

The Devil's Interval

By

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Our modern music exists of dissonance – resolution. The prime characteristic interval requiring resolution is the Tritone - the interval of an augmented 4th or diminished 5th. This interval known in the early church as the “Devil’s Interval” was actually prohibited in official church music. Imagine Bach’s struggle to take music from its normal course of Tonic, Sub Dominant, Dominant and back again without the use of this interval. The tritone is the characteristic interval of all dominant chords. The guide tones or the 3rd and 7th of all dominants create this tritone interval and demand resolution in two possible directions; contrary motion where both notes move in by half steps and contrary motion where both notes move out by half steps. This resolution of tritones is what gives dominant chords their V7 to I resolution of what we have come to expect in traditional Western harmony (G7 to C). The guide tones of the G7 (B the 3rd and F the 7th of the G7 chord resolve to a C and E notes and allow the resolution to a C chord) This is a normal V7 to I resolution. Bb and F# become the other contrary resolution of the B and F tritone notes and form the root and 3rd of a Gb chord.

Hence, the two possible resolutions of a G7 chord are down a fifth to a C chord or down a half step to a Gb chord. All dominant chords have these two possible points of primary resolution, down a 5th or down a half step. Look at the relationship between the two possible resolutions; they are a tritone apart. The actual primary dominant chord relating to the Gb is a Db7th. The guide tone of the Db7 are an F - the 3rd and a B - the 7th. Again this forms a tritone interval and is the exact same notes as in the G7 chord only reversed. The 3rd of the one chord becomes the 7th of the other and the 7th of the one chord becomes the 3rd of the other. In other words, the G7 chord and the Db chord, which are a tritone apart, actually contain the same tritone of the B and F notes. Being

that these two chords contain the same tritone, they have the same two points of primary resolution and hence can substitute for each other. The G7 can resolve to a C or to a Gb and the Db7 can resolve to a Gb or a C. Each resolution is either the traditional down a 5th resolution or down a half step which has become known as substitute dominance and is identified with the half step bass motion to its resolution.

When substitutions are made, a proper resolution of the tritones are satisfied and the resolution is heard however the main difference is in the Bass motion of down a half step versus down a 5th. This creates a slight deception to our ear in that the resolution is satisfied yet a slight deception of the half step descending bass line creates interest.

Further interest is created when we take into consideration the associated II-7 with its related dominant chord. D-7 is the related II to a G7 chord and Ab-7 is the related II chord to the tritone substitute chord Db7. Now, look at the relationship of the two II-7 chords - they are a tritone apart. As you can see, this tritone theme tends to feed on itself. If the two dominant chords can substitute for each other and satisfy the resolution, then we can also substitute their related II-7 chords. In other words, D-7 G7 can now be Ab-7 G7 and both can resolve to either a C or a Gb. Using the other dominant chord, our original II-7 V7 is Ab-7 Db7 and we can substitute the other relative II chord creating the progression D-7 Db7 again which can resolve to either a C or a Gb.

Here are all the possibilities;

D-7 G7 C, D-7 G7 Gb, Ab-7 G7 C, Ab-7 G7 Gb,

Ab-7 Db7 Gb, Ab-7 Db7 C, D-7 Db7 Gb, D-7 Db7 C

Identification of a tritone substitute is by noticing the descending half step bass motion. Further noticing of a minor 7th chord moving down a half step to a dominant chord implies substitution of the relative II chords.

The mathematics associated with harmony and especially this tritone theme is very fascinating. To continue with the theme, let's look at some of the associated scales. Let's give our G7 chord a Lydian b7 scale which contains the notes G A B C# D E F and G and now let's look at its tritone substitute of Db and give it an altered dominant scale, the notes would be Db D E F G A B and Db. Observe that they are the same scale. This also works the other way by using a G altered dom. scale and giving its tritone substitute Db a Lydian b7 scale. Again the results are the same scale.

Diminished Chords manifest this situation two fold - all diminished chords contain two tritones and if all tritones resolve in contrary motion in opposite directions to two possibilities then all diminished chords have four possible points of resolution to create dominant functioning diminished chords. This double tritone of diminished 7th chords is what gives it its haunting sound associated with most horror movie music. If either of the two tritones of a diminish chord resolve as previously stated, the diminish chord is considered a dominant functioning diminish. Should either of the tritones not resolve as expected in contrary motion in or out by half-steps, the diminish chord is considered passing or chromatic diminish; a way of smoothly getting from one chord to another. As you can see and hopefully hear, this is all very logical and mathematically interesting. Dominant chords and diminish chords are extremely important in our western music to allow the progression from consonant to dissonant with satisfying resolutions.

The natural progression from consonance to dissonance and resolution is what makes music interesting and satisfying. Music would be extremely bland without the use of dissonance. Imagine a world of parallel 3rd's and 6th's and no dissonance – resolution.