

SCALE, CHORD & ARPEGGIO SUBSTITUTION

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Lesson #1: CHORD AND ARPEGGIO SUBSTITUTION

(Lesson #2: SCALE SUBSTITUTION coming soon)

Substitution is an essential part of jazz. Virtually all jazz artists use substitution and a few artists, like the great [chord melody](#) player [Lenny Breau](#) and pianist Bill Evans, breathed new life into jazz standards with their remarkable and clever use of substitution.

Substitution is not limited to chords and arpeggios. Scales can be substituted also and this is discussed in another lesson.

WHAT IS SUBSTITUTION?

It is the art of replacing a [chord](#), [scale](#) or [arpeggio](#) with another.

WHAT IS THE ADVANTAGE OF SUBSTITUTION?

Substitution allows you to melodically and harmonically enhance your music by applying familiar scales, chords and arpeggios in new and different ways .

WHAT DOES A SUBSTITUTION LOOK AND SOUND LIKE?

Virtually all jazz musicians --chord players (guitar, piano etc) and single note players (sax, violin, trumpet etc)-- use substitution. Substitutions vary widely in the degree they relate to the original scale, chord or arpeggio. Generally you can use this as a guide:

- **EXPLICIT** substitutions have an apparent connection to the original scale, chord or arpeggio. Therefore the more subtle and less threatening it will sound. Go [here](#) and [here](#) for more
- **IMPLIED** substitutions do not have an apparent connection to the original scale, chord or arpeggio it is replacing. Therefore the more blatant and threatening it will sound. Go [here](#) and [here](#) for more

CAN YOU GIVE A FEW EXAMPLES OF SUBSTITUTION?

A substitution may be as relatively simple and **explicit** as adding an embellishment to the [local chord](#). For example:

- Cmaj7 (C-E-G-B) substituted for C (C-E-G) Numerically this is 1maj7 subbing for 1.

A substitution may replace the local chord entirely --I often refer to this as a wholesale substitution. For example:

- Am9 (A-C-E-G-B) is often substituted for Cmaj7 (C-E-G-B) Numerically this is 6m9 subbing for 1maj7.

Finally an **implied** substitution may not seem to have an apparent connection to the original scale, chord or arpeggio it is replacing. However with enough theory knowledge and study a relationship can be discerned. For example:

- Eb7b5 (Eb-G-A-Db) is often substituted for A7b5 (A-C#-Eb-G) Numerically this is referred to as the b5 substitution. Go [here](#) for more.

CAN SCALES BE SUBSTITUTED?

Substitution can be applied to local scales by simply raising, lowering adding or omitting intervals. For example the fifth interval in the C major scale (C1--D2--E3--F4--**G5**--A6--B7--C8) is often lowered thus altering the scale like this

- C1--D2--E3--F4--**Gb (b5)**--A6--B7--C8

(MORE ON SCALE SUBSTITUTION IN A FUTURE LESSON)

IS THERE A METHOD TO THE MADNESS?

With any jazz [improvisation](#), or [chord melody](#) arrangement, you are confronted with the task of figuring out what [chord](#), [arpeggio](#) or [scale](#) can be [substituted](#) for another. Of course you could simply substitute a chord, arpeggio or scale at random but there is a proven substitution method --and it is based on fundamental [theory](#).

HOW DOES THIS SUBSTITUTION METHOD WORK?

This method starts by [harmonizing](#) the [major scale](#) and then [relating](#) the chords by dividing them (and their arpeggios) into these two harmonic categories:

- **RESOLUTION** (Chords/arpeggios that can be substituted for the 1 chord)
- **TENSION** (Chords/arpeggios that can be substituted for the 5 chord)

WHERE DOES TENSION AND RESOLUTION COME FROM?

[Tension](#) and [Resolution](#) is the living dynamic that adds interest to all art forms. It may be referred to as "dark to light" or simply "movement and rest".

Tension and Resolution has been a part of music forever and a component of music theory for centuries. The terms simply reflect the dynamics found in all of music --indeed in all art forms. Without tension and resolution there would not be any contrast to appreciate.

The Resolution and Tension categories in this sub method come from understanding the most important chord progression in music, the omnipresent: [5 to 1](#) cadence. **In essence we are converting the abstract (tension and resolution) into the tangible (5 to 1).** For example in the key of C, [C](#) is 1 and [G](#) is 5. (see [chart](#)) The [Tension](#) of the 5 chord pulls to the [Resolution](#) of the 1 chord.

WHAT'S THE BIG DEAL ABOUT 5 TO 1?

The 5-1 progression is important because it symbolizes tension and resolution. 5 to 1 is an integral part of all music --it is everywhere and thus we are imprinted with it. For centuries it has been the most utilized cadence in [all styles](#) of western culture music and we hear it everyday even if we are not aware of it.

It is in all genres including: **rock**, **country**, **bluegrass** and **jazz**. It is in the music in TV and radio commercials as well as in the background music we hear at WalMart and the BP store! And it is --implicitly or explicitly-- in virtually all of the [Jazz standards](#).

WHAT DOES TENSION AND RESOLUTION HAVE TO DO WITH 5 TO 1?

As stated the 5-1 cadence is pervasive. So we exploit this by understanding that the 5 chord is synonymous with tension and the 1 chord is synonymous with resolution. In other words we can reduce virtually all the popular chords in jazz to just two abstract categories: **tension** and **resolution**. By doing this we can simplify our thinking and our approach to improvising. And as with all things jazz this method will require study, practice and application.

WHAT KIND OF CHORDS ARE USED IN 5 TO 1 PROGRESSIONS?

In the key of C the 5 chord is G. G is a basic [triad](#) (G-B-D). Jazz players usually replace triads with the cooler, and harmonically richer, four note [seventh chord](#). This being the case the 5 chord would be G7 and thus the [number](#) would reflect that and be 57. Such is the case with the 1 chord. Instead of the "vanilla" C triad, jazzers prefer Cmaj7 and the number would be 1maj7. So [in our discussion](#) keep this in mind:

- 5 actually refers to the 57 (i.e. G7 seventh chord)
- 1 actually refers to the 1maj7 (i.e. Cmaj7 seventh chord)

The [seventh chords and arpeggios chart](#) illustrates the mathematical harmonization process We have to look closer at the chords and arpeggios to understand what gives the 1 chord its resolution and what gives the 5 chord tension.

NOTE: Jazzers often embellish and/or alter the 1maj7 and the 57.

HOW ARE CHORDS SEPARATED INTO TENSION AND RESOLUTION CATEGORIES?

We must take a closer look at how chords --especially the 1 and 5-- are constructed to understand this. Each chord/arpeggio in a scale --here the major scale-- is realized (or constructed) by adding (harmonizing) every other note of the scale together. This is the same as adding every [third](#) note together. (see [chart](#)) All harmonized seventh chords/arpeggios have these intervals:

- **root (1) ...this is the first note in any *uninverted seventh chord.** **An uninverted chord is sounded in chronological sequence from root up --1-3-5-7 etc.*
- **third (3rd) ...this is the second note in any uninverted seventh chord, It may be a major 3rd or a minor 3rd (minor 3rd = flatted 3rd).**

- **fifth (5th)....this is the third note in any uninverted seventh chord.**
- **seventh (7th)....this is the fourth note in any uninverted seventh chord. It may be a major 7 or minor 7 (minor 7 = flatted 7).**

In chords and arpeggios the **root** and the **5th** interval align the same*. In other words the root and fifth is the same distance apart. Because of this similarity we can say that the **root and fifth of a chord is not unique** --they do not have any distinguishing characteristics. (*all except the seven minor seven flat five chord/arpeggio 7m7b5--see [chart](#)--explained later)

WELL THEN WHAT MAKES THE CHORDS/ARPEGGIOS DIFFERENT?

As discussed the first and fifth intervals in seventh chords are not different.* However if we study the **3rd** and **7th** interval of each chord/arpeggio (see [chart](#))--and compare or measure each from the root-- we will see that they are not the same. For example in the key of C, the the root and the fifth of the 2m7 chord (Dm7)

Dm7 = D(1) F(b3) A(5) C(b7)

are the same interval distance from the root as they are in the 4maj7 chord (Fmaj7)

Fmaj7 = F(1) A(3) C(5) E(7)

Yet overall these chords sound very different because the 3rd and the 7th interval spacing in each is not the same. The 3rd and 7th interval distance is less (or minor) in the Dm7 than they are in the Fmaj7.

SUMMARY: The 3rd and 7th intervals separate or define each chord/arpeggio --in other words the 3rd and seventh intervals give the chord it's character.

SO HOW ARE THE CHORDS CATEGORIZED?

Now that we have determined that the third and seventh intervals define a chord's sound or it's character. we will need to look closer at the third and seventh intervals in the 1 chord and the 5 chord.

Study these 1 and 5 chords examples in the key of C. (Remember: The rules and principles apply to all keys)

Cmaj7 is the 1maj7 and it's defining, resolved interval is the third (E).

Cmaj7 (1maj7) = C(1) E(3) G(5) B(7)

G7 is the 57 chord it's defining tension interval is the seventh (F).

G7 (57) = G(1) B(3) D(5) F(7)

So the other chords (and their arpeggios) of the major scale are categorized as either tension or resolution, according to whether they contain the 3rd (of the 1maj7 chord) or the 7 (of the 57 chord).

If a chord has the 3rd (i.e. E in the Cmaj7) of the 1maj7 chord it is in the resolution category, and they are:

1maj7 (Cmaj7 -- C-E-G-B)

3m7 (Em7 -- E-G-B-D)

6m7 (Am7 -- A-C-E-G)

If a chord has the 7th (i.e. F in the G7) of the 57 chord it is in the tension category, and they are:

2m7 (Dm7 -- D-F-A-C)

*4maj7 (Fmaj7 -- F-A-C-E)

57 (G7 -- G-B-D-F)

Bm7b5 (Bm7b5 --B-D-F-A)

***Note: The 4maj7 chord (Fmaj7) contains the E of the 1 chord but due to the overpowering presence of the F note it is in the tension category.**

For any 7th chord, substitute a minor 7th chord a perfect 4th lower, if the melody will tolerate it.

For example, the 2nd chord in Silent Night (if we play it in the key of C) is the G7 chord. So we simply go down a perfect 4th from G -- which is D -- and we build a minor 7th chord. The melody at that point is "D", so

there's no conflict between the melody and the chord. So it works. After playing Dm7, we can go back to G7. We have just made the song more interesting.

If you're not sure what chord is a perfect 4th below a 7th, here's a chord substitution chart that will help you. You might want to print it out and keep it on your music rack on your piano:

7th chord ----- m7 chord subs
C7 Gm7
F7 Cm7
G7 Dm7
D7 Am7
A7 Em7
E7 Bm7
B7 F#m7
Db7 Abm7
Eb7 Bbm7
Ab7 Ebm7
Gb7 Dbm7
Bb7 Fm7