

Why does playing music/listening to music affect our emotions?

No question about it – music communicates emotional information – happiness, joy, excitement, sorrow, fear, ... to us humans. Why/how?

Some fraction of the higher-order processing centers of auditory information are wired into various the emotional centers of our brain – directly affecting our emotional state – happy/sad/fear/exhuberance/anticipation.... Why???

The human voice {along with visual information – *e.g.* body language} convey emotional information in speech/music communication from one person to another – enabling other humans to better understand the state of that person at that time.

Interestingly enough – the intervals and harmonic content of sad and/or stressed/subdued speech contains an excess of intervals/harmonics which are minor and/or more dissonant-sounding than happy/exhuberant and/or excited speech, which contains an excess of intervals/harmonics which are major and/or more consonant-sounding:

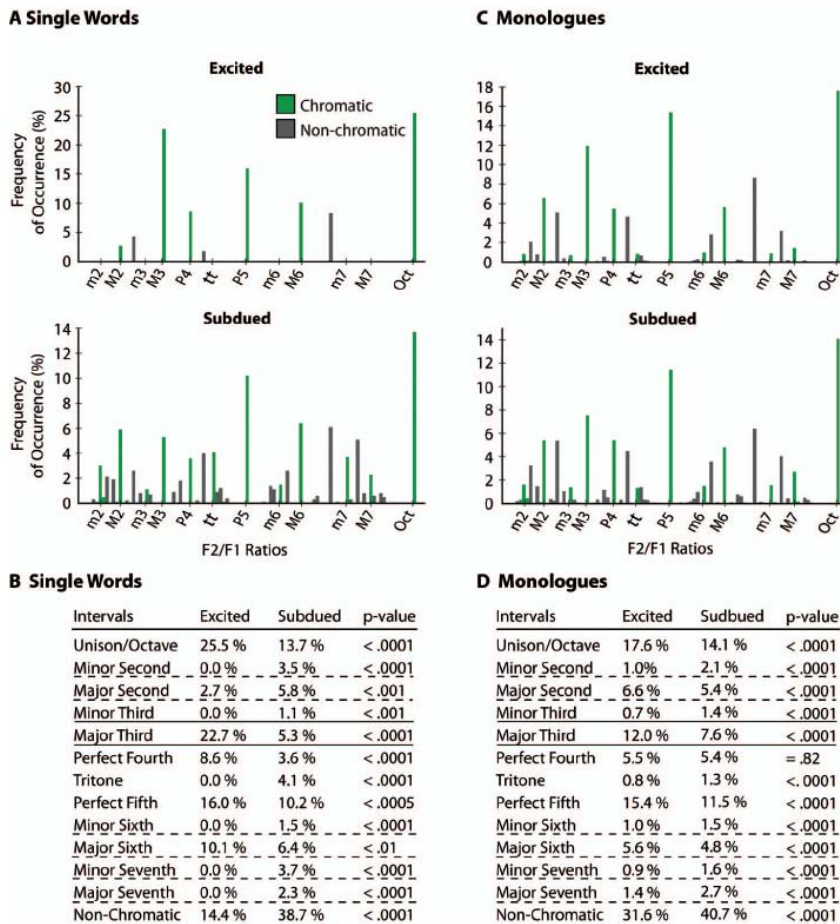


FIG. 5. Comparison of the ratios of the first two formants in excited and subdued speech derived from analyses of the single word and monologue databases. Ratios have been collapsed into a single octave such that they range from 1 to 2. (A) The distribution of formant ratios in excited and subdued speech from the single word database; green bars indicate ratios within 1% of chromatic interval ratios (see Table 1A); gray bars indicate ratios that did not meet this criterion. (B) The percentage of formant ratios corresponding to each chromatic interval in (A) for excited and subdued speech. (C) The same as (A), but for the monolog data. (D) The same as (B), but for the monolog data in (C). *p*-values for each interval were calculated using the chi-squared test for independence, with expected values equal to the mean number of occurrences of an interval ratio across excited and subdued speech. Intervals empirically determined to distinguish major and minor music are underlined (dashed-lines indicate intervals with less marked contributions).