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Durham Undergraduate Research in Music & Science

Music Preferences of those on the Left and Right of the UK Political Spectrum: What Can be Deduced about Individuals' Music Libraries from their Political Attitudes?

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ABSTRACT

Research shows links between music preferences and both personality and American political attitudes, suggesting that people prefer music which aligns with their identities. Using the Short Test of Music Preference (STOMP), studies show a four-factor model of music preference. The current study investigated whether this model is found when adapting the STOMP to provide example artists of genres, and whether British political affiliation influences music preference. 103 UK citizens completed an online questionnaire consisting of the adapted STOMP and a question asking which political party they would vote for. A five-factor model of music preference was revealed: Rhythm and Blues (R&B), Upbeat, Traditional, Reflective, and Rebellious. There was only one significant difference between political groups' music preferences; the left-wing group liked R&B significantly more than the right-wing group, potentially due to underlying personality factors. Lack of other significant results could be due to the political measure not ensuring adequately contrasting views between the two groups; further research needs to improve on this issue. Practical applications for targeted online advertising are outlined.

1. INTRODUCTION

Music listening is a universal everyday activity, whether it is played in public background or proactively selected. In the latter case, the chosen music genre depends on personal preference. Reasons why individuals like and dislike different genres is of interest to music psychologists, thus research has explored how individual differences relate to music preferences.

Initial research explored whether personality and music preferences correlate. Research shows that those who are more open to experience tend to dislike pop music, but like jazz and rock (Dollinger, 1993), and a wide variety of genres (Rawlings & Ciancarelli, 1997), as measured using the NEO Personality Inventory and Litle and Zuckerman's (1986) Music Preference questionnaire. The theory behind this is that "people seek musical environments that reinforce and reflect their personalities [and] attitudes" (Rentfrow, Goldberg, & Levitin, 2011, p.1140). Those who are more open to experience seek greater diversity, hence they prefer a wider range of genres, especially nonmainstream genres (Delsing et al., 2008).

Aside from personality and music preferences, other research shows links between personality and political attitudes. A meta-analysis by Jost et al. (2003) showed that conservatives have a high personal need for order and structure in their everyday lives, but they are not open to experience. Carney et al. (2008) found similar results to Jost et al. (2003); participants completed the Big Five Inventory and rated how conservative/liberal they were on a scale from one ("extremely liberal") to five ("extremely conservative"). Results showed that liberals were more open to experience and entertainment seeking than conservatives. Jost et al. (2007) explain these findings by discussing how political conservatism is an ideological belief system that involves stability, structure and a resistance to change. This belief system results in a desire for reassurance by remaining with the familiar *status quo* and avoiding any uncertainty and potential resultant negative consequences associated with the unknown, new experiences.

With relationships found between personality and both music preferences (Dollinger, 1993; Rawlings & Ciancarelli, 1997) and political attitudes (Jost et al., 2003; Carney et al., 2008), research also investigated the relationship between music preferences and political attitudes. Research by Fox and Williams (1974) involved participants rating their enjoyment of nine music styles and their opinions on four political and social problems using Likert scales. Results showed that conservatives enjoyed pop and easy listening, whilst liberals favoured jazz, folk, blues and protest music. More contemporary research by Stringer (2017), who measured preference of 11 music genres using a 5-point Likert scale, found that the more conservative the person, the more they preferred religious music and disliked alternative music. Political attitudes were measured implicitly by participants stating their agreement with 26 politically-themed statements on a six-point Likert scale (Stringer, 2017). Participants also selected which 2016 presidential candidate they supported, providing a real-world measure of political affiliation.

Further research by Rentfrow and Gosling (2003) explored the structure, or common themes, underlying music preferences, and the links between undergraduate students' music preferences, political affiliation and personality. The researchers devised the Short Test of Music Preferences (STOMP), whereby preferences for 14 music genres are rated using a 7-point Likert scale with endpoints one ("not at all") and seven ("a great deal"). Using these responses, principal components analysis (PCA) was conducted. Where participants' responses to genres were similar, they clustered together, identifying four music preference dimensions, shown in Table 1.

Table 1. The Four Music Preference Dimensions and the Individual Genres within Each, Found by Rentfrow and Gosling (2003)

Music preference dimension	Individual genres
Reflective & Complex	Blues
	Jazz
	Classical
	Folk
Intense & Rebellious	Rock
	Alternative
	Heavy metal
Upbeat & Conventional	Country
	Religious
	Pop
	Sound track
Energetic & Rhythmic	Rap/hip-hop
	Soul/funk
	Dance/Electronica

In the study by Rentfrow and Gosling (2003), participants completed the STOMP, six personality questionnaires including the Big Five Inventory, and self-reported on a 5-point Likert scale how politically liberal and conservative they were. Results showed that those who liked Reflective & Complex and Intense & Rebellious music were more liberal and open to experience, those who liked Upbeat & Conventional music were more agreeable and conservative, and those who favoured Energetic & Rhythmic music were more extraverted and liberal. This shows links between music preferences and both personality and political affiliation. Rentfrow and Gosling (2003) explained these findings in accordance with the aforementioned theory whereby music preference may be shaped by self-views (Rentfrow, Goldberg, & Levitin, 2011). Individuals may prefer to listen to music which they feel encapsulates their personality characteristics in order to reinforce them. For example, liberals tend to be extraverts, meaning that they typically have a confident and enthusiastic nature (Cambridge Dictionary, 2019). Energetic and Rhythmic music is also associated with enthusiasm, hence liberals may seek out such music as it captures, and therefore reinforces, their personality and identity.

However, prior research into this area has concentrated on American political affiliation and music preference, with less research on British politics. As such, this is the focus of the current study. Questionnaires used in previous research (Fox & Williams, 1974; Stringer, 2017) were based upon American politics, therefore are not applicable. Furthermore, the measure used by Rentfrow and Gosling (2003), asking participants to rate how liberal and conservative they are, relies on the assumption that participants have similar relative interpretation. One participant's rating of "quite liberal" may be another's "very liberal". Consequently, a more definitive measure of political affiliation will be used. Currently, no generally accepted and validated measure of British political opinions has been found. Therefore, based upon Stringer (2017), who asked participants which American presidential candidate they supported, participants will be asked which of eight British political parties they support. Participants will be classified into left (liberal) or right (conservative) of the political spectrum based upon their party selection. The terms left/right will be used instead of liberal/conservative; although synonymous (Dictionary.com, 2019), the former two are more prevalent in British vernacular. The question will ask participants to imagine they are the deciding vote in a tied election. This wording attempts to avoid participants voting tactically by selecting the party believed to have a better victory chance, instead of their actual first choice (Singh, 2017). This will attain an accurate perception of participants' political attitudes, allowing more confidence in the results. Demographic variables will also be asked, ensuring a balanced population representation.

Regarding measuring music preference, the STOMP is suitable as it is the commonly used measure in this research area (Ferrer, Eerola, & Vuoskoski, 2012), offering a more valid measure than the *ad hoc* measures used by Fox and Williams (1974) and Stringer (2017). However, whilst the factor structure found by Rentfrow and Gosling (2003) has been replicated by Langmeyer, Guglhör-Rudan and Tarnai (2012), other studies found different preference dimensions. Using STOMP responses, Dunn, de Ruyter, and Bouwhuis (2011) found six dimensions instead of four: Rhythm and Blues (jazz, blues, and soul), Hard rock (heavy metal, alternative, and rock), Bass heavy (rap and dance), Country (country and folk), Soft rock (pop and soundtracks), and Classical (classical and religious). A different preference structure was possibly found because the STOMP simply lists music genres without providing standardised definitions. Interpreting genres is subjective; participants may rate genres with different definitions in mind. Reducing subjectivity in genre interpretation could be achieved by providing examples artists of each music style, as done by Mashkin and Volgy (1975), who studied lyric messages and political attitudes. The current study will adapt the STOMP measure by providing two examples of famous artists for each genre, thus standardising interpretation. PCA will be conducted using the STOMP responses to identify whether the same factor structure is attained as Rentfrow and Gosling (2003) with this adaption.

Therefore, the study aims to replicate the factor structure of the STOMP before exploring whether affiliation with either the left or right of the UK political spectrum influences music genre preference, by comparing how much the two groups like each music preference dimension established from the

PCA. Whilst some have conflicted the factor structure found by Rentfrow and Gosling (2003; Dunn et al., 2011), it has often been successfully replicated (Langmeyer et al., 2012), therefore the first hypothesis predicts that the factor structure will support that found by Rentfrow and Gosling. The second hypothesis predicts that, due to underlying personality factors, there will be a link between political affiliation and music preferences. Following past research (Fox & Williams, 1974; Stringer, 2017; Rentfrow & Gosling, 2003), within the larger dimensions, the left-wing group will prefer blues, jazz, classical, folk, rock, alternative, heavy metal, rap/hip-hop, soul/funk and dance/electronica music, whilst the right-wing group will prefer country, soundtrack, religious and pop music.

2. METHODS

2.1 Design. There were two independent variables: political affiliation, with two levels, left or right on the political spectrum; and music genre dimension, for which PCA was conducted to identify the number of levels. There was one dependent variable: mean liking score of each music dimension. A mixed design was used; a between-subjects design was used for political affiliation as participants were in either the left or right condition, and a within-subjects design was used for music genre as participants took part in every condition.

2.2 Participants. A volunteer sample of 206 UK citizens was recruited via social-media, however 103 results were removed according to exclusion criteria outlined in the stimuli, such as lack of political alignment. Participants were individuals aged 18-25 (M = 20.18, SD = 1.98; 69 males, 32 females, and 2 other) who were either currently studying towards (76%) or who had previously graduated (24%) with an undergraduate degree.

2.3 Materials and Procedure. An anonymous online questionnaire was used to collect data (see Appendix A), created and distributed using "onlinesurveys.ac.uk".

The first webpage involved participants reading the information sheet and stating their consent by pressing "OK".

On the second page, participants read the participant requirements and confirmed that they matched these by again selecting "OK".

The third and fourth pages of the questionnaire measured nine socio-demographic variables, including social class and employment status.

The fifth section used the Short Test of Music Preference (Rentfrow & Gosling, 2003) to measure liking of each music genre category. Participants rated how much they liked 14 music genres (blues, jazz, classical, folk, rock, alternative, heavy metal, country, religious, pop, soundtrack, rap/hip-hop, soul/funk and dance/electronica) on a Likert scale with endpoints one ("not at all") and seven ("a great deal"). Participants could also select "unfamiliar with this genre", however those who did were excluded from analyses as this response fails to provide a numerical value contributing to the overall mean liking of the genre dimension. Two examples of artists were provided per individual genre, selected by entering the genre into "iTunes.com" and choosing the first two artists in the charts (December, 2018). For classical, religious, soul/funk and heavy metal no artists appeared on "iTunes.com". Therefore, "top [genre] artists" was searched using "google.com" and the first two artists which emerged were selected.

The penultimate section of the questionnaire measured political attitudes by asking participants which of eight UK political parties they would vote for in an election. There was a ninth option ("I don't know – I have no political opinions"), however participants who selected this were excluded from analyses as they were not aligned with either political condition. In accordance with this, six participants were excluded. The parties selected were those which gained the highest number of votes in the UK 2017 general election (BBC, 2017). Furthermore, these parties represent a range along the left-right spectrum. Participants were split into left-wing or right-wing depending on their party selection. Table 2 shows party options, their position on the left-right spectrum (Wikipedia, 2019), and which condition, left or right, each belongs in. For example, those voting for "Labour Party" were in the left condition.

Table 2. Eight Main UK Political Parties and their Positions on the Left-Right Spectrum

Political party	Position on the left-right spectrum	Left or right condition
Green Party of England and Wales	Left-wing	Left
Labour Party	Centre-left	Left
Scottish Nationalist Party (SNP)	Centre-left	Left
Sinn Fein	Centre-left to left-wing	Left
Liberal Democrats	Centre to centre-left	Excluded
Conservative Party	Centre-right	Right
Democratic Unionist Party (DUP)	Centre-right to right-wing	Right
UK Independence Party (UKIP)	Right-wing to far-right	Right

Table 2 shows that out of the eight political parties, five are to the left of the political spectrum. To ensure a more equal balance between those on the right and left, participants who selected "Liberal Democrats" were excluded. This party was chosen because it is ambiguous whether "Liberal Democrats" is left-wing. It is considered "centre to centre-left", therefore would likely attract voters with nebulous opinions. As the study aims to compare those with contrasting political opinions this may confound the results, therefore the exclusion of "Liberal Democrats" aims to avoid this.

The final page of the questionnaire involved participants reading the debrief sheet to end the experiment.

3. RESULTS

Inspection of the demographic questions responses showed a relatively balanced spread of social variables such as family income, social class and parental education, giving confidence that the results represented the whole population as opposed to specific groups, such as the middle class.

The 14 music genres were subjected to PCA using SPSS-22. Assessing the data suitability for factor analysis, 103 participants' data was analysed, thus the case to variable ratio exceeded the minimum requirement of 5:1. The correlation matrix showed sufficient correlations to proceed, and appropriate tests showed no multicollinearity issues and supported the factorability of the correlation matrix. All communalities were greater than .2 therefore each variable accounted for an acceptable proportion of variance in the final factor solution.

Numerous criteria were used to determine the appropriate number of factors to retain in the factor solution, thus reducing the risk of under- or over-extraction of factors which could pervert later conclusions (Zwick & Velicer, 1986). In accordance with the Kaiser criterion, PCA revealed five components, with eigenvalues exceeding one, suggesting a five-factor model, accounting for 66.84% of total variance. However, the scree plot (Cattell, 1966) showed an elbow at the seventh factor, indicating a six-factor model, whilst a parallel analysis (Horn, 1965) suggested three factors. Solution interpretability is also important to consider (Rentfrow & Gosling, 2003), thus five components were included in the final model as the factors within the components appeared logical, and because five was the median value of the three numerical tests.

A varimax-rotated components matrix revealed the factor structure outlined in Table 3. The table shows that some factors loaded onto two components, or dimensions, for example folk loaded onto Upbeat and Traditional music. Factors were included in the dimension which they loaded most strongly to over .50, in this instance Traditional music. Alternative music loaded onto Upbeat, Reflective and Rebellious dimensions, but did not load particularly strongly onto any one component, thus it was removed from the final factor structure.

Table 3. Factor Loadings of the 14 Music Genres on Five Varimax-Rotated Principal Components

Genre	Music-preference dimension				
	Rhythm & blues	Upbeat	Traditional	Reflective	Rebellious
Jazz	**.854**				
Soul/funk	**.803**				
Blues	**.728**		.332		
Pop		**.773**			
Dance/ Electronica		**.724**			
Rap/Hip-hop		**.605**		-.457	
Country			**.799**		
Religious			**.663**		
Folk		.341	**.589**		
Soundtrack				**.703**	
Classical	.399			**.630**	
Alternative		.338		.535	.442
Rock					**.862**
Heavy metal					**.695**

Note. The factor loadings included within each music dimension are in boldface.

Dimensions were named according to previous research showing similar dimensions (Rentfrow & Gosling, 2003; Dunn et al., 2011), and by asking five laypersons to examine the factor structure and label the dimensions in such a way that they perceive suitably encapsulates the genres within (see Appendix B for layperson responses). Common themes across the laypersons' responses were identified and used to create the final titles. However, dimension labels inherently characterise some factors better than others, thus are to be used only as a guide (Rentfrow & Gosling, 2003, p.1241).

The first component consisted of jazz, soul/funk, and blues music, named Rhythm and Blues (R&B) music, based on the strong rhythmic elements of these genres. Pop, dance/electronica, and rap/hip-hop loaded onto the second component. Due to the fast-paced, positive nature of these genres, this component was named Upbeat music. Country, religious, and folk music loaded onto the third component, named Traditional music because the genres have notable cultural associations. Soundtrack and classical music loaded onto the fourth component, labelled Reflective music since these genres were considered to be calming and thought-

provoking by the laypersons who assisted in creating the component names. Rock and heavy metal music loaded onto the fifth component, labelled Rebellious music in accordance with the themes of revolution that are prominent in these genres.

Liking scores of each of the five music genre dimensions were established by calculating each participant's mean liking score from the two or three individual genres within each dimension. For example, the mean of soundtrack and classical music gave the liking score of Reflective music for each participant. Higher mean scores indicated stronger liking of genre dimensions. Overall mean scores for liking of each dimension were entered into a mixed ANOVA to compare the means of each dimension for those on the left and right of the political spectrum.

Table 4. Table of Mean Scores and Standard Deviations of Liking Each Music Genre Group for those in the Left or Right Political Group

Genre	Politics	N	*M*	*SD*
Rhythm and Blues	Right	63	4.03	1.55
	Left	40	4.64	1.35
	Total	103	4.40	1.57
Upbeat	Right	63	3.88	1.35
	Left	40	4.32	1.5
	Total	103	4.15	1.46
Traditional	Right	63	3.06	.98
	Left	40	2.76	1.20
	Total	103	2.87	1.07
Reflective	Right	63	4.10	1.73
	Left	40	3.63	1.49
	Total	103	3.88	1.63
Rebellious	Right	63	4.53	1.82
	Left	40	4.20	1.71
	Total	103	4.33	1.76

The Mauchly's test of sphericity was significant ($W(9) = .77$, $p = .002$), violating the sphericity assumption. Consequently, Greenhouse-Geisser corrected statistics were used in further interpretation.

Table 4 shows the mean liking scores of the five music dimensions. There was a significant main effect for genre ($F(3.56, 359.84) = 18.79$, $p < .001$, $\eta^2 = .157$), with a large effect size. There was a significant difference between mean liking scores of participants across the five genre dimensions. Using the Bonferroni correction to explore this further, mean liking scores of R&B, Upbeat, Reflective and Rebellious music were all significantly higher than mean liking scores of Traditional music ($p < .01$).

Looking at political group, Levene's tests across all five music dimensions were not significant ($p > .05$), assuming equal variances for all. The main effect of politics was not significant ($F(1, 101) = .004$, $p = .950$), therefore there was no significant difference in overall mean liking of genre dimensions between those affiliating with the left and right of the political spectrum.

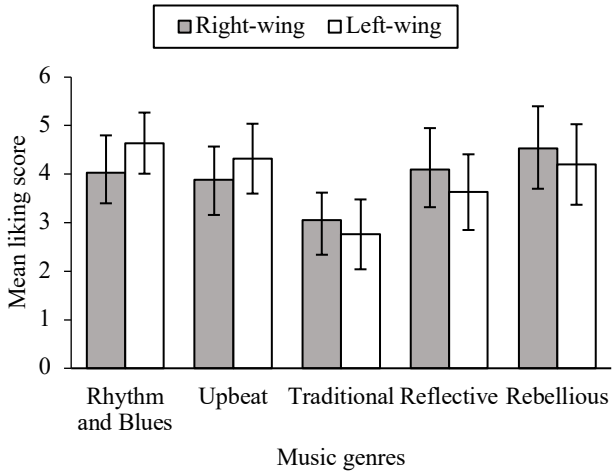

Figure 1. Mean liking scores and standard error bars of each music genre for those on the left and right of the political spectrum

There was a significant interaction effect between genre and political group, illustrated in Figure 1, with a small effect size ($F(3.56, 359.84) = 3.23$, $p = .016$, $\eta^2 = .031$). Independent t-tests were conducted to inspect this further. Levene's tests were non-significant ($p > .05$) for all five genre dimensions, therefore equal variances were assumed for all. There were no significant differences between political groups in mean liking scores of Upbeat ($t(101) = -1.51$, $p = .13$), Traditional ($t(101) = 1.22$, $p = .23$), Reflective ($t(101) = 1.48$, $p = .14$), or Rebellious music ($t(101) = .92$, $p = .36$). However, for R&B music, mean liking scores of those on the right of the political spectrum ($M = 4.03$) were significantly lower than mean liking scores of those on the left ($M = 4.64$, $t(101) = -2.10$, $p = .038$).

4. DISCUSSION

The study aimed to replicate the factor structure of the STOMP and investigate whether music preference is influenced by political affiliation. A five-factor model of music preference was found: R&B (jazz, soul/funk, and blues), Upbeat (pop, dance/electronica, and rap/hip-hop), Traditional (country, religious, and folk), Reflective (soundtrack and classical), and Rebellious (rock and heavy

metal). This conflicted the first hypothesis which predicted that the same four-factor structure found by Rentfrow and Gosling (2003) would emerge: Reflective & Complex, Intense & Rebellious, Upbeat & Conventional, and Energetic & Rhythmic.

Regarding the effect of political affiliation on music preference, supporting the hypothesis, the left-wing group liked R&B music (jazz, soul/funk and blues) significantly more than the right-wing group. However, whilst it was predicted that those on the left would prefer folk, rock, classical, alternative, heavy metal, rap/hip-hop and dance/electronica, with those on the right preferring country, soundtrack, religious and pop music, there were no significant differences between how much the two political groups liked these genres within the Upbeat, Traditional, Reflective, and Rebellious music dimensions.

Returning to the factor structure, there are both similarities and differences between the structures attained in the current study compared to prior research. Regarding similarities, the Rebellious dimension is supported by Rentfrow and Gosling (2003) and Dunn et al. (2011) who found rock and heavy metal in the same dimension. However, these studies also found alternative music within this dimension, whereas it was removed in the current study due to the fact that it did not load strongly onto any dimension. This difference could be due to the addition of example artists in the STOMP questionnaire used in the present study which may have meant that the term alternative music was interpreted differently than in previous studies. Alternative music has an ambiguous definition as it refers to any music that is "outside the musical mainstream" (Merriam-Webster, 2019), therefore it consists of a number of sub-categories. The term "alternative music" was coined in the 1960's when rock music was the dominant music genre in the Western world, therefore alternative rock is most commonly associated with alternative music (Carew, 2019). Perhaps in the research by Rentfrow and Gosling (2003) and Dunn et al. (2011) participants were rating their preference of alternative music with alternative rock music in mind, hence the related genres of rock and heavy metal loaded onto the same dimension. However, in the present study, the example artists for alternative music, Gotye and Florence and the Machine, can be considered to more closely align with the sub-category of alternative pop as opposed to alternative rock, hence this genre will have been interpreted and rated differently, resulting in the dissimilar factor structure.

Examining similarities in the factor structures of the studies further, whilst the current study found five music preference dimensions, Dunn et al. (2011) found six, and Rentfrow and Gosling (2003) found four. Genres were in similar dimensions to those found by Rentfrow and Gosling. However, the current study found soundtrack and classical music to encompass its own dimension whereas Rentfrow and Gosling found classical amongst jazz, folk and blues, and soundtrack with country, religious, and pop. Moreover, in the current study soul/funk was in the same dimension as jazz and blues, whereas Rentfrow and Gosling found it amongst dance and rap. Pop was in the same dimension as dance/electronica and rap/hip-hop, instead of amongst country, religious, and soundtrack.

Moreover, Dunn et al. (2011) found the same R&B dimension as in the current study, consisting of jazz, soul/funk and blues. Dimensions in the two studies are comparable, except Dunn et al. (2011) found classical and religious, and soundtrack and pop in separate dimensions, whereas the current study found pop with dance/electronica and rap/hip-hop, classical with soundtrack, and religious with country and folk.

The differences between factor structures in the current study and past research may have occurred due to the STOMP revision in the current study whereby two example artists were provided per genre in order to standardise interpretation of ambiguous genre titles. Further study should test whether this influences factor structure, by directly comparing dimensions attained when participants rate genre preferences when artist examples are present compared to when they are absent.

Furthermore, different factor structures of music preference may have been found across research using the STOMP due to issues with the questionnaire itself, whereby insufficient genres are included. Rentfrow, Goldberg and Levitin (2011) identified this issue and expanded the 14 genres used in the STOMP questionnaire to 26 genres. For example, whilst the STOMP includes the genre dance/electronica, Rentfrow et al. separated these into dance and electronica. These genres have distinctive intrinsic characteristics (Rentfrow et al., 2011) which participants may favour differently, therefore narrowing down genres allows greater insight into music preference. Using their questionnaire, Rentfrow et al. (2011) identified a five-factor structure of music preference ("MUSIC") across three independent studies, indicating robustness. Therefore, the current study's focus on the factor structure attained by the STOMP, which suggested that its replicability is questionable, raises the question of whether the alternative "MUSIC" questionnaire should replace the STOMP as the accepted measure of music preference. This is a factor to be considered by future researchers in the field.

Focusing on links between political affiliation and music preference, the finding that R&B music (jazz, soul/funk, and blues) was preferred by left-wing participants is supported by Rentfrow and Gosling (2003) and Fox and Williams (1974) who both found that liberals prefer blues and jazz. Furthermore, those more open to experience like jazz and blues (Rentfrow & Gosling, 2003; Dollinger, 1993) and have more liberal views (Jost et al., 2008; Carney et al., 2008). Supporting the theory that individuals seek music reaffirming their personalities and opinions (Rentfrow et al., 2011), those on the left may prefer R&B music due to being more open to experience, thus they seek this music as it is nonmainstream (Delsing et al., 2008). Further research should test this by replicating the study, but also including the Big Five Inventory, as used by Rentfrow and Gosling (2003), to assess whether greater openness to experience mediates left-wing affiliation and preference for R&B music.

Whilst a significant difference was found for R&B music, no significant differences were found between left-wing and right-wing groups for the other dimensions. This contrasts Rentfrow and Gosling (2003), who found that liberals liked Reflective & Complex, Intense & Rebellious and Energetic & Rhythmic and disliked Upbeat & Conventional music more than conservatives. Significant findings may have been found by Rentfrow and Gosling but not in the current study due to different political measures being used. Instead of measuring political affiliation on a Likert scale, the current study asked participants to vote for a UK political party. Those voting Conservative and Labour were assigned to right-wing and left-wing respectively, however there may actually be little difference between the two. 38% of the public believe the two parties' policies are "fairly different" and 30% believe they are "very or fairly similar" (YouGov, 2015). 71.8% of participants selected the Conservative or Labour party, therefore, there may have been negligible difference in participants' views in the two political conditions, hence the lack of a significant difference between the groups' music preferences. There cannot be a significant effect on the dependent variable (music preference) without effective manipulation of the independent variable (political attitudes). Further research should test participants with more extreme political affiliation. Only those identifying as right-wing to far-right and left-wing to far-left should be included in analyses, thus excluding those with centrist views. This would ensure greater contrast between political affiliation to identify whether the lack of significant results were due to methodology issues.

Taking inspiration from Colley (2008) who compared the factor structure of males' and females' music preference, another way to explore differing music preferences of political groups would involve conducting separate parallel components analyses for the left-wing and right-wing conditions. If the two political conditions produce different music preference dimensions then it will demonstrate that political affiliation does influence preference more than the results from the present study suggest.

Conducting research into this area integrates different aspects of peoples' lives, providing insight into the complex nature of music preferences. As society becomes progressively technologically-focused, music is increasingly played using streaming websites (Aguiar, 2017). Understanding the links between political opinions and music preferences provides a tool for targeted online advertisements (Stringer, 2017). Listeners of jazz, blues and soul/funk music could be shown advertisements for left-wing instead of right-wing political parties as they are more likely to be interested in the former. Likewise, these music genres could be advertised to individuals who post and search online about left-wing politics. This benefits consumers, who would only see relevant advertisements, and advertisers regarding cost-effectiveness (Iyer, Soberman, & Villas-Boas, 2005).

Overall, the study has satisfied the aims of investigating the factor structure of music preference using the STOMP questionnaire and comparing politically left- and right-wing groups' music preference. Although there were similarities regarding how genres clustered, results showed five music dimensions as opposed to four shown by Rentfrow and Gosling (2003), potentially due to the current study's addition of example artists for genres in the STOMP, and/or due to issues with the measure itself whereby too few genres are included. Using the five-factor model, those on the left of the political spectrum preferred R&B music to those on the right. It is speculated that this is because those on the left are more open to experience and likely to listen to nonmainstream music. No differences in preference were found between the political groups for the other dimensions, possibly due to insufficient contrast in views between the two groups to allow comparison of music preference. Further research needs to test participants with more extreme views to provide a more comprehensive understanding of how music, attitudes and personality interact. This is not only of interest to music psychologists for general curiosity, but also in terms of practical applications in a consumer-based society.

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APPENDICES

Appendix A: Online survey

Music preferences and Political attitudes

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Page 1: Informed Consent

Welcome, and thank you for consdering to participate in this study.

The experiment seeks to understand the link between your music preferences and political attitudes. It is being conducted for a summative project within the Durham University Music department.

What will the study involve?

The questionnaire involves answering several simple questions, including on your attitudes and opinions, taking 5-10 minutes to complete.

The procedure of the experiment is as follows:

- **Basic Info** - Simple demographic information will be requested (no personal information required)
- **Music** - you will rate to what extent you like 14 music genres
- **Political attitudes –** one question will ask your UK political party affiliation
- **End/debrief** - the experiment concludes

How will the data be used and stored?

All data will be completely anonymised, such that no person can be identified. Data will be stored securely on a password protected laptop.

What if I change my mind?

You maintain your right to withdraw your data from the experiment at any time by closing the window. However, once the survey has been completed you will not be able to withdraw your data due to the anonymous nature of the study.

Contacts:

If you have any questions regarding the experiment, please contact the experimenter:

If you wish to make a complaint, please contact the module leader: kelly.jakubowski@durham.ac.uk

Please confirm the following statements:

- I confirm that I have read and understand the information sheet (the current page) for the above project
- I have had the opportunity to consider the information and ask any questions
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason
- I agree to take part in the above project
- I have been informed about how the data will be used and stored

1. Press OK if you are happy to proceed

○ OK and proceed

Next ›

Music preferences and Political attitudes

16% complete

Page 2: Participant requirements

To take part in the study you must be:

- Aged 18-25
- A UK citizen
- Studying or have studied an undergraduate degree

If you do not fit these requirements then you are unfortunately unable to take part at this time. In which case, please kindly close the window.

2. If you do fit these requirements, please click OK to continue to the study.

- ○ OK

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Music preferences and Political attitudes

33% complete

Page 3: Demographic questions 1

3. What is your age in years?

Please select exactly 1 answer(s).

- [ ] 18
- [ ] 19
- [ ] 20
- [ ] 21
- [ ] 22
- [ ] 23
- [ ] 24
- [ ] 25

4. What is your gender?

Please select exactly 1 answer(s).

- [ ] Male
- [ ] Female
- [ ] Other

5. Are you a UK citizen?

Please select exactly 1 answer(s).

- [ ] Yes
- [ ] No

6. What is your ethnicity?

Please select exactly 1 answer(s).

- [ ] White or White British
- [ ] Asian or Asian British – Chinese
- [ ] Asian or Asian British – Indian / Pakistani / Bangladeshi
- [ ] Asian or Asian British – Other
- [ ] Black or Black British
- [ ] Mixed
- [ ] Other

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Music preferences and Political attitudes

50% complete

Page 4: Demographic questions 2

7. Do you consider yourself to have a long term health condition or disability according to the definition of the Equality Act? (The Equality Act 2010 generally defines a disabled person as someone who has a mental or physical impairment that has a substantial and long-term adverse effect on the person's ability to carry out normal day-to-day activities.)

Please select exactly 1 answer(s).

- [ ] Yes
- [ ] No
- [ ] Prefer not to say

8. Did either of your parents study at university?

Please select exactly 1 answer(s).

- [ ] Yes
- [ ] No

9. What is your employment status?

Please select exactly 1 answer(s).

- [ ] Student
- [ ] Employed full-time
- [ ] Employed part-time
- [ ] Self-employed
- [ ] Homemaker
- [ ] Unemployed

10. My family income when I was a child was:

Please select exactly 1 answer(s).

- [ ] Well below average
- [ ] Slightly below average
- [ ] Average
- [ ] Slightly above average
- [ ] Well above average
- [ ] Don't know/ prefer not to answer

11. Please choose one of the following that best describes your social class when growing up:

Please select exactly 1 answer(s).

- [ ] Lower
- [ ] Working
- [ ] Middle
- [ ] Upper middle
- [ ] Upper
- [ ] Don't know/ Prefer not to answer

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Music preferences and Political attitudes

66% complete

Page 5: Music Preferences

This part of the survey uses a table of questions, view as separate questions instead?

12. Please rate how much you like the following genres of music, where 1 = not at all and 7 = a great deal

Please don't select more than 1 answer(s) per row.

Please select at least 1 answer(s).

	1 = not at all	2	3	4 = no strong feelings	5	6	7 = a great deal	Unfamiliar with this genre
CLASSICAL eg Chopin, Beethoven	☐	☐	☐	☐	☐	☐	☐	☐
BLUES eg BB King, Muddy Waters	☐	☐	☐	☐	☐	☐	☐	☐
COUNTRY eg Dolly Parton, John Denver	☐	☐	☐	☐	☐	☐	☐	☐
DANCE/ELECTRONICA eg David Guetta, Avicii	☐	☐	☐	☐	☐	☐	☐	☐
FOLK eg Of Monsters and Men, Mumford and Sons	☐	☐	☐	☐	☐	☐	☐	☐
RAP/HIP-HOP eg Eminem, Drake	☐	☐	☐	☐	☐	☐	☐	☐
SOUL/FUNK eg Stevie Wonder, Prince	☐	☐	☐	☐	☐	☐	☐	☐
RELIGIOUS eg Hillsong, Tamela Mann	☐	☐	☐	☐	☐	☐	☐	☐
ALTERNATIVE eg Gotye, Florence and the Machine	☐	☐	☐	☐	☐	☐	☐	☐
JAZZ eg Nina Simone, Frank Sinatra	☐	☐	☐	☐	☐	☐	☐	☐
ROCK eg Nickelback, Kings of Leon	☐	☐	☐	☐	☐	☐	☐	☐
POP eg Ariana Grande, Rihanna	☐	☐	☐	☐	☐	☐	☐	☐
HEAVY METAL eg Rage Against the Machine, Aerosmith	☐	☐	☐	☐	☐	☐	☐	☐
SOUND TRACK eg The Greatest Showman, A Star Is Born	☐	☐	☐	☐	☐	☐	☐	☐

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Music preferences and Political attitudes

83% complete

Page 6: Political attitudes

13. Imagine there is a British general election held today where the party with the highest number of votes (rather than seats) wins. In this scenario, all political parties votes are tied on 5 million each and your single vote determines who wins the election. Which party would you vote for to put in power?

Please select exactly 1 answer(s).

- [ ] Conservative Party
- [ ] Labour Party
- [ ] Liberal Democrats
- [ ] Scottish Nationalist Party (SNP)
- [ ] UK Independence Party (UKIP)
- [ ] Green Party of England and Wales
- [ ] Democratic Unionist Party (DUP)
- [ ] Sinn Fein
- [ ] I don't know – I have no political opinions

< Previous

Finish ✔

Appendix B: Dimension labels reported by laypersons

Five laypersons (all students), recruited through volunteer sampling, were shown the five genre dimensions and asked the following:

"In your opinion, what would you call the overarching theme for each of these genres groups? For example, what do jazz, soul/funk, and blues all have in common, which can be summed up in one or two words?

Genre groups:

1. Jazz, Soul/Funk, Blues
2. Pop, Dance/Electronica, Rap/Hip-hop
3. Country, Religious, Folk
4. Soundtrack, Classical
5. Rock, Heavy Metal"

Table 1. Labels of Genre Dimensions Reported by Laypersons

Genre dimension	**Dimension labels reported by laypersons**				
	Layperson 1	**Layperson 2**	**Layperson 3**	**Layperson 4**	**Layperson 5**
Jazz Soul/Funk Blues	Strong beats	Groove	Rhythmic	Jazz tempo	Swing rhythms
Pop Dance/Electronica Rap/Hip-hop	Upbeat	Bounce	Entertaining	Positive	Stimulating
Country Religious Folk	Old/Traditional	Emotive	Cultural	Country acoustic	Story-telling
Soundtrack Classical	Instrumental	Calming	Educational	Classical scores	Deep and thoughtful
Rock Heavy Metal	Defiant	Energetic	Cathartic	Aggressive	Loud