

MUSICAL APTITUDE AND EMOTIONAL INTELLIGENCE

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By

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MUSICAL APTITUDE AND EMOTIONAL ABILITY

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ABSTRACT

Prior literature has demonstrated a strong link between musical ability and trait emotional intelligence (Juslin & Laukka, 2003; Juslin & Sloboda, 2001; Lima & Castro, 2011; Trimmer & Cuddy, 2008). The current study seeks to expand on this by including variability in quality of music production as a predictor variable and employing comprehensive measures of emotional intelligence. Past literature has operationally defined musical ability as either duration of musical training or self-reported musicianship (Bigand, Vieillard, Madurell, Marozeau & Dacquet, 2005; Resnicow & Salovey & Repp, 2004; Trimmer & Cuddy, 2008). Moreover, prior studies have measured emotional intelligence by assessing participants' ability to identify inflection in speech or valence of musical pieces (Lima & Castro, 2011; Juslin & Lukka, 2003; Juslin & Laukka, 2003; Juslin & Sloboda, 2001; Trimmer & Cuddy, 2008). This study seeks to expand on these findings by identifying a potential mediating effect of musical ability on the moderating effect of musical training on emotional intelligence. We propose that although musical ability enhances emotional intelligence, this relationship is a function of ability rather than the result of mere training. In order to examine how musical ability informs emotional intelligence. Participants will create original compositions that will later be appraised by knowledgeable musicians. We will utilize both text-based and an ability-based measures to assess trait emotional intelligence. Participants' musical perception abilities and personality traits also be assessed. Primarily, we expect to find that musical ability, (i.e. the quality of music produced) will mediate the effect of training

on emotional intelligence. We propose that musical ability will be a stronger predictor than duration of training on emotional intelligence.

The study of music and emotion has been fraught with controversy. Scholars from differing paradigms disagree about the ultimate purpose of musical expression, and on its potential to influence the human emotional state. For instance, numerous studies challenge whether music can induce “genuine” or “every day” emotions (Noy, 1993; Scherer, 2003). Others maintain that music serves no obvious adaptive function in humans (Huron, 2001; Pinker, 1997) and that this “auditory cheesecake” arose accidentally as a byproduct of other processes that is “merely meant to tickle...our mental faculties” (Pinker, 1997, p. 534). Although this perspective seems extreme, postulating as to the bygone purpose of music is somewhat problematic. After all, evolutionary traits change over time (Reeve & Sherman, 1993), making it difficult to find convincing evidence as to the adaptive role music served. One common explanation points to “cross-modal similarities” between music and language and indicates they evolved from common origin (Brown, 2000). Although this explanation is controversial, there is evidence that musical representation could generate emotive expression because of similarities shared with vocal patterns found in speech (Thompson, Shallenberg & Husain, 2001). Given the underlying acoustic similarities between vocal and musical expression (Budd, 1985; Davies, 2001; Gabrielsson & Juslin, 2003; Salovey & Mayer, 1990; Juslin & Laukka, 2003) it seems justifiable to say that a key function of music is to communicate emotion (Juslin & Sloboda, 2001; Behne, 1997). It is clear from recent experimental work that music has an intense effect on arousal and mood (Blood & Zattore, 2001; Thompson, Shallenberg & Husain, 2001) thereby confirming that musical

expression facilitates communication of feelings. For instance, Blood and Zattore (2001) examined the pleasure responses experienced by participants while listening to music, using an FMRI machine. The researchers concluded that simply listening to music activated award centers and regions of the brain implicated in the experience of deep emotional states. This research seeks to further examine the connection between emotions and musical ability.

INTRODUCTION

EMOTIONAL INTELLIGENC AND PERSONALITY

Trait Emotional intelligence encompasses a domain of personality that is linked with a variety of affect-related capabilities (Petrides et al., 2010). Literature on emotional intelligence (Hereafter, EI) provides for a variety of definitions. For example, Trimmer and Cuddy (2008) define EI as the ability to “perceive emotions, facilitate thoughts about emotions, understand emotions, and manage one’s own emotions” (p. 839). Overall, this construct concerns the ability to recognize and regulate one’s own emotions and to accurately detect the emotional state of others (Trimmer & Cuddy, 2008; Petrides et al., 2010). In sum, Trait Emotional intelligence primarily concerns individual differences in these emotional abilities (Petrides et al., 2010). Moreover, Trait EI has been linked to the Big Five in numerous studies (Petrides, et al., 2010; Russo, et al., 2012; Van der Linden, Tsaousis & Petrides, 2012). Two prominent personality correlates are Trait Extroversion and Trait Openness which appear to be positively inter-correlated with Trait EI (Petrides, et al., 2010; Van der Linden, Tsaousis & Petrides, 2012). It seems intuitive that more

extroverted (read as: socially driven and externally directed) individuals would be more adept at judging the emotional state of others (Petrides et al., 2012). Open individuals, moreover, tend to be more reflective and complex, which aligns with the construct of EI, both in terms of heightened awareness of and attentiveness to the state of others (Chamorro-Premuzic & Furnham, 2007). The current research will examine all of the Big Five personality traits (including not only Extroversion and Openness, but also Agreeableness, Conscientiousness, and Neuroticism). Prior research is mixed in terms of relationships with music (Petrides, et al., 2010; Chamorro-Premuzic & Furnham, 2007). For instance, Petrides et al, (2010) found that Individuals scoring high on Neuroticism, utilized music primarily for nostalgic reasons and to regulate their mood. On the other hand, the researchers found that participants scoring high on metrics measuring openness, preferred to concentrate more on what they heard, in an effort to cognitively appraise the music itself or the skillfulness of the musicianship underlying it. The current study will examine these variables in an exploratory manner.

EFFECTS OF MUSIC TRAINING

Literature on musical expertise and emotional intelligence is somewhat mixed (Lima & Castro, 2011; Trimmer & Cuddy, 2008). Typically, studies concerning musical training and EI have explored differences in the ability of musicians and non-musicians in detecting the emotional content of speech (called prosody or inflection) (Lima & Castro, 2011; Juslin & Lukka, 2003). Numerous studies evaluate how duration of musical training impacts proficiency at judging emotional undertones of a musical piece (Bigand, Vieillard, Madurell, Marozeau & Dacquet, 2005; Resnicow & Salovey & Repp, 2004), or

examine musicians and non-musicians (Trimmer & Cuddy, 2008), in search of differences in emotional processing. For instance, Trimmer and Cuddy (2008) examined how both musical training and ability informed how participants scored on the MSCEI (ability-based emotional intelligence test) and how proficient they were at evaluating the valence of musical pieces and judging the emotional content of speech. They found that musicians were better both at identifying the emotional content of musical phrases and that of spoken phrases. Furthermore, the majority of studies in this field utilize speech inflection, or prosody, as a gauge of general emotional intelligence ability (EI) (Juslin & Laukka, 2003; Juslin & Sloboda, 2001; Trimmer & Cuddy, 2008). These are interesting routes through which to understand the construal. Although thought-provoking, it could be argued that both musical skill and speech prosody both rely on acoustic mechanisms. It seems reasonable that individuals with more experience discerning changes in pitch (e.g., proficient musicians) would therefore have a finely tuned ear for subtle vocal changes. Few studies address how musical ability in novices, for example, impacts EI as a general construct. That being said, it would be useful to examine whether individual variability in music-making skills is tied to emotional abilities in other channels.

THE CURRENT STUDY

Additional research is needed to advance the study of the relationship between EI and musical ability. The literature would profit from added research linking musical performance skill with ecologically valid measures of EI. If self-reported musicianship is predictive of one facet of EI (e.g. speech prosody) it would not be unreasonable to infer that musical construction could be linked to more general EI measures. Perhaps musical ability enhances the capacity to decode emotions across communicative domains (speech

vs. visual cues) (Juslin & Laukka, 2003)? If, in fact, skilled musicians are proficient at auditory tests of EI, this ability could extend to other realms; such as reading facial expressions. It would be interesting to explore if musical ability mediates the relationship between musical training and improved emotional detection abilities.

Furthermore, if music has its roots in transmission of emotion; then individuals who are more skilled at producing it will display higher overall emotional intelligence.

We predict that:

- Scores on both visual and text-based tests of Emotional Intelligence will be strongly inter-correlated
- Coders' ratings of the quality of musical pieces will be positively inter-correlated
- Individuals who produce better quality music score will score high on measures of Emotional Intelligence
- Individuals who score high on trait Openness will create better quality musical pieces
- Trait Openness will be positively correlated with trait Emotional Intelligence
- Trait Extroversion will be positively correlated with Emotional Intelligence

METHODS

Participants

Undergraduate psychology students were recruited from SUNY New Paltz, to voluntarily participate in return for the fulfillment of a credit requirement. For Phase II, three independent raters judged the quality of music produced by participants in Phase I. All participants recruited had normal to corrected-to-normal vision and no impairments to motor functioning.

Design

This study employed a correlational design. The predictor variables were trait openness, extroversion, musical training and musical ability and the dependent variable was emotional intelligence.

Materials

A Casio CTK-533 electronic keyboard was provided to participants to facilitate the creation of melodies of constrained length, as described. A Sony ICD-PX333 Digital Flash Voice Recorder was used to record and upload the phrases.

A computerized questionnaire, distributed via Qualtrics, assessed participants on the following metrics:

Musical perception ability was assessed using the Tonedead Test developed by Dr. Jake Mandell (n.d.). This auditory discrimination task took approximately six minutes to complete and was designed to assess both pitch perception and musical memory abilities. This test provided auditory representations of 36 pairs of musical phrases. Each of the phrases lasted approximately three to seven seconds and the two phrases were separated

by a two second pause. After listening to both phrases, participants were asked to indicate whether the phrases were the same or different. Two buttons displayed on screen were used to make this selection. If the participant decided that the two phrases were identical, he selected a green button, on the left hand side of the screen that displays the word “same.” If the participant determined that the phrases were different, he was instructed to select the red button on the screen under the word “different.” After completion of the 36 trials the percentage of correct selections was logged by the experimenter for each participant under the participant’s anonymous code.

Emotional Intelligence was assessed in two ways. The first measure, developed by Nichola Schutte et al. (1998), was a 33-item self-report questionnaire designed to assess participants along three domains of the EI construct (Schutte et al. 1998). These three domains were: appraisal/expression of emotion in the self and others, regulation of emotion in self and others, and utilization of emotions in critical thinking/problem solving. Participants were asked to answer questions on a 5-point Likert scale (with responses ranging from 1 = strongly disagree, to 5 = strongly agree). Questions consisted of statements such as: “I know when to speak about my personal problems to others,”; “Other people find it easy to confide in me,”; “I am aware of the non-verbal messages I send to others,”; “I am aware of the nonverbal messages I send to others.” Some questions were reverse scored, such as: “I find it hard to understand the nonverbal messages of others” and “It is difficult for me to understand why people feel the way they do” (see **Appendix D, Questions 48-81**). The items were scored and summed to attain a composite score of general EI.

The second emotional intelligence measure was a revised version of the Reading the Mind in the Eyes test (RMET) developed by Baron-Cohen, Wheelwright, Hill, Raste, and Plumb (2001). The RMET provided visual representations of 36 pairs of eyes. The eyes in the photographs were actor portrayals of various emotions. For each pair of eyes, the participant was instructed to choose (from four distinct emotions) the word that best described what the person in the picture was feeling. For instance, the first visual representation was a pair of female eyes with the following four options: “playful,” “comforting,” “irritated,” “bored.” The participant chose the word that s/he felt best described the emotion being depicted (**See Appendix D, Questions 11-47**). The percentage of correct responses made by each participant was calculated based on the number of accurate responses given.

Lastly, a self-report questionnaire called the Ten Item Personality Inventory (TIPI) used by Gosling, Rentfrow and Swann (2003) was administered. The test provided a score on each of the “Big Five” personality measures: Openness, Conscientiousness, Extraversion, Agreeableness, and Emotional Stability. The questionnaire consisted of 10 items (with two relating to each trait). Participants were asked to rate their level of agreement with a given statement about their temperament (from 1 = disagree strongly, to 7 = agree strongly). For instance, to measure Extraversion the question asked the degree to which the participant saw themselves as “Extraverted, enthusiastic,” or “Reserved, Quiet” (reverse scored). The items were presented in a random order, so as not to indicate which trait was being assessed (**See Appendix D, Questions 82-92**).

Procedure

In Phase I, participants were brought into the laboratory, individually, to take part in the study. Once the experimenter reviewed the consent form, participants began the study.

Participants were told “In this portion of the study, you will be asked to compose an original melody of a constrained length. We will record this sound clip. The melody should be 20 seconds long. You will now be given one minute to familiarize yourself with the keyboard and come up with your original composition. Please do your best on this task” (See **Appendix B**). To maintain consistency, the keyboard was set to Tone 98 (Marimba) for all trials. Afterwards, the experimenter turned on the recording device and told participants “the 20 second recording will begin now”. Once the experimenter counts down from there, the recording will begin. Participants were asked to perform a musical piece of a constrained length (20 seconds). The experimenter did not give the participants any guidance about how to perform this task. These ‘sound clips’ served as a measure of innate musical ability. Using a digital interface, the recordings were uploaded and stored, by participant number, on a secure computer.

Participants also completed a computerized questionnaire to assess musical-perception ability, obtain demographics, and measure personality traits and overall emotional intelligence (described above in the *Materials* section). The first question embedded in the Qualtrics survey included a link to the Tonedead test developed by Jake Mandell (n.d.). Participants were given auditory instructions by the experimenter for this task. Participants were told “In this portion of the study, you will be asked to complete an online music perception test. This test takes approximately six minutes to complete and is

designed to assess pitch perception and musical memory abilities. You can adjust the volume of the playback by clicking the “**Test Volume**” button. Note that once you click the “**Take Test**” button, the phrases will immediately begin playing.

The test consists of 36 pairs of musical phrases. Each of the phrases lasts approximately three to seven seconds and there will be a two-second pause between each phrase. After listening to both phrases, your task is to indicate whether the two phrases you just heard were the same or different.

Two buttons displayed on screen can be used to make your selection. If the phrases are identical, click the green button on the left hand side of the screen marked “same.” If the phrases are different, select the red button on the screen under the word “different.” Each pair of phrases will be played only once. After completion of the 36 trials, the software displays a percentage of correct selections. Please remain on this screen until instructed to move on to the next phase. This percentage score will be logged by the experimenter under the anonymous participant code you’ve created”(See **Appendix C**). The experimenter proceeded to log the participants score on the music perception task, and provided the sheet of definitions (See **Appendix D**) to participants in order for them to complete the remainder of the survey. A sheet with definitions was provided in order to complete the first part of the survey.

In Phase II, three independent raters were asked to come in to the lab and rate the musical phrases that participants created in Phase I. Qualtrics was used to randomly determine the order in which the music files were played. After raters listened to the phrases they were asked to rate what they have heard on a set of seven distinct quality measures adapted from a study concerning quality of music conducted by Katherine Eskine (2013).

The seven categories included: Quality (rated from low quality to high quality), Appeal (from unappealing to appealing), Expressiveness (expressionless to expressive), Imaginativeness (from unimaginative to imaginative), Complexity (from simple to complex), Quality of Rhythm (from dull rhythm to interesting rhythm), and Quality of the Melody (from dull melody to interesting melody). Participants were instructed to rate each piece on all metrics using a 9-point Likert scale (**See Appendix E, Question 1**).

ANALYSIS

Multiple regression analysis was used to determine whether musical ability mediates the relationship between musical training and improved emotional intelligence. The same type of analysis will be used to determine the degree to which Openness and EI are predictive of musical skill. Similarly, a regression analyses was used to determine the strength of the correlation between the quality of the music produced and emotional intelligence. A similar calculation was performed for trait openness as a predictor of musical quality, and the correlation between Openness, Extroversion and EI. Further, the correlation between scores on the two types of emotional intelligence measures was evaluated. Inter-rater reliability was calculated between ratings assigned to each musical piece by participants in Phase II.

RESULTS

Forty adults from the New Paltz community participated in the current study. The participants ranged in age from 18-61 (Mdn = 21.5). Sixty-five percent (N = 26) were female and thirty-five percent were male (N = 14). Five participants reported that they were *currently* taking music/vocal lessons at the time of data collection. Twenty six

participants reported having formal musical training (lasting longer than six months), and 14 reported that they had no formal training.

Emotional Intelligence: Trait and Ability-based Measures

Recall that prediction 1 stated that scores on both visual and text-based tests of EI would be strongly inter-correlated. Prediction 1 was not supported. The interaction between scores on the RMET and SSEI were not significant ($r(40) = .11, ns$). In hindsight, this result echoes literature on the topic that makes a clear distinction between trait and ability-based emotional ability, which are often assessed using self-report and cognitive tests, respectively (Petrides, 2011).

Assessment of Music Quality

Three independent coders recruited from the Evolutionary Psychology Laboratory on campus were selected to rate each of the 40 musical phrases, as described above, on seven metrics to assess relative quality of the music produced. Prediction 2 posited that coders' ratings of the quality of musical pieces would be positively inter-correlated. Cronbach's alpha was utilized to assess the level of agreement between raters on their evaluations of each music track. Utilizing all three coders produced the *most* agreement (highest α 's) and least amount of variation, across all value metrics. Cronbach's α for the first metric, Quality was $\alpha = .53$, excluding five items from the analysis due to zero variance (complete between-rater agreement). For the Unappealing/Appealing metric $\alpha = .59$, excluding four items. Expressiveness had a Cronbach's $\alpha = .92$, excluding two items. Ratings for Imaginativeness $\alpha = .24$, excluding eight items that were identical between raters. Ratings for Complexity $\alpha = -.207$ excluding four items, Quality of Rhythm $\alpha = -$

2.78 excluding four cases, and Quality of the Melody $\alpha = -1.08$, excluding five cases. Overall, there was significant agreement among raters, with the exception of their assessments of the complexity of musical phrases and how dull/interesting the rhythm and melody were. Obviously the alphas attained on these metrics (complexity, dull/interesting rhythm and melody) are not acceptable. There seemed to be less consistency among raters for these last three metrics. Overall, Prediction 2 was partially supported, in that; coders seemed to be in relative agreement on most metrics for assessing music quality. Inter-rater reliability was particularly high for *quality*, *appeal*, and *expressiveness*.

Emotional Intelligence and Musical Ability

Prediction 3 posited that Individuals who produce better quality music would score higher on measures of Emotional Intelligence. In either case, in examining the correlations between scores on the RMET or SSEI with scores on music quality, this hypothesis was not supported ($r(40) = .11, ns$) and ($r(40) = .02, ns$) respectively. Interesting to note that despite the small N for males with musical training (N=8), larger effect sizes were found for the relationship between both measures of EI and Overall music quality.

	RMET	Total SSEI	Overall Music	Music Express.	Muisc Preptn.
RMET Proportion Correct	-				
Total SSEI	0.11	-			
Overall Music Score	0.11	0.02	-		
Music Expressiveness	0.17	0.09	.94**	-	
Music Perception Score	-0.14	0.25	-0.05	-0.11	-

** $p < 0.01$

Personality and Music Quality

Prediction 4 asserted that Trait Openness would correlate with higher quality musical production. Prediction 4 was not supported ($r(40) = -.05, ns$). In fact, none of the Big Five personality dimensions were predictive of overall musical quality, or any of the sub-metrics comprising the overall quality measure.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Openness	-													
2	Extraversion	0.13	-												
3	Agreeableness	-0.08	0.21	-											
4	Conscientiousness	-0.08	0.21	1.00**	-										
5	Emotional stability	0.02	0.06	0.15	0.15	-									
6	Overall Music Score	-0.05	-0.21	0.09	0.09	0.09	-								
7	Music Quality	-0.10	-0.14	0.18	0.18	0.09	.97**	-							
8	Music Appeal	-0.05	-0.18	0.12	0.12	0.03	.96**	.95**	-						
9	Music Expressiveness	-0.06	-0.15	0.15	0.15	0.05	.94**	.92**	.90**	-					
10	Misic Imaginativeness	0.00	-0.24	0.07	0.07	0.13	.94**	.88**	.85**	.86**	-				
11	Music Complexity	-0.07	-0.18	0.14	0.14	0.18	.88**	.82**	.75**	.81**	.91**	-			
12	Music Rhythm	-0.04	-0.23	-0.04	-0.04	0.03	.96**	.93**	.94**	.87**	.88**	.79**	-		
13	Music Melody	-0.01	-.291***	0.03	0.03	0.08	.96**	.93**	.93**	.86**	.86**	.76**	.96**	-	
14	Music Perception Score	.37*	.30*	0.21	0.21	0.25	-0.05	-0.03	-0.08	-0.11	0.05	0.00	-0.07	-0.11	-
Note: For all correlations N = 40															
* $p < 0.05$ (1-tailed).															
** $p < 0.01$ (1-tailed).															
*** $p < .01$, however, prediction was in opposite direction															

Personality and Emotional Intelligence

Prediction 5 stated that trait openness would be positively correlated with trait EI. Prediction 5 was partially supported. SSEI was significantly inter-correlated with Openness ($r(40) = .31, p < .05$). Prediction 6 posited that trait extroversion would also be positively inter-correlated with EI. Prediction 6 was partially supported. SSEI was

positively inter-correlated with Extraversion ($r(40) = .42, p < .01$). SSEI was also positively inter-correlated with both Agreeableness ($r(40) = .46, p < .01$), and Conscientiousness ($r(40) = .46, p < .01$). In addition, in interpreting Personality variables and their impact on Ability-based EI, both Agreeableness and Conscientiousness were positively inter-correlated with scores on the RMET ($r(40) = .34, p < .05$), ($r(40) = .34, p < .05$), respectively. In conclusion, the Big Five factors were highly loaded onto the Self-report measure of EI.

Table 3		<i>Correlations of Personality, Self-Reported Emotional Intelligence, Reading the Mind in the Eyes Test and Musical Perception Ability</i>							
		1	2	3	4	5	6	7	8
1	Openness	-							
2	Extraversion	0.13	-						
3	Agreeableness	-0.08	0.21	-					
4	Conscientiousness	-0.08	0.21	1.00**	-				
5	Emotional stability	0.02	0.06	0.15	0.15	-			
6	Total SSEI	.31*	.42**	.46**	.46**	0.13	-		
7	RMET Proportion Correct	0.09	-0.08	.34*	.34*	-0.20	0.11	-	
8	Music Perception Score	.37*	0.30	0.21	0.21	0.25	0.25	-0.14	-
Note: For all correlations N= 40									
* $p < 0.05$									
** $p < 0.01$									

ADDITIONAL FINDINGS

Given the vast literature on psychological differences across genders, several follow-up exploratory analyses were conducted to examine effects of gender on music composition and other relevant variables.

Musical Skill: The Role of Gender and Training

One interesting finding was that music produced by male participants was rated as higher quality (on each individual quality metric and overall) than that produced by females, even though males scored lower on both measures of EI. Neither of these effects was significant (see Table 4), but due to the small sample size, they remain noteworthy.

Means/ Score	Male (SD)	Female (SD)
Total SSEI	123.93 (16.67)	127.38 (7.78)
RMET Proportion Correct	0.69 (.08)	0.75 (.09)
Music Perception Score	78.76 (9.02)	72.86 (10.99)
Overall Music Score	41.34 (11.40)	34.94 (12.48)
Music Quality	6.00 (1.87)	5.18 (1.87)
Music Appeal	5.95 (1.85)	5.03 (1.83)
Music Expressiveness	5.52 (1.68)	4.87 (1.72)
Music Imaginativeness	6.12 (1.75)	5.12 (1.82)
Music Complexity	5.60 (1.66)	4.92 (1.80)
Music Rhythm	6.12 (1.75)	4.91 (2.00)
Music Melody	6.02 (1.72)	4.91 (2.05)
Note:		
N (females) = 26		
N (males) = 14		

Although males produced higher quality music than females, this effect was not significant independently ($\beta = .25, ns$). Interestingly, males did produce significantly higher quality music, when we controlled for prior musical training. ($\beta = .33, p < .05$). Thus, it appears that prior training is a suppressor variable. In males, training mediates overall music quality, and the inclusion of this variable strengthens the relationship between gender and the quality of music produced (see Table 5).

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
	β	Std. Error	Beta		
Constant	38.09	6.78		5.62	0.00
Gender	8.52	3.90	0.33	2.18	0.04
Music Training	-9.20	3.90	-0.36	-2.36	0.02

Note. Dependent variable was overall music score.

DISCUSSION

The current research attempted to examine the potential link between emotional intelligence and musical ability found in prior literature. One stark difference between the current study and others was the experimental procedure. In contrast to prior studies which utilizing self-reported musicianship as a measure of musical ability, the current study relied on the quality of participants' music production and music perception ability. In addition, as an alternative to utilizing speech prosody as a measure of EI we sought to include a global measure (the Reading the Mind in the Eyes Test) and a self-report measure.

The results of the current project suggest that EI (as measured by the RMET and self-report) is not correlated with musical ability. In speculation, this result could have been obtained for a number of reasons. Given the small sample size, perhaps there was not enough power to detect this kind of effect. In addition, it's possible that the link between emotional ability and musical skill found in other studies is simply the result of enhanced auditory ability and is not indicative of global emotional skill. In other words, perhaps musicians are more proficient at judging emotion in speech specifically because

of more nuanced pitch detection ability, and not because they possess enhanced emotional facility. The current research suggests that the emotion detection abilities seen in musicians could be limited to auditory-based tests.

The most notable finding was the impact of both gender and music training on overall music quality. Interestingly, when we controlled for music training, gender was a significant predictor of overall music quality. This was a surprising result that seems to provide support for the Evolutionary concept of music as a signal of reproductive fitness utilized primarily by males (Miller, 2000). Evolutionary researchers maintain that musical prowess is a proxy for intelligence and is primarily utilized by males to signal aptitude. This theory seems at least partially supported by the relationship found between gender, and overall music score, when controlling for music training.

LIMITATIONS

The current research would have been more comprehensive if it had included a speech prosody measure for EI in addition to the visual and self-report measures. This would have provided for improved comparison with prior literature that these metrics. In addition, acquiring a larger sample of participants would have increased statistical power and enabled better detection of correlational effects.

CONCLUSION

The question of why humans create music is still up for debate among experts. Some researchers assert that musical expression has no inherent purpose, but is simply a byproduct of other evolutionary processes (Huron, 2001; Pinker, 1997). On the other hand, certain scientists maintain that the primary goal of musical production is to

facilitate the communication of emotions (Juslin & Sloboda, 2001; Behne, 1997). That being said, the ultimate purpose of musical expression is not wholly understood.

Although, the purpose of musical expression is opaque, it's clear that music serves to influence the human emotional state in various ways. Further, prior research has effectively documented a link between music and specific emotional abilities (Juslin & Laukka, 2003; Juslin & Sloboda, 2001; Lima & Castro, 2011; Trimmer & Cuddy, 2008). Prior studies have focused specifically on enhanced emotional perception abilities found in musicians as compared to non-musicians. Numerous studies have concluded that musicians, when compared with non-musicians, display an enhanced capacity to detect the latent emotional content in speech.

Although the current study employed the RMET as a global measure of emotional intelligence, future research could profit by replicating prior studies that found a correlational link between the level of music proficiency and ability to detect inflection in speech sounds (prosody) (Lima & Castro, 2011; Juslin & Laukka, 2003). In addition, the study of musical ability and emotional proficiency could be more strongly extended by utilizing a comprehensive measure of Emotional Intelligence in conjunction with a prosody measure, thereby either (a) confirming that these enhanced abilities are in fact limited to audition, or (b) demonstrating that the RMET lacks construct validity in this situation. In attempting to detect subtle differences in emotional ability that are, in theory, strengthened by musical proficiency, these effects are indeed small. In addition to testing musicians and non-musicians, we believe that having participants actually produce music of a quantifiable quality is a nice addition to prior literature.

Lastly, although the predictions in the current study were not well supported, we believe aspects of the methodology employed were inventive and an improvement upon measures typically used to evaluating musical proficiency. Incorporating a music production element significantly improves the construct validity of the current study. Further, using independent raters to evaluate the original musical compositions produced by participants instead of a self-report measure for musical ability strengthens this research immensely. Future research in this area could benefit from retaining the methodological advances of the current study, and attempting to further isolate the mechanism underlying the emotional ability component.

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APPENDIX A

STATE UNIVERSITY OF NEW YORK AT NEW PALTZ INFORMED CONSENT FORM

Title: *Musical Ability and Emotional Intelligence Study*

Principal Investigator: *Morgan E. Gleason*

Department: *Psychology*

Contact Name and Phone Number for questions/problems: *Morgan E. Gleason, mgleason@hawkmil.newpaltz.edu ; (845) 257-2371*

This is a PSYCHOLOGICAL research study. The study will include only participants who choose to take part in the study. Please take your time to make your decision.

WHY IS THIS STUDY BEING DONE?

The purpose of this study is to further our understanding of human behavior.

HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?

We plan to run a maximum of 100 participants.

WHAT IS INVOLVED IN THE STUDY?

In this study, you will be asked to produce a musical phrase on the keyboard provided. You will then take a short survey.

HOW LONG WILL I BE IN THE STUDY?

The entire process should be completed in forty minutes, or perhaps in an hour.

WHAT ARE THE RISKS OF THE STUDY?

The only reasonable risks in the study are that you may become uncomfortable or unduly stressed about being recorded and/or about answering questions about yourself.

For more information about risks, please ask the researcher present or contact:

Morgan Gleason at mgleason@hawkmil.newpaltz.edu

ARE THERE BENEFITS TO YOU PERSONALLY IN TAKING PART IN THE STUDY?

If you agree to take part in this research, you may learn something beneficial and useful about yourself. You'll learn about your creative process and your emotional abilities.

IS THIS STUDY OF POTENTIAL BENEFIT TO SOCIETY AS A WHOLE AND TO OTHERS?

Yes, one ultimate goal of this study is to understand the connection between music, art and emotion. Having more self-knowledge and awareness is of great potential benefit not only to each one of us, but also to society as a whole.

WHAT OTHER OPTIONS ARE THERE? Instead of being in this research study, you have these options:

To immediately stop your participation at any time with no consequences to you.

WHAT ABOUT CONFIDENTIALITY? *Efforts will be made to keep your personal information confidential.*

Confidentiality will be kept by creating a unique experimental ID for your data that will not be associated with your personal identifying information.

WHAT ARE THE COSTS?

The study will take approximately forty minutes to an hour of your time.

If you are a member of the psychology research pool at SUNY New Paltz, you will receive credit for taking part in this study.

WHAT ARE MY RIGHTS AS A PARTICIPANT?

Taking part in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may choose not to take part, may leave the study at any time, or not answer research questions which you consider inappropriate. Leaving the study will not result in any penalty or loss of benefits to which you are entitled.

WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

Morgan E. Gleason at mgleason@hawkmail.newpaltz.edu , (845) 257-2371

For questions about your rights as a research participant, contact the State University of New York at New Paltz Human Research Ethics Board (HREB)(which is a group of people who review the research to protect your rights) at 845-257-3282.

The Human Research Ethics Board (HREB) of the State University of New York at New Paltz has determined that this research meets the criteria for human subjects according to Federal guidelines. You will get a copy of this form.

CONSENT: I have read or have had read to me the preceding information describing the study. All of my questions have been answered to my satisfaction and this form is being signed voluntarily by me indicating my desire to participate in this study. I am not waiving any of my legal rights by signing this form. I understand I will receive a copy of this consent form.

Printed Name of Participant

Signature of Participant

Date

Printed Name of Person Obtaining Consent
Date

Signature of Participant Obtaining

Consent

APPENDIX B

Experimenter Script

Experimenter:

“In this portion of the study, you will be asked to compose an original melody of a constrained length. We will record this sound clip. The melody should be 20 seconds long. You will now be given one minute to familiarize yourself with the keyboard and come up with your original composition. Please do your best on this task.”

(Experimenter leaves briefly)

Experimenter:

“OK, I will now count to three, and then turn on the recorder. Once I do so, your 20 second time period will begin. “This is Participant code xxxx”(this aids in documenting participant’s code). “3, 2, 1(Turns on recorder) Begin.”

(Experimenter will watch the timer and stop the recording once the time limit has been reached.)

APPENDIX C

Experimenter Script

Experimenter:

(E opens Tonedead Test website: <http://jakemandell.com/tonedeaf/>)

Instructions:

“In this portion of the study, you will be asked to complete an online music perception test. This test takes approximately six minutes to complete and is designed to assess pitch perception and musical memory abilities. You can adjust the volume of the playback by clicking the “**Test Volume**” button. Note that once you click the “**Take Test**” button, the phrases will immediately begin playing.

The test consists of 36 pairs of musical phrases. Each of the phrases lasts approximately three to seven seconds and there will be a two second pause between each phrase. After listening to both phrases, your task is to indicate whether the two phrases you just heard were the same or different.

Two buttons displayed on screen can be used to make your selection. If the phrases are identical, click the green button on the left hand side of the screen marked “same”. If the phrases are different, select the red button on the screen under the word “different”. Each pair of phrases will be played only once. After completion of the 36 trials, the software will ask some standard demographic questions. Please remain on the demographic screen until instructed to move on to the next phase. The next screen will display a percentage of

correct selections that needs to be logged by the experimenter under the anonymous participant code you've created.”

APPENDIX D

Definitions

Aghast - shocked and upset: struck with terror, amazement, or horror: shocked

Arrogant - having or showing the insulting attitude of people who believe that they are better, smarter, or more important than other people: having or showing arrogance

Contemplative - involving, allowing, or causing deep thought: devoted to religious thought and prayer

Contented - happy and satisfied

Despondent - very sad and without hope

Dispirited - deprived of morale or enthusiasm

Imploring - to call upon in request

Incredulous - not able or willing to believe something : feeling or showing a lack of belief

Pensive - *quietly sad or thoughtful*

Tentative - not done with confidence: uncertain and hesitant

* These definitions were provided by the Merriam-Webster online dictionary:

<http://www.merriam-webster.com/dictionary/word> 1/9/2014

APPENDIX E

Q1 Enter your participant code

Q2 In this portion of the study you will be asked to complete an online music perception test. This test takes approximately six minutes to complete and is designed to assess pitch perception and musical memory abilities. Please notify the experimenter that you have reached this section and await further instructions. <http://jakemandell.com/tonedeaf/>

Q3 What is your age?

- 18 (1)
- 19 (2)
- 20 (3)
- 21 (4)
- 22 (5)
- 23 (6)
- 24 (7)
- 25 (8)
- 26 (9)
- 27 (10)
- 28 (11)
- 29 (12)
- 30 (13)
- 31 (14)
- 32 (15)
- 33 (16)
- 34 (17)
- 35 (18)
- 36 (19)
- 37 (20)
- 38 (21)
- 39 (22)
- 40 (23)
- 41 (24)
- 42 (25)
- 43 (26)
- 44 (27)
- 45 (28)
- 46 (29)
- 47 (30)

- 48 (31)
- 49 (32)
- 50 (33)
- 51 (34)
- 52 (35)
- 53 (36)
- 54 (37)
- 55 (38)
- 56 (39)
- 57 (40)
- 58 (41)
- 59 (42)
- 60 (43)
- 61 (44)
- 62 (45)
- 63 (46)
- 64 (47)
- 65 (48)

Q4 What is your gender?

Q5 Do you have normal or corrected-to-normal vision?

- Yes (1)
- No (2)

Q6 Do you have any difficulty with motor control (e.g. the production of hand movement) ?

- Yes (1)
- No (2)

Q7 Do you currently take instructional music/voice lessons of any kind?

- Yes (1)
- No (2)

Q8 Have you ever taken music lessons of any kind that lasted for more than 6 months? (e.g. instrument/voice)

- Yes (1)
- No (2)

If No Is Selected, Then Skip To How would you describe your family's ...

Q9 If you have taken music lessons, how would you rate your ability to play/sing?

- Poor (1)
- Fair (2)
- Good (3)
- Very Good (4)
- Excellent (5)

Q10 If you play an instrument or sing, how often do you practice?

- Never (1)
- Less than Once a Month (2)
- Once a Month (3)
- 2-3 Times a Month (4)
- Once a Week (5)
- 2-3 Times a Week (6)
- Daily (7)

Q11 Instructions for the following section: For each photo, choose the word that best describes what you think the person depicted is thinking or feeling. **(You will be provided with a page of definitions for this section)****each pair of eyes will be displayed on a separate page in Qualtrics



Q12

- Playful (1)
- Comforting (2)
- Irritated (3)
- Bored (4)



Q13

- Terrified (1)
- Upset (2)
- Arrogant (3)
- Annoyed (4)



Q14

- Joking (1)
- Flustered (2)
- Desire (3)
- Convinced (4)



Q15

- Joking (1)
- Insisting (2)
- Amused (3)
- Relaxed (4)



Q16

- Irritated (1)
- Sarcastic (2)
- Worried (3)
- Friendly (4)



Q17

- Aghast (1)
- Fantasizing (2)
- Impatient (3)
- Alarmed (4)



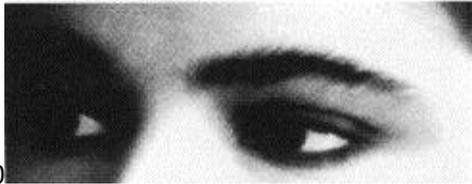
Q18

- Apologetic (1)
- Friendly (2)
- Uneasy (3)
- Dispirited (4)



Q19

- Despondent (1)
- Relieved (2)
- Shy (3)
- Excited (4)



Q20

- Annoyed (1)
- Hostile (2)
- Horrified (3)
- Preoccupied (4)



Q21

- Cautious (1)
- Insisting (2)
- Bored (3)
- Aghast (4)



Q22

- Terrified (1)
- Amused (2)
- Regretful (3)
- Flirtatious (4)



Q23

- Indifferent (1)
- Embarrassed (2)
- Skeptical (3)
- Dispirited (4)



Q24

- Decisive (1)
- Anticipating (2)
- Threatening (3)
- Shy (4)



Q25

- Irritated (1)
- Disappointed (2)
- Depressed (3)
- Accusing (4)



Q26

- Contemplative (1)
- Flustered (2)
- Encouraging (3)
- Amused (4)



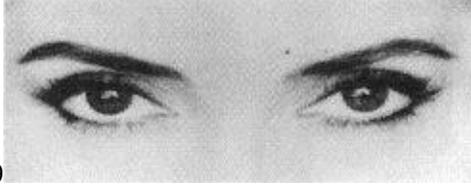
Q27

- Irritated (1)
- Thoughtful (2)
- Encouraging (3)
- Sympathetic (4)



Q28

- Doubtful (1)
- Affectionate (2)
- Playful (3)
- Aghast (4)



Q29

- Decisive (1)
- Amused (2)
- Aghast (3)
- Bored (4)



Q30

- Arrogant (1)
- Grateful (2)
- Sarcastic (3)
- Tentative (4)



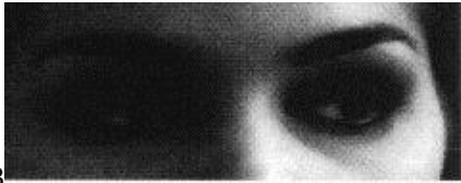
Q31

- Dominant (1)
- Friendly (2)
- Guilty (3)
- Horrified (4)



Q32

- Embarrassed (1)
- Fantasizing (2)
- Confused (3)
- Panicked (4)



Q33

- Preoccupied (1)
- Grateful (2)
- Insisting (3)
- Imploring (4)



Q34

- Contented (1)
- Apologetic (2)
- Defiant (3)
- Curious (4)



Q35

- Pensive (1)
- Irritated (2)
- Excited (3)
- Hostile (4)



Q36

- Panicked (1)
- Incredulous (2)
- Despondent (3)
- Interested (4)



Q37

- Alarmed (1)
- Shy (2)
- Hostile (3)
- Interested (4)



Q38

- Joking (1)
- Cautious (2)
- Arrogant (3)
- Reassuring (4)



Q39

- Interested (1)
- Joking (2)
- Affectionate (3)
- Contented (4)



Q40

- Impatient (1)
- Aghast (2)
- Irritated (3)
- Reflective (4)



Q41

- Grateful (1)
- Flirtatious (2)
- Hostile (3)
- Disappointed (4)



Q42

- Ashamed (1)
- Confident (2)
- Joking (3)
- Dispirited (4)



Q43

- Serious (1)
- Ashamed (2)
- Bewildered (3)
- Alarmed (4)



Q44

- Embarrassed (1)
- Guilty (2)
- Fantasizing (3)
- Concerned (4)



Q45

- Aghast (1)
- Baffled (2)
- Distrustful (3)
- Terrified (4)



Q46

- Puzzled (1)
- Nervous (2)
- Insisting (3)
- Contemplative (4)



Q47

- Ashamed (1)
- Nervous (2)
- Suspicious (3)
- Indecisive (4)

Q48 The following questions deal with interpersonal interactions. Please answer them as honestly as possible.

Q49 I know when to speak about my personal problems to others.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q50 When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q51 I expect that I will do well on most things I try.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q52 Other people find it easy to confide in me.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q53 I find it hard to understand the nonverbal messages of other people.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q54 Some of the major events of my life have led me to re-evaluate what is important and not important.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q55 When my mood changes, I see new possibilities.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q56 Emotions are some of the things that make life worth living.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q57 I am aware of my emotions as I experience them.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q58 I expect good things to happen.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q59 I like to share my emotions with others.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q60 When I experience a positive emotion, I know how to make it last.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q61 I arrange events others enjoy.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q62 I seek out activities that make me happy.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q63 I am aware of the nonverbal messages I send to others.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q64 I present myself in a way that makes a good impression on others

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q65 When I am in a positive mood, solving problems is easy for me.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q66 By looking at their facial expressions, I recognize the emotions people are experiencing.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q67 I know why my emotions change.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q68 When I am in a positive mood, I am able to come up with new ideas.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q69 I have control over my emotions.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q70 I easily recognize my emotions as I experience them.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q71 I motivate myself by imagining a good outcome to tasks I take on.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q72 I compliment others when they have done something well.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q73 I am aware of the nonverbal messages other people send.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q74 When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q75 When I experience a change in emotions, I tend to come up with new ideas.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q76 When I am faced with a challenge, I give up because I believe I will fail.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q77 I know what other people are feeling just by looking at them.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q78 I help other people feel better when they are down.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q79 I use good moods to help myself keep trying in the face of obstacles.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q80 I can tell how people are feeling by listening to the tone of their voice.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q81 It is difficult for me to understand why people feel the way they do.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q82 Here are a number of personality traits that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Q83 1. Extraverted, enthusiastic.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q84 2. Critical, quarrelsome.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q85 3. Dependable, self-disciplined.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q86 4. Anxious, easily upset.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q87 5. Open to new experiences, complex.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q88 6. Reserved, quiet.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q89 7. Sympathetic, warm.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q90 8. Disorganized, careless.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q91 9. Calm, emotionally stable.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q92 10. Conventional, uncreative.

- Not at all like me (1)
- Not like me (2)
- Not much like me (3)
- Neutral (4)
- Somewhat like me (5)
- Like me (6)
- Just like me (7)

Q93 This is the end of the survey section. Thank you for your participation!

APPENDIX F

Music Rating Survey

The screenshot displays the Qualtrics Survey Software interface for editing a survey. The browser address bar shows the URL: https://co1.qualtrics.com/ControlPanel/?ClientAction=EditSurvey&Section=SV_71yEs8Ptyuwxa7j8&SubSection=8&SubSubSection=8&PageActionOptions=8. The navigation menu includes: Look & Feel, Survey Options, Survey Flow, Print Survey, Spell Check, Preview Survey, and Launch Survey. The survey title is "Music Rating Survey" and it was last saved on 19 Feb 2014 at 5:05pm. A search bar for survey contents is also present.

The main content area shows a "Default Question Block" with a question titled "Please rate the track you've just heard:". The question is a Likert scale with 10 response points. The anchors are:

- Low Quality
- Unappealing
- Expressionless
- Unimaginative
- Simple
- Dull Rhythm
- Dull Melody
- High Quality
- Appealing
- Expressive
- Imaginative
- Complex
- Interesting Rhythm
- Interesting Melody

Each anchor has a corresponding radio button for selection. Below the question, there are buttons for "Copy Items From..." and "+ Create a New Item".

The right-hand sidebar contains various configuration options for the question block, including "Change", "Statement", "Scale P", "Labels", "Matrix T", "Options", "Validatic", and "Validatic".

The Windows taskbar at the bottom shows several open applications: Start, PaperCut NG, Qualtrics Surve..., Balance for n002..., Thesis, MusicalAbilityand..., Abstract for thes..., and Initial_Survey [C...]. The system clock indicates 1:07 PM on 2/21/2014.