

## PODCAST #14: SOME DO'S AND DONT'S ABOUT CHORDS AND INVERSIONS

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Hello. This is the fourteenth in a series of podcasts dealing with different elements of music composition and the second of three podcasts on aspects of harmony. Today our subject is some do's and don'ts about using chords and their inversions and I'm going to start with a pretty stark statement.

Our harmonic system is in essence very simple. It's built on three-note chords called triads consisting of pitches spaced a third apart, and includes the so-called root, the third and the fifth. The root is called that for good reason. Think of an apple tree. With its roots in the soil it is strong, but it is less strong when with age it splits and the roots become partly dislodged, and even less so with its trunk on the ground and most of its roots exposed to the air. By the way, lest you think I'm making this up, I have seen apple trees in all the conditions I've just described. Think of root position, that is, with the root of the chord in the bass, as the tree upright and stable. First inversion, with the third of the chord in the bass, is less strong but still viable, like the aging tree with the split trunk. Second inversion, with the fifth of the chord in the bass, much like the old apple tree with its roots exposed to the air, is very weak and not capable of supporting life. Why? Listen to this (PLAY OPENING OF MAGIC FLUTE OVERTURE). This is the opening of Mozart's wonderful opera "The Magic Flute" and the three chords are, in the key of E Flat Major, E flat, C minor and E flat in first inversion, respectively, or in chord terms I vi and I6. Simple, powerful, elegant and in some ways the key to the music of the entire opera. Let's listen again and pay special attention to the bass line. (PLAY OPENING AGAIN) Now here's the bass line alone with the upper line. (PLAY MAGIC FLUTE OUTER VOICES.) Note the contrary motion and how Mozart spreads the harmony. He then spends the next several bars bringing the lines back closer together. Now I'm going to alter the bass line and I want you to pay special attention to it when I play the progression. (PLAY MAGIC FLUTE OVERTURE USING SECOND INVERSIONS) Notice anything? Here's the original again (PLAY ORIGINAL AGAIN) and now the altered version (PLAY VERSION USING SECOND INVERSIONS). I hope you can hear that the original is more effective. What did I alter? The bass of the first two chords so they were in second inversion instead of root position. Why is that ineffective? Because in a second inversion chord, also called a 6-4 chord, a fourth is on the bottom of the chord and then a third above that to make the upper note a sixth above the bass (PLAY ARPEGGIATED 6/4 CHORD). So? **SO** we have over 500 years of hearing chords based on thirds so that when we hear this (PLAY I 6/4 CHORD) we want it to be followed by this (PLAY V CHORD). That is, the chord with the sixth and fourth between bass and the upper voices resolves to a root position chord with a fifth and third above the bass, respectively. I have watched music theory students literally squirm in their seats when I've played a second inversion chord and left it hanging as they waited and waited and waited for me to resolve to a root position chord. This is what we expect and when we get a 6/4 chord out of context it sounds wrong, plain and simple.

In a functional system like the Western harmonic tradition, everything has a place, but the system grew and evolved over time to include new chords and non-harmonic tones. However, the basic functions of the three chord positions never really altered from 1600 into the 20<sup>th</sup> century. Why? Composers are by nature experimenters, curious people unwilling to accept things as they are just because they are told to accept them. So we can take it as a matter of course that they will try new ways of doing things or we'd still have Gregorian chant as our music today. However, composers are also in the main not stupid. They don't waste energy doing things they find are ineffective. If the aim of composing is to create effective music and a particular chord position is ineffective, why use it?

I think part of the problem is not understanding that in Western harmonic music, unlike jazz or pop or folk music, it's not just a melody and chords which are merely blocks of sound. Those chords

have specific jobs to do to get the listener from point A to point B and what gets us there is not just the melody but the other voices, particularly the bass line. As I mentioned in my previous podcast on voice leading, each note in a chord is part of a line and its job is to help move to the next chord smoothly while still retaining some measure of linear independence. Nowhere is this more true than in the bass, which performs two different yet vital functions. It acts as the second-most important line after the melody, and it creates the harmonic foundation upon which the other parts rest, much as the foundation of a building supports the remainder of the structure. In order to handle all that weight, the foundation must be strong and stable. Root position and to a somewhat lesser extent first inversion chords give us that stability, second inversion chords don't. It's that simple. So in composing tonal music listen to and pay real attention to the bass line and avoid second inversion chords unless you know the four very specific instances in which they have been used historically. Once you know cadential, pedal, passing and arpeggio 6/4 chords and where it's appropriate to use them, go ahead. Until then, don't use second inversion chords at all and I guarantee your music won't suffer.

If you're at the point now where you're saying "Yeah, right, but I want to try things MY way" you've got company, LOTS of company. Most composers try to resist what's been handed down to them at some point or other. When I was first in graduate school my composition teacher was telling me something I had written was ineffective. Exasperated, I said "But I WANT that." He responded "Do you want what you want or do you want a good piece?" Very softly I asked "Can't I have both?" As it turned out, when I adjusted my approach a bit things started to work better and I made a lot of progress. And my teacher and I became very close.

One person who spent most of his life butting heads with the establishment was the French composer Hector Berlioz, who literally wrote the book (the first one anyway) on orchestration and whose first major work, the "Symphonie Fantastique" turned the cultural world of Paris upside down in 1830 with its bold new ideas and modern-sized orchestra. Even before Berlioz was formally accepted into the Paris Conservatoire to study he got kicked out of its library by the Conservatoire's director. His music for large forces shocked and puzzled many of his contemporaries, including his fellow composers, and he was forced to make his living writing music reviews about the generally inferior music Parisians preferred to his own. Once asked if he always wrote for 500 performers he sarcastically replied that no, sometimes he wrote for 450. Berlioz went his own way and that often meant writing music on a grand scale, but he also wrote music of great beauty and intimacy and it's one of these latter works I wish to examine, the "Shepherds' Farewell to the Holy Family", a chorus from the oratorio "L'Enfance du Christ" or "The Childhood of Christ". This chorus uses a little woodwind introduction to each verse to imitate shepherds' pipes but otherwise the orchestra merely doubles the choral lines. Let's listen to the first verse (PLAY VERSE ONE OPENING- 1'07" AND FADE OUT ON OBOE'S RE-ENTRANCE). As you could no doubt hear, Berlioz was a great melodist, but it's his harmonic sense I wish to examine here. If you say "Okay, it's nice but what's so different about this?" I want to point out three things. First, it's a tribute to Berlioz's part-writing and voice-leading skills that music which contains some fairly radical chromaticism in a short space can sound so smooth. Berlioz may have hated his time at the Conservatoire, but he must have absorbed what he was taught. Second, keep in mind that this music was written not in the 20<sup>th</sup> or 21<sup>st</sup> century but in 1854. Finally, throughout the piece, despite his rebellious nature and desire to innovate, Berlioz uses standard practices for chord positions. Let's look at two examples. First, here's the first phrase (PLAY BARS 5-12 6"-18"). I want to point out the ending. It's a half cadence, that is, it ends on the dominant or V chord instead of the tonic or I but it's HOW Berlioz gets there that we need to check. In the two bars leading up to the V chord he moves from I in first inversion to ii using contrary motion, then from IV to V, again using contrary motion. No parallel octaves or fifths and in the entire 8-bar first phrase nary a second inversion chord to be heard. Here are the final three bars of the phrase arranged just for woodwinds (PLAY SHEPHERDS' FAREWELL). Now here they are in an arrangement where I've deliberately added parallel motion and second inversion chords (PLAY SHEPHERDS' FAREWELL ARRANGED

FOR SECOND INVERSION). Listen to both again, first my rearrangement (PLAY REARRANGEMENT AGAIN) and then the original (PLAY ORIGINAL VERSION). Hear the difference? The second is smooth and effective both because of the independent sound of the lines and also because of the chord positions as determined by the bass line.

My second example goes further afield. By the end of the third phrase Berlioz has just moved us to C# minor. That's not unusual as it's the relative minor of the original key, E major. At the end of the phrase he arrives at a half cadence which uses a diminished seventh chord substitute for the dominant in C# minor. Again, not that unusual, but listen to where he goes next (PLAY FINAL FOUR BARS OF PHRASE AND FOLLOW WITH FINAL PHRASE 31''-1'07''). Instead of going where we expect, that is, C# minor, Berlioz, in a tritone substitution that would make a jazz composer proud, moves us suddenly all the way to G major for two bars, then C major, then E minor and finally in the last four bars of the verse he resolves back to the original key of E major. Sounds like a recipe for travel sickness, right? But we never even hit a bump in the road thanks to Berlioz's voice leading. By resolving the soprano and bass in opposite directions (that is, through contrary motion) each time save one and using standard chord positions and voice-leading practices, Berlioz makes these remote key shifts sound smooth, effective and effortless, as well as beautiful. Oh, and only three second-inversions out of 33 chords in the entire passage and all three are used appropriately. Here's the passage again. (PLAY PREVIOUS EXAMPLE AGAIN).

Let's summarize what we've talked about. First, in Western harmonic music, chord position matters and that's determined by the bass, so when writing tonal music REALLY pay attention to the bass and its interaction with the other voices, especially the soprano. I know we've spent a lot of time discussing melody in our earlier podcasts, but when dealing with harmony it's important to think from the bottom up rather than from the top down. Avoid writing first inversion chords in really important places like the beginnings and ends of sections or pieces and avoid using second inversion chords COMPLETELY until and unless you know the four specific instances in which they can be used appropriately. And remember, if it walks like a duck, flaps like a duck and quacks like a duck, the listener will figure it IS a duck. That is, if you are writing a piece which uses Western tonal language, the listener will expect standard practices to be followed in terms of voice leading and chord position. Even if that listener doesn't know the difference between second inversion and second base, her or his ear will point out when something doesn't follow standard practices and your rationale about trying something different will just come across as poorly written music. It's as if you are learning English and want to make an original statement, so you say "Name my Smith John is." Imagine how that will go over. There are lots of approaches to using chords in non-standard ways effectively by changing the context so we don't expect the chords to follow traditional harmonic practices. Listen to 20<sup>th</sup> century composers like Debussy, Ravel, Stravinsky, Bartok, Prokofiev and Shostakovich to name just a few. These composers all used triads in non-standard ways because they established their own harmonic language which didn't rely just on functional practices of the past so the listener didn't expect traditional chord progressions. So if you use standard harmonic progressions follow standard practices and things will work well. If you want to branch out, work to change the language of your piece and then other approaches are possible.

Next time we'll discuss chords as the whole ball of wax in a piece. I hope you can join me.