

Title:

The Perceptual Attraction of Predominant Chords

Proposal:

It is often stated that some predominant chords are “stronger”, more effective, or more attracted to the following dominant than others. This paper discusses an experiment that asked listeners to rate the perceptual attraction of predominant chords as they resolve to the dominant chord, and compares these perceptual strengths of attraction with theoretical measurements such as Lerdahl’s (2001) harmonic attraction algorithm.

Seminal music theory textbooks address the issue of which predominant chords are more attracted to V, but clarification is needed. For example, in *The Complete Musician*, Steven Laitz (2001) implies that the ii6 chord is a stronger predominant than the IV chord because it shares \wedge^2 in common with V and thus anticipates the dominant arrival (p.227). Therefore, a predominant complex consists of IV-ii6-V because the ii6 is a stronger predominant chord than IV. However, Laitz also states that the German augmented sixth chord “is usually the last event before the dominant,” even though it does not share any notes in common with the dominant (Laitz, 2001, p.507). Kostka/Payne (2009) does not supply an explanation as to why the ii chord is a stronger predominant than the IV chord (p.111) when describing the IV-ii predominant complex.

This paper attempts to alleviate some of these pedagogical problems by studying the perceptual attraction of predominant chords through experimentation. Twenty-one freshmen music majors at Ithaca College served as subjects. In each of the 40 randomized trials, listeners heard three sonorities. All chord progressions were in C major/minor and heard in a synthesized piano timbre. Sonority 1 was tonic, sonority 2 was some predominant chord, and sonority 3 was V. Each sonority lasted 1.5 seconds. After each trial, listeners were asked to rate how well sonority 2 was attracted to the final sonority on a seven-point Likert scale.

Results support typical theoretical assumptions. For example, predominant chords containing chordal sevenths were more attracted to V than chords without sevenths ($t(20)=3.05$, $p=.006$), chords from the minor mode were more attracted to V than those from the major mode ($t(20)=3.1$, $p=.005$), and chords in inversion were more attracted to V than chords in root position ($t(20)=2.6$, $p=.019$).

Listener responses were compared with theoretical measurements of attraction: One such measurement of attraction counts up the number of semitones required to resolve a predominant chord to V. For example, the French augmented sixth chord resolves to V by 3 semitones: D stays on D, C goes to B, F# resolves to G, and Ab resolves to G. It was found that there was no significant correlation between listener responses and predominant chords that move to V by the fewest number of semitones ($r=-.198$, $p=.233$). In addition, neither was there a significant correlation between listener responses and Cohn’s (1998) DVLS (see also Santa, 2003) or Monahan’s (2008) KDIs. Interestingly, a moderate correlation was found between listener responses and Lerdahl’s attraction algorithm ($r=.454$, $p=.004$).

By better understanding which predominants are more strongly attracted to the dominant, we can improve pedagogy of common-practice harmony, dictation, and composition.

List of References:

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