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ABSTRACT This preliminary questionnaire-based study explored various trends in the music preferences and evaluative styles of 100 young adult females and males. While previous research has explored gender differences in genre preferences, this study aimed to explore gender differences in artist preferences, by establishing that participants' lists of favourite artists contained an unequal ratio of males and females. Consistent with a wide range of research on gender-biased performance evaluations and gender socialization, this gender bias was stronger in the majority of males. Future research with larger samples will explore the trends across cultures and sexual orientations. It is argued that gender preference is an important and defining characteristic of music preferences, particularly for young white Australian males.

KEYWORDS: *evaluation, gender, masculinity, music tastes, popular music, sex differences*

Introduction

In their work on exploring music preferences, Rentfrow and Gosling (2003) sought to direct attention to an aspect of contemporary personal and social life that had been largely neglected by mainstream social and personality psychology. Their study concluded that there are patterns linking music preferences with personality dimensions (e.g. cheerful music with extraversion), self-views (e.g. conventional music styles with conservative self-views) and cognitive abilities (e.g. complex music with intelligence). After sketching 'an initial map of the music preferences terrain', Rentfrow and Gosling identified 'some potential landmarks for future exploration' (p. 1252), such as whether these patterns would vary across age or culture. This present article establishes the importance of another landmark in the music preferences terrain that Rentfrow and Gosling did not mention – gender. It will be argued that both the gender of the listener and whether his or her artist preferences are gender-biased are important features in any description of music preferences in Western popular music.

The gender of the listener has been considered in relation to genre preferences at various points over the last 30 years by survey research yielding broad descriptions of males

preferring 'hard, tough' music and females preferring 'soft, romantic' music (Frith, 1978; Hansen and Hansen, 1991; Russell, 1997). More recently, a Swiss study found that although males liked hard rock music more than females, it was only fifth on their list (after pop, classical, hip-hop and electronic, and before meditation, country and folk), while being seventh on the females' list (Nater et al., 2006). In the other direction, females reported stronger preferences than males for classical and meditation music. Christenson and Peterson (1988) found differences in how males and females group genres together and concluded that 'when it comes to popular music, gender "counts" and must be accounted for' (p. 299). However, genre is not the only aspect of music preferences in which gender is involved.

In relation to the gender of the music artist, researchers from the fields of media studies (Whiteley, 1997), sociology (Frith and McRobbie, 1990) and gender studies (Feigenbaum, 2005), have theorized that male and female artists are differentially presented, celebrated and critiqued according to gender-loaded notions of performativity, image and prestige. Similar arguments have been advanced in relation to pro-male gender bias in classical music (Cooper, 1995), literature (Olsen, 1978; Russ, 1983) and the visual arts (Greer, 1979; Nochlin, 1988[1971]).

A particularly pervasive media discourse around gender and popular rock music is said to be perpetuating 'the history of rock [as] a history of the active exclusion of women as significant artistic voices' (Auslander, 2004: 4). Bayton's (1998) two media surveys, in 1988 and 1996, document the overwhelming under-representation of female musicians in rock music media, including TV, radio and magazines. More recently, this was pointedly displayed in a recent issue of *Rolling Stone* magazine (2005b), which listed only 10 female artists in its poll of the 100 'most influential and significant artists of all time'. Only two women, Aretha Franklin (9) and Madonna (36) counted amongst the top 45. The 'expert panel of musicians, industry figures and critics', selected by the editors of *Rolling Stone*, that voted on the poll consisted of 52 men and only two women. A similarly gender-loaded ratio of artist representation in the popular music canon was displayed in another poll published in *Rolling Stone*, listing the 500 greatest songs of all time (2005b). This poll deemed 445 male-sung songs to be worthy of inclusion, while mentioning only 55 songs sung by females. Of these 55 female-sung songs, only six appeared in the top 100, while 16 appeared in the bottom 100. Perhaps unsurprisingly, the voting panel consisted of 149 men and only 23 women. *Time* magazine followed suit in 2006, publishing an online list of the 'All-Time 100 Albums', compiled by two male music critics, containing 88.33 albums by males and only 11.67 by females (Fleetwood Mac score the .67, having two female singers and one male singer) (Tyrangiel and Light, 2006).

There are a number of possible explanations for the disproportionate representation of males in the popular music canon that are based on the current structure of the music industry – for example, that there are simply more male artists than female artists, or that somehow males are innately better musicians than females. The former is disputed by Bayton (1998), who argues that many interrelated constraints, both material and ideological, act to discourage females from participating in making music (particularly rock music), while the latter is not supported by either sales figures or psychological research.

While *Rolling Stone*'s polls estimate a ratio of male-to-female talent of roughly 9:1, actual album sales indicate a ratio closer to 2:1 – 3.67 of the 10 best-selling albums

of all time are sung by women (Bennett, 2005). A casual browse of any music store's shelves would suggest that the ratio of 9:1 is certainly not reflective of the ratio of successful males-to-females in the industry.

In terms of musical talent, a wealth of literature reports no significant gender differences in musical ability or talent in children across all primary school ages (Halpern, 2000; Pollatou et al., 2005; Shuter-Dyson and Gabriel, 1981). In their study of the behaviours, interests and attitudes regarding the music of 232 high school students, Crowther and Durkin (1982) actually found *greater* involvement in musical activities in females at all ages between 12 and 18 years. Thus, on several grounds, there exist disjunctures between perceptions of male-to-female musical talent in the media and data from the real world.

This article aims to address the question of music preferences rather than ratings of talent or ability – 'who do you like' more than 'who do you think is more talented'. The individual's personal preferences are of interest here – the subjective attraction or pull – largely avoiding objective notions of talent, ability and success, where the criteria are more hotly contested and less easily measured.

Before considering whether this gender bias in music media also exists in the music preferences of 100 young adults, this article will draw on research supporting the argument that a host of socializing forces impact differentially on males and females, generating biases in the ways they listen to, and accord prestige to, musical talent in male and female artists. It is proposed that any theory of music preferences must consider the gender of both the listener and of the artists they prefer.

LISTENING: DIFFERENT EARS OR SELECTIVE HEARING?

In non-musical speaking and listening, it seems that the listener does not hear the message without also being influenced by the gender of the messenger. For example, more favourable facial expressions were given by both male and female group members to male leaders than to the female leaders making equivalent contributions to group discussions (Butler and Geis, 1990). Female leaders actually received fewer smiles and more frowns the *more* they spoke. Even a male-voiced computer tutor was heard by students as more informative, competent and friendlier when giving corrective feedback than a female-voiced computer tutor giving *the exact same feedback* (Nass et al., 1997).

These differences in how the genders are heard can be traced right back to social interactions, expectations and schemas very early in the lifespan. In children's play, same-sex segregation begins by age three, and the ratio of same-sex to opposite-sex play reaches 11:1 by six-and-a-half years of age (Maccoby and Jacklin, 1987). As early as 33 months, boys were unlikely to listen or respond to the vocal prohibitions of the girls they had been paired with, although they would respond to boys, while girls would respond to both boys and girls (Jacklin and Maccoby, 1978). In mixed-sex maths groups in US grade schools, boys responded to requests for information almost exclusively to other boys and not to girls, while girls would respond to both the boys and girls (Webb and Kenderski, 1985). It appears that boys are not listening or responding to girls at an age when voice-pitch does not differ and cannot be implicated to explain some auditory preference.

Across ages 20 to 90, general preferences were reported for low-pitched voices and male speakers by both males and females (Hollien et al., 1991). Addington's (1968) attribution study found that harsh voices generate different impressions depending on

who they belong to – harsh-voiced males were viewed as mature, realistic and well-adjusted, while harsh-voiced females were viewed as stupid, masculine, lazy and inartistic. In terms of pitch preferences, ‘more positive traits are assigned to female speakers with high voices and male speakers with low voices . . . [although] in both genders low voices are associated with dominant and self-confident personalities’ (Biemans, 2000: 38). Even though loudness was associated in both male and female speakers with self-confidence, dominance (Harrigan et al., 1989) and aggression (Rose and Tryon, 1979), it was agreed upon by both genders that males should speak louder than females (Kramer, 1977; Tielen, 1992). It appears that higher, quieter voices are favoured in females even though, or perhaps *because*, neither of these features is associated with self-confidence or dominance.

Speaking, as well as listening, also appears to be governed by gendered rules regarding dominance and power. A wealth of research shows that, in mixed-sex conversations, men talk more than women, men interrupt more often than women, and women are more likely to be interrupted and ignored than men (James and Drakich, 1993; Lockheed, 1985; Zimmerman and West, 1975). Deaux and Major (1987) cite social-behavioral research of gender differences that reflect ‘cultural norms for women to be modest, for men to resist conformity, and for men to engage in heroic or chivalrous action’ (p. 380). This propelling of women away from, and of men towards, public display and performance, propels onlookers away from expecting transgressions of these norms. So, if we *hear* gendered voices differently and have different expectations of them, then the following section considers how we might also *evaluate* them differently.

EVALUATING: PRESTIGE STUDIES AND ATTRIBUTIONS OF MALE/FEMALE SUCCESS

From an early age, differential evaluations are made of males and females. Green (1997) found pro-male biases in the attitudes of UK music teachers who estimated stronger compositional and creative talents in their male students, while they considered females to be good at singing, listening, notation and playing classical music, despite assessments that did not reflect such differences. Recent studies have also revealed strong gender-stereotyping in both parents and primary-school children of certain instruments as either male-appropriate (drums, horns) or female-appropriate (flutes, violins) (O'Neill, 1997; Pickering and Repacholi, 2001).

In relation to non-musical evaluating, gender bias in evaluations of hypothetically different performers when the performances are actually identical was first explored in ‘prestige studies’ by Goldberg (1968). His seminal work uncovered a pro-male evaluative bias concerning fictitious authors of the same written excerpt, when named John McKay, J. McKay or Joan McKay. This bias was found again more recently by Paludi and Strayer (1985) and also in evaluations of New Age music (Colley et al., 2003). In the absence of other details about the composers, both males and females rated music more positively and with more references to competence when told it was by a male composer. Similar prejudices seem to underpin evaluations of painting (Pheterson et al., 1971) and leadership (Eagly et al., 1992). Crozier (1997) argues that crediting an artistic creation to a male creator increases perceptions of its worth and artistic merit, while crediting the same creation to a female creator decreases such perceptions.

Deaux and Major (1987) reviewed a range of studies that showed how observers 'are likely to evaluate a specific man's performance more highly than an equivalent performance by a woman' (p. 379). Observers differentially attribute success by explaining male performance in terms of ability, while explaining female performance in terms of more temporary causes such as effort or luck. Stereotypically gendered evaluations are made by college students of their male professors ('smart and knowledgeable') and female professors ('nice and sensitive to students' needs') (Basow, 1995). This even occurs when the professors are hypothetical and named as male or female (Burns-Glover and Veith, 1995).

Males and females are subject to differing standards of evaluation throughout and apparently beyond the lifespan, as indicated by Radtke et al.'s (2000) finding that gender stereotypes even persist in the way that eminent dead male and female psychologists are written about in obituaries in the *American Psychologist* journal. The language used and the gender discourse found in the tributes to female psychologists 'serve to marginalize their contributions [to their field] by virtue of feminizing and softening the narrative line of their lives' (Radtke et al., 2000: 225). It is a rather morbid example of the broader theme found in all of the above research that the accomplishments of men and women are heard and evaluated differently.

THE QUESTION IS 'WHO?'

The implications of this theme, however, have not been considered in relation to music preferences. If popular music performed by males is afforded greater credibility and prestige in the media than that performed by females, as indicated by *Rolling Stone's* 9:1 ratio, then plausibly, the music preferences of the general public may be similarly 'male heavy'.

There has been extensive research linking gender-of-listener to genre preference, but not considering gender-of-artist preference. In fact, no known study of music preferences has yet aimed to investigate whether an unequal ratio of male and female artists is favoured by *all* listeners, or whether the ratio differs according to listener's gender.

Therefore, the present study aims to put gender on 'the map of the music preferences terrain' by considering the following exploratory questions:

- Is there a gender bias in the music preferences of young adults, consistent with the prediction that their lists of favourite music artists would contain more male artists than female artists?
- Is the gender bias equally displayed across the genders?
- Do gender differences arise regarding preferences for certain factors of the music and in styles of written expression about music?

Method

PARTICIPANTS

The sample of 50 females and 50 males participated as part of a first year psychology course at a university in Sydney, Australia. Mean age was 19.7 years (SD = 2.06) – 'young adulthood' was restricted to 18–25 to minimize potential cohort effects caused by changes in music trends over time. The project's title was 'My Favourite Music Is . . .' to prevent the priming of gender.

The majority of participants were of Anglo-Australian descent (69%), while 17 percent were of varying Asian backgrounds, and 14 percent were of varying European, American and South African backgrounds. Uneven distributions occurred across sexual orientation, self-rated on a five-point scale: heterosexual (36 females and 45 males); mostly heterosexual (12 females and no males); bisexual (one female and one male); mostly homosexual (one female and one male); and homosexual (no females and three males). Fifty-two percent of females and 46 percent of males reported playing one or more musical instruments, but this factor did not produce any differences in the data and was thus omitted.

DESIGN

The questionnaire contained three lists designed to investigate various aspects of music preferences and attitudes, at various levels of social desirability in light of Rentfrow and Gosling's (2003) concern that the stating of one's music preferences is susceptible to impression management and notions of 'cool'. Differences may arise between the personal and the socially esteemed, and between the publicly proclaimed and the privately selected. In an effort to reduce the possible influence of researcher-participant dynamics, each questionnaire was distributed, completed and returned by secure email. To attempt gender neutrality, music acts were defined as 'singer/artist/band/group'.

The 'favourites' list required participants to name, in any order, their five favourite music acts rating each one on a scale of 1 to 4 (1 = good, 2 = very good, 3 = excellent, 4 = greatest ever) to indicate the strength of their liking.

The 'canon' list asked participants to name, in any order, who they believed to be popularly esteemed as the top five music acts since the 1950s. This aimed to ascertain beliefs about which acts are held in highest regard by society, constituting the canon of great music.

The 'listened to' list required participants to name the five music acts that they had actually been listening to most frequently in the previous three months. Social desirability would be detected in differences between what participants claimed as their favourite and what they actually spent their time listening to, although this may be complicated by situational factors in music listening such as music not chosen by the listener – at work, for example. Participants were also asked to offer reasons for what attracted them to each of these five acts. This yielded rich qualitative data offering insight into how females and males express their relationship to music.

Participants were then required to rate the importance of the following nine components of 'what makes good music' on a four-point scale: singer's voice, the drums/rhythm, skills of musicians, lyrics, that the song is upbeat, that you can sing along to it, message of the song, mood/atmosphere, who the artist is, and other.

Finally, participants completed the Personal Attributes Questionnaire (PAQ) (Spence and Helmreich, 1978) – a popular and well-established measure of the trait clusters instrumentality and expressivity. Spence (1984) asserts that these groupings should not be simply interpreted as measures of masculinity or femininity, but of the trait clusters instrumentality and expressivity, which are thought to be correlated with theoretical concepts of masculinity and femininity respectively. The rationale here was to see whether the gender ratio of music preferences would vary with scores on these trait clusters.

SCORING PROCEDURE AND CODING ANALYSIS

For each participant, the count of female acts that appeared on each of their lists was scored out of a total of 5, as 'favourite female', 'canon female' and 'listened to female', respectively. The 'listened to' list was also counted for how many of the acts listed are in the 'rock' genre. It was decided to treat the 11 cases of incomplete lists by converting each participant's average to a proportion out of 5. Mixed-sex bands and dance compilations were scored as 0.5, for the dual presence of female and male vocals.

The open-ended responses from the 'listened to' list were analysed for a variety of surface trends, such as the use of full sentences or point form, total word counts and the frequency of emotion-related words.

Response content was coded in accordance with McAdams's (2002) appropriation of Bakan's (1966) notions of agency and communion. McAdams's 'simple and reliable method for coding the salience of agency and communion themes in written or verbal accounts of especially significant autobiographical events' (2002: 1) codes the presence of four themes of agency (achievement/responsibility, power/impact, self-insight and status/victory) and four themes of communion (love/friendship, dialogue, care/help and unity/togetherness). Niedzwinska (2003) cites research on life memories showing that males focus more on experiences related to agency, mastery and performance, while females focus on experiences of communion and affiliation.

Statements regarding skill, career longevity, originality, genius and greatness related to 'achievement/responsibility' and 'status/victory', and were scored as AS. References to solo vocals, solo instruments and positive transformation of mood/energy related to 'power/impact', and were scored as PI. Statements regarding the intellectual message and genre and variety related to 'self-insight', and were scored as SI. These scores comprised the Agency scale.

Statements involving 'fanhood', badging and loyalty related to 'love/friendship', and were scored LE. Statements regarding the emotional content of lyrics related to 'dialogue', and were scored D. Statements such as 'X soothes me', 'I relax to Y' and 'Z is easy to chill to' related to 'care/help', and were scored CH. Statements regarding harmonizing vocals, blended instruments, participation ('singing along' and 'dancing to') and absorption (atmospheric, 'getting lost in') related to 'unity/togetherness', and were scored UT. These comprised the Communion scale.

In sum, this allowed for the exploration of relationships between *descriptive* information (gender, sexual orientation, nationality and the PAQ's Instrumentality and Expressivity scales), *music listening* information (favourite, popularly esteemed and most listened to), and *music evaluation* information (ratings of importance of nine aspects, styles of responses and reference to themes of agency or communion).

Results

STATISTICAL ASSUMPTIONS

The following a priori comparisons of means (between females and males) used independent samples. Repeated-measure MANOVAs were conducted to test whether differences varied across groups. Where required, the results of General Linear Model (GLM) analyses were confirmed by separate non-parametric tests. Post hoc comparisons of nationality had Bonferroni-adjusted alpha-levels, $.05/3 = .017$.

The reliability of the Agency/Communion coding system was established through a high inter-rater reliability between two independent raters' coding of responses from 20 participants – measured by an Intraclass Correlation Coefficient of .978 ($N = 20$, $p < .0005$) for the Agency scale, and .947 ($N = 20$, $p < .0005$) for the Communion scale.

MUSIC LISTENING STATISTICS

Table 1 displays the major findings in relation to music listening and artist preference among the 50 females and 50 males, establishing strongly biased, 'male-heavy' lists of favourite artists, popularly esteemed canon artists and, less so, 'listened to' artists. Both males and females are shown to have listed more male artists than female artists, but the table also shows that males did so significantly more than females.

Males listed significantly fewer female artists on each of their lists even though they were not listening to significantly more rock music than females. In fact, 76 percent of the males listed *no* female favourites at all, compared to only 26 percent of female participants. Of these 38 males, 88 percent also listed no female artists on their other two lists – they reported no female artists among their favourite, or in their estimation of the public's favourites, or among their 'most listened to'. Only 12 of the 50 males listed one or more favourite female artists, making any further comparisons regarding the ratings of their liking of each artist redundant, and any correlations with PAQ dimensions limited. It is only possible to note that these 12 males did not score differently from the other males on instrumentality or expressivity. While female artists comprise 28.8 percent of the top five favourites for females, they comprise only 12.6 percent of that of males.

A similar trend occurs on the 'canon' list. Males listed significantly fewer female artists (9.6%) in their estimation of who is popularly considered to be the best of all time than did females (19.6%). Similarly, males reported listening to significantly fewer female artists (18.4%) than did females (37.8%).

Comparing the 'favourites' and 'listened to' lists, both females and males reported listening to significantly more female artists than they rated as their favourite – $t(49) = 3.9$, $p < .001$, and $t(49) = 2.64$, $p < .05$, respectively.

From the males come the following ratios of male-to-female representation in the three lists: 7:1, 9:1 and 5:1, respectively. From the females come the corresponding ratios of 5:2, 4:1 and 2:1. It is interesting to reiterate that the ratios displayed in the *Rolling Stone* (2005a, 2005b) polls averaged 9:1.

No significant correlations were found between the scores on the PAQ's Instrumentality and Expressivity scales and the counts of female artists on each list,

TABLE 1 *Listening to music – female artists included across three preference lists*

List (scored out of 5)	Females, $n = 50$ (SD)	Males, $n = 50$ (SD)	Comparison of means
Favourite female artists	1.44 (1.36)	.63 (1.28)	$t(98) = 3.06$, $p < .01$
Canon female artists	.98 (.85)	.48 (.71)	$t(98) = 3.21$, $p < .01$
Listened to female artists	1.89 (1.32)	.92 (1.18)	$t(98) = 3.87$, $p < .001$

so it does not appear that this difference is related to the personality traits of instrumentality or expressivity.

MUSIC EVALUATION STATISTICS

The ratings and rankings by females and males of the importance of nine aspects of music were both remarkably similar, although females had a higher overall rating than males for almost every one on the 4-point scale (0 = neutral, 1 = important, 2 = very important and 3 = absolutely essential) (see Table 2).

Females rated significantly higher than males the importance of lyrics, musicians' skills and the singer's voice: $t(98) = 2.57, p < .05$, $t(98) = 2.29, p < .05$, and $t(98) = 2.28, p < .05$, respectively. However, these differences were not significant when the ratings were standardized to control for the higher overall ratings by females. Instead, the only significant differences were that males rated the importance of 'who the artist is' and the 'upbeat' factor higher than did females, $t(98) = 2.94, p < .01$, and $t(98) = -2.21, p < .05$, respectively – although neither aspect was rated very high by either gender. Separate principal-component analyses of the nine aspects, using varimax rotation, found components that neither cohered empirically nor mapped in any theoretical clustering. The principal components were different for the genders and were thus not comparable conceptually. Therefore the gender ratio difference does not seem to be explained by attractions to different aspects of music.

ANALYSIS OF QUALITATIVE DATA

Inspection of the open-ended responses on the 'listened to' list yielded the following observations (excluding the two females and four males who offered none): while 58.3 percent of females and 43.5 percent of males responded in full-sentence form, 41.7 percent and 56.5 percent respectively responded in point form or broken sentences. This accounted for their difference in total word counts – females used an average of 67.63 words ($SD = 47.21$), while the average for males was 53.07 words ($SD = 44.47$). Their respective standard deviations reflect great variability in how participants chose to answer (ranging between 0 and 228 words).

TABLE 2 *Ratings by females and males of nine aspects of music (scored out of 3)*

Rank	Females (n = 50)		Males (n = 50)	
	Aspects of music	Mean(SD)	Aspects of music	Mean(SD)
1	Singer's voice	2.44 (.61)	Singer's voice	2.14 (.70)
2	Drums/rhythm	2.18 (.69)	Drums/rhythm	2.00 (.77)
3	Skills of musicians	2.14 (.93)	Mood/atmosphere	2.08 (.88)
4	Mood/atmosphere	2.10 (.89)	Skills of musicians	1.70 (.99)
5	Lyrics	1.98 (.80)	Lyrics	1.58 (.76)
6	Message of song	1.24 (.96)	Message of song	1.12 (.90)
7	Can sing along	.94 (.91)	Who the artist is	.74 (.92)
8	Upbeat	.54 (.73)	Upbeat	.68 (.99)
9	Who the artist is	.50 (.74)	Can sing along	.64 (.78)
	<i>M</i> = 1.56 (.81)		<i>M</i> = 1.41 (.85)	

Responses were also counted for the frequency of emotion-related words used. Males averaged 5.65 emotion-related words ($SD = 4.86$) and females averaged 5.69 ($SD = 3.32$). These counts, and the scores on the Agency and Communion scales, had non-normal distributions and were thus adjusted. Independent-sample *t*-tests on the adjusted means found that females did not use significantly more emotion-related words than males.

The only significant relationship found between each of these dimensions and scores on the PAQ's Instrumentality and Expressivity scales was that females' scores on Expressivity were positively correlated with a higher emotion-related word count, Pearson's $r = .458$, $N = 48$, $p < .001$.

The adaptation of McAdam's coding system yielded the following raw means of references to the themes of Agency and Communion respectively for females, 7.15 ($SD = 4.18$) and 7.19 ($SD = 4.62$), and for males, 7.22 ($SD = 4.76$) and 6.48 ($SD = 4.36$). It is interesting that Communion was significantly correlated with scores on the PAQ's Expressivity scale, Pearson's $r = .308$, $N = 89$, $p < .01$, while agency did not correlate significantly with the PAQ's Instrumentality scale.

Discussion

This preliminary study, which will be followed with ongoing research, uncovered some major differences that previous genre-focused music research had left unexplored. It found that, for the young adults in this Australian university sample, more male artists are listed as favourite than female artists (in a combined ratio of more than 4:1). Although significantly less so, this gender bias was also reported in their lists of what they most frequently listen to (in a combined ratio of less than 3:1). There are two possible explanations for why both groups listed significantly fewer female artists among their favourites than they actually listen to – that both groups feel equally reluctant to officially accord 'favourite status' to the female-sung music they listen to (particularly when they are completing a questionnaire for a male researcher), or that they simply rate certain music as their favourite, but actually listen to other music in everyday life for enjoyment or by circumstance, thus subjecting it to different standards of evaluation.

This study also revealed highly significant differences between female and male listeners. The pro-male gender bias was significantly stronger in males, on all three lists – not only regarding their personal favourites and who they most frequently listen to, but also who they believe are socially endorsed as the best of all time. This highly distinguishing feature of their music preferences appears to be more telling than differences regarding genre preference, appreciation of certain music aspects, and styles of expression regarding music. In other words, the music listening practices of these males and females do not appear to be differentiated strongly around genre, or a preference, say, for drums or lyrics. Nor are males and females particularly different in the ways they speak or write about music. They are, however, significantly different in terms of the gender ratios of their music preferences.

Closer inspection also indicated the possibility of further differences within the male sample across nationality and sexual orientation. Future research will aim to explore, with greater numbers, the possibility that the pro-male gender bias is not

simply displayed by all males, but that it is perhaps more pronounced in certain socially determined 'constellations of masculinity' and less pronounced in others.

If the pro-male gender bias was produced entirely by either or both of the two explanations (deemed unconvincing in the 'Introduction' earlier) that there are more male artists in the music industry or that males simply make better music than females, one would not expect the male-heavy ratios to differ across the lists, or across gender. If those two explanations were sufficient, similar or non-different ratios of male-to-female artists should arise in what is personally favoured, popularly favoured, and personally listened to, *and* should be agreed upon by both male and female listeners. But this study found that the ratios do differ, and significantly so, in directions predicted by literature on prestige, gender development and gender-as-status.

Both males and females displayed male-heavy lists of music preferences, which concurs with a host of findings unified by the theme that, especially in masculine-typed domains, males are evaluated as having greater competence, creativity and status. It could be argued that fanhood in popular music, with its heightened notions of credibility, 'coolness' and authority, is especially prone to the effects of status beliefs, or culturally shared evaluations of one group's status in relation to others. The status beliefs surrounding gender affect 'who is listened to in social encounters, who is judged to have the best ideas or the most ability, who rises to leadership and who is directed toward or away from positions of power and influence in society' (Ridgeway and Bourg, 2004: 218). In various gender socialization theories, various mechanisms, such as education, parenting, peers and the media, operate to maintain the status beliefs that inform gender roles and stereotypes. The status belief involved here is that females are less worthy of prestige and credibility as music artists than males.

Developmental literature reports stronger gender-typed attitudes in males across the lifespan (Spence, 1993), including the already cited findings that, from age three, boys tend to not listen or respond to girls (Jacklin and Maccoby, 1978; Webb and Kenderski, 1985). It is also argued that punishments for cross-sex transgressions are harsher for males than females (Bussey and Bandura, 1999; Pickering and Repacholi, 2001). Men, more so than women, are found to have greater explicit prejudice against female authority figures (Rudman and Kilianksi, 2000), more strongly held sexist attitudes (Glick and Fiske, 2001), and less complex representations of women (Park and Judd, 1990).

Perhaps these findings help explain why the pro-male gender bias was so significantly pronounced in the males in this study – most of whom reported music preferences that are almost entirely characterized by the omission of female artists. O'Dair (1999) suggests that 'the lack of women representatives in the rock canon is not necessarily the result of a vast conspiracy to write women out of history, but something deeper, more unsettling – a lack of passion for or connection with women' (p. 249).

To some extent, the bias could be motivated by same-sex identification, which is said to be stronger in males (Bussey and Bandura, 1999). Both males and females were found to attend to same-gender characters in movies and television viewing (Luecke-Aleska et al., 1995; Maccoby et al., 1958). The males in this sample may simply find it easier and more rewarding to relate to a singer of their same gender. But this is obviously not the case for the females who are listing a majority of male artists, or for a minority of the males.

That females are generally listing more male artists than female artists reflects the females' greater adoption of the opposite sex's perspective and greater integration of opposite-sex influences. Irrespective of whether this involves an increased capacity for relating to the 'other' and whether this comes from biological or from social origins, its implication is that, for boys, there is little conflict between their own valuation of their gender and societal valuation of it. For girls, however, although they may value being a girl and gender-linked activities, they very early recognize the differential societal valuation of male and female roles (Kuhn et al., 1978; Meyer, 1980). Consequently, women have some incentive to attempt to raise their status by mastering activities and interests traditionally typed as masculine (Bussey and Bandura, 1999: 696).

If asking a male to name his favourite artists is more likely to produce a more male-dominated list than asking a female, then the very least that *Rolling Stone* magazine should do when collating the poll of the 100 'most influential and significant artists of all time' (2005b) is to ask an equal number of male and female voters – not the 52 men and two women who rated only one female artist in the top 35. The findings of gender bias in this study of 100 undergraduate students would suggest that a somewhat more gender-balanced poll, though still not 50:50, would be produced if more than two females voted. It is plausible, instead, that a male-dominated voting panel perpetuates a male-dominated poll in an esteemed magazine which, to some extent, perpetuates in its audience the tendency to buy a male-dominated collection of music, thereby perpetuating greater sales for male artists and thus reinforcing their position at the top end of these polls.

It is interesting that the pro-male gender bias is not only found in the males' personal preferences but also in their perceptions of which artists the wider society prefers. Their estimation of gender representation in society's list is not out-of-step with that of their own personal list of favourites. The same cannot be said, however, for both the females and males who *do* listen to female artists, who are, in fact, liking and listening to more female artists than they think are popularly considered to be worthy of liking. In essence, their personal preferences are at odds with their perceptions of what constitutes the canon of 'great music', while the gender ratio for the majority of males in their favourites list is equal to that in their canon list. Thus, the former place themselves in a perceived minority when it is actually the latter whose preference ratios are the least common, which also goes part of the way to explain the more balanced gender ratio in album sales (2:1).

North and Hargreaves (1999) liken music preferences to wearing a badge and projecting a social identity, and Cooper (1995) writes of how 'allegiances to particular groups and artists can take on almost tribal significance' (p. 4). The data here shows that females and males who *do* listen to female artists are wearing a badge which is perceived as less credible or prestigious.

Summary

The aim of this preliminary study was to highlight that gender preference, as well as genre preference, is a defining feature of music preferences. This data and further testing across larger samples will explore its applicability across age groups, sexual orientations and nationalities, and may also connect well with previous work on gender

bias in prestige studies, the gender socialization concept of the 'turning away from femininity' in masculinity and any exploration of what affects the reversal of girls' greater involvement in music at school age.

It is important to temper these findings with reminders of what is not being addressed by this study – the questions of whether musical ability differs across gender, or whether the found bias is also produced by structural biases in the music industry. It should also be noted that this study relied on the participants' recall of their recent listening habits and on the honesty of their self-reporting, while a first-hand inspection of their CD shelves might have yielded a more reliable count. The issue of personal investment in one's music preferences would have been better tapped by a question measuring the importance of music in the lives of the participants, and not just its components.

Further methodological concerns include the classifying of a particular song as 'female music' because it is sung by a female (and similarly for male music). This does not account for the gender of the songwriter, but does assume that the gender of the character in the song matches the gender of the singer performing it. This also fails to consider that some artists do not conform to normative gender roles.

Conclusion

While previous studies focusing on genre are informative, they rarely excavate beneath the surface to address the question not of *what* music preferences are made up of, but of *who* – not *what* they *are* listening to, but *who* they *are not* listening to. This quick and straightforward survey of 100 undergraduate students has uncovered some very interesting differences.

Such clear differences in the count of who most young males and females are listening to are interesting in light of research suggesting that, between ages 12 and 18, adolescents in developed countries listen to over 10,000 hours of music (Brown and Hendee, 1989; Christenson and Roberts, 1998). Kurdek (1987) found that adolescents identified music listening as their most frequently used coping strategy for dealing with stress. Other findings reflect the importance of music in the personal and social lives of adolescents and young adults, regarding their development of identity, attitudes and aspirations, and as a means of emotional regulation and expression (Dittmar, 1992; Thompson and Larson, 1995).

This present study showed that, importantly, young adult males and females (and various groups therein) fill their '10,000 hours of music listening' differently – a major difference being the gender of the musicians they prefer. It adds gender to the list of potential landmarks in the music preferences terrain and recommends that further studies of music preferences must take into account the gender of both the listener and the performer. To theorize only about what genres males and females typically prefer is to neglect what is established here – that music preferences differ in terms of preferred artist gender as well as preferred genre.

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