Supplemental Analyses

Unbiased Hit Rates

Age group (6-7 year olds, 8-9 year olds, 10-11 year olds, and adults) was the between-groups variable, while the emotion of the stimulus (happy, sad, angry, and scared) and type of stimulus (music, inflected speech, and affect bursts) were within-groups variables. The DV was participant's recognition of the emotion in the stimulus using unbiased hit rates.

A main effect of age group was found, $F(3, 107) = 27.32$, $p < .001$, $\eta^2_p = .43$. Bonferroni-corrected post hoc tests revealed that adults ($M = .84$) were more accurate than all children, $ps \leq .015$. The two older groups of children (10-11 year olds, $M = .73$, 8-9 year olds, $M = .63$) scored similarly, $p = .083$, and 6-7 year olds ($M = .58$) scored similarly to 8-9 year olds, $p = 1.00$, however were less accurate than 10-11 year olds, $p = .002$.

A main effect of the type of stimulus was found, $F(1.99, 213.7) = 11.30$, $p < .001$, $\eta^2_p = .96$. As predicted, there was no significant difference between scores on music ($M = .71$) and speech ($M = .71$), $p = 1.0$. In contrast, scores on affect bursts ($M = .74$) were significantly higher than both music and speech, $ps < .001$.

The age by type interaction, $F(5.99, 213.7) = 3.01$, $p = .04$, $\eta^2_p = .06$, indicated that for music stimuli, 6-7 year olds ($M = .51$) and 8-9 year olds ($M = .56$), 8-9 year olds and 10-11 year olds, and 10-11 year olds ($M = .74$) and adults ($M = .84$) scored similarly, $ps \geq .22$. Both 10-11 year olds and adults scored higher than the youngest group, $ps \leq .002$, and adults scored higher than 8-9 year olds, $p \leq .008$. For the inflected speech stimuli, 6-7 year olds ($M = .53$) scored similarly to 8-9 year olds ($M = .60$), $p = 1.00$. 10-11 year olds ($M = .69$) scored similarly to all groups, $ps \geq .09$. Adults ($M = .84$) scored higher on speech than the 2 younger groups of children, $ps \leq .001$. Finally, for the affect bursts, all age groups scored similarly, $ps \geq .108$, with

the exception of adults, who scored higher than the 6-7 year olds (p = .03). Table 4 summarises these results.

The age by type interaction also revealed that for 6-7 year olds, scores on music (M = .51) and speech (M = .53) were similar, p = 1.0, while scores on affect bursts (M = .69) were significantly higher than scores on music, p = .015. Scores on speech were similar to music nad affect bursts (ps > .08) For children aged 8-9 years, 10-11 years, and adults, there was no difference between scores on the 3 types of stimuli, ps ≥ .108.

A main effect of the emotion of the stimulus was also found, F(2.69, 288.71) = 11.75, p < .001, η^2_p = .10. Participants' scores for happy and sad stimuli (Ms = .78,) were similar (p = 1.00), and were higher than the other emotions, ps < .001. Scores on anger (M = .69) and fear (M = .69) were also similar, p = 1.00.

Finally, a significant stimulus type by emotion interaction was found, F(4.87, 521.15) = 8.82, p < .001, η^2_p = .076. For the music stimuli, participants scored similarly for happy (M = .76), sad, (M = .83), and scared music (M = .68), ps < .92, but lower for angry music (M = .56), ps ≤ .001. For the inflected speech stimuli, participants scored similarly for happy speech (M = .77), sad speech (M = .72), and angry speech (M = .75), ps = 1.00. Participants scored significantly lower on scared speech (M = .62) than all emotions save angry speech, p ≤ .04. Finally, for the affect burst stimuli, participants scored similarly on all emotions$p$s = 1.00.

The emotion by age group interaction was non-significant, F(8.09, 288.71) = 1.33, p = .227, η^2_p = .036, nor was the three-way interaction of type of stimulus, emotion, and age-group, F(14.6, 521.16) = 1.63, p = .07, η^2_p = .04.