The social psychology of music and musical taste

Thesis submitted for the degree of Ph.D.
at the Heriot-Watt University, May 2009

Adam Lonsdale
School of Life Sciences
Heriot-Watt University

The social psychology of music and musical taste

A J Lonsdale

Abstract

This thesis is concerned with the social psychology of music and musical taste. It deals with four main research questions: (1) Why do people listen to music? (2) Do stereotypes of musical taste influence how individuals judge other people and themselves? (3) Do people exhibit in-group favouritism towards those who share their musical taste? and (4) Do stereotypes of musical taste influence how individuals perceive other people? The findings of this thesis serve to highlight musical taste as an important socio-cultural construct that is likely to influence social cognition, perception and intergroup behaviour. The thesis also provides further insight as to why people listen to music, and why it is so important to them. This thesis serves to highlight the potential for music psychologists to use well-established theories from mainstream social psychology to understand musical behaviour.

Acknowledgements

There are several individuals whose contribution to this work needs to be acknowledged. First, I would like to thank my supervisor Adrian North. His support and guidance over the course of this thesis has been invaluable, and I have learnt a great deal from him. I would also like to thank my work colleagues and the postgraduate community at the University of Leicester for the friendly and relaxed environment in the psychology department, which made my studies all the more enjoyable. I am grateful to everyone who participated in my research, and in particular the following people who provided access to participants and helped with data collection: Jo Marshall at South Wolds Community School; Judith Wrigley at Colonel Frank Seely Sixth Form College; Andy Kettlewell at Castle College; Helen Ralphs; and Susan Greenwell. I am of course indebted to my parents for their continuing support for my studies.

The final acknowledgement is to Vicky. Without her constant support, reassurance and most importantly her patience, I am sure this thesis would not have been possible.

Contents   **Page**

Chapter 1   Introduction and outline of chapters

The research presented in this thesis investigated a number of different topics surrounding the social psychology of music. This research addressed four main questions: (1) Why do people listen to music? (2) Do stereotypes of musical taste influence how individuals judge other people and themselves? (3) Do people exhibit in-group favouritism towards those who share their musical taste? (4) Do stereotypes of musical taste influence how individuals perceive other people? The present thesis is organised into five sections, each of which begins with a review of the relevant research, and the research questions that are to be investigated.

Section A contains four different studies that each adopted a 'uses and gratifications' approach to investigate the reasons why people listen to music. Chapter 2 provides an overview of previous 'uses and gratifications' research concerned with the reasons why people listen to music, and outlines the different research questions addressed by each of the four studies. In Chapter 3, a study investigated the reasons why adolescents listen to music. In Chapter 4, a second study investigated whether the reasons why people listen to music differ significantly from other media and leisure activities. In Chapter 5, a third study investigated why people listen to music using an open-ended, qualitative research design to identify reasons for listening to music that may have been overlooked by previous investigations. In Chapter 6, a fourth study investigated whether people of different ages listen to music for different reasons. The findings of all four studies are then summarised in Chapter 7, where ideas regarding the likely psychological functions of music, its everyday importance to people, and future research are discussed.

The remainder of the thesis was concerned with the social functions of music, and in particular the idea that people might use their musical taste as a social 'badge' of identity and group membership (Frith, 1983; North & Hargreaves, 1999). The studies presented in Section B, C and D investigated several research questions developed from this idea.

Section B contains six studies that investigated a number of different ideas regarding the role of stereotypes in the social 'badge' function of musical taste. Chapter 8 introduces the idea that musical taste might function as a social 'badge' of identity and group membership, and puts forward several research questions developed from this assumption. In Chapter 9, a study investigated whether people share significantly differentiated and consensual stereotypes regarding the fans of different musical styles. In Chapter 10, a study investigated whether these stereotypes significantly influence a participant's social judgements when they are informed of an individual's musical taste. In Chapter 11, two studies looked at how individuals judge other peoples' musical tastes, and in particular whether the representativeness heuristic is used to quickly and economically judge another person's likely musical taste. In Chapter 12, two studies investigated whether a process of 'self-to-stereotype matching' is responsible for how peoples' musical taste develops. The findings of Chapters 8 to 12 are then discussed in Chapter 13.

Section C investigated two questions developed from the assumptions of social identity theory (Tajfel, 1978). Chapter 14 puts forward the idea that as a social 'badge' of group membership, musical taste is expected to contribute to an individual's sense of social identity. Based on this assumption, people were expected to exhibit in-group favouritism toward those who shared their musical taste. In Chapter 15, a study investigated whether individuals hold significantly more positive stereotypes for fans of their favourite musical style than for fans of their least favourite musical style. In Chapter 16, a 'minimal group'

design was used to investigate whether people behave more favourably to those believed to share their musical taste. Chapter 17 discusses the findings of both studies.

Section D explores the idea that stereotypes of musical taste may significantly influence how people perceive the physical characteristics of others. Chapter 18 puts forward the idea that the relative accessibility of stereotypes of musical taste might influence how participants perceived the likely sex or age of several different faces. In Chapter 19, a study investigated whether gender stereotypes of musical taste significantly influence how participants perceive the likely sex of two androgynous faces. In Chapter 20, a study investigated whether age stereotypes of musical taste also influence how participants perceive the age of eight different faces. Chapter 21 provides a summary of these findings and discusses their implications for future research.

Section E discusses the findings and implications of Chapters 2 to 21, and highlights areas where further research might be necessary, together with the overall conclusions of the thesis.

SECTION A: WHY DO WE LISTEN TO MUSIC?

Chapter 2   Music: A uses and gratifications analysis

People spend enormous amounts of time and money listening to music. Despite the continued growth of online and offline piracy and several years of declining sales, in 2005, the global recorded music market was estimated to be worth around US $33 billion (IFPI, 2007). Several surveys highlight extraordinary levels of music consumption particularly during adolescence (see Zillmann & Gan, 1997 for a review), and the particular importance that adolescents ascribe to music (Fitzgerald, Joseph, Hayes, & O'Regan, 1995). In view of this, listening to music is clearly important to people, and adolescents in particular. However, surprisingly little empirical research has been done to explain why.

Research has highlighted that people listen to music for a wide variety of different reasons (see Zillman & Gan, 1997 for a review). For example, Gantz, Gartenberg, Pearson, & Schiller (1978) found that adolescents listened to relieve tension, pass the time, fill uncomfortable silences, alleviate feelings of loneliness, manage their mood and relieve boredom. Roe's (1985) retrospective study showed that Swedish children listened to music for similar reasons, namely to create a 'good atmosphere', control moods, fill silences, and pass the time. Passing the time was also found to be the main reason why Sun and Lull's (1986) sample of adolescents watched music videos.

Although undoubtedly important in providing an initial insight as to why adolescents listen to music, these studies are now somewhat dated. Recent technological developments (e.g. the CD, the Walkman, the internet, the iPod, etc.) have made listening to music increasingly accessible, convenient, portable, and cheap. Given these changes, the reasons why people listen to music could be reasonably expected to be different to those identified by research done over 20 years ago.

Recent trends within music psychology have led to a re-evaluation of the role of social psychological factors. For example, Hargreaves & North (1997, 1999) are among many to have suggested that research over recent decades has largely ignored the social functions of music at the expense of its cognitive and emotional functions. Hargreaves and North (1999) concluded that music served three social functions; used by individuals to help manage their moods, self-identity, and interpersonal relationships. North, Hargreaves and O'Neill (2000) supported this idea, showing that a sample of 13-14 year-olds listened to music to portray a social image to others, and to fulfil their emotional needs. Similarly, Tarrant, North, and Hargreaves (2000) showed that American and English adolescents listened to music to satisfy both emotional and social needs, as well as for reasons of self-actualisation. These studies were all conducted according to the assumptions of the 'uses and gratifications approach'.

Uses and gratifications research (Katz, Blumer, & Gurevitch, 1974) is an approach used originally by sociologists to investigate how people use the mass media to satisfy their individual needs. To do this, uses and gratifications research simply asks participants to report the reasons from a list of candidates that apply to them. The main assumption of this approach is that individuals actively use the media to serve their needs, rather than being passive recipients of the mass media. Furthermore, individuals are assumed 'sufficiently self-aware' to report their motives, or at least recognise them when asked to rate a number of possible motives. Finally, the uses and gratifications model also claims that all media compete with one-another to fulfil an individual's need, together with more conventional means (e.g., social interaction) of achieving this.

Four studies are reported in Section A, each of which adopted the 'uses and gratifications' approach to investigate the following research questions:

1) Why do adolescents listen to music?

The study presented in Chapter 3 investigated adolescents' reasons for listening to music. In keeping with earlier research, this study simply asked participants to rate the reasons why they listen to music. However, in contrast to previous investigations, this study explored a broader range of possible motives, based on an established typology of media gratifications (McQuail, Blumer, & Brown, 1972).

2) Is music important? If so, why?

The study presented in Chapter 4 investigated whether the reasons people listen to music differs significantly to those of eight other leisure activities. This study investigated whether the uses and gratifications identified in Chapter 3 are unique to music, or can be derived from other leisure activities. Based on the assumption that different media and leisure activities are likely to compete with each other to satisfy an individual's needs; this study was hoped to provide an initial insight as to why music is so important to people.

3) When free to explain why, what reasons do adolescents give for listening to music?

The study presented in Chapter 5 used an open-ended qualitative research design to investigate why people listen to music. In the previous two studies, participants had been asked to rate to a number of different reasons to explain why they personally listen to music. In doing so, both studies may have restricted participants to a limited number of

possible reasons to account for why they listen to music. In view of this criticism, this study used an open-ended, qualitative research design, where participants were free to explain why they listen to music.

4) Do people of different ages listen to music for different reasons?

Like most, if not all past research, the preceding three studies were all based on the study of adolescent samples, and as a result, their findings might not necessarily be generalised to other age groups. Given this limitation, the study presented in Chapter 6 investigated the possibility that people of different ages might listen to music for different reasons.

The social functions of music are of special interest to the present research (see Sections B and C), and in particular, the idea that musical taste is used by individuals as a social 'badge' of group membership and self-identity (Frith, 1983; North & Hargreaves, 1999). People have, for example, been found to exhibit in-group favouritism toward those perceived to share their musical taste, which is consistent with the idea that musical taste acts a 'badge' of group membership, contributing to an individual's social identity (e.g., Bakagiannis and Tarrant, 2006; North & Hargreaves, 1999; Tekman & Hortaçsu, 2003). In view of this, three of the four studies reported in Section A (see Chapters 3, 4, and 6) asked participants directly if they agreed that musical taste is used in this way. The idea that an individual's musical taste, group membership and identity are in someway related has arguably developed since the 1950s, and is now a part of folk psychology. However, despite this, no study to date has asked people directly if they actually regard musical taste in this way, and are conscious of its symbolic functions as a social 'badge' of identity.

In addition to this, Chapters 3, 4 and 6 also examined the possibility that men and women might use music for different reasons. For example, North, Hargreaves, & O'Neill (2000) found that females are more likely to use music to regulate their mood, whereas males are more likely to use music to create an impression with others.

Chapter 3   Why do adolescents listen to music?

Previous uses and gratifications research concerned with why people listen to music (e.g.,

Gantz et al, 1978; Tarrant et al, 2000, etc.) all have asked participants to rate a number of

different reasons for listening to music. These reasons were selected according to

researchers' discretion, their use in previous studies, or on the basis of informal discussions

with participants in pilot research. As such, the items to which participants could respond

were limited – they reflect, respectively, the opinions of the researcher, the opinions of

previous researchers, and the opinions of only pilot participants – and these may or may not

represent an exhaustive list of the true uses and gratifications of music. Specifically, of the

five most commonly cited studies concerned with this subject (Gantz et al, 1978; Roe,

1985; Sun and Lull, 1986; North, Hargreaves et al, 2000; Tarrant et al 2000), a mean of 12

reasons were used. It would be surprising indeed if these 12 items were sufficient to capture

the range of uses and gratifications that music might serve. In view of these criticisms, this

first study investigated why people listen to music using a much broader list of potential

reasons, selected according to an established model of media gratifications.

McQuail, Blumer, and Brown (1972) suggest that in general the needs served by the

mass media fall into any of four categories: (1) surveillance (i.e., the need to find out

what's going on in the world around us); (2) personal identity (i.e., the need to find out who

we are); (3) personal relationships (i.e., the need to interact with others); and (4) diversion

(i.e., the need for escapism, entertainment, and relaxation). Past research has also

highlighted repeatedly that mood-management is an important reason why people listen to

music (e.g., Gantz et al, 1978; Roe, 1985, North et al, 2000). So, in the absence of any

coherent theoretical framework, reasons for listening to music were selected according to a

five-factor model of music gratifications (i.e., surveillance, personal identity, personal relationships, diversion, and mood-management).

Method

Participants

300 undergraduate students (150 males, 150 females) participated in the study voluntarily. Participants' mean age was 21.31 years (*SD = 2.75*).

Materials and Procedure

Participants completed a questionnaire designed especially for the present study. The questionnaire was completed in a university campus library, and took approximately 3 to 4 minutes to complete.

The questionnaire first asked participants to rate how important music was in their everyday life. Ratings were given on an 11-point scale (0 = *Not at all important* and 10 = *Extremely important*). In addition to this, participants were also asked to indicate the amount of time (hours per day) they normally spent listening to music and the amount of money (UK£ per month) normally on music.

Participants were then presented with a 30-item scale, and asked to rate the extent to which each statement accurately described why they listened to music. Ratings were given on an 11-point scale (0 = *Not at all* and 10 = *Completely*). Six statements were used for each of the five factors in the proposed model of music gratifications: (1) *Surveillance* (e.g., "To keep up with current events"); (2) *Personal identity* (e.g., "To express my identity"); (3) *Personal relationships* (e.g., "To have something to talk about with others");

(4) *Diversion* (e.g., "To take my mind off things"); (5) *Mood-management* (e.g., "To make me feel better"). The 30 statements were presented in a randomised order.

At the end of the questionnaire, participants were questioned directly about the idea that musical taste might function as a social 'badge' that symbolically represents their identity. Participants were asked to answer the following two questions using an 11-point scale (0 = *Not at all* and 10 = *Completely*): (1) "To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?" and (2) "To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?"

Results

Initial analysis indicated that listening to music was important in participants' everyday life (i.e., mean importance rating = 7.65, SD = *1.90*). Participants reported listening to music for a mean of 3.66 (SD = *3.37*) hours per day, and normally spent a mean of UK£8.80 (SD = *12.17*) on music every month.

A factor analysis was conducted on participants' responses to the 30 reasons why they listened to music. Varimax rotation of the principal components showed there were six different factors with eigenvalues greater than one, and together accounted for 64.47% of variance present in participants' ratings. Factor loadings greater than 0.30 are shown in Table 1.

These loadings suggest that Factor 1 might be interpreted as 'negative mood management', where music is used to alleviate negative feelings and for mood enhancement. Factor 2 might be interpreted as 'personal identity', where music is used for

identity development or to portray a social image to others. Factor 3 might be interpreted as 'surveillance', where music is used to learn about things. Factor 4 might be interpreted as 'positive mood management', where music is used to achieve and optimise positive moods. Factor 5 might be interpreted as 'interpersonal relationships', where music is used to promote and maintain social interaction. Factor 6 might be interpreted as 'diversion', where music is used as a distraction to relieve boredom or to simply pass the time.

A 2 x 6 mixed ANOVA was used to compare whether the average ratings that male and female participants gave to statements in each of the six factors differed significantly. No interaction was found (where $F(1, 298) = .38$; $p > .05$), nor any effect of participants' sex (where $F(5, 1490) = 1.73$; $p > .05$). However, a main effect was found, indicating that mean scores for each factor differed significantly, where $F(5, 1490) = 748.45$, $p < .001$. Table 2 shows the mean rating given to each of the six factors ranked in descending order.

Bonferroni pairwise comparisons were subsequently carried out to establish where these significant differences were (see Table 3 for a summary). These comparisons showed that there were significant differences between mean ratings for all six factors, with the exception of a non-significant difference between the mean ratings given on the 'diversion' and 'negative mood-management' factors.

A 2 x 2 mixed ANOVA was used to examine if male and female participants differed significantly with regard to ratings of the extent to which they and other people use musical taste as a symbolic 'badge' of identity. A significant main effect was found between participants' answers to the two different questions, where $F(1, 298) = 219.86$; $p < .01$. However, no interaction was found (where $F(1, 298) = .01$; $p > .05$), nor any effect

of participants' sex (where F $(1, 298) = .27$; $p > .05$). Table 4 shows the mean ratings given

to both questions.

Table 1.
Factor analysis of participants' reasons for listening to music

Reason	Factor 1 loading	Factor 2 loading	Factor 3 loading	Factor 4 loading	Factor 5 loading	Factor 6 loading
To help get through difficult times	.77					
To relieve anxiety	.73					
To relieve tension / stress	.73					
To express my feelings & emotions	.71					
To make me feel better	.68					
To alleviate feelings of loneliness	.64					
To escape the reality of everyday life	.59					
To construct a sense of identity for myself		.78				
To explore possible identities		.76				
To portray a particular image to others		.74				
To express my identity		.73				
To create an image for myself		.72				
To display my membership of social groups / subcultures		.58				
To learn how to do things			.78			
To learn how to behave in future			.76			
To obtain useful information for daily life			.74			
To discover who I really am			.60			
To learn how other people think			.60			
To be entertained				.84		
To relax				.71		
To set the 'right' mood				.63		
To take my mind off things				.56		
To keep up with current events					.78	
To stay in touch with current fashions & trends					.68	
To spend time with family					.56	
To have something to talk about with others					.50	
To spend time with friends					.48	
To 'fill' uncomfortable silences						.75
To pass the time						.68
To relieve boredom						.64
Eigenvalue	4.40	4.06	3.17	3.08	2.81	1.81
Percentage of variance	14.66	13.54	10.58	10.27	9.37	6.03

Table 2.
Mean rating for each of the six factors identified

	Mean rating (*S.D*)
Positive mood management (e.g. to set the 'right' mood)	7.90 (*1.52*)
Diversion (e.g. to pass the time)	6.43 (2.04)
Negative mood management (e.g. to make me feel better)	6.36 (*1.96*)
Interpersonal relationships (e.g. to have something to talk about with others)	3.54 (*2.02*)
Personal identity (e.g. to create an image for myself)	2.89 (*2.10*)
Surveillance (e.g. to learn how other people think)	2.33 (*1.73*)

Table 3.

Summary of Bonferroni pairwise comparisons between factors

	Factors				
	Personal identity	Surveillance	Positive mood management	Interpersonal relationships	Diversion
Negative mood management	3.47*	4.03*	1.54*	2.82*	.06
Personal identity		.56*	5.01*	.65*	3.53*
Surveillance			5.57*	1.21*	4.10*
Positive mood management				4.36*	1.48*
Interpersonal relationships					2.89*

* $p < .05$

Table 4.
Musical taste as a symbolic 'badge' of identity - Mean ratings

	Male	Female	Total
To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?	5.23 (*2.65*)	5.33 (*2.38*)	5.28 (*2.51*)
To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?	7.31 (*1.81*)	7.42 (*1.36*)	7.36 (*1.60*)

Discussion

The results indicated that music was regarded as an important aspect of the participants' everyday lives. On average, participants reported spending 3.66 hours per day listening to music, and spending UK£8.80 on music every month. This level of music consumption is much higher than found previously (North, Hargreaves, & O'Neill, 2000; Sun & Lull, 1986; Tarrant, North, & Hargreaves, 2000), although this is most likely because of the undergraduate sample used.

Participants were asked to rate how accurately 30 reasons described why they listen to music. Factor analysis of participants' ratings showed there were six main reasons why participants listen to music: (1) negative mood management; (2) personal identity; (3) surveillance; (4) positive mood management; (5) interpersonal relationships; and (6) diversion. Although similar to three-factor models identified previously (North et al, 2000; Tarrant, North, & Hargreaves, 2000), this six-factor model arguably highlights with greater subtlety the different reasons why people listen to music. One reason for this is the simple fact that participants in this study were asked to rate a longer list of reasons to describe why they listen to music.

In keeping with past research (e.g., Gantz et al, 1978; Roe, 1985, North et al, 2000), mood-management was an important reason why participants listened to music. However, in this case, participants' ratings seemed to distinguish between the management of positive and negative moods. This distinction highlights more precisely the way in which music is used to regulate our moods. Specifically, the two factors suggest that people use music both as a means to cope with, and alleviate negative feelings (e.g., anxiety, loneliness, stress, etc), as well as a way for individuals to create and optimise a positive mood (e.g., to relax).

The remaining four factors correspond with McQuail, Blumer, and Brown's (1972) model of media gratifications that was used to provide a theoretical framework for the current investigation. So with the exception of mood-management, participants were found to listen to music for any of four main reasons: (1) personal identity; (2) interpersonal relationships; (3) surveillance; and (4) diversion.

Consistent with North et al's (2000) study, the current findings suggest that people use music to construct and express their identity. In this respect, the music people listen to is believed to function symbolically as a social 'badge' of identity (Frith, 1983; North & Hargreaves, 1999). This symbolic role is considered to have direct implications for how an individual's musical taste develops. Recent research suggests that musical taste develops according to a process of 'self-to-stereotype matching' (see Chapter 12; North & Hargreaves, 1999), where a preference for a particular musical style is related significantly to an individual's perceived similarity to stereotypical music fans. In this context, the music people choose to listen to, and their individual musical taste is understood to take on a personal significance, serving both to construct and express their identity.

In line with previous research (Hargreaves & North, 1999; Tarrant et al, 2000), the management of interpersonal relationships was found to be another reason why people listen to music. This factor suggests that music is used to establish and maintain personal relationships. Listening to music often provides people with an opportunity for social interaction (e.g., dancing, live music) and shared experiences, both of which promote and maintain the formation of social relationships. Moreover, music itself might simply present people with a common subject for everyday conversation, contributing to the day-to-day interaction that maintains relationships.

The present study is the first to put forward the idea that music is used as means to learn about others and the world around us. This function of music is thought to correspond to what McQuail, Blumer, and Brown (1972) referred to as the need for 'surveillance'. By listening to music, individuals are perhaps able to discover about other peoples' opinions and experiences (e.g., falling in love), and learn about people from different socio-cultural backgrounds. Because of their relative inexperience, adolescents and young children are considered most likely to listen to music for this reason.

The sixth factor suggested that music is also used as a distraction to relieve boredom, 'fill' uncomfortable silences, or simply pass the time. In this sense, listening to music is understood to function as a 'diversion' (see McQuail, Blumer, & Brown, 1972), used routinely by people to moderate the boredom often experienced in everyday life (e.g., driving, housework, waiting, etc.). This diversion function of music is broadly supported by previous studies (Gantz et al, 1978; Roe, 1985; Sun and Lull, 1986). Most significantly, this finding highlights that people may, at certain times, listen to music for no other reason but to relieve their boredom; an idea that is frequently overlooked by music research.

For some reason, none of the previous studies extend their investigation of why people listen to music beyond the use of factor analysis. Factor analysis of participants' ratings simply allows us to identify the different reasons for listening, but crucially fails to tell us which of these reasons are most important to people. In view of this, the present investigation compared the mean rating given to each of the six factors to give a clearer picture of why people listen to music.

On the basis of this comparison, it was found that music is used primarily as a means to create and optimise a positive mood (i.e., positive mood management). In second place, the non-significant difference between mean scores for diversion and negative mood management indicates that music is used no more as a distraction than it is used to alleviate negative feelings and emotions. In fourth and fifth place respectively, means ratings showed that music is used as a means for managing both interpersonal relationships and their personal identity. Finally, mean ratings showed that 'surveillance' was the least important of the six reasons why people listen to music. No evidence of sex differences were found on each of these six factors, indicating that men and women listen to music for the same reasons.

Overall, this comparison indicated that the functions of music are primarily emotional, whilst the social functions of music (i.e., interpersonal relationships and personal identity) seem to be of secondary importance to this.

Finally, participants were asked directly about the symbolic function of musical taste as a social 'badge' of identity (Frith, 1983; North & Hargreaves, 1999). It was found that regardless of sex, participants considered that other people were significantly more likely than themselves to use musical taste as a symbolic 'badge' of identity. This indicated that whilst participants recognised the symbolic function of musical taste as a social 'badge' of identity, to some extent they also wanted to personally dissociate themselves from this idea (i.e., "I use musical taste as symbolic 'badge' of my identity, but not as much as other people"). This sort of response is might well be an example of the "third-person effect" (see Davison, 1983). The third-person effect refers to the tendency of people to overestimate the influence of the media (in this case, music) on the attitudes and behaviour

of others. Future research might investigate whether this third-person effect extends to how people regard other functions of music.

Chapter 4   Is music special? If so, why?

Several studies have shown that when compared to other leisure activities, listening to music is particularly important to adolescents (e.g., Fitzgerald et al, 1995; North, et al, 2000; Rentfrow & Gosling, 2003). The importance of music is also evident by high record sales (see Zillman & Gan, 1997 for a review), and the time spent each day listening to music. For example, Lyle and Hoffman (1972) put forward an estimate that almost half of teenage girls sampled listen to music for at least 4 hours a day. The present study first investigated whether listening to music was more or less important to participants than other media and leisure activities, and also if they spend significantly more time and money listening to music than other everyday leisure pursuits (e.g., TV, radio, etc). If, as expected, music is so important to participants' everyday lives in relation to other leisure activities, the present study then aimed to explain why?

Uses and gratifications research (Katz, Blumer, & Gurevitch, 1974) asserts that rather than being passive recipients; people use the mass media to gratify their individual needs. In addition to this, the uses and gratifications approach also assumes that different media and leisure activities are likely to compete with each other to satisfy these needs. Given both these assumptions, and the importance of music, it is reasonable to expect that the uses and gratifications served by listening to music are different, or perhaps unique, when compared to those associated with other leisure activities. Accordingly, using the six-factor model of gratifications identified in Chapter 3, the present study also investigated whether the reasons why people listen to music differ significantly from other media and leisure activities.

There are many reasons why participants might rate listening to music as a 'special' case in terms of satisfying their individual needs. Unlike most leisure activities, individuals can listen to music wherever, and whenever they chose, free to replay songs again and again. As a result, individuals are perhaps able to choose the music they listen to, to a greater extent than their other leisure pursuits (e.g., TV, radio, newspapers & magazines), where participation is often scheduled beyond individual control. This freedom might mean people ascribe greater personal significance to music they listen to relative to other leisure activities. Listening to music is also known to directly influence an individual's level of arousal (e.g., Berlyne, 1971), and this might mean that participants rate music as better than other leisure activities as a means to regulate their mood. Listening to music often provides people with an opportunity for social interaction and to form relationships (e.g., dancing, live music). Given this, participants are expected to rate music better as a means to promote social interaction when compared to individual leisure pursuits that serve to isolate people (e.g., computer games, reading books). Finally, whilst most forms of the media are intended for a specific purpose (e.g., TV, newspapers – designed primarily to inform people of current news and events), listening to music is expected to serve a number of an individual's different needs.

Method

Participants

117 undergraduate psychology students (27 males, 90 females) participated in the study as part of their course requirement. Participants' mean age was 19.85 years ($SD =$ 1.03).

Materials

Participants completed a questionnaire that asked them to rate how important each of the nine different leisure activities investigated was in their everyday life. Ratings were given on an 11-point scale (0 = *Not at all important* and 10 = *Extremely important*). Participants were also asked to indicate the amount of time (hours per day) and money (UK£ per month) they normally spent engaged in each activity.

A 30-item scale was used to establish participants' motives for participating in each of the nine different leisure activities. Participants rated the extent to which each of the 30 statements accurately described why they participated in each of the nine leisure activities on an 11-point scale (0 = *Not at all* and 10 = *Completely*). Ratings were given for one activity at a time: for example, participants first rated the extent to which the 30 statements applied to why they played computer games, then to why they read books, and so on.

The scale was divided into six subscales based on the motivational factors identified in Chapter 3, namely (1) *Positive mood management* (e.g., "to set the 'right' mood"); (2) *Diversion* (e.g., "to take my mind off things") (3) *Negative mood management* (e.g., "to make me feel better"); (4) *Interpersonal relationships* (e.g., "to have something to talk about with others"); (5) *Personal identity* (e.g., "to express my identity"); (6) *Surveillance* (e.g., "to keep up with current events"). Overall scores for each subscale were calculated as the sum of the rating assigned to the items. For each activity, the 30 statements were presented in a random order. Moreover, the sequence in which the nine activities were presented was also randomised between participants into one of three different versions of the questionnaire.

At the end of the questionnaire, participants were again asked directly about the idea that musical taste might function as a social 'badge', used to by people to symbolically

represent their identity. Participants were required to answer two questions using an 11-point scale (0 = *Not at all* and 10 = *Completely*), namely: (1) "To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?" and (2) "To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?"

Results

To establish the importance of music to participants relative to the other leisure interests investigated, three within-subjects ANOVAs were used to compare the everyday importance, time and money normally spent pursuing each of the nine different leisure activities. Table 5 provides a summary of these analyses. Bonferroni pairwise comparisons were then used to compare how important music was in relation to the eight other activities. Table 6 provides a summary of these comparisons.

Tables 5 and 6 show that participants considered listening to music to be the most important of the nine leisure activities investigated. Participants' also reported that on average, they spent significantly more time per day listening to music (3.82 hours per day) than any of the other eight activities. Moreover, second only to pursuing their favourite hobby / pastime, participants reported spending significantly more money each month listening to music than other activity (although the non-significant difference between music and reading books was the only exception to this).

Six 2 x 9 mixed ANOVAs were carried out to test whether male and female participants' reasons for listening to music differed significantly from those of the other eight activities investigated on each of the six factors. With the exception of ratings on the surveillance, there was a significant interaction between sex and participants' ratings on

each of the other five factors. However, post-hoc analysis showed there were no significant differences between male and female reasons for listening to music, so in the interests of brevity, the results of these interactions and post-hoc analysis were not included. Significant differences between the nine activities were found on each of the six factors, a summary of these findings can be seen in Table 7. Bonferroni pairwise comparisons were then carried out to compare how participants' reasons for listening to music differed to those of the other eight activities overall scores on each of the six factors. A summary of these comparisons can be found in Table 8.

Tables 7 and 8 show that music scored highest of all the activities for both 'positive mood management' and 'negative mood management'. Listening to music and pursing a favourite hobby / pastime both scored highest on the 'personal identity' factor, although the difference between music and favourite hobby was not significant. Watching TV and listening to music both scored highest on the 'diversion' factor, although the difference between TV and music was non-significant. Watching TV scored highest for the 'interpersonal relationships', followed by watching films and reading newspapers / magazines. Whilst non-significant differences were found between 'interpersonal relationships' mean scores for music, sport, radio and favourite hobby, listening to music scored significantly higher on this factor than reading books and playing computer games. Watching TV, reading books, newspapers and magazines scored highest on the 'surveillance' factor, followed by pursing a favourite hobby. Non-significant differences were found between 'surveillance' scores for music, films, and radio, although listening to music did score significantly higher on this factor than watching sport and playing computer games.

A 2 x 2 mixed ANOVA was used to determine whether male and female participants differed significantly in the extent they considered themselves and others to use their musical taste as a symbolic 'badge' of identity. Table 9 shows the mean ratings given to both questions. A significant main effect was found between participants' answers to the two different questions, where $F (1, 115) = 50.88$; $p < .01$. However, no interaction was found (where $F (1, 115) = .50$; $p > .05$), nor any effect of participants' sex (where $F (1, 115) = 2.10$; $p > .05$).

Table 5.

Summary of scores for each activity

	Activity									
	Music	Computer Games	Television	Films	Books	Sport	Radio	Newspapers / Magazines	Favourite hobby	F
Everyday importance	8.75 (*1.28*)	2.19 (*2.60*)	6.21 (*2.19*)	6.08 (*2.41*)	6.38 (*2.44*)	3.96 (*3.05*)	4.34 (*2.95*)	5.16 (*2.65*)	8.11 (*1.51*)	88.59**
Time spent (Hrs / day)	3.82 (*2.07*)	.52 (*.84*)	2.47 (*1.49*)	1.35 (*1.04*)	1.64 (*1.13*)	.45 (*.28*)	1.41 (*1.76*)	.84 (*.70*)	2.39 (*1.43*)	92.42**
Money spent (£ / month)	16.05 (*14.28*)	3.17 (*7.50*)	4.04 (*5.55*)	9.79 (*10.26*)	14.42 (*13.66*)	4.45 (*9.91*)	.24 (*1.00*)	5.60 (*5.31*)	32.08 (*44.72*)	40.24**

* $p < .01$; ** $p < .001$

Note: df = 8 in all cases

Table 6.

Summary of Bonferroni pairwise comparisons between music and other activities

	Activity							
	Computer games	Television	Films	Books	Sport	Radio	Newspapers / Magazines	Favourite hobby
MUSIC								
Everyday importance	6.56*	2.54*	2.67*	2.38*	4.80*	4.41*	3.59*	.64*
Time spent (Hrs / day)	3.30*	1.36*	2.47*	2.18*	3.37*	2.42*	2.98*	1.43*
Money spent (£ / month)	12.88*	12.01*	6.27*	1.63	11.60*	15.81*	10.45*	16.03*

* $p < .05$

Table 7.
Summary of mean scores for each activity

	Activity									
	Music	Computer games	Television	Films	Books	Sport	Radio	Newspapers / Magazines	Favourite hobby	F
Negative mood management	49.95 (*12.59*)	15.81 (*18.28*)	28.68 (*16.84*)	32.91 (*16.14*)	30.25 (*16.53*)	14.64 (*15.68*)	19.79 (*16.44*)	16.85 (*15.14*)	44.35 (*13.00*)	96.81**
Personal identity	20.97 (*15.06*)	3.05 (*6.01*)	9.11 (*10.81*)	9.53 (*11.23*)	12.92 (*12.28*)	10.53 (*12.27*)	8.38 (*11.53*)	10.21 (*12.36*)	23.68 (*15.57*)	47.03**
Surveillance	11.59 (*10.51*)	2.44 (*4.62*)	20.81 (*8.98*)	11.25 (*9.95*)	20.92 (*10.63*)	8.12 (*9.20*)	10.89 (*9.46*)	21.27 (*10.29*)	16.56 (*11.59*)	68.39**
Positive mood management	32.39 (*5.91*)	13.62 (*12.29*)	26.44 (*7.39*)	27.07 (*6.63*)	23.17 (*8.91*)	13.87 (*11.07*)	20.21 (*11.16*)	18.44 (*8.06*)	27.28 (*6.55*)	53.21**
Interpersonal relationships	17.10 (*10.76*)	7.18 (*7.83*)	31.64 (*9.54*)	24.21 (*8.97*)	11.83 (*8.27*)	17.68 (*12.05*)	15.23 (*10.06*)	23.45 (*8.17*)	19.92 (*10.11*)	76.58**
Diversion	20.73 (*6.23*)	11.09 (*9.36*)	20.30 (*5.80*)	18.26 (*6.21*)	15.06 (*6.44*)	9.99 (*7.17*)	15.32 (*8.28*)	14.66 (*6.57*)	16.15 (*6.38*)	33.60**

* $p < .01$; ** $p < .001$

Note: df = 8 in all cases.

Table 8.

Summary of post-hoc Bonferroni pairwise comparisons between music and other activities

	Computer Games	Television	Films	Books	Activity Sport	Radio	Newspapers / Magazines	Favourite hobby
<u>MUSIC</u>								
Negative mood management	34.14*	21.27*	17.04*	19.70*	35.31*	30.15*	33.10*	5.60*
Personal identity	17.92*	11.86*	11.44*	8.05*	10.44*	12.60*	10.76*	2.70
Surveillance	9.15*	9.22*	0.34	9.33*	3.47*	0.70	9.68*	4.97*
Positive mood management	18.78*	5.96*	5.33*	9.22*	18.52*	12.19*	13.95*	5.11*
Interpersonal relationships	9.92*	14.54*	7.11*	5.27*	0.57	1.87	6.35*	2.82
Diversion	9.64*	0.43	2.47*	5.67*	10.74*	5.41*	6.07*	4.58*

* $p < .05$

Table 9.
Musical taste as a symbolic 'badge' of identity - Mean ratings

	Male	Female	Total
To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?	6.11 (*2.91*)	5.39 (*2.42*)	5.56 (*2.55*)
To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?	7.70 (*1.32*)	7.33 (*1.44*)	7.42 (*1.42*)

Discussion

When asked to rate the importance of different leisure activities in their everyday life, ratings showed that participants regarded listening to music as the most important of the nine activities investigated (e.g., TV, radio, computer games). Participants reported spending significantly more time listening to music than any other activity. Also, with the exception of pursuing their favourite hobby / pastime, participants reported normally spending more money each month on music than any other activity. Together, these findings support the idea that music is of particular importance to adolescents, above other everyday leisure pursuits.

To investigate why listening to music is so important to people relative to other leisure activities, participants were asked to rate how accurately 30 reasons described why they participated in each of the nine leisure activities investigated. Using the six-factor model of music gratifications identified in Chapter 3, it was evident that listening to music served to fulfil a unique combination of uses and gratifications, which might only otherwise be fulfilled by a number of different leisure activities. Comparison of ratings given to each the six factors also indicated that men and women listen to music for the same reasons.

Scores on both the 'positive mood management' and 'negative mood management' factors indicated that more than the other eight activities participants listened to music to manage their mood. This suggests that of the leisure activities investigated, listening to music was the foremost way by which individuals regulate their moods; where music is used both to create and optimise positive moods, as well as to alleviate negative feelings. Similarly, on the basis of interview data, Saarikallio and Erkkilä (2007) concluded that for a group of Finnish adolescents "music proved to be a versatile means for mood regulation" (p. 105). The present findings suggest that individuals might use music to strategically influence their moods, which may not be possible to the same extent with other leisure activities.

Scores on the 'personal identity' factor showed that participants used music and their favourite hobby / pastime to construct and express their identity to a significantly greater extent than any of the seven other activities investigated. One possible explanation for this is that both activities may offer people with a greater scope for individual choice than any of the other activities. Because of this freedom, people might more readily ascribe personal significance to the music they choose to listen to, or the hobby they choose to pursue. This is contrasted with watching TV for example, where though able to select the channel, individuals are ultimately less able to control what they watch. Or alternatively, in some cases listening to music could be a participant's favourite hobby, which might explain why scores on the 'personal identity' factor were not significantly different. The potential overlap between activities was a problematic issue throughout this investigation and will be discussed later.

Scores on the 'diversion' factor showed that participants used music and TV as a distraction significantly more than any of the seven other activities investigated. The high 'diversion' scores found for many of the activities suggest that the primary purpose of any leisure activity is (to varying extents) to occupy us in an enjoyable way to relieve boredom or pass the time. Listening to music and watching TV might not therefore be uniquely motivated by the need for a distraction, but rather they are both simply better at distracting us than other leisure activities.

Scores on the 'interpersonal relationships' factor showed that participants used TV, films, newspapers and magazines to manage personal relationships significantly more than they used music. Non-significant differences were found between 'interpersonal relationships' scores for music, sport, radio, and hobbies, whereas listening to music scored significantly higher on this factor than reading books and playing computer games. This

suggests that when compared to other leisure activities, people might simply regard watching TV and films as providing a better opportunity for social interaction, and to spend time with family and friends. Whereas, low scores for reading books and playing computer games are understandable given that both activities are normally individual pursuits, and therefore serve to isolate people rather than promote social interaction. Another reason for these finding might also be the way television programmes, films, and newspapers / magazines are customarily scheduled for broadcast or publication. This scheduling makes the collective consumption of these media possible, which might present individuals with much greater possibility of shared experiences. This is not normally the case for music, where individuals are typically responsible for the music they listen to; music as a result is perhaps less likely (compared to TV, films, newspapers / magazines) to be the subject of day-to-day conversation that often maintain social relationships.

Scores on the 'surveillance' factor showed that participants used newspapers / magazines, books and TV to learn about the others and the world around them significantly more than other activities. This is perhaps most easily understood given that these particular elements of the mass media are, for the most part, designed specifically for the purposes of communicating current news and information. Comparison of 'surveillance' scores also suggested that listening to music is motivated significantly less by the need for surveillance, relative to participation in other activities. This is unsurprising because, although inadvertently informative, music might not function effectively as a means to learn about things. This idea is consistent with the findings of Chapter 3, which showed that 'surveillance' was the least important of the six reasons why people listen to music.

Scores on each of the six factors indicate therefore that listening to music is uniquely capable of satisfying a number of different needs. With the exception of 'interpersonal relationships' and 'surveillance', mean scores on each of the other factors suggest that music

is, for the most part, rated as better than the other leisure activities at serving an individual's different needs. This apparent versatility might well explain why music is so important to adolescents. Uses and gratifications research assumes that different media and leisure activities compete with each other to satisfy peoples' needs. In view of this assumption, music might simply be the most effective means by which individuals can satisfy their different needs.

One limitation the study experienced was the potential overlap between the leisure activities investigated. Specifically, the use of broad categories meant that the different activities were not necessarily mutually exclusive. For example, when watching TV, people might actually be watching music videos, films, or sporting events. Nonetheless, it would be impractical to distinguish between all the possible different sub-categories of each leisure activity (e.g., TV-music, TV-films, TV-sport, etc.).

When asked about this directly, participants (regardless of sex) considered themselves significantly less likely to use their musical taste as a symbolic 'badge' of identity than other people. Like Chapter 3, the present findings suggest that whilst participants recognised the symbolic role of musical taste as a social 'badge' of identity, they also wished to personally dissociate themselves from using music in this way. This sort of response is consistent with the "third-person effect" (see Davison, 1983).

Chapter 5   Why do we listen to music? A qualitative analysis

The uses and gratifications approach (Katz, Blumer, & Gurevitch, 1974) is based on the assumption that individuals actively use the media to serve their needs, rather than being passive recipients of these media. In addition to this, individuals are also assumed 'sufficiently self-aware' to report the reasons why they take part in particular activities, in this case, the reasons why they listen to music. This assumption has led previous investigations (e.g., Gantz et al, 1978; North et al, 2000) to ask participants to assign numerical ratings to a number of different reasons to explain why they personally listen to music. These reasons were pre-defined by the researchers, and as such these previous studies may have overlooked the real reasons why people listen to music.

In view of this criticism, the present study used an open-ended question format in which participants were free to explain why they listen to music. This qualitative research design highlights the reasons given by participants themselves to explain why they listen to music. Traditionally, interviews have been used to investigate why people listen to music (e.g., Bennett, 2000; DeNora, 2000; Laughey, 2006). This has allowed researchers to elicit rich, detailed information from participants, which has led to the development of a number of important ideas regarding the functions of music. This approach has, however, often provided only idiographic accounts of why people listen to music, where because of relatively small samples, researchers have tended to interpret data idiographically rather than nomothetically. As such, the reasons why people listen to music are usually explained in terms of the particulars of the specific case discussed rather than in terms of more useful generalisations. Interviews are also time-consuming, subject to interviewer effects, and are difficult to analyse. For these reasons, the present study did not use interviews to investigate why, in general, people listen to music.

The present study simply asked participants to write down the reasons why they listen to music, thus avoiding many of the problems normally associated with interviews. First, this self-report measure took a short time to complete, making it possible to study a larger sample of participants. As a result, the findings of this study might be more easily generalised to a wider population of people. Second, by avoiding the use of face-to-face interviews, participant's answers may be less subject to a social desirability bias, the use of leading questions, or interviewer effects (i.e., the idea that an interviewer's behaviour and characteristics can influence the answers given). In the present study, participation was anonymous; increasing the likelihood of individuals responding honestly, and less inclined to give socially desirable answers. Third, when compared to interview transcripts, the findings of the present study were significantly easier to analyse. Specifically, because reasons were provided directly by participants, rather than inferred indirectly from interview transcripts, analysis of participants' responses should be less likely subject to interpretative bias. Given these advantages, the present investigation was expected to provide a more representative account of why, in general, people listen to music.

Method

Participants

189 psychology undergraduates (148 females, 41 males) participated in the study voluntarily. Participants' mean age was 18.89 years ($SD = 3.10$).

Design & Procedure

Participants completed an open-ended questionnaire to establish participants' reasons for listening to music. Participants were first asked to indicate their sex and age. Following this, participants were then asked to write as many reasons as possible to explain why they

listen to music. Participants were given four minutes to complete the questionnaire. Each participant's response was later transcribed ready for analysis.

Results and Discussion

Thematic analysis (see Braun and Clarke, 2006 for an overview) was used to identify any patterns or themes present in the reasons given by participants to explain why they listen to music. Taking an inductive approach, the analysis was carried out with no prior assumptions about why people listen to music. Themes were identified through the repeated examination of participants' transcripts, crosschecking for common patterns between participants to explain why they listen to music. Another researcher also analysed participant transcripts independently; themes were identified only when both researchers were agreed. From this analysis seven main themes were found to emerge from the reasons given by participants to explain why they listen to music.

Mood management

The most prominent theme throughout participants' responses was the use of music as a means to express emotion and manage their mood. In most cases, listening to music seemed to be a way for individuals to strategically create and enhance a particular mood or emotion. Participants explained how they listened to music to create, change, shift, and set different moods to suit both their personal needs and social demands.

"To put me in the mood I want to be in"

"To get me into a certain mood / feel a certain way"

"To put me in a particular mood / get me out of a particular mood"

"To put me in a 'going out mood' before I go out at night!"

"To put me in the mood for something"

For most participants, listening to music was used as a deliberate attempt to manage their level of arousal. Music was frequently described as a way to help participants "to relax", "to chill out", "calm down", as well as a means "to motivate", and increase levels of arousal and energy. Given this, it is understandable that participants reported using music to regulate their level of arousal throughout the day, and according to the particular demands of different activities (e.g., exercise).

"Gives me energy"

"To hype myself up"

"Calms me down or picks me up"

"Helps me to go to sleep"

"To wake me up in the mornings"

"To motivate myself on occasions of sluggishness"

"I listen to music to motivate myself whilst working / exercising"

Listening to music also appeared to represent a way for participants to create a positive mood. A large proportion of participants reported listening to music because it "makes me happy", "to cheer me up", "to make me feel better".

"Put me in a good mood"

"Makes me feel better when feeling low"

"It makes things seem better"

"Can bring you out of a bad mood"

The use of music to influence how people experience their emotions was evident in participants' reasons for listening to music. Instead of using music to create a particular state, participants reported listening to music to enhance or optimise their emotional experiences.

"To amplify emotions"

"To heighten emotions"

"To augment my mood"

"Makes the current mood I'm in exaggerated"

"It enhances the mood I am in or the emotions I am feeling"

For some, listening to music provided participants with an opportunity for an emotional release or 'catharsis'. This suggests that participants might listen to music as a means to cope with and alleviate negative feelings; although this cathartic function of music was, for most participants, limited to relieving stress.

"To make me cry"

"To release aggression"

"Helps release emotions if feeling down"

"Sad songs let me allow my feelings out when I'm hurt and angry"

Participants also used music as a way to understand and express emotions that might otherwise be confusing, and difficult to articulate. In particular, participants often reported listening to music that was felt to match their emotions at the time.

"To reflect my emotions"

"As a way of understanding how I feel"

"I use it as a way of expressing the mood I'm in"

"To reflect how I'm feeling at that point in time"

"Better express how I feel about certain things"

"It says what you otherwise can't find the words to say"

Music as background noise

The second main theme that emerged from the reasons given by participants was the use of music as 'background noise'. This finding suggested that in a number of cases listening to music was not the primary focus of participants, but rather a secondary activity used to accompany another task.

"Background to make other activities more enjoyable"

"Entertain myself when I'm doing something else"

"So there's some kind of noise in the background"

"For background listening when doing other things such as cooking"

"As I am cleaning or working I like to hear music in the background, just makes what I'm doing more interesting"

For most participants, the use of music as a source of 'background noise' was motivated primarily by the need to avoid uncomfortable silences. Participants frequently reported that they "hate silence" and listened to music simply because "it fills the silence".

"I don't like silence"

"I don't like being in complete silence"

"I like having noise in the background – I don't like it being too quiet!"

"As background noise to cover the silence when in my car or in my room"

"It fills in the silence when I'm busy doing something"

"Create background noise if the room is silent"

In social situations, participants report listening to music for similar reasons. Participants reported using music to provide background noise when with other people in order "to avoid awkward silences" and "to create an atmosphere".

"Background sound to avoid awkward silences"

"Don't like it when its quiet, provides a better atmosphere"

"To set the right atmosphere for special occasions"

"At a party / gathering to create atmosphere and decrease the need for constant conversation, it helps avoid awkward circumstance"

"When talking to friends I tend to have it on in the background"

"As background noise when friends are over, it's nicer to have music in the background than silence"

In some cases, participants reported using music as a way to alleviate feelings of loneliness. When alone, listening to music presumably offers individuals with background noise that might serve as company, avoiding periods of silence that may remind them they are alone.

"To accompany me while I'm alone"

"Helps me to feel safe when I am in the house on my own"

"So I don't feel lonely when travelling or on my own"

"When alone keeps me company"

"It keeps you company if you're on your own"

A large number of participants reported listening to music in the background when working or studying. Participants frequently reported listening to music because it "helps me to concentrate".

"Helps me to concentrate when played softly in the background"

"To act as background music as I cannot study or work in silence"

"I can work better with music than silence"

"Helps me revise when it's in the background"

"Background music stops my mind from wandering when I need to focus on work"

Participants also reported listening to music when travelling. In this context, participants often described music as a means "to pass the time", or distract themselves while on long journeys.

"To occupy myself when travelling"

"On the bus I listen to music to pass time"

"Something to pass the time when waiting, or going somewhere"

"Helps to shorten a long journey in the car"

"Makes time seen faster, if waiting for something or on public transport"

Musical participation

The third main theme found was the idea that participants listened to music in order to participate in musical behaviours. For example, participants reported listening to music "to sing along to", "to dance to", and in few cases to help them write songs, and to practice playing an instrument.

49

To reflect on the past

The fourth main theme discovered was the use of music to bring to mind and reflect upon particular memories. Participants described listening to music to "bring back memories", to "trigger certain memories", to remind them of a place, person, time, or event, or "because it can remind me of good times". These findings suggest that when feeling nostalgic and sentimental, participants may listen to music to reflect on past experiences, relive memories from childhood, or remind of them happy times and of loved ones.

"To remind me of past happy times!"

"Because it reminds me of my friends and family"

"To reminisce (people, places, holiday memories, etc.)"

"Reminds me of specific events I associate with a particular song"

"Sometimes I listen to music just because it reminds me of someone important to me or it reminds me of a particular time of my life"

Music as an enjoyable experience

The fifth theme was the idea that participants listened to music for no other reason but to enjoy themselves. Participants reported listening to music simply "because I enjoy it", "because it is fun", "to entertain myself", or "because I love it". Most of the time, participants were unable or unwilling to state why they enjoyed music; but in some cases specific musical elements (e.g., lyrics, melody, beats, etc.) were identified as an explanation of why they listened to music.

"To simply enjoy it for what it is"

"Purely because I enjoy listening to music"

"Sometimes I just like certain lyrics or a beat"

"To hear a specific melody that appeals to me"

"Simply to enjoy the music / melody / lyrics"

"I like the lyrics of the song"

Social interaction

The sixth theme discovered was the idea that listening to music was "a social activity", which offered an opportunity for participants "to socialise with friends" (e.g., dancing, live music). Participants also reported listening to music "to have something to talk about" with others, where shared musical experiences might serve as a useful conversation topic. In this context, listening to music might be understood to facilitate social interaction, helping individuals to form and maintain relationships with others.

"I listen to have fun with my friends"

"Something to discuss with friends"

"Can sometimes act as a conversation starter"

"To have something to talk to friends about"

"Good talking point when you meet someone"

"To help me connect with friends – gives us a common ground"

Music as a distraction

The final theme to emerge was the use of music as a means to distract participants and occupy them when bored. Participants often described listening to music "to pass the time", "to kill time", to "distract me" and "to relieve boredom". In many cases, participants explained listening to music simply because it "gives me something to do".

51

"To keep me occupied"

"Take my mind off things"

"Takes my mind off problems"

"For a distraction if I'm bored"

"It gives me something to do when I'm bored"

"When there's nothing else to do"

"It's the cheapest & easiest way to pass the time"

Conclusions

Thematic analysis of the reasons given by participants showed that, in general, there were seven main reasons why they listen to music. Participants reported listening to music as a means to manage their mood, to provide 'background noise' to accompany another activity, to participate in musical behaviours, to reflect on the past, to enjoy the music, to encourage social interaction, and as a distraction. These themes correspond closely with the factors identified in Chapter 3. Most significantly, by using an open-ended qualitative design, the present investigation discovered reasons why people listen to music that had previously been overlooked.

Participants reported listening to music to sing along and dance to, providing them with a means to participate in musical behaviours regardless of musical talent or training. The present investigation also highlighted that participants listen to music as a way to remember a particular person, time, place, or event, to reflect on the past, or to remind them of happy times and loved ones. Though perhaps obvious reasons for listening to music, both have rarely been explicitly stated as such and have not been dealt with directly by previous investigations (e.g., Gantz et al, 1978; Roe, 1985; Tarrant et al, 2000). This would not have

been possible if participants were asked to simply rate a limited number of reasons to explain why they personally listen to music.

Though far from providing a definitive account of why people listen to music, the present findings offer an initial insight as to the reasons participants are likely to use to explain why they listen to music. Chapter 3 suggested that people use music as a means to define and express their identity; and given this, it is therefore interesting to note that for the most part participants in the present study did not mention listening to music for this reason. This raises several questions about whether people actually use music to manage their identity or, if they do, they are not consciously aware of it. The more likely explanation may simply be that participants were unwilling to admit openly that they use music in this way. Findings in Chapter 3 and 4 showed evidence of a "third-person effect", where participants appeared to distance themselves from the idea that musical taste is used as a social 'badge' of identity. This implied that participants might regard the use of music to manage their identity as associated with a social stigma to be avoided. Future research is needed to explore this idea further.

The open-ended qualitative design used in the present study is an effective method to investigate the reasons why people listen to music. By asking participants to write down the reasons why they listen to music the present investigation was able to study a significantly larger sample than would otherwise be possible with the use of interviews. In doing so, the present findings allow us to make increasingly confident generalisations about why people listen to music. To interview a large participant sample of an equivalent size would have been prohibitively time-consuming, extremely difficult to analyse, and subject to interviewer effects and bias. However, in some cases, asking participants to write down the reasons why they listen to music may not be the most appropriate research method. For example, the use of interviews might be better suited when studying particular participant samples where

writing down their reasons for listening might be difficult (e.g., the illiterate, the young, and the elderly).

The main limitation of the present findings is that they are based on the assumption that participants are sufficiently aware of, and able to properly articulate, the reasons why they listen to music. The extent to which this assumption is appropriate is open to debate. Individuals may not always know why they listen to music, and as a result the reasons given by participants might simply be those that they have previously heard others say, or well-known, clichéd explanations that do not necessarily correspond with why they personally listen to music. The qualitative analysis of participants' responses may also have been subject to potential limitations. As with any qualitative study, the possibility of an interpretative bias cannot be disregarded, although this was hopefully minimised through inter-rater agreement on the themes identified. In addition to this, the present study provides only a descriptive account of why participants listen to music. This meant that the present findings were unable to demonstrate how important each of the reasons identified were to why participants listen to music, which would have been helpful.

Future investigations might use qualitative research methods to investigate ideas largely ignored by previous research. For example, North, Hargreaves, & Hargreaves (2004) showed how peoples' reasons for listening to music were likely to differ according to the time of day, the place, and the social situation (e.g., alone, with friends). To explore this idea in greater depth, researchers might use music diaries (see Gavin, 2006), to record participants' reasons when and where they listen to music. Future studies might also use the present study's open-ended qualitative approach to look at whether people of different age groups give different reasons for listening to music.

The use of qualitative methods allows the researcher to elicit rich, detailed information, and in this case to discover reasons for listening to music that have not previously been thought of. For this reason, qualitative methods represent an invaluable feature of any well-balanced investigation that should complement, rather than replace quantitative studies of why people listen to music.

Chapter 6   Reasons for listening to music: A cross-sectional study

The main criticism of previous investigations concerned with the reasons for listening to music (e.g., Gantz et al, 1978; North et al, 2000) is that they employed adolescent samples, and as a result, their findings cannot necessarily be generalised to other age groups. This tendency to focus exclusively on the uses and gratifications of adolescents is perhaps understandable given the particular importance they ascribe to music in their everyday lives (e.g., Fitzgerald, Joseph, Hayes, & O'Regan, 1995; see Chapters 3 & 4). In addition to this, the idea that development might continue beyond adolescence has, broadly speaking, been ignored by psychological research given the long held assumption that an individual's development is largely completed by this time (e.g., Freud, 1962; Piaget, 1974). These factors may have led previous researchers to overlook the possibility that people of different ages might listen to music for different reasons, and the present investigation addresses this.

The idea that an individual's development might continue throughout adulthood was first popularised by Erikson (1980). He believed that over the course of their life span, an individual goes through eight stages, each presenting them with a particular psychosocial crisis. The way in which each crisis is dealt with and resolved was thought to influence how an individual's personality develops. Levinson's (1986) model of adult development also suggested that adult life is structured into distinct periods or 'eras' (i.e., pre-, early, middle and late adulthood). This model claimed that individuals undergo a number of transitional periods during which their priorities, their relationships with others, and their social roles were all likely to change. Gould's (1978) ideas regarding the development of adult consciousness again illustrate how individuals may continue to develop throughout adulthood, where false assumptions about oneself and the world are confronted, and over time gradually abandoned as one 'grows up'. Based on this notion that an individual's goals,

priorities, and challenges are likely to differ at different points of their lifespan, the present investigation studied whether people of different ages listen to music for different reasons.

Several previous investigations have found evidence of a developmental shift in how people relate to music. For example, Holbrook and Schindler (1989) and North and Hargreaves (1995, 2002) found that people of all ages were most likely to prefer music listened to during late adolescence or early adulthood, such that musical tastes tend to reflect those songs, artists, and genres most prevalent at that period of their life. LeBlanc, Sims, Siivola, and Obert's (1993) cross-sectional study found that an individual's tolerance for different musical styles (or 'open-earedness') fluctuated between different age groups. Musical tolerance was highest among young children, significantly lower among adolescents, higher again among adults, and then lower again among older participants. If aesthetic responses to music vary among different age cohorts, this again suggests that it is not unreasonable to expect that people of different ages might also listen to music for different reasons.

Previous research has investigated why non-adolescent samples listen to music, although this has typically focused on a specific age group, with no direct comparison between people of different ages. For example, Hays and Minichello (2005) asked a sample of elderly people (i.e., aged 60 yrs+) why they listened to music. However, because no comparisons were made with other age groups, this study was unable to offer any indication whether elderly people listen to music for the same reasons as younger people, or if they significantly differ in some way.

The present study asked participants from six different age groups to rate the reasons why they listen to music. To the best of the author's knowledge this study was the first to investigate whether people of different ages listen to music for different reasons; and because

57

of this there were no grounds to predict specifically where these age differences might lie. However, if we accept the assumptions that people at different points of their life are likely to face different challenges, and that individuals use music to serve their needs, it is then reasonable to expect that different age groups might have different reasons for listening to music.

Method

Participants

Seven hundred volunteers were recruited from three sixth form colleges, three university campus libraries, and from members of the general public. Participants were divided into six age groups, namely 173 16-18 year-olds (88 males, 85 females); 197 19-24 year-olds (104 males, 93 females); 94 25-29 year-olds (50 males, 44 females); 78 30-39 year-olds (50 males, 28 females); 75 40-49 year-olds (48 males, 27 females); 83 50+ year-olds (39 males, 44 females).

Design & Procedure

Participants completed a questionnaire that first asked them to rate how important music was in their everyday life. Ratings were given on an 11-point scale (0 = *Not at all important* and 10 = *Extremely important*). In addition to this, participants were also asked to report the amount of time (hours per day) they spent listening to music and the amount of money (UK£ per month) they normally spent on music.

A 48-item scale was then used to ask why participants listen to music (i.e., based on the findings of Study 3, 18 items were added to the 30 item scale used in Study 1 and 2). Participants were instructed to rate the extent to which each statement described why they listened to music. Ratings were given on an 11-point scale (0 = *Not at all* and 10 =

Completely). The 48 statements were presented to all participants in the same randomised order.

At the end of the questionnaire, participants were questioned directly about the idea that musical taste might function as a social 'badge', used by people to symbolically represent their identity. Participants were required to answer the following two questions using an 11-point scale (0 = *Not at all* and 10 = *Completely*): (1) "To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?" and (2) "To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?"

Results

Three two-way between-groups ANOVAs were used to test the effects of participants' sex and age group on (1) ratings of how important music was in their everyday life; (2) the hours per day they spent listening to music; and (3) the amount of money (UK£/month) they spent on music differed significantly according to a participant's sex and age group. Significant main effects for participants' age were found on the everyday importance of music (F (5, 688) = 11.46; $p < .01$), the time spent listening to music (F (5, 688) = 7.44; $p < .01$), and the amount of money spent listening to music (F (5, 688) = 6.19; $p < .01$). Tukey HSD post-hoc comparisons between the six different age groups can be found in Appendix 1. The only significant main effect for sex was found on the amount of money participants report spending listening to music (F (1, 688) = 7.00; $p < .01$). Post-hoc analysis showed that men aged 25 to 29, and those aged 50 and over spent significantly more money listening to music than women of the same age. In each case, no significant interaction was found between age and sex. Figures 1, 2 and 3 illustrate how the six age groups differed.

Everyday importance of music
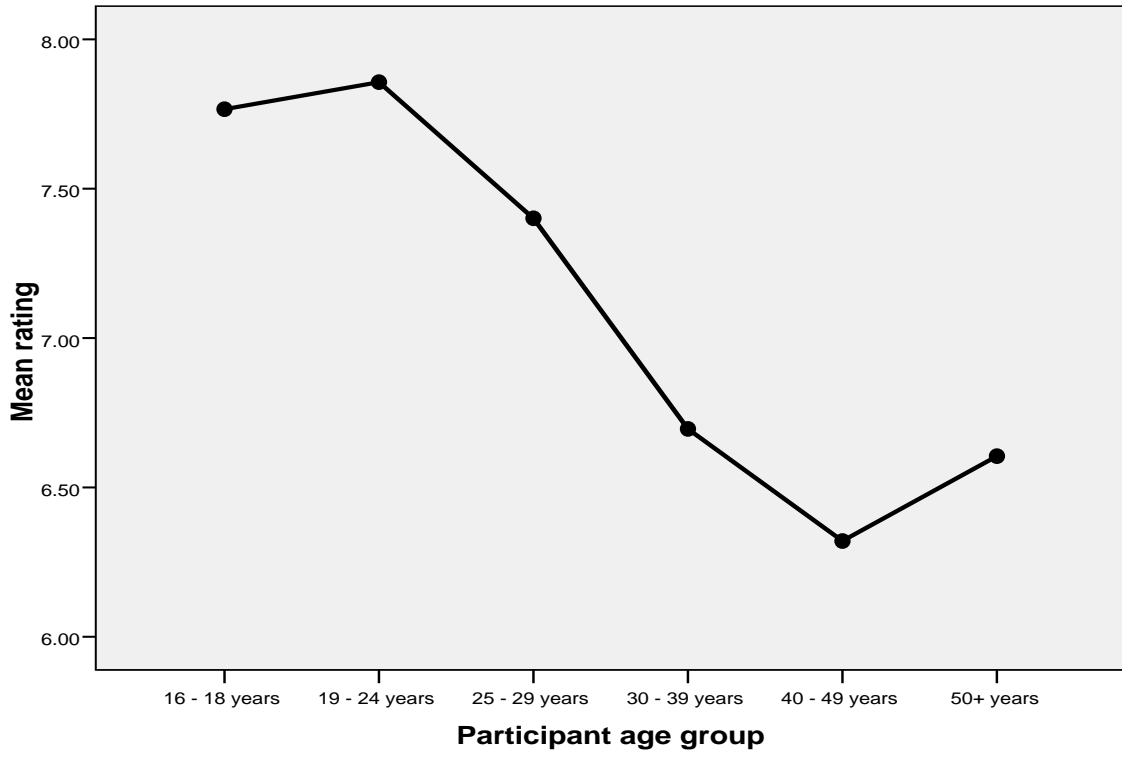
Figure 1. *Everyday importance of music*

Number of hours per day spent listening to music
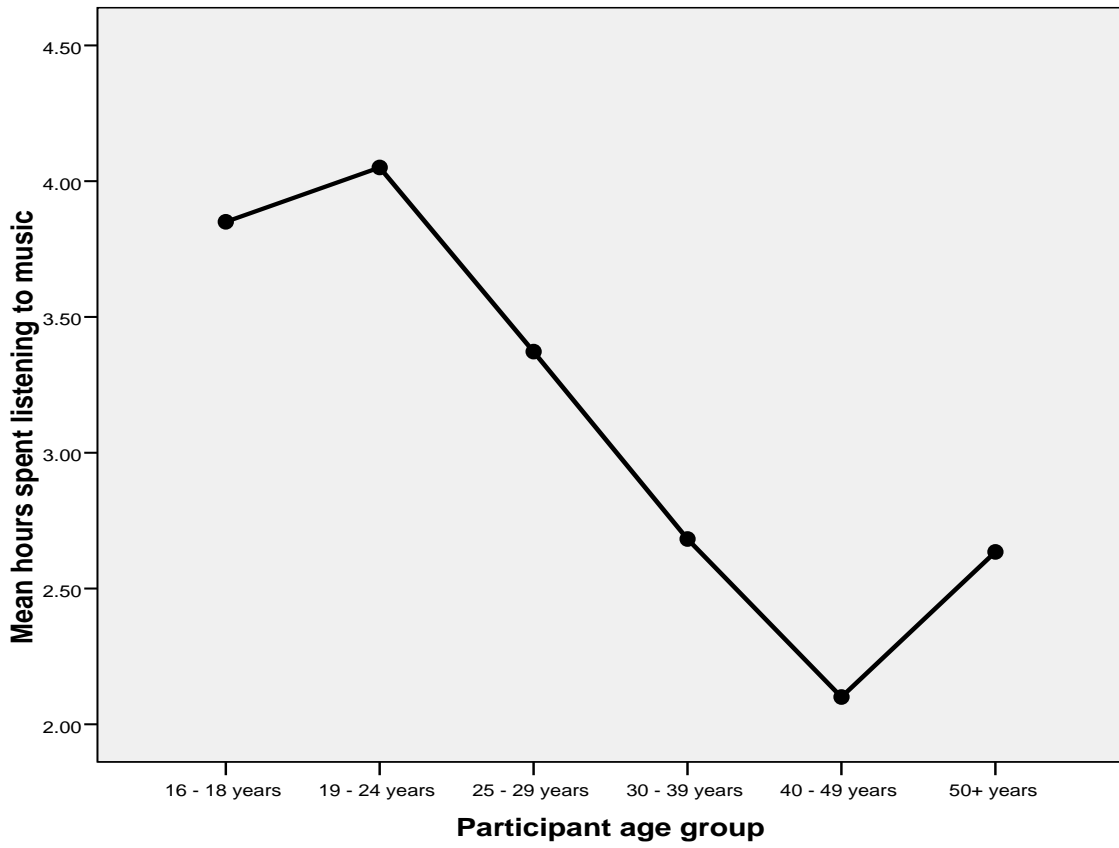
Figure 2. *Time spent listening to music* (hours per day)
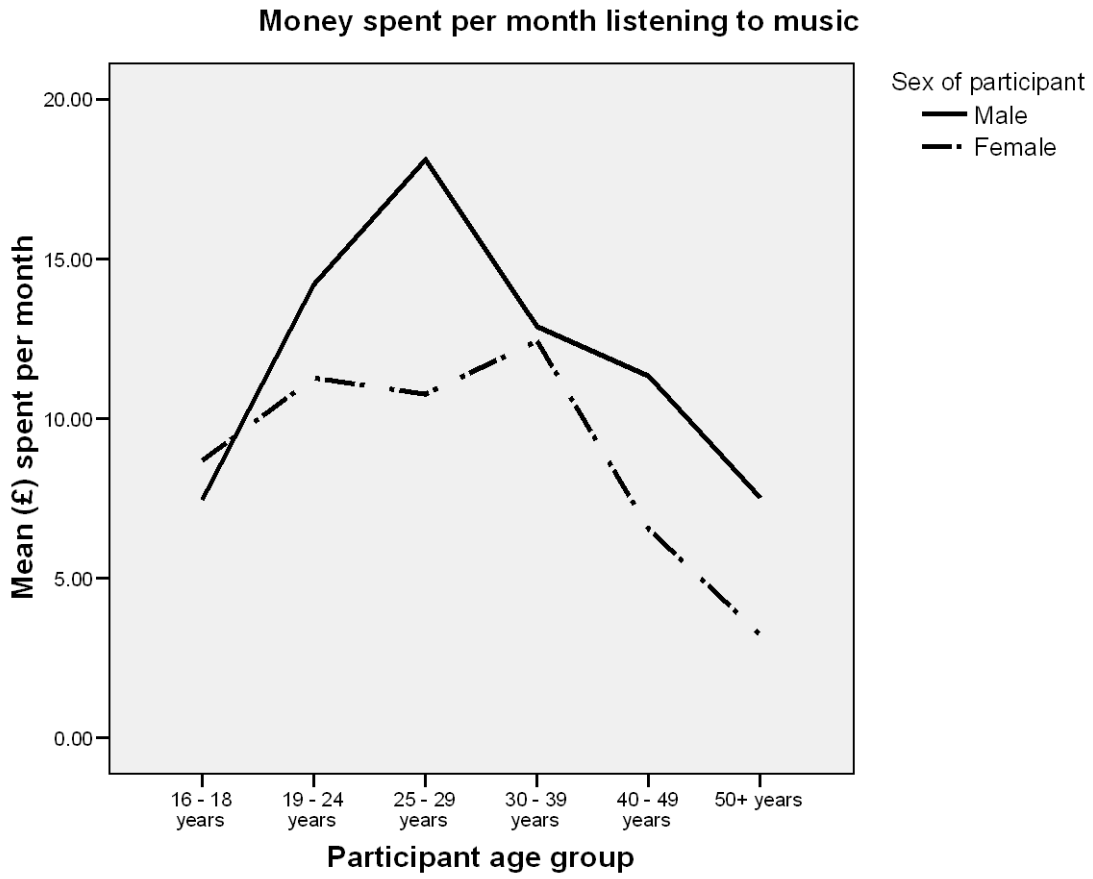
Figure 3. *Money spent listening to music* (UK£ per month)

A factor analysis was conducted on participants' ratings of the 48 reasons why they listened to music. Varimax rotation of the principal components showed that there were eight different factors with eigenvalues greater than one, which together accounted for 60.96% of variance present in participants' ratings. Factor loadings greater than 0.30 are shown in Table 10.

These loadings suggest that Factor 1 might be interpreted as 'personal identity', where music is used for identity development or to portray a social image to others. Factor 2 might be interpreted as 'negative mood management', where music is used to alleviate negative feelings and to enhance mood. Factor 3 might be interpreted as 'positive mood management', where music is used to entertain and create positive moods. Factor 4 might be interpreted as 'reminiscing', where individuals listen to music to reminisce, reminding them of a particular place, person, or time. Factor 5 might be interpreted as 'diversion', where music is used as a distraction to relieve boredom, or to simply pass the time. Factor 6 might be interpreted as 'arousal', where music is used to manage an individual's level of arousal. Factor 7 might be interpreted as 'surveillance' where music is used as a means to keep up with current events and social trends. Factor 8 might be interpreted as 'social interaction' where people listen to music to provide an opportunity for interaction with others. Overall scores for each factor were calculated as the sum of ratings given to their respective items.

Table 10.
Factor analysis of participants' reasons for listening to music

Reason	Factor 1 loading	Factor 2 loading	Factor 3 loading	Factor 4 loading
To create an image for myself	.79			
To construct a sense of identity for myself	.77			
To express my identity	.76			
To explore possible identities	.74			
To discover who I really am	.72			
To portray a particular image to others	.71			
To display my membership of social groups / subcultures	.71			
To learn how other people think	.60			
To learn how to do things	.59			
To learn how to behave in future	.59			
To have something to talk about with others	.59			
To help get through difficult times		.70		
To reflect how I feel		.68		
To express my feelings & emotions		.64		
To relieve anxiety		.64		
To alleviate feelings of loneliness		.64		
To relieve tension / stress		.58		
To take my mind off things		.54		
To cheer me up		.53		
To make me feel better		.52		
To escape the reality of everyday life		.51		
To be entertained			.74	
To enjoy the music			.73	
To relax			.71	
To brighten up my day			.55	
To create an atmosphere			.46	
To set the 'right' mood			.37	
To reminisce about the past				.80
To bring back certain memories				.78
To remind me of happy times				.76
To remind me of someone				.65
Eigenvalue	15.28	4.07	2.23	1.93
Percentage of variance	31.83	8.47	4.64	4.02

Table 10. (Continued)
Factor analysis of participants' reasons for listening to music

Reason	Factor 5 loading	Factor 6 loading	Factor 7 loading	Factor 8 loading
To pass the time	.72			
To distract me	.68			
To relieve boredom	.62			
To 'fill' uncomfortable silences	.49			
To help me concentrate on work	.41			
To help me get to sleep at night	.34			
To help me exercise		.78		
To dance to		.77		
To give me energy		.53		
To sing along to		.47		
To wake me up in the mornings		.44		
To obtain useful information for daily life			.77	
To keep up with current events			.72	
To stay in-touch with current fashions & trends			.50	
To socialise with friends				.71
To spend time with friends				.67
To spend time with family				.58
Eigenvalue	1.78	1.57	1.31	1.11
Percentage of variance	3.71	3.26	2.73	2.30

A 2x6 MANOVA was then carried-out on factor scores to test whether or not men and women within the different age groups listen to music for significantly different reasons. Multivariate analysis showed found significant differences between age groups (F (40, 3425) = 7.89, $p < .001$) and between male and female participants (F (8, 681) = 18.06, $p < .001$). No significant interactions were found between sex and age. Univariate analyses showed there were significant differences between the age groups on scores on seven of the eight factors. Mean scores on each factor and Tukey HSD post-hoc comparisons between the six different age groups can be found in Appendix 2. Univariate analyses also showed significant differences between male and female scores on the personal identity, reminiscing and arousal factors. Table 11 provides a summary of these findings. Figures 4 to 10 each show mean scores for each of the seven factors where significant differences were found.

Table 11.
Summary of 2x6 between-groups analyses

Factor	Age	Sex	Age*Sex Interaction
Personal identity	8.17**	8.20*	1.05
Negative mood management	11.26**	2.38	1.35
Positive mood management	12.82**	1.65	0.82
Reminiscing	7.07**	6.98*	1.99
Diversion	31.24**	1.78	1.45
Arousal	36.79**	66.52**	0.52
Surveillance	1.33	2.65	0.40
Social interaction	4.44*	2.69	1.46

* $p < .01$; ** $p < .001$
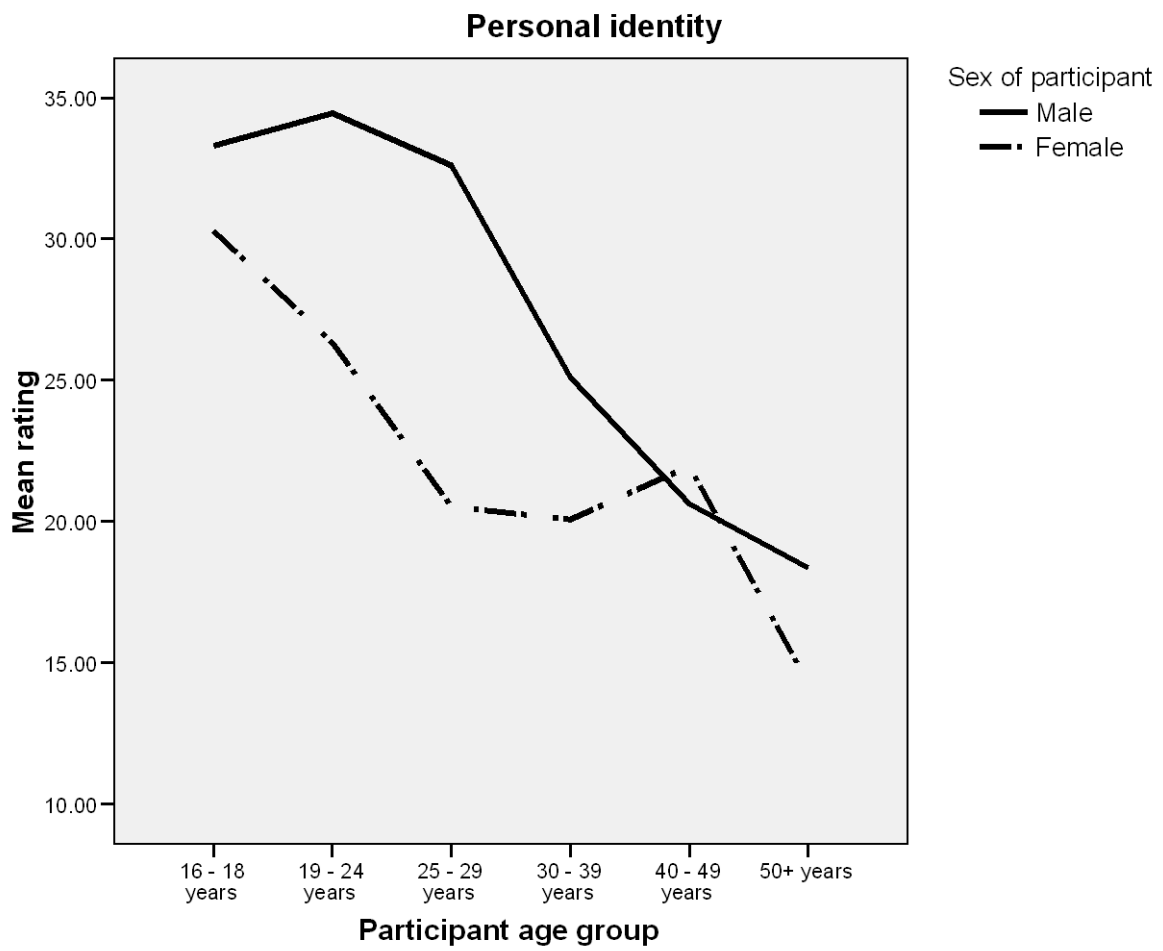
Figure 4. *Personal identity scores*

Negative mood management
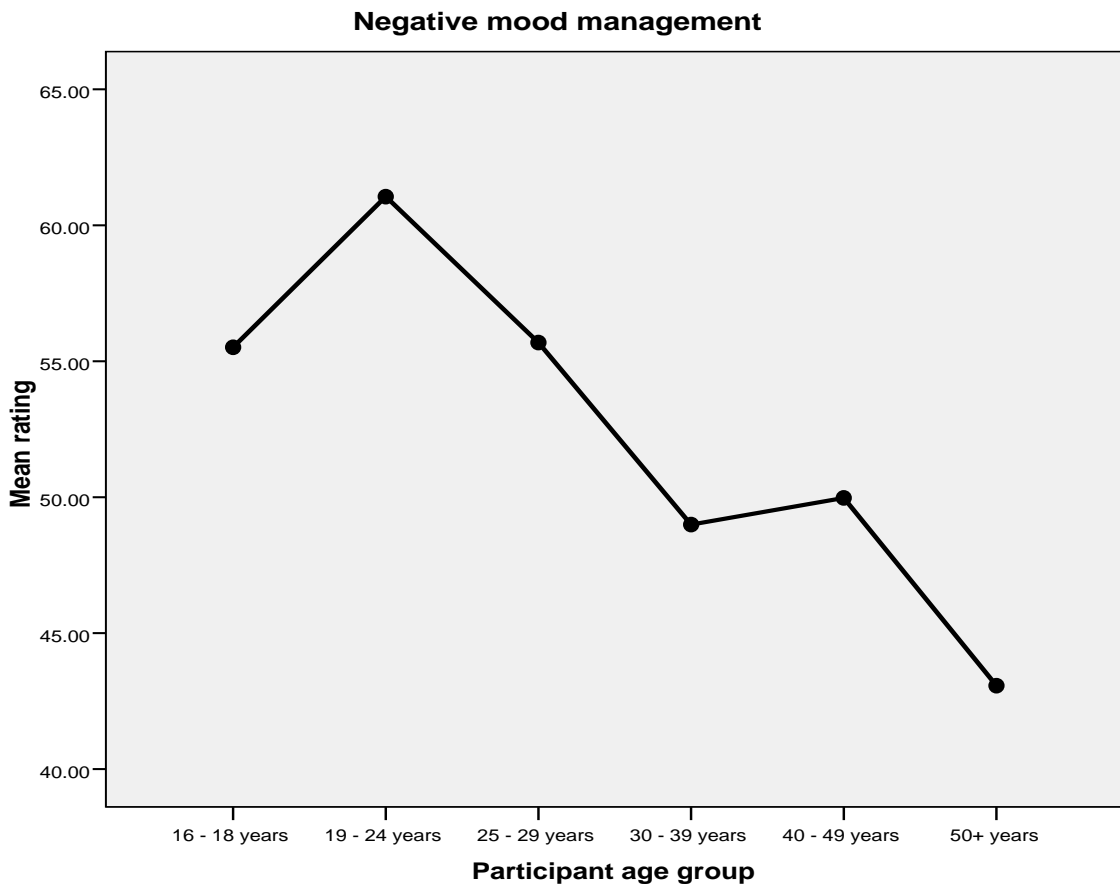
Figure 5. *Negative mood management scores*

Positive mood management
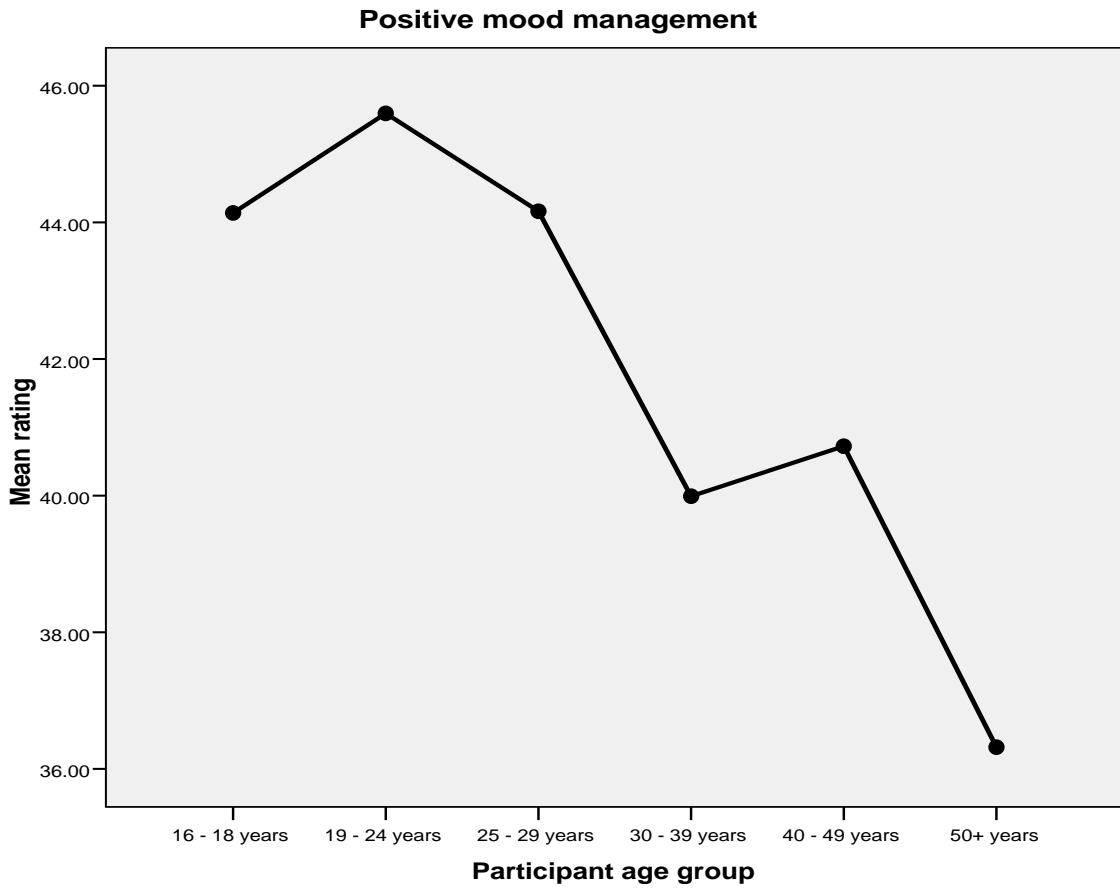
Figure 6. *Positive mood management scores*
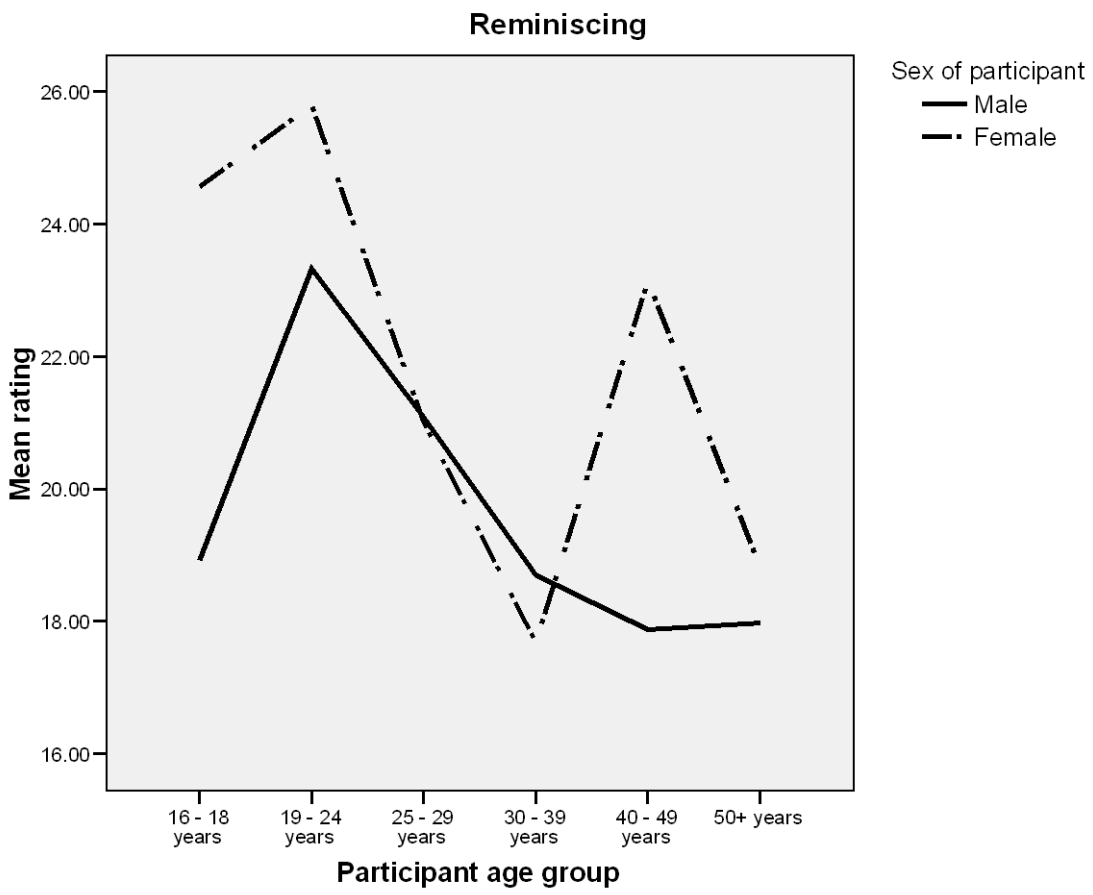
Figure 7. *Reminiscing scores*
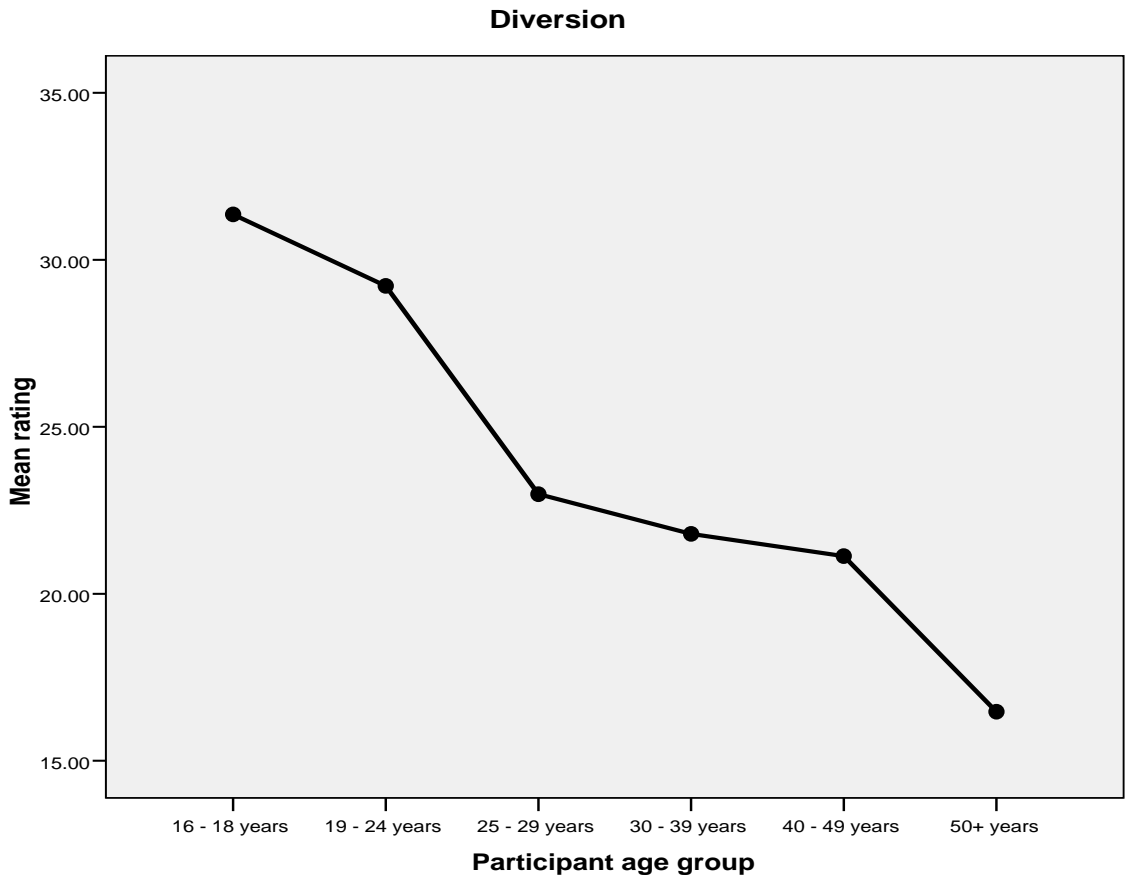
Figure 8. *Diversion scores*
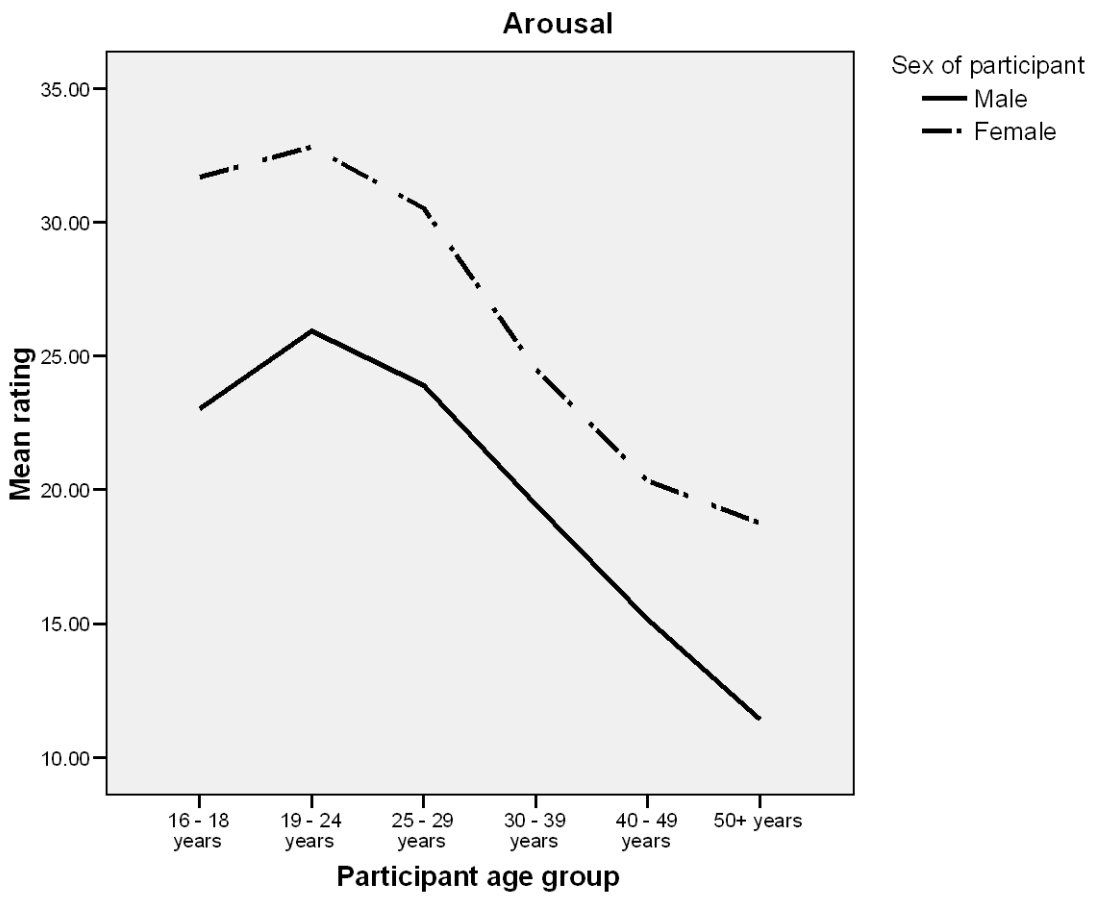
Figure 9. *Arousal scores*
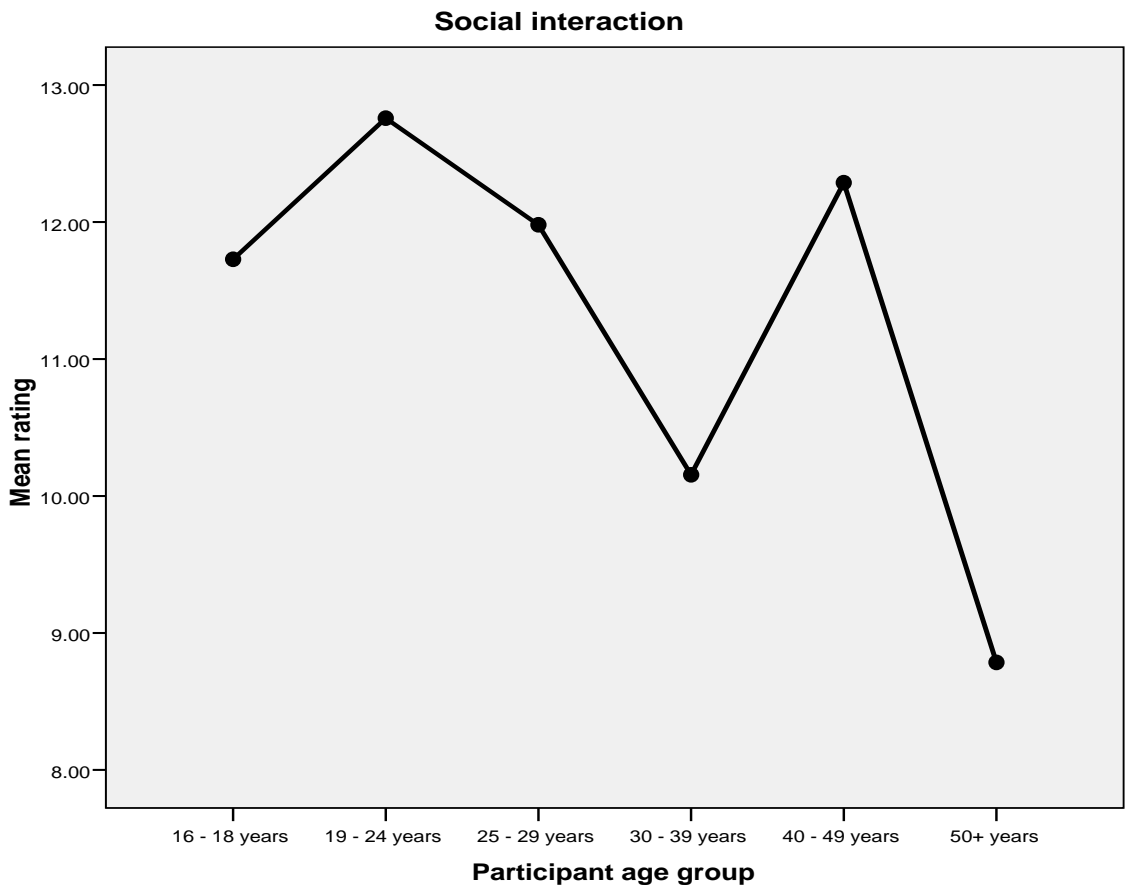
Figure 10. *Social interaction scores*

A 2 x 2 mixed ANOVA was used to examine whether male and female participants differed significantly with regard to ratings of the extent to which they and other people use musical taste as a symbolic 'badge' of identity. A significant main effect was found on participants' answers to the two different questions, where $F(1, 698) = 601.56$; $p < .001$. However, no effect of participants' sex was found (where $F(1, 698) = 2.51$; $p > .05$), nor any interaction (where $F(1, 698) = 2.44$; $p > .05$). Table 12 shows the mean ratings given to both questions.

Table 12.
Musical taste as a symbolic 'badge' of identity - Mean ratings

	Male	Female	Total
To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?	4.55 (*3.03*)	4.13 (*2.82*)	4.36 (*2.94*)
To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?	6.99 (*1.90*)	6.91 (*1.94*)	6.96 (*1.92*)

Discussion

When asked to rate how important music is in their everyday life, mean ratings suggested that music was particularly important for adolescents and young adults, but was significantly less important for participants aged over 30. This decline in music's everyday importance is most likely explained by differences in participants' priorities and growing responsibilities (e.g., full-time work, children, financial commitments), rather than by a direct effect of their age. For example, music might be expected to play a significantly more important part in the life of a 30 year-old man who is single, with no children, and works only part-time, than for a

74

married man of the same age, who works full-time and has a family to support. Future research should investigate this idea, examining the relative influence of an individual's chronological age, subjective age (i.e., how old do you feel?), and the number of social roles and responsibilities they have on how important music is to them.

Participants aged between 16 and 29 reported spending significantly more time listening to music than those aged over 30. One reason for this might be that people aged 30 years and over simply have less spare time to listen to music or, because of changing priorities they are less inclined to spend their spare time listening to music. Young adults (i.e., 25-29 years old) also reported spending the most money each month on music. Participants aged 50 years and over spent the least on music each month, spending significantly less than all other age groups except for those aged between 16 and 18 years. Participants aged 25 to 29 might well have had the highest disposable income of all six of the age groups investigated, and may therefore have felt free to spend more money on non-essential, leisure goods such as music. Interestingly, even though music was found equally important to participants of both sexes, men aged between 25 and 29 years, and over 50 years reported spending more money on music than women of a similar age. Future research should investigate the possible reasons for this, and explore why men are likely to spend more money on music than women of the same age.

Participants were asked to rate how accurately 48 reasons described why they listen to music. Factor analysis of participants' ratings showed there were eight main reasons why participants listened to music: (1) personal identity; (2) negative mood management; (3) positive mood management; (4) reminiscing; (5) diversion; (6) arousal; (7) surveillance; and (8) social interaction. This eight-factor model is broadly consistent with the six factors identified in Chapter 3. Participants' scores on each of these eight factors showed several significant differences between the six age groups investigated.

Scores on the 'personal identity' factor indicated that participants in each successive age group were less and less likely to listen to music as a means to define and express their identity. Late adolescents (16 – 18 years old) were most likely to listen for this reason, significantly more than those aged over 30 years. One possible explanation for this is that, as people grow into adulthood they are likely to encounter ever more opportunities to define and express their identity in ways (e.g., as a parent, through an occupation, etc.) other than the music they like to listen to. In addition to this, men aged between 19 and 29 years scored significantly higher on the 'personal identity' factor than women of the same age. These finding suggested that whilst equally important to identity development for adolescents, women are significantly less likely to listen to music for this reason when adults. In contrast to this, young men appear to continue listening to music to define and express their identity until they reach their thirties, after which 'personal identity' scores exhibit a similar decline for both men and women.

Scores on both 'negative' and 'positive mood management' factors suggested that for age groups older than adolescence and early adulthood, participants were increasingly less likely to listen to music to regulate their emotions. Older participants were perhaps more adept at managing their moods, and as a result were less reliant on music for this reason. Indeed, research suggests that emotional intelligence (i.e., the ability to recognise, understand and manage our emotions) might increase with age (Mayer, Caruso, & Salovey, 2000). Future research should explore this idea, investigating whether an individual's emotional intelligence mediates the extent to which they use music to regulate their moods.

Scores on the 'reminiscing' factor showed that participants aged 19 to 24 were significantly more likely than those over 30 to use music to reminisce about the past. This finding was initially counter-intuitive, older people (especially those over 50) were expected

most likely to listen for this reason, if only because they had experienced more life events to reminisce over. However, research has shown that the elderly might not reminisce any more than younger people (e.g., Merriam & Cross, 1982; Webster, 1994, 1995), and if so, the present finding is less surprising. There is, however, evidence to suggest that people of different ages reminisce for different reasons (Webster, 1995; Webster & McCall, 1999). The age differences observed in participants' scores might therefore indicate that listening to music serves reminiscence functions more suited to the needs of young adults than older people, whatever these precise functions may be. Scores on the reminiscing factor also suggest that women aged 16 to 18 and 40 to 49 were more likely to use music to reminisce about the past than men of the same age. Previous studies have also found that men and women reminisce for different reasons (Webster, 1995; Webster & McCall, 1999). For women, reminiscing tends to serve a social function, to encourage conversation and maintain intimacy with others. This may explain why women score higher on the reminiscing factor, perhaps using music more readily to remind themselves and others of shared experiences (e.g., "this song reminds me of time we went on holiday together") that may facilitate social interaction.

Scores on the 'diversion' factor indicated that adolescents were the most likely group to use music as a distraction, whereas participants in each of the other five age groups were, with increasing age, less likely to listen for this reason. One possible explanation for this might be greater access to, and use of portable music players (e.g., the iPod) among young people, who are therefore better able to draw on music as a means to distract them, or simply pass the time. Future research should investigate how (e.g., radio, internet, mp3 player), when, and where (e.g., at home, or a nightclub) people of different of ages listen to music, as this is likely to significantly influence the reasons why people listen.

77

Scores on the 'arousal' factor suggested that participants aged 30 years and over were significantly less likely than younger people to listen to music as a mean of managing their level of arousal. One reason for this might be that people aged over 30 were able to find other means or simply felt less need to manage their arousal level. Scores on the arousal factor also indicated that women of all ages were significantly more likely than men to listen to music as a means of managing their arousal. Research has shown that when compared to men, women display a heightened physiological reaction to arousing music (Nater, Abbruzzese, Krebs, & Ehlert, 2006). This greater sensitivity to the arousing effects of music might explain why women are more likely than men to listen to music to manage their arousal.

Comparison of 'surveillance' scores showed there were no significant differences between participants in all six age groups in their use of music as a means to keep up with current events and social trends. Chapter 3 showed that 'surveillance' was the least important reason why people listen to music; with this in mind the present findings may reflect the fact that people do not actually use music to learn about others and the world around us.

Scores on the 'social interaction' factor showed that young adults (16 to 29 years olds) were significantly more likely than those aged 50 years and over to listen to music as a means to spend time with family and friends. This finding suggests that for older people, listening to music might be less of a social activity to be shared with others, and more of a personal experience, to be enjoyed alone. This finding perhaps reflects the greater social isolation and loneliness experienced in late adulthood (e.g., Rokach, 2000).

In keeping with the findings of Chapters 3 and 4, when asked about the idea that musical taste might function symbolically as a social 'badge' of identity, participants' ratings showed evidence of a "third-person effect" (Davidson, 1983). Specifically, ratings indicated

that whilst participants recognised 'other people' were likely to use their musical tastes as a 'badge' of identity, they themselves were less likely to do the same.

The main limitation of the present study is the cross-sectional design used. Because of this, the current findings cannot be assumed to provide evidence of developmental changes; rather, the present results instead provide evidence of differences between people of different age cohorts. To address this, longitudinal studies are needed to investigate whether the differences observed here represent true developmental changes, or are simply the result of generational differences between age cohorts. The present findings indicate that an individual's reasons for listening to music are likely to change most significantly when they reach their thirties. With this in mind, future longitudinal studies might investigate whether an individual's reasons for listening differ significantly as they undergo this transition from early adulthood (i.e., 19-29 years) into mid-adulthood (i.e., 30-50 years).

Future replications of this study should aim to investigate a broader range of age groups, taking into account the reasons why children (8-12 years), young adolescents (13 -15 years), and those in late adulthood (50-59 years / 60 years and over) listen to music. Future research should also investigate how individual differences, other than age, influence why people listen to music (e.g., ethnicity, personality). In the meantime, the present findings indicate that music serves a number of different uses and gratifications, and that the nature of these differs between age groups.

Chapter 7   General discussion

The four studies reported in Section A were conducted according to the assumptions of the 'uses and gratifications approach' (Katz, Blumer, & Gurevitch, 1974), and all provide further insight as to why music is so important to people.

Chapter 3 investigated peoples' reasons for listening to music, and showed that there were six main reasons why participants listen to music. Comparison of mean ratings given to each of the six factors indicated that participants listen to music primarily as a means to manage / regulate their moods, as well as a diversion to distract them from everyday boredom, or simply pass the time. In contrast, the social functions of music (i.e., 'interpersonal relationships' and 'personal identity') were of secondary importance to this, and the use of music as means to learn about others and the world around us (i.e., 'surveillance') was found to be the least important of the six reasons why people listen to music.

Chapter 4 investigated whether listening to music was more or less important to participants than other leisure activities. Together, ratings of everyday importance and the reported time and money spent listening to music showed that music is of particular importance to adolescents, relative to the other leisure activities investigated. To explain why music was so important to participants, Chapter 4 also investigated whether the reasons people listen to music were significantly different to those of eight other leisure activities. Mean scores on each of the six factors indicated that listening to music is uniquely capable of satisfying a number of different needs. With the exception of both the 'interpersonal relationships' and 'surveillance' factors, listening to music was found to be better than the other leisure activities at serving an individual's different needs. This versatility may explain

why music is so important to people, whereby listening to music might simply be the most effective means for individuals to satisfy their different needs.

In Chapter 5, an open-ended qualitative research design was used to investigate peoples' reasons for listening to music. Thematic analysis showed that, in general, there were seven main reasons why participants listen to music. Participants reported listening to music as a means to manage their mood, to provide 'background noise' to accompany another activity, to participate in musical behaviours, to reflect on the past, to enjoy the music, to encourage social interaction, and as a distraction. These themes correspond closely with the factors identified in Chapter 3. Most significantly, by using an open-ended qualitative design, Chapter 5 discovered reasons why people listen to music that had been overlooked by previous research.

Chapter 6 investigated whether people of different ages listen to music for different reasons. Significant differences were found between the six age groups on seven of the eight main reasons for listening to music. Using a cross-sectional design, these findings cannot be assumed to represent true developmental changes, and might simply reflect generational differences between age cohorts. This limitation served to highlight the need for longitudinal studies to investigate if peoples' reasons for listening to music differ significantly as they grow older.

The findings of all four studies must, however, be regarded with some caution given that the uses and gratifications approach is based on the assumption that individuals are 'sufficiently self-aware' of the reasons why they take part in particular activities. This may not necessary be entirely accurate, or true. However, given problems of falsification, it would be pointless for any empirical study to investigate the possibility that people listen to music to gratify their unconscious needs or desires of which they are unaware.

When asked if they themselves or other people use their musical taste as a social 'badge' of identity, participants' ratings in studies 1, 2 and 4 showed evidence of a "third-person effect" (Davison, 1983). Mean ratings for both questions indicated that whilst participants recognised the symbolic role of musical taste as a social 'badge' of identity, they also wished to personally dissociate themselves (publicly, at least) from using music in this way. When asked similar questions regarding the relationship between music and identity, Williams (2001) found evidence of a similar third-person effect during small group discussions with teenage schoolchildren. Williams (2001) discovered that whilst the teenagers might use music as a means of identity construction, they were often extremely reluctant to admit this openly, claiming it was something that 'other people' did (and young children in particular). Williams (2001) suggested this reluctance to personally admit that they identified with music stemmed from the teenagers' media awareness and cultural sophistication, whereby those who do so, are seen negatively as culturally ignorant or naïve. In this context, participants were perhaps motivated to distance themselves from the stigma associated with the idea of using musical taste as a social 'badge' of identity. However, this explanation warrants further investigation.

The main limitation of the research presented in the previous four chapters is that it assumes that people listen to music for the same reasons, regardless of individual differences, the socio-cultural context, and the music itself. Recent research has, for example, shown that individual differences in personality and intelligence might influence why people listen to music (Chamorro-Premuzic & Furnham, 2007). North, Hargreaves and Hargreaves (2004) found that the reasons why participants listened to music differed significantly according to who they were with, the social setting, and the time of day. There is also evidence to suggest that people listen to different music genres for different reasons (North, Hargreaves, & O'Neill, 2000). In the light of this, the reasons why an individual listens to music can be

assumed likely to vary for a number of different factors; future research should therefore aim to reflect this, providing an increasingly comprehensive and precise account of how people use music to satisfy their individual needs.

SECTION B: MUSICAL TASTE AND STEREOTYPING

Chapter 8   Musical taste and stereotyping

The 'uses and gratifications' studies presented in the Chapters 3,4,5, and 6 highlight the idea that music might serve a number of different functions for those listening. In Chapter 3, for example, participants were found to listen to music primarily to manage their emotions, which is in keeping with the findings of past research (e.g., Gantz et al, 1978; Roe, 1985, North et al, 2000). More recent studies (North et al, 2000; Tarrant et al, 2000) have, however, suggested that music is also used as a means to manage our social relationships and personal identity. The present section of the thesis is, accordingly, concerned with the functions of music in social relationships and personal identity, and in particular the idea that musical taste is used by individuals as a social 'badge' of identity (Frith, 1983; North & Hargreaves, 1999).

Frith's (1983) study of youth and musical subcultures was the first to suggest that "all adolescents use music as a badge" (p. 217). Through the conspicuous consumption of different musical styles, adolescents were understood to use music as a means to express their individuality and personal identity, whilst also providing a way to distinguish between members of different peer groups. In this context, an individual's musical taste functions as a socially symbolic 'badge' of identity, used by people to communicate their likely characteristics (e.g., attitudes, opinions, personality, etc.) and group membership to others.

Given the time and money people spend listening to music (see Zillmann & Gan, 1997 for a review), there has been disproportionately little psychological research done to investigate this social 'badge' function of musical taste. Indeed, Zillmann and Gan (1997) point out that "the wealth of proposals concerning the social influence of musical preference and its expression stands in contrast to a scarcity of pertinent empirical investigations" (p.

173). Indeed, only a few researchers have directly investigated the idea that as a 'badge' of identity, an individual's musical taste might influence how others see them.

In Zillmann and Bhatia's (1989) study, participants were asked to rate the desirability of several potential 'dates' presented as a part of a study concerned supposedly with video dating. Zillmann and Bhatia (1989) found that the disclosure of musical taste significantly influenced how attractive potential dates were perceived to be. For example, women who expressed a preference for classical music were perceived more attractive than those who liked heavy metal. Similarly, men who expressed a preference for heavy metal were seen to be more attractive than those who liked classical music. Using a similar research design, Sargent and Weaver (1996) found that participants rated individuals who expressed a preference for heavy metal as less sophisticated, and more rebellious. In both cases, these studies showed that our musical taste might significantly influence how other people see us.

In a series of studies, North and Hargreaves (1999) investigated the proposed social 'badge' function of musical taste in greater depth. First, North and Hargreaves (1999) showed that adolescents held significantly differentiated and consensual stereotypes regarding the fans of different musical styles. Second, when asked to judge the likely characteristics of a target individual, participants were found to judge them more positively if described as liking a musical style rated as most prestigious (i.e., British pop). This demonstrated that as a 'badge' of identity, a person's musical taste might influence the extent to which he or she is perceived favourably by others.

A final study also showed how participants' musical preferences were related to the extent to which their own characteristics corresponded with those of stereotypical fans of two different musical styles, suggesting that a process of 'self-to-prototype' matching may be responsible for how our musical tastes develop. In addition to this, when asked to rate

statements or adjectives describing typical music fans, participants' were found to attribute significantly more positive qualities and fewer negative characteristics to fans of their preferred musical style. This finding was regarded to be an example of in-group favouritism, and as such supported the idea that musical taste might act as a 'badge' of social identity and group membership. A number of other studies have found similar evidence that as a 'badge' of group membership, people tend to exhibit an in-group bias towards those who share our musical taste (e.g., Bakagiannis & Tarrant, 2006: Tekman & Hortaçsu, 2003; Tarrant, North, & Hargreaves, 2001).

Three studies in Section A questioned participants about the idea that musical taste functions as social 'badge' of identity (see Chapters 3, 4, & 6), prior to this no study had asked people directly whether they use music in this way. In each of the three studies, participants' ratings indicated that, to some extent, they recognised that musical taste might function as a 'badge' of identity.

The social 'badge' function of musical taste is arguably governed by collectively held stereotypes of musical taste. Research has shown that these stereotypes are likely to guide social cognition, influencing how individuals use musical taste as a means to judge others and express their identity. The following four chapters in Section B investigated this idea, investigating a number of different questions regarding the role of stereotypes in the social 'badge' function of musical taste:

1) Do people share stereotypes of musical taste?

If musical taste is used as a means to distinguish between members of different social groups, there should be real, or at least *perceived* differences between fans of different musical styles.

For this reason, the study reported in Chapter 9 investigated whether people hold different stereotypes regarding the fans of different musical styles. Previous studies have investigated this idea (North & Hargreaves, 1999; Rentfrow & Gosling, 2007), but these were subject to limitations that were addressed by this investigation.

2) Do stereotypes of musical taste influence how we judge other people?

The study reported in Chapter 10 investigated whether stereotypes of musical taste significantly influence how participants judge an individual's likely characteristics (e.g., age, ethnicity, etc.).

3) How do we judge other peoples' likely musical taste?

Previous research (North & Hargreaves, 1999; Sargent & Weaver, 1996; Zillmann & Bhatia, 1989) suggests that knowing an individual's musical preferences can significantly influence how we judge and behave toward them. In view of this, the way in which people identify an individual's likely musical taste is considered to have direct implications for how they are judged by others. The two studies reported in Chapter 11 looked at how stereotypes of musical taste influence the way in which individuals judge other peoples' likely musical taste. Specifically, this research tested whether the representativeness heuristic is used to judge the likely musical taste of others, where judgements are based an individual's similarity to stereotypical music fans rather than base-rate information.

4) Is there a link between an individual's musical taste and their identity?

In Chapter 12, two studies investigated whether a process of 'self-to-stereotype matching' is responsible for how an individual's musical taste develops. This tested the idea that individuals are more likely to prefer musical styles that stereotypically have fans that are similar to them. Previously, North and Hargreaves (1999) investigated this idea, but their findings were however subject to limitations that were addressed by this research.

Chapter 9   Musical styles: The social categorisation of stereotypical music fans

Musical taste has been argued to function as a social 'badge' of identity and group membership (Frith, 1983; North & Hargreaves, 1999) where through the conspicuous consumption of music individuals are able to display membership of a particular social group. As a 'badge' of group membership, musical taste might provide people with a means to identify and distinguish between the members of different social groups. This role of musical taste is, however, reliant upon the shared belief that particular social groups stereotypically like certain types of music. For this reason, the present study investigated whether people hold different stereotypes regarding the fans of different musical styles.

The association between musical taste and group membership has been studied by many researchers in a variety of disciplines. Most notably, sociologists concerned with the subcultural implications of musical taste have discussed the homological relationship between particular social groups and the musical styles they prefer to listen to (e.g., Willis, 1978). Hebdige (1979) for example, considered the subcultural appropriation of musical styles as one of several culturally coded responses that serve "to crystallise, objectify, and communicate group experience" (Hebdige, 1979; p.79). Other sociologists have argued that musical genres provide us with the means with which to organise, construct and maintain boundaries between social groups (e.g., Bourdieu, 1984; DiMaggio, 1987).

Despite the apparent social significance of musical taste, there has been very little psychological research to investigate peoples' stereotypes of musical taste. Several studies have investigated the negative stereotypes held about fans of 'problem' music styles (i.e. heavy metal and rap) (Binder, 1993; Fried, 2003), which might account for peoples' biased response to music as a function of its perceived genre (e.g., Ballard, Dodson, & Bazzini,

1999; Fried, 1996; 1999). Apart from this, only two studies have directly investigated peoples' stereotypes of musical taste (North and Hargreaves, 1999; Rentfrow & Gosling, 2007), although both are subject to limitations.

In general, both studies tested two ideas: (1) that participants should hold different stereotypes of the fans of different musical styles; and (2) that participants should, to some extent, agree with one another about these stereotypes. North and Hargreaves' (1999) study asked two groups of adolescents (i.e., 10-11 and 18-19 years-old) to indicate the demographic status (e.g., social class, age-group, etc.) and the characteristics they considered typical of music fans of different musical styles. Findings indicated that both groups of adolescents held consensual stereotypes regarding the fans of different musical styles.

However, these findings were subject to limitations. First, North and Hargreaves (1999) restricted their study to only three musical styles (i.e., indie pop, classical music, and chart pop), which failed to show the range of different stereotypes likely to be held by participants. Second, North and Hargreaves' (1999) study overlooked several demographic and personal characteristics known to relate to musical taste, such as personality of those who prefer particular musical styles (e.g., Dollinger, 1993; Rawlings & Ciancarelli, 1997); their political orientation (Fox & Williams, 1974); their intelligence (Keston & Pinto, 1955); their propensity to anti-social behaviour (e.g., Miranda & Claes, 2004; Rubin, West, & Mitchell, 2001); and their vulnerability to 'at-risk' behaviour (e.g., Burge & Lester, 2001; Martin, Clarke, & Pearce, 1993).

Rentfrow and Gosling's (2007) study asked several groups of undergraduates to each judge the stereotypical fan of one of the 14 different musical styles investigated. Participants

were asked to rate stereotypical music fans in terms of their personality traits, a list of descriptive adjectives, values and their likelihood to use drugs or alcohol. Participants' ratings showed that the stereotypical fans differed significantly between each musical style. Participants' ratings also showed evidence of a consensus, indicating that for the most part, participants agreed about these stereotypes.

To test whether participants shared consensual stereotypes of musical taste, both studies used two questionable measures. North and Hargreaves (1999) used split-half correlations, and Rentfrow and Gosling (2007) used intraclass correlations. In both cases, the correlational analyses used were more suited to measuring inter-rater consistency (i.e., reliability) than inter-rater agreement (i.e., a consensus). In view of this, the present study used a more appropriate measure of inter-rater agreement to estimate the extent to which people share consensual stereotypes of musical taste.

Recent surveys (North & Hargreaves, 2007a,b,c) have shown that musical taste is largely differentiated according to an individual's demographics (e.g., sex, ethnicity, age) and lifestyle choices (e.g., relationships, education, health). These surveys suggest that peoples' stereotypes of musical taste may contain a "kernel of truth", based on real differences between music fans. The findings of Rentfrow and Gosling's (2007) study support this idea, suggesting that peoples' stereotypes do correspond accurately to the characteristics of real music fans. However, regardless of whether these stereotypes are valid or not, the present study was concerned only with whether participants shared a belief that different groups of people stereotypically like different musical styles. Real or not, these stereotypes are likely to influence how people collectively understand, appreciate and consume different styles of music, and therefore warrant further investigation.

The present investigation tested two distinct predictions. First, participants will hold significantly different stereotypes concerning the typical fans of each of the 15 musical styles across all the characteristics investigated. Second, participants should, to an extent, agree about the nature of these stereotypes. These findings in both cases have direct implications for the effective use of musical taste as a social 'badge' of identity and group membership. Put simply, if musical taste was to function as a social 'badge' across an entire society, members of that society would arguably need to collectively share relatively consensual stereotypes concerning the likely characteristics of fans of different musical styles. This shared belief that particular social groups stereotypically like certain types of music would ensure that people could use an individual's musical taste as an effective means to identify their likely characteristics and which social groups they are likely to be members of. For example, if an individual used their preference for opera as a means to convey their likely characteristics to others (i.e., "I'm a wealthy, upper class, intelligent, white person"), this is reliant on the assumption that people collectively share a similar idea of what stereotypically opera fans are like. Without this, the individual's musical taste would fail to effectively communicate his/her likely characteristics to other people.

Method

Participants

Ninety-three psychology undergraduates (66 females, 27 males) participated in the study as part of their course requirement. Participants' mean age was 19.83 years ($SD =$ 1.14).

Design & Procedure

A questionnaire was used to establish the characteristics that participants' considered typical of the fans of 15 different musical styles. The musical styles were chosen following a brief pilot study that asked 50 undergraduates to report the musical artist or band that epitomised several musical genres. The intention of the pilot study was to establish the extent to which undergraduates were familiar with a range of different musical styles. Only musical styles where responses indicated sufficient level of undergraduate familiarity (i.e., where at least 50% of the sample gave a response to a musical style) were selected for investigation. For each of the 15 selected musical styles, the modal response was used as an example to explicitly define each musical style for participants. A full list of the musical styles used and their examples can be found in Appendix 3.

The questionnaire used in the main study asked participants to indicate what they considered to be the normal characteristics of typical fans of each of the 15 musical styles (see Appendix 4 for an example). Participants were asked to "Please indicate the characteristics you consider to be typical of fans of [for example] classical music (e.g., Beethoven, Mozart)". Closed questions were used to identify the sex, ethnicity, and religious beliefs perceived typical of fans of each musical style, where participants were asked to select one option in response to each question. Open questions were used to judge the perceived age and intelligence of typical fans, where participants were asked to be specific rather than to give rough estimates. In the case of intelligence estimates, a simple scale of intellect and corresponding IQ points was included to inform participants' estimates.

The remainder of the questionnaire used a 5-point rating scale to identify the perceptions of typical fans' (a) family income; (b) personality traits; (c) political orientation; (d) relative religiosity; (e) likelihood of participation in anti-social behaviour; and (f) vulnerability to 'at-risk' behaviours of typical music fans. The 'big five' model of personality (e.g., Digman, 1990) was adopted to investigate the personality traits perceived to be typical

of different music fans. Participants assigned ratings between polarised personality adjectives (e.g., 'introverted' = 1 and 'extroverted' = 5; 'emotionally stable' = 1 and 'neurotic' = 5; 'narrow minded' = 1 and 'open minded' = 5; 'disagreeable' = 1 and 'agreeable' = 5; 'unconscientious' = 1 and 'conscientious' = 5). In the same way, the expected political orientation of typical music fans was scaled from 1 ('socialism') to 5 ('conservatism'). Family income was measured on a scale from 1 ('extremely poor / welfare dependent') to 5 ('extremely rich'). The religiosity of typical music fans was measure on a scale from 1 ('Not religious at all') to 5 ('Highly religious'). Items concerned with the perceived likelihood that the typical fans participate in 'anti-social' behaviour (e.g., street crime, violence) and were vulnerable to 'at-risk' behaviours (e.g., drug abuse, suicide), both used a 5-point rating scale, where 1 = 'Never' and 5 = 'Highly likely'. The order in which participants judged the typical fans of each of the 15 musical styles was randomised between participants.

Results

Non-parametric analyses were first conducted to establish whether participants considered the typical fans of each of the 15 musical styles investigated to have a particular sex, ethnicity or religious belief. Binominal analyses were used first to establish if a significant proportion of participants perceived the typical fan of each music styles to be either male or female. Table 13 provides a summary of this.

The binominal analyses suggest that, with the exception of opera and classical music, a significant proportion of participants perceived the typical fan of each musical style to be of a particular sex. Inspection of Table 13 shows that a significant proportion of participants perceived country, chart pop, soul, and R'n'B music fans as typically female; and fans of

reggae, jazz, heavy metal, punk, hip-hop / rap, dance, indie rock, rock, and ska were perceived as typically male.

To establish if a significant proportion of participants perceived the typical fans of each of the fifteen music styles to be of a particular ethnicity, several chi squared 'goodness of fit' analyses were conducted. Table 14 shows that a significant proportion of participants regarded reggae, hip-hop / rap, soul and R'n'B fans as typically black; and fans of country, heavy metal, punk, classical music, chart pop, dance music, indie rock, rock, opera and ska were all typically perceived to be white. Jazz fans were perceived typically as either black or white.

Several chi squared 'goodness of fit' analyses were conducted to establish if participants perceived the fans of each of the fifteen musical styles to have a particular religious belief. Table 15 shows that a significant proportion of participants perceived the typical fans of reggae, jazz, country, hip-hop / rap, classical music, chart pop, soul, opera and R'n'B to be Christians. A significant proportion of participants also perceived the typical fans of heavy metal, punk, dance music, indie rock, rock and ska to be atheists.

Twelve within-subjects one-way ANOVAs were then conducted to determine whether the perceived characteristics of typical fans differ significantly between the 15 musical styles. The dependent variables in these analyses were, respectively ratings of fans' (1) age, (2) family income, (3) extroversion, (4) neuroticism, (5) openness to experience, (6) agreeableness, (7) conscientiousness, (8) intelligence, (9) political orientation, (10) religiosity, (11) likelihood of anti-social behaviour, and (12) vulnerability to at-risk behaviour. Table 16 provides a summary of the mean ratings for each of the 15 musical styles and the subsequent ANOVA analyses.

These analyses indicate that for each of the 12 characteristics, participants perceived significant differences between the typical fans of the 15 musical styles. Bonferroni post-hoc analyses highlighted a large number of significant differences between the fans of the 15 music styles for each characteristic. In the interests of brevity, the results of these pairwise comparisons are presented in Appendix 5.

To demonstrate clearly how fans of each of the 15 musical styles were perceived stereotypically to differ, twelve hierarchical cluster analyses were performed for each of the characteristics listed in Table 16. These examined the squared Euclidean distance using the between-group linkage method. Figures 11 to 22 show the dendograms produced and the mean rating given to fans of each musical style.

To establish whether participants shared consensual stereotypes of musical taste, variance ratio indices were calculated for each of the twelve characteristics. Conway & Schaller (1998) outline several different methods for the measurement of consensual beliefs, of which a variance ratio index similar to the r_{wg} agreement index (James, Demaree & Wolf, 1984, 1993) was judged most appropriate for this study. Variance ratio indices were calculated by dividing the variance observed in participants' ratings by a benchmark level of variability, considered consistent with a consensual perception of typical music fans. The value calculated is then subtracted from 1 to give an index score of consensual responses scaled from 0 to 1, where higher index values indicate greater interrater agreement, and a score of 1 suggests that participants agreed perfectly about a music fans' likely characteristics. Variance ratio indices below zero denote that participants' perceptions are not consensual, where the variance observed in participants' ratings exceeds that of the benchmark of variability used to define a consensual response.

Consensual estimates of both typical fan's age and intelligence were defined to have an 'acceptable' variance of 100 (i.e. $SD = 10$ years and 10 IQ points respectively) or less. Participant ratings on the remaining items using a five-point scale (e.g., personality traits, political orientation) were defined as consensual with a variance of 1 (i.e. $SD = 1$) or less. Table 17 provides a summary of the variance ratio index calculated for each characteristic of typical fans of the 15 music styles investigated.

The variance ratio indices in Table 17 indicate that the characteristics stereotypically associated with fans of different musical styles were largely consensual. The only exception to this trend were participants' intelligence estimates, the variability of which, on average, exceeded the threshold of what was defined as a consensual response. Mean variance ratio index scores also show that participants agreed more about the characteristics of stereotypical music fans for some musical styles than others. Mean variance ratio indices for each musical style showed that participants' ratings were most consensual concerning stereotypical fans of chart pop, indie rock, and soul (.42, .40 and .40 respectively); whilst participants were least agreed regarding the stereotypical characteristics of heavy metal, punk and country fans (i.e. .12, .18, and .19).

Table 13.

Summary of binominal analysis of perceived sex of typical music style fans

Music style (N)	Observed proportions	
	Male	Female
Reggae (91)	.98 (89) **	.02 (2)
Jazz (93)	.89 (83) **	.11 (10)
Country (92)	.34 (31)	.66 (61) *
Heavy metal (90)	.98 (88) **	.02 (2)
Punk (91)	.93 (85) **	.07 (6)
Hip-hop / Rap (90)	.91 (82) **	.09 (8)
Classical music (90)	.57 (51)	.43 (39)
Chart pop (93)	-	1.00 (93) **
Dance music (93)	.71 (66) **	.29 (27)
Indie rock (90)	.77 (69) **	.23 (21)
Soul (91)	.21 (19)	.79 (72) **
Rock (90)	.91 (82) **	.09 (8)
Opera (91)	.40 (36)	.60 (55)
Ska (92)	.89 (82) **	.11 (10)
R'n'B (91)	.23 (21)	.77 (70) **

$* p < .01; ** p < .001$

Table 14.
Perceived ethnicity of typical music style fans

| Music style (N) | Ethnicity | | | | | |
	Asian	Black	Hispanic	White	Other ethnic background	χ^2 (df)
Reggae (93)	-	86	2	1	4	226.01** (3)
Jazz (92)	-	42	2	46	2	77.04** (3)
Country (92)	1	-	1	89	1	252.52** (3)
Heavy metal (90)	-	-	1	89	-	86.04** (1)
Punk (92)	-	-	-	91	1	88.04** (1)
Hip-hop / Rap (92)	6	78	3	5	-	175.57** (3)
Classical music (93)	1	-	1	91	-	174.19** (2)
Chart pop (93)	1	-	-	92	-	89.04** (1)
Dance music (92)	4	2	-	86	-	149.83** (2)
Indie rock (90)	2	-	-	86	2	156.80** (2)
Soul (93)	-	80	2	10	1	186.79** (3)
Rock (91)	-	-	-	90	1	87.04** (1)
Opera (89)	-	1	2	84	2	228.53** (3)
Ska (91)	1	6	5	76	3	230.26** (4)
R'n'B (90)	20	64	-	3	3	110.62** (3)

* $p < .05$; ** $p < .001$

Table 15.
Perceived religious belief of typical music style fans

Music style (N)		Religious Belief								
	Ag	Ath	Bud	Ch	Hind	Islam	Jud	Sikh	Other	χ^2 (df)
Reggae (93)	7	10	6	39	1	-	-	1	29	98.86** (6)
Jazz (93)	12	14	-	63	-	-	-	-	4	93.02** (3)
Country (91)	3	5	1	78	-	-	-	-	4	246.09** (4)
Heavy metal (92)	8	71	-	8	-	1	-	-	4	189.85** (4)
Punk (89)	13	62	-	10	-	-	-	-	4	96.57** (3)
Hip-hop / Rap (90)	11	23	1	38	3	1	-	1	12	110.00** (7)
Classical music (91)	5	5	-	76	1	1	2	-	1	357.69** (6)
Chart pop (91)	19	24	-	42	-	-	-	-	6	29.31** (3)
Dance music (92)	20	50	-	16	1	-	-	-	5	80.94** (4)
Indie rock (91)	21	42	1	20	1	-	-	-	6	83.26** (5)
Soul (93)	2	5	1	73	-	2	-	1	9	316.84** (6)
Rock (92)	16	55	1	15	-	1	-	-	4	137.83** (5)
Opera (90)	5	5	-	76	-	1	-	-	3	234.22** (4)
Ska (92)	18	49	-	16	-	1	-	-	8	73.54** (4)
R'n'B (91)	9	13	-	36	5	9	1	2	16	77.18** (7)

* $p < .05$; ** $p < .001$

Religious Belief Abbreviations:
Ag = Agnostic; Ath = Atheist; Bud = Buddhism; Ch = Christianity; Hind = Hinduism; Jud = Judaism;
Sikh = Sikhism.

Table 16.

Descriptive analysis of typical music fan characteristics for 15 musical styles (SD) & summary of within-subjects ANOVA analyses

	Age	Family income	Extroversion	Neuroticism	Openness to experience	Agreeableness	Conscientiousness
				Music fan characteristics			
Reggae	30.17 (*7.32*)	2.29 (*0.56*)	3.86 (*0.85*)	2.31 (*1.08*)	4.00 (*0.86*)	3.88 (*0.82*)	2.91 (*0.79*)
Jazz	39.41 (*10.00*)	3.46 (*0.67*)	3.27 (*0.89*)	2.28 (*0.81*)	3.67 (*0.71*)	3.78 (*0.69*)	3.69 (*0.69*)
Country	41.91 (*8.98*)	2.64 (*0.74*)	3.51 (*0.93*)	2.59 (*0.88*)	2.89 (*1.04*)	3.45 (*0.84*)	3.30 (*0.77*)
Heavy metal	23.02 (*7.69*)	2.91 (*0.63*)	3.07 (*1.16*)	3.70 (*0.95*)	2.97 (*1.14*)	2.46 (*0.91*)	2.45 (*0.88*)
Punk	24.05 (*7.40*)	2.68 (*0.74*)	3.90 (*0.93*)	3.43 (*1.04*)	3.17 (*1.00*)	2.60 (*0.84*)	2.40 (*0.81*)
Hip-hop / rap	19.41 (*2.34*)	2.57 (*0.72*)	3.85 (*0.83*)	3.01 (*0.88*)	2.92 (*0.99*)	2.53 (*0.85*)	2.73 (*0.78*)
Classical music	44.97 (*10.85*)	4.15 (*0.51*)	2.61 (*0.81*)	2.22 (*0.94*)	2.83 (*1.08*)	3.52 (*0.93*)	4.20 (*0.79*)
Chart pop	14.54 (*2.09*)	3.09 (*0.44*)	3.70 (*0.73*)	2.96 (*0.81*)	2.96 (*0.94*)	3.39 (*0.78*)	3.09 (*0.69*)
Dance music	20.38 (*3.05*)	3.02 (*0.65*)	4.12 (*0.76*)	3.04 (*0.90*)	3.32 (*0.93*)	3.16 (*0.90*)	2.69 (*0.82*)
Indie rock	20.48 (*4.55*)	3.09 (*0.51*)	3.02 (*0.91*)	2.89 (*0.90*)	3.45 (*0.87*)	3.18 (*0.86*)	2.91 (*0.75*)
Soul	32.85 (*8.55*)	2.88 (*0.59*)	3.60 (*0.81*)	2.12 (*0.82*)	3.69 (*0.83*)	3.95 (*0.70*)	3.57 (*0.68*)
Rock	20.75 (*3.62*)	3.00 (*0.51*)	3.45 (*1.04*)	3.45 (*0.89*)	3.34 (*1.01*)	3.01 (*0.78*)	2.73 (*0.79*)
Opera	46.99 (*8.82*)	4.32 (*0.57*)	3.16 (*0.98*)	2.19 (*0.97*)	2.84 (*1.14*)	3.44 (*0.83*)	4.04 (*0.99*)
Ska	26.22 (*8.98*)	2.90 (*0.47*)	3.75 (*0.84*)	3.04 (*0.79*)	3.43 (*0.83*)	3.29 (*0.90*)	2.69 (*0.75*)
R'n'B	19.16 (*2.67*)	2.96 (*0.66*)	4.04 (*0.67*)	2.71 (*0.83*)	3.04 (*1.04*)	3.12 (*0.99*)	2.92 (*0.73*)
F	229.88**	75.68**	21.95**	30.26**	13.30**	28.90**	48.67**
N	(88)	(86)	(90)	(90)	(90)	(90)	(89)

* p < .05; ** p < .001

Note: df = 14 in all cases

Table 16. (Continued)
Descriptive analysis of typical music fan characteristics for 15 musical styles (SD) & summary of within-subjects ANOVA analyses

	Music fan characteristics				
	Intelligence	Political orientation	Religiosity	Likelihood to participate in 'anti-social' behaviour	Vulnerability to 'at-risk' behaviour
Reggae	99.01 (*12.05*)	2.18 (*0.85*)	3.42 (*0.86*)	2.73 (*0.82*)	3.49 (*0.92*)
Jazz	111.96 (*10.46*)	2.85 (*0.80*)	3.14 (*0.82*)	1.90 (*0.53*)	2.12 (*0.72*)
Country	94.29 (*12.27*)	3.37 (*1.06*)	3.71 (*0.81*)	2.12 (*0.75*)	2.08 (*0.67*)
Heavy metal	99.36 (*12.60*)	2.43 (*0.80*)	2.01 (*0.87*)	3.64 (*0.88*)	3.99 (*0.82*)
Punk	96.34 (*11.14*)	2.24 (*0.98*)	1.95 (*0.86*)	3.76 (*0.84*)	3.92 (*0.91*)
Hip-hop / rap	95.46 (*13.86*)	2.70 (*0.69*)	2.84 (*0.92*)	3.95 (*0.80*)	3.96 (*0.75*)
Classical music	118.04 (*10.42*)	4.03 (*0.89*)	3.53 (*0.77*)	1.49 (*0.56*)	1.65 (*0.73*)
Chart pop	96.43 (*10.49*)	3.01 (*0.52*)	2.71 (*0.80*)	2.52 (*0.88*)	2.63 (*0.89*)
Dance music	97.66 (*13.51*)	2.74 (*0.67*)	2.15 (*0.78*)	3.23 (*1.02*)	3.81 (*0.96*)
Indie rock	102.98 (*8.56*)	2.46 (*0.73*)	2.45 (*0.75*)	2.84 (*0.84*)	3.41 (*0.73*)
Soul	104.22 (*9.74*)	2.80 (*0.87*)	3.88 (*0.67*)	1.96 (*0.69*)	2.13 (*0.77*)
Rock	102.08 (*11.46*)	2.41 (*0.70*)	2.10 (*0.76*)	3.28 (*0.86*)	3.73 (*0.79*)
Opera	116.92 (*10.03*)	4.10 (*0.66*)	3.52 (*0.69*)	1.41 (*0.56*)	1.51 (*0.64*)
Ska	99.12 (*9.63*)	2.46 (*0.82*)	2.38 (*0.81*)	2.95 (*0.94*)	3.26 (*0.91*)
R'n'B	99.71 (*12.46*)	2.75 (*0.72*)	3.10 (*0.86*)	3.29 (*0.83*)	3.24 (*0.86*)
F	51.64**	52.54**	69.63**	104.76**	121.61**
N	(88)	(89)	(90)	(90)	(93)

*$p < .05$; ** $p < .001$

Note: df = 14 in all cases

```
Hip-hop (19.38)     ⇩↘
R'n'B (19.14)       ⇩▫
Dance (20.50)       ⇩▫
Rock (20.80)        ⇩⇕⇩↘
Indie rock(20.51)⇩↗ ▫⇩⇩⇩↘
Chart pop(14.47) ⇩⇩⇩↗    ⇔
Heavymetal(23.03)⇩⇩⇩⇩⇩⇩⇩⇕⇩⇩⇩↘
Punk (24.02)     ⇩⇩⇩⇩⇩⇩↗   ▫⇩⇩⇩⇩⇩⇩↘
Ska (26.16)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
  Reggae (30.18)    ⇩⇩⇩⇩⇩⇩⇩⇩✗⇩⇩⇩⇩⇩⇩⇩⇩↗
⇔
  Soul (33.03)      ⇩⇩⇩⇩⇩⇩⇩⇩↗                              ⇔
Classical (44.91)⇩⇩⇩⇩⇩✗⇩⇩⇩⇩↘                              ⇔
  Opera (46.82)     ⇩⇩⇩⇩⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
  Jazz (39.24)      ⇩⇩⇩⇩⇩⇩⇩⇩✗⇩↗
  Country (41.64)   ⇩⇩⇩⇩⇩⇩⇩⇩↗
```
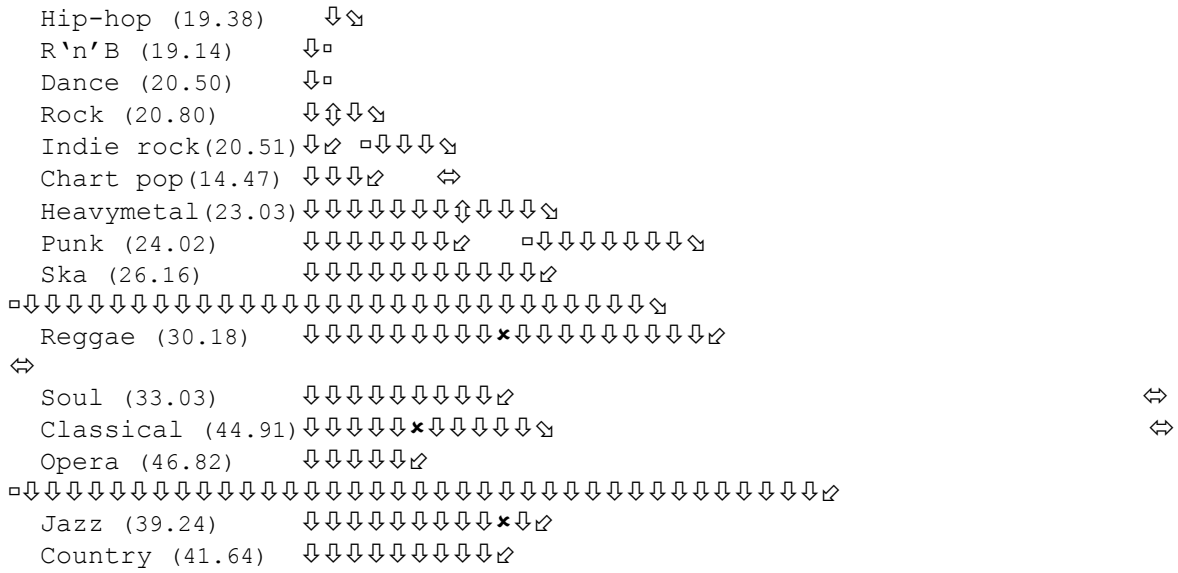
Figure 11.
Hierarchical cluster analysis dendogram of age perceived typical for fans of 15 musical styles.

```
Heavy metal(2.93)⇩✖⇩↘
Rock (3.02)        ⇩⇩↙ ⇔
Indie rock (3.10)⇩⇩⇩⇧⇩⇩⇩↘
Chart pop (3.07) ⇩✖⇩↙    ⇔
Ska (2.91)          ⇩↙      ▫⇩⇩⇩↘
Soul (2.87)        ⇩⇩⇩⇩⇩⇩▫   ▫⇩⇩⇩↘
Dance (3.02)       ⇩⇩⇩⇩⇩⇩⇩↙  ⇔    ⇔
Punk (2.67)        ⇩⇩⇩⇩⇩⇩⇩⇩⇩↙    ▫⇩⇩⇩⇩↘
Hip-hop (2.55)     ⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩↘ ⇔       ⇔
R'n'B (2.94)       ⇩⇩⇩⇩⇩⇩⇩⇩↙    ▫⇩↙
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Reggae (2.27)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩↙        ⇔                          ⇔
Country (2.64)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙          ⇔                          ⇔
Jazz (3.45)        ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
⇔
Classical (4.14)
⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
Opera (4.34)       ⇩⇩⇩↙
```

Figure 12.
Hierarchical cluster analysis dendogram of family income perceived typical for fans of 15 musical styles.

```
Dance (4.11)      ⇩×⇩⇩⇩⇩⇩⇩↘
R'n'B (4.03)      ⇩↙          ⇔
Hip-hop (3.84)    ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇧⇩⇩⇩⇩↘
Chart pop (3.69)  ⇩⇩⇩⇩⇩⇩⇩⇩↙    ▫⇩⇩⇩⇩↘
Punk (3.89)       ⇩×⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙    ⇔
Ska (3.73)        ⇩↙
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Country (3.48)    ⇩⇩⇩×⇩⇩⇩⇩⇩⇩↘        ⇔                    ⇔
Soul (3.61)       ⇩⇩⇩↙    ▫⇩⇩⇩⇩⇩⇩⇩⇩↙                ⇔
Reggae (3.86)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙                       ⇔
Heavy
metal(3.06)⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩×⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
⇔
Rock (3.43)       ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙              ▫⇩↙
Classical (2.62)  ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩×⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
⇔
Opera (3.17)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
Jazz (3.30)       ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩×⇩⇩⇩⇩⇩⇩⇩⇩↙
Indie rock (2.99)⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
```
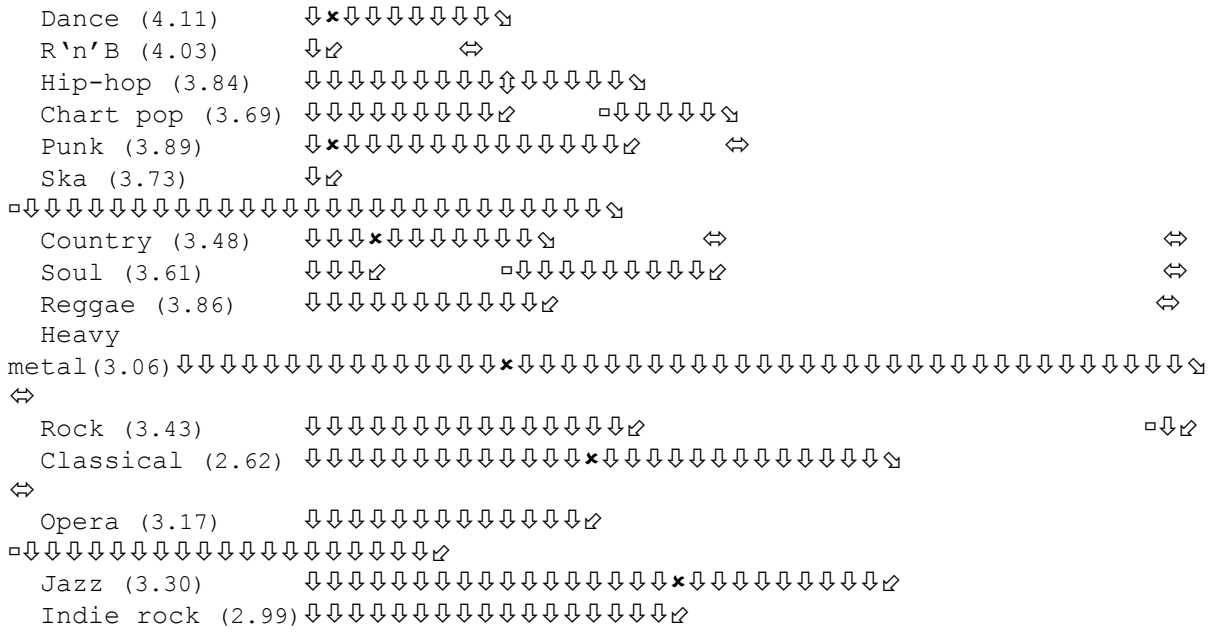
Figure 13.

Hierarchical cluster analysis dendogram of extroversion perceived typical for fans of 15 musical styles.

106

```
Jazz (2.29)       ⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
Soul (2.12)       ⇩⇲          ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
Classical (2.24)  ⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇲
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
Opera (2.19)      ⇩⇩⇩⇩⇩⇩⇲                    ⇔                    ⇔
Reggae (2.33)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
⇔
Heavy metal(3.70) ⇩⇩⇩⇩⇩⇩⇩✖⇩⇲                              ⇔
Rock (3.44)       ⇩⇩⇩⇩⇩⇩⇩⇲ ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
⇔
Punk (3.50)       ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲                ⇔                ⇔
Indie rock (2.90) ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇲              ⇔
⇔
Ska (3.06)        ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲      ⇔
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
Chart pop (2.99)  ⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇲    ▫⇩⇩⇩⇲            ⇔
R'n'B (2.74)      ⇩⇩⇩⇲        ▫⇩⇩⇩⇩⇲ ⇔    ⇔              ⇔
Country (2.61)    ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲   ▫⇩⇲  ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
Dance (3.04)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲      ⇔
Hip-hop (3.03)    ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇲
```
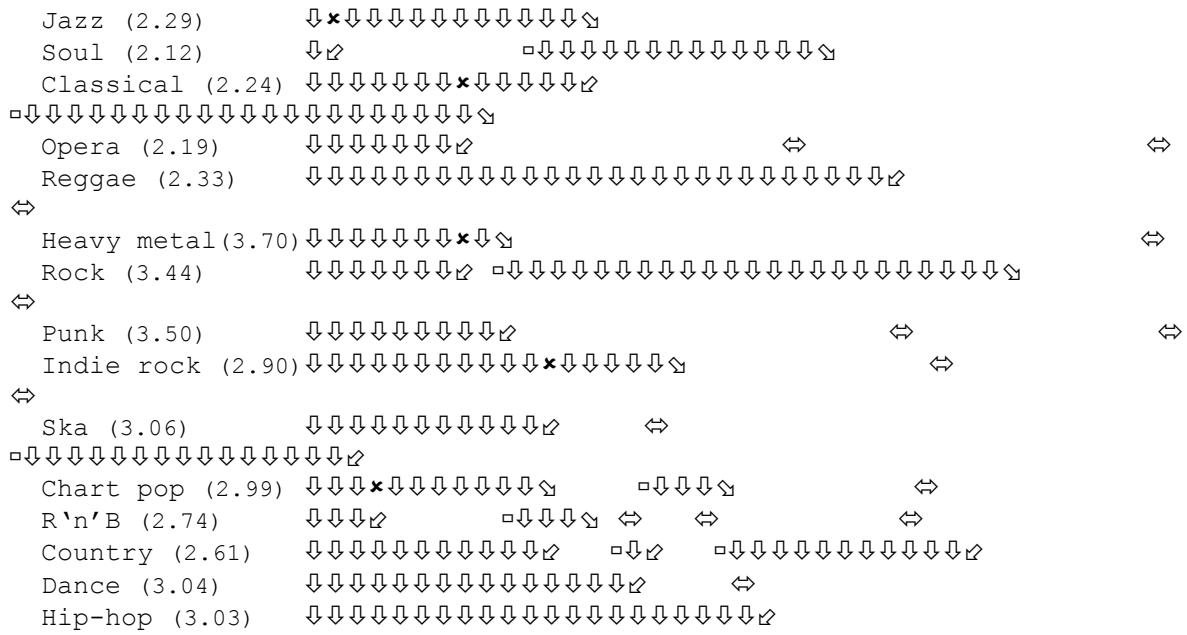
Figure 14.

Hierarchical cluster analysis dendogram of neuroticism perceived typical for fans of 15 musical styles.

```
Jazz (3.67)      ⇩✖⇩⇩⇩⇩⇩↘
Soul (3.70)      ⇩↗      ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Reggae (4.00)    ⇩⇩⇩⇩⇩⇩↗                          ⇔
Heavy metal(2.98)⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘        ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Punk (3.21)      ⇩⇩⇩⇩⇩⇩⇩↗              ▫⇩⇩⇩⇩⇩↘ ⇔              ⇔
Indie rock (3.43)⇩⇩⇩⇩⇩✖⇩⇩⇩↘           ⇔        ⇔ ⇔            ⇔
Ska (3.42)       ⇩⇩⇩⇩⇩↗   ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩↗       ▫⇩↗              ⇔
Rock (3.36)      ⇩⇩⇩⇩⇩⇩⇩⇩↗              ⇔
▫⇩⇩⇩⇩⇩⇩↘
Dance (3.33)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗          ⇔
⇔
Hip-hop (2.92)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩↘                    ⇔
⇔
R'n'B (3.03)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗        ▫⇩⇩⇩↘            ⇔
⇔
Country (2.86)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
⇔
Chart pop (2.94) ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
⇔
Classical (2.87)
⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
Opera (2.84)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
```
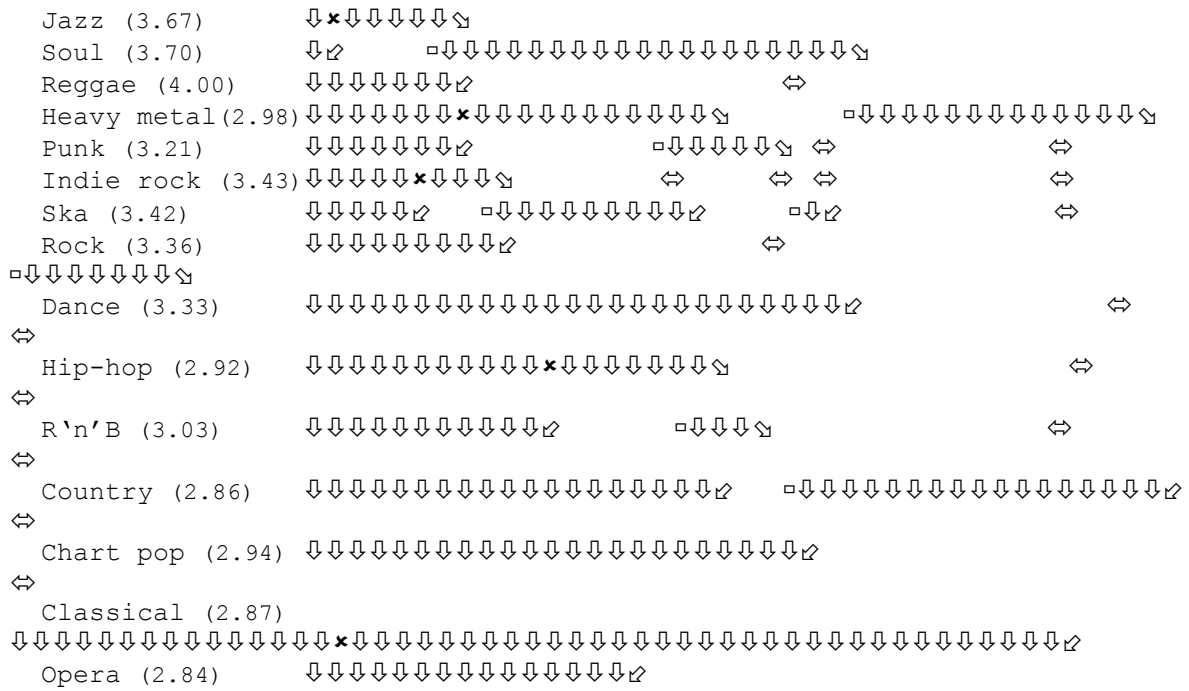
Figure 15.
Hierarchical cluster analysis dendogram of openness to experience perceived typical for fans of 15 musical styles.

Jazz (3.77)   ⇩✖⇩⇩⇩⇩⇩↘
Soul (3.94)   ⇩↗   ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Reggae (3.88)   ⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩↘
Classical (3.51) ⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩↗ ⇔
Opera (3.46)   ⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Country (3.43)   ⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩↘ ⇔   ⇔
Chart pop (3.38) ⇩⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩↗   ⇔
Ska (3.31)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Indie rock (3.19)⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘   ⇔
⇔
Rock (3.03)   ⇩⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩⇩↘   ⇔   ⇔
Dance (3.14)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩⇩⇩↗
⇔
R'n'B (3.10)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
⇔
Heavy metal(2.47)⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
⇔
Punk (2.63)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
Hip-hop (2.52)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
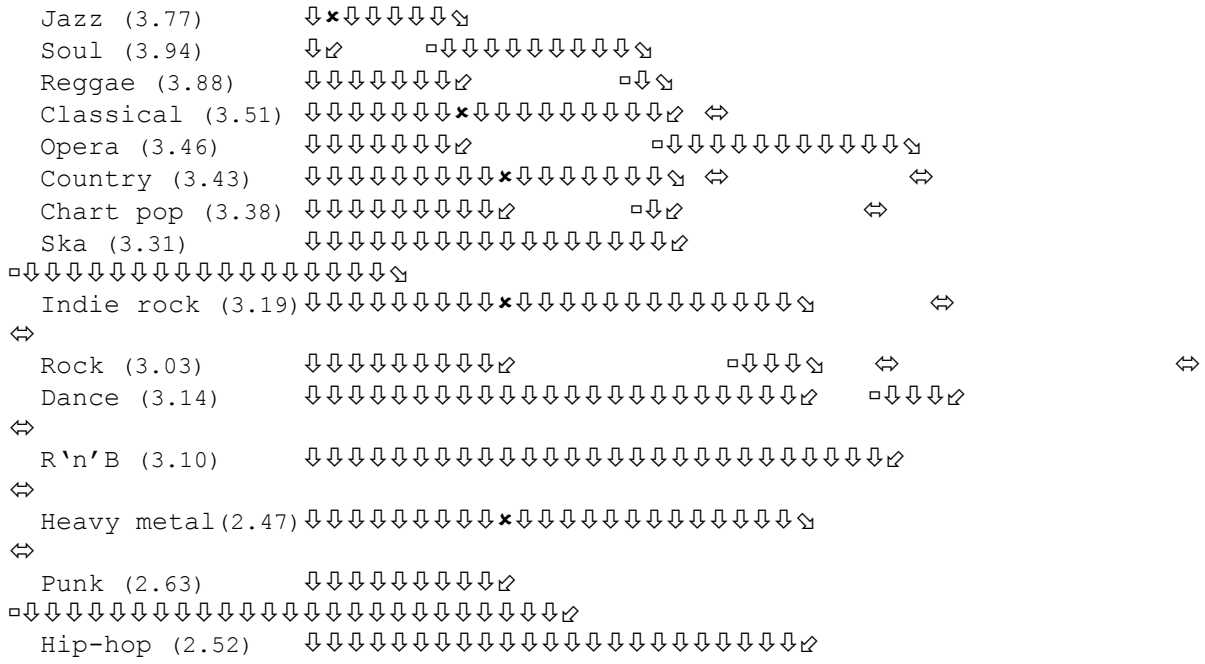
Figure 16.
Hierarchical cluster analysis dendogram of agreeableness perceived typical for fans of 15 musical styles.

```
Jazz (3.66)        ⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Soul (3.57)        ⇩↙           ▢⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Country (3.31)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
▢⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Classical (4.18)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩↙
⇔
Opera (4.06)       ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙                    ⇔
Punk (2.42)        ⇩✖⇩⇩⇩↘                              ⇔
Rock (2.72)        ⇩↙   ▢⇩⇩⇩⇩⇩⇩⇩⇩↘                    ⇔
Heavy metal(2.46)⇩⇩⇩⇩⇩↙           ⇔                    ⇔
Chart pop (3.07)   ⇩⇩⇩⇩⇩✖⇩⇩⇩↘
▢⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
Ska (2.70)         ⇩⇩⇩⇩⇩↙   ▢⇩↘   ⇔
Indie rock (2.94)⇩⇩⇩⇩⇩⇩⇩⇩⇩↙ ⇔    ⇔
Hip-hop (2.73)     ⇩✖⇩⇩⇩⇩⇩↘    ▢⇩⇩⇩↙
R'n'B (2.92)       ⇩↙       ▢⇩⇩⇩▢
Dance (2.67)       ⇩⇩⇩⇩⇩⇩⇩↙    ⇔
Reggae (2.91)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↙
```
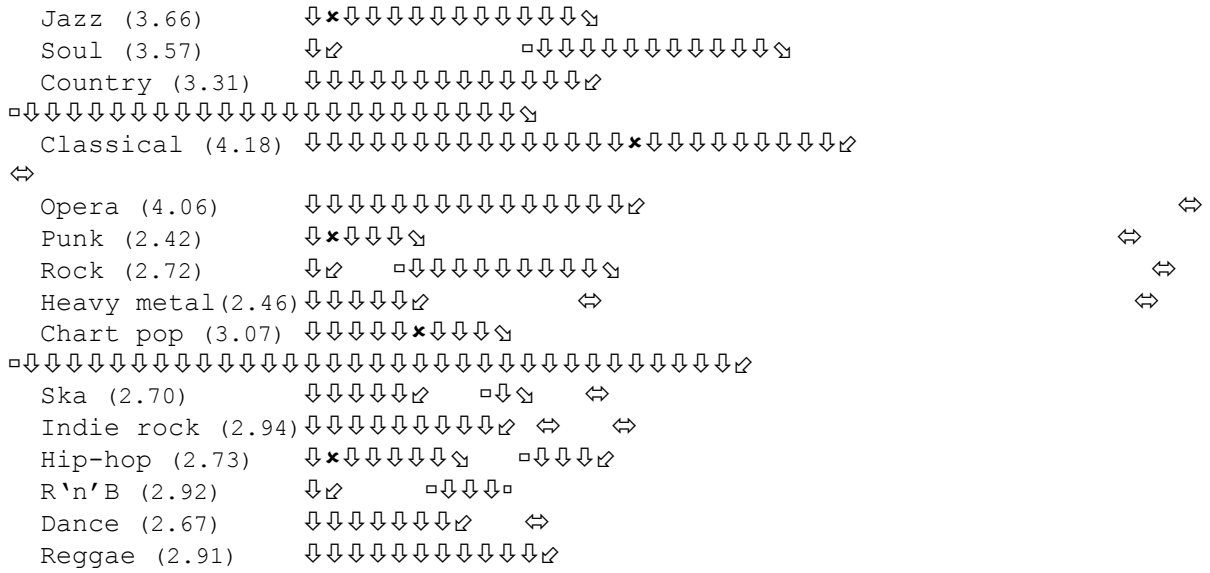
Figure 17.
Hierarchical cluster analysis dendogram of conscientiousness perceived typical for fans of 15 musical styles.

```
Classical (117.99)⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Opera (117.01)     ⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Jazz (111.01)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗                              ⇔
Heavy metal(99.44)⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩↘                               ⇔
Rock (102.38)      ⇩⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩⇩⇩⇩⇩⇩⇩⇩↘
⇔
Reggae (98.91)     ⇩⇩⇩⇩⇩⇩✖⇩⇩⇩↘ ⇔          ⇔                    ⇔
Punk (96.52)       ⇩⇩⇩⇩⇩⇩⇩↗   ▫⇩↗         ⇔                    ⇔
Indie rock(103.02)⇩⇩⇩⇩⇩✖⇩⇩⇩↘ ⇔           ⇔                    ⇔
Soul (104.11)      ⇩⇩⇩⇩⇩↗     ▫⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
Ska (99.43)        ⇩⇩⇩⇩⇩⇩⇩⇩⇩↗            ⇔
Country (93.98)    ⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩↘        ⇔
Chart pop (96.06) ⇩⇩⇩⇩⇩⇩⇩↗       ▫⇩⇩⇩⇩⇩↘ ⇔
Dance (97.33)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗    ▫⇩↗
Hip-hop (95.09)    ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩↗
R'n'B (99.47)      ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
```
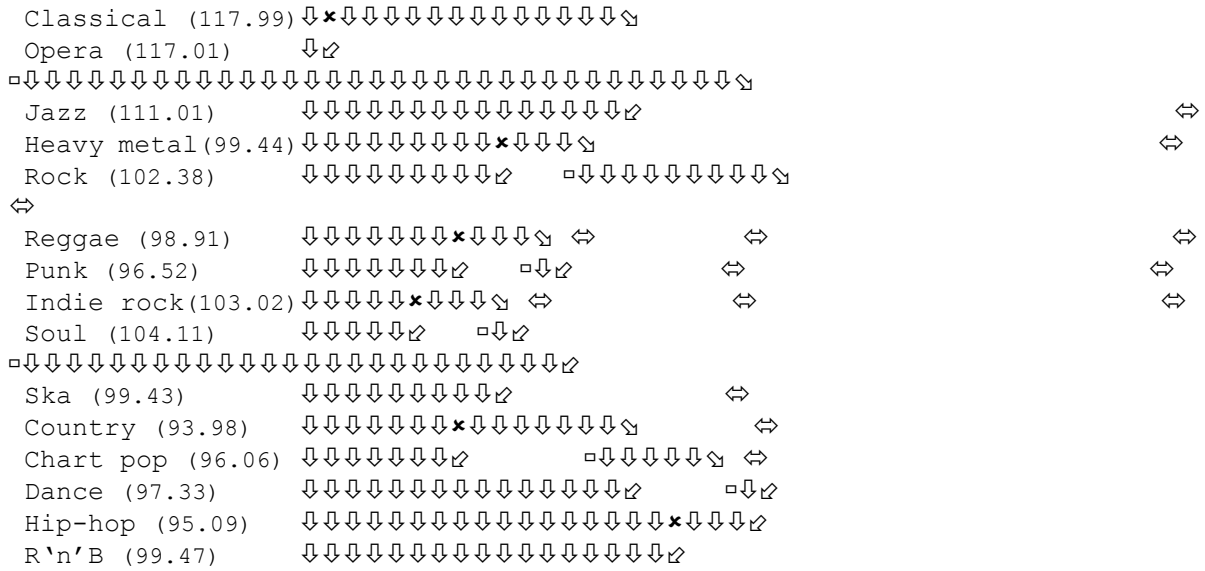
Figure 18.
Hierarchical cluster analysis dendogram of intelligence perceived typical for fans of 15 musical styles.

```
Chart pop (3.00)  ⇩✘⇩⇩⇩↘
Dance (2.74)      ⇩↗    ▫⇩⇩⇩⇩⇩⇩↘
Hip-hop (2.71)    ⇩✘⇩⇩↗          ⇔
R'n'B (2.76)      ⇩↗              ⇔
Heavy metal(2.42) ⇩⇩⇩⇩⇩✘⇩↘    ▫⇩↘
Rock (2.39)       ⇩⇩⇩⇩⇩↗ ▫⇩↘   ⇔ ⇔
Indie rock (2.46) ⇩⇩⇩⇩⇩⇩⇩↗ ▫⇩↘ ⇔ ▫⇩⇩⇩↘
Ska (2.47)        ⇩⇩⇩⇩⇩⇩⇩⇩↗ ▫⇩↗ ⇔   ⇔
Reggae (2.17)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗   ⇔
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Jazz (2.82)       ⇩⇩⇩⇩⇩⇩⇩⇩✘⇩⇩⇩⇩⇩↗   ⇔
⇔
Soul (2.79)       ⇩⇩⇩⇩⇩⇩⇩⇩↗          ⇔                           ⇔
Punk (2.20)       ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
⇔
Classical (4.01)  ⇩⇩⇩✘⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
⇔
Opera  (4.10)     ⇩⇩⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
Country (3.40)    ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
```
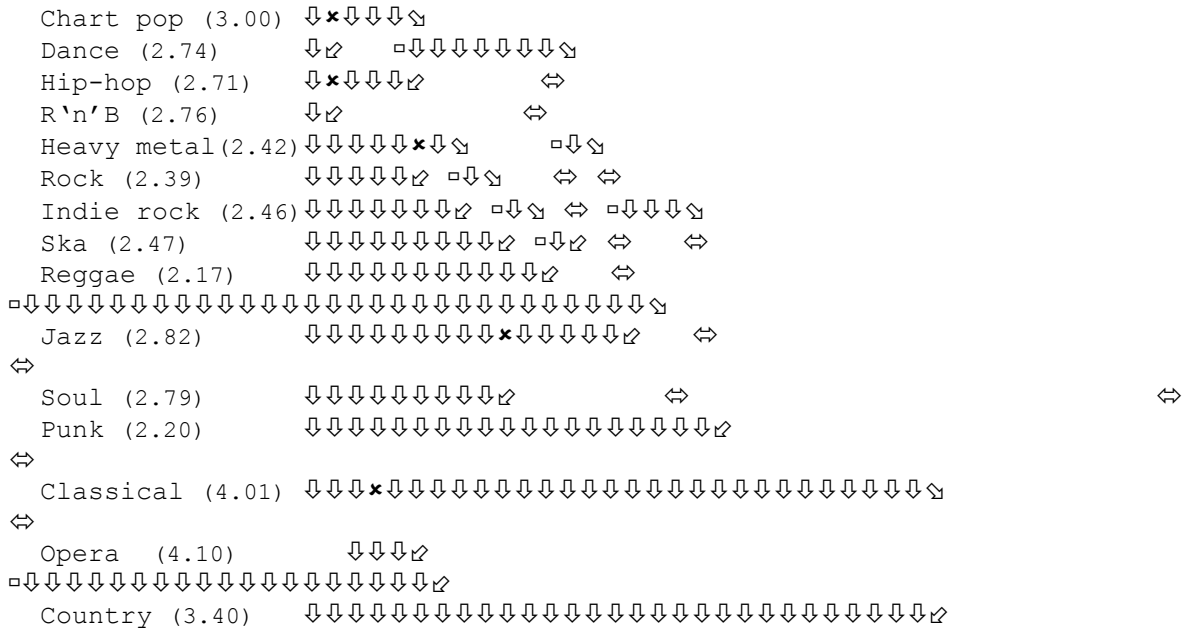
Figure 19.

Hierarchical cluster analysis dendogram of political orientation perceived typical for fans of 15 musical styles.

```
Classical (3.50) ⇩✖⇩⇩⇩⇩↘
Opera (3.50)     ⇩↗        ▫⇩⇩⇩⇩⇩↘
Jazz (3.12)      ⇩⇩⇩⇩⇩⇩⇩↗        ⇔
Reggae (3.42)    ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇧⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Country (3.73)   ⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Soul (3.89)      ⇩⇩⇩↗                    ⇔                    ⇔
Hip-hop (2.86)   ⇩⇩⇩⇩⇩⇩⇩✖⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
⇔
R'n'B (3.12)     ⇩⇩⇩⇩⇩⇩⇩↗                                   ⇔
Punk (1.96)      ⇩✖⇩⇩⇩⇩⇩↘                                   ⇔
Rock (2.09)      ⇩↗        ▫⇩⇩⇩⇩⇩↘                          ⇔
Indie rock (2.44)⇩✖⇩⇩⇩↘ ⇔        ⇔                            ⇔
Ska (2.38)       ⇩↗ ▫⇩↗      ▫⇩⇩⇩↘                          ⇔
Dance (2.14)     ⇩⇩⇩⇩⇩↗        ⇔
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
Chart pop (2.68) ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗   ⇔
Heavy metal(2.02)⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
```
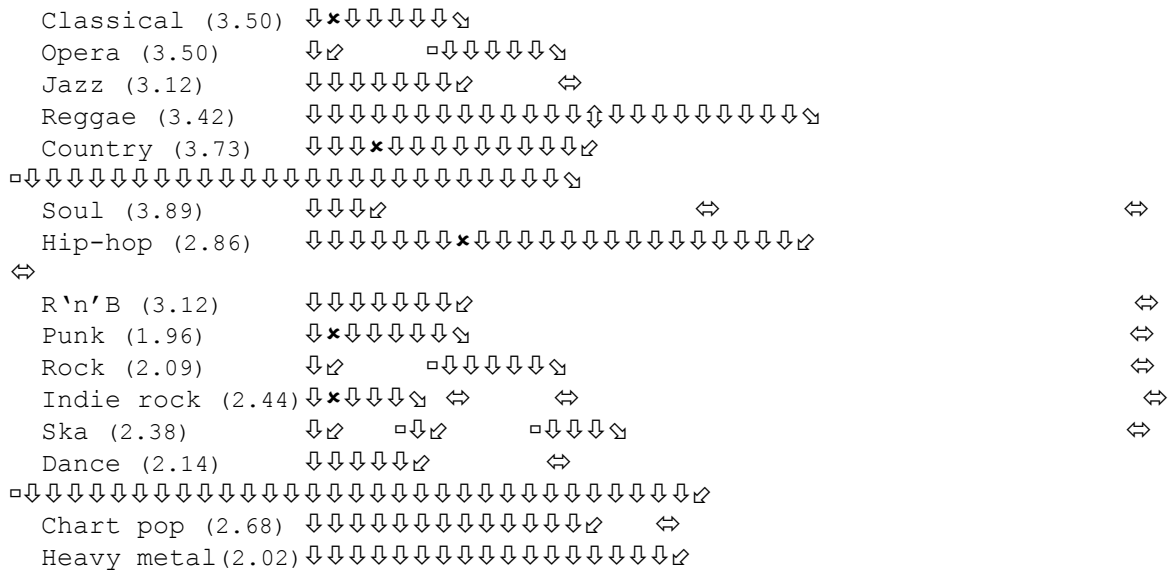
Figure 20.
Hierarchical cluster analysis dendogram of religiosity perceived typical for fans of 15 musical styles.

113

```
Classical (1.51) ⇩✗⇩⇩⇩⇩⇩⇩⤵
Opera (1.42)     ⇩↵
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⤵
Jazz (1.92)      ⇩⇩⇩⇩⇩⤵    ⇔                    ⇔
Soul (1.97)      ⇩⇩⇩⇩⇩⇧⇩⇩⇩↵                    ⇔
Country (2.12)   ⇩⇩⇩⇩⇩↵                         ⇔
Reggae (2.73)    ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩✗⇩⤵                ⇔
Chart pop (2.52) ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↵ ▫⇩⤵              ⇔
Indie rock (2.83)⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↵ ▫⇩⇩⇩⇩⇩⇩⇩⤵
⇔
Ska (2.92)       ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↵        ⇔
⇔
Heavy metal(3.62)⇩⇩⇩⇩⇩⇩⇩✗⇩⇩⇩⇩⇩⤵
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↵
Rock (3.29)      ⇩⇩⇩⇩⇩⇩⇩↵     ▫⇩⇩⇩⤵        ⇔
Punk (3.74)      ⇩⇩⇩⇩⇩⇩⇩✗⇩⇩⇩⇩⇩↵  ▫⇩⇩⇩⤵      ⇔
Hip-hop (3.94)   ⇩⇩⇩⇩⇩⇩⇩↵           ⇔  ▫⇩⇩⇩⇩↵
R'n'B (3.28)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↵   ⇔
Dance (3.24)     ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↵
```

Figure 21.
Hierarchical cluster analysis dendogram of likely participation in 'anti-social behaviour' perceived typical for fans of 15 musical styles.

114

```
Jazz (2.13)        ⇩↘
Country (2.08)     ⇩⇧⇩⇩⇩↘
Soul (2.14)        ⇩↗    ▫⇩⇩⇩⇩⇩⇩↘
Classical (1.67)   ⇩✗⇩⇩⇩↗
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↘
Opera (1.52)       ⇩↗            ⇔                    ⇔
Chart pop (2.64)   ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗                      ⇔
Hip-hop (3.96)     ⇩✗⇩↘                          ⇔
Rock (3.72)        ⇩↗ ▫⇩↘                        ⇔
Punk (3.91)        ⇩⇩⇩↗ ▫⇩↘                      ⇔
Heavy metal (3.98) ⇩⇩⇩⇩⇩↗ ▫⇩⇩⇩⇩⇩↘                   ⇔
Dance (3.82)       ⇩⇩⇩⇩⇩⇩↗     ⇔                      ⇔
Reggae (3.51)      ⇩⇩⇩⇩⇩⇩⇩✗⇩↘
▫⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
Indie rock (3.41)  ⇩⇩⇩⇩⇩⇩⇩↗ ▫⇩↘ ⇔
Ska (3.24)         ⇩⇩⇩⇩⇩⇩⇩⇩⇩↗ ▫⇩↗
R'n'B (3.22)       ⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩⇩↗
```

Figure 22.
Hierarchical cluster analysis dendogram of vulnerability to 'at-risk behaviour' perceived typical for fans of 15 musical styles.
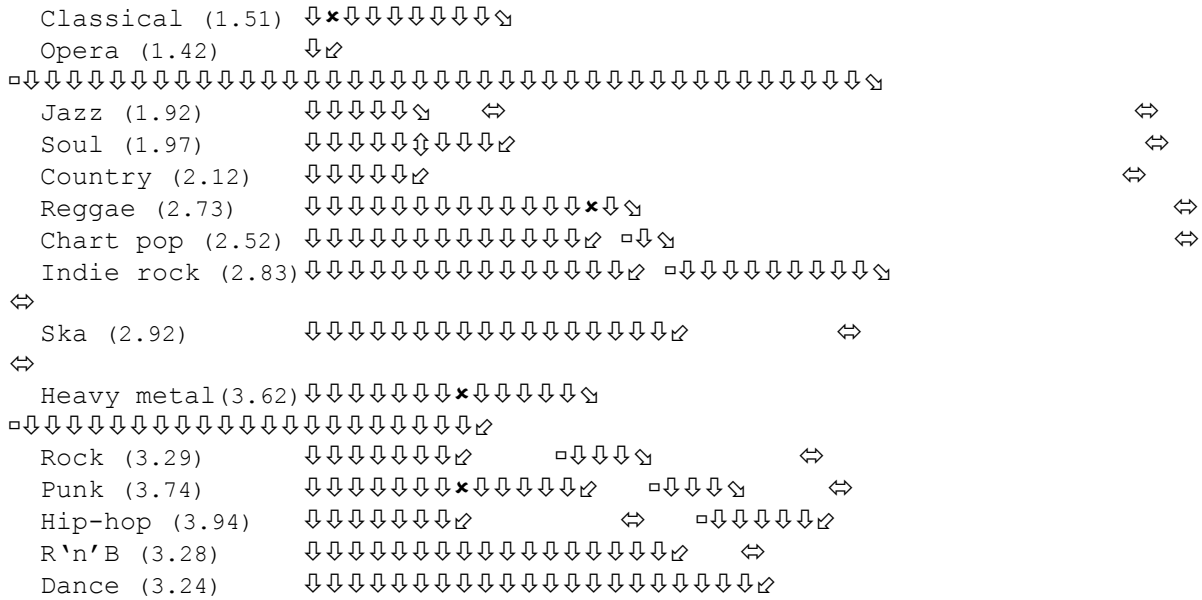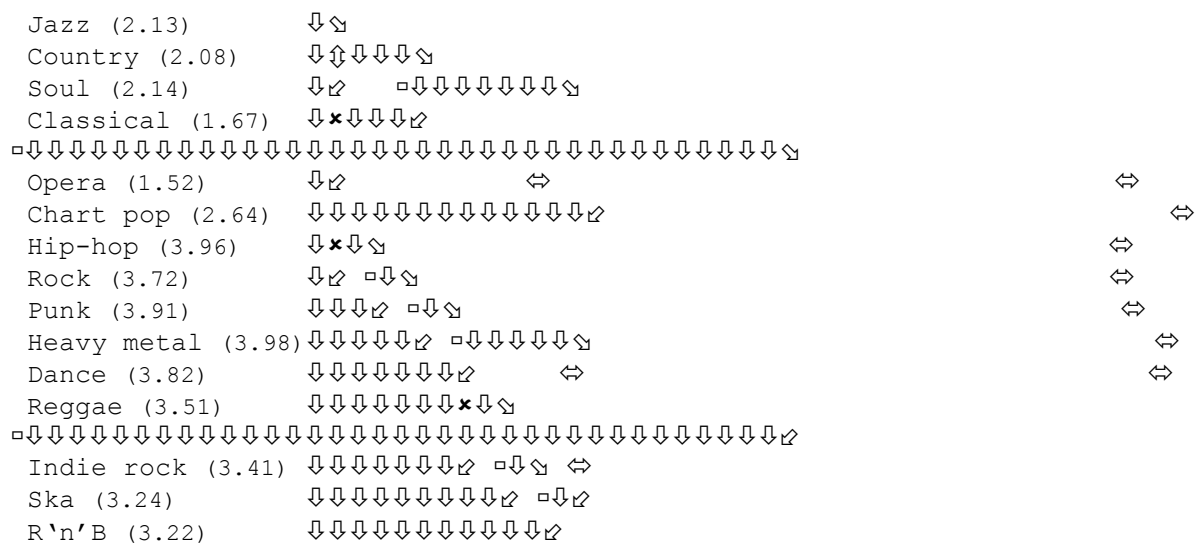
Table 17.
The variance ratio index calculations for every characteristic perceived to be typical of each of the 15 investigated music style fans

	Age	FI	E	N	O	A	C	I	PO	R	ASB	ARB	Mean
						Typical music fan characteristics							
Reggae	.46	.68	.27	-.17	.26	.33	.37	-.45	.28	.25	.32	.16	.23
Jazz	.00	.55	.21	.34	.49	.53	.52	-.09	.36	.34	.72	.48	.37
Country	.19	.46	.13	.23	-.09	.29	.41	-.51	-.12	.35	.43	.56	.19
Heavy metal	.41	.61	-.34	.11	-.31	.18	.22	-.59	.36	.24	.22	.33	.12
Punk	.45	.45	.13	-.07	.01	.30	.35	-.24	.04	.25	.30	.17	.18
Hip-hop / rap	.94	.49	.31	.23	.02	.27	.39	-.92	.53	.15	.36	.44	.27
Classical music	-.18	.74	.35	.11	-.17	.14	.38	-.09	.21	.40	.68	.46	.25
Chart pop	.96	.81	.46	.35	.11	.39	.53	-.10	.73	.36	.23	.20	.42
Dance music	.91	.58	.42	.20	.13	.19	.33	-.83	.55	.39	-.05	.08	.24
Indie rock	.79	.74	.17	.20	.25	.25	.44	.27	.46	.44	.29	.47	.40
Soul	.27	.65	.35	.33	.31	.51	.54	.05	.25	.55	.52	.41	.40
Rock	.87	.74	-.09	.20	-.02	.40	.38	-.31	.51	.43	.27	.38	.31
Opera	.22	.67	.04	.06	-.29	.32	.02	-.01	.56	.53	.69	.60	.28
Ska	.19	.78	.29	.37	.32	.18	.44	.07	.34	.35	.12	.18	.30
R'n'B	.93	.57	.55	.31	-.09	.03	.47	-.55	.49	.26	.31	.25	.29
Mean	.49	.63	.22	.19	.06	.29	.39	-.29	.37	.35	.36	.34	

Note: Consensual ratio indices in bold type.

Abbreviations of variables:
FI = Family income; E = Extroversion; N = Neuroticism; O = Openness to experience; A = Agreeableness; C = Conscientiousness; I = Intelligence;
PO = Political orientation; R = Religiosity; ASB = Likelihood to participate in 'anti-social' behaviour; ARB = Vulnerability to 'at-risk' behaviour.

Discussion

Participants held significantly different stereotypes concerning the typical fans of each of the 15 musical styles across all the characteristics investigated. Moreover, variance ratio indices indicated that with the exception of intelligence estimates, participants were for the most part, agreed about these stereotypes. On the basis of these findings it appears that participants collectively hold clear-cut and consensual stereotypes of musical taste. These findings indicate that participants shared a belief that different groups of people stereotypically like different musical styles.

The identification of consensual and differentiated stereotypes of musical taste is consistent with previous research (North & Hargreaves, 1999; Rentfrow & Gosling, 2007). However, the variance ratio indices used in this investigation are a more appropriate measurement of consensus than the correlational analyses used previously; the present study therefore provides the first real evidence that people share consensual stereotypes of musical taste.

The dendograms presented in Figures 11 to 22 illustrate how participants categorised stereotypical music fans into different social groups. Figure 11 for example, shows how participants categorised stereotypical music fans into one of four age groups: (1) adolescents (e.g., chart pop, R'n'B); (2) young adults (e.g., heavy metal, punk); (3) adults (e.g., reggae and soul); (4) older people (e.g., opera, classical music). These dendograms demonstrate explicitly how participants represent the perceived differences between music fans, where individual musical styles are categorised into increasingly superordinate stereotypes of musical taste (e.g., stereotypically 'old' and 'young' musical styles). The superordinate categorisation of musical styles suggests that people may collectively hold 'metagenres' of musical taste (e.g., Christenson & Peterson, 1988; Fink, Robinson & Dowden, 1985; Tekman

& Hortaçsu, 2002; Roe, 1985), although future research may be necessary to investigate this idea further.

These stereotypes of musical taste are likely to have direct implications for the social 'badge' function of musical taste (Frith, 1983, North & Hargreaves, 1999). To function effectively as a 'badge' of group membership, it is necessary for individuals to share a belief that different groups of people stereotypically like different musical styles. As such, individual differences in musical taste are likely to be regarded as a socially meaningful way for people to identify and discriminate between the members of different social groups. Furthermore, if musical taste were to function as a social 'badge' used by individuals to display their likely characteristics and group membership to others, people would need to collectively share relatively consensual stereotypes of musical taste. By sharing these stereotypes, the way in which people use and interpret musical taste as a socially symbolic 'badge' of group membership is more likely to be coordinated successfully. The findings of the present study suggest that this is correct in both cases.

The consensus evident in participants' stereotypes of musical taste suggests that individuals are likely to have learnt these stereotypes through socio-cultural processes of socialisation and acculturation, rather than learnt directly from personal experience. For example, without ever meeting an opera fan, individuals are still likely to agree largely on what a stereotypical opera fan is. The present finding that participants share common stereotypes of musical taste is therefore not entirely surprising given that they presumably share a common experience of socialisation or acculturation (i.e., all undergraduates of a similar age). For this reason, it is perhaps reasonable to expect an age-related developmental shift in how people learn these collectively held stereotypes of musical taste. Future research might investigate whether an individual's stereotypes of musical taste become increasingly consensual from adolescence onwards, indicating a growing social and cultural integration.

When collectively subscribed to, these stereotypes of musical taste are likely to influence how people collectively understand, appreciate and consume different musical styles. For example, these stereotypes might influence how an individual's musical taste develops. Recent research has indicated that musical taste may develop according to a process of self-to-stereotype matching (see Chapter 12; North & Hargreaves, 1999), where an individual's preference for a particular musical style is related significantly to their perceived similarity to stereotypical music fans. Thus, through the conspicuous consumption of particular musical styles, individuals may be able to display membership, or at least an affiliation with certain social groups (or 'taste publics'). However, further research is necessary to establish the extent to which these stereotypes influence the development of an individual's musical taste (see Chapter 12).

These stereotypes of musical taste might also exert a significant influence upon the processes of social cognition (Fiske & Taylor, 1991). For example, these stereotypes are presumed to function as judgemental heuristics, or cognitive 'short-cuts' used to simplify how we perceive other people. In particular, these stereotypes are expected to influence how we judge a person's likely musical taste (see Chapter 11). Or alternatively, as a social 'badge' of identity, an individual's musical taste may be used to simplify how people judge an individual's likely characteristics (see Chapter 10). The potential role of musical taste as a social heuristic warrants further research.

The stereotypes of musical taste identified here are expected to be entirely culturally and temporally specific, subject to continual readjustment according to individual experience and socio-cultural influence. Furthermore, given the continual fragmentation and creation of different musical styles and subcultures, the empirical study of musical taste must then be acknowledged as an ongoing and responsive process. Thus, it cannot necessarily be assumed

that the social stereotypes identified here are both 'static' and universal representations of musical taste, which will remain applicable both cross-culturally and over prolonged periods of time. Consequently, it is recommended that any future study of the social psychology of musical taste be prefaced by an investigation to establish both culture and time-specific stereotypes of musical taste.

Given the association with group membership, future research might also explore the influence of intergroup bias upon participants' stereotypes of musical taste. In the context of social identity theory (Tajfel, 1978), stereotypes of musical taste could be expected to reflect the effects of in-group favouritism, where individuals are expected to perceive stereotypical fans of their favourite musical style more favourably than fans of musical styles they dislike. This idea is tested in Chapter 15 (see Section C). Future investigations should also attempt to extend the study of these stereotypes across a broader range of musical genres (although this might be impractical due to the potential overlap and the difficulties of categorising differing musical genres – see Russell, 1997).

In summary, this investigation has found evidence to suggest that people collectively hold clearly defined and consensual stereotypes of musical taste. These stereotypes indicate that participants shared a belief that different groups of people stereotypically like different musical styles. These stereotypes might have direct implications for musical taste as a social 'badge' of group membership, where people are likely to collectively regard individual differences in musical taste as a means to identify and distinguish between the members of different social groups. As such, the findings of the present study provide initial support for the idea that individuals might use musical taste as a social 'badge' of group membership.

Chapter 10   Social consequences of expressed musical taste

As noted earlier, several researchers have described musical taste as a social 'badge' of identity (Frith, 1983; North & Hargreaves, 1999), used by individuals as a means to convey their likely characteristics (e.g., age, personality, social class) to others. Research has shown that when disclosed to others, an individual's musical taste can influence how others see them. For example, Zillmann and Bhatia (1989) found that the disclosure of musical taste significantly influenced how attractive potential dates were perceived to be. North and Hargreaves (1999) also showed that preference for a particular musical style significantly influenced how participants judge an individual's likely characteristics, such that people who like musical styles that are regarded as prestigious were likely to be judged more favourably than other music fans. Given these findings, it is suggested that as a 'badge' of identity, musical taste might serve as an influential social cue that is likely to play a significant role in how we see other people.

The present study investigated whether informing participants of an individual's musical taste significantly influenced their judgements of the individual's likely characteristics. Several recent investigations have indicated that people share consensual stereotypes of musical taste (see Chapter 9; North and Hargreaves, 1999; Rentfrow and Gosling, 2007). For this reason, it is also expected that when participants are informed of an individual's musical taste their judgements will exhibit a common bias consistent with stereotypical fans of the musical style in question. The present study manipulated the information given in personal descriptions to establish whether stereotypes of musical taste significantly bias how participants judged the likely characteristics of five fictional individuals.

Method

Participants

Two hundred psychology undergraduates (170 females, 30 males) participated in the study as part of their course requirement. Participants' mean age was 19.11-years ($SD =$ 1.08).

Design & Procedure

Participants completed a questionnaire that required them to judge the likely characteristics of five fictional individuals from written descriptions (see Appendix 6 for an example). Using a closed-question format, participants were required to only select one of several different options to identify: (1) their likely ethnicity; (2) their likely age; (3) their likely income; (4) how intelligent they are likely to be; (5) their likely political orientation; (6) how often they are likely to participate in 'anti-social' behaviour (e.g., street crime, violence); and (7) how vulnerable to 'at-risk' behaviours (e.g., drug abuse, suicide) they are likely to be.

All participants followed this procedure in one of four different experimental conditions (n = 50), where the information given in the personal descriptions was experimentally manipulated. In condition 1, participants were asked to judge the likely characteristics of five fictitious individuals from relatively uninformative, and ambiguous personal descriptions, for example:

"John is tall and has dark hair, and currently lives in the north east of England. John lives near his family, but he rarely sees his dad because he is an executive at major pharmaceutical company, and travels a lot. John's favourite colour is also blue."

122

In condition 2, participants were asked to judge the likely characteristics of individuals based on the same ambiguous personal descriptions (as in condition 1) together with a statement of the individual's favourite musical style (e.g., chart pop). For example:

"John is tall and has dark hair, and currently lives in the north east of England. John lives near his family, but he rarely sees his dad because he is an executive at major pharmaceutical company, and travels a lot. John's favourite style of music is reggae (e.g., Bob Marley), and his favourite colour is blue."

In condition 3, participants were asked to judge the likely characteristics of the five individuals based on the same ambiguous descriptions, however the inclusion of their favourite musical style was counterbalanced. Accordingly, each of the five musical styles (i.e., reggae, chart pop, heavy metal, opera, and hip-hip / rap) was used equally across the five different personal descriptions. The counterbalanced inclusion of musical styles was intended to ensure that any findings could be attributed to the influence of musical taste in general, rather than any interaction between a particular musical style and the personal descriptions used. For example:

"John is tall and has dark hair, and currently lives in the north east of England. John lives near his family, but he rarely sees his dad because he is an executive at major pharmaceutical company, and travels a lot. John's favourite style of music is chart pop (e.g., Britney Spears), and his favourite colour is blue."

In condition 4, participants were asked to judge the likely characteristics of the five individuals from a statement of their favourite musical style alone, for example:

"Person A's favourite style of music is reggae (e.g., Bob Marley)."

Results

The analysis of participants' judgements was carried out in two distinct stages. First, chi-squared analyses were carried out to test whether the addition of musical taste to ambiguous personal descriptions (i.e., conditions 1 and 2) significantly influenced how participants' judged the likely characteristics of the five individuals described. Tables 18 to 24 indicate that when asked to judge the likely characteristics of five fictional individuals, the inclusion of their favourite musical style significantly influenced participants' judgements. In general, participants' judgements were significantly more clear-cut when musical tastes were added to the ambiguous personal descriptions of the five individuals.

The second stage of the analysis was intended to establish the influence of particular musical styles on participants' judgements. Chi-squared analyses were carried out to establish whether there was a significant bias evident in how participants in each of the three conditions where musical taste was included in personal descriptions (i.e., conditions 2,3, and 4), judged the likely characteristics of each of the five individuals. Chi-squared analyses were also used to test whether the manipulation of the personal descriptions had a significant effect upon how participants judged the likely characteristics of the five individuals.

Tables 25 to 31 show that when asked to judge the likely characteristics of five fictional individuals, participants demonstrated a significant bias that corresponded with established stereotypes of musical taste. In general, a significant proportion of participants judged an individual to have a particular characteristic (e.g., high intelligence) when each of the five musical genres was used across the three experimental conditions. In each case,

participants' judgements of an individual's likely characteristics seemed to correspond with those of stereotypical fans of each of the five musical styles.

The manipulation of personal descriptions was found to have a significant effect on how participants' judged the likely characteristics of individuals. In most cases, participants given only descriptions of an individual's favourite musical style (e.g., "Person B's favourite style of music is chart pop (e.g., Britney Spears)") made significantly more clear-cut judgements of their likely characteristics, when compared to participants given additional ambiguous information about an individual. However, the same manipulation of personal descriptions had a non-significant effect on how participants' judged the likely political orientation of any of the five fictional individuals.

Table 18.
Likely ethnicity inferred from personal descriptions.

	Type of personal description		
	Ambiguous description alone	Ambiguous description & musical taste	Overall
John (Reggae)			
Black	8	31	39
Asian	3	0	3
White	34	17	51
Hispanic	5	2	7
			$\chi^2 = 23.52^{**}$ (3)
Linda (Chart pop)			
Black	0	2	2
Asian	0	0	0
White	49	48	97
Hispanic	1	0	1
			$\chi^2 = 3.01$ (2)
Tom (Heavy metal)			
Black	11	1	12
Asian	3	2	5
White	32	47	79
Hispanic	4	0	4
			$\chi^2 = 15.38^{**}$ (3)
Mary (Opera)			
Black	11	2	13
Asian	12	7	19
White	14	24	38
Hispanic	13	17	30
			$\chi^2 = 10.71^{*}$ (3)
John (Hip-hop / Rap)			
Black	5	16	21
Asian	5	10	15
White	38	22	60
Hispanic	2	2	4
			$\chi^2 = 11.70^{**}$ (3)

* $p < .05$; ** $p < .01$

Table 19.
Likely age inferred from personal descriptions.

	Type of personal description		
	Ambiguous description Alone	Ambiguous description & musical taste	Overall
John (Reggae)			
5-12yrs	13	2	15
13-17yrs	16	10	26
18-34yrs	14	32	46
35yrs+	7	6	13
			$\chi^2 = 16.57^{**}$ (3)
Linda (Chart pop)			
5-12yrs	5	13	18
13-17yrs	22	31	53
18-34yrs	23	6	29
35yrs+	0	0	0
			$\chi^2 = 15.05^{**}$ (2)
Tom (Heavy metal)			
5-12yrs	5	1	6
13-17yrs	26	31	57
18-34yrs	18	18	36
35yrs+	1	0	1
			$\chi^2 = 4.11$ (3)
Mary (Opera)			
5-12yrs	6	0	6
13-17yrs	12	1	13
18-34yrs	25	22	47
35yrs+	7	27	34
			$\chi^2 = 27.26^{**}$ (3)
John (Hip-hop / Rap)			
5-12yrs	13	4	17
13-17yrs	15	33	48
18-34yrs	13	13	26
35yrs+	9	0	9
			$\chi^2 = 20.52^{**}$ (3)

* $p < .05$; ** $p < .01$

Table 20.
Likely income inferred from personal descriptions.

	Type of personal description		
	Ambiguous description alone	Ambiguous description & musical taste	Overall
John (Reggae)			
No income	27	9	36
Below average income	6	16	22
Average income	17	24	41
Above average income	0	1	1
			$\chi^2 = 15.74$** (3)
Linda (Chart pop)			
No income	20	38	58
Below average income	5	2	7
Average income	17	8	25
Above average income	8	2	10
			$\chi^2 = 13.71$** (3)
Tom (Heavy metal)			
No income	21	28	49
Below average income	13	8	21
Average income	14	13	27
Above average income	2	1	3
			$\chi^2 = 2.56$ (3)
Mary (Opera)			
No income	15	1	16
Below average income	11	2	13
Average income	15	21	36
Above average income	9	26	35
			$\chi^2 = 27.74$** (3)
John (Hip-hop / Rap)			
No income	24	25	49
Below average income	2	14	16
Average income	13	10	23
Above average income	11	1	12
			$\chi^2 = 17.75$** (3)

* $p < .05$; ** $p < .01$

Table 21.
Likely intelligence inferred from personal descriptions.

	Type of personal description		
	Ambiguous description alone	Ambiguous description & musical taste	Overall
John (Reggae)			
Above average intelligence	3	0	3
Average intelligence	41	46	87
Below average intelligence	6	4	10
			$\chi^2 = 3.69\ (2)$
Linda (Chart pop)			
Above average intelligence	19	10	29
Average intelligence	30	37	67
Below average intelligence	1	3	4
			$\chi^2 = 4.52\ (2)$
Tom (Heavy metal)			
Above average intelligence	4	7	11
Average intelligence	39	36	75
Below average intelligence	7	7	14
			$\chi^2 = 0.94\ (2)$
Mary (Opera)			
Above average intelligence	11	35	46
Average intelligence	33	14	47
Below average intelligence	6	1	7
			$\chi^2 = 23.77^{**}\ (2)$
John (Hip-hop / Rap)			
Above average intelligence	16	0	16
Average intelligence	29	40	69
Below average intelligence	5	10	15
			$\chi^2 = 19.42^{**}\ (2)$

* $p < .05$; ** $p < .01$

Table 22.
Likely political orientation inferred from personal descriptions.

	Type of personal description		
	Ambiguous description alone	Ambiguous description & musical taste	Overall
John (Reggae)			
Left	11	22	33
Centre	27	26	53
Right	12	2	14
			$\chi^2 = 10.83$** (2)
Linda (Chart pop)			
Left	9	5	14
Centre	31	38	69
Right	10	7	17
			$\chi^2 = 2.38$ (2)
Tom (Heavy metal)			
Left	15	21	36
Centre	31	23	54
Right	4	6	10
			$\chi^2 = 2.59$ (2)
Mary (Opera)			
Left	19	6	25
Centre	23	10	33
Right	8	34	42
			$\chi^2 = 27.98$** (2)
John (Hip-hop / Rap)			
Left	6	14	20
Centre	28	33	61
Right	16	3	19
			$\chi^2 = 12.51$** (2)

* $p < .05$; ** $p < .01$

Table 23.
Likely participation in 'anti-social' behaviour inferred from personal descriptions.

	Type of personal description		
	Ambiguous description alone	Ambiguous description & musical taste	Overall
John (Reggae)			
Never	32	17	49
Once or twice	18	32	50
Regularly	0	1	1
			$\chi^2 = 9.51$** (2)
Linda (Chart pop)			
Never	36	44	80
Once or twice	14	6	20
Regularly	0	0	0
			$\chi^2 = 3.06$ (1)
Tom (Heavy metal)			
Never	9	7	16
Once or twice	38	35	73
Regularly	3	8	11
			$\chi^2 = 2.64$ (2)
Mary (Opera)			
Never	41	50	91
Once or twice	9	0	9
Regularly	0	0	0
			$\chi^2 = 7.81$ (1)
John (Hip-hop / Rap)			
Never	34	4	38
Once or twice	14	40	54
Regularly	2	6	8
			$\chi^2 = 38.20$** (2)

$* p < .05;$ ** $p < .01$

Table 24.
Likely vulnerability to 'at-risk' behaviours inferred from personal descriptions.

	Type of personal description		
	Ambiguous description alone	Ambiguous description & musical taste	Overall
John (Reggae)			
Not at all likely	26	19	45
Moderately vulnerable	24	28	52
Highly vulnerable	0	3	3
			$\chi^2 = 4.40$ (2)
Linda (Chart pop)			
Not at all likely	32	38	70
Moderately vulnerable	18	11	29
Highly vulnerable	0	1	1
			$\chi^2 = 3.20$ (2)
Tom (Heavy metal)			
Not at all likely	19	8	27
Moderately vulnerable	27	32	59
Highly vulnerable	4	10	14
			$\chi^2 = 7.48*$ (2)
Mary (Opera)			
Not at all likely	36	45	81
Moderately vulnerable	14	4	18
Highly vulnerable	0	1	1
			$\chi^2 = 7.56*$ (2)
John (Hip-hop / Rap)			
Not at all likely	31	12	43
Moderately vulnerable	15	29	44
Highly vulnerable	4	9	13
			$\chi^2 = 14.77**$ (2)

* $p < .05$; ** $p < .01$

Table 25.
Likely ethnicity inferred from musical taste.

	Type of personal description			
	Ambiguous description & musical taste (1)	Ambiguous description & musical taste (2)	Musical taste alone	Overall
Reggae				
Black	31	31	44	106
Asian	0	2	0	2
White	17	15	3	35
Hispanic	2	2	3	7
	$\chi^2 = 25.24$** (2)	$\chi^2 = 45.52$** (3)	$\chi^2 = 67.24$** (2)	$\chi^2 = 17.30$** (6)
Chart pop				
Black	2	0	0	2
Asian	0	2	0	2
White	48	44	50	142
Hispanic	0	4	0	4
	$\chi^2 = 42.32$** (1)	$\chi^2 = 67.36$** (2)	-	$\chi^2 = 16.39$* (6)
Heavy metal				
Black	1	2	1	4
Asian	2	1	0	3
White	47	46	49	142
Hispanic	0	1	0	1
	$\chi^2 = 82.84$** (2)	$\chi^2 = 119.76$** (3)	$\chi^2 = 46.08$** (1)	$\chi^2 = 4.60$ (6)
Opera				
Black	2	1	0	3
Asian	7	0	0	7
White	24	44	41	109
Hispanic	17	5	9	31
	$\chi^2 = 23.44$** (3)	$\chi^2 = 67.72$** (2)	$\chi^2 = 20.48$** (1)	$\chi^2 = 29.63$** (6)
Hip-hop / Rap				
Black	16	18	36	70
Asian	10	3	5	18
White	22	27	8	57
Hispanic	2	2	1	5
	$\chi^2 = 17.52$** (3)	$\chi^2 = 35.28$** (3)	$\chi^2 = 60.88$** (3)	$\chi^2 = 25.34$** (6)

* $p < .05$; ** $p < .01$

Note:
Ambiguous description & musical taste (1) = Favourite musical style kept constant for each of the five individuals.
Ambiguous description & musical taste (2) = Favourite musical style counterbalanced for each of the five fictional individuals.

Table 26.
Likely age inferred from musical taste.

	Type of personal description			
	Ambiguous description & musical taste (1)	Ambiguous description & musical taste (2)	Musical taste alone	Overall
Reggae				
5-12yrs	2	3	0	5
13-17yrs	10	15	2	27
18-34yrs	32	26	42	100
35yrs+	6	6	6	18
	$\chi^2 = 43.12^{**}$ (3)	$\chi^2 = 25.68^{**}$ (3)	$\chi^2 = 58.24^{**}$ (2)	$\chi^2 = 16.28^{*}$ (6)
Chart pop				
5-12yrs	13	18	22	53
13-17yrs	31	22	28	81
18-34yrs	6	8	0	14
35yrs+	0	2	0	2
	$\chi^2 = 19.96^{**}$ (2)	$\chi^2 = 20.08^{**}$ (3)	$\chi^2 = 0.72$ (1)	$\chi^2 = 15.29^{*}$ (6)
Heavy metal				
5-12yrs	1	1	0	2
13-17yrs	31	23	18	72
18-34yrs	18	26	31	75
35yrs+	0	0	1	1
	$\chi^2 = 27.16^{**}$ (2)	$\chi^2 = 22.36^{**}$ (2)	$\chi^2 = 27.16^{**}$ (2)	$\chi^2 = 10.02$ (6)
Opera				
5-12yrs	0	0	0	0
13-17yrs	1	9	0	10
18-34yrs	22	15	1	38
35yrs+	27	26	49	102
	$\chi^2 = 22.84^{**}$ (2)	$\chi^2 = 8.92^{*}$ (2)	$\chi^2 = 46.08^{**}$ (1)	$\chi^2 = 42.59^{**}$ (4)
Hip-hop / Rap				
5-12yrs	4	7	0	11
13-17yrs	33	26	29	88
18-34yrs	13	17	21	51
35yrs+	0	0	0	0
	$\chi^2 = 26.44^{**}$ (2)	$\chi^2 = 10.84^{**}$ (2)	$\chi^2 = 1.28^{**}$ (1)	$\chi^2 = 9.45$ (4)

* $p < .05$; ** $p < .01$

Note:
Ambiguous description & musical taste (1) = Favourite musical style kept constant for each of the five individuals.
Ambiguous description & musical taste (2) = Favourite musical style counterbalanced for each of the five fictional individuals.

Table 27.
Likely income inferred from musical taste.

	Type of personal description			
	Ambiguous description & musical taste (1)	Ambiguous description & musical taste (2)	Musical taste alone	Overall
Reggae				
No income	9	12	1	22
Below average income	16	9	16	41
Average income	24	29	32	85
Above average income	1	0	1	2
	$\chi^2 = 23.12^{**}$ (3)	$\chi^2 = 13.96^{**}$ (2)	$\chi^2 = 52.56^{**}$ (3)	$\chi^2 = 13.36^{*}$ (6)
Chart pop				
No income	38	33	37	108
Below average income	2	3	2	7
Average income	8	13	11	32
Above average income	2	1	0	3
	$\chi^2 = 71.28^{**}$ (3)	$\chi^2 = 51.44^{**}$ (3)	$\chi^2 = 39.64^{**}$ (2)	$\chi^2 = 3.86$ (6)
Heavy metal				
No income	28	17	5	50
Below average income	8	18	22	48
Average income	13	14	22	49
Above average income	1	1	1	3
	$\chi^2 = 31.44^{**}$ (3)	$\chi^2 = 14.80^{**}$ (3)	$\chi^2 = 29.52^{**}$ (3)	$\chi^2 = 25.36^{**}$ (6)
Opera				
No income	1	6	1	8
Below average income	2	3	0	5
Average income	21	21	9	51
Above average income	26	20	40	86
	$\chi^2 = 39.76^{**}$ (3)	$\chi^2 = 20.88^{**}$ (3)	$\chi^2 = 50.92^{**}$ (2)	$\chi^2 = 22.05^{**}$ (6)
Hip-hop / Rap				
No income	25	26	13	64
Below average income	14	13	17	44
Average income	10	11	20	41
Above average income	1	0	0	1
	$\chi^2 = 23.76^{**}$ (3)	$\chi^2 = 7.96^{*}$ (2)	$\chi^2 = 1.48$ (2)	$\chi^2 = 11.94$ (6)

* *p* < .05; ** *p* < .01

Note:

Ambiguous description & musical taste (1) = Favourite musical style kept constant for each of the five individuals.

Ambiguous description & musical taste (2) = Favourite musical style counterbalanced for each of the five fictional individuals.

Table 28.
Likely intelligence inferred from musical taste.

	Type of personal description			
	Ambiguous description & musical taste (1)	Ambiguous description & musical taste (2)	Musical taste alone	Overall
Reggae				
Above average intelligence	0	6	2	8
Average intelligence	46	37	44	127
Below average intelligence	4	7	4	15
	$\chi^2 = 35.28**$ (1)	$\chi^2 = 37.24**$ (2)	$\chi^2 = 67.36**$ (2)	$\chi^2 = 9.26$ (4)
Chart pop				
Above average intelligence	10	11	0	21
Average intelligence	37	35	39	111
Below average intelligence	3	4	11	18
	$\chi^2 = 38.68**$ (2)	$\chi^2 = 31.72**$ (2)	$\chi^2 = 15.68**$ (1)	$\chi^2 = 17.12**$ (4)
Heavy metal				
Above average intelligence	7	4	10	21
Average intelligence	36	42	30	108
Below average intelligence	7	4	10	21
	$\chi^2 = 33.64**$ (2)	$\chi^2 = 57.76**$ (2)	$\chi^2 = 16.00**$ (2)	$\chi^2 = 7.14$ (4)
Opera				
Above average intelligence	35	33	40	108
Average intelligence	14	16	10	40
Below average intelligence	1	1	0	2
	$\chi^2 = 35.32**$ (2)	$\chi^2 = 30.76**$ (2)	$\chi^2 = 18.00**$ (1)	$\chi^2 = 3.12$ (4)
Hip-hop / Rap				
Above average intelligence	0	3	1	4
Average intelligence	40	43	40	123
Below average intelligence	10	4	9	23
	$\chi^2 = 18.00**$ (1)	$\chi^2 = 62.44**$ (2)	$\chi^2 = 50.92**$ (2)	$\chi^2 = 6.34$ (4)

* $p < .05$; ** $p < .01$

Note:
Ambiguous description & musical taste (1) = Favourite musical style kept constant for each of the five individuals.
Ambiguous description & musical taste (2) = Favourite musical style counterbalanced for each of the five fictional individuals.

Table 29.
Likely political orientation inferred from musical taste.

	Type of personal description			
	Ambiguous description & musical taste (1)	Ambiguous description & musical taste (2)	Musical taste alone	Overall
Reggae				
Left	22	18	28	68
Centre	26	29	22	77
Right	2	3	0	5
	$\chi^2 = 19.84{**}$ (2)	$\chi^2 = 20.44{**}$ (2)	$\chi^2 = 0.72$ (1)	$\chi^2 = 6.00$ (4)
Chart pop				
Left	5	3	2	10
Centre	38	41	48	127
Right	7	6	0	13
	$\chi^2 = 41.08{**}$ (2)	$\chi^2 = 53.56{**}$ (2)	$\chi^2 = 42.32{**}$ (1)	$\chi^2 = 9.26$ (4)
Heavy metal				
Left	21	19	25	65
Centre	23	24	20	67
Right	6	7	5	18
	$\chi^2 = 10.36{**}$ (2)	$\chi^2 = 9.16{*}$ (2)	$\chi^2 = 13.00$ (2)	$\chi^2 = 1.58$ (4)
Opera				
Left	6	3	4	13
Centre	10	9	7	26
Right	34	38	39	111
	$\chi^2 = 27.52{**}$ (2)	$\chi^2 = 42.04{**}$ (2)	$\chi^2 = 45.16{**}$ (2)	$\chi^2 = 1.99$ (4)
Hip-hop / Rap				
Left	14	16	17	47
Centre	33	33	31	97
Right	3	1	2	6
	$\chi^2 = 27.64{**}$ (2)	$\chi^2 = 30.76{**}$ (2)	$\chi^2 = 25.24{**}$ (2)	$\chi^2 = 1.38$ (4)

* $p < .05$; ** $p < .01$

Note:
Ambiguous description & musical taste (1) = Favourite musical style kept constant for each of the five individuals.
Ambiguous description & musical taste (2) = Favourite musical style counterbalanced for each of the five fictional individuals.

Table 30.
Likely participation in 'anti-social' behaviour inferred from musical taste.

	Type of personal description			
	Ambiguous description & musical taste (1)	Ambiguous description & musical taste (2)	Musical taste alone	Overall
Reggae				
Never	17	24	16	57
Once or twice	32	24	31	87
Regularly	1	2	3	6
	$\chi^2 = 28.84^{**}$ (2)	$\chi^2 = 19.36^{**}$ (2)	$\chi^2 = 23.56^{**}$ (2)	$\chi^2 = 4.31$ (4)
Chart pop				
Never	44	42	36	122
Once or twice	6	8	14	28
Regularly	0	0	0	0
	$\chi^2 = 28.88^{**}$ (1)	$\chi^2 = 23.12^{**}$ (1)	$\chi^2 = 9.68^{**}$ (1)	$\chi^2 = 4.57$ (2)
Heavy metal				
Never	7	11	6	24
Once or twice	35	34	32	101
Regularly	8	5	12	25
	$\chi^2 = 30.28^{**}$ (2)	$\chi^2 = 28.12^{**}$ (2)	$\chi^2 = 22.24^{**}$ (2)	$\chi^2 = 4.85$ (4)
Opera				
Never	50	47	44	141
Once or twice	0	3	5	8
Regularly	0	0	1	1
	-	$\chi^2 = 38.72^{**}$ (1)	$\chi^2 = 67.72^{**}$ (2)	$\chi^2 = 7.13$ (4)
Hip-hop / Rap				
Never	4	9	2	15
Once or twice	40	39	28	107
Regularly	6	2	20	28
	$\chi^2 = 49.12^{**}$ (2)	$\chi^2 = 46.36^{**}$ (2)	$\chi^2 = 21.28^{**}$ (2)	$\chi^2 = 26.83^{**}$ (4)

* $p < .05$; ** $p < .01$

Note:
Ambiguous description & musical taste (1) = Favourite musical style kept constant for each of the five individuals.
Ambiguous description & musical taste (2) = Favourite musical style counterbalanced for each of the five fictional individuals.

Table 31.
Likely vulnerability to 'at-risk' behaviours inferred from musical taste.

	Type of personal description			
	Ambiguous description & musical taste (1)	Ambiguous description & musical taste (2)	Musical taste alone	Overall
Reggae				
Not at all likely	19	25	13	57
Moderately vulnerable	28	23	26	77
Highly vulnerable	3	2	11	16
	$\chi^2 = 19.24$** (2)	$\chi^2 = 19.48$** (2)	$\chi^2 = 7.96$* (2)	$\chi^2 = 13.41$** (4)
Chart pop				
Not at all likely	38	31	37	106
Moderately vulnerable	11	19	13	43
Highly vulnerable	1	0	0	1
	$\chi^2 = 43.96$** (2)	$\chi^2 = 2.88$ (1)	$\chi^2 = 11.52$** (1)	$\chi^2 = 5.23$ (4)
Heavy metal				
Not at all likely	8	6	3	17
Moderately vulnerable	32	33	29	94
Highly vulnerable	10	11	18	39
	$\chi^2 = 21.28$** (2)	$\chi^2 = 24.76$** (2)	$\chi^2 = 20.44$** (2)	$\chi^2 = 5.44$ (4)
Opera				
Not at all likely	45	40	42	127
Moderately vulnerable	4	9	8	21
Highly vulnerable	1	1	0	2
	$\chi^2 = 72.52$** (2)	$\chi^2 = 50.92$** (2)	$\chi^2 = 23.12$** (1)	$\chi^2 = 3.30$ (4)
Hip-hop / Rap				
Not at all likely	12	9	3	24
Moderately vulnerable	29	35	30	94
Highly vulnerable	9	6	17	32
	$\chi^2 = 13.96$** (2)	$\chi^2 = 30.52$** (2)	$\chi^2 = 21.88$** (2)	$\chi^2 = 11.97$* (4)

* *p* < .05; ** *p* < .01

Note:
Ambiguous description & musical taste (1) = Favourite musical style kept constant for each of the five individuals.
Ambiguous description & musical taste (2) = Favourite musical style counterbalanced for each of the five fictional individuals.

Discussion

The present findings indicated that an individual's musical taste might play a significant role in how they are judged by others. When asked to judge the likely characteristics of five individuals, the participants who were informed of the individuals' musical taste made significantly different judgements compared to those who were not. On the whole, participants' judgements were significantly more clear-cut than those given ambiguous descriptions alone, and seemed to correspond closely with established stereotypes of musical taste (see Chapter 9). For example, when asked to judge the likely age of Linda (see Table 19), participants' judgements are significantly more definite (i.e., aged between 13 and 17yrs) when the fact that Linda is a chart pop fan is added to her ambiguous personal description. This is consistent with the study in Chapter 9 that found stereotypical chart pop fans were, on average, perceived to be 14.54 years old. These findings support the idea that peoples' stereotypes of musical taste might significantly influence how people judge the likely characteristics of others.

Subsequent analyses concerned with the influence of particular musical styles showed that across the three conditions where musical taste was included in personal descriptions (i.e., conditions 2, 3, & 4), participants' judgements appeared to exhibit a common bias consistent with the stereotypical fan of the musical style in question. For example, when told that an individual's favourite musical style is reggae, a significant proportion of participants, across all three conditions, judged that the individual was likely to be black, aged between 18 and 34 years, of average income and intelligence, a socialist, participated in 'anti-social' behaviour once or twice, and moderately vulnerable to 'at-risk' behaviours – all of which correspond with Chapter 9's findings concerning stereotypical reggae fans. These findings suggest that when informed of an individual's musical taste, peoples' judgements of them are

likely to exhibit a common bias consistent with the characteristics stereotypically associated with fans of the musical style in question.

Further analyses also highlighted that in general, the manipulation of personal descriptions significantly influenced participants' social judgements. Specifically, participants' judgements were significantly more clear-cut if given descriptions that referred only to their musical tastes, when compared to those who were given ambiguous descriptions together with their musical tastes. This finding is regarded to be an example of the "dilution effect" (Nisbett, Zukier, & Lemley, 1981) influencing participants' judgements. Put simply, the dilution effect refers to a phenomenon of social cognition where the influence of diagnostic information is effectively 'diluted' when accompanied by nondiagnostic information, leading individuals to make less extreme judgements or predictions. In particular, the dilution effect is thought to bias similarity judgements, where the inclusion of nondiagnostic information serves to reduce the perceived similarity between the target individual and typical outcomes. In this case, participants' judgements were understandably more 'dilute' when given ambiguous information together with their musical tastes than those participants whose judgements were based on their musical taste alone.

The present findings suggest that knowledge of an individual's musical taste is likely to influence how others see them; this has direct implications for the social 'badge' function of musical taste as a means of self-presentation. Given the potential stereotypic connotations associated with preference for a particular musical style, individuals may choose to strategically manipulate the disclosure of their musical tastes to manage how other people might judge them. For example, when asked to rate their music preferences both in private and publicly in front of their classmates, Finnäs (1989) found that a sample of schoolchildren tended to give lower preference ratings for traditional musical styles (i.e., classical and folk music) when in public than when they rated the same music in private. This reluctance to

openly display their musical preferences for classical and folk music, was arguably a self-presentational strategy employed by the schoolchildren to avoid any negative stereotypic connotations associated with preference for such music. Future research should explore this idea further, and investigate how displays of musical taste (e.g., clothing, hairstyles) might be used by individuals as a means of self-presentation.

In summary, the findings of this investigation indicated that when informed of an individual's musical tastes, people's judgements of their likely characteristics showed a significant bias that seemed to correspond with stereotypes of musical taste. Moreover, the investigation also found evidence of a "dilution effect", where in general, the stereotypic bias of participants' judgements appeared to be less clear-cut when given additional ambiguous information about an individual. These findings suggest that as a social 'badge' of identity, musical taste might be an influential social cue that is likely to play a significant role in how we see other people.

Chapter 11   Musical taste and the representativeness heuristic

The investigation reported in the previous chapter indicates that knowledge of someone's musical taste has direct consequences for how we judge and behave toward them. On the basis of these findings, it was suggested that musical taste might play a significant role in how we perceive other people. The way in which people identify an individual's musical taste therefore is considered to have direct implications for how they are judged by others.

The most straightforward way to determine someone's musical taste is, of course, to ask him or her. Rentfrow and Gosling's (2006) study of topics raised during Internet discussions demonstrated that music preferences were the most popular conversation topic when getting to know someone. This finding suggests that musical taste is likely to play an important part in getting to know someone, such that in the course of everyday conversation people may routinely solicit information about each other's musical taste when they first meet. In real life, however, people are likely to make judgements about an individual's musical taste before even meeting them, and these judgements of musical taste are expected to influence how individuals perceive and behave towards each other. The present research investigated how people might judge the likely musical taste of others.

Any judgements made under conditions of uncertainty will be made according to a relevant social schema, in this case stereotypes of musical taste. In this context, people's stereotypes of musical taste are assumed to significantly bias how individuals judge the likely musical tastes of others, acting as judgemental 'heuristics'. Put simply, heuristics are cognitive 'short-cuts', or 'rules of thumb' used to reduce potentially complex social judgements and decisions into increasingly simplistic evaluations. Heuristics enable individuals to make judgements quickly and economically, however due to their insensitivity to statistical evidence or logical reasoning they are liable to lead to errors. Despite this,

heuristics are regarded effective cognitive strategies because of their continued use. Tversky and Kahneman (1974) identified a number of these key heuristic principles, including the 'representativeness heuristic'.

The representativeness heuristic is used to judge whether a person or object is a likely member of a particular category (e.g., "Is this person likely to be a criminal?"), where judgements of likelihood are based on an individual's similarity to group stereotypes, rather than base-rate information concerning the actual probability of such events. To illustrate this, the representativeness heuristic explains, for example, why people sometimes misdiagnose themselves as having a rare and life-threatening disease. Individuals will often ignore the low statistical probability of having the disease, but focus instead on the fact that their symptoms are representative of the disease in question, and consider themselves more likely to be seriously ill. Despite the implications for social cognition, only a limited number of studies have investigated the representativeness heuristic. Kahneman and Tversky's (1972, 1973) studies first demonstrated the use of the representativeness heuristic to assess the subjective probability of events, in which the application of heuristic rules were contrasted clearly with a normative (or Bayesian) model of judgement.

The present research is based on the proposal that the representativeness heuristic is used to judge likely musical taste of others. As such, the likelihood of an individual holding a preference for a particular musical style (i.e., "Is this person likely to be a heavy metal fan?") should be evaluated according to their perceived similarity to stereotypical music fans rather than base-rate estimates of musical taste. The only previous study to investigate how people judge the musical taste of others was carried-out by Finnäs (1987), and is thought to provide indirect support for this idea.

144

Finnäs (1987) showed that when asked to estimate the likely musical tastes of their classmates, school children tended to misjudge others' preferences in keeping with broadly shared stereotypes of musical taste. In particular, participants consistently over-estimated their peers' preference for loud, rock-orientated music, whilst underestimating their preference for quiet, classical music. This tendency is arguably the product of participants' reliance upon the representativeness heuristic where an individual's similarity to stereotypical music fans is thought to have significantly influenced how participants judged each other's musical taste. Rock fans are stereotypically younger than classical music fans (see Chapter 9), because of this, participants' fellow classmates were more likely perceived to be representative of typical rock music fans than typical classical music fans. For this reason, it is understandable that in a sample of schoolchildren, participants overestimated each other's musical taste for rock music, and underestimated preference for classical music.

The research reported in this chapter investigated two questions based on the possibility that individuals might use the representativeness heuristic to judge other peoples' likely musical taste. First, if the representativeness heuristic is responsible for how people judge others' musical taste, then participants' judgements should exhibit a common bias that corresponds with their stereotypes of musical taste. Study 1 investigated whether or not this was the case. Second, if a stereotypic bias were to be found, judgements of musical taste should be based on the heuristic principle of perceived representativeness, rather than base-rate information. Study 2 investigated whether an individual's similarity to stereotypical music fans is related more closely to predictions of their musical taste than base-rate estimates of musical taste.

Study 1 - Do stereotypes of musical taste significantly bias judgements of other peoples' musical taste?

Several recent studies have suggested that people share consensual stereotypes of musical taste (see Chapter 9; North & Hargreaves, 1999; Rentfrow & Gosling, 2007). For this reason, it is reasonable to expect that when asked to judge an individual's likely musical taste, people's judgements will exhibit a common stereotypic bias. This stereotypic bias would provide initial evidence to suggest that the representativeness heuristic might be used to judge other people's likely musical taste.

Participants were given descriptions of 10 fictitious individuals that were based on previously established stereotypes of musical taste (see Chapter 9), and asked to guess the likely music style preference of each. The present research also investigated the extent to which the quantity of information presented to participants could influence the likelihood of employing stereotypical processing. It is well established that judgemental heuristics are more likely to be employed under conditions of greater uncertainty (see Kahneman, Slovic, & Tversky, 1982). The present study therefore manipulated the amount of information given to participants about the ten individuals, to establish whether this influenced the extent to which their judgements exhibited a stereotypic bias.

Method

Participants

One hundred and fifty psychology undergraduate students (123 females, 27 males) participated in the study as part of their course requirement. Participants' mean age was 19.22 years ($SD = 1.37$).

Design & Procedure

Participants completed a questionnaire that required them to identify the likely musical style preference of ten fictional individuals (see Appendix 7 for an example). Each

individual was described differently, according to characteristics stereotypically associated with fans of the ten musical styles. These characteristics included, for example, age, income, beliefs; and were taken from the previous study of stereotypes of musical taste (see Chapter 9). When asked to identify each individual's favourite musical style, participants were provided with four options. Of the four options, one was the musical style used to construct the personal descriptions (i.e., the 'correct' response), whilst the other three remaining options were selected randomly from a list of the nine remaining musical styles. Participants were asked to identify one musical style for each of the ten fictional individuals.

All participants followed this procedure in one of the three experimental conditions (n = 50), which manipulated the information given to participants about the ten individuals. In condition 1, participants were given both a written personal description and a portrait photograph consistent with established stereotypes of musical taste (see Chapter 9). In condition 2, participants were given the portrait photographs alone; whilst in condition 3, participants were given only the personal descriptions.

Results

Chi-squared analyses were performed to establish whether there was a significant bias evident in how participants in each of the three conditions identified the favourite musical style of each of the ten fictitious individuals investigated. Chi-squared analyses were also used to determine whether the manipulation of the personal description had a significant effect upon how participants identify the likely musical taste of the ten individuals. Table 32 provides a summary of these analyses for each of the ten investigated individuals.

Table 32.
Likely musical taste of ten different individuals

| | Type of personal description | | | |
	Photograph & Description	Photograph alone	Description alone	Overall
Daniel (Heavy metal fan)				
Chart pop	1	8	1	10
Opera	0	3	0	3
Classical	0	1	0	1
Heavy metal	49	38	49	136
	$\chi^2 = 46.08^{**}$ (1)	$\chi^2 = 71.44^{**}$ (3)	$\chi^2 = 46.08^{**}$ (1)	$\chi^2 = 19.58^{**}$ (6)
Stacy (R'n'B fan)				
Country	0	3	0	3
Opera	0	4	0	4
Jazz	3	13	2	18
R'n'B	47	30	48	125
	$\chi^2 = 38.72^{**}$ (1)	$\chi^2 = 37.52^{**}$ (3)	$\chi^2 = 42.32^{**}$ (1)	$\chi^2 = 31.25^{**}$ (6)
Peter (Jazz fan)				
Jazz	46	47	38	131
R'n'B	2	0	0	2
Indie rock	2	3	9	14
Dance	0	0	3	3
	$\chi^2 = 77.44^{**}$ (2)	$\chi^2 = 38.72^{**}$ (1)	$\chi^2 = 42.04^{**}$ (2)	$\chi^2 = 17.26^{**}$ (6)
Nigel (Hip-hop / Rap fan)				
Country	0	0	0	0
Hip-hop / Rap	46	37	49	132
Indie rock	4	12	1	17
Jazz	0	1	0	1
	$\chi^2 = 35.28^{**}$ (1)	$\chi^2 = 40.84^{**}$ (2)	$\chi^2 = 46.08^{**}$ (1)	$\chi^2 = 15.18^{**}$ (4)
John (Classical fan)				
Indie rock	2	2	2	6
R'n'B	0	0	0	0
Dance	0	1	1	2
Classical	48	47	47	142
	$\chi^2 = 42.32^{**}$ (1)	$\chi^2 = 82.84^{**}$ (2)	$\chi^2 = 82.84^{**}$ (2)	$\chi^2 = 1.01$ (4)

*p < .05; ** p < .01

Note: Stereotypical music fan used for each individual's description / photograph shown in brackets.

Table 32. (Continued)
Likely musical taste of ten different individuals

	Type of personal description			
	Photograph & Description	Photograph alone	Description alone	Overall
Beth (Chart pop fan)				
Heavy metal	2	2	3	7
Classical	0	23	0	23
Chart pop	48	20	47	115
Jazz	0	5	0	5
	$\chi^2 = 42.32$** (1)	$X^2 = 26.64$** (3)	$\chi^2 = 38.72$** (1)	$\chi^2 = 69.45$** (6)
Toby (Dance fan)				
Opera	0	1	0	1
Dance	31	21	42	94
Hip-hop / Rap	15	20	5	40
Chart pop	4	8	3	15
	$\chi^2 = 22.12$** (2)	$\chi^2 = 22.48$** (3)	$\chi^2 = 57.88$** (2)	$\chi^2 = 20.59$** (6)
Margaret (Opera fan)				
Heavy metal	0	0	1	1
Opera	50	50	49	149
Dance	0	0	0	0
Hip-hop / Rap	0	0	0	0
	-	-	$\chi^2 = 46.08$** (1)	$\chi^2 = 2.01$ (2)
Neil (Indie rock fan)				
Indie rock	44	41	45	130
Country	0	3	2	5
Classical	2	1	0	3
Chart pop	4	5	3	12
	$\chi^2 = 67.36$** (2)	$\chi^2 = 87.28$** (3)	$\chi^2 = 72.28$** (2)	$\chi^2 = 5.50$ (6)
Mary (Country)				
R'n'B	6	1	11	18
Hip-hop / Rap	0	0	0	0
Country	44	48	39	131
Heavy metal	0	1	0	1
	$\chi^2 = 28.88$** (1)	$\chi^2 = 88.36$** (2)	$\chi^2 = 15.68$** (1)	$\chi^2 = 11.27$* (4)

$* \ p < .05; ** \ p < .01$

Note: Stereotypical music fan used for each individual's description / photograph shown in brackets.

Table 32 showed that a significant proportion of participants identified a particular musical style as the likely favourite for each the ten fictional individuals. For example, a significant proportion of participants (across all the experimental conditions) considered the favourite musical style of Daniel and John was likely to be heavy metal and classical music respectively. In each case, participants' judgements of musical taste corresponded with the stereotypes of musical taste used to construct their personal descriptions.

Further analyses showed that the manipulation of information given to participants had a significant effect on how they judged the likely musical taste of the ten individuals. For seven of the 10 target individuals, participants given portrait photographs alone made significantly less clear-cut judgements of musical taste, when compared to those given either photographs and personal descriptions or personal descriptions alone.

Discussion

When asked to judge the likely musical tastes of ten fictional individuals, a significant proportion of participants identified a particular musical style. In each case, the musical style selected corresponded with the stereotypes of musical taste used for the personal descriptions and photographs. This correspondence suggested that an individual's similarity to stereotypical music fans might influence how people judge their musical taste. The stereotypic bias evident in participants' judgements also supports the possibility that the representativeness heuristic is used to judge other people's musical taste.

The study also investigated whether manipulating the information given to participants had a significant effect on how they judged the likely musical taste of the ten fictitious individuals. In all three conditions, a significant proportion of participants judged each individual to have the same favourite musical style, exhibiting the same stereotypic bias.

However, further analyses of the manipulation demonstrated that for the most part, participants' judgements of musical taste were significantly less clear-cut when given portrait photographs alone to judge the ten individuals, than when given either personal descriptions and photographs or personal descriptions alone. These findings are likely to reflect the comparatively greater ambiguity associated with judgements based solely on an individual's appearance relative to explicitly stereotypic, written descriptions.

The main limitation of the present study is that when asked to judge the favourite musical style of each individual, participants were provided with only four different musical styles as options to indicate their response. This restricted participants' range of responses and might have therefore inadvertently led them to give the stereotypic judgements observed. To improve on this, future investigations should include a greater number of musical styles and provide participants with the same options for each fictitious individual. Future research might also consider even using an open-ended question format, where participants would be asked to judge an individual's musical taste without any options to restrict their response.

The findings of this first study suggest that when asked to judge other peoples' likely musical taste, individuals' judgements show a significant bias consistent with stereotypes of musical taste. This stereotypic bias is regarded to offer initial evidence for the idea that stereotypes of musical taste might function as judgemental 'heuristics', or cognitive 'short-cuts' used to quickly and economically judge the musical taste of others. Specifically, the stereotypic bias exhibited by participants' judgements was presumed to stem from the use of the representativeness heuristic to judge the musical taste of others. Study 2 investigated this idea, and tested whether perceived similarity to typical music fans, rather than base-rate information is related to how people predict others' likely musical taste.

Study 2 – Judgements of musical taste and the representativeness heuristic

The representativeness heuristic refers to a cognitive bias where the likelihood of an event is judged according to its perceived similarity to typical group members. This is contrasted with a normative (or Bayesian) model of judgement, where the perceived likelihood of events is based on the consideration of an event's relative frequency or probability according to statistical evidence. In this respect, perceived representativeness, like any other heuristic, reduces potentially complex judgements and decisions into increasingly simplistic 'rules of thumb'. In terms of social cognition, the representativeness heuristic is particularly useful when making quick judgements about people; and in particular when identifying likely group members (e.g., "Is this person likely to be a doctor?"). The present study tested whether the representativeness heuristic is used to predict other peoples' likely musical taste.

In Study 1, when asked to judge other peoples' musical taste, participants' judgements exhibited a common bias that corresponded with each individual's similarity to stereotypical music fans. This stereotypic bias may be the result of participants using the representativeness heuristic to judge the likely musical taste of others. Based on this assumption, the way in which people judge an individual's likely musical taste (e.g., "Is this person likely to be a reggae fan?") should be based on their similarity to stereotypical music fans (i.e., "Is this person like typical reggae fans?"). Moreover, any judgements of musical taste should be made irrespective of base-rate information concerning the relative frequency of different music fans (i.e., "How likely is this person to be a reggae fan given the number of reggae fans in the country?"). To test this idea, the present investigation used a research design very similar to that of Kahneman and Tversky's (1973) pioneering study of intuitive prediction.

152

Kahneman and Tversky's (1973) study provided perhaps the clearest demonstration of how the representativeness heuristic can significantly bias people's judgements under uncertainty. The study was concerned with how participants predicted the subject that a fictitious graduate student (i.e., Tom W.) was likely to study. Participants were spilt into three different groups: (1) the base-rate group; (2) the similarity group; and (3) the prediction group. In the base-rate group, participants were asked to give their best guesses about the percentage of students enrolled in each of the nine graduate courses. In the similarity group, participants were asked to rank the nine subjects in terms of how similar Tom W. was to the typical graduate student of each academic subject. Participants in the prediction group were asked to rank the nine subjects in order of how likely Tom W. was to study each subject. Kahneman and Tversky (1973) found that participants' predictions were correlated strongly with mean similarity rankings rather than with base-rate estimates. This finding suggested that regardless of the prior probability, participants judged Tom W's likely subject by his similarity to typical graduate students. Similar findings were also expected when people are asked judge the likely musical taste of others.

If the representativeness heuristic is used to identify the likely musical tastes of others, an individual's perceived similarity to typical music fans should correlate more closely with predictions of their likely musical taste than should base-rate estimates of musical taste. The present investigation tested this idea using a research design similar to Kahneman and Tversky's (1973) study.

Method

Participants

One hundred and twenty-five undergraduate psychology students (98 females, 27 males) participated voluntarily. Participants' mean age was 19.84 years (SD = 3.29), and all were studying at a university in the East Midlands of the UK.

Design & Procedure

Participants completed different questionnaires in one of five different groups (n = 25). In group 1, participants were asked to consider the normal distribution of music style preferences in the British population as a whole. Like Kahneman and Tversky (1973), participants were required to give specific percentage estimates to indicate the proportion of the population perceived to like each of the 10 music styles investigated (see Appendix 8 for questionnaire). Calculators were made available to help ensure that estimates added up to 100%, and those participants whose estimates failed to do this correctly were not used as part of the study. Participants' estimates were used to establish the perceived 'base-rates' of musical taste for each of the ten musical styles.

Participants in the remaining four groups were given one of two fictional personal descriptions based on previously established stereotypes of musical taste (see Chapter 9). Participants in groups 2 and 3 were asked to judge the personal description of *John*, which was based on Chapter 9's findings concerning the characteristics of stereotypical heavy metal fans:

"John is a 23-year-old white man from a below average income household. At work, John is relatively disorganised, irresponsible and is slightly less intelligent than his colleagues. John tends to be somewhat self-centred and unfriendly to those outside his immediate friendship groups. In the past, John has shown evidence of drug abuse and is thought to be vulnerable to further 'at-risk behaviours' (e.g., suicide, unprotected sex). John is also an atheist."

Participants in groups 4 and 5 were asked to judge the personal description of *Jerome*, which was based on Chapter 9's findings concerning the characteristics of stereotypical hip-hop / rap fans:

"Jerome is a 19-year-old black man from a below average income household. Jerome is out-going, but relatively narrow-minded and hostile to those outside his family and immediate friendship groups. He is known to regularly participate in anti-social behaviour (e.g., street crime, violence) and abuse illegal drugs. Jerome is also a Christian."

Participants in groups 2 and 4 were asked to rank each of the 10 musical styles in order of how the extent to which they considered that the individual described was similar to the typical fan of each music style (see Appendix 9). Similarity was ranked where 1 = '*least to similar to John / Jerome*' and 10 = '*most similar to John / Jerome*'. Participants in groups 3 and 5 were asked to rank each of the 10 musical styles in order of how likely it was that the individual described would be a fan of (see Appendix 10). The prediction of the described individual's likely musical preference was ranked, so that 1 = '*John / Jerome is least likely to be a fan of this style*', and 10 = '*John / Jerome is most likely to be a fan of this style*'. In each of these groups participants were instructed to rank each of the 10 musical styles differently, and those who failed to do this correctly were not used as part of the study.

Results

Pearson's *r* correlational analyses were conducted to establish the relationships between the mean ranked predictions of musical taste with both mean base rate estimates, and mean ranked similarity scores. Table 33 shows that for both *John* and *Jerome* there was a strong significant positive correlation between their mean ranked similarity to stereotypical music

fans and mean ranked predictions of their likely musical taste. Table 33 also shows that mean ranked predictions of musical taste were not significantly related to mean base rate estimates regarding the perceived proportions of music style preferences in the British population.

Table 33.
Correlation coefficients between the mean ranked prediction of musical taste and both (1) *mean base-rate population estimates*; *and* (2) *mean ranked similarity*

	Mean Base-Rate Estimates (%)	Mean Ranked Similarity	
		John	Jerome
Mean Ranked Prediction			
John	.40	.98**	-
Jerome	.50	-	.95**

* *p* < .05; ** *p* < .01.

Discussion

When asked to predict an individual's likely musical taste, participants' judgements correlated significantly with their perceived similarity to typical music fans. In contrast, no such correlation was evident between the same ranked predictions and base-rate estimates of musical taste considered typical of the British population. This suggests that simply because John was perceived to be similar to stereotypical heavy metal fans, and Jerome similar to stereotypical hip-hop / rap fans, they were each predicted more likely to like those musical styles, regardless of whether base-rate estimates suggested otherwise. On closer inspection, the extent to which rankings of perceived similarity and predicted musical tastes were correlated (i.e., *r* = .98 and .95), suggested that judging an individual as similar to stereotypical fans of a particular musical style might be psychologically very similar to judging their likely musical taste. These findings support the idea that the representative heuristic is used to judge the likely musical taste of others.

In this case, the representativeness heuristic simplified how participants' judged the likely musical taste of two fictional individuals. The use of the representativeness heuristic meant that participants did not have to consider the actual likelihood that in a given population either John or Jerome was a fan of a particular musical style, which would be a complex and time-consuming process. Instead, participants had only to consider whether the individual was similar to stereotypical music fans. Although susceptible to errors, this heuristic strategy allows individuals to quickly and economically judge other peoples' likely musical taste. This finding may also explain why, in Study 1, participants' judgements of musical taste tended to exhibit a common bias that corresponded with previously established stereotypes of musical taste.

General discussion

The findings of this investigation support the idea that the representativeness heuristic is used to judge the likely musical taste of others. Study 1 showed that when asked to judge the likely musical taste of ten fictional individuals, participants' judgements exhibited a common bias that corresponded with each individual's similarity to stereotypical music fans. This stereotypic bias was believed to stem from the use of the representativeness heuristic. Study 2 confirmed this idea, showing that an individual's similarity to stereotypical music fans, rather than base-rate estimates of musical taste, was significantly related to predictions of their likely musical taste. This suggested that an individual's relative similarity to stereotypical music fans might act as a heuristic 'rule of thumb' used by people to quickly and economically judge their likely musical taste.

Musical taste has been shown to play a significant role in how people are seen by others (e.g., North & Hargreaves, 1999; Zillmann & Bhatia, 1989). The way in which we

judge an individual's musical taste is therefore likely to have direct implications for how people perceive and behave toward them. Recent research has shown that people perceive and behave more favourably towards those perceived to share their musical taste than towards those who do not (e.g., Bakagiannis & Tarrant, 2006; see Section C). In this respect, musical taste has been argued to function as a social 'badge' (Frith, 1983; North & Hargreaves, 1999) of group membership, where those who share our musical tastes should be more likely to be considered in-group members. In view of this, the use of the representativeness heuristic to judge peoples' likely musical taste is expected to have implications for intergroup behaviour. For example, individuals who closely resemble stereotypical fans of our favourite musical style, according to the present findings, are likely to be judged to share our musical taste. Future research might investigate whether these individuals are likely to be considered in-group members, and subject to in-group favouritism, regardless of whether they actually share our musical taste. In this context, an individual's similarity to stereotypes of musical taste is expected to significantly influence how people behave toward them.

In summary, the present findings support the idea that the representativeness heuristic is used to judge the likely musical taste of others. These findings suggest that an individual's similarity to stereotypical music fans might act as a heuristic 'rule of thumb' used by people to quickly and economically judge their likely musical taste. Musical taste is thought to play a significant role in how people see others. The use of the representative heuristic to judge an individual's likely musical taste is therefore expected to have implications for how people see and behave towards each other.

Chapter 12   The development of musical taste: A self-to-stereotype process

The research reported in the previous chapter indicated that similarity to stereotypical music fans might act as a heuristic 'rule of thumb' used to quickly and economically judge the likely musical taste of other people. In the present chapter, research investigated whether an individual's similarity to stereotypical music fans is also used as a heuristic 'rule of thumb' when forming their own musical tastes.

The idea that your musical taste and identity are in some way related, saying something about the kind of person you are, has been long assumed throughout popular culture, everyday life, and academic research. In particular, musical taste has been argued to function symbolically as a social 'badge' of identity and group membership (Frith, 1983; North & Hargreaves, 1999). As a symbolic 'badge' of identity, people are expected to use their musical tastes as a means of self-presentation; where an individual's musical preferences are used to present a particular identity, or convey their likely characteristics to others. This symbolic role as a 'badge' of social identity is considered to have direct implications for how an individual's musical taste develops. More specifically, musical taste is believed to develop according to a process of 'self-to-stereotype matching'.

Self-to-stereotype matching (or 'self-to-prototype matching' as it was originally described) is a decision-making strategy where personal choices are made on the basis of the perceived similarity between the self-concept and appropriate stereotypes (or prototypes) of behaviour (Niedenthal, Cantor & Kihlstrom, 1985). Research has shown that self-to-stereotype matching is likely to be important when making a number of everyday choices and decisions. For example, self-congruity with stereotypes of behaviour is significantly related to people's intention to smoke (Chassin, Presson, Sherman, Corty, & Olshavsky, 1981) and drink alcohol (Chassin, Telzloff, & Hershey, 1985), level of academic achievement (Martinot

& Monteil, 2000), academic preferences (Hannover & Kessels, 2004), educational plans, and participation in social activities (Burke & Reitzes, 1981), clothing preferences (Ericksen & Sirgy, 1992), occupations (Moss & Frieze, 1993), and housing preferences (Niedenthal, Cantor, & Kilhstrom, 1985). Similarly, the self-concept is known to exert a significant influence on consumer attitudes, behaviour and product evaluation. The relationship between self-congruity and consumer choice (i.e., product and brand preference, purchase intention, etc.) is also broadly substantiated (see Sirgy, 1982 for a review). The way people decide which musical styles they like and listen to is believed to follow a similar process of self-to-stereotype matching.

The idea that an individual's musical taste acts as a socially symbolic display of their identity is admittedly not a new idea; however at present this relationship has been subject to little empirical investigation. Sociological analyses appropriately highlight the importance of socio-cultural and economic factors in the symbolic role of musical taste (e.g., Dolfsma, 1999). However, these insights have often been at the expense of investigating the psychological processes that underlie the development of musical taste. North and Hargreaves' (1999) study is the only one to have directly addressed the idea that peoples' musical tastes are related to their self-concept, and were the first to empirically demonstrate that an individual's similarity to stereotypical music fans was related to their musical preferences.

North & Hargreaves (1999) asked participants to rate the extent to which 30 statements (e.g., "They can be tough") were typical of chart pop and rap fans and of themselves. The correlations between ratings of self and typical chart pop fans were found to be significantly higher for participants who were fans of chart pop than for fans of rap. Likewise, correlations between ratings of self and typical rap fans were found to be higher for participants who were fans of rap than for fans of chart pop. These findings were the first to

empirically demonstrate a possible link between the self and an individual's musical preferences; however despite this initial success these findings were subject to some limitations that will be discussed later.

The present research aimed to further investigate the idea that self-to-stereotype matching might account for the development of an individual's musical taste. Two studies investigated whether participants' preference for a particular musical style is significantly related to their similarity to stereotypical music fans. Put simply, participants were expected to like a musical style more readily if they themselves are similar to the stereotypical fans of that musical style. To assess this, each study used a different measure of self-to-stereotype similarity. In Study 1, a self-to-stereotype discrepancy score was calculated for each participant according to the percentage by which his or her characteristics differed from those of stereotypical music fans. In Study 2, participants were simply asked to rate how similar they considered themselves to stereotypical music fans. In both cases, participants' ratings of musical taste were expected to correlate significantly with measures of self-to-stereotype similarity.

Using a variety of psychometric scales both studies also investigated whether particular individual differences mediated the extent to which self-to-stereotype similarity influenced a participant's musical taste. Study 1 also explored the idea that self-to-stereotype similarity might serve as a heuristic 'rule of thumb' used to simplify how individuals judge their musical tastes. In addition to self-to-stereotype similarity, Study 2 investigated whether perceived identification, liking, and dissimilarity with stereotypical music fans were also related to participants' ratings of musical taste.

Study 1 – Musical taste: Self-to-stereotype similarity as a personal heuristic

As a social 'badge' of identity (Frith, 1983; North & Hargreaves, 1999), it is perhaps reasonable to expect that an individual's musical taste will in some way correspond with the kind of person they are. In this context, musical taste is believed to develop according to a process of self-to-stereotype matching; as such, individuals are expected to like a particular musical style more readily if they are similar to the stereotypical fan of that musical style. As noted earlier, North and Hargreaves (1999) found that participants' who preferred chart pop showed more similarity to typical chart pop fans than typical rap fans, and vice versa for participants who preferred rap music.

Although consistent with the idea of self-to-stereotype matching, North and Hargreaves' (1999) findings were however subject to limitations. For example, participants were asked to rate the typical fans of only two musical styles (i.e., chart pop and rap); and though unlikely, the relationship between self-to-stereotype similarity and musical taste may not necessarily extend beyond these two musical styles. In view of this, the present study extended North and Hargreaves (1999) original study and investigated the relationship between self-to-stereotype similarity and participants' preference for 13 different musical styles.

When assessing self-to-stereotype similarity, North and Hargreaves (1999) looked at characteristics and qualities relevant to personal identity (e.g., "These people can be rather lazy"), but did not study demographic information that may relate to a person's social identity. Social identity refers simply to those aspects of an individual's self-concept defined by his or her memberships of particular social groups (e.g., nationality). This is contrasted with personal identity, which refers to those aspects of the self-concept defined by those

unique attributes that distinguish us from other group members (e.g., personality, intelligence). If as expected, musical taste is used as a social 'badge' of group membership, one's social identity should exert a significant influence upon the individual development of musical taste. For this reason, the present study required participants give relevant demographic information (e.g., gender, age, ethnicity) as well as personal qualities (e.g., personality, intelligence) when asked to report both their own characteristics and those of stereotypical music fans. Accordingly, the present study was considered to offer a more representative measure of self-to-stereotype similarity, which took into account of both a participant's personal and social identity.

The main purpose of this first study was to investigate whether or not participants like musical styles more readily if they themselves are similar to the stereotypical fans of that musical style. Note that, consistent with previous research (see Sirgy, 1982), a participant's similarity with stereotypes of the fans of certain musical styles was measured using a self-to-stereotype discrepancy score. As a result of this, negative correlations were expected between self-to-stereotype discrepancy scores and participants' ratings of musical taste, and two measures of music consumption (i.e., time spent listening & number of records purchased). The second aim of the present study was to establish whether similarity to stereotypical music fans is used as a heuristic 'rule of thumb' to simplify how individuals judge their own musical tastes.

Heuristics are cognitive 'short-cuts', or 'rules of thumb' that reduce complex processes of judgement and decision-making into simplistic evaluations. Heuristic rules contrast with Bayesian models of judgement, where the likelihood of events is evaluated according to their relative probability and prior statistical evidence. Heuristics enable individuals to make rapid, intuitive assessments and predictions, although they are liable to lead to errors due to their insensitivity to statistical evidence. Tversky & Kahneman (1974)

identified a number of these key heuristic principles, including the 'representativeness heuristic'.

As noted earlier, the representativeness heuristic refers to a heuristic rule where the subjective probability of events is evaluated according to the extent to which they are perceived to be representative of typical events or category members. Chapter 11 demonstrated that individuals might use the representativeness heuristic when asked to judge the musical taste of others. More specifically, Chapter 11 found that rankings of a target individual's similarity to stereotypical music fans, rather than base-rate estimates of musical taste (i.e., estimates regarding the percentage of the British population that liked each musical style), were significantly related to predictions of their likely musical taste. This suggested that an individual's relative similarity to stereotypical music fans might act as a heuristic 'rule of thumb' used by people to quickly and economically judge the likely musical taste of others.

The present study investigated the possibility that people might also use the representative heuristic to judge their own musical tastes. If this were to be the case, a participant's similarity to stereotypes of musical taste should correlate more closely to ratings of their own musical taste than should base-rate estimates concerning the perceived percentage of different music fans in a given population.

In addition to this, the present study also investigated if particular individual differences mediate the extent to which a participant engages in self-to-stereotype matching. More specifically, the study aimed to establish those psychological characteristics that predict the extent to which an individual's favourite and least favourite musical styles exhibit self-to-stereotype similarity. To do this, the present study investigated several different psychological characteristics known to influence an individual's tendency to engage in self-

to-stereotype matching. For example, personal self-esteem, self-clarity, social desirability, and self-monitoring (Helgeson & Supphellen, 2004; Niedenthal, Cantor, & Kihlstrom, 1985; North & Hargreaves, 1999; Setterlund & Niedenthal, 1993). The study also explored several untested characteristics that were expected to influence the extent to which an individual employed self-to-stereotype matching.

Positive evaluation of one's social identity and fellow group members is expected to promote self-to-stereotype matching in musical taste. Assuming that musical taste serves as a 'badge' of group membership, people with high collective self-esteem (Luhtanen & Crocker, 1992) should engage in self-to-stereotype matching to a greater extent as way to ensure their musical taste reflect their membership of valued in-groups. Individuals who are particularly self-conscious (Feingstein, Scheier, & Buss, 1975) were also expected to be more aware of any self-to-stereotype similarity, and as a result it was considered more likely to influence how their musical tastes develop. Given the present proposal that self-to-stereotype similarity might serve as a heuristic 'rule of thumb', an individual's intolerance for uncertainty (Freeston, Rheaume, Letarte, Dugas, & Ladouceur, 1994) was also expected to moderate the use of self-to-stereotype matching. The use of heuristics is believed to become particularly apparent in uncertain situations (Kahneman, Slovic, & Tversky, 1982). Accordingly, people who respond most negatively to uncertainty (i.e., high intolerance for uncertainty) were considered likely to attend to their perceived similarity with stereotypical music fans more readily when forming their musical tastes.

An individual's identity style (Berzonsky, 1989) refers to the way they process self-relevant information; as such it was expected that one's identity style might mediate the extent to which self-to-stereotype matching was used to judge their musical taste. In particular, individuals who adopt a normative identity style (i.e., the tendency to process self-relevant information in relation to social norms and the expectations of others) were

predicted most likely to hold musical tastes based on their perceived similarity to stereotypical music fans. Finally, openness to experience (i.e., the extent to which individuals hold open-minded values, aesthetically orientated tastes, and an intellectual curiosity) was expected to relate negatively with self-congruent musical tastes. Open-minded participants are considered less likely to make use of conventional means of self-definition and expression, and are thus less likely to hold musical tastes that conform to stereotypes of musical taste.

Method

Participants

One hundred and eight psychology undergraduates (86 females, 22 males) participated in the study as part of their course requirement. Participants' mean age was 19.11 years (*SD* = .95).

Measures

A questionnaire was used to establish the characteristics that participants considered typical of the fans of 13 musical styles. For example, participants were asked to "Please indicate the characteristics you consider to be typical of fans of reggae (e.g., Bob Marley)". Closed questions were used to identify the demographics (i.e., sex, ethnicity and religious beliefs) of typical fans of each musical style, where participants were instructed to select one option for each characteristic. Open questions were used to identify the perceived age and intelligence of typical musical style fans, where participants were required to give specific age (in years) and IQ estimates (following a brief explanation of IQ scores, e.g. a population mean of 100). The remaining items used a 5-point rating scale (see Chapter 9 for details) to identify participants' perception of typical music fans' (a) family income; (b) personality

traits; (c) political orientation; (d) religiosity; (e) likelihood of participation in anti-social; and (f) vulnerability to 'at-risk' behaviour. The order in which participants judged the typical fans of each of the 13 musical styles was randomised.

Participants were then asked to indicate their own characteristics using identical items to those previously used to establish their stereotypes of the fans of different musical styles. Based on this, participants' similarity to collective stereotypes of musical taste was calculated. Self-to-stereotype discrepancy scores for each musical style were calculated for each participant according to the percentage by which his or her characteristics differed from those of the stereotypical music fan of each musical style on each of the items. Percentage difference scores were used as a measure of self-to-stereotype discrepancy both to avoid the arbitrary assignment of similarity scores and also to standardise mean differences between characteristics using different rating scales (e.g., 5-point scale used to measure personality, whereas, 'open' questions were used to measure age and intelligence). Accordingly, if a participant's characteristics (e.g., ethnicity, age) were identical to those of stereotypical of music fans, they were given a self-to-stereotype discrepancy score of 0%.

For characteristics measured using closed questions (i.e., sex, ethnicity, and religious belief), self-to-stereotype discrepancy scores were calculated between participants' own characteristics and the modal characteristics of the stereotypical music fan of each of the 13 musical styles. In these cases, participant's characteristics were considered either identical or different to those of stereotypical music fans, such that participants would score either 0% or 100% self-to-stereotype discrepancy respectively. For the remaining characteristics measured using open questions (e.g., age, intelligence, personality), self-to-stereotype differences were calculated as the percentage difference between a participant's own characteristics and the mean characteristics of stereotypical music fans. For each of the 13 musical styles, an overall

self-to-stereotype discrepancy score was calculated as the sum of the percentage discrepancy scores for all 15 characteristics investigated.

Participants were then asked to rate each of the 13 musical styles from 0 ('*I hate this musical style*') to 10 ('*I absolutely love this musical style*'). These ratings were used as a measure of participants' musical taste. Following this, participants were asked to indicate both their favourite and least favourite musical style from the list 13 musical styles investigated. Two measures of music consumption were also used to establish (a) the average number of hours per week normally spent listening to each of the 13 musical styles; and (b) the number of records normally purchased per year from each of the 13 musical styles. Finally, participants were instructed to give percentage estimates as to the proportion of the British population that liked each of the 13 musical styles. Participants were asked to be as specific as possible (i.e., avoid simply rounding-up estimates), and most importantly, to ensure that their estimates added up to 100%. Those participants whose estimates failed to do this correctly were not used as part of the study. These percentage estimates represented participants' perceived base-rates of musical taste in the British population.

Several different psychometric scales were included for the remainder of the questionnaire. These scales were used to establish those psychological characteristics that predict self-to-stereotype discrepancy scores for both an individual's (a) favourite and (b) least favourite musical style. The questionnaire was completed in one of two counterbalanced conditions, where participants either rated their stereotypes of musical taste then completed the psychometric scales, or vice-versa. In each case, participants were instructed to take a 5-minute break between the two sections, which was intended to prevent questionnaire fatigue. The following scales were used:

Personal self-esteem

168

The Rosenberg (1965) self-esteem scale was used to measure personal self-esteem (PSE), which assesses the overall evaluation of one's own worth or value. The 10-item scale simply asks participants to indicate the extent to which they agree with each of the statements (e.g., "I certainly feel useless at times") using a 4-point rating scale (i.e., *Strongly agree* (SA); *Agree* (A); *Disagree* (D); *Strongly disagree* (SD)). PSE scores range from 0 to 30, where high scores indicate a positive evaluation of an individual's personal identity. The PSE scale has been found to be internally consistent ($\alpha = .74$) and reliable over a 2-week test-retest interval ($r = .85$) (McCarthy & Hoge, 1982; Silbert & Tippett, 1965).

Collective self-esteem

The collective self-esteem (CSE) scale (Luhtanen & Crocker, 1992) was used to assess the tendency to evaluate one's social identity positively. Together with an overall CSE score, the 16-item measure is divided into four distinct subscales; (1) *membership esteem* (i.e., individual judgment of how good or worthy they are as members of their social groups; e.g., "I am a worthy member of the social groups I belong to"); (2) *private collective self-esteem* (i.e., personal judgment of how good one's social groups are; e.g., "I feel good about the social groups I belong to"); (3) *public collective self-esteem* (i.e., individual judgments of how other people evaluate one's social groups; e.g., "Overall, my social groups are considered good by others"); and (4) *importance to identity* (i.e., the importance of one's social group memberships to one's self-concept; e.g., "The social groups I belong to are an important reflection of who I am").

Participants were instructed to rate the extent to which they agreed with each of the 16 statements using a 7-point rating scale (i.e. 1 = *Strongly disagree*; 4 = *Neutral*; 7 = *Strongly agree*). Overall, the CSE scale has been found to be internally consistent ($\alpha = .85$) and reliable over a 6-week test-retest interval ($r = .68$) (Luhtanen & Crocker, 1992). CSE scores for the four subscales range from 4 to 28, where a score of 28 indicates a particularly

positive self-evaluation of one's social identity. Overall collective self-esteem scores are calculated as the mean score of these 4 sub-scales.

Intolerance for uncertainty

The intolerance for uncertainty scale (IUS) (Freeston, Rheaume, Letarte, Dugas, & Ladouceur, 1994) was used to assess the extent to which participants responded negatively to uncertainty. The English version of the IUS (Buhr & Dugas, 2002) has been found to have excellent internal consistency ($\alpha = .94$) and good test-retest reliability ($r = .74$). Participants were asked to rate each of the 27 items to reflect how they felt about each of the statements (e.g., "The ambiguities of life stress me") using a 5-point rating scale (i.e. 1 = *Not at all representative of me*; 5 = *Completely representative of me*). In view of recent research (Buhr & Dugas, 2002) overall uncertainty intolerance scores were used rather than the scale's original five-factor structure. High scores on this scale suggest that an individual has a high intolerance for uncertainty.

Self-concept clarity

The self-concept clarity (SCC) scale (Campbell et al, 1996) was used to assess the extent to which participants' self-beliefs were clearly and confidently defined, internally consistent, and stable. The SCC scale has been shown to have high levels of internal consistency ($\alpha = .86$) and test-retest reliability after both a 4 and 5-month interval ($r = .79$ and .70 respectively) (Campbell et al, 1996). The 12-item scale required participants to indicate the extent they agree with each statement (e.g., "In general, I have a clear sense of who I am and what I am") as self-descriptive using a 5-point rating scale (i.e., 1 = *Strongly disagree*; 5 = *Strongly agree*). High scores on this scale suggest that participants' self-beliefs are clearly defined and stable.

Self-Monitoring

170

The self-monitoring scale (SMS) (Snyder, 1974) was used to assess participants'

orientation and response to social settings, and more precisely the extent to which they

monitor their expressive behaviour and self-presentation. The scale asked participants to rate

each of the 25 self-descriptive statements (e.g., "I'm not always the person I appear to be") as

either true (or mostly true) or false (or not usually true). Overall SMS scores were calculated

as a discontinuous variable, where scores between $0 - 12$ indicate that a participant is a low

self-monitor, and scores $13 - 25$ indicate a high self-monitor.

Social Desirability

A shortened version of the Marlowe-Crowne Social Desirability scale (Crowne &

Marlowe, 1960) was used to assess the extent to which people are motivated to obtain social

approval by responding in a culturally appropriate and acceptable manner. The 8-item short

form version of the scale (Greenwald & Satow, 1970) correlates significantly with scores

from the original, extended version of the scale ($r = .69$) and has also been shown to have

'satisfactory' levels of reliability (i.e., alphas between .65 and .77) with general population

samples (see Ray, 1984). Participants were asked to respond to each of the eight statements

(e.g., "Are you quick to admit a mistake?") where it pertains to them, using either *YES*, *NO* or

NOT SURE. High scores on this scale indicate that participants are highly motivated to obtain

social approval.

Self-Consciousness

The self-consciousness scale (Fenigstein, Scheier, & Buss, 1975) was used to assess

participants' inclination to direct attention inward or outward. The 23-item scale is divided

into 3 distinct subscales, namely (1) *Private self-consciousness* (i.e., self-focused attention to

one's inner thoughts and feelings; e.g., "I'm always trying to figure myself out"); (2) *Public

self-consciousness* (i.e., self-focused attention to the self as a social object that has an effect

on others; e.g., "I'm concerned about the way I present myself"); (3) *Social anxiety* (i.e.,

discomfort in the presence of others; e.g., "Large groups make me nervous"). Test-retest correlations indicate that the scale ($r = .80$) and its subscales ($r = .84$; .79; .73) are reliable (Fenigstein et al, 1975). Moreover, the three-factor model of the scale has been supported by subsequent confirmatory factor analysis (Gould, 1986). Participants were instructed to indicate the extent to which they considered each of the 23 statements were descriptive of themselves using a 5-point rating scale (i.e., 1 = *Extremely uncharacteristic*; 5 = *Extremely characteristic*).

Identity Style

A revised version of Berzonsky's (1989) identity style inventory (ISI) was used to assess participant's identity processing styles. The ISI contains 40 different statements concerned with personal beliefs, attitudes, and ways of dealing with issues. However, terms used in 4 items (i.e., items 3, 15, 20 and 21) were appropriately modified for a British sample (e.g., "university" and "degree" instead of "school" and "major"). Participants are instructed to rate each statement using a 5-point Likert scale, where 1 = *not like me at all*, and 5 = *very much like me*.

The ISI is intended to be a measure of the social-cognitive strategies used to process self-relevant information, assessing participants along four distinct subscales; (1) *informational style* (i.e., the tendency to actively seek-out and evaluate self-referential information; e.g., "I've spent a great deal of time thinking seriously about what I should do with my life"); (2) *normative style* (i.e., the tendency to process self-relevant information in relation to social norms and expectations of significant others; e.g., "I prefer to deal with situations where I can rely on social norms and standards"); (3) *diffuse / avoidant style* (i.e., the tendency to procrastinate and avoid processing self-relevant information; e.g., "When I know a situation is going to cause me stress, I try to avoid it"); and (4) *identity commitment* (i.e., the extent to which individuals are committed to their identity; e.g., "I know what I want

to with my future"). Each subscale has been shown to be internally consistent and reliable over a 2-month interval: informational ($\alpha = .62$, $r = .75$); normative ($\alpha = .66$, $r = .74$); diffuse ($\alpha = .73$, $r = .71$); commitment ($r = .84$) (see Berzonsky, 1992). Scores on each of these four subscales represent the extent to which participants adopt the different identity styles.

Openness to experience

A 20-item scale was used to measure *openness to experience*, a dimension of personality from the 'five-factor model' of personality (Costa & McCrae, 1992). The scale is intended to assess the extent to which participants hold open-minded values, aesthetically orientated tastes, and an intellectual curiosity. Taken from the 'International Personality Item Pool' (IPIP), the scale was found to have good internal consistency ($\alpha = .89$) and to correspond closely to equivalent scales on the NEO Personality Inventory (NEO-PI-R; see Costa & McCrae, 1992), where $r = 0.78$ (IPIP, 2001). Participants are instructed to indicate the extent to which they consider each of the 20 items (e.g., " I enjoy hearing new ideas") accurately describes them using a 5-point rating scale (i.e., 1 = *This statement is a very inaccurate description of me*; 3 = *Neither accurate nor inaccurate*; 5 = *This statement is a very accurate description of me*). Overall scores on the openness to experience scale represent the sum of ten negative and ten positively scored items. High scores on this scale indicate that participants are open-minded.

Results

Pearson's *r* correlational analyses were conducted to establish the relationships between both (a) overall self-to-stereotype discrepancy scores; (b) base-rate percentage estimates of musical taste in the British population and measures of musical taste and music consumption.

Table 34, 35, 36 provides a summary of these correlations for each of the 13 musical styles investigated.

A repeated measures *t*-test was also used to test whether overall self-to-stereotype discrepancy differed significantly between participants' favourite and least favourite musical style. Participants' overall self-to-stereotype percentage discrepancy scores were on average, found to be significantly greater for their least favourite musical style (M = 604.91, S.D = 152.99) than their favourite musical style (M = 530.42, S.D = 113.86), where t (107) = 4.60, $p < .001$. Participants' base-rate percentage estimates of musical taste were found to be significantly greater for their favourite musical style (M = 13.04, S.D = 5.98) than their least favourite musical style (M = 6.56, S.D = 5.67), where t (107) = 7.45, $p < .001$.

Two standard multiple regressions were carried out to establish whether scores on each of the psychometric scales significantly predict participants' overall self-to-stereotype discrepancy scores both for their favourite and least favourite musical style. Table 37 provides a summary of the multiple regression analyses.

Table 37 shows that the individual differences (e.g., collective self-esteem, self-concept clarity) investigated account for 14 per cent of the variance in overall self-to-stereotype discrepancy scores for participants' favourite musical style. Of the eighteen scales (and subscales) investigated, private collective self-esteem made the only significant contribution (beta = -3.14). This indicates that high scores on the private collective self-esteem subscale of the CSE scale are negatively related to participants' overall self-to-stereotype discrepancy score for stereotypical fans of their favourite musical style. Table 37 also shows that the same scales accounted for 11 per cent of the variance in self-to-stereotype discrepancy scores for participants' least favourite musical style. Both the private self-consciousness and public self-consciousness subscales were found to make significant unique

contributions (beta = -.44 and .35 respectively) to the variance in self-to-stereotype discrepancy scores. These findings indicate that high scores on both private and public self-consciousness subscales are negatively and positively related respectively, to participants' overall self-to-stereotype discrepancy scores for stereotypical fans of their least favourite musical style.

Table 34.

Summary of correlations between participant's musical taste, self-to-stereotype discrepancy and base-rate estimates of musical taste

	Reggae	Jazz	Country	Heavy metal	Hip-hop / Rap	Musical taste Classical music	Chart pop	Dance	Indie rock	Soul	Rock	Opera	R'n'B
Self-to-stereotype discrepancy (%)	-.29**	-.07	-.01	-.19*	-.29**	.00	-.26**	-.06	-.16	-.09	-.17	-.08	-.24*
Base-rate estimate (%)	.19**	.13	.23*	.08	.10	.05	.04	.17	.25**	.25**	.42**	.04	.16

* *p* < .05; ** *p* < .01

N = 108 in all cases.

Table 35.
Summary of correlations between time spent listening to music (hrs/week), self-to-stereotype discrepancy and base-rate estimates of musical taste

	Reggae	Jazz	Country	Heavy metal	Hip-hop / Rap	Classical music	Chart pop	Dance	Indie rock	Soul	Rock	Opera	R'n'B
Self-to-stereotype discrepancy (%)	-.04	.01	.03	-.13	-.13	.07	-.18	-.12	-.17	.14	-.22*	-.03	.01
Base-rate estimate (%)	.02	.12	.34**	.07	.19*	.14	.13	.25**	.09	.06	.17	.02	.32**

* *p* < .05; ** *p* < .01

N = 108 in all cases.

Table 36.
Summary of correlations between number of records purchased (per year), self-to-stereotype discrepancy and base-rate estimates of musical taste

	Reggae	Jazz	Country	Heavy metal	Hip-hop / Rap	Classical music	Chart pop	Dance	Indie rock	Soul	Rock	Opera	R'n'B
Self-to-stereotype discrepancy (%)	-.23*	.00	.13	-.12	-.25**	.11	-.07	-.12	-.15	.16	-.21*	-.14	-.01
Base-rate estimate (%)	.20*	.06	-.02	.05	.15	.18	.02	.19*	.14	.13	.28**	-.11	.32**

* $p < .05$; ** $p < .01$

N = 108 in all cases

Table 37.
Summary of standardised coefficients.

Predictor variables	Self-to-stereotype discrepancy (%)	
	Favourite Musical style	Least favourite Musical style
Personal self-esteem (PSE)	.08	-.21
Collective self-esteem (CSE)		
- Membership esteem	-.01	.01
- Private collective self-esteem	-.31*	-.10
- Public collective self-esteem	.10	.00
- Importance to identity	.24	.07
Intolerance for uncertainty *(IUC)*	*.04*	*-.04*
Self-concept clarity *(SCC)*	*.17*	*.05*
Self-Monitoring *(SM)*	*.17*	*-.05*
Social desirability	*.14*	*-.06*
Self-consciousness		
- Private self-consciousness	-.20	-.44**
- Public self-consciousness	.23	.35*
- Social anxiety	.24	.11
Identity style		
- Informational	.20	.19
- Normative	.14	.07
- Diffuse/ avoidant	-.11	-.04
- Commitment	-.09	.12
Openness to experience	*.02*	*.07*
	R square = .28 Adjusted R = .14	R square = .25 Adjusted R = .11

* $p < .05$; ** $p < .01$

179

Discussion

The findings of the present study support the idea that a process of self-to-stereotype matching is to some extent responsible for the development of musical taste. The significant negative correlations found between self-to-stereotype discrepancy scores and ratings of musical taste suggested that a participant's similarity to stereotypical fans of a particular musical style is positively related to the extent they like that musical style. Similar negative correlations were also evident between self-to-stereotype discrepancy scores and measures of music consumption, suggesting that self-to-stereotype matching might also be used when judging what musical styles to listen to and spend money on. Comparison of overall self-to-stereotype discrepancy scores for both participants' favourite and least favourite musical style showed that, on average, participants characteristics significantly differed more with those of the stereotypical fans of their least favourite musical style than their favourite musical style. Together, these findings highlight a relationship between self-to-stereotype similarity and participants' musical taste that is consistent with previous research (North and Hargreaves, 1999), and offer further empirical evidence for a link between an individual's musical taste and their self-identity.

The present study also investigated the possibility that a participant's similarity to stereotypical music fans was used as a heuristic 'rule of thumb' to simplify how their judged their own musical tastes. To test this, correlations between ratings of musical taste and both (1) self-to-stereotype similarity; and (2) base-rate estimates of musical taste were compared. Significant correlations were found in both cases. Comparison of base-rate estimates also showed that, on average, that a significantly greater proportion of the population was perceived to like a participant's favourite musical style than their least favourite musical style. These findings indicated that when considering their musical tastes, people might also

make use of base-rate information to evaluate the perceived likelihood that in a given population they are fans of a particular musical style. In view of this, the present findings were inconclusive in terms of whether an individual's similarity to stereotypical music fans is used as a heuristic 'rule of thumb' for the development of their musical taste. Similar inconclusive correlations were also observed for both measures of music consumption (i.e., time spent listening to music, and number of records purchased). Future research is needed to investigate this idea further.

The present study also found evidence that particular individual differences might mediate the extent that self-to-stereotype matching influences participants' musical taste. Scores on the private collective self-esteem subscale were found to predict significantly a participant's overall self-to-stereotype discrepancy score for their favourite musical style. This implied that a positive personal evaluation of one's social groups is likely to encourage individuals to engage in self-to-stereotype matching when developing their own musical taste. This findings is consistent with the idea that a person's musical taste might function as a social 'badge' of group membership, where individuals may use their musical taste to symbolically reinforce their membership of valued in-groups.

Scores on both public and private self-consciousness subscales were also found to significantly predict participants' overall self-to-stereotype discrepancy scores for their least favourite musical style. Both findings indicate that the extent to which an individual's attention is focused on the self is likely to mediate the degree to which they hold stereotypically self-congruent musical tastes. The influence of public self-consciousness indicates that people who consider themselves the subject of social attention are more likely to dislike musical styles associated stereotypically with fans whose characteristics differ to their own. Publicly self-conscious individuals tend to be more aware of how they present themselves and how others see them. For these individuals, their musical dislikes might be

regarded as means to publicly distance themselves from certain social groups or personal characteristics stereotypically associated with fans of particular musical styles. In this context, one's musical dislikes might be used to show other people those social groups an individual wished to dissociate themselves from.

The influence of private self-consciousness indicated that participants who more readily focus on their inner thoughts and feelings were more likely to be similar to the stereotypical fan of their least favourite musical style. Privately self-conscious individuals tend to behave according to their own personal beliefs regardless of social norms and expectations. As a result of this, privately self-conscious people are arguably less concerned with how they appear to others, and are less inclined to use their musical dislikes as a means to publicly distance themselves from members of undesirable out-groups.

The main limitation of this first study was the self-to-stereotype discrepancy score used to measure the extent to which each participant's characteristics differed from those of stereotypical music fans. By using this measure, the present study ensured that self-to-stereotype discrepancy on the 15 characteristics investigated (e.g., age, ethnicity, intelligence) were standardised, avoiding the arbitrary assignment of self-to-stereotype similarity scores. However, this might not be the most appropriate way to measure an individual's similarity to stereotypical music fans. Firstly, by standardising the discrepancy scores across all 15 characteristics the present study may have overlooked the possibility that self-to-stereotype similarity on certain characteristics (e.g., age, ethnicity) may be more important to participants than others (e.g., intelligence, personality). Secondly, the self-to-stereotype discrepancy score calculated for each participant was unable to determine if they themselves perceived any similarity to stereotypical music fans. Regardless of whether or not participants were actually similar to stereotypical music fans, their perceived similarity could be arguably more important to how an individual's musical tastes develop. To resolve this,

182

Study 2 simply asked participants to rate how similar they considered themselves to stereotypical music fans.

Study 2 - Musical taste and perceived self-to-stereotype similarity

In Study 1, participants were found to like musical styles more readily if they themselves were similar to the stereotypical fan of that musical style (i.e., low self-to-stereotype discrepancy). This suggested that a process of self-to-stereotype matching might be responsible for how individual musical tastes develop. The self-to-stereotype discrepancy score used in Study 1 measured the extent to which each participant's characteristics matched those of stereotypical music fans. One limitation of this approach was that it did not take into account the potential influence of an individual's perceived self-to-stereotype similarity. Study 2 investigated this idea, by simply asking participants to rate how similar they considered themselves to stereotypical music fans.

If self-to-stereotype matching is responsible for the development of musical tastes, it is expected that a participant's perceived similarity to typical music fans will correlate positively with ratings of their musical taste. In addition to this, the present study also explored whether the extent to which participants like a particular musical style is significantly related to whether they identify with, like, or are different to typical music fans. Finally, given the findings of Study 1; Study 2 investigated whether scores on both the collective self-esteem (Luhtanen & Crocker, 1992) and self-consciousness scale (Fenigstein, Scheier, & Buss, 1975) significantly predict how similar participants rated themselves to the typical fans of their favourite and least favourite musical style.

Method

Participants

One hundred and three psychology undergraduates (89 females, 14 males) participated in the study as part of their course requirement. Participants' mean age was 19.42 years (*SD* = 2.13).

Measures

A questionnaire was used to establish the extent that participants considered themselves similar to, identified with, were different to, and like the stereotypical fan for each of the 14 musical styles investigated. For each musical style, participants were asked to "think about what they consider to be [for example] a typical reggae fan". Participants were then asked to answer four different questions: (1) "I am in many ways similar to typical reggae fans"; (2) "I identify with typical reggae fans"; (3) "I am different from the average fan of reggae"; (4) "I normally like fans of reggae". In each case participants answered using an 11-point rating scale (0 = *Not at all* and 10 = *Very much*). The order in which participants judged the typical fans of each of the 14 musical styles was randomised.

Participants were then asked to rate the extent they like each of the 14 musical styles (where 0 = *I hate this musical style* and 10 = *I absolutely love this musical style*). Following this, participants were asked to indicate which of the 14 musical styles was their favourite and least favourite musical style. Finally, participants completed both the collective self-esteem scale (Luhtanen & Crocker, 1992) and the self-consciousness scale (Fenigstein, Scheier, & Buss, 1975).

Results

184

Pearson's *r* correlational analyses were conducted to establish the relationships between participants' ratings of musical taste and the extent they rated themselves as (a) similar to; (b) different to; (c) identified with; and (d) normally like typical fans of each of the 13 musical styles investigated. Table 38 provides a summary of these correlations.

Four repeated measures *t*-tests were used to test whether the extent to that participants' rated themselves as similar to, different to, identify with, and normally like typical fans of their favourite and least favourite musical style differed significantly. Table 39 shows that on average, participants rated themselves significantly more similar to, identify with, and normally like fans of their favourite musical style than fans of their least favourite musical style. Participants also rated themselves significantly less different to typical fans of their favourite musical style than to fans of their least favourite musical style.

Two multiple regression were carried out to establish whether scores on both the collective self-esteem and self-consciousness scale predicted how similar participants rated themselves to typical fans of their favourite and least favourite musical style. Scores on both scales (and their subscales) were not found to significantly predict participants' self-rated similarity to typical fans of either their favourite or least favourite musical style. In view of this, a further two multiple regression were carried out to explore whether scores on both scales significantly predict how different participants rated themselves to fans of their favourite and least favourite musical style. Table 40 shows that scores on the private collective self-esteem sub-scale significantly predict how different participants rated themselves to fans of their favourite musical style.

185

Table 38.

Summary of correlation coefficients (r) for the relationship between musical taste and measures of self-to-stereotype similarity, difference, identification, and liking

	Reggae	Jazz	Country	Heavy metal	Hip-hop / Rap	Classical music	Chart pop	Dance	Indie rock	Punk	Soul	Rock	Opera	R'n'B
Self-to-stereotype similarity	.60**	.61**	.70**	.61**	.65**	.67**	.73**	.79**	.78**	.73**	.51**	.69**	.55**	.68**
Self-to-stereotype difference	-.41**	-.34**	-.53**	-.32**	-.54**	-.41**	-.67**	-.61**	-.67**	-.53**	-.42**	-.49**	-.47**	-.64**
Music fan identification	.64**	.68**	.70**	.66**	.61**	.60**	.68**	.76**	.70**	.74**	.59**	.65**	.70**	.60**
Music fan liking	.63**	.69**	.66**	.59**	.70**	.58**	.60**	.74**	.78**	.71**	.56**	.71**	.54**	.62**

* p < .01; ** p < .001

N = 103 in all cases.

Table 39.

T-test comparison of scores for both favourite and least favourite musical style

	Favourite musical style	Least favourite musical style	*t*
Self-to-stereotype similarity	7.95 (*1.59*)	1.43 (*1.64*)	27.78**
Self-to-stereotype difference	2.47 (*2.32*)	7.88 (*2.54*)	15.38**
Music fan identification	8.16 (*1.63*)	1.76 (*1.93*)	25.32**
Music fan liking	8.44 (*1.40*)	3.09 (*2.13*)	21.32**

* *p* < .01; ** *p* < .001

df = 102 in all cases.

Table 40.

Summary of standardised coefficients for self-to-stereotype difference scores for both favourite and least favourite musical style

Predictor variables	Favourite musical style	Least favourite musical style
Collective self-esteem (CSE)		
- Membership esteem	-0.14	0.21
- Private collective self-esteem	-0.28*	-0.03
- Public collective self-esteem	0.06	-0.18
- Importance to identity	0.15	0.00
Self-consciousness		
- Private self-consciousness	-0.09	0.02
- Public self-consciousness	-0.06	0.04
- Social anxiety	-0.06	-0.09
	R square = .09	R square = .07
	Adjusted R = .03	Adjusted R = -.00

* $p < .05$

Discussion

In keeping with Study 1, the present findings indicate that an individual's perceived similarity to stereotypical fans of a particular musical style is positively related to the extent they like that musical style. Participants were also found to rate themselves, on average, significantly more similar to typical fans of their favourite musical style than to fans of their least favourite musical style. Both findings provide further support for the idea that an individual's perceived similarity to stereotypical music fans might exert a significant influence upon how their musical tastes develop.

Positive correlations were evident between participants' musical taste and the extent to which they rated that they like and identify with the stereotypical fans of different musical styles. Comparison of participants' ratings showed that they like and identify with fans of their favourite musical style significantly more than fans of their least favourite musical style. This suggested that participants who normally like, and identify with fans of a particular musical style were more likely themselves to be a fan of that musical style. Negative correlations were also found between participants' ratings of musical taste and the extent to which they rated themselves as different to stereotypical music fans. Comparison of participants' ratings showed that they considered themselves significantly more different to fans of their least favourite musical style than fans of their favourite musical style. This suggested that participants might be less inclined to like a particular musical style if they consider themselves different from the musical style's typical fans.

189

The present study found that scores on both the collective self-esteem and self-consciousness scale did not significantly predict participants' self-rated similarity to fans of both their favourite and least favourite musical style. However, scores on the private self-esteem subscale were found to significantly predict how different participants' rated themselves from the typical fans of their favourite musical style. Consistent with the findings of Study 1, this suggests that individuals who hold a particularly positive personal evaluation of their social groups are less likely to perceive a difference between themselves and the stereotypical fans of their favourite musical style. Put simply, this indicated that people might be more inclined to engage in self-to-stereotype matching when judging their own musical tastes, if they are personally positive about their group membership(s).

General discussion

The two studies reported here offer further support for the idea that a process of self-to-stereotype matching is, to some extent, responsible for how an individual's musical taste develops. In both cases, an individual's relative similarity to the stereotypical fans of a particular musical style was found to relate positively with the extent that he or she likes that musical style. Together the findings of Study 1 and 2 indicated that, in general, people tend to like those musical styles that stereotypically have fans that are similar to them. This is consistent with North and Hargreaves' (1999) findings with chart pop and rap fans. In this context, the music people choose to listen to, and their individual musical tastes can be understood to take on greater personal significance, perhaps serving as a social 'badge' of their identity (Frith, 1983; North & Hargreaves, 1999).

Using a self-to-stereotype discrepancy measure, Study 1 showed that when participants' characteristics differed from those of stereotypical fans of a particular musical style, they themselves were less likely themselves to be a fan of that musical style. Study 1 also investigated the idea that an individual's relative similarity to stereotypical music fans might be used as a heuristic 'rule of thumb' for the development of their musical tastes. However, no clear evidence was found for this. Correlations between participants' ratings of musical taste and both (1) self-to-discrepancy scores and (2) base-rate estimates of musical taste were inconclusive. This suggested that as well as their similarity to stereotypical music fans; people might also make use of base-rate information (i.e., "How many people normally like this musical style in a given population?") when considering their own musical tastes. Given the inconclusive nature of these findings, future research may be needed to clarify this further.

In Study 2, participants were simply asked to rate how similar they considered themselves to the typical fan of several different musical styles. In keeping with the findings of Study 1, participants' perceived similarity to typical music fans was found to correlate positively with ratings of their musical taste. Study 2 also asked participants to rate the extent they like, identify with, and how dissimilar they were to typical music fans. Ratings of musical taste were found to correlate positively with the extent participants like and identify with the typical fan of each of the 13 musical styles; and correlate negatively with the extent participants rated themselves different to typical music fans. These findings highlight possible avenues for future research, and raise further questions regarding the role, and relative importance of liking,

identification, and difference with stereotypical music fans to how an individual's musical taste develops.

In both studies there was evidence to suggest that certain individual differences may mediate the extent to which self-to-stereotype similarity influenced a participant's musical taste. In study 1, scores on the public and private self-consciousness subscales were found to significantly predict participants' overall self-to-stereotype discrepancy scores for their least favourite musical style. In this respect, the extent to which participants' characteristics differed from those of stereotypical fan of their least favourite musical style was arguably mediated by how concerned individuals were about how they appeared to others. The characteristics of people who regarded themselves the object of social attention (i.e., high public self-consciousness) seemed to more readily differ to those the stereotypical fan of their least favourite musical style. In contrast, those individuals who are more inclined to focus on their own thoughts and feelings (i.e., high private self-consciousness) were more likely to share characteristics of the stereotypical fan of their least favourite musical style. These findings suggest that according to their concerns about how they appear to others, individuals may be more or less inclined to use their musical dislikes as a means to publicly distance themselves from members of a particular social group.

In both Study 1 and 2, scores on the private collective self-esteem subscale were found to significantly predict how different participants were to the stereotypical fan of their favourite musical style. This suggested that individuals who feel good about the groups they belong to will be less likely differ from the stereotypical fans of their favourite musical style. These findings are consistent with the idea that people

might use their musical taste as a 'badge' of social identity, where individuals are likely to prefer musical styles that symbolically display membership of, or affiliation with those social groups that they personally value.

The present investigation has shown that similarity to stereotypical fans of a particular musical style is likely influence how our musical tastes develop. Study 1 highlighted this by calculating self-to-stereotype discrepancy scores based on the extent to which each participant's characteristics matched those of stereotypical music fans. Study 2 did this using a self-rated measure of self-to-stereotype similarity. Of the two, an individual's perceived similarity to stereotypical music fans is predicted to exert the greater influence on their musical taste than any real similarity to music fans. Future investigations should therefore use both measures of self-to-stereotype similarity to test this prediction.

People respond to music in a number of different ways; Abeles (1980) believed there are three different types of response. First, an *emotional* response, where individuals involuntarily experience emotion following exposure to music. Second, a *preference* response, where people respond to music with an immediate statement of liking or disliking. Though under greater voluntary control than an emotional response, a preference response does not necessarily imply a long-term commitment to the stimulus. Finally, a *taste* response, where an individual's music preferences reflect more stable, longer-term commitment to particular musical styles, or artists. In the light of this, the present investigation can be understood to have studied participants' *musical taste* as opposed to their *musical preferences*. Future

193

investigations might then explore whether similarity to stereotypical music fans also influences how people form their musical preferences.

In summary, the findings of the present investigation provide further support for the idea that a process of self-to-stereotype matching might to some extent account for how peoples' musical tastes develop. Two studies each using a different measure of self-to-stereotype similarity, found that participants' relative similarity to the stereotypical fans of a particular musical style correlated significantly with the extent that they liked that musical style. These findings suggest that, in general, individuals tend to prefer those musical styles that stereotypically have fans that are similar to them. These findings are consistent with the idea that an individual's musical taste might act as a social 'badge' of identity, used by people to present a particular image, convey their likely characteristics, or display group membership to others.

Chapter 13 General discussion

The four chapters reported in Section B highlight the role of stereotypes in the social 'badge' function of musical taste (Frith, 1983; North & Hargreaves, 1999):

In Chapter 9, a study found that participants collectively held clear-cut and consensual stereotypes of musical taste. This suggested that people are likely to share a belief that different groups of people stereotypically like different musical styles. These findings support the idea that as a social 'badge' of group membership, individuals might use musical taste as a means to identify and distinguish between the members of different social groups.

In Chapter 10, a study investigated whether informing participants of an individual's musical taste significantly influenced how they judged their likely characteristics. As a 'badge' of identity, an individual's musical taste might be expected to serve as an influential social cue that is likely to play a significant role in how we see other people. When asked to judge the likely characteristics of five individuals, participants who were informed of the individuals' musical taste made significantly different judgements compared to those who were not. Furthermore, when informed of an individual's musical taste, participants' judgements exhibited a common bias that seemed to correspond with stereotypes of musical taste. Together, these findings suggested that as a social 'badge' of identity, musical taste might be an influential social cue that is likely to play a significant role in how we see other people.

In Chapter 11, two studies investigated whether individuals use the representativeness heuristic to judge other peoples' likely musical taste. The first study showed that when asked to judge the likely musical taste of ten fictional individuals, participants' judgements exhibited a common bias, which seemed to correspond with stereotypes of musical taste. This stereotypic bias was presumed to stem from the use of the representativeness heuristic. Study 2 confirmed this, showing that an individual's similarity to stereotypical music fans, rather than base-rate estimates of musical taste, was significantly related to predictions of their likely musical taste. These finding suggested that an individual's relative similarity to stereotypical music fans might act as a heuristic 'rule of thumb' used by people to quickly and economically judge their likely musical taste.

In Chapter 12, two studies investigated whether self-to-stereotype matching might account for the development of an individual's musical taste. Both studies, each using a different measure of self-to-stereotype similarity, found that a participant's relative similarity to the stereotypical fans of a particular musical style correlated significantly with the extent that they liked that musical style. These correlations suggested that, in general, individuals tend to prefer those musical styles that stereotypically have fans that are similar to them. These findings are consistent with the idea that, an as a social 'badge' of identity, an individual's musical taste may be used to present a particular image, convey their likely characteristics, or display group membership to others.

Taken together, the findings reported in Section B indicate that people hold clear-cut and consensual stereotypes of musical taste. These stereotypes significantly

influenced how individuals judge other people and themselves. In particular, similarity to stereotypical music fans was found to significantly influence how individuals judged both their own musical taste and the likely musical tastes of others. In this context, an individual's similarity to stereotypes of musical taste might be regarded as a heuristic 'rule of thumb' used by people to reduce potentially complex social judgements and decisions into increasingly simplistic evaluations. When collectively subscribed to, these stereotypes might well underpin the social 'badge' function of musical taste.

SECTION C: MUSICAL TASTE AND IN-GROUP FAVOURITISM

Chapter 14   Musical taste and in-group favouritism

Section B showed that musical taste might function as a social 'badge', used by people to symbolically represent their membership of different social groups. Given the proposed relationship with group membership, musical taste is expected to contribute to an individual's sense of social identity.

'Social identity' refers simply to those aspects of one's self-concept defined by the different social groups we are members of, or identify with (e.g., gender, nationality). This contrasts with personal identity, which refers to aspects of the self-concept defined by attributes that distinguish us from other group members (e.g., personality, intelligence). Social identity theory (Tajfel, 1978) claims that in order to maintain a positive social identity and high self-esteem people are motivated to evaluate the groups to which they belong (so-called in-groups) more positively than other relevant out-groups. This in-group bias is expected to have direct implications for how people regard musical taste, such that people perceive and behave more favourably towards those who share their musical taste than those who do not. In view of the proposed association with group membership, those who share our musical tastes should be more likely considered in-group members than those who do not share our musical tastes, and for this reason they should also be subject to in-group favouritism.

Recent research supports these predictions of social identity theory. For example, people attribute more positive characteristics to fans of musical styles they themselves like than they do to those who like other musical styles (North &

Hargreaves, 1999; Tekman & Hortaçsu, 2003). Similarly, when asked to estimate the musical taste of in-group and out-group members, adolescents associate in-group members more with positively stereotyped musical styles and less with negatively stereotyped musical styles (Tarrant, North, & Hargreaves, 2001). Furthermore, if led to believe that members of an out-group share similar musical preferences, people hold more positive intergroup perceptions than if told nothing about their musical tastes (Bakagiannis & Tarrant, 2006). Similarly, when perceived to share our musical taste individuals are evaluated more positively, seen to be more desirable as potential friends, and more sexually attractive (Knobloch, Vorderer, & Zillmann, 2000; Zillmann & Bhatia, 1989). These findings are consistent with the predictions of social identity theory, where people exhibit in-group favouritism toward those who share similar musical taste to them.

The following two studies in Section C investigated two questions developed from the assumptions of social identity theory (Tajfel, 1978). In Chapter 15, the first study explored whether peoples' stereotypes of musical taste reflect the principles of in-group favouritism. Regarded as cognitive antecedents of prejudice (Tajfel, 1969), stereotypes are typically regarded as responsible for the characteristic processes of social cognition that underlie in-group favouritism. In Chapter 16, a second study investigated the prediction that individuals should behave more favourably towards those who share their musical tastes than those who do not. Specifically, the investigation adopted a 'minimal group' research design to test experimentally whether participants rewarded those perceived to share their musical tastes (i.e., the in-group) significantly more than they rewarded those who do not (i.e., the out-group). The findings of both studies are then discussed in Chapter 17.

Chapter 15   Stereotypes of musical taste and in-group favouritism

If stereotypes represent the cognitive antecedents of prejudice (Tajfel, 1969), the investigation of peoples' stereotypes seems a sensible starting point for any study of in-group favouritism. Stereotypes are generally thought to simplify normally complex social situations, exaggerating perceived differences between social groups, whilst also minimising perceived within-group variability. In this context, stereotypes exert a significant influence upon how we see the members of different social groups, having direct implications for in-group favouritism.

Social identity theory (Tajfel, 1978) suggests that through a process of social comparison individuals are motivated to evaluate members of their own social group more positively than members of relevant out-groups. People's stereotypes were expected to exhibit the same in-group bias. Also, it is suggested that people may use musical taste as a social 'badge' of group membership and self-identity (Frith, 1983; North & Hargreaves, 1999). Given both these assumptions, the present study explored whether or not people's stereotypes of musical taste reflect the influence of in-group favouritism. Put simply, individuals were expected to hold significantly more positive stereotypes for fans of their favourite musical style than for fans of their least favourite musical style.

As noted in Chapter 14, two recent studies have provided initial empirical support for the idea that people perceive those who share their musical tastes significantly more favourably than those who do not (North & Hargreaves, 1999; Tekman & Hortaçsu, 2003). Specifically, both studies showed that when asked to rate

statements or adjectives describing typical music fans, participants attributed significantly more positive qualities and fewer negative characteristics to fans of their preferred musical style. Whilst these findings of in-group favouritism are consistent with the predictions of social identity theory, they are however subject to several limitations. For example, participants in both studies were asked to rate the typical fans of only two musical styles (e.g., chart pop and rap), which may well have led inadvertently to the polarised stereotypes found. This approach might have also over-simplified participants' true musical tastes, which were reduced effectively into an unrealistic dichotomy. Furthermore, both studies neglected to investigate the potential influence of self-esteem. This is particularly surprising given that social identity theory argues that an individual's motivation to favour the in-group is to increase self-esteem, an idea that has been supported repeatedly by empirical evidence (see Rubin & Hewstone, 1998 for a review).

In view of these criticisms, the present study investigated whether peoples' stereotypes of the fans of several musical styles exhibited in-group bias. The present research also attempted to provide a more realistic account of peoples' individual musical tastes that has been done hitherto. Moreover, the present study also investigated if personal and collective self-esteem mediated the extent to which individuals exhibited in-group favouritism. Specifically, individuals with low self-esteem were expected more likely to positively differentiate fans of their favourite musical style from the fans of their least favourite style.

Method

Participants

Three hundred undergraduates (150 females, 150 males) participated in the study voluntarily. Participants' mean age was 20.23 years ($SD = 2.47$). Participants were recruited so that an equal number liked each of the six musical styles investigated (n = 50), of which, an equal number were male and female (i.e., 25 males and 25 females).

Measures

A questionnaire was used to establish how positively or negatively participants evaluated typical fans of six different musical styles. The musical styles used (i.e., heavy metal / rock, hip-hop / rap, chart pop, dance music, indie rock, & R'n'B) were chosen because they were considered representative of the musical tastes in the undergraduate population sampled. Participants were asked to rate the extent to which 18 statements (e.g., "Chart pop fans are popular") accurately described typical fans of the six different musical styles. Ratings were given on 11-point scales (0 = *Poor description* and 10 = *Excellent description*).

Each of the statements used one of 18 different adjectives were chosen because of their previous use in studies of intergroup evaluation (e.g., Locksley, Oritz, & Hepburn, 1980; Tarrant, 2002). Of the 18 adjectives used, nine represented positive and socially desirable characteristics (e.g., honest, friendly) and nine represented negative, socially undesirable characteristics (e.g., cruel, selfish). For each musical style, these adjectives were presented in a random order. Moreover, the sequence in which participants judged the typical fan of each of the six musical styles was also randomised between participants to offset any potential order-effects. Following this,

participants were asked to indicate which of the six musical styles were their favourite and least favourite.

The remainder of the questionnaire asked participants to complete measures of personal self-esteem and collective self-esteem. The Rosenberg (1965) self-esteem scale was used as a measure of personal self-esteem (PSE), which assesses one's overall evaluation of self worth or value. The 10-item scale asks participants to indicate the extent to which they agree with each of the statements (e.g., "I certainly feel useless at times") using a 4-point rating scale (i.e. *Strongly agree* (SA); *Agree* (A); *Disagree* (D); *Strongly disagree* (SD)). PSE scores range from 0 to 30, where high scores indicate a positive evaluation of an individual's personal identity. The PSE scale has been found to be internally consistent ($\alpha = .74$) and reliable over a 2-week test-retest interval ($r = .85$) (McCarthy & Hoge, 1982; Silbert & Tippett, 1965).

The collective self-esteem (CSE) scale (Luhtanen & Crocker, 1992) was used to assess the tendency to evaluate one's social identity positively. Together with an overall CSE score, the 16-item measure is divided into four distinct subscales, namely; (1) *membership esteem* (i.e., an individual's judgment of how good or worthy he/she is as a member of their social group; e.g., "I am a worthy member of the social groups I belong to"); (2) *private collective self-esteem* (i.e., personal judgment of how good one's social groups are; e.g., "I feel good about the social groups I belong to"); (3) *public collective self-esteem* (i.e., individual judgments of how other people evaluate one's social groups; e.g., "Overall, my social groups are considered good by others"); and (4) *importance to identity* (i.e., the importance of one's social group

memberships to one's self-concept; e.g., "The social groups I belong to are an important reflection of who I am").

Participants were instructed to rate the extent to which they agreed with each of the 16 statements using a 7-point rating scale (i.e., 1 = *Strongly disagree*; 4 = *Neutral*; 7 = *Strongly agree*). Overall, the CSE scale has been found to be internally consistent (α = .85) and reliable over a 6-week test-retest interval (r = .68) (Luhtanen & Crocker, 1992). CSE scores for the four subscales range from 4 to 28, where a score of 28 indicates a particularly positive self-evaluation of one's social identity. Overall collective self-esteem scores are calculated as the mean score of these 4 sub-scales.

Results

Several repeated measures *t*-tests were used to investigate whether participants judged fans of their favourite musical style significantly more favourably than fans of their least favourite musical style. Table 41 provides a summary of mean ratings given to each of the 18 adjectives, together with the overall mean positive and negative ratings (i.e., the mean score of the nine positive and nine negative adjectives respectively) for fans of both participants' favourite and least favourite musical style.

Pearson's *r* correlational analyses were also used to test for any relationship between participants' self-esteem scores and the extent to which their judgement of typical music fans positively differentiated fans of their favourite musical style from fans of their least favourite musical style. To measure this, two new variables were

calculated. The first represented the mean difference between the overall mean rating for fans of the participants' favourite musical style and least favourite musical style on the nine positive statements. The second new variable was calculated by repeating this with overall mean ratings on the nine negative statements. Scores for each of these new variables were then correlated with scores for both personal and collective self-esteem. Table 42 provides a summary of these correlations.

Further analyses were carried out to explore whether people exhibited in-group favouritism to a greater or lesser extent according to their individual musical tastes. For example, are heavy metal fans more likely than hip-hop fans to favour typical fans of their favourite musical style? Two one-way between-groups ANOVAs were used to compare the mean difference between (a) the overall mean rating on the nine positive statements; and (b) the overall mean rating on the nine negative statements assigned to typical fans of a participant's favourite and least favourite musical style for fans of the six musical styles investigated. In both cases, non-significant differences were found between fans of the six musical styles, when comparing the mean difference between overall 'positive' ratings (F (5, 294) = .52, p > .05); and overall 'negative' ratings (F (5, 294) = 1.95, p > .05).

Table 41.

Mean rating assigned to typical fans of peoples' favourite and least favourite musical style, and results of individual t-tests for both positive and negative adjectives

Adjective	Mean for favourite musical style	Mean for least favourite musical style	t	Eta squared
Positive				
Intelligent	5.88 (*2.21*)	4.17 (*2.15*)	10.00**	.25
Fun	7.13 (*1.95*)	4.52 (*2.24*)	15.61**	.45
Nice	6.19 (*1.98*)	4.45 (*2.09*)	10.37**	.26
Friendly	6.44 (*2.11*)	4.53 (*2.23*)	10.95**	.29
Honest	5.92 (*2.16*)	4.44 (*1.97*)	8.65**	.20
Trustworthy	5.90 (*2.12*)	4.38 (*2.12*)	9.16**	.22
Considerate	5.57 (*2.08*)	4.19 (*1.93*)	8.73**	.20
Loyal	6.25 (*2.34*)	5.14 (*2.29*)	6.42**	.12
Popular	6.38 (*2.36*)	4.53 (*2.57*)	8.44**	.19
Overall positive rating	6.18 (*1.55*)	4.48 (*1.39*)	14.97**	.43
Negative				
Lazy	4.14 (*2.41*)	5.02 (*2.45*)	4.75**	.07
Cruel	3.18 (*2.30*)	4.77 (*2.54*)	8.63**	.20
Selfish	3.69 (*2.27*)	4.97 (*2.39*)	7.67**	.16
Unreasonable	3.63 (*2.20*)	5.25 (*2.43*)	9.19**	.22
Dishonest	3.41 (*2.04*)	4.73 (*2.34*)	8.20**	.18
Boring	3.12 (*2.41*)	5.16 (*2.75*)	10.38**	.26
Ignorant	3.83 (*2.35*)	5.49 (*2.60*)	8.96**	.21
Unfashionable	3.30 (*2.68*)	5.18 (*3.00*)	7.50**	.16
Snobbish	3.51 (*2.56*)	4.28 (*2.86*)	3.58**	.04
Overall negative rating	3.54 (*1.56*)	4.98 (*1.67*)	12.98**	.36

* $p < .01$; ** $p < .001$

df = 299 in all cases.

Table 42.

Summary of correlations between mean difference between overall mean positive and negative ratings for typical fans of favourite and least favourite musical styles.

	Mean difference between overall mean positive rating for fans of favourite and least favourite musical style	Mean difference between overall mean negative rating for fans of favourite and least favourite musical style
Personal self-esteem (PSE)	.05	.09
Collective self-esteem (CSE)	.02	.04
- Membership esteem	.04	.06
- Private collective self-esteem	.06	.05
- Public collective self-esteem	-.04	.02
- Importance to identity	-.02	-.01

* $p < .05$

df = 300 in all cases.

Discussion

When asked to rate typical fans of several different musical styles, participants were significantly more likely to attribute positive characteristics (e.g., fun, friendly) to fans of their favourite musical style than to the fans of their least favourite musical style; and were significantly less likely to attribute negative characteristics (e.g., cruel, ignorant) to fans of their favourite musical style than to the fans of their least favourite musical style. These findings are consistent with the predictions of social identity theory (Tajfel, 1978; Tajfel and Turner, 1979), which claims that people should evaluate fans of their favourite musical style (i.e., the in-group) more favourably than those of their least favourite musical style (i.e., the out-group). In this sense, peoples' stereotypes of musical taste exhibit in-group favouritism, consistent with the idea that musical taste is used as a social 'badge' of group membership.

Past research supports the idea that we stereotypically perceive those who share our musical tastes more favourably than those who do not (North & Hargreaves, 1999; Tekman & Hortaçsu, 2003). Both studies compared only two musical styles, whereas the present study investigated a range of different musical styles. In this respect, the current findings provide the most robust empirical evidence yet for the predicted relationship between musical taste and social identity. Specifically, this study allows us to conclude that, irrespective of individuals' musical taste, their stereotypes of musical taste are likely to exhibit an in-group bias.

According to social identity theory (Tajfel, 1978; Tajfel and Turner, 1979), individuals are motivated to favour in-group members by their need to maintain high

self-esteem and a positive social identity. In view of this, personal and collective self-esteem should have mediated the extent to which participants positively differentiated fans of their favourite musical style from fans of their least favourite musical style. The present study found no evidence to support this however. This might suggest that people favour those who share their musical tastes regardless of self-esteem.

Exploratory analyses also revealed that all participants exhibited in-group bias to more or less the same the extent, regardless of their own musical tastes for the six musical styles investigated. This indicates that in-group favouritism toward fans of your favourite musical style is likely to be a feature of social cognition common to all music fans.

The findings of the present study suggest that participants perceived those who shared their musical tastes more positively than those who did not. Social identity theory predicts that these evaluations should have direct implications for how people behave towards others. Chapter 16 investigated this idea, testing the prediction that individuals should behave more favourably towards those who share their musical tastes (i.e., the in-group) than those who do not (i.e., the out-group).

Chapter 16   Musical taste and intergroup behaviour

If as expected, musical taste is used as a social 'badge' of group membership (Frith, 1983; North & Hargreaves, 1999), it is perhaps reasonable to expect that people who share our musical tastes will be perceived as likely in-group members. Social identity theory (Tajfel, 1978) predicts that individuals are motivated to favour in-group members so they can maintain a positive social identity and high self-esteem. In view of this, people are similarly expected to exhibit in-group favouritism to those believed to share their musical tastes.

Chapter 15 showed how in-group favouritism influences how people perceive stereotypical music fans. The present study investigated whether a similar in-group bias also influences how people behave towards others. Specifically, this study experimentally tested whether people behave more favourably towards those perceived to share their musical taste than those who do not. This was investigated using the 'minimal group' research design.

A 'minimal group' research design is an experimental procedure used to arbitrarily assign people into groups. Typically, participants are asked to complete a relatively simple or trivial task (e.g., estimate the number of dots on a screen). Following this, participants are then divided into different groups, supposedly because of their performance on the earlier task. However, unknown to participants, the assignment of group membership is in fact entirely random. Participants are informed privately of which group they have been assigned to, whilst the group membership of all other participants remains anonymous. Interaction within and between group

members is also prohibited, so that throughout the experiment participants are unaware of who belongs to which group. Once assigned to groups, participants are then asked typically to either give their opinions of, or allocate rewards to members of both the in-group and out-group(s).

Tajfel, Billig, Bundy, & Flament (1971) first demonstrated how minimal group conditions could influence people's intergroup behaviour. When assigned randomly into one of two groups (seemingly because of a preference for one of two artists), Tajfel et al (1971) found that participants consistently allocated more money to in-group members than to those did not share their artistic preferences (i.e., the out-group). This showed that simply categorising people into one of two groups alone was sufficient to elicit in-group favouritism. This finding has proven to be robust. Indeed, review of subsequent 'minimal group' experiments (Brewer, 1979; Tajfel, 1982) suggests that despite using different participant samples and dependent measures, at least 30 studies have shown that social categorisation into different groups can lead to in-group bias.

Bakagiannis and Tarrant's (2006) study is the only previous instance in which the 'minimal group' design has been used to investigate the social implications of *musical taste*. In their study, participants were assigned to one of two groups (i.e., supposedly 'convergent thinkers' and 'divergent thinkers'), and then told that the two groups were likely to have either similar or different musical preferences. If led to believe that the out-group shared similar musical preferences, participants held more positive intergroup perceptions than if told nothing about their musical tastes. Bakagiannis & Tarrant (2006) argued that by sharing musical tastes this provided both

212

groups with a common in-group identity, which served to reduce intergroup discrimination.

In the present study, a 'minimal group' research design was used to randomly assign participants into two groups on the basis of their supposedly different musical tastes. In this minimal group design, individuals were expected to behave more favourably towards those they believed to share their musical taste (i.e., the in-group) than those who they believed did not (i.e., the out-group). To assess this, participants were asked to decide how much other group members should be rewarded for their participation in the research.

Past research has measured the allocation of rewards using a series of matrices, where participants are presented with several different reward options for in- and out-group members. Originally developed by Tajfel et al (1971), these matrices allow the researcher to identify different reward strategies employed by participants (e.g., maximum joint profit, maximum in-group profit). An example of the matrices used in Tajfel et al's (1971) minimal group experiments is shown in Figure 23.

These reward matrices are subject to considerable criticism, however. Most significantly, their forced-choice format has been criticised for *explicitly* presenting participants with the opportunity to demonstrate in-group favouritism (Locksley, Oritz, & Hepburn, 1980). More generally, the reward matrices unrealistically restrict the allocation of rewards, which may particularly pre-dispose participants to behave according to demand characteristics of in-group favouritism. For these reasons, the present study used a simpler means to measure the allocation of rewards, whereby

213

participants were free (within reasonable predefined limits) to allocate whatever rewards they chose.

Booklet for group preferring Klee

These numbers are rewards for:

Member no. 74 of Klee group	19	18	17	16	15	14	13	12	11	10	9	8	7
Member no. 44 of Kandinsky group	1	3	5	7	9	11	13	15	17	19	21	23	25

Please fill in below details of the box you have chosen:

Amount

Reward for member 74 of Klee group _____

Reward for member 44 of Kandinsky group _____

Figure 23. *Example of matrices used in Tajfel et al's (1971) minimal group experiments*

Accordingly, participants in the present study were expected to allocate significantly greater rewards to people perceived to share their musical tastes (i.e., the in-group) than to those who did not (i.e., the out-group). The study also investigated whether personal and collective self-esteem mediated the extent to which an individual's allocation of rewards exhibited an in-group bias. Furthermore, the study explored whether individuals who directly acknowledged the role of musical taste as a symbolic 'badge' of group membership and identity were more likely to discriminate against out-group members than were those who did not.

Method

Participants

Thirty-two psychology undergraduates (3 males, 29 females) participated in the study as part of their course requirement. Participants' mean age was 18.78 years ($SD = .55$).

Design & Procedure

The study was based on the premise of a market research survey intended to showcase new bands to a focus group of undergraduates. In groups of eight, participants were asked to listen to 2-minute excerpts taken from 14 different songs. All songs used were written and performed by unsigned dance music artists (see www.unsignedmp3.com). These songs were chosen for two reasons. First, unsigned artists were used to limit participants' prior familiarity with the songs. Second, dance music was used because of its characteristic use of instrumentals, guest vocalists, and samples: participants could be assumed to be less likely to recognise that all 14 songs were from different artists.

To prevent interaction between them, participants were seated at one of two parallel tables, such that both halves of the group were facing away from one another, and those sat at each table were seated some distance apart. Participants were asked to remain silent throughout the experiment and avoid communicating with each other.

The 14 songs were played to participants in seven successive pairs. After each pair, participants were instructed to indicate on their answer sheet which of the two

songs was their favourite. Participants were then given a 5-minute "market research music survey" to complete, which was intended to occupy them whilst the experimenter seemingly "analysed" their earlier responses to the seven pairs of songs to work out their musical tastes. Following this, participants were told that all the songs played earlier were written and performed by two different (and actually fictional) unsigned dance artists (namely, Paul Lewis and Citizen 64); and that the survey was simply intended to assess their respective popularity amongst a sample of undergraduates, with a view to deciding which of the two artists would be signed by the dance music record label that commissioned the survey.

Participants were then told that recent undergraduate surveys at other universities across the country had shown that individuals normally have preference for one or the other of the two artists. Following this, participants were told that 'analysis' of their responses to the 14 songs showed that four of the group preferred Paul Lewis and that four preferred Citizen 64. Participants were then thanked for their help and told they would be paid for taking part in the survey. However, because no appropriate fee had been arranged with the record label sponsoring the research, participants would be allowed to suggest how much money they should receive. Subsequent interviews with participants after the research indicated that this cover story was convincing.

Participants were each given a reward allocation sheet that privately informed them that their responses to the 14 songs played earlier indicated a preference for one of the two artists. This allowed participants to be assigned randomly into one of two experimental groups (Paul Lewis fans or Citizen 64 fans) of equal size. Participants

were also given a participant number, and told that the remaining seven members of the focus group had also been given a number, so that they would be unable to identify each other and their group membership. This ensured that the allocation of rewards was anonymous, avoiding the potentially confounding effect of prior relationships between participants on the allocation of rewards.

Participants were asked to allocate reward tokens rather than money: this was intended to control the possible range of rewards allocated, although participants were told that this was "because the amount of funding for the survey has not as yet been confirmed." The reward allocation sheet told participants they were free to give each of the other seven members of the group anywhere between 0 and 100 reward tokens. Participants were required to indicate the number of reward tokens they wished to allocate to each of the other group members. The reward allocation sheets showed that three participants shared the participant's own musical taste (i.e., the in-group) and that the other four participants did not (i.e., the out-group). Figure 24 provides an example of the reward sheet given to a participant who supposedly preferred Citizen 64.

Please indicate your reward allocation decisions on the following response sheet…

For example, if you wish to allocate 57 reward tokens to **participant 17**, simply write 57 in the box below where it says participant 17.

Your participant number is*: **43**   (*Remember not to allocate rewards to yourself)

Participant 72	Participant 17	Participant 4	Participant 19	Participant 38	Participant 27	Participant 3
Paul Lewis fan	*Citizen 64 fan*	*Citizen 64 fan*	*Paul Lewis fan*	*Paul Lewis fan*	*Citizen 64 fan*	*Paul Lewis fan*

(<u>Note</u>: Italics used to denote hand-written sections)

Figure 24. *Example of reward allocation sheet given to a Citizen 64 fan*

After completing the reward allocation sheets, participants were asked to complete a brief questionnaire including measures of personal self-esteem (Rosenberg, 1965), and collective self-esteem (Luhtanen & Crocker, 1992) as in Study 1 (i.e., Chapter 15). In addition to these, two final questions addressed directly the idea that musical taste might function as a social 'badge', used by people to symbolically represent their identity. The first question asked "To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?" The second question asked, "To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?" Participants answered both questions using an 11-point scale (0 = *Not at all* and 10 = *Completely*). Participants were then thanked for their participation.

Participants were fully debriefed three to four weeks later by email, once data collection was complete. They were told the true purpose of the study, informed that

they would not receive any rewards for participating, received an explanation why the deception was an essential aspect of the methodology, and given the opportunity to withdraw their data (although none did so).

Results

A repeated measures *t*-test showed that, on average, participants allocated significantly more reward tokens to those perceived to share their musical taste (72.92; $SD = 25.10$) than to those who did not (68.34; $SD = 25.99$) (t (31) = 2.06, $p <$ .05). The eta-squared statistic (.12) indicated a small effect size (see Cohen, 1988).

Pearson's *r* correlational analyses were used to test the relationship between self-esteem and the extent to which participants' allocation of rewards favoured those perceived to share the same musical taste. Specifically, the mean difference between in-group and out-group rewards was correlated with (a) each participant's scores on measures of both personal and collective self-esteem; and (b) each participant's answers to both questions concerning whether they believed that musical taste is used as a symbolic 'badge' of identity. Table 43 provides a summary of these correlations.

Table 43.

Summary of correlations between mean difference between in-group & out-group rewards, self-esteem and musical taste as a social 'badge'

	Mean difference between in-group and out-group rewards
Personal self-esteem (PSE)	-.04
Collective self-esteem (CSE)	-.04
- Membership esteem	-.07
- Private collective self-esteem	.03
- Public collective self-esteem	-.01
- Importance to identity	-.04
"To what extent do you think your musical taste functions as a symbolic 'badge' of your identity?"	.05
"To what extent do you think other people use musical taste as a symbolic 'badge' of their identity?"	.02

* $p < .05$

df = 32 in all cases.

Discussion

The findings of this second investigation provide further support for the idea that musical taste is used as a social 'badge' of group membership. When randomly assigned to one of two groups, participants rewarded group members perceived to share their musical taste significantly more than those who did not. As such, participants' allocation of rewards exhibited in-group favouritism. This is consistent with the predictions of social identity theory (Tajfel, 1978), and Bakagiannis and Tarrant's (2006) findings concerning musical taste.

Social identity theory (Tajfel, 1978) assumes that in-group favouritism is motivated by the individual's need for high self-esteem and a positive social identity. Given this assumption, personal and collective self-esteem were expected to mediate the extent to which an individual's allocation of rewards favoured group members perceived to share their musical taste. The present study found no evidence to support this: regardless of self-esteem, participants' allocation of rewards showed evidence of in-group favouritism.

The present study also explored the idea that individuals who explicitly acknowledge the role of musical taste as a 'badge' of group membership may be more likely to exhibit in-group favouritism than those who do not. Again, the present study found no evidence for this; participant's allocation of rewards exhibited an in-group bias whether or not they acknowledged the social 'badge' function of musical taste.

Using a 'minimal group' research design, the present study was able to exert a level of experimental control that is often missing in research concerned with the social functions of music. Despite this, the minimal group approach may not be entirely appropriate as a means to understand fully the social implications of musical taste. In particular, the random assignment of participants into different groups of music fans may be inappropriate simply because this assignment may not necessarily correspond with their individual musical tastes. For this reason, future investigations of in-group favouritism should use real groups of music fans, whilst retaining the experimental control of a minimal group design (i.e., no interaction between participants and participants' group membership remaining anonymous). 'Real' music fans are expected to exhibit in-group bias toward those who share their musical taste

to a much greater extent than the artificial groups created experimentally in the

present study.

Chapter 17   General discussion

The two studies reported in Chapters 15 and 16 offer further support for the idea that musical taste is used as a social 'badge' (Frith, 1983; North & Hargreaves, 1999) of group membership, which contributes to an individual's social identity. In keeping with the predictions of social identity theory (Tajfel, 1978), participants in both studies exhibited in-group favouritism toward those who shared their musical taste.

Chapter 15 showed that participants held significantly more positive stereotypes of fans of their favourite musical style than they did of fans of their least favourite musical style. Chapter 16 showed that when assigned randomly to one of two groups, participants rewarded group members perceived to share their musical taste significantly more than those who did not. These findings contribute to a growing body of empirical evidence that suggests shared musical taste is one possible criterion for in-group membership. Recent research has shown that people evaluate those who share their musical tastes more positively than those who do not (Bakagiannis and Tarrant, 2006; Knobloch, Vorderer, & Zillmann, 2000; North & Hargreaves, 1999; Tekman & Hortaçsu, 2003; Zillmann & Bhatia, 1989); which is consistent with in-group favouritism. In view of these findings, the idea that musical taste functions as a symbolic 'badge' of group membership and social identity looks increasingly plausible.

Social identity theory (Tajfel, 1978) asserts that in-group favouritism is motivated by an individual's need for high self-esteem and a positive social identity. In both studies reported here, however, there was no relationship between self-esteem

223

and in-group favouritism. The absence of any apparent role of self-esteem calls into question whether the present findings can be attributed to the causal mechanism typically proposed by advocates of social identity theory to explain instances of in-group favouritism. The factors that might have led to a failure to identify any effects of self-esteem in the present research represent an obvious candidate for future research. Similarly, if self-esteem did not apparently motivate participants to exhibit in-group favouritism, then future research may attempt to determine what did. One possibility is that the in-group bias exhibited toward those who share our musical taste is mediated by an individual's degree of identification with fellow music fans. Previous studies have repeatedly shown that identification with the in-group is positively related to intergroup discrimination (e.g., Perreault & Bourhis, 1998; Sidanius, Pratto, & Mitchell, 1994). Accordingly, individuals who more readily identify with fans of their favourite musical style may be expected to perceive and / or behave more favourably toward those who share their musical taste.

If shared musical taste is a criterion of in-group membership, then this raises further questions for future research regarding musical taste and social identity. For example, the 'out-group homogeneity effect' (e.g., Judd & Park, 1988; Quattrone & Jones, 1980) is likely to influence how we perceive people who do not share our musical taste. Put simply, this means that individuals are expected to perceive those who do not share their musical taste as a more homogeneous group of people (i.e., "they are all the same") than those who do share their musical taste.

In summary, the findings of Section C provide further support for the idea that musical taste is used as a social 'badge' of group membership, which contributes to an

individual's sense of social identity. In keeping with the predictions of social identity theory, participants exhibited in-group favouritism toward those who shared their musical taste. This suggests that shared musical taste is a possible criterion of in-group membership. As such, musical taste may function symbolically as a social 'badge' used by people to display group membership and to differentiate themselves from members of the out-group. However, at present, a great deal of work remains to be done to confirm this.

SECTION D: STEREOTYPES OF MUSICAL TASTE AND PERCEPTION

Chapter 18   Stereotypes of musical taste and perception

Broadly speaking, stereotypes are acknowledged to exert a significant influence upon the processes of social cognition (Fiske & Taylor, 1991); of particular interest to this section of the thesis is the effect of stereotypes on social perception. Based on the assumption that all perception is fundamentally a product of categorisation, Bruner (1957) suggests that the relative accessibility of different categories influences how individuals perceive the world around them; an idea he termed 'perceptual readiness'. Put simply, perceptual readiness refers to a state where an individual will more readily impose a particular categorical interpretation on the perceptual process (e.g., "object X is an apple"), if a particular category (e.g., apples) is more accessible. In this context, the relative accessibility of different social categories is expected to play a significant role in how we perceive other people.

The accessibility of categories according to Bruner (1957) is likely to depend upon two factors: (a) motivation (i.e., what we want to see); and (b) knowledge / past experience (i.e., what we expect to see). Motivational factors are considered to influence perceptual readiness such that categories are made more or less accessible according to an individual's needs and goals. For example, object X is perhaps more likely perceived as an apple if an individual is hungry and would like to eat an apple (e.g., Sanford, 1936, 1937; Levine, Chein, & Murphy, 1942). Bruner and Goodman's (1947) classic experiments provide arguably the clearest illustration of the effects of motivation on perception. Bruner and Goodman (1947) found that when asked to judge the size of different coins, poor children overestimated their size significantly more than rich children. This perceptual accentuation of coin size was argued to

reflect the greater value of money to poor children; whose greater need for money led them to perceive the coins as larger than they actually were.

The relative accessibility of categories is also subject to an individual's knowledge and past experience of situations; such that a category will become more accessible in a given situation if, in the past an individual has learnt that category members are likely to be encountered. For example, when in a supermarket, an individual is perhaps more likely to perceive object X (a small red sphere) as an apple rather than a cricket ball, because at the point of perception, knowledge and past experience of supermarkets (i.e., supermarkets are more likely to sell apples than cricket balls) had made the category of apples more accessible. Put into simple terms, the way we perceive the world is influenced by what we normally expect to see, and these expectations are governed largely by our stereotypes.

Social stereotypes significantly influence how we perceive other people. A particularly startling example of this is shown by research concerned with the negative stereotype that black people are more readily violent than white people (Duncan, 1976; Sagar & Schofield, 1980). Duncan (1976) found that when asked to evaluate the behaviour of two actors, ambiguous aggressive behaviour (e.g., a shove) was more readily perceived as aggressive if the perpetrator was black than if he was white. Likewise, Sagar and Schofield (1980) found that even relatively innocuous acts (e.g., taking a pencil) were perceived to be significantly more threatening when carried out by a black man than when carried out by a white man. The findings of both studies can be explained in terms of perceptual readiness. Given the stereotype that black people are more violent, the concept of violence would arguably be more

accessible when observing a black person than a white person. As a result of this, participants would understandably perceive ambiguously aggressive behaviour more readily as violent and threatening.

Research has shown that stereotypes also influence perceptual judgements of height. Dannenmaier and Thumin (1964) found a significant relationship between authority status and an individual's perceived height. Specifically, when asked to estimate the heights of academic staff and students, participants were found to perceive those in authority (i.e., staff members) as taller than they actually were, whilst underestimating the height of fellow students. Wilson (1968) further developed this idea, asking participants to estimate the height of a single person rather than several different figures. Wilson (1968) found if the individual was ascribed high academic status (e.g., professor, senior lecturer), he was perceived significantly taller than if ascribed low academic status (e.g., student). This accentuation of perceived height is presumably because stereotypically we expect people of higher status or in positions of authority to be taller than those of lower status. More recently, Nelson, Biernat & Manis (1990) highlighted the influence of sex stereotypes (i.e., men are taller than women) on estimates of height. Nelson, Biernat & Manis (1990) found even though the actual height of all targets had been controlled, men were perceived significantly taller than women.

In view of these findings, it is clear that rather than being simply a product of a visual process, the way we perceive other people is influenced by our social stereotypes. Based on this assumption, the following two studies in Section D

investigated whether stereotypes of musical taste significantly influence how individuals see other people.

Investigations concerned with the deleterious effects of so-called 'problem' musical styles (e.g., rap music and heavy metal) have illustrated how stereotypes of musical taste might influence how individuals judge and perceive other people. For example, a number of studies have found that exposure to rap music had a significant stereotypical effect on how participants' subsequently judged black people (e.g., Johnson, Trawalter, & Dovidio, 2000; Rudman & Lee, 2002). In such cases, participants' exposure to music is presumed to have increased the accessibility of negative stereotypes associated with fans of rap music (see Binder, 1993; Fried, 2003), which served to 'prime' their stereotypic social judgements. The studies serve to highlight the influence of stereotypes of musical taste on social judgements. A similar priming effect was also expected to influence how individuals perceive other people on even the simplest of perceptual tasks.

To investigate this idea, participants in two studies were either asked to judge the likely sex (i.e., Chapter 19), or the likely age (i.e., Chapter 20) of several different faces. In both cases, participants read experimentally manipulated personal descriptions prior to judging each face. This manipulation was used to investigate whether the inclusion of musical styles associated stereotypically with fans of a particular age or sex significantly influenced how participants subsequently perceived them. When understood in terms of 'perceptual readiness', the experimental manipulation of personal descriptions was expected to influence the relative accessibility of different stereotypes of musical taste, having direct implications for

how an individual is then perceived. For example, in Chapter 20, telling a participant that an individual likes a musical style that stereotypically has young fans (e.g., chart pop) would arguably increase the accessibility of stereotypes relating to young people prior to judging their age. This participant would then be expected to then subsequently see this individual as significantly younger than participants who were told that he or she likes a musical style that stereotypically has older fans (e.g., classical music). Likewise, in Chapter 19, the inclusion of musical styles stereotypically associated with male or female fans was expected to significantly influence how participants judged an individual's likely sex.

Chapter 19   Stereotypes of musical taste and sex perception

Men and women engage with music in different ways. Research evidence suggests

that where there are gender differences in musical behaviour, they are likely to be the

result of gender stereotypes (see O'Neill, 1997; Dibben, 2002 for a review) rather than

any real differences between the sexes. For example, the musical instruments that

children and adolescents prefer and choose to play have been found to closely follow

gender stereotyped ideas that certain instruments are 'masculine' or 'feminine' (see

O'Neill, 1997 for a review). In school, girls are found to report a greater preference

for music and musical activities than boys (Crowther & Durkin, 1982; Eccles,

Wigfield, Harold, & Blumenfeld, 1993). Again, gender stereotypes are thought to

account for this difference (Colley, Comber, & Hargreaves, 1994), where

schoolchildren are suggested to regard music as a 'feminine' subject, and is therefore,

more likely to appeal to girls than boys. Similar gender stereotyped ideas are also

believed to exist concerning how people think about musical taste.

A review of the research highlights that, in general, males tend to like music

described as 'tough' or 'hard' (e.g., heavy metal), whereas females tend to prefer

music described as 'softer' and 'romantic' (e.g., chart pop) (see Russell, 1997).

Similarly, North and Hargreaves (2007a) found evidence that men and women tend to

like different musical styles. These distinctions between male and female musical

tastes are arguably the product of broader gender stereotypes, where people regard

certain musical styles as stereotypically 'masculine' or 'feminine'. The findings of

Chapter 9 support this idea, showing that a significant proportion of participants

surveyed considered the stereotypical fans of several different musical styles to be of

a particular sex. For example, country, chart pop, soul, and R'n'B were seen stereotypically to have female fans; whilst reggae, jazz, heavy metal, punk, hip-hop / rap, dance, indie rock, rock, and ska were all perceived stereotypically to have male fans. The present study investigated whether these gender stereotypes of musical taste significantly influence how participants perceived the likely sex of two androgynous faces.

Bruner's (1957) idea of 'perceptual readiness' suggests that the way in which individuals perceive the world around them is influenced greatly by the relative accessibility of different categories prior to perception. The present study investigated whether the relative accessibility of gender stereotypes influenced how participants subsequently perceived the likely sex of two androgynous faces. The present study did this by manipulating the personal descriptions that participants read before judging the likely sex of each face. When described as liking a stereotypically 'male' musical style prior to judging their face, participants were expected more likely to subsequently perceive an androgynous face as male, than when the same individual is described as liking a stereotypically 'female' musical style, and vice versa.

Method

Participants

Ninety-six psychology undergraduates (83 females, 13 males) participated in the study as part of their course requirement. Participants' mean age was 19.32 years ($SD = 1.48$).

Design & Procedure

Participants completed a questionnaire that asked them to identify the likely sex of eight different faces (see Appendix 11). Faces were selected following a pilot study (N = 24), which established which of 32 faces were considered male or female. Participants were asked to rate each face using an 11-point rating scale (0 = *Male* and 10 = *Female*). Mean ratings suggested that two faces were regarded as androgynous (4.25 and 4.67). The selection of the six remaining non-androgynous faces was intended to distract participants from the focus of the investigation (i.e., the two androgynous faces). Two faces were identified as being particularly male (1.04 and 0.87), and another two faces as particularly female (8.83 and 9.67). The two other faces were chosen because mean ratings suggested they were perceived to be a somewhat androgynous female (6.50) and a somewhat androgynous male (3.87). The eight faces were presented to participants in a random order. Using a closed-question format, participants were asked to identify each face as either male or female.

All participants followed this procedure in one of four different experimental conditions (n = 24), where the personal descriptions on the page before each of the eight faces were experimentally manipulated. In condition 1, participants were given no personal descriptions, having to identify the likely sex of the eight faces from the portrait photographs alone; this was used as a control condition. In condition 2, participants were asked to identify the likely sex of the eight faces from the portrait photographs together with uninformative, ambiguous and essentially meaningless personal descriptions. These ambiguous descriptions were counterbalanced equally for each of the eight faces. In conditions 3 and 4, participants were given the same counterbalanced ambiguous personal descriptions together with an additional

234

statement referring to the individual's musical taste (e.g., "John's favourite musical style is heavy metal"). In both conditions the musical taste of the six non-androgynous faces was chosen at random from a list of 10 different musical styles and kept constant throughout. However, in condition 3 the musical taste of the two androgynous faces was manipulated so that one face was described as liking chart pop, and the other liking heavy metal, and vice-versa in condition 4.

Both musical styles were chosen because previous research (see Chapter 9) indicated that they were gender-specific musical styles; where chart pop is perceived stereotypically to have female fans, whilst heavy metal is perceived stereotypically to have male fans. This assumption was supported by the findings of the pilot study, where mean ratings (0 = Male and 10 = Female) suggested that chart pop and heavy metal were musical styles associated typically with female and male fans respectively (8.36 and 1.96).

Results

Chi-square analyses were used to establish whether the manipulation of personal descriptions had a significant effect upon how participants perceived the likely sex of the two androgynous faces. Table 44 provides a summary of how participants' perceived the sex of the first androgynous individual in the four different experimental conditions.

Table 44.
Perceived sex of first androgynous individual

	No description	Ambiguous description	Chart pop	Heavy metal
Male	23	22	20	22
Female	1	2	4	2

Chi-square analysis demonstrated that the experimental manipulation of personal descriptions did not significantly influence how participants' perceived the sex of the first androgynous individual, where $\chi^2 = 2.33$; df = 3; $p > .05$. Table 45 provides a summary of how participants' perceived the sex of the second androgynous individual in the four different experimental conditions.

Table 45.
Perceived sex of second androgynous individual

	No description	Ambiguous description	Chart pop	Heavy metal
Male	5	3	10	10
Female	19	21	14	14

Chi-square analysis demonstrated that the experimental manipulation of personal descriptions did not significantly influence how participants' perceived the sex of the second androgynous individual, where $\chi^2 = 7.66$; df = 3; $p > .05$. However, it ought to be noted that these results were only marginally non-significant ($p = .053$).

Discussion

Participants were expected more likely to subsequently perceive an androgynous face as male if preceded by a personal description that described them as liking a stereotypically 'male' musical style (i.e., heavy metal). Likewise, participants were expected more likely to perceive the same androgynous face as female if preceded by a personal description that described them as liking a stereotypically 'female' musical style (i.e., chart pop). The present study found no evidence to support this. The present findings suggest that regardless of how they were described prior to judging their faces; the sex of the two androgynous faces was perceived no differently by participants in all four experimental conditions. Accordingly, the relative accessibility of gender stereotypes may be assumed to have no significant effect how on people perceive another's likely sex.

One possible explanation for these findings is that the process of perceiving an individual's likely sex is not easily susceptible to the influence of stereotypes. The ability to discriminate successfully between male and female faces is extremely important for how people interact with one another. Given its importance to human social interaction, it is therefore unsurprising that, in general, people are found to be "remarkably accurate at deciding whether faces are male or female" (Bruce et al, 1993; p. 131). In the light of this, it is perhaps understandable that participants in the present study were not significantly influenced by the relative accessibility of gender stereotypes simply because as a perceptual task, judging an individual's likely sex was too easy. Future research might investigate whether stereotypes of musical taste significantly influence judgements on more difficult perceptual tasks (e.g., age perception – See Chapter 20).

One limitation of the present study is that the two faces used may not have been sufficiently androgynous. For example, all but one of the participants given no description judged the first androgynous individual to be male (see Table 44), this calls into question whether this individual was at all androgynous. Any future replication of this investigation might therefore benefit from a more extensive pilot study to ensure that a better selection of androgynous faces was used.

Chapter 20   Stereotypes of musical taste and age perception

In Chapter 19, participants were found to perceive the likely sex of two androgynous faces no differently, regardless of whether they were described as liking either a stereotypically 'male' or 'female' musical style. This suggested that the relative accessibility of gender stereotypes had no significant effect how on participants perceived the likely sex of the two faces. The present study investigated whether stereotypes of musical taste significantly influence participants' judgements on arguably a more difficult perceptual task - age perception.

North and Hargreaves' (2007a) recent demographic survey of musical tastes showed that people of different ages tend to hold different musical tastes. In general, young people were found more likely to prefer musical styles that are currently fashionable (e.g., hip-hop, dance), whilst older people tended to be fans of more established musical styles (e.g., classical music, opera). These distinctions in musical taste are also found to be evident in peoples' stereotypes of musical taste. In Chapter 9, a study found that when asked to identify the typical age of fans of 15 different musical styles, participants collectively shared a belief that people of different ages stereotypically like different musical styles. For example, chart pop, R'n'B, hip-hop, indie rock and dance were all seen stereotypically to have adolescent fans (i.e., 14 to 20 years old); jazz, country, classical music and opera were in contrast all seen stereotypically to have older adult fans (i.e., 39 to 46 years old). The present study investigated whether these age stereotypes of musical taste significantly influence how participants perceived an individual's likely age.

Bruner (1957) suggests that the way in which individuals perceive the world around them is influenced greatly by the relative accessibility of different categories prior to perception. The present study investigated whether the relative accessibility of age stereotypes influenced how participants subsequently perceived the likely age of eight different faces. The present study did this by manipulating the personal descriptions that participants read before judging the likely age of each face. Participants told that an individual liked a stereotypically 'old' musical style (e.g., classical music) were expected to subsequently perceive the target individual's face as significantly older than participants who were told that the same individual liked a stereotypically 'young' musical style (e.g., chart pop).

Method

Participants

Ninety-six undergraduates (86 female, 10 male) participated in the study as part of their course requirement. Participants' mean age was 19.14 years (*SD* =2.33).

Design & Procedure

Participants completed a questionnaire that asked them to identify the likely age of eight different faces (4 male, 4 female) (see Appendix 12). Using an open-question format, participants were asked to give specific age estimates (i.e., "person 3 is 25 years old"), rather than rough estimates (i.e., "person 3 is aged between 20 – 30 years").

All participants followed this procedure in one of four different experimental conditions (n = 24), where the personal descriptions on the page before each of the eight faces were experimentally manipulated. In condition 1, participants were given no personal descriptions, having to identify the likely age of the eight faces from the portrait photographs alone; this was used as a control condition. In condition 2, participants were asked to identify the likely age of the eight faces from the portrait photographs together with uninformative, ambiguous and essentially meaningless personal descriptions. These ambiguous descriptions were equally counterbalanced across the eight faces. In conditions 3 and 4, participants were given the same counterbalanced ambiguous descriptions together with an additional statement referring to the individual's musical taste (e.g., "Beth's favourite musical style is classical music").

In both condition 3 and 4, the musical taste of the eight individuals was described using eight different musical styles; these were chosen because previous research (see Chapter 9) suggested that people stereotypically associate them with fans of different ages. Four were chosen as musical styles perceived stereotypically to have young fans: Chart pop (14.47 years old); R'n'B (19.14 yrs); Hip-hop / Rap (19.38 yrs); and Dance music (20.50 yrs). The other four musical styles were chosen because they were perceived stereotypically to have older fans: Jazz (39.24 years old); Country (41.64 yrs); Classical (44.91 yrs); and Opera (46.82 yrs). Each musical style was paired-up so that the inclusion of stereotypically 'young' or 'old' musical taste was counter-balanced between conditions 3 and 4 (see Appendix 13 for pairings). For example, dance music and classical music were paired together. Accordingly, in condition 3, together with a counterbalanced ambiguous personal description person

three is described as liking dance music, and person seven is described as liking classical music, and vice-versa in condition 4.

Results

A between-subjects ANOVA was used to establish whether the manipulation of personal descriptions had a significant effect on how participants perceived the likely age of each of eight individuals investigated. Table 46 shows the mean age estimate for each of the eight individuals in the four different experimental conditions.

Table 46 shows that the manipulation of personal descriptions had a significant effect on how participants perceived the likely age of individual 1, 2, and 7. Post-hoc Tukey HSD tests were then carried out to compare how participants' age estimates for these three individuals differed between the four conditions. A summary of these comparisons can be found in Table 47. Figures 25 to 27 each illustrate how the manipulation of personal descriptions influenced the perceived age of these three individuals.

Table 46.
Perceived age of eight individuals

		Personal description used			
	No description	Ambiguous description alone	Stereotypically *'young' musical style* (e.g. chart pop)	Stereotypically 'old' musical style (e.g. classical)	*F*
Person 1	26.21 (*3.82*)	28.54 (*4.35*)	24.63 (*2.46*)	29.29 (*4.10*)	7.81**
Person 2	25.88 (*4.55*)	25.88 (*5.23*)	23.00 (*4.76*)	26.42 (*2.32*)	3.03*
Person 3	31.63 (*3.83*)	30.50 (*5.05*)	29.13 (*6.38*)	32.08 (*4.24*)	1.69
Person 4	19.21 (*1.93*)	18.33 (*1.76*)	18.75 (*2.33*)	19.67 (*2.71*)	1.62
Person 5	27.00 (*3.08*)	25.96 (*3.11*)	27.50 (*4.87*)	27.25 (*4.55*)	.69
Person 6	26.04 (*4.46*)	24.04 (*2.94*)	24.08 (*4.41*)	26.46 (*5.11*)	2.11
Person 7	23.13 (*2.83*)	22.88 (*3.89*)	20.92 (*3.99*)	26.25 (*6.81*)	5.47**
Person 8	22.88 (*3.10*)	21.58 (*3.80*)	22.42 (*4.16*)	21.67 (*3.97*)	.65

* $p < .05$ ** $p < .01$

Table 47.
Summary of Bonferroni pairwise comparisons of age estimates for three individuals

| | Ambiguous description alone | Personal description used | |
		Stereotypically 'young' musical style (e.g. chart pop)	Stereotypically 'old' musical style (e.g. classical)
Person 1			
No description	2.33	1.58	3.08*
Ambiguous description alone	-	3.92*	0.75
Stereotypically 'young' musical style	-	-	4.67*
Person 2			
No description	0.00	2.88	0.54
Ambiguous description alone	-	2.88	0.54
Stereotypically 'young' musical style	-	-	3.42*
Person 7			
No description	0.25	2.21	3.13
Ambiguous description alone	-	1.96	3.38
Stereotypically 'young' musical style	-	-	5.33*

* $p < .05$ ** $p < .01$
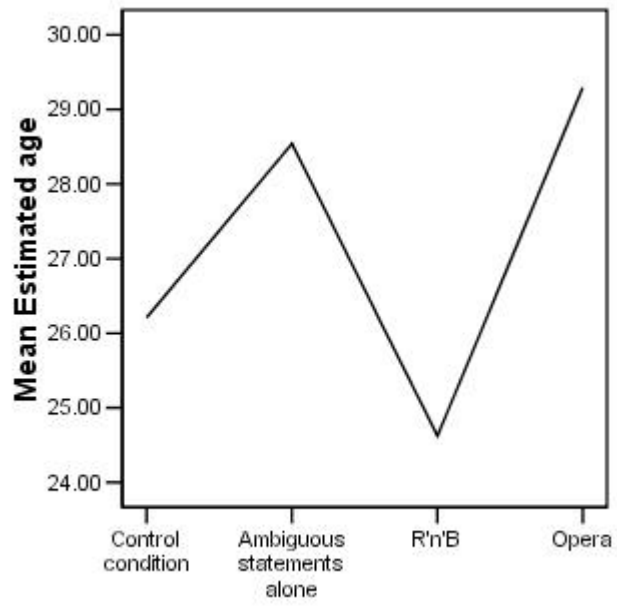
Figure 25. *Perceived age of person one*
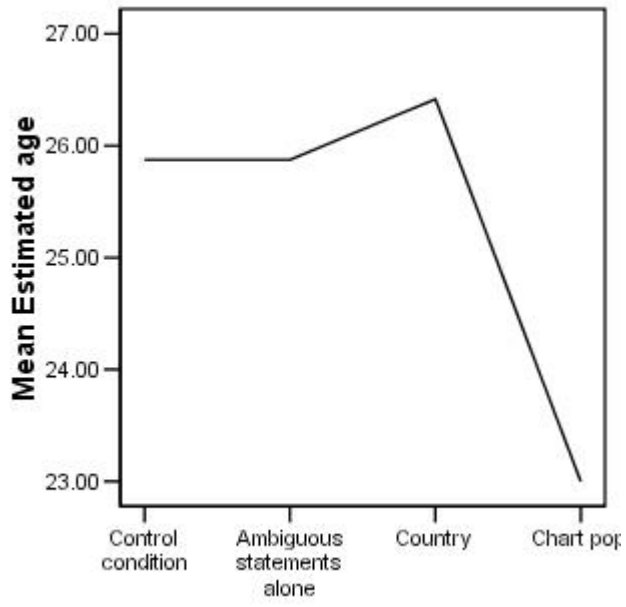
Figure 26. *Perceived age of person two*
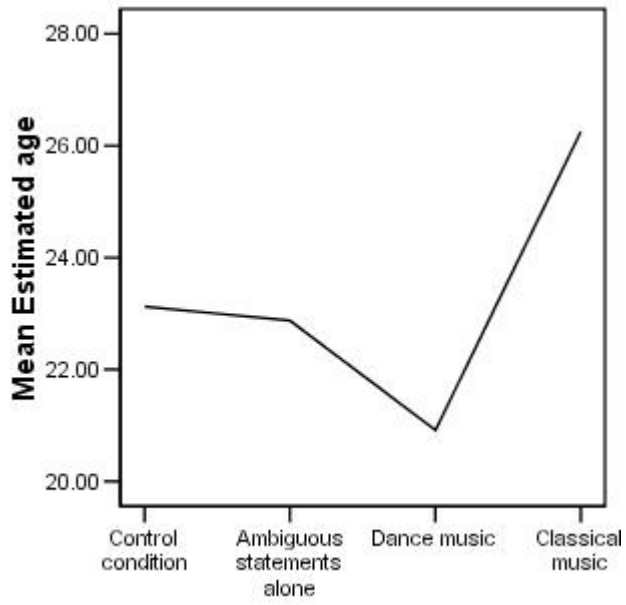
Figure 27. *Perceived age of person seven*

Discussion

Of the eight faces investigated, participants were found to judge three faces to be significantly older if beforehand they were described as liking a stereotypically 'old' musical style (i.e., classical music) than if described as liking a stereotypically 'young' musical style (i.e., chart pop). In one case, participants judged a face (i.e., person 1) as significantly older if the person concerned was described as having stereotypically 'old' musical tastes when compared to those participants who were told nothing about the target individual. Participants were also found to see the same face as significantly younger if the person concerned was described as having stereotypically young musical taste, compared to those participants who were given ambiguous personal descriptions. Together, the findings of the present study indicate that stereotypes of musical taste might significantly influence how participants perceived an individual's likely age.

The influence of these age stereotypes is explained in terms of Bruner's (1957) idea of 'perceptual readiness', where the relative accessibility of age stereotypes is argued to have had a significant effect on how participants perceived an individual's likely age. By manipulating the personal descriptions, the present study was assumed to have manipulated the relative accessibility of age stereotypes before participants judged the likely age of each face. So, for example, stereotypes relating to older people would have arguably been more accessible for participants told that an individual holds stereotypically 'old' musical tastes (e.g., opera). Given the greater accessibility, these participants were arguably 'primed' to perceive the individual as older more readily than those told he or she liked a stereotypically 'young' musical

248

style, or given no description. Significant differences observed in participants' age estimates were therefore believed to reflect the increased accessibility of age stereotypes prior to judging each face.

Chapter 21   General discussion

The two studies reported in Chapters 19 and 20 investigated whether manipulating the relative accessibility of different stereotypes of musical taste significantly influenced how participants judged the likely sex, or the likely age of several different faces. Both studies were based on the assumptions of 'perceptual readiness', where the relative accessibility of stereotypes was expected to have had a significant effect on how participants perceived an individual's face.

      In Chapter 19, participants were found to perceive the likely sex of two androgynous faces no differently, regardless of whether the person concerned was described as liking either a stereotypically 'male' or 'female' musical style. This was thought to indicate that the process of discriminating between male and female faces was not easily susceptible to the influence of stereotypes; and as a perceptual task, judging an individual's likely sex was too easy for participants. Accordingly, it was therefore suggested that stereotypes of musical taste were more likely to influence participants' judgements on a more difficult perceptual task (e.g., age perception), an idea that was subsequently investigated in Chapter 20.

      In Chapter 20, a study found evidence to suggest that stereotypes of musical taste might significantly influence how individuals perceive other peoples' likely age. In particular, participants were found to judge three faces as significantly older if beforehand the person concerned was described as liking a stereotypically 'old' musical style (i.e., classical music) than if described as liking a stereotypically 'young' musical style (i.e., chart pop). In one case, participants judged a face as

significantly older if the person concerned was described as having stereotypically old musical tastes when compared to those participants who were told nothing about the target individual. The same face was also judged significantly younger if described as having stereotypically 'young' musical taste, than when participants were given ambiguous personal descriptions of the target individual. These findings were explained in terms of the relative accessibility of age stereotypes prior to judging each face.

The present findings raise further questions for future research. A future study might investigate whether exposure to musical styles associated stereotypically with young or old fans influences how participants judge an individual's likely age. For example, when exposed unobtrusively to classical music, participants are predicted (because of the increased accessibility of stereotypes relating to older people) to perceive individuals as significantly older than those exposed to chart pop, or no music. However, time constraints and practical difficulties meant that this investigation was not possible within the context of this thesis.

In summary, the findings of Section D indicated that stereotypes of musical taste might significantly influence how individuals perceive other people. In Chapter 20, participants were found to judge an individual's face to be significantly older if beforehand they were described as liking a stereotypically 'old' musical style (i.e., classical music) than if described as liking a stereotypically 'young' musical style (i.e., chart pop). This suggests that the relative accessibility of age stereotypes prior to judging a person's face is likely to significantly influence how old that person is perceived to be. Future research should explore this further to establish whether

participants' age estimates are significantly influenced by exposure to certain musical

styles.

SECTION E: GENERAL DISCUSSION

Chapter 22   Overview of findings and implications for future research

The research present in this thesis investigated several different questions concerned with the social psychology of music. First, why do people listen to music? Second, do stereotypes of musical taste significantly influence how individuals judge other people and themselves? Third, do people exhibit in-group favouritism towards those who share their musical taste? Fourth, do stereotypes of musical taste influence how we perceive other people?

In Section A, four different studies adopted a 'uses and gratifications' approach to investigate the reasons why people listen to music. Chapter 3 found that there were six main reasons why adolescents listened to music: (1) negative mood management; (2) personal identity; (3) surveillance; (4) positive mood management; (5) interpersonal relationships; and (6) diversion. Comparison of these factors indicated that that the functions of music are primarily emotional, whilst the social functions of music (i.e. interpersonal relationships and personal identity) seem to be of secondary importance to this.

Previous research has shown that when compared to other leisure activities, listening to music is particularly important to adolescents (e.g., Fitzgerald et al, 1995; North, et al 2000; Rentfrow & Gosling, 2003). Chapter 4 confirmed this, ratings of everyday importance, and the time and money reported spent listening to music showed that music is of particular importance to adolescents, above the other leisure activities investigated (e.g., TV, films, etc.). To explain why this might be, Chapter 4 also investigated whether the reasons people listen to music differed significantly to

those of eight other leisure activities. Mean scores showed that for the most part, listening to music was rated as better than other leisure activities at serving an individual's different needs. This versatility may explain why music is so important to people, whereby listening to music might be simply the most effective means for individuals to satisfy their different needs.

In Chapter 5, an open-ended qualitative research design was used to investigate peoples' reasons for listening to music. Thematic analysis of the reasons given by participants showed that, in general, there were seven main reasons why they listen to music. Participants reported listening to music as a means to manage their mood, to provide 'background noise' to accompany another activity, to participate in musical behaviours, to reflect on the past, to enjoy the music, to encourage social interaction, and as a distraction. These themes correspond closely with the factors identified in Chapter 3. Most significantly, by using an open-ended qualitative design, this study identified reasons why people listen to music that had been overlooked by previous research. For this reason, the use of qualitative methods represents a useful feature of any well-balanced investigation that should complement quantitative studies of why people listen to music.

The main criticism of the studies reported in Chapters 3, 4 and 5 is that they were all based on the study of adolescent samples, and as a result their findings cannot necessarily be generalised to other age groups. However, this is a criticism that can be directed at most, if not all past research, which has tended to focus exclusively on the uses and gratifications of adolescents. In Chapter 6, a study investigated whether people of different ages listen to music for different reasons. Using a cross-sectional

design, this study found significant differences between the six age groups on seven of the eight main reasons for listening to music. However, these findings cannot be assumed to represent true developmental changes, and might simply reflect generational differences between age cohorts. This limitation served to highlight the need for longitudinal studies to investigate if peoples' reasons for listening to music change significantly as they grow older.

In all three studies where participants were asked about the social 'badge' function of musical taste (Chapters 3, 4 and 6), participants' ratings showed evidence of the "third-person effect" (Davidson, 1983). In each of the three studies, mean ratings indicated that although participants acknowledge that 'other people' use their musical taste as a social 'badge' of identity, they themselves were personally reluctant to admit using music in this way to the same extent. This finding suggests that whilst people are aware of the social 'badge' function of musical taste, there is perhaps a social stigma associated with individuals openly using their musical preferences as a 'badge' of their identity and group membership.

This 'badge' function is arguably governed by peoples' stereotypes of musical taste. Research in Section B investigated this idea, investigating a number of different questions based on this central assumption. In Section B, six studies investigated four different questions developed from the assumption that the social 'badge' function of musical taste is governed by collectively held stereotypes regarding the fans of different musical styles. In Chapter 9, a study investigated whether people share significantly differentiated and consensual stereotypes of musical taste. This study found that participants held clear-cut and consensual stereotypes of musical taste,

indicating that they collectively shared a belief that different groups of people stereotypically like different musical styles. These findings support the idea that as a social 'badge' of group membership, individuals might use musical taste as a means to identify and distinguish between the members of different social groups.

In Chapter 10, a study investigated whether informing participants of an individual's musical taste significantly influenced how the former judged the likely characteristics of the latter. When informed of an individual's musical taste, participants' judgements exhibited a common bias that seemed to correspond with stereotypes of musical taste. Together, these findings suggested that as a social 'badge' of identity, musical taste is likely to be an influential social cue that is likely to play a significant role in how we see other people.

In Chapter 11, two studies investigated the possibility that individuals might use the representativeness heuristic to judge other peoples' likely musical taste. The first study showed that when asked to judge the likely musical taste of ten fictional individuals, participants' judgements exhibited a common bias, which seemed to correspond with stereotypes of musical taste. This stereotypic bias was presumed to stem from the use of the representativeness heuristic. The second study confirmed this, showing that an individual's similarity to stereotypical music fans, rather than base-rate estimates of musical taste, was significantly related to predictions of their likely musical taste. These findings suggested that an individual's relative similarity to stereotypical music fans might act as a heuristic 'rule of thumb' used by people to quickly and economically judge their likely musical taste.

In Chapter 12, two studies investigated the idea that a process of self-to-stereotype matching might account for the development of an individual's musical taste. These studies each used a different measure of self-to-stereotype similarity, and found that a participant's relative similarity to the stereotypical fans of a particular musical style correlated significantly with the extent that they liked that musical style. These correlations suggested that, in general, individuals tend to prefer those musical styles that stereotypically have fans that are similar to them. These findings are consistent with the idea that as a social 'badge' of identity, individual's musical taste may be used to present a particular image, convey their likely characteristics, or display group membership to others

In Section C, the findings of two studies offered further support for the idea that musical taste is used as a social 'badge' of group membership, which contributes to an individual's sense of social identity. In keeping with the predictions of social identity theory, participants were found to exhibit in-group favouritism toward those who shared their musical taste. This suggested that shared musical taste is a possible criterion of in-group membership. As such, musical taste may function symbolically as a social 'badge' used by people to display group membership and to differentiate themselves from members of the out-group.

In Section D, two studies investigated whether stereotypes of musical taste significantly influence how participants perceive an individual's face. In Chapter 19, participants were found to perceive the likely sex of two androgynous faces no differently, regardless of whether they were described as liking either a stereotypically 'male' or 'female' musical style. This was thought to indicate that the process of

discriminating between male and female faces was not easily susceptible to the influence of stereotypes.

In Chapter 20, a study found evidence to suggest that stereotypes of musical taste might significantly influence how individuals perceive other peoples' likely age. In particular, participants were found to judge three faces to be significantly older if beforehand they were described as liking a stereotypically 'old' musical style (i.e. classical music) than if described as liking a stereotypically 'young' musical style (i.e. chart pop). These findings were explained in terms of Bruner's idea of 'perceptual readiness', where the relative accessibility of age stereotypes prior to judging each face was believed to significantly influence how old they are perceived to be. On the basis of these findings, a future investigation was proposed to explore whether participants' age estimates are similarly influenced by unobtrusive exposure to either stereotypically 'old' or young' musical styles.

The research findings reported in this thesis have a number of different implications for future research, and the psychology of music. First, by dealing with a variety of different topics and research questions (e.g., social identity theory, stereotypes, heuristics) each section of the thesis demonstrated the extent to which the social psychology of music is a multifaceted subject. More importantly, this highlights the potential for the use of well-established ideas from mainstream social psychology to understand musical behaviour. In this context, it is possible to expect that any theory of social psychology might be applied to study the psychology of music.

For example, the application of theories regarding collective or 'mob' behaviour (e.g., LeBon, 1985; Turner and Killian, 1957) might be used to investigate how and why music affects people when in large groups and crowds. When played at large social gatherings (e.g., sporting events, political rallies), music might be regarded as a social and emotional contagion serving to heighten physiological arousal, increase feelings of affiliation, and provide a sense of collective identity. In smaller, less structured crowds (e.g., protests, strikes, football fans), music and singing might also be seen as a means to foster greater solidarity and group cohesion between people. To investigate these ideas, future research ought to study whether listening to music can reduce self-awareness, increase disinhibition, or has the potential for deindividuation; all of which have been factors thought to facilitate collective behaviour or a 'mob mentality'.

Theories of implicit social cognition might also be applied to investigate the effects of music that seem to operate outside of our conscious awareness. For example, the implicit influence of in-store music on product choice (North, Hargreaves, & McKendrick, 1999) might be understood more appropriately using theories of stereotype activation, accessibility, and priming. The activation of any stereotype is known to 'prime' individuals to think and behave in ways that are consistent with that stereotype in any subsequent situation or task. In view of this, future research might employ models of implicit social cognition to investigate whether the activation (or accessibility) of different stereotypes account for the subliminal effects of music observed on consumer behaviour, product choice, and social judgements (e.g., Areni & Kim, 1993; Hansen & Hansen, 1988; Johnson, Trawalter, & Dovidio, 2000; North & Hargreaves, 1998; Rudman & Lee, 2002).

Whilst recent developments have been important in highlighting the role of social psychology in how people experience and use music, they should not be made at the expense of a well-balanced psychological study of music. In particular, when investigating the psychology of music, psychologists should exercise caution and remember that listening to music is first and foremost an emotional experience. Indeed, the research findings reported in Section A suggested that participants listen to music primarily for emotional reasons, used as a means to manage both their positive and negative moods. Future research should reflect this assumption, where previously disparate ideas within music psychology (i.e., the cognitive, the emotional, and the social psychology of music) are integrated fully.

Theoretical integration of this kind would ensure that the recent developments evident in the social psychology of music do not lead psychologists to study music as if it were in an emotional and cognitive vacuum, in the same way experimental aesthetics had led psychologists to study music as if in a social vacuum. To address this need for integration, any future research concerned with the psychology of music and musical taste is arguably better understood when considered within a broader theory of emotion. Specifically, a two-factor model of emotion (Schachter and Singer, 1962) is argued to provide the theoretical basis for a more comprehensive explanation of why individuals like the music they like, and how their musical tastes develop.

The two-factor model of emotion (Schachter & Singer, 1962) is a theory which claims that to experience emotion, two components (or factors) are necessary: physiological arousal and cognition. According to this theory, an individual must first

experience a change in arousal; following this, the individual's experience of emotion is dependent on how this change is interpreted. In this context, an individual might cognitively 'label' the same state of arousal as a different emotion (e.g., fear or excitement) depending on the situation they are in. This two-factor model of emotion might also govern how people experience music.

When listening to music, individuals must first experience a change in arousal. This arousal is arguably the primary determinant of how an individual responds to music, such that music producing too much, or too little cortical arousal is unlikely to elicit a preference response in the pleasure / reward centres of the brain. Following this, the way individuals interpret, or 'label' their physiological response to music is believed to mediate whether or not long-standing musical tastes develop.

Though entirely speculative, the two-factor model of music preferences put forward here is considered to highlight the need for music psychologists to re-assess the relative position of social psychology, within a well-balanced psychological study of music, and musical behaviour. Indeed, such an integrative theoretical framework will be almost certainly necessary if psychologists are to understand music properly, and reconcile how both our immediate emotional response to music and the social psychological implications of musical taste interact with each another.

Overall, the findings of this thesis serve to highlight musical taste as an important socio-cultural construct that is likely to influence social cognition, perception and intergroup behaviour. The present thesis also provides further insight as to why people listen to music, and why it is so important to them. More generally,

this thesis also serves to highlight the potential for music psychologists to use well-established theories from mainstream social psychology to understand musical behaviour.

References

Abeles, H.F. (1980). Responses to music. In D.A. Hodges (Ed.), *Handbook of Music Psychology*. (pp. 105 – 140). National Association for Music Therapy, Lawrence, KS.

Areni, C.S., & Kim, D. (1993). The influence of background music on shopping behaviour: classical versus top-forty music in a wine store. *Advances in Consumer Research*, *20*, 336 - 340.

Bakagiannis, S., & Tarrant, M. (2006). Can music bring people together? Effects of shared musical preference on intergroup bias in adolescence. *Scandinavian Journal of Psychology*, *47*, 129 – 136.

Ballard, M.E., Dodson, A.R., & Bazzini, D.G. (1999). Genre of music and lyrical content: expectation effects. *Journal of Genetic Psychology*, *160*, 476 - 487.

Bennett, A. (2000). *Popular Music and Youth Culture*: *Music, Identity and Place*. Basingstoke: Palgrave.

Berlyne, D.E. (1971). *Aesthetics and psychobiology*. New York: Appleton-Century-Crofts.

Berzonsky, M.D. (1989). Identity style: Conceptualization and measurement. *Journal of Adolescent Research*, *4*, 268 – 282.

Berzonsky, M.D. (1992). Identity style and coping strategies. *Journal of Personality*, *60*, 771 – 778.

Binder, A. (1993). Constructing racial rhetoric: Media depictions of harm in heavy metal and rap music. *American Sociological Review*, *58*, 753 – 767.

Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Trans. by R. Nice. London: Routledge.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77 – 101.

Brewer, M.B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin*, *86*, 307 – 324.

Bruce, V., Burton, A.M., Hanna, E., Healy, P., Mason, O., Coombes, A., Fright, R., & Linney, A. (1993). Sex discrimination: how do we tell the difference between male and female faces? *Perception*, *22*, 131 – 152.

Bruner, J.S. (1957). On perceptual readiness. *Psychological Review*, *64*, 123 – 152.

Bruner, J.S., & Goodman, C.C. (1947). Value and need as organizing factors in perception. *Journal of Abnormal and Social Psychology*, *42*, 33 – 44.

Buhr, K., & Dugas, M.J. (2002). The intolerance of uncertainty scale: psychometric properties of the English version. *Behaviour Research and Therapy*, *40*, 931 – 945.

Burge, M., & Lester, D. (2001). Predicting suicidal ideation in high school students. *Psychological Reports*, *89*, 283 – 284.

Burke, P.J., & Reitzes, D.C. (1981). The link between identity and role performance. *Social Psychology Quarterly*, *44*, 83 – 92.

Campbell, J.D., Trapnell, P.D., Heine, S.J., Katz, I.M., Lavalle, L.F., & Lehman, D.R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, *70*, 141 – 156.

Chamorro-Premuzic, T., & Furnham, A. (2007). Personality and music: Can traits explain how people use music in everyday life. *British Journal of Psychology*, *98*, 175 – 185.

Chassin, L., Presson, C.C., Sherman, S.J., Corty, E., & Olshavsky, R.W. (1981). Self-images and cigarette smoking in adolescence. *Personality and Social Psychology Bulletin*, *7*, 670 – 676.

Chassin, L., Tetzloff, C., & Hershey, M. (1985). Self-image and social-image factors in adolescent alcohol use. *Journal of Studies on Alcohol*, *46*, 39 – 47.

Christenson, P.G., & Peterson, J.B. (1988). Genre and gender in the structure of music preferences. *Communication Research*, *15*, 282 – 301.

Crowne, D.P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, *24*, 349 – 354.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed). Hillsdale, NJ: Lawrence Earlbaum.

Colley, A., Comber, C., & Hargreaves, D. (1994). Gender effects in school subject preferences: A research note. *Educational Studies*, *20*, 13 – 18.

Conway, L.G., & Schaller, M. (1998). Methods for the measurement of consensual beliefs within groups. *Group Dynamics: Theory, Research, and Practice*, *2*, 241 – 252.

Costa, P.T. Jr., & McCrae, R.R. (1992). *NEO P-I-R professional manual*. Odessa, FL: Psychological Assessment Resources.

Crowther, R., & Durkin, K. (1982). Sex- and age-related differences in the musical behaviour, interests, and attitudes towards music of 232 secondary school students. *Educational Studies*, *8*, 131 – 139.

Davison, W.P. (1983). The third-person effect in communication. *Public Opinion Quarterly*, *47*, 1 – 15.

DeNora, T. (2000). *Music in Everyday Life*. Cambridge: Cambridge University Press.

Dibben, N. (2002). Gender identity and music. In R.A.R. MacDonald, D.J. Hargreaves & D. Miell (Eds.), *Musical Identities*. (pp. 117 – 133). Oxford: University Press.

Digman, J.M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, *41*, 417 – 440.

DiMaggio, P. (1987). Classification in art. *American Sociological Review*, *52*, 440 – 455.

Dolfsma, W. (1999). The consumption of music and the expression of values: A social economic explanation for the advent of pop music. *American Journal of Economics and Sociology*, *58*, 1019 – 1046.

Dollinger, S.J. (1993). Personality and music preference: Extraversion and excitement seeking or openness to experience? *Psychology of Music*, *21*, 73 – 77.

Duncan, B.L. (1976). Differential social perception and attribution of intergroup violence: testing the lower limits of stereotyping of blacks. *Journal of Personality and Social Psychology*, *34*, 590 – 598.

Eccles, J., Wigfield, A., Harold, R.D., & Blumenfeld, P. (1993). Age and gender

differences in children's self- and task perceptions during elementary school. *Child Development*, *64*, 830 – 847.

Ericksen, M.K., & Sirgy, M.J. (1992). Employed females' clothing preferences, self-image congruence, and career anchorage. *Journal of Applied Social Psychology*, *22*, 408 – 422.

Erikson, E. H. (1980). *Identity and the Life Cycle*. New York: Norton.

Fenigstein, A., Scheier, M.F., & Buss, A.H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology*, *43*, 522 – 527.

Fink, E.L., Robinson, J.P., & Dowden, S. (1985). The structure of music preference and attendance. *Communication Research*, *12*, 301 – 318.

Finnäs, L. (1987). Do young people misjudge each others' musical taste? *Psychology of Music*, *15*, 152 – 166.

Finnäs, L. (1989). A comparison between young people's privately and publicly expressed musical preferences. *Psychology of Music*, *17*, 132 – 145.

Fiske, S.T., & Taylor, S.E. (1991) *Social cognition* (2nd ed.). McGraw-Hill: New York.

Fitzgerald, M., Joseph, A.P., Hayes, M., & O'Regan, M. (1995). Leisure activities of adolescent schoolchildren. *Journal of Adolescence*, *18*, 349 – 358.

Fox, W.S., & Williams, J.D. (1974). Political orientation and music preferences among college students. *Public Opinion Quarterly*, *38*, 352 – 371.

Freeston, M.H., Rhéaume, J., Letarte, H., Dugas, M.J., & Ladouceur, R. (1994). Why do people worry? *Journal of Personality and Individual Differences*, *17*, 791 – 802.

Freud, S. (1962). *Three essays on the theory of Sexuality*. Trans. by J. Strachey. London: Hogarth Press.

Fried, C.B. (1996). Bad rap for rap: Bias in reactions to music lyrics. *Journal of Applied Social Psychology*, *26*, 2135 – 2146.

Fried, C.B. (1999). Who's afraid of rap: Differential reactions to music lyrics. *Journal of Applied Social Psychology*, *29*, 705 – 721.

Fried, C.B. (2003). Stereotypes of music fans: Are rap and heavy metal fans a danger to themselves or others? *Journal of Media Psychology*, *8*. Retrieved April 15th, 2006, from the World Wide Web: http://www.calstatela.edu/faculty/sfischo/Fried%20rev.pdf.

Frith, S. (1983). *Sound effects: Youth, leisure and the politics of rock 'n' roll*.

Constable: London.

Gantz, W., Gartenberg, H.M., Pearson, M.L., & Schiller, S.O. (1978). Gratifications and expectations associated with pop music among adolescents. *Popular Music and Society*, 6, 81 – 89.

Gavin, H. (2006). Intrusive music: The perception of everyday music explored by diaries. *The Qualitative Report*, *11*, 550 – 565.

Gould, R.L. (1978). *Transformations*: *Growth and change in adult life*. New York: Simon & Schuster.

Gould, S.J. (1986). The self-consciousness scale: a confirmatory analysis. *Psychological Reports*, *59*, 809 – 810.

Greenwald, H.J., & Satow, Y. (1970). A short social desirability scale. *Psychological Reports*, *27*, 131 – 135.

Hannover, B., & Kessels, U. (2004). Self-to-prototype matching as a strategy for making academic choices. Why high school students do not like math and science. *Learning and Instruction*, *14*, 51 – 67.

Hansen, C.H., & Hansen, R.D. (1988). How rock music videos can change what is seen when boy meets girl: Priming stereotypic appraisal of social interactions. *Sex Roles*, *19*, 287 – 316.

Hargreaves, D.J., & North, A.C. (ed.) (1997). *The Social Psychology of Music*.

    Oxford: Oxford University Press.

Hargreaves, D.J., & North, A.C. (1999). The functions of music in everyday life:

    Redefining the social in music psychology. *Psychology of Music*, *27*, 71 – 83.

Hays, T., & Minichiello, V. (2005). The meaning of music in the lives of older

    people: a qualitative study. *Psychology of Music*, *33*, 437 – 451.

Hebdige, D. (1979). *Subculture: The meaning of style*. Oxon: Routledge.

Helgeson, J.G., & Supphellen, M. (2004). A conceptual and measurement comparison

    of self-congruity and brand personality: the impact of socially desirable

    responding. *International Journal of Market Research*, *46*, 205 – 233.

Holbrook, M.B., & Schindler, R.M. (1989). Some exploratory findings on the

    development of musical tastes. *Journal of Consumer Research*, *16*, 119 – 124.

International Federation of the Phonographic Industry. (2007). *Digital formats*

    continue to drive the global music market. Retrieved January 15, 2007, from

    the World Wide Web: http://www.ifpi.org/content/library/worldsales2005.pdf.

International Personality Item Pool. (2001). *A Scientific collaboratory for the*

272

development of advanced measures of personality traits and other individual differences. Retrieved online from the World Wide Web on 12/12/2005: http://ipip.ori.org.

James, L.R., Demaree, R.G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology*, *69*, 85 – 98.

James, L.R., Demaree, R.G., & Wolf, G. (1993). r_{wg}: An assessment of within-group interrater agreement. *Journal of Applied Psychology*, *78*, 306 – 309.

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*, 233 – 251.

Judd, C.M., & Park, B. (1988). Out-group homogeneity: Judgments of variability at the individual and group levels. *Journal of Personality and Social Psychology*, *54*, 778 – 788.

Kahneman, D., Slovic, P., & Tversky, A. (1982). *Judgement under uncertainty: Heuristic and biases*. Cambridge: Cambridge University Press.

Kahneman, D., & Tversky, A. (1972). Subjective probability: A judgement of representativeness. *Cognitive Psychology*, *3*, 430 – 454.

Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, *80*, 237 – 251.

Katz, E., Blumer, J.G., & Gurevitch, M. (1973-1974). Uses and Gratifications research. *The Public Opinion Quarterly*, *37*, 509 – 523.

Keston, M.J., & Pinto, I.M. (1955). Possible factors influencing musical preference. *The Journal of Genetic Psychology*, *86*, 101 – 113.

Knobloch, S., Vorderer, P., & Zillmann, D. (2000). The impact of music preferences on the perception of potential friends in adolescence. *Zeitschrift fuer Sozialpsychologie*, *31*, 18 – 30.

Konečni, V.J. (1982). Social interaction and musical preference. In D. Deutsch (Ed.), *The Psychology of Music*. (pp. 497 – 516). Orlando: Academic Press.

Laughey, D. (2006). *Music and Youth Culture*. Edinburgh: Edinburgh University Press.

LeBlanc, A., Sims, W. L. Siivola, C., & Obert, M. (1993). Music style preferences of different-age listeners. *Paper presented at the Tenth National Symposium on Research in Music Behavior, University of Alabama, Tuscaloosa, Alabama, U.S.A.*

LeBon, G. (1947, first published in 1895). *The Crowd: A study of the Popular Mind*. London: Ernest Benn.

Levine, R., Chein, I., & Murphy, G. (1942). The relation of the intensity of a need to the amount of perceptual distortion: a preliminary report. *Journal of Psychology*, *13*, 283 – 293.

Levinson, D.J. (1986). A conception of adult development. *American Psychologist*, *41*, 3 – 13.

Locksley, A., Oritz, V., & Hepburn, C. (1980). Social categorization and discriminatory behavior: Extinguishing the minimal intergroup discrimination effect. *Journal of Personality and Social Psychology*, *39*, 773 – 783.

Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, *18*, 302 – 318.

Lyle, J., & Hoffman, H.R. (1972). Children's use of television and other media. In U.S. National Institute of Mental Health. Television and social behavior. Reports and papers: Vol. IV. Television in day-to-day life: Patterns of use (ed. E.A. Rubinstein, G.A. Comstock, and J.P. Murray), pp. 129 – 256. U.S. Government Printing Office, Washington, DC.

Martin, G., Clarke, M., & Pearce, C. (1993). Adolescent suicide: Music preference as

an indicator of vulnerability. *Journal of the American Academy of Child and Adolescent Psychiatry*, *32*, 530 – 535.

Martinot, D., & Monteil, J.M. (2000). Use of the self-concept in forming preferences by French students of different levels of academic achievement. *The Journal of Social Psychology*, *140*, 119 – 131.

Mayer, J.D., Caruso, D.R., & Salovey, P. (2000). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, *27*, 267 – 298.

McCarthy, J.D., & Hoge, D.R. (1982). Analysis of age effects in longitudinal studies of adolescent self-esteem. *Developmental Psychology*, *18*, 372 – 379.

McQuail, D., Blumer, J.G., & Brown, J.R. (1972). The television audience: a revised perspective. In D. McQuail (Ed.), *Sociology of Mass Communications*. (pp. 135 - 165) Harmondsworth: Penguin.

Merriam, S.B., & Cross, L.H. (1982). Adulthood and reminiscence: A descriptive study. *Educational Gerontology*, *8*, 275 – 290.

Miranda, D., & Claes, M. (2004). Rap music genres and deviant behaviors in French-Canadian adolescents. *Journal of Youth and Adolescence*, *33*, 113 – 122.

Moss, M.K., & Frieze, I.H. (1993). Job preferences in the anticipatory socialization phase: a comparison of two matching models. *Journal of Vocational Behavior*,

42, 282 – 297.

Nater, U.M., Abbruzzese, E., Krebs, M., & Ehlert, U. (2006). Sex differences in

emotional and psychophysiological responses to musical stimuli. *International*

Journal of Psychophysiology, *62*, 300 – 308.

Nelson, T.E., Biernat, M.R., & Manis, M. (1990). Everyday base rates (sex

stereotypes): Potent and resilient. *Journal of Personality and Social*

Psychology, *59*, 664 – 675.

Niedenthal, P.M., Cantor, N., & Kihlstrom, J.F. (1985). Prototype matching: a

strategy for social decision making. *Journal of Personality and Social*

Psychology, *48*, 575 – 584.

Nisbett, R.E., Zukier, H., & Lemley, R. (1981). The dilution effect: Nondiagnostic

information weakens the effect of diagnostic information. *Cognitive*

Psychology, *13*, 248 – 277.

North, A.C., & Hargreaves, D.J. (1995). Eminence in pop music. *Popular Music and*

Society, *19*, 41 – 66.

North, A.C., & Hargreaves, D.J. (1998). The effect of music on atmosphere and

purchase intentions in a cafeteria. *Journal of Applied Social Psychology*, *28*,

2254 - 2273.

North, A.C., & Hargreaves, D.J. (1999). Music and adolescent identity. *Music Education Research*, *1*, 75 – 92.

North, A.C., & Hargreaves, D.J. (2002). Age variations in judgements of 'great' art works. *British Journal of Psychology*, *93*, 397 - 405.

North, A.C., & Hargreaves, D.J. (2007a). Lifestyle correlates of musical taste: 1. Relationships, living arrangements, beliefs, and crime. *Psychology of Music*, *35*, 58 - 87.

North, A.C., & Hargreaves, D.J. (2007b). Lifestyle correlates of musical taste: 2. Media, leisure time and music. *Psychology of Music*, *35*, 179 – 200.

North, A.C., & Hargreaves, D.J. (2007c). Lifestyle correlates of musical taste: 3. Travel, money, education, employment, and health. *Psychology of Music*, *35*, 473 – 497.

North, A.C., & Hargreaves, D.J. (2008). *The Social and Applied Psychology of Music*. Oxford: Oxford University Press.

North, A.C., Hargreaves, D.J., & Hargreaves, J.J. (2004). Uses of music in everyday life. *Music Perception*, *22*, 41 – 77.

North, A.C., Hargreaves, D.J., & McKendrick, J. (1999). The influence of in-store music on wine selections. *Journal of Applied Psychology*, *84*, 271 – 276.

North, A.C., Hargreaves, D.J., & O'Neill, S.A. (2000). The importance of music to adolescents. *British Journal of Educational Psychology*, *70*, 255 – 272.

O'Neill, S.A. (1997). Gender and music. In D.J. Hargreaves & A.C. North (eds.), *The Social Psychology of Music*. (pp. 46 – 63). Oxford: Oxford University Press.

Perreault, S., & Bourhis, R.Y. (1998). Social identification, interdependence and discrimination. *Group Processes & Intergroup Relations*, *1*, 49 – 66.

Piaget, J. (1974). *The Child and Reality*. Trans. by A. Rosin. London: Muller.

Quattrone, G.A., & Jones, E.E. (1980). The perception of variability within in-groups and out-groups: Implications for the law of small numbers. *Journal of Personality and Social Psychology*, *38*, 141 – 152.

Rawlings, D., & Ciancarelli, V. (1997). Music preference and the five-factor model of the NEO personality inventory. *Psychology of Music*, *25*, 120 – 132.

Ray, J.J. (1984). The reliability of short social desirability scales. *The Journal of Social Psychology*, *123*, 133 – 134.

Rentfrow, P.J., & Gosling, S.D. (2003). The do re mi's of everyday life: the structure and personality correlates of music preferences. *Journal of Personality and Social Psychology*, *84*, 1236 – 1256.

Rentfrow, P.J., & Gosling, S.D. (2006). Message in a ballad: The role of music

   preferences in interpersonal perception. *Psychological Science*, *17*, 236 – 242.

Rentfrow, P.J., & Gosling, S.D. (2007). The content and validity of music-genre

   stereotypes among college students. *Psychology of Music*, *35*, 306 – 326.

Roe, K. (1985). Swedish youth and music: Listening patterns and motivations.

   Communication Research, *12*, 353 – 362.

Rokach, A. (2000). Loneliness and the life cycle. *Psychological Reports*, *86*, 629 –

   642.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ:

   Princeton University Press.

Rubin, A.M., West, D.V., & Mitchell, W.S. (2001). Differences in aggression,

   attitudes towards women, and distrust as reflected in popular music

   preferences. *Media Psychology*, *3*, 25 – 42.

Rubin, M., & Hewstone, M. (1998). Social identity theory's self-esteem hypothesis: A

   review and some suggestions for clarification. *Personality and Social

   Psychology Review*, *2*, 40 – 62.

Rudman, L.A., & Lee, M.R. (2002). Implicit and explicit consequences of exposure to

violent and misogynous rap music. *Group Processes & Intergroup Relations*, *5*, 133 – 150.

Russell, P.A. (1997). Musical tastes and society. In D.J. Hargreaves & A.C. North (Eds), *The social psychology of music*. (141 – 158). Oxford: University Press.

Saarikallio, S., & Erkkilä, J. (2007). The role of music in adolescents' mood regulation. *Psychology of Music*, *35*, 88 – 109.

Sagar, H.A., & Schofield, J.W. (1980). Racial and behavioral cues in black and white children's perception of ambiguously aggressive acts. *Journal of Personality and Social Psychology*, *39*, 590 – 598.

Sanford, R.N. (1936). The effects of abstinence from food upon imaginal processes: a preliminary experiment. *Journal of Psychology*, *2*, 129 – 136.

Sanford, R.N. (1937). The effects of abstinence from food upon imaginal processes: a further experiment. *Journal of Psychology*, *3*, 145 – 149.

Sargent, S.L., & Weaver, J.B. (1996). *Exploring the impact of expressed media preferences on perceptions of opposite gender peers*. Paper presented at the annual conference of the International Communication Association, Chicago.

Schachter, S., & Singer, J.E. (1962). Cognitive, social and physiological determinants of emotional state. *Psychological Review*, *69*, 379 – 399.

Setterlund, M.B., & Niedenthal, P.M. (1993). "Who am I? Why am I here?: self-esteem, self-clarity, and prototype matching. *Journal of Personality and Social Psychology*, *65*, 769 – 780.

Sidanius, J., Pratto, F., & Mitchell, M. (1994). In-group identification, social dominance orientation, and differential intergroup social allocation. *Journal of Social Psychology*, *134*, 151 – 167.

Silbert, E., & Tippett, J. (1965). Self-esteem: Clinical assessment and measurement validation. *Psychological Reports*, *16*, 1017 – 1071.

Sirgy, M.J. (1982). Self-concept in consumer behaviour: A critical review. *Journal of Consumer Research*, *9*, 287 – 300.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, *30*, 526 – 537.

Sun, S.-W., & Lull, J. (1986). The adolescent audience for music videos and why they watch. *Journal of Communication*, *36*, 115 – 125.

Tajfel, H. (1969). Cognitive aspects of prejudice. *Journal of Social Issues*, *25*, 79 – 97.

Tajfel, H. (1978). *Differentiation between social groups*. London: Academic Press.

Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, *33*, 1 – 39.

Tajfel, H., Billig, M.G., Bundy, R.P., & Flament, C. (1971). Social categorisation and intergroup behaviour. *European Journal of Social Psychology*, *1*, 149 – 178.

Tarrant, M. (2002). Adolescent peer groups and social identity. *Social Development*, *11*, 110 – 123.

Tarrant, M., North, A.C., & Hargreaves, D.J. (2000). English and American adolescents' reasons for listening to music. *Psychology of Music*, *28*, 166 – 173.

Tarrant, M., North, A.C., & Hargreaves, D.J. (2001). Social categorization, self-esteem, and the estimated musical preferences of male adolescents. *The Journal of Social Psychology*, *141*, 565 – 581.

Tekman, H.G., & Hortacsu, N. (2002). Aspects of stylistic knowledge: What are different styles like and why do we listen to them? *Psychology of Music*, *30*, 28 – 47.

Tekman, H.G., & Hortaçsu, N. (2003). Perceiving and reasoning about musical styles and their listeners: The role of social identity. *Proceedings of the 5th Triennial ESCOM Conference*, *8-13*, *Hanover*.

Turner, R.H., & Killian, L.M. (1957). *Collective Behaviour*. Englewood-Cliffs: Prentice-Hall.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*, 1124 – 1131.

Webster, J.D. (1994). Predictors of reminiscence: A lifespan perspective. *Canadian Journal on Aging*, *13*, 66 – 78.

Webster, J.D. (1995). Adult age differences in reminiscence functions. In B.K. Haight, & J.D. Webster (Eds.), The art and science of reminiscing: Theory, research, methods, and applications. Washington DC: Taylor and Francis.

Webster, J.D., & McCall, M.E. (1999). Reminiscence functions across adulthood: A replication and extension. *Journal of Adult Development*, *6*, 73 – 85.

Williams, C. (2001). Does it really matter? Young people and popular music. *Popular Music*, *20*, 223 – 242.

Willis, P.E. (1978). *Profane culture*. London: Routledge & Kegan Paul.

Zillmann, D., & Bhatia, A. (1989). Effects of associating with musical genres on heterosexual attraction. *Communication Research*, *16*, 263 – 288.

Zillmann, D., & Gans, S. (1997). Musical taste in adolescence. In D.J. Hargreaves &

A.C. North (Eds.), *The Social Psychology of Music*. (pp. 61 – 87). Oxford:

University Press.

Appendices

Appendix 1 – Summary of mean scores and Tukey HSD post-hoc comparisons between the six different age groups

Table 48.
Summary of mean scores for each age group

	Age group					
	16-18yrs	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50yrs+
Everyday importance	7.76 (1.81)	7.85 (1.90)	7.41 (1.86)	6.73 (1.88)	6.31 (2.17)	6.60 (2.62)
Time (hrs/day) spent listening to music	3.84 (3.28)	4.04 (3.15)	3.40 (3.59)	2.60 (1.93)	2.03 (1.40)	2.63 (2.74)
Money (£/month) spent listening to music	8.05 (11.37)	12.81 (17.79)	14.66 (15.43)	12.72 (15.47)	9.60 (11.05)	5.24 (7.80)

Table 49.

Tukey HSD pairwise comparisons of everyday importance – A summary of mean differences between age groups

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	0.09	0.35	1.03*	1.46*	1.16*
19-24yrs		0.44	1.12*	1.55*	1.25*
25-29yrs			0.68	1.11*	0.81
30-39yrs				0.42	0.13
40-49yrs					0.30

* $p < .05$

Table 50.
Tukey HSD pairwise comparisons of time spent listening to music (hours per day) – A summary of mean differences between age groups

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	0.20	0.44	1.24*	1.81*	1.21*
19-24yrs		0.64	1.43*	2.01*	1.41*
25-29yrs			0.80	1.37*	0.78
30-39yrs				0.57	0.02
40-49yrs					0.60

* $p < .05$

Table 51.
Tukey HSD pairwise comparisons of money spent listening to music (UK£ per month) – A summary of mean differences between age groups

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	4.76*	6.61*	4.66	1.55	2.81
19-24yrs		1.85	0.09	3.21	7.57*
25-29yrs			1.95	5.06	9.42*
30-39yrs				3.12	7.48*
40-49yrs					4.36

* $p < .05$

Appendix 2 – Summary of mean scores and Tukey HSD post-hoc comparisons between the six different age groups

Table 52.
Summary of mean scores for each age group

	Age group						
	16-18yrs	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50yrs+	*F*
Personal identity	31.82 (2.50)	30.61 (23.06)	26.95 (21.06)	23.29 (22.70)	21.11 (18.70)	16.19 (19.82)	8.17**
Negative mood management	55.45 (20.73)	60.84 (17.42)	55.68 (18.62)	49.19 (22.60)	49.71 (20.70)	43.05 (25.15)	11.26**
Positive mood management	44.14 (8.94)	45.62 (7.74)	44.05 (10.40)	39.81 (11.53)	40.35 (10.79)	36.31 (13.20)	12.82**
Reminiscing	21.69 (10.13)	24.49 (9.59)	21.04 (9.91)	18.33 (10.56)	19.77 (9.93)	18.42 (11.04)	7.07**
Diversion	31.36 (10.51)	29.15 (11.08)	23.05 (10.23)	22.46 (9.74)	21.32 (11.37)	16.42 (11.88)	31.24**
Arousal	27.28 (10.61)	29.18 (10.33)	27.00 (10.15)	21.26 (10.67)	17.01 (10.06)	15.30 (10.12)	36.79**
Surveillance	8.24 (7.21)	8.09 (6.48)	8.21 (7.27)	8.76 (7.53)	7.03 (7.10)	6.31 (7.26)	1.33
Social interaction	11.72 (6.71)	12.75 (7.01)	11.98 (6.56)	10.27 (7.00)	11.60 (8.48)	8.81 (7.49)	4.44*

* $p < .01$; ** $p < .001$

Note: $df = 5, 688$ in all cases.

Table 53.

Summary of Tukey HSD pairwise comparisons of personal identity scores

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	1.20	4.87	8.52*	10.71*	15.62*
19-24yrs		3.67	7.32	9.51*	14.42*
25-29yrs			3.65	5.84	10.75*
30-39yrs				2.19	7.10
40-49yrs					4.91

$* p < .05$

Table 54.

Summary of Tukey HSD pairwise comparisons of negative mood management scores

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	5.39	0.24	6.25	5.74	12.40*
19-24yrs		5.16	11.65*	11.13*	17.79*
25-29yrs			6.49	5.97	12.63*
30-39yrs				0.51	6.14
40-49yrs					6.66

*p < .05

Table 55.

Summary of Tukey HSD pairwise comparisons of positive mood management scores

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	1.48	0.09	4.33*	3.79	7.83*
19-24yrs		1.57	5.81*	5.27*	9.31*
25-29yrs			4.25	3.71	7.74*
30-39yrs				0.54	3.49
40-49yrs					4.03

* $p < .05$

Table 56.

Summary of Tukey HSD pairwise comparisons of reminiscing scores

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	2.80	0.65	3.36	1.92	3.27
19-24yrs		3.45	6.16*	4.72*	6.07*
25-29yrs			2.71	1.27	2.62
30-39yrs				1.44	0.09
40-49yrs					1.35

* $p < .05$

Table 57.

Summary of Tukey HSD pairwise comparisons of diversion scores

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	2.21	8.31*	8.90*	10.04*	14.94*
19-24yrs		6.10*	6.69*	7.83*	12.73*
25-29yrs			0.59	1.73	6.63*
30-39yrs				1.14	6.04*
40-49yrs					4.90*

$* p < .05$

Table 58.

Summary of Tukey HSD pairwise comparisons of arousal scores

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	1.91	0.28	6.02*	10.26*	11.98*
19-24yrs		2.18	7.93*	12.17*	13.88*
25-29yrs			5.74*	9.99*	11.70*
30-39yrs				4.24	5.96*
40-49yrs					1.71

* $p < .05$

296

Table 59.

Summary of Tukey HSD pairwise comparisons of social interaction scores

	Age group				
	19-24yrs	25-29yrs	30-39yrs	40-49yrs	50+yrs
16-18yrs	1.03	0.26	1.45	0.12	2.92*
19-24yrs		0.77	2.48	1.15	3.94*
25-29yrs			1.71	0.38	3.17*
30-39yrs				1.33	1.46
40-49yrs					2.79

* $p < .05$

Appendix 3 – Music styles and examples used in questionnaire.

Reggae   (e.g. Bob Marley)
Jazz   (e.g. Miles Davis)
Country   (e.g. Dolly Parton)
Heavy metal   (e.g. Metallica)
Punk   (e.g. The Sex Pistols)
Hip-hop / rap (e.g. 50 cent, Eminem, etc)
Classical music   (Beethoven, Mozart, etc)
Chart pop   (e.g. Britney Spears)
Dance music   (e.g. Fat Boy Slim)
Indie rock (e.g. Oasis)
Soul   (e.g. Aretha Franklin)
Rock   (e.g. Nirvana, Red Hot Chilli Peppers, etc)
Opera   (e.g. Pavarotti)
Ska   (e.g. Madness)
R'n'B (e.g. Usher)

Appendix 4 – Example taken from questionnaire used in Chapter 9.

Please indicate the characteristics you consider to be typical of fans of *reggae* (e.g. Bob Marley)*:*

1) Are reggae fans normally? (Please only circle one option for each characteristic)

Male **or** Female

Asian **/** Black **/** Hispanic **/** White **/** Other Ethnic Background

2) Normally, what religious beliefs do reggae fans have?
(Please only circle one option)

Agnostic **/** Atheist **/** Religious-Buddhism **/** Religious-Christianity
Religious-Hinduism **/** Religious-Islam **/** Religious-Judaism **/** Religious-Sikhism
Religious-Other

3) How old are reggae fans normally?
Reggae fan age estimate = _____ Years old.   (Please give a specific estimate)

4) How rich are a normal reggae fan's family?
(Please circle the appropriate rating)

1	**2**	**3**	**4**	**5**
Extremely poor / Welfare dependent		Average income		Extremely rich

5) What is the personality of a normal reggae fan like?
(Please circle the appropriate ratings for each dimension of personality)

(Neutral)

Introverted i.e. shy, unsociable and passive	1	2	3	4	5	**Extroverted** i.e. talkative, sociable and assertive
Emotionally stable i.e. calm and relaxed	1	2	3	4	5	**Neurotic** i.e. anxious, nervous and tense
Narrow minded i.e. dogmatic, rigid or conventional thinker	1	2	3	4	5	**Open minded** i.e. imaginative, independent or divergent thinker
Disagreeable i.e. hostile, unhelpful and selfish	1	2	3	4	5	**Agreeable** i.e. friendly, helpful and co-operative
Unconscientious i.e. disorganised and irresponsible	1	2	3	4	5	**Conscientious** i.e. responsible and organised

6) Normally, how intelligent are reggae fans?
(Please consult scale below to estimate IQ)

-----60-------80-------100-------120-------140-----

| Exceptionally low intelligence | Low intelligence | Average intelligence | High intelligence | Exceptionally high intelligence |

- Reggae fan IQ estimate = _____ IQ pts. (Please give a specific estimate)

7) What is the normal political orientation of reggae fans?
(Please circle the appropriate rating)

1   **2**   **3**   **4**   **5**

Socialism   Neutral   Conservatism
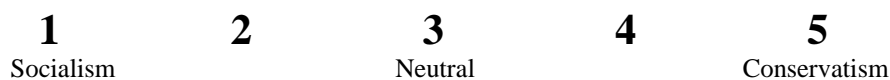
8) Normally, how religious are reggae fans?
(Please circle the appropriate rating)

1   **2**   **3**   **4**   **5**

Not religious   Highly religious
At all
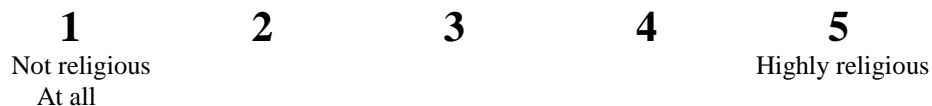
9) How likely are normal reggae fans to participate in anti-social behaviours (e.g. street crime, violence, etc)?
(Please circle the appropriate rating)

1   **2**   **3**   **4**   **5**

Never   Highly likely

10) How vulnerable to 'at-risk behaviours' (e.g. drug abuse, suicide, etc) are reggae fans normally? (Please circle the appropriate rating)

1   **2**   **3**   **4**   **5**

Never   Highly likely

11) How confident are you that these judgements are characteristic of most reggae fans? (Please circle the appropriate rating)

1   **2**   **3**   **4**   **5**

Not at all   Completely
Confident.   Confident.

Appendix 5 – Summary of bonferroni pairwise comparisons for each of the 12 dependent variables.

Table 60.
Bonferroni pairwise comparisons of mean age difference (years) perceived typical of music style fans.

	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
						Musical styles								
Reggae	9.06*	11.46*	7.15*	6.16*	10.81*	14.73*	15.72*	9.68*	9.67*	2.85	9.39*	16.64*	4.02*	11.05*
Jazz	-	2.40	16.21*	15.22*	19.86*	5.67*	24.77*	18.74*	18.73*	6.21*	18.44*	7.58*	13.08*	20.10*
Country	-	-	18.60*	17.61*	22.26*	3.27	27.17*	21.14*	21.13*	8.60*	20.84*	5.18*	15.48*	22.50*
Heavy metal	-	-	-	0.99	3.66*	21.88*	8.57*	2.53	2.52	10.00*	2.24	23.78*	3.13	3.90*
Punk	-	-	-	-	4.65*	20.89*	9.56*	3.52*	3.51*	9.01*	3.23*	22.80*	2.14	4.89*
Hip-hop / Rap	-	-	-	-	-	25.53*	4.91*	1.13	1.14	13.66*	1.42*	27.44*	6.78*	0.24
Classical music	-	-	-	-	-	-	30.44*	24.41*	24.40*	11.88*	24.11*	1.91	18.75*	25.77*
Chart pop	-	-	-	-	-	-	-	6.03*	6.05*	18.57*	6.33*	32.35*	11.69*	4.67*
Dance music	-	-	-	-	-	-	-	-	0.01	12.53*	0.30	26.32*	5.66*	1.36*
Indie rock	-	-	-	-	-	-	-	-	-	12.52*	0.28	26.31*	5.65*	1.38
Soul	-	-	-	-	-	-	-	-	-	-	12.24*	13.78*	6.88*	13.90*
Rock	-	-	-	-	-	-	-	-	-	-	-	26.02*	5.36*	1.66*
Opera	-	-	-	-	-	-	-	-	-	-	-	-	20.66*	27.68*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	7.02*
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* *p* < .05

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 61.
Bonferroni pairwise comparisons of mean difference family income perceived typical of music style fans

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	1.19*	0.37*	0.66*	0.41*	0.28	1.87*	0.80*	0.76*	0.84*	0.61*	0.76*	2.07*	0.64*	0.67*
Jazz	-	0.81*	0.52*	0.78*	0.91*	0.69*	0.38*	0.43*	0.35*	0.58*	0.43*	0.88*	0.55*	0.51*
Country	-	-	0.29	0.04	0.09	1.50*	0.43*	0.38*	0.47*	0.23	0.38*	1.70*	0.27	0.30
Heavy metal	-	-	-	0.26	0.38*	1.21*	0.14	0.09	0.17	0.06	0.09	1.41*	0.02	0.01
Punk	-	-	-	-	0.13	1.47*	0.40*	0.35*	0.43*	0.20	0.35*	1.66*	0.23	0.27
Hip-hop / Rap	-	-	-	-	-	1.59*	0.52*	0.48*	0.56*	0.33	0.48*	1.79*	0.36*	0.40*
Classical music	-	-	-	-	-	-	1.07*	1.12*	1.04*	1.27*	1.12*	0.20	1.23*	1.20*
Chart pop	-	-	-	-	-	-	-	0.05	0.04	0.20	0.05	1.27*	0.16	0.13
Dance music	-	-	-	-	-	-	-	-	0.08	0.15	0.00	1.31*	0.12	0.08
Indie rock	-	-	-	-	-	-	-	-	-	0.23	0.08	1.23*	0.20	0.16
Soul	-	-	-	-	-	-	-	-	-	-	0.15	1.47*	0.04	0.07
Rock	-	-	-	-	-	-	-	-	-	-	-	1.31*	0.12	0.08
Opera	-	-	-	-	-	-	-	-	-	-	-	-	1.43*	1.40*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* $p < .05$

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 62.

Bonferroni pairwise comparisons of mean difference extroversion perceived typical of music style fans

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	0.56*	0.38	0.80*	0.03	0.01	1.23*	0.17	0.26	0.87*	0.24	0.42	0.69*	0.12	0.18
Jazz	-	0.18	0.24	0.59*	0.54*	0.68*	0.39	0.81*	0.31	0.31	0.13	0.13	0.43	0.73*
Country	-	-	0.42	0.41	0.37	0.86*	0.21	0.63*	0.49	0.13	0.04	0.31	0.26	0.56*
Heavy metal	-	-	-	0.83*	0.79*	0.43	0.63*	1.06*	0.07	0.56	0.38	0.11	0.68*	0.98*
Punk	-	-	-	-	0.04	1.27*	0.20	0.22	0.90*	0.28	0.46*	0.72*	0.16	0.14
Hip-hop / Rap	-	-	-	-	-	1.22*	0.16	0.27	0.86*	0.23	0.41	0.68*	0.11	0.19
Classical music	-	-	-	-	-	-	1.07*	1.49*	0.37	0.99*	0.81*	0.54*	1.11*	1.41*
Chart pop	-	-	-	-	-	-	-	0.42*	0.70*	0.08	0.26	0.52*	0.04	0.34
Dance music	-	-	-	-	-	-	-	-	1.12*	0.50*	0.68*	0.94*	0.38	0.08
Indie rock	-	-	-	-	-	-	-	-	-	0.62*	0.44	0.18	0.74*	1.04*
Soul	-	-	-	-	-	-	-	-	-	-	0.18	0.44	0.12	0.42*
Rock	-	-	-	-	-	-	-	-	-	-	-	0.27	0.30	0.60*
Opera	-	-	-	-	-	-	-	-	-	-	-	-	0.57*	0.87*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* $p < .05$

Abbreviations of music styles:

HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 63.

Bonferroni pairwise comparisons of mean difference neuroticism perceived typical of music style fans.

	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
							Musical styles							
Reggae	0.04	0.28	1.37*	1.17*	0.70*	0.09	0.66*	0.71*	0.57*	0.21	1.11*	0.14	0.72*	0.41
Jazz	-	0.32	1.41*	1.21*	0.74*	0.04	0.70*	0.76*	0.61*	0.17	1.16*	0.10	0.77*	0.46*
Country	-	-	1.09*	0.89*	0.42	0.37	0.38*	0.43	0.29	0.49*	0.83*	0.42	0.44	0.13
Heavy metal	-	-	-	0.20	0.67*	1.46*	0.71*	0.66*	0.80*	1.58*	0.26	1.51*	0.64*	0.96*
Punk	-	-	-	-	0.47*	1.26*	0.51*	0.46	0.60*	1.38*	0.06	1.31*	0.44*	0.76*
Hip-hop / Rap	-	-	-	-	-	0.79*	0.04	0.01	0.13	0.91*	0.41	0.84*	0.02	0.29
Classical music	-	-	-	-	-	-	0.74*	0.80*	0.66*	0.12	1.20*	0.06	0.81*	0.50*
Chart pop	-	-	-	-	-	-	-	0.06	0.09	0.87*	0.46*	0.80*	0.07	0.24
Dance music	-	-	-	-	-	-	-	-	0.14	0.92*	0.40	0.86*	0.01	0.30
Indie rock	-	-	-	-	-	-	-	-	-	0.78*	0.54*	0.71*	0.16	0.16
Soul	-	-	-	-	-	-	-	-	-	-	1.32*	0.07	0.93*	0.62*
Rock	-	-	-	-	-	-	-	-	-	-	-	1.26*	0.39	0.70*
Opera	-	-	-	-	-	-	-	-	-	-	-	-	0.87*	0.56*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* *p* < .05

Abbreviations of music styles:

HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock

Table 64.

Bonferroni pairwise comparisons of mean difference openness to experience perceived typical of music style fans

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	0.33	1.14*	1.02*	0.79*	1.08*	1.13*	1.06*	0.67*	0.57*	0.30	0.64*	1.16*	0.58*	0.97*
Jazz	-	0.81*	0.69*	0.46	0.74*	0.80*	0.72*	0.33	0.23	0.03	0.31	0.82*	0.24	0.63*
Country	-	-	0.12	0.36	0.07	0.01	0.09	0.48	0.58*	0.84*	0.50	0.01	0.57*	0.18
Heavy metal	-	-	-	0.23	0.06	0.11	0.03	0.36	0.46	0.72*	0.38	0.13	0.44	0.06
Punk	-	-	-	-	0.29	0.34	0.27	0.12	0.22	0.49*	0.14	0.37	0.21	0.18
Hip-hop / Rap	-	-	-	-	-	0.06	0.02	0.41	0.51*	0.78*	0.43	0.08	0.50	0.11
Classical music	-	-	-	-	-	-	0.08	0.47	0.57*	0.83*	0.49	0.02	0.56*	0.17
Chart pop	-	-	-	-	-	-	-	0.39	0.49*	0.76*	0.41	0.10	0.48	0.09
Dance music	-	-	-	-	-	-	-	-	0.10	0.37	0.02	0.49	0.09	0.30
Indie rock	-	-	-	-	-	-	-	-	-	0.27	0.08	0.59*	0.01	0.40
Soul	-	-	-	-	-	-	-	-	-	-	0.34	0.86*	0.28	0.67*
Rock	-	-	-	-	-	-	-	-	-	-	-	0.51	0.07	0.32
Opera	-	-	-	-	-	-	-	-	-	-	-	-	0.58*	0.19
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* $p < .05$

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 65.
Bonferroni pairwise comparisons of mean difference agreeableness perceived typical of music style fans

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	0.11	0.44*	1.41*	1.24*	1.36*	0.37	0.50*	0.73*	0.69*	0.07	0.84*	0.42*	0.57*	0.78*
Jazz	-	0.33	1.30*	1.13*	1.24*	0.26	0.39*	0.62*	0.58*	0.18	0.73*	0.31	0.46*	0.67*
Country	-	-	0.97*	0.80*	0.91*	0.08	0.06	0.29	0.24	0.51*	0.40	0.02	0.12	0.33
Heavy metal	-	-	-	0.17	0.06	1.04*	0.91*	0.68*	0.72*	1.48*	0.57*	0.99*	0.84*	0.63*
Punk	-	-	-	-	0.11	0.88*	0.74*	0.51*	0.56*	1.31*	0.40*	0.82*	0.68*	0.47
Hip-hop / Rap	-	-	-	-	-	0.99*	0.86*	0.62*	0.67*	1.42*	0.51*	0.93*	0.79*	0.58*
Classical music	-	-	-	-	-	-	0.13	0.37	0.32	0.43*	0.48*	0.06	0.20	0.41
Chart pop	-	-	-	-	-	-	-	0.23	0.19	0.57*	0.34	0.08	0.07	0.28
Dance music	-	-	-	-	-	-	-	-	0.04	0.80*	0.11	0.31	0.17	0.04
Indie rock	-	-	-	-	-	-	-	-	-	0.76*	0.16	0.27	0.12	0.09
Soul	-	-	-	-	-	-	-	-	-	-	0.91*	0.49*	0.63*	0.84*
Rock	-	-	-	-	-	-	-	-	-	-	-	0.42	0.28	0.07
Opera	-	-	-	-	-	-	-	-	-	-	-	-	0.14	0.36
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* $p < .05$

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 66.
Bonferroni pairwise comparisons of mean difference conscientiousness perceived typical of music style fans.

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	0.75*	0.40	0.45*	0.49*	0.18	1.27*	0.16	0.24	0.03	0.66*	0.19	1.15*	0.21	0.01
Jazz	-	0.35	1.20*	1.25*	0.93*	0.52*	0.60*	0.99*	0.72*	0.09	0.94*	0.39	0.97*	0.74*
Country	-	-	0.85*	0.90*	0.58*	0.87*	0.25	0.64*	0.37	0.26	0.60*	0.74*	0.62*	0.39
Heavy metal	-	-	-	0.05	0.27	1.72*	0.61*	0.21	0.48*	1.11*	0.26	1.60*	0.24	0.46*
Punk	-	-	-	-	0.32	1.76*	0.65*	0.26	0.53*	1.16*	0.30*	1.64*	0.28	0.51*
Hip-hop / Rap	-	-	-	-	-	1.45*	0.34	0.06	0.21	0.84*	0.01	1.33*	0.03	0.19
Classical music	-	-	-	-	-	-	1.11*	1.51*	1.24*	0.61*	1.46*	0.12	1.48*	1.26*
Chart pop	-	-	-	-	-	-	-	0.39*	0.12	0.51*	0.35	0.99*	0.37*	0.15
Dance music	-	-	-	-	-	-	-	-	0.27	0.90*	0.05	1.38*	0.02	0.25
Indie rock	-	-	-	-	-	-	-	-	-	0.63*	0.23	1.11*	0.25	0.02
Soul	-	-	-	-	-	-	-	-	-	-	0.85*	0.48*	0.88*	0.65*
Rock	-	-	-	-	-	-	-	-	-	-	-	1.34*	0.02	0.20
Opera	-	-	-	-	-	-	-	-	-	-	-	-	1.36*	1.14*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

$* p < .05$

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 67.
Bonferroni pairwise comparisons of mean difference intelligence perceived typical of music style fans

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	12.10*	4.93	0.53	2.39	3.82	19.08*	2.85	1.58	4.11	5.21*	3.47	18.10*	0.52	0.56
Jazz	-	17.03*	11.57*	14.49*	15.92*	6.98*	14.96*	13.68*	7.99*	6.90*	8.64*	6.00*	11.58*	11.55*
Country	-	-	5.47	2.55	1.11	24.01*	2.08	3.35	9.05*	10.14*	8.40*	23.03*	5.46	5.49
Heavy metal	-	-	-	2.92	4.35	18.55*	3.39	2.11	3.58	4.67	2.93	17.57*	0.01	0.02
Punk	-	-	-	-	1.43	21.47*	0.47	0.81	6.50*	7.59*	5.85*	20.49*	2.91	2.94
Hip-hop / Rap	-	-	-	-	-	22.90*	0.97	2.24	7.93*	9.02*	7.28*	21.92*	4.34	4.38
Classical music	-	-	-	-	-	-	21.93*	20.66*	14.97*	13.88*	15.61*	0.98	18.56*	18.52*
Chart pop	-	-	-	-	-	-	-	1.27	6.97*	8.06*	6.32*	20.96*	3.38	3.41
Dance music	-	-	-	-	-	-	-	-	5.69	6.78*	5.05	19.68*	2.10	2.14
Indie rock	-	-	-	-	-	-	-	-	-	1.09	0.65	13.99*	3.59	3.56
Soul	-	-	-	-	-	-	-	-	-	-	1.74	12.90*	4.68	4.65
Rock	-	-	-	-	-	-	-	-	-	-	-	14.64*	2.94	2.91
Opera	-	-	-	-	-	-	-	-	-	-	-	-	17.58*	17.55*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* $p < .05$

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 68.

Bonferroni pairwise comparisons of mean difference political orientation perceived typical of music style fans

	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
							Musical styles							
Reggae	0.65*	1.24*	0.25	0.03	0.54*	1.84*	0.83*	0.57*	0.29	0.62*	0.23	1.93*	0.30	0.60*
Jazz	-	0.58*	0.40	0.62*	0.11	1.19*	0.18	0.08	0.36	0.03	0.43*	1.28*	0.35	0.06
Country	-	-	0.99*	1.20*	0.70*	0.61*	0.40	0.66*	0.94*	0.62*	1.01*	0.70*	0.93*	0.64*
Heavy metal	-	-	-	0.21	0.29	1.60*	0.58*	0.33	0.05	0.37	0.02	1.69*	0.06	0.35
Punk	-	-	-	-	0.51*	1.81*	0.80*	0.54*	0.26	0.58*	0.19	1.90*	0.27	0.56*
Hip-hop / Rap	-	-	-	-	-	1.30*	0.29	0.03	0.25	0.08	0.32	1.39*	0.24	0.06
Classical music	-	-	-	-	-	-	1.01*	1.27*	1.55*	1.23*	1.62*	0.09	1.54*	1.25*
Chart pop	-	-	-	-	-	-	-	0.26	0.54*	0.21	0.61*	1.10*	0.53*	0.24
Dance music	-	-	-	-	-	-	-	-	0.28	0.05	0.35	1.36*	0.27	0.02
Indie rock	-	-	-	-	-	-	-	-	-	0.33	0.07	1.64*	0.01	0.30
Soul	-	-	-	-	-	-	-	-	-	-	0.39	1.32*	0.32	0.02
Rock	-	-	-	-	-	-	-	-	-	-	-	1.71*	0.08	0.37
Opera	-	-	-	-	-	-	-	-	-	-	-	-	1.63*	1.34*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

p < .05

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 69.
Bonferroni pairwise comparisons of mean difference religiosity perceived typical of music style fans

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	0.30	0.31	1.40*	1.47*	0.57*	0.08	0.74*	1.28*	0.98*	0.47*	1.33*	0.08	1.04*	0.30
Jazz	-	0.61*	1.10*	1.17*	0.27	0.38*	0.44*	0.98*	0.68*	0.77*	1.03*	0.38*	0.74*	0.00
Country	-	-	1.71*	1.78*	0.88*	0.23	1.06*	1.59*	1.29*	0.16	1.64*	0.23	1.36*	0.61*
Heavy metal	-	-	-	0.07	0.83*	1.48*	0.66*	0.12	0.42*	1.87*	0.07	1.48*	0.36	1.10*
Punk	-	-	-	-	0.90*	1.54*	0.72*	0.19	0.49*	1.93*	0.13	1.54*	0.42*	1.17*
Hip-hop / Rap	-	-	-	-	-	0.64*	0.18	0.71*	0.41*	1.03*	0.77*	0.64*	0.48*	0.27
Classical music	-	-	-	-	-	-	0.82*	1.36*	1.06*	0.39*	1.41*	0.00	1.12*	0.38
Chart pop	-	-	-	-	-	-	-	0.53*	0.23	1.21*	0.59*	0.82*	0.30	0.44*
Dance music	-	-	-	-	-	-	-	-	0.30	1.74*	0.06	1.36*	0.23	0.98*
Indie rock	-	-	-	-	-	-	-	-	-	1.44*	0.36*	1.06*	0.07	0.68*
Soul	-	-	-	-	-	-	-	-	-	-	1.80*	0.39*	1.51*	0.77*
Rock	-	-	-	-	-	-	-	-	-	-	-	1.41*	0.29	1.03*
Opera	-	-	-	-	-	-	-	-	-	-	-	-	1.12*	0.38
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74*
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* $p < .05$

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 70.
Bonferroni pairwise comparisons of mean difference likelihood to participate in anti-social behaviour perceived typical of music style fans

	Musical styles													
	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	0.81*	0.61*	0.89*	1.01*	1.21*	1.22*	0.21	0.51*	0.10	0.77*	0.56*	1.31*	0.19	0.54*
Jazz	-	0.20	1.70*	1.82*	2.02*	0.41*	0.60*	1.32*	0.91*	0.04	1.37*	0.50*	1.00*	1.36*
Country	-	-	1.50*	1.62*	1.82*	0.61*	0.40*	1.12*	0.71*	0.16	1.17*	0.70*	0.80*	1.16*
Heavy metal	-	-	-	0.12	0.32	2.11*	1.10*	0.38	0.79*	1.66*	0.33*	2.20*	0.70*	0.34
Punk	-	-	-	-	0.20	2.23*	1.22*	0.50*	0.91*	1.78*	0.46*	2.32*	0.82*	0.47*
Hip-hop / Rap	-	-	-	-	-	2.43*	1.42*	0.70*	1.11*	1.98*	0.66*	2.52*	1.02*	0.67*
Classical music	-	-	-	-	-	-	1.01*	1.73*	1.32*	0.46*	1.78*	0.09	1.41*	1.77*
Chart pop	-	-	-	-	-	-	-	0.72*	0.31	0.56*	0.77*	1.10*	0.40	0.76*
Dance music	-	-	-	-	-	-	-	-	0.41	1.28*	0.04	1.82*	0.32	0.03
Indie rock	-	-	-	-	-	-	-	-	-	0.87*	0.46*	1.41*	0.09	0.44
Soul	-	-	-	-	-	-	-	-	-	-	1.32*	0.54*	0.96*	1.31*
Rock	-	-	-	-	-	-	-	-	-	-	-	1.87*	0.37	0.01
Opera	-	-	-	-	-	-	-	-	-	-	-	-	1.50*	1.86*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

p < .05

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

Table 71.
Bonferroni pairwise comparisons of mean difference vulnerability to 'at-risk' behaviour perceived typical of music style fans.

	Jazz	Country	HM	Punk	H/R	Classic	Chart	Dance	IR	Soul	Rock	Opera	Ska	R'n'B
Reggae	1.38*	1.43*	0.47*	0.40	0.44*	1.84*	0.87*	0.31	0.10	1.37*	0.21	1.99*	0.27	0.29
Jazz	-	0.06	1.84*	1.78*	1.82*	0.47*	0.51*	1.69*	1.28*	0.01	1.59*	0.61*	1.11*	1.09*
Country	-	-	1.90*	1.83*	1.88*	0.41*	0.57*	1.74*	1.33*	0.07	1.64*	0.56*	1.17*	1.14*
Heavy metal	-	-	-	0.07	0.02	2.31*	1.33*	0.16	0.57*	1.83*	0.26	2.46*	0.73*	0.76*
Punk	-	-	-	-	0.04	2.24*	1.27*	0.09	0.50*	1.77*	0.19	2.39*	0.67*	0.69*
Hip-hop / Rap	-	-	-	-	-	2.29*	1.31*	0.13	0.54*	1.81*	0.23	2.43*	0.71*	0.73*
Classical music	-	-	-	-	-	-	0.98*	2.16*	1.74*	0.48*	2.06*	0.14	1.58*	1.56*
Chart pop	-	-	-	-	-	-	-	1.18*	0.77*	0.50*	1.08*	1.12*	0.60*	0.58*
Dance music	-	-	-	-	-	-	-	-	0.41	1.68*	0.10	2.30*	0.58*	0.60*
Indie rock	-	-	-	-	-	-	-	-	-	1.27*	0.31	1.89*	0.17	0.19
Soul	-	-	-	-	-	-	-	-	-	-	1.58*	0.62*	1.10*	1.08*
Rock	-	-	-	-	-	-	-	-	-	-	-	2.20*	0.48*	0.50*
Opera	-	-	-	-	-	-	-	-	-	-	-	-	1.72*	1.70*
Ska	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02
R'n'B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Musical styles (column group header)

* *p* < .05

Abbreviations of music styles:
HM = Heavy metal; H/R = Hip-hop / Rap; Classic = Classical music; Chart = Chart pop; Dance = Dance music; IR = Indie rock.

John is tall and has dark hair, and currently lives in the north east of England. John lives near his family, but he rarely sees his dad because he is an executive at major pharmaceutical company, and travels alot. John's favourite style of music is reggae (e.g. Bob Marley), and his favourite colour is blue.

Based on this description, please try to indicate what John's likely characteristics might be.

(Please tick appropriate boxes)

1. What is John's likely ethnicity? (Please only tick **one** box)

(a) Black (e.g. African, Caribbean, etc)? ☐ (b) Asian (e.g. Chinese, Indian, etc)? ☐
(c) White (e.g. European, British, etc)? ☐ (d) Hispanic (e.g. Spanish, Latin American, etc)? ☐

2. What is John's likely age? (Please only tick **one** box)

(a) 5 – 12 years old? ☐ (b) 13 – 17 years old? ☐ (c) 18 – 34 years old? ☐
(d) 35 years and above? ☐

3. What is John's income likely to be? (Please only tick **one** box)

      (a) No income (dependent on others) ☐
      (b) Below average income ☐
      (c) Average income ☐
      (d) High-average income ☐
      (e) High income ☐

4. How intelligent is John likely to be? (Please only tick **one** box)

      (a) Above average intelligence? ☐
      (b) Average intelligence? ☐
      (c) Below average intelligence? ☐

5. What is John's political orientation likely to be?

(Please only tick **one** box)
(a) The left? ☐   (b) The centre? ☐   (c) The right? ☐
(i.e. Socialism)   (i.e. Neutral)   (i.e. Conservatism)

6. How often is John likely to participate in 'anti-social' behaviour (e.g. street crime, violence, etc)? (Please only tick **one** box)
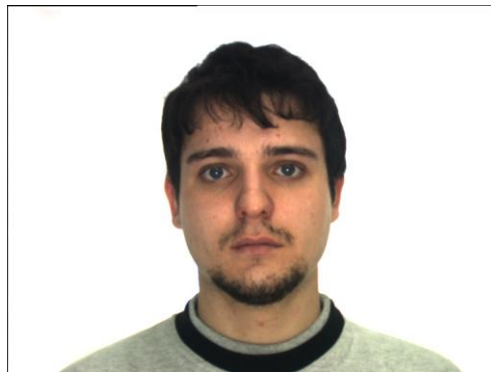
      (a) Never? ☐ (b) Once or twice? ☐ (c) Regularly? ☐

7. How vulnerable to 'at-risk' behaviours (e.g. drug abuse, suicide, etc) is John likely to be? (Please only tick **one** box)

(a) Not at all likely? ☐ (b) Moderately vulnerable? ☐ (c) Highly vulnerable?

Appendix 7 – Example taken from questionnaire used in Chapter 11 (Study 1).

Daniel is 23-year-old white man from an average income family household. He is an atheist, who is lazy and at times can be quite unfriendly. Daniel is known to regularly abuse recreational drugs and thought to be highly vulnerable to other 'at-risk behaviours' (e.g. suicide, self-harm, etc).

What is Daniel's favourite style of music likely to be? (Please only tick **one** box)

        (a) Chart pop?   ☐
        (b) Opera?   ☐
        (c) Classical music?   ☐
        (d) Heavy metal?   ☐

Stacy is an extremely out-going, and relaxed 19-year-old black woman. She originates from a middle-income family, and is of average intelligence. In the past, Stacy has occasionally, been involved in both drug abuse and anti-social behaviour.

What is Stacy's favourite style of music likely to be? (Please only tick **one** box)

        (a) Country?   ☐
        (b) Opera?   ☐
        (c) Jazz?   ☐
        (d) R'n'B?   ☐

Please write down your best guesses as to the percentage of the British population as whole that like each of the following music styles*:

(* Please be as specific as possible (i.e. avoid simply rounding-up estimates), and please try to ensure estimates **add-up to 100%**, otherwise I will be unable to use your data; Calculators will be available to help if necessary)

1) Chart pop (e.g. Britney Spears)   _____ %

2) Hip-hop / rap (e.g. Eminem,)   _____ %

3) R n'B (e.g. Usher)   _____ %

4) Heavy metal (e.g. Metallica)   _____ %

5) Rock (e.g. Red Hot Chilli Peppers)   _____ %

6) Classical (e.g. Mozart)   _____ %

7) Reggae (e.g. Bob Marley)   _____ %

8) Country (e.g. Dolly Parton)   _____ %

9) Dance (e.g. Fat Boy Slim)   _____ %

10) Jazz (e.g. Miles Davis)   _____ %

<u>Total</u> =   <u>100</u> %

Please read the following personal description carefully:

"John is a 23-year-old white man from a below average income household. At work, John is relatively disorganised, irresponsible and is slightly less intelligent than his colleagues. John tends to be somewhat self-centred and unfriendly to those outside his immediate friendship groups. In the past, John has shown evidence of drug abuse and is thought to be vulnerable to further 'at-risk behaviours' (e.g. suicide, unprotected sex, etc). John is also an atheist."

How similar is John to other typical music fans?

Please rank how similar you consider John to the typical fan of each of the following 10 music styles*:
(*Rank similarity where 1 = **least similar to John** and 10 = **most similar to John**; Please ensure you rank all ten music styles differently)

1) Chart pop (e.g. Britney Spears)   _____

2) Hip-hop / rap (e.g. Eminem)   _____

3) R n'B (e.g. Usher)   _____

4) Heavy metal (e.g. Metallica)   _____

5) Rock (e.g. Red Hot Chilli Peppers)   _____

6) Classical (e.g. Mozart)   _____

7) Reggae (e.g. Bob Marley)   _____

8) Country (e.g. Dolly Parton)   _____

9) Dance (e.g. Fat Boy Slim)   _____

10) Jazz (e.g. Miles Davis)   _____

Please read the following personal description carefully:

"John is a 23-year-old white man from a below average income household. At work, John is relatively disorganised, irresponsible and is slightly less intelligent than his colleagues. John tends to be somewhat self-centred and unfriendly to those outside his immediate friendship groups. In the past, John has shown evidence of drug abuse and is thought to be vulnerable to further 'at-risk behaviours' (e.g. suicide, unprotected sex, etc). John is also an atheist."

What is John's musical taste?

Please rank each of the following 10 musical styles in order of how likely that John might be a fan of*: (*Rank likelihood where 1 = **John is least likely to be fan of this style** and 10 = **John is most likely to be a fan of this style**; Please ensure you rank all ten music styles differently)

1) Chart pop (e.g. Britney Spears) _____

2) Hip-hop / rap (e.g. Eminem) _____

3) R'n'B (e.g. Usher) _____

4) Heavy metal (e.g. Metallica) _____

5) Rock (e.g. Red Hot Chilli Peppers) _____

6) Classical (e.g. Mozart) _____

7) Reggae (e.g. Bob Marley) _____

8) Country (e.g. Dolly Parton) _____

9) Dance (e.g. Fat Boy Slim) _____

10) Jazz (e.g. Miles Davis) _____

QUESTIONNAIRE

Shortly, you will be asked to judge the sex of eight different individuals, this should not take more than 10 minutes of your time.

Don't worry; there are no *right* or *wrong* answers to any of the following questions, simply try to ensure that your answers are as **honest** as possible and **please ensure you answer every question**.

All responses will remain confidential and completely anonymous.

Thank you for your participation.

For each of the following 8 individuals please indicate what you consider to be their <u>sex</u> (i.e. male or female).

For each individual, you must only give **<u>one</u>** response (i.e. male **<u>OR</u>** female), participants who respond inappropriately (i.e. "person 3 is BOTH male and female) will **not** receive EPR credits.

Please ensure that you answer **<u>all</u>** questions appropriately; participants who fail to do so will **not** receive EPR credits.
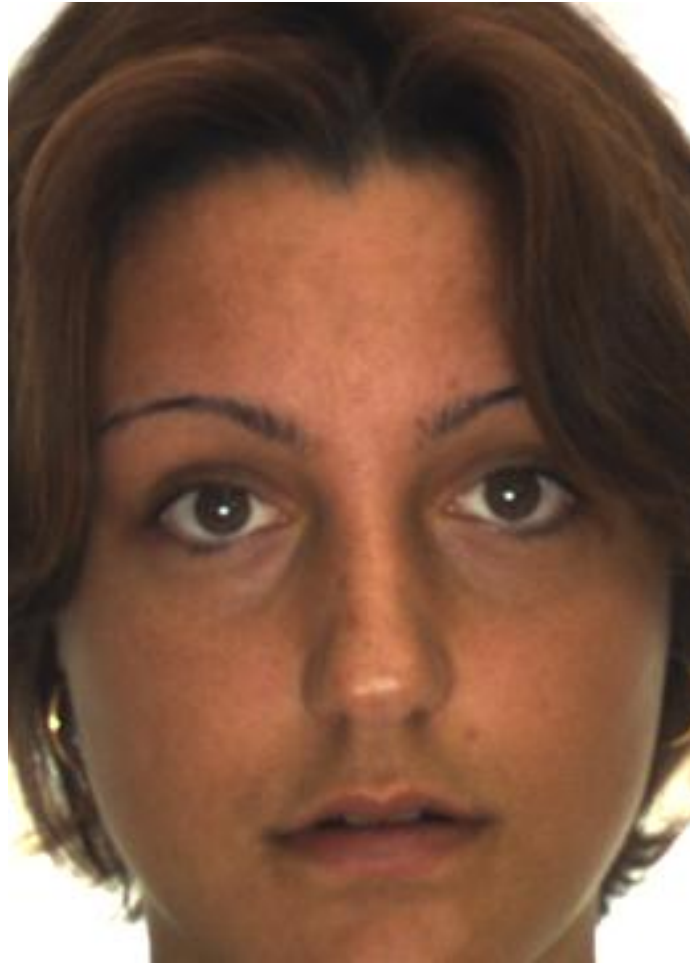
Person 1
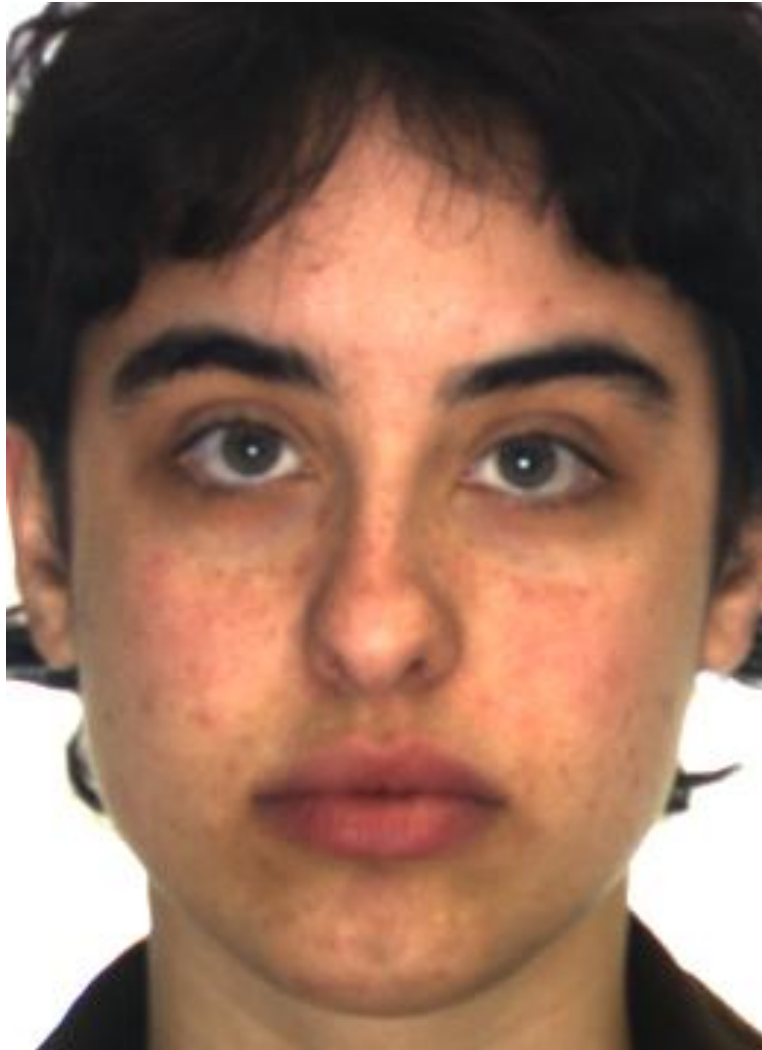
Person 1 is:

Male ☐   Female ☐   (Please only tick **one** box)

Person 2

Person 2 is:

Male ☐   Female ☐   (Please only tick **one** box)

Person 3

Person 3 is:

Male ☐   Female ☐   (Please only tick **one** box)

Person 4

Person 4 is:

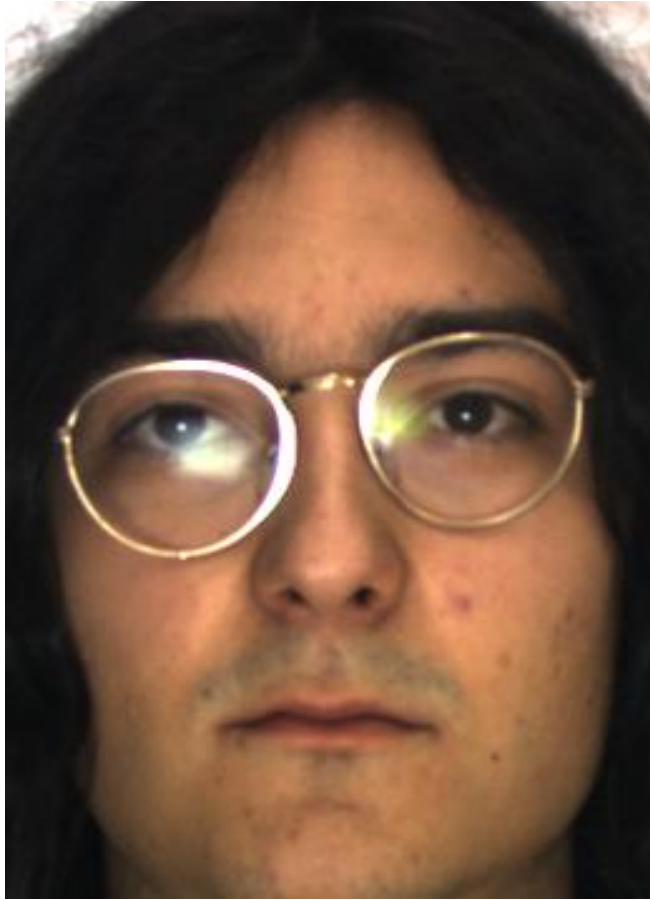Male ☐   Female ☐   (Please only tick **one** box)

Person 5

Person 5 is:

Male ☐   Female ☐   (Please only tick **one** box)
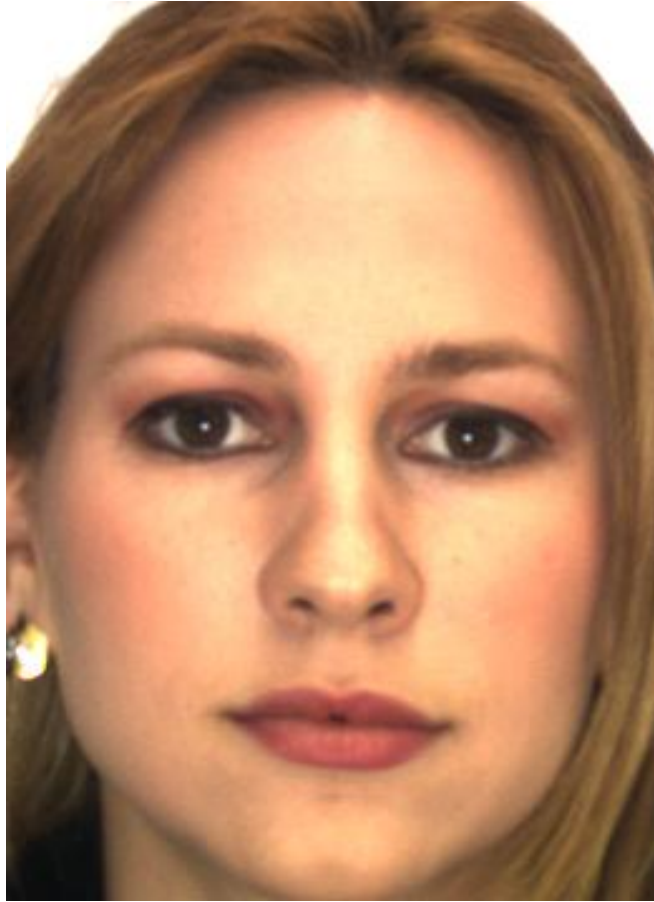
Person 6

Person 6 is:

Male ☐   Female ☐   (Please only tick **one** box)

Person 7

Person 7 is:

Male ☐   Female ☐   (Please only tick **one** box)

Person 8

Person 8 is:

Male ☐   Female ☐   (Please only tick **one** box)

QUESTIONNAIRE

Shortly, you will be asked to judge the age of eight different individuals, this should not take more than 5 minutes of your time.

Don't worry; there are no *right* or *wrong* answers to any of the following questions, simply try to ensure that your answers are as **honest** as possible and **please ensure you answer every question**.

All responses will remain confidential and completely anonymous.

Thank you for your participation.

For each of the following 8 individuals please indicate what you consider to be their likely age.

For each individual, please ensure you give a specific age estimate (person 3 is 25 years old)**, and avoid giving rough estimates** (i.e. "person 3 aged between 20 – 30 yrs).

Person 1

Person 1 is John. He was born in Derby on 7th December. He likes watching football, his favourite team is Derby County, and he tries to watch them play as often as possible. John's least favourite food is brussel sprouts. John's favourite musical style is opera.

Person 1

How old is Person 1?
(Please give a specific age estimate)

Person 1 is _____ years old

Person 2

Person 2 is Matthew. He was born in Manchester on 21st March. He regularly goes to his local cinema to watch films with his brother Kevin. Matthew's favourite food is fish and chips. Matthew's favourite musical style is chart pop.

Person 2

How old is Person 2?
(Please give a specific age estimate)

Person 2 is _____ years old

Person 3

Person 3 is Daniel. He was born in South London on 17th October. Daniel is an only child, so likes to spend a lot of his time with friends. Daniel's favourite food is beans-on-toast. Daniel's favourite musical style is dance music.

Person 3

How old is Person 3?
(Please give a specific age estimate)

Person 3 is _____ years old

Person 4

Person 4 is Paul. He was born in Cardiff on 2nd February. Family is very important to Paul, and he likes to visit his extended family whenever possible. Paul's favourite colour is red. Paul's favourite musical style is jazz.

Person 4

How old is Person 4?
(Please give a specific age estimate)

Person 4 is _____ years old

Person 5

Person 5 is Helen. She was born in Norwich on 29th July. She likes to watch sport, and recently subscribed to Sky Sports. Helen's favourite colour is orange. Helen's favourite musical style is R'n'B.

Person 5

How old is Person 5?
(Please give a specific age estimate)

Person 5 is _____ years old

Person 6

Person 6 is Claire. She was born in Oxford on 4th April. She spends a lot of her spare time with her best friend. Claire's favourite colour is green. Claire's favourite musical style is country.

Person 6

How old is Person 6?
(Please give a specific age estimate)

Person 6 is _____ years old

Person 7

Person 7 is Mary. She was born in Newcastle on 21st June. She broke her arm, and has only recently left hospital and is feeling much better now. Mary's favourite colour is blue. Mary's favourite musical style is classical music.

Person 7

How old is Person 7?
(Please give a specific age estimate)

Person 7 is _____ years old

Person 8

Person 8 is Beth. He was born in Bristol on 1st November. She likes animals and regularly visits her local zoo to watch the chimpanzees. Beth's least favourite food is haggis. Beth's favourite musical style is hip-hop / rap.

Person 8

How old is Person 8?
(Please give a specific age estimate)

Person 8 is _____ years old

Appendix 13 – Musical style pairings used in Chapter 20.

1. Chart pop & Country
2. R'n'B & Opera
3. Hip-hop / Rap & Jazz
4. Dance & Classical music