

Enharmonic Reinterpretation of Diminished seventh Chords

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As you know from aural skills, each note in a fully-diminished seventh chord is three half-steps from the next; it is because of this symmetry that you cannot judge inversion by ear.

Of course, this does not mean that you can cycle through the chord by moving by minor thirds. Suppose we are dealing with the diminished seventh chord on B shown at the start of Example 1. Cycling through factors, we move up by minor thirds from B to D to F to Ab, but then we must go up by augmented 2nd (also three half-steps, but not the same as a minor third) to get back to B-natural.

This means that we can respell the chord that sounds like this in any one of four different ways. Any one of the factors of the chord could be spelled as the root; this only requires some enharmonic respelling. Example 1 shows one such respelling; B-natural, the root of vii°_7 in C minor, is respelled as C-flat. Now the root is D; if we move to E-flat major, this chord will be borrowed vii°_7 , the same Roman numeral now in a different key.

A diminished seventh chord can function as a pivot chord; at least one of the notes will have different (enharmonically equivalent) spellings relative to the two keys. (Usually composers pick just one spelling and leave it to those reading the score to understand what's going on.)

Moving between Dominants via Enharmonic Diminished Seventh Chords

Nineteenth-century composers liked to slide between chords by moving voices only by half steps. One way to do this is to go between dominant seventh chords and diminished seventh chords. Any dominant seventh chord can be transformed into a diminished seventh chord by raising the root by a half step. This is shown in Example 2. (For simplicity, Examples 2 and 3 deal more with pitch class than with pitch; they are abstractions away from real musical situations, and the figured bass numbers indicate the presence of sevenths, not specific inversions.)

Similarly, any diminished seventh chord can be transformed into any one of four dominant seventh chords, by spelling it with the desired leading tone as the root, and then lowering the seventh by a half step.

(The close relationship between vii°_7 and V_7 should be familiar from first year; recall especially that $\text{vii}^{\circ 4}_2$ generally functions as V_7 with a non-harmonic tone in the bass.)

In Example 3, our diminished seventh chord is used to cycle through its four closely-related dominant seventh chords, with all of the enharmonic transformations made explicit.

Another way of thinking of this is that there is a special relationship between the keys of C major/minor, Eb major/minor, F#/Gb major/minor, and A major/minor; all of their dominant chords are related through a common diminished seventh chord.

See A/S 534-536

Direct Motion between Dominants Related by Enharmonic Diminished Sevenths

Composers usually leave out one of the enharmonic spellings of the diminished seventh chord. Sometimes they leave out the diminished seventh chord altogether, so that two apparently unrelated dominants follow each other directly. If they share a common diminished seventh chord (that is, if they can each be transformed into enharmonically-equivalent diminished seventh chords by raising the root by a half step), this relationship explains the progression; it is as if the diminished seventh chord were implied, almost like an elided resolution. Example 4 shows this. Whenever there is a progression of this kind, there will be two common tones, and the other two voices will move by half step (at least, this is the idealized voice leading; in a free texture skips are possible).

Example 1

Example 2

c: vii^o₇ ==> Eb: vii^o₇ c: V₇ ==> vii^o₇

Example 3

c: V₇ ==> vii^o₇ ==> Eb: vii^o₇ ==> V₇ ==> vii^o₇ ==> Gb: vii^o₇ ==> V₇ ==> vii^o₇ ==>

A: vii^o₇ ==> V₇ ==> vii^o₇ ==> c: vii^o₇

Example 4

Eb: V₂ ==> Gb: V₃ Eb: V₂ (==> vii^o₃ ==> Gb: vii^o₅) ==> V₃