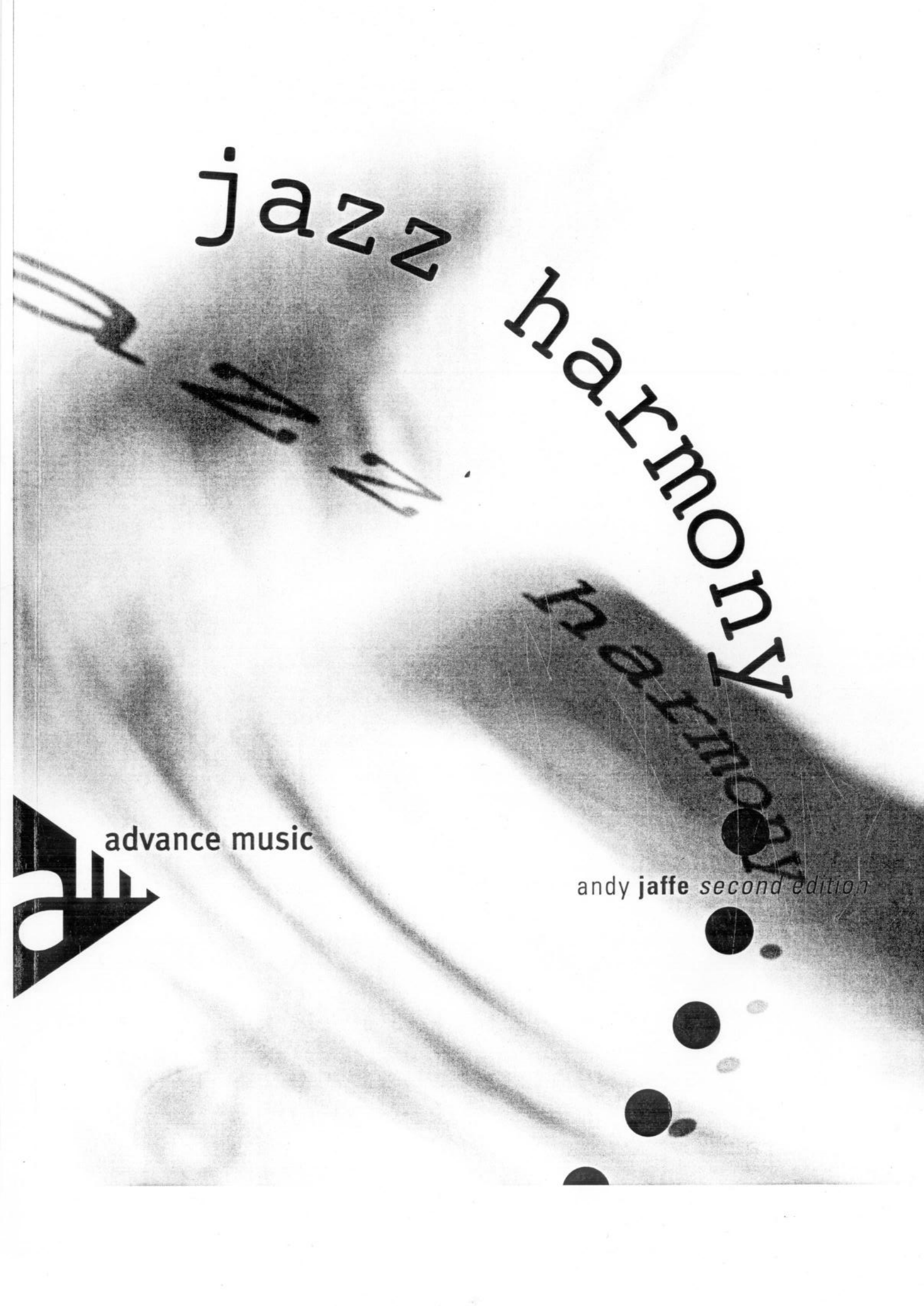
jazz harmony
harmony
advance music
andy jaffe second edition

Jazz Harmony

by ANDY JAFFE

Thelonious Monk
"Thelonious Monk Sextett" Session
WOR Studios, NYC, 05-30-1952
Photography by Francis Wolff

Jazz Harmony

by ANDY JAFFE

Cover Art: 10eg Visual

Layout and Musical Notation: T. M. Zentawer

Production: Hans Gruber

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Foreword and Acknowledgments

How to use this book:

This text reflects the basic way in which I have taught my jazz theory and improvisation courses at a variety of primarily college-level institutions over the past twenty years. The state of jazz pedagogy has changed radically during that time, as have my personal educational perspective and experience.

This text constitutes an updated, hopefully more clearly organized version of my 1983 text *Jazz Theory*, reflecting the changes in my teaching style and organizational method which have been a result of this evolving experience, both musically and pedagogically. It is designed in a topic-by-topic format, including bibliography, discography, and relevant suggested assignments at the end of each chapter. The discography is quite specifically related to the musical examples referenced in the text, and all the recordings are listed in their curently available forms, so that even an institution or individual wishing to start from scratch in teaching such a course could do so. Likewise, I feel that the bibliography is quite comprehensive, relevant, and up to date.

When I began writing *Jazz Theory* nearly twenty years ago, jazz pedagogy was at a much more formative stage, and my own teaching experience had been primarily defined by my experiences in institutions with well-established jazz programs. Having spent a good deal of time since in liberal arts institutions, or in other educational and musical situations where the primacy of the jazz idiom (or even its validity as a field worthy of serious academic pursuit) was not taken for granted, I have had to reassess the assumptions one makes in structuring such a course of study. The text, then, can be regarded as a fleshed-out syllabus, reflecting the manner in which a course can be taught today in a liberal arts or undergrade institution, where students need first of all to be acquainted with the basic language of jazz harmonic theory, then taken progressively through an examination of the various topics necessary to achieving an understanding of jazz harmony and improvisation. The text's organization is also designed to show the teacher and student alike how to integrate the various excellent pedagogical resources available today into a structured study of music.

The order in which these topics are explored has been carefully organized so that the student can proceed from the most accessible concepts in harmony and improvisation to those which are most complex. Once a foundation of basic theoretical language has been established, the topics of modal playing, melodic embellishment and improvisation, form, and the Blues are presented. More complex theoretical topics such as the uses of secondary and substitute Dominant harmonies, key-of-the-moment, interpolated chords, modal interchange, and Blues and "I Got Rhythm" variations are then introduced. This order of topical discussion does not mirror the historical evolution of the music, rather

it introduces the concepts in an order which has proven most accessible to students, moving from the simpler improvisational concepts through the most complex.

I cannot overstate the importance of doing many, many, in-class performance projects to reinforce what is being studied in the text. Every assignment or exercise which is done should reflect the fact that, first and foremost, jazz is an aural tradition. To study melodic variation, listen to and transcribe several interpretations of the same melody. To study Blues, write one! Several transcriptions should be undertaken over the course of the year, performed by the transcriber and collectively analyzed by the class. When studying "Rhythm Changes," write one! Eartraining and keyboard voice-leading exercises should be a regular part of the in- class routine.

Having established artists make guest appearances to speak with, coach, and otherwise share their experiences with the students is an invaluable method of enlivening and enriching the coursework. Guest artists have had a terrific impact on the programs I have developed.

I welcome any comments or suggestions on how the organization of this text works for you, or how it might be improved. I would also be happy to communicate with anyone who might want some help in setting up or implementing this sort of curriculum.

Finally, I would be remiss were I not to thank the various people whose behind-the-scenes work helped to make this text what it is. Thomas M. Zentawer and Michael Ebert, whose expertise in graphic calligraphy brought the musical examples to life, Dan Richter for his editorial assistance; Ann Maggs, whose attention to detail and knowledge of the recorded jazz repertoire created our bibliography and discography, Fred Tillis for being an inspiration, mentor, and role model for an aspiring jazz advocate for over twenty years, and of course Hans Gruber, for making our work available to you.

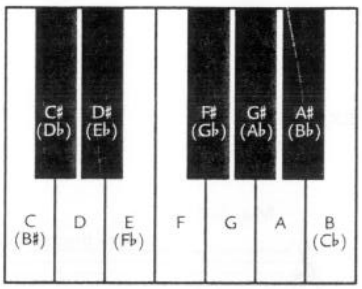
This book is dedicated to the great masters of the jazz tradition, the most important artform to have evolved in the 20th century, in hopes that in some small way it will help give something back to this wonderful tradition which has so enriched all of our lives.

Intervals, Chords, and Inversions

Any study of jazz harmony must begin with a thorough understanding of intervals. An interval is the distance in pitch between notes.

Using the piano keyboard as our frame of reference, let's review the various possible names of the pitches within the chromatic scale. (Example 1.1)

EXAMPLE 1.1



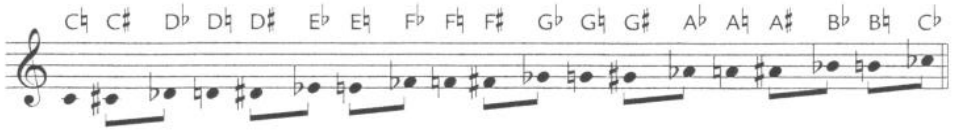
Using middle C as a point of reference, the following simple intervals are created when moving *upward* in pitch to the remaining notes of the chromatic scale (NOTE: a simple interval is one of less than one octave).

TABLE 1.1

Pitch of Origin	Destination	Interval Name(s)	Number of Half-steps
Middle C	C	Unison	0
Middle C	C♯ (D♭)	Half-step; minor second	1
Middle C	D	Whole-step; major second	2
Middle C	D♯ (E♭)	Augmented second; minor third	3
Middle C	E	Major third	4
Middle C	F	Perfect fourth	5
Middle C	F♯ (G♭)	Augmented fourth; diminished fifth; "tritone"	6
Middle C	G	Perfect fifth	7
Middle C	A♭ (G♯)	Augmented fifth; minor sixth	8
Middle C	A	Major sixth	9
Middle C	B♭ (A♯)	Minor seventh; augmented sixth	10
Middle C	B	Major seventh	11
Middle C	C	Octave	12

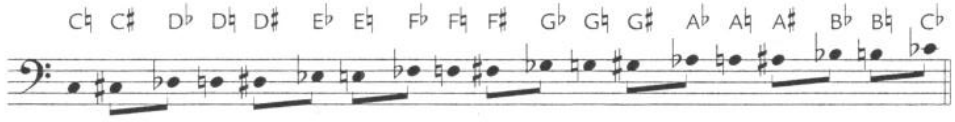
Musical notation in treble clef for this same information would be as follows:

Example 1.2

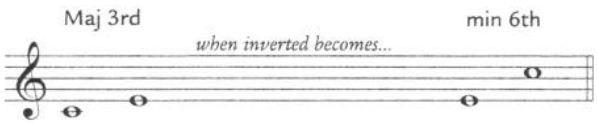


Similarly, in bass clef the same pitches would be notated thus:

Example 1.3



Example 1.4



Any interval can be *inverted*. For example, the interval from C up to E natural is a major third. Inverting this interval means changing the point of reference from C to E, or said another way, moving the C *an octave higher*. The resulting interval is called a minor sixth.

The following table shows the inversions of our original intervals from Table 1.1, using the common abbreviations of interval names where applicable ("P" denotes Perfect, "m" denotes minor, "M" denotes major, "+" denotes augmented, and "dim" denotes diminished):

Table 1.2

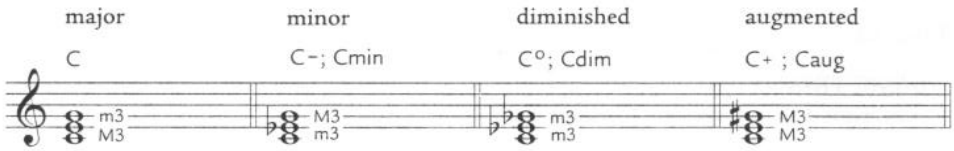
Pitch of Origin	Destination	Interval Name(s)	Interval's Inversion
Middle C	C	Unison	Inverts to Octave (8ve)
Middle C	C♯ (D♭)	m2	Inverts to M7
Middle C	D	M2	Inverts to +6/−7
Middle C	D♯ (E♭)	+2/m3	Inverts to M6
Middle C	E	M3	Inverts to +5/m6
Middle C	F	P4	Inverts to P5
Middle C	F♯ (G♭)	+4/dim5 (tritone)	Inverts to +4/dim5
Middle C	G	P5	Inverts to P4
Middle C	G♯ (A♭)	+5/m6	Inverts to M3
Middle C	A	M6	Inverts to +2/m3
Middle C	A♯ (B♭)	+6/−7	Inverts to M2
Middle C	B	M7	Inverts to m2
Middle C	C'	Octave (8ve)	Inverts to Unison

All chords are made up of combinations of notes. The most commonly used chord types are built out of the various possible combinations of intervals of thirds. Three-note chords built from thirds are called triads, four-note chords built from thirds are called seventh chords.

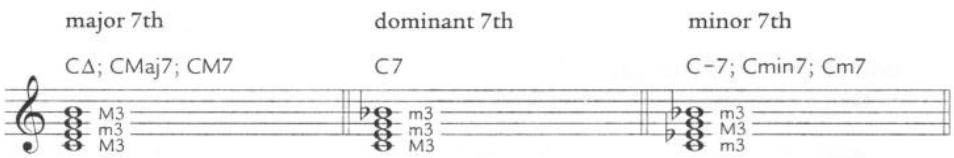
The most commonly occurring triads and seventh chords follow. Note that each has a unique intervallic definition, as well as one or more chord symbols that can be used to represent it.

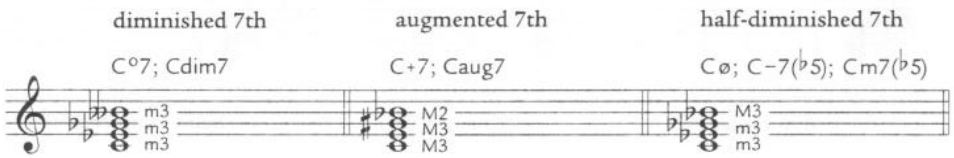
TABLE 1.3

BASIC TRIADS
(key/root = C)

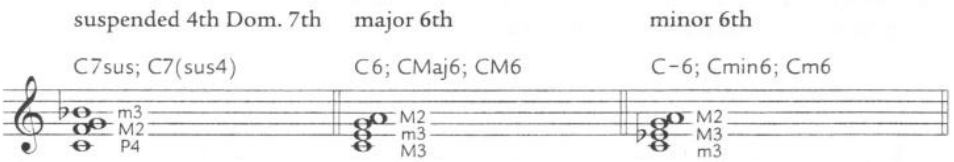


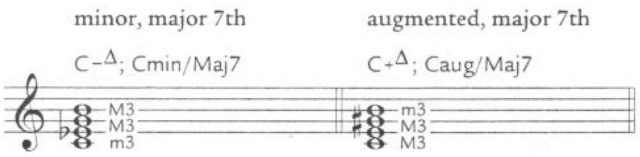
BASIC SEVENTH CHORDS
(key/root = C)





DOMINANT SEVENTH VARIANTS & SIXTH CHORDS
(key/root = C)

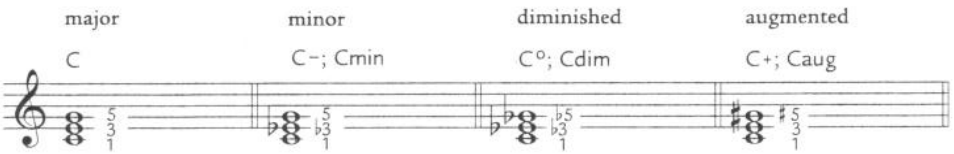




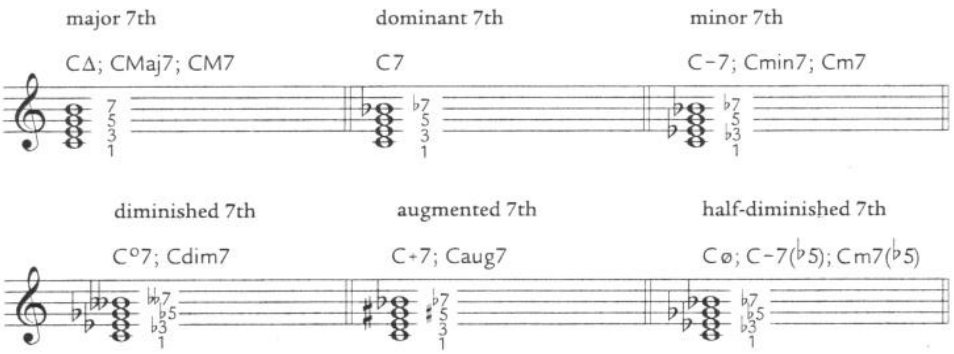
The note the chord is named after is called its *root*. When this note is found in the lowest voice of the chord, as in the above examples, the chord is said to be in root position. The next note above it in the chord is called its third, and creates an interval above the root which is either a major or minor third, thereby determining whether the chord itself is considered to be of major or minor quality. The note above the chord's third is called its fifth, and in a seventh chord, the highest note is referred to as its seventh. These designations are derived from the degree of the scale based on the chord's root which each note represents. All of the triads and seventh chord examples shown in Table 1.3 could be similarly defined in terms of scalar intervallic descriptions (the reference being the major scale based upon the chord's root):

TABLE 1.4

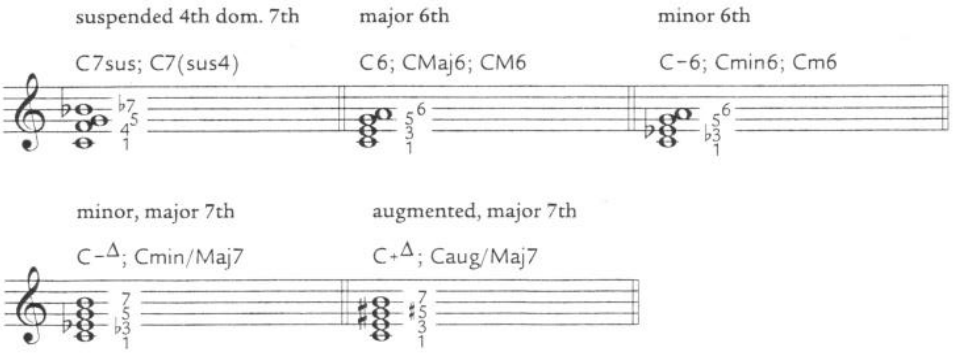
BASIC TRIADS
(key/root = C; reference = C major scale)



BASIC SEVENTH CHORDS
(key/root = C; reference = C major scale)



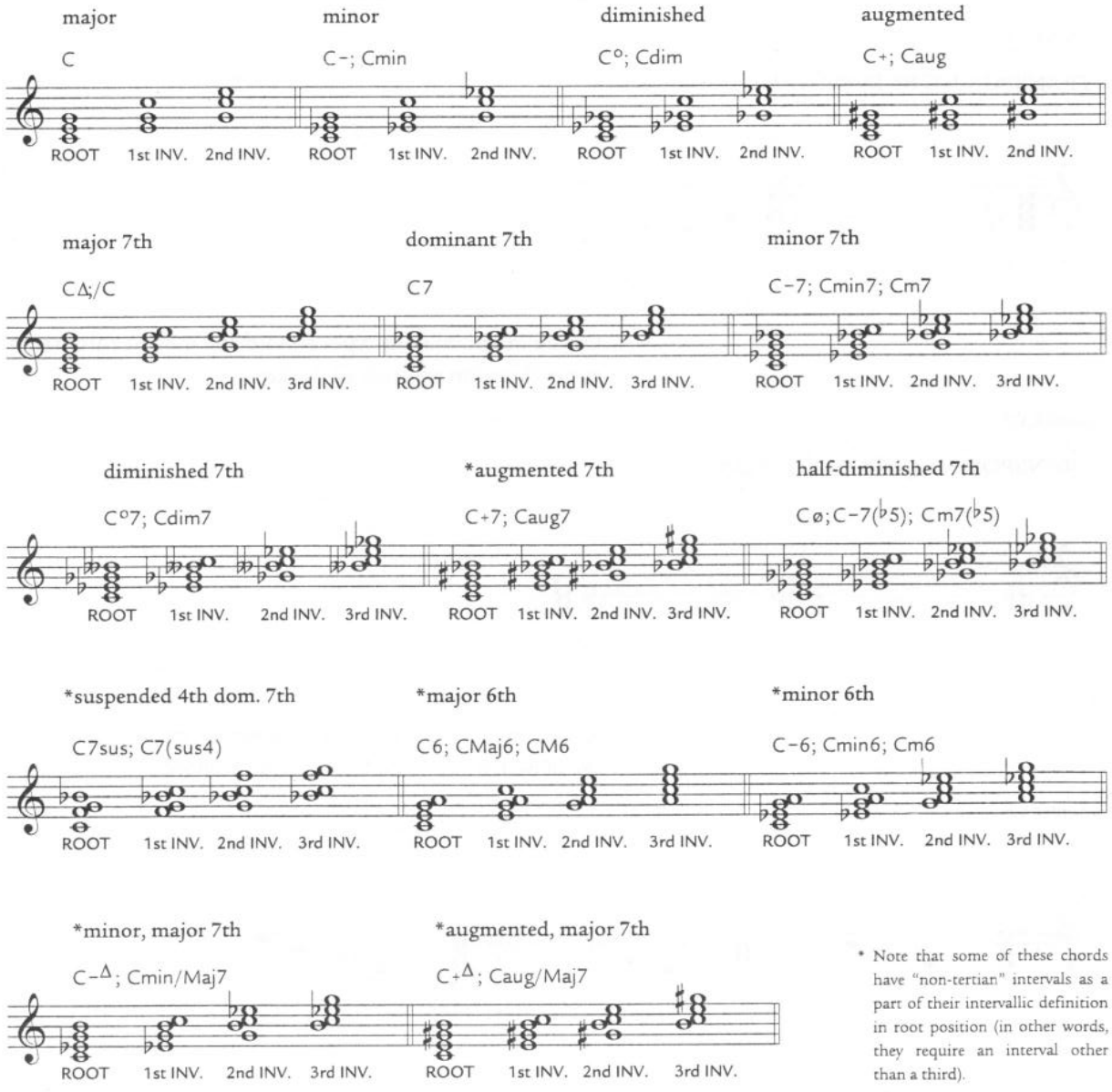
DOMINANT SEVENTH VARIANTS & SIXTH CHORDS
(key/root = C; reference = C major scale)



Just as individual intervals may be inverted, so chords may be. The following table shows the primary triads from Table 1.3 and each of their inversions. To reiterate, when the root of the chord is in the lowest voice (as in the chords shown in Table 1.3), the chord is said to be in root position. Inverting the chord so that its third is in the lowest voice is called *first inversion*. Similarly, chords are said to be in *second* and *third* inversions, respectively, when their fifth or seventh is made the lowest voice. (NOTE: in all inversions, strictly speaking, the ordering of notes within the chord remains the same. Other configurations of the notes within the chord may occur, but this sort of chord voicing, sometimes referred to as an open voicing, does not, strictly speaking, constitute an inversion of the chord.)

TABLE 1.5

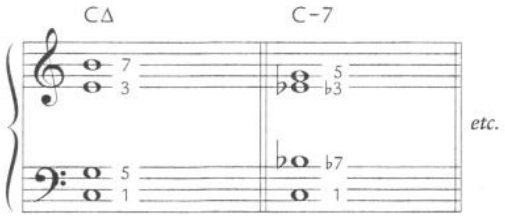
TRIADS, SEVENTH CHORDS, and their INVERSIONS
(key/root = C)



* Note that some of these chords have "non-tertian" intervals as a part of their intervallic definition in root position (in other words, they require an interval other than a third).

EXAMPLE 1.5

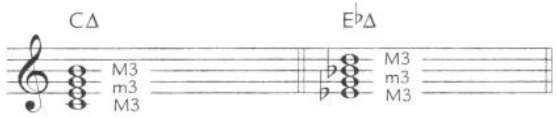
TYPICAL OPEN POSITION CHORDS
(as distinguished from inversions per se)



Obviously, it is indispensable to be able to play all of these chords in all twelve keys. You should create various exercises for yourself in order to master this task. You might begin by picking any chord type and recreating its formula on any degree of the chromatic scale. This is called transposing:

EXAMPLE 1.6

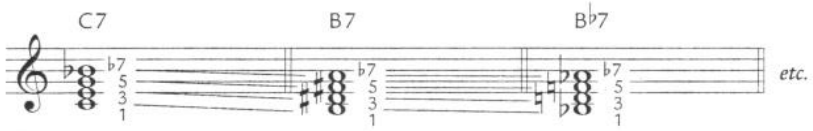
TRANSPOSING BY INTERVAL



Or you might take any type of chord and move it chromatically in either direction through all the keys.

EXAMPLE 1.7

TRANSPOSING CHROMATICALLY



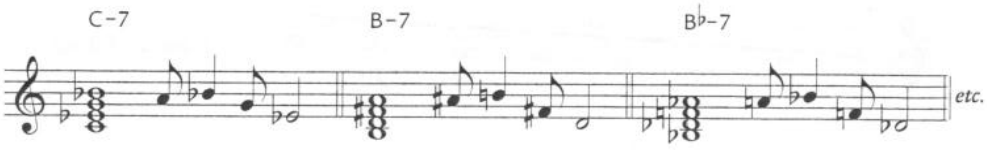
A good exercise to prepare for improvisation is to play the *arpeggios* of each of the inversions of a given chord...

EXAMPLE 1.8

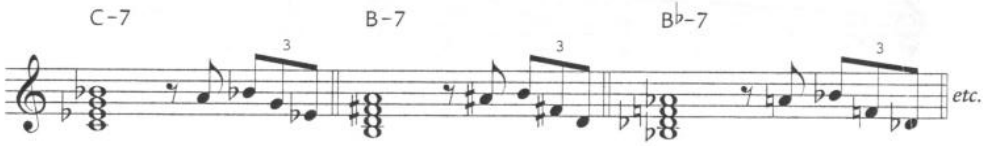
...or to add chromatic notes to the arpeggios in various rhythms.

EXAMPLES 1.9A & 1.9B

Example 1.8 could become:



...or:

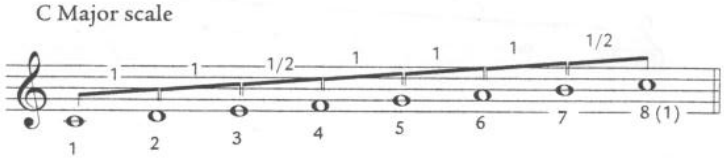


Diatonic Harmony

Diatonic is a word of Greek etymology which is colloquially used to mean "belonging to the scale." (In its strictest sense it means "two tones.") A chord, melody, or any harmonic phenomenon may be diatonic. Although the term generally refers to music diatonic to the major scale (see below), music may also be diatonic to any other mode or scale. Scales, like chords, each have an intervallic definition, only it is horizontal rather than vertical. Each scale has its own unique interval formula, which is generally comprised of a succession of steps and half-steps. The major scale is defined intervallically as follows:

EXAMPLE 1.10

C Major scale

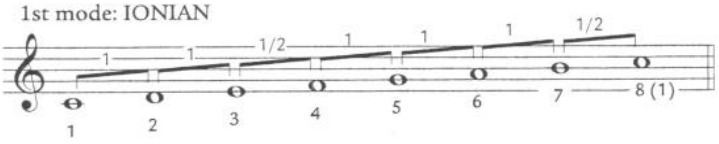


The major scale can be inverted by the same process as were the chords, that is, by keeping the notes in the same order but by establishing a different starting point. Each of the resultant "inversions" is referred to as a mode. These modes are said to be related, or relative to their parent scale. That is, they contain the same notes in the same order, but with a different point of origin. Each of these resultant modes has its own name of Greek origin, and its own intervallic definition, based on the new starting point.

TABLE 1.6

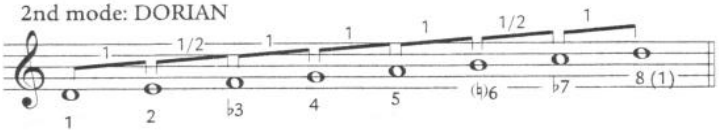
MODES of C MAJOR

1st mode: IONIAN



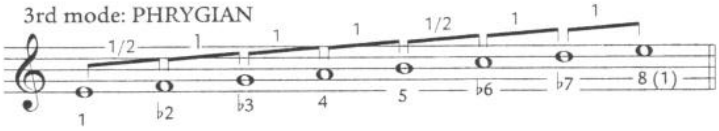
C Ionian (Major)

2nd mode: DORIAN



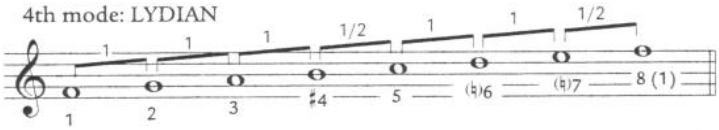
D Dorian

3rd mode: PHRYGIAN



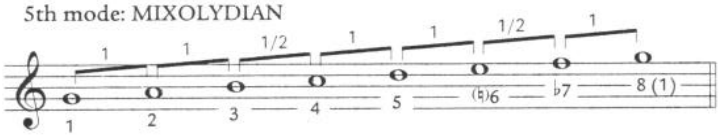
E Phrygian

4th mode: LYDIAN



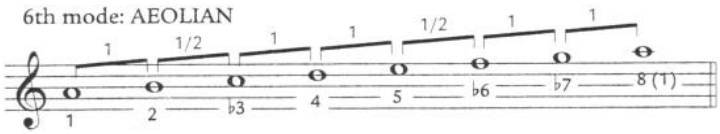
F Lydian

5th mode: MIXOLYDIAN



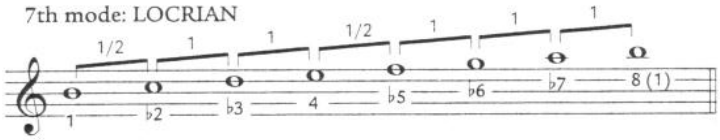
G Mixolydian

6th mode: AEOLIAN



A Aeolian

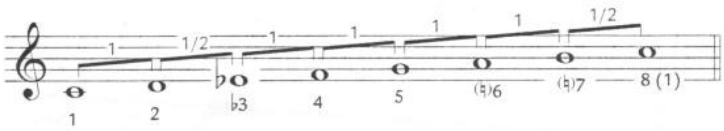
7th mode: LOCRIAN

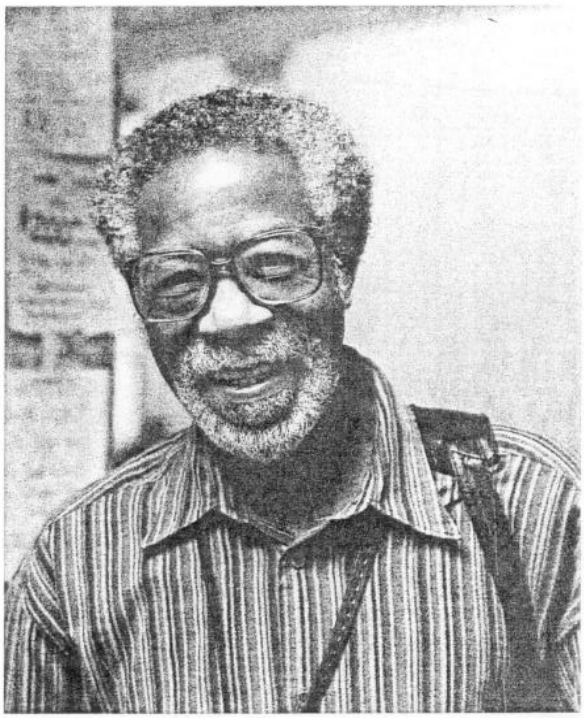


B Locrian

Of course there are many more different scale types than the major scale, from each of which related modes may be similarly derived. Though these resultant modes may not be as commonly used as those derived from the major scale, and may not have Greek names (or in some cases, any commonly agreed upon designation), the principle of deriving them remains the same, as does the notion of their each having an individual intervallic definition and a related parent scale. Aside from the major scale and its modes, the scale most commonly used to create such a system in the jazz idiom is known as the melodic, or jazz, minor scale. This scale can be thought of as being a major scale whose third has been lowered, and is equivalent to the ascending form of the traditional melodic minor. major and melodic minor scales, or modes based on the same root, are said to be parallel; thus, C melodic minor is said to be *parallel* to C major.

EXAMPLE 1.11





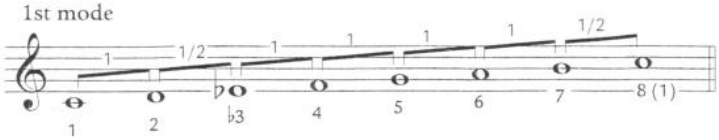
Joe Henderson (© Louis Ouzer)

The modes of C melodic minor (as well as their intervallic definition and, where applicable, their commonly used names) follow:

Table 1.7

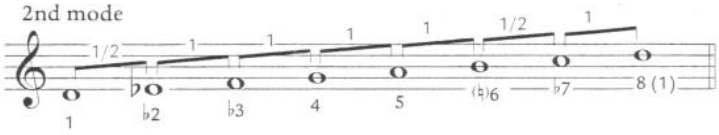
MODES of C MELODIC MINOR
(Note: E♭'s throughout)

1st mode



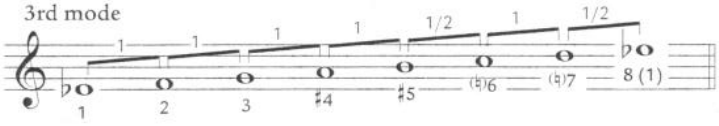
C Melodic minor

2nd mode



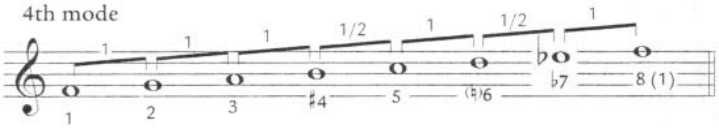
(no common designation)

3rd mode



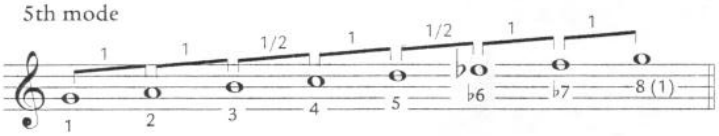
E♭ Lydian augmented

4th mode



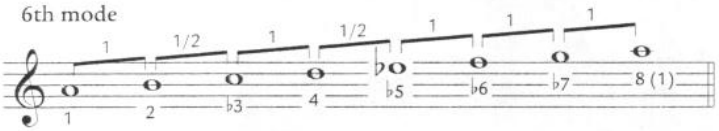
F Lydian ♭7

5th mode



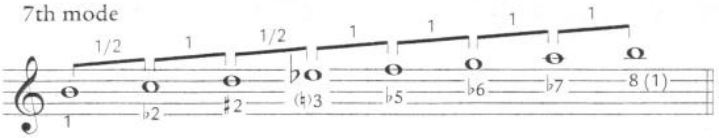
(no common designation)

6th mode



A Locrian ♮9

7th mode

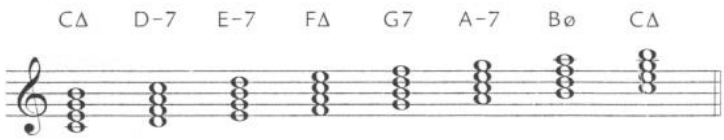


B Altered

Diatonic Seventh Chords in the Major and Parallel Melodic Minor Scales

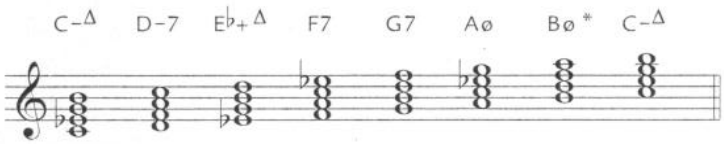
Each mode or scale has its own system of diatonic harmonies as well as its own modes. This system is created by building seventh chords on each degree of the scale or mode, using only notes from the mode. For example, in the C major system, the diatonic seventh chords would be:

EXAMPLE 1.12

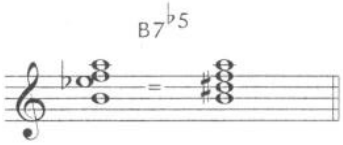


Likewise, in C melodic minor the following system would result:

EXAMPLE 1.13



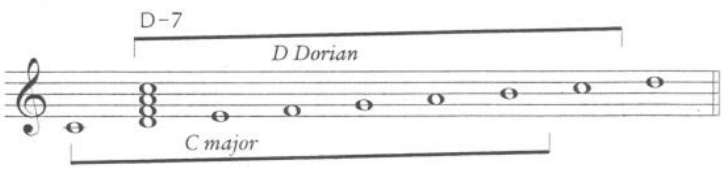
EXAMPLE 1.13A



** Note that in C melodic minor, the diatonic chord built on B might also be a dominant seventh, depending on which diatonic third above the B is used to construct the chord, D♮ or E♭.*

Also note that one could associate the modes built on each individual scale degree with the seventh chord built on that degree. Therefore, for example, in the key of C major it is common to use the D Dorian mode in conjunction with the D-7 chord, since each is an expression, vertical or horizontal, of the harmony associated with the second mode or degree of the C major scale.

EXAMPLE 1.14



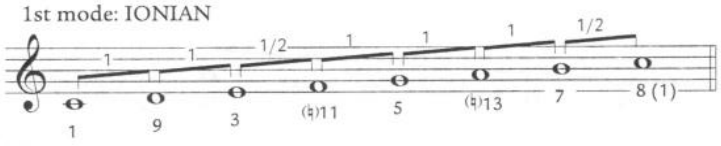
Obviously the ability to recognize areas of diatonic tonality and apply these principles will enable the composer/improviser to successfully use appropriate harmonic resources.

Compound Interval Nomenclature

At this point it is necessary to redefine the second, fourth, and sixth degrees of any scale. These may also be known as the ninth, eleventh, and thirteenth respectively. This nomenclature is achieved by adding 7 to whatever the original quality of these degrees of the scale might have been. For example, the second degree of the scale plus 7 becomes 9 (what this really means is the second degree of the scale in the presence of a seventh chord with which it is consonant). The same would be true of an eleventh being the fourth degree of the scale in the presence of a seventh chord with which it is consonant. Likewise, the thirteenth becomes the compound interval designation for the sixth degree of the scale or mode involved. In certain scales or modes these compound intervals may be ♭ or ♯, therefore their compound interval would be as well. For example, the lowered second degree of a scale would become ♭9, the raised fourth degree of a scale a ♯11, and so forth. Whether a note is raised or lowered it is always labeled in reference to the parallel major scale based on its root. The underlying principle is that, in the presence of the associated seventh chord, these notes may be thought of as extensions or colorations ("color tones") of the basic seventh chord. To return to Example 1.11, we can see how this completes our understanding of the vertical and horizontal interrelationship of diatonic chords and their associated modes. To summarize, a scale or a mode may be thought of as a horizontal expression of the seventh chord, complete with its three diatonically available extensions. Returning to Tables 1.6 and 1.7 above, each of the modes of C major and C melodic minor might be re-labeled as follows using compound interval notation for their passing tones:

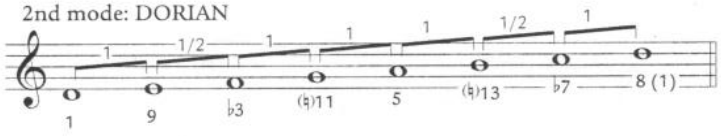
MODES of C MAJOR
(with extensions)

1st mode: IONIAN



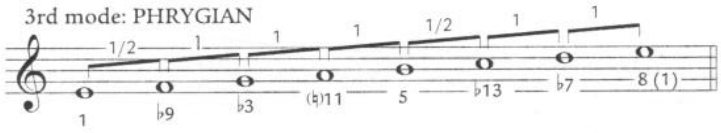
C Ionian (Major)

2nd mode: DORIAN



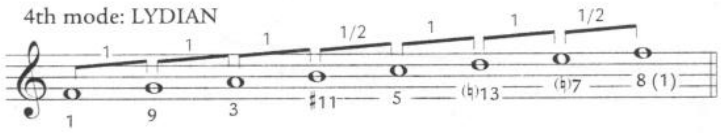
D Dorian

3rd mode: PHRYGIAN



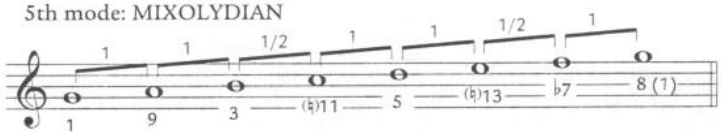
E Phrygian

4th mode: LYDIAN



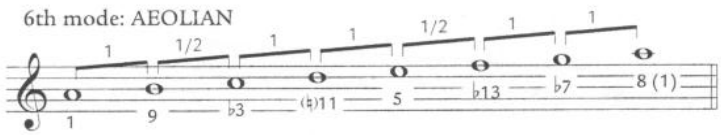
F Lydian

5th mode: MIXOLYDIAN



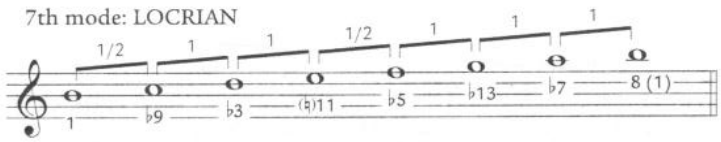
G Mixolydian

6th mode: AEOLIAN



A Aeolian

7th mode: LOCRIAN

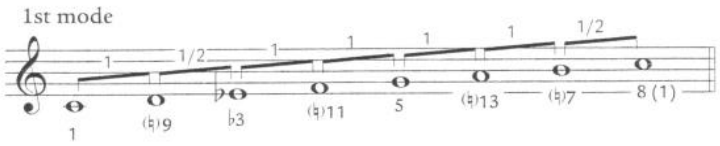


B Locrian

TABLE 1.9

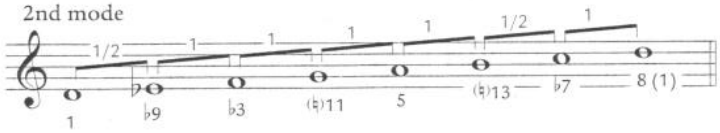
MODES of C MELODIC MINOR
(with extensions)

1st mode



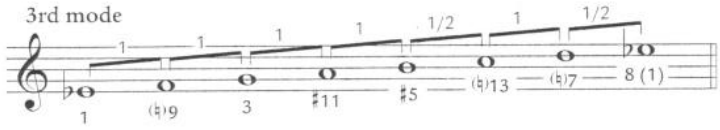
C Melodic minor

2nd mode



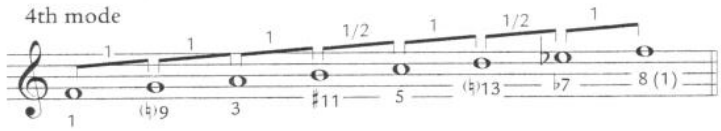
(no common designation)

3rd mode



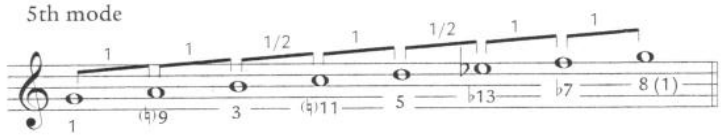
E♭ Lydian augmented

4th mode



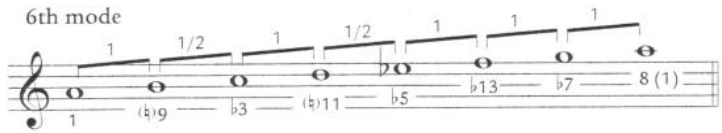
F Lydian ♭7

5th mode



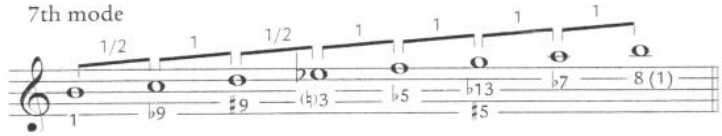
(no common designation)

6th mode



A Locrian ♮9

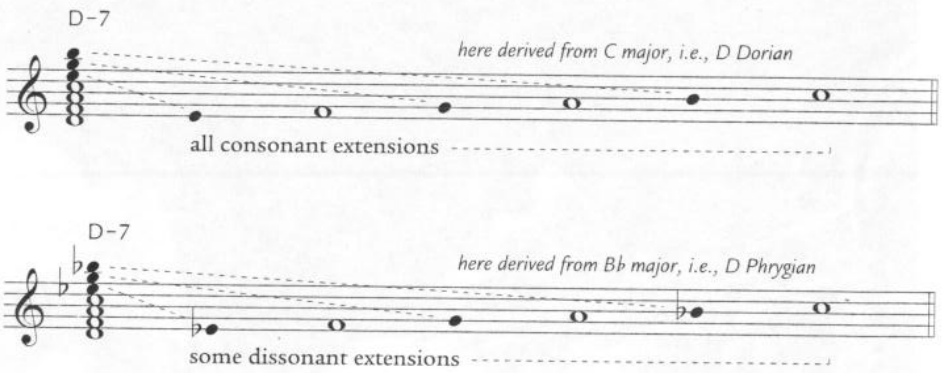
7th mode



B altered

It is important to note here that most chord types are diatonic to more than one scale or modal system, and therefore could be extended with slightly different combinations of color tones, depending on which mode or scale they were being derived from. As a general rule, such chord types are usually treated in improvisation or compositional contexts as if they had been derived from the modal choice which creates the most consonant relationships.

EXAMPLE 1.15



In this case, most composer/improvisers will opt for the first choice as it provides what are generally regarded to be more consonant extensions of the chord. Play the two examples, and see if you agree.

Suggested Exercises and Assignments:

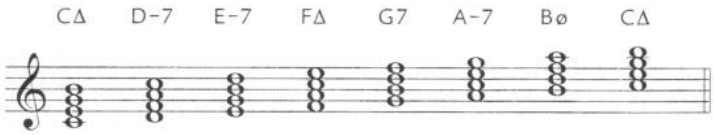
- Be able to write out the diatonic seventh chords and their extensions in all twelve major and melodic minor scales.
- Be able to write out basic seventh chords in any key.
- Be able to recognize basic seventh chords aurally (related ear-training).

Louis Armstrong (© Ray Avery's Jazz Archives)

DIATONIC AND MODAL CHORD PROGRESSIONS

Let's return to the diatonic system of harmony in C major.

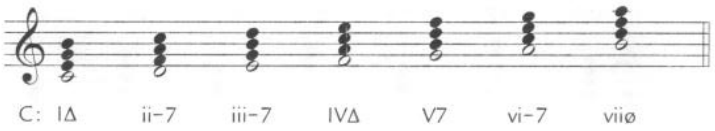
EXAMPLE 1.12



To facilitate harmonic analysis and aural recognition of commonly used chord progressions, Roman numerals are associated with each diatonic chord. Note that these contain all elements of the chord symbol, simply replacing the chord's root with a Roman numeral, I through VII. (Chords in which the interval between the root and the third of the chord is a minor third [like -7, ø, and °7 chords] are analyzed with *lowercase* Roman numerals, whereas chords in which the interval between the root and the third of the chord is a major third [like Δ, +7, and dominant 7 chords] are analyzed with *uppercase* Roman numerals.)

TABLE 2.1

DIATONIC CHORD FUNCTION



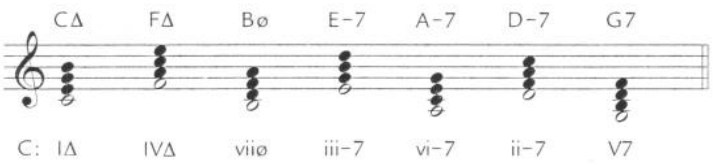
Although tonal chord progression is much more common than is modal chord progression, the same principles can be used to analyze diatonic harmony in modes.

Note that the interval from the tonic (Roman numeral I) of the scale or mode to the root of the chord is referred to as ♭ or ♯ in the Roman numeral just as it was in the original intervallic definition of the scale (see Chapter 1, Table 1.6). This is because the point of reference for all Roman numeral analysis is the parallel major scale, since it is by far the most commonly used. Note that it is always important to specify the exact interval from the root as well as the chord's quality in harmonic analysis in the jazz idiom since so often a high proportion of the harmonic material of a given progression will be non-diatonic, creating the temporary modulations and chromatic color which are so characteristic of the idiom. Thus, in C major tonality an FΔ chord is IVΔ, not just IV, since there are many other types of chromatically-altered or otherwise non-diatonic IV chords which might commonly be used for coloration in a piece without necessarily creating a change in the tonality (F7 in the key of C is IV7, for example). More about this topic in later chapters, especially in Chapter 7.

Major Key Progression and Function

Chord progressions rarely move in the parallel order shown in the examples above, and in tonal (as opposed to modal) circumstances are rarely purely diatonic. Most tonal chord progression moves in what is known as the "Cycle of Fifths," that is, chords follow one another whose roots are a fourth or a fifth apart within the system. Rearranging the diatonic seventh chords of the major scale to put them in this order yields the following:

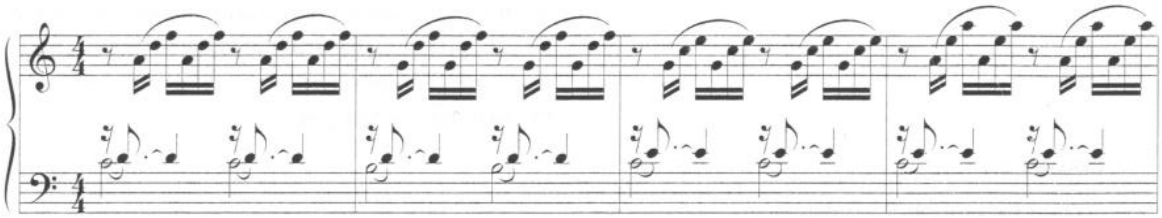
Example 2.1



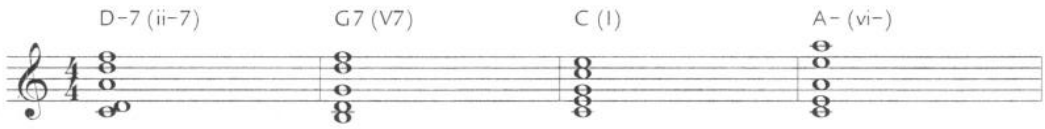
Elements of such cyclic diatonic progressions form the basis for most Western tonal music, and operate the same whether employed by Bach:

EXAMPLE 2.2

PRELUDE IN C – Johann Sebastian Bach
(from "The Well-Tempered Clavier," Bk. 1, ms.2-5)



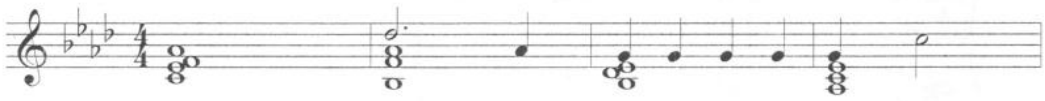
which reduces to...



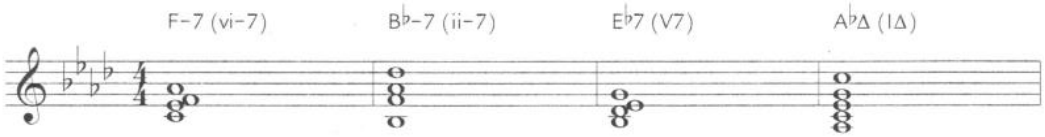
...or by Jerome Kern.

EXAMPLE 2.3

ALL THE THINGS YOU ARE – Jerome Kern
(ms.1-4)



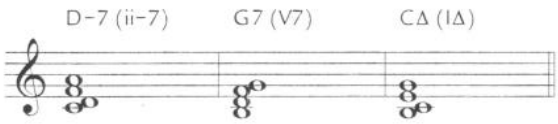
which reduces to...



Note that chord progression in the Cycle of Fifths produces *common tones* between adjacent chords in the system. When confronted with adjacent chord symbols in a progression where common tones exist, it is important to choose inversions which allow such common tones to remain in the same voices when moving from one chord to the next. The principle of exploiting common tones is called *voice-leading* and produces a more interesting sound, more clearly emphasizing those notes which change as the chords progress. Identifying these changing notes and bringing them out in improvisation is in the most basic way what is meant by "playing the changes."

EXAMPLE 2.4

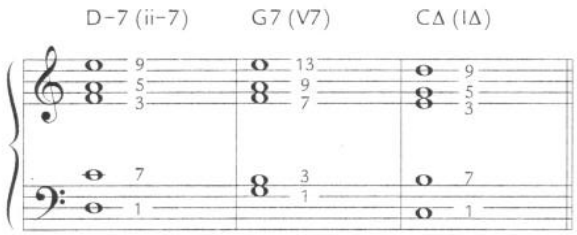
SIMPLE VOICE-LEADING
(typical Cycle of Fifths progression)



These voice-leading principles may be extended to color tones as well.

EXAMPLE 2.5

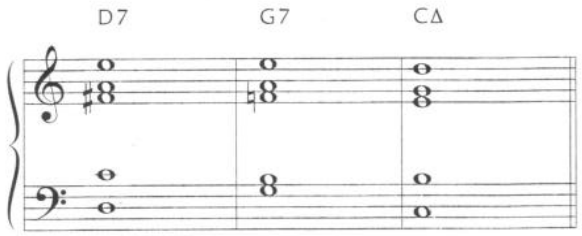
SAME PROGRESSION, but with extensions
(used in typical piano/arranging voicings)



Obviously the principle of voice-leading is important in any tonal chord progression, diatonic or otherwise, whether that progression is being expressed in actual chord voicings or one note at a time in an improvised melodic line.

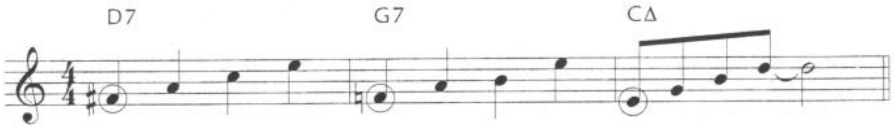
EXAMPLE 2.6A

VOICE-LEADING of a COMMON PROGRESSION,
expressed vertically



EXAMPLE 2.6B

SAME PROGRESSION,
expressed horizontally



Arpeggiating the voice-led seventh chords of any chord progression you are working on in the manner of Example 2.6B will help you hear its voice-leading better in both harmonic and melodic terms.

Functional Categories in the Major Key Diatonic System

The seven chords within the major key diatonic system have come to assume functions within the system which we might describe as stable and unstable. These functions are directly related to the presence or absence within the given seventh chord of the fourth and seventh degrees of the scale, the pitches which create the half-step relationships to the tonic and third degrees of the scale.

In jazz theoretical analysis, these relationships produce the following commonly used functional categories within the key:

SUBDOMINANT (SD):

· defined as containing scale-degree-4, but not scale-degree-7

· mildly unstable

· in the key of C, these would be D-7 (ii-7) and FΔ (IVΔ).

DOMINANT (D):

· defined as containing both scale-degree-4 and scale-degree-7

· most unstable

· in the key of C, these would be G7 (V7) and Bø (viiø).

TONIC (T):

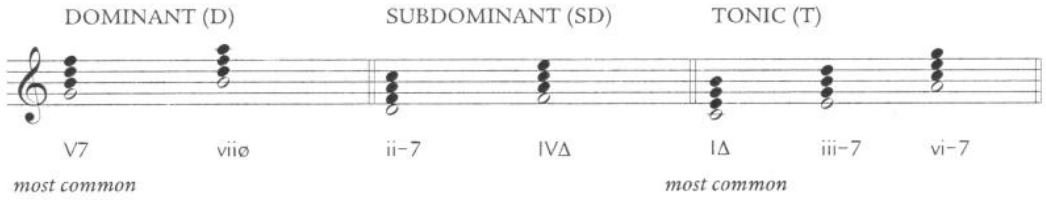
· defined as not containing the fourth scale-degree

· very stable

· in the key of C, these would CΔ (IΔ, primary) , A-7 (vi-7) and E-7 (iii-7).

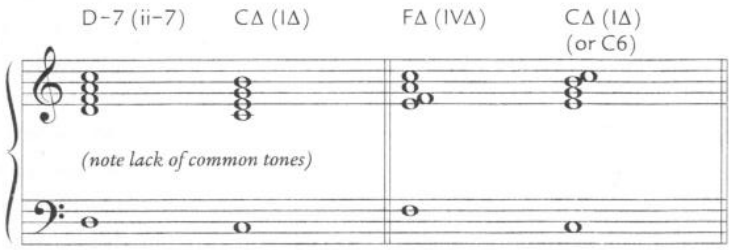
TABLE 2.2

FUNCTIONAL CATEGORIES

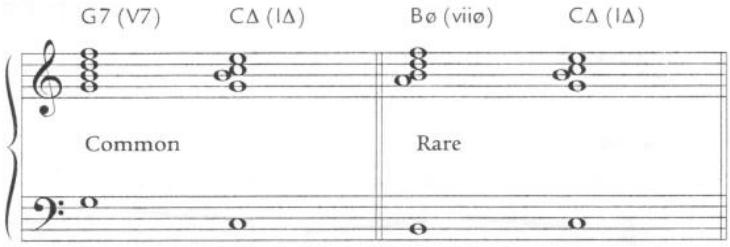


Progressions moving from subdominant to tonic are obviously less strong than those moving from dominant to tonic. All such progressions are called cadences, and can be *simple* (IV-I, ii-I, V-I) or *compound* (ii-V-I, IV-V-I). Such distinctions will apply in minor key harmony as well (see Chapter 7). Obviously the V7 chord has become the primary dominant seventh chord and the IΔ chord the primary tonic chord within the system, through common usage. This basic system of chord progression serves as the underlying harmonic basis for the functional harmony of most classical, popular, and standard song repertoire in Western music. As we will see, it provides such a strong intuitive and aural frame of reference in our musical conditioning as Western listeners that it can easily accommodate many types of non-diatonic and chromatic variations, which make individual progressions more interesting to us than a purely diatonic one would be. The following example illustrates the common cadences discussed above with use of basic seventh chord voice-leading:

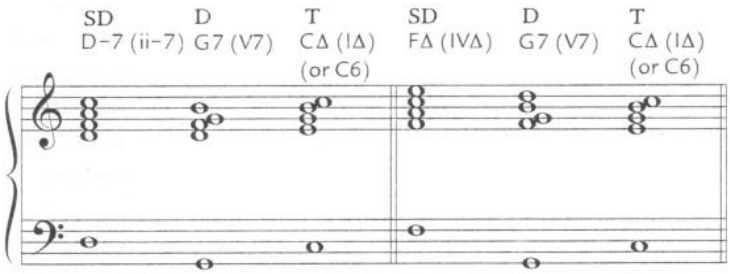
SIMPLE SUBDOMINANT CADENCES
(C major tonality)



SIMPLE DOMINANT CADENCES



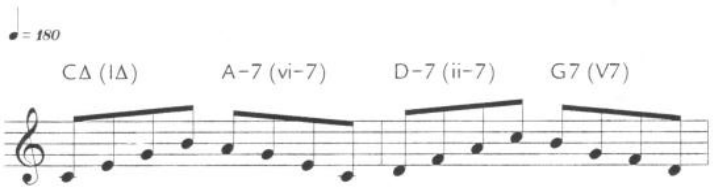
COMPOUND CADENCES



Modal Progression

The modal style, popularized in the jazz idiom by such artists as Miles Davis and Bill Evans (*Kind of Blue*), John Coltrane (*My Favorite Things*), and Dave Brubeck (*Time Out/Take Five*), relies on an extended elaboration of a single mode or scale, allowing for more freedom for the musician to develop his/her ideas outside the context of chordally based voice leading. Its inception was a reaction to what these and other masters of the idiom regarded as a lack of freedom in improvisation in Bebop and Post-Bop styles, due to what they had come to regard as their demanding constraints of harmony and tempo, which involved predominantly fast, functional, diatonically related harmony moving at a rapid rate of chord change (harmonic rhythm). These characteristics of the music often left the improviser with relatively few choices in executing the voice-leading of a specific progression.

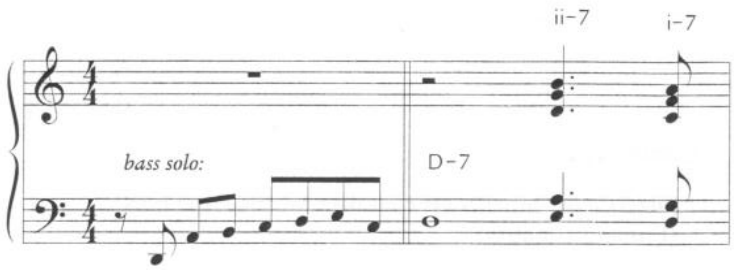
Example 2.8



By contrast, modal music seeks to establish harmonic redundancy and the absence of voice leading, often over a rhythmic foundation not in 4/4, not fast, and perhaps featuring an *ostinato* (repeating bass or other rhythmic pattern). Therefore, although modal systems have as many diatonic chords as tonal ones, "modal" progressions need to be kept very simple in order to sound like the intended mode rather than its related major tonality. In other words, it is necessary for the progression to remain simple and repetitive. The modal cadences which therefore tend to be the basis of such music are often simple, redundant and parallel. While a tonal cadence uses harmony to resolve the unstable fourth and seventh scale degrees, a modal cadence moves back and forth between a tonic of the mode to a neighboring chord in the mode, usually above or below the tonic in a stepwise relationship, over some sort of tonic based ostinato or pedal point. Miles Davis' *So What* is one of many such examples. Compare it to any bebop composition for density of harmonic rhythm, tempo, and functional harmonic cadence:

EXAMPLE 2.9

So What – Miles Davis
(pickups & ms.1)



In order to most clearly establish a particular mode, modal progressions tend to be purely diatonic to the mode. The juxtaposition of modal and tonal phrases or sections within the same composition is a compositional device which found much favor among jazz composers almost as soon as the modal style became popular. It is important always to realize that the development of the jazz idiom has been a combination of an aural tradition, passed down from musician to musician, and one which has been strongly influenced by the evolution of 20th Century recording technology and the immediate accessibility of new trends in music to all musicians within the idiom. Therefore various historical periods and influences tend to overlap, as do the lives of the players who created them. So within a period of a year or two it is possible to see dramatic changes in the development of the art form as documented by its most influential recordings, as was the case around 1960, when composers like Horace Silver integrated modal and tonal concepts of chord progression within the same composition. This is sometimes referred to as the mainstream style. Good examples of this sort of synthesis would be *Ugetsu* by Cedar Walton (indeed most music by the composer/arrangers writing for the Jazz Messengers), *Speak Like A Child* by Herbie Hancock (1968), and *Yeah* by Horace Silver (from his quintet's indispensable 1959 Blue Note album, HORACE-SCOPE).

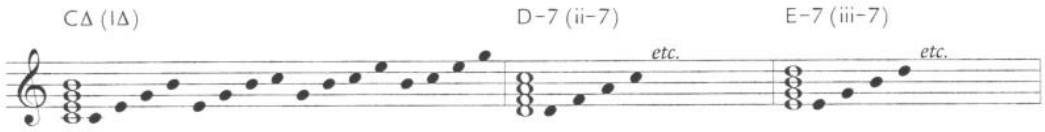
Herbie Hancock (© Ken Franckling. All rights reserved.)

Suggested Exercises and Assignments:

- Write out and label all diatonic seventh chords in major and parallel melodic minor tonality in various keys (ideally all twelve!);
- Arpeggiate diatonic seventh chords in major and parallel melodic minor scales, ideally all inversions;

EXAMPLE 2.10

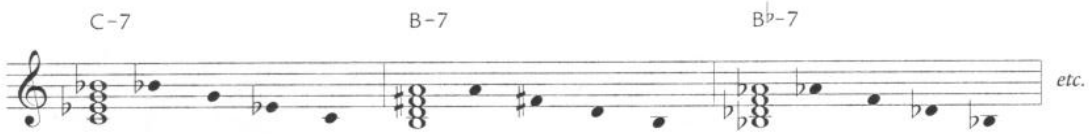
DIATONIC SEVENTH CHORD ARPEGGIATION
(C major tonality)



- Write out/arpeggiate each type of seventh chord moving down or up chromatically from any starting point;

EXAMPLE 2.11

CHROMATIC SEVENTH CHORD ARPEGGIATION
(example = -7 chords)



- Write out/play all modes of major and melodic minor scales in various (all) keys;
- Voice-lead the common cadences illustrated in Example 2.7 above in various (all) keys;
- Learn to identify these progressions, as well as each of the individual modes and chord types discussed to this point, aurally (i.e., do relevant ear training); and
- Discuss/analyze various examples from the repertoire of modal and tonal chord progression. Include especially those examples mentioned in the above discussion (also see Discography).

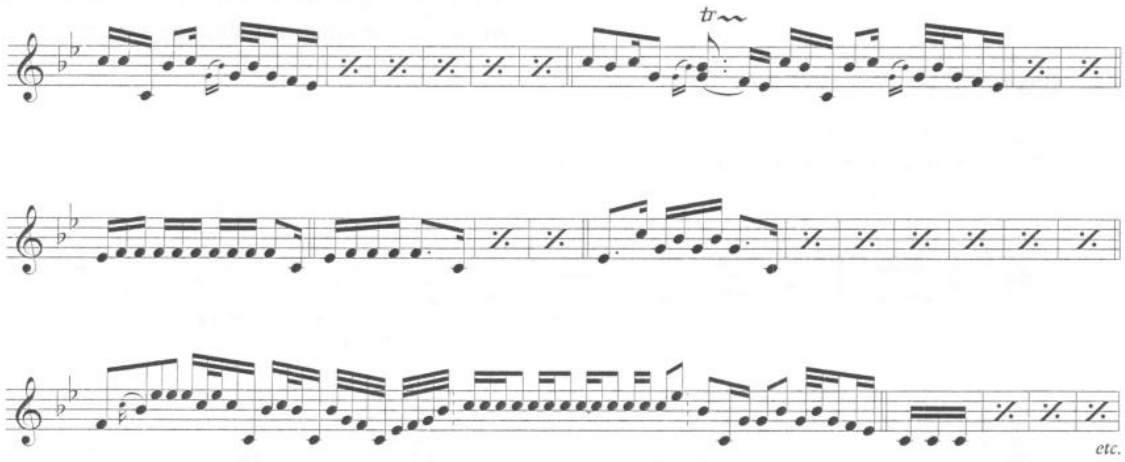
CHAPTER **Three**

THE BLUES

The Blues can be thought of as many things: a state of mind, a musical style unto itself, and, most significantly, a musical form; the most widely used musical form to have evolved in 20th Century music. The Blues form evolved in the United States as a synthesis of African and European musical elements. The most common Blues form is known as the twelve-bar Blues. African musical elements brought to bear on the Blues include: use of disjunct (leaping) melodies, the absence of harmonic accompaniment, the coexistence of duple and triple metric subdivisions of the measure concurrently (polyrhythm); and the use of "call-and-response" (a musical statement is made by one member of the group, and subsequently responded to by another member of the group or by the group as a whole). The following musical example, taken from an article by Lloyd Miller entitled "African and Turkish Roots of Jazz-Roots of the Blues" (from the International Association of Jazz Educators Jazz Research Papers, 1990), illustrates the use of these characteristics in an example of music from the Tuareg tribe of sub-Saharan Africa.

EXAMPLE 3.1

Tuareg Blues – Tuareg tribe



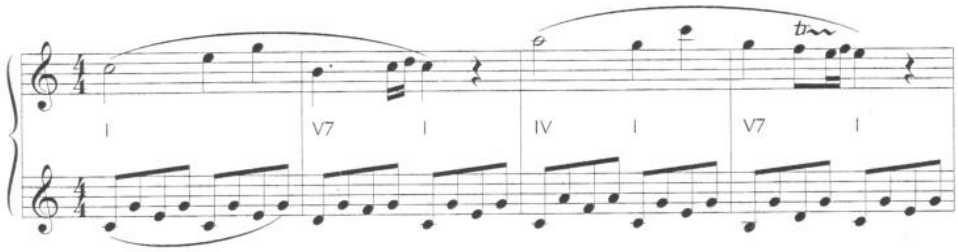
Miller, Lloyd. *African and Turkish Roots of Jazz – Roots of the Blues.* IAJE Research Papers, 1990, p. 70

The European music with which the African musical characteristics described above were blended to create the American musical idiom exhibited the following musical characteristics: periodic phrase length (four-bar phrases); use of conjunct (scale-wise) or arpeggiated melody; and, most importantly, the use of cyclic diatonic progressions and simple and compound cadences discussed in Chapter 2.

The following musical example, taken from the Mozart *Piano Sonata K. 545 in C Major*, illustrates the use of these elements.

EXAMPLE 3.2

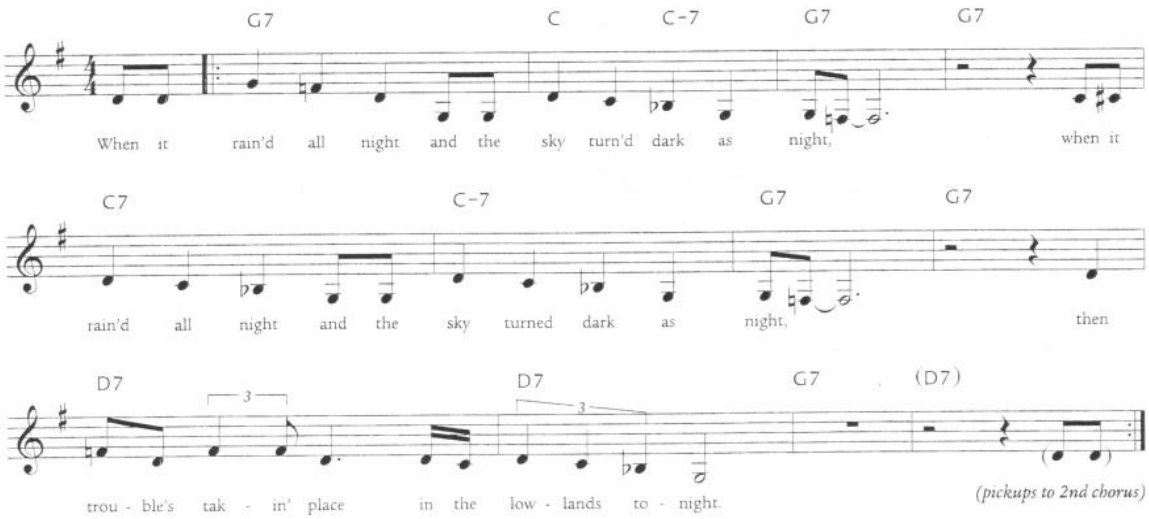
Piano Sonata in C Major, K. 545 – Wolfgang Amadeus Mozart
(ms.1-4)



The Blues form, like most instrumental forms, most likely originated as a duplication of a pre-existing vocal form and then evolved as a separate instrumental form on its own. Rural Blues vocalists, prior to this formalization of the twelve-bar Blues, sang phrases that lasted as long as was necessary for the lyric to be completed, pausing to breathe before proceeding to the next phrase. Therefore the placement of chords within the progression did not always occur after a specific number of bars, as is true in today's twelve-bar form. The evolution of the twelve-bar instrumental form as it is known today probably occurred in large part as a consequence of Blues singers being accompanied by instrumentalists other than themselves, which necessitated a more formal structure. An example of the sort of variable-length phrase structure of early vocal Blues follows (NOTE: such transcriptions are, by nature, rhythmically approximate):

EXAMPLE 3.3

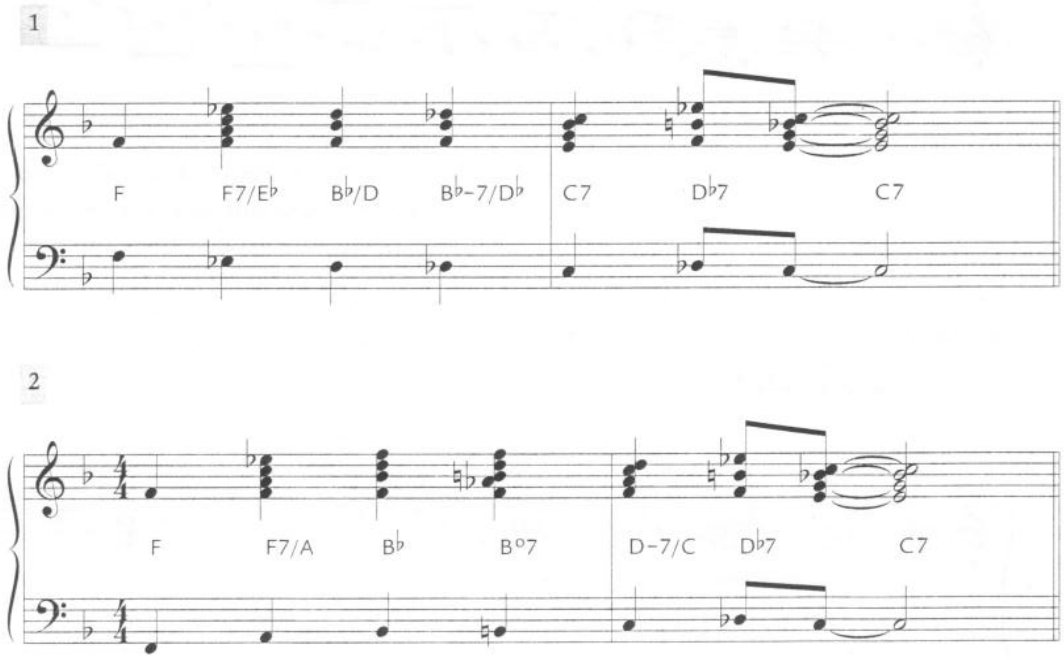
Backwater Blues, 1927
BESSIE SMITH, vocal & JAMES P. JOHNSON, piano



The Blues form in most common use today includes the three following important harmonic phenomena: First, there is a tonic chord which usually lasts for the first four bars of the form. The tonic chord in a Blues is a dominant seventh chord. This is different from the tonic chord in a diatonic setting, which is normally triadic, a Δ, or 6 chord. The reason that the tonic chord in a Blues is a dominant seventh chord is because the chord accommodates the blue note, ♭7, of the Blues scale (see Example 3.7). The second important harmonic phenomenon in the Blues form is the move to the IV chord, also a dominant seventh, in measures 5 and 6, prior to the return to the tonic dominant seventh chord in measures 7 and 8. The third significant harmonic phenomenon of the Blues form is the cadence. The cadence is usually one of the two compound cadences discussed in Chapter 2; ii-V or V-IV, with each chord lasting one bar during the ninth and tenth bars respectively. Which cadence is used is largely a function of style. As we will see in later chapters, the Blues form is remarkably flexible and has been able to adapt to all of the various stylistic evolutions which have occurred throughout the jazz idiom. The Blues form can range from extremely simple to extremely complex, harmonically speaking, depending on the complexity of the harmonic material which is used to fill in the spaces between the three primary seventh chords, I, IV, and V (see also Chapter 8). Measures 11 and 12 of a Blues usually involve some sort of diatonic turnaround (I-vi-ii-V), or one of several stylized Blues endings (these Blues endings usually reiterate the entire progression in the space of the last two bars):

EXAMPLE 3.4

Typical Blues Endings found in ms. 11 and 12



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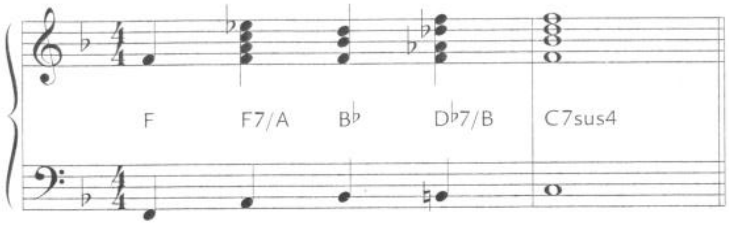
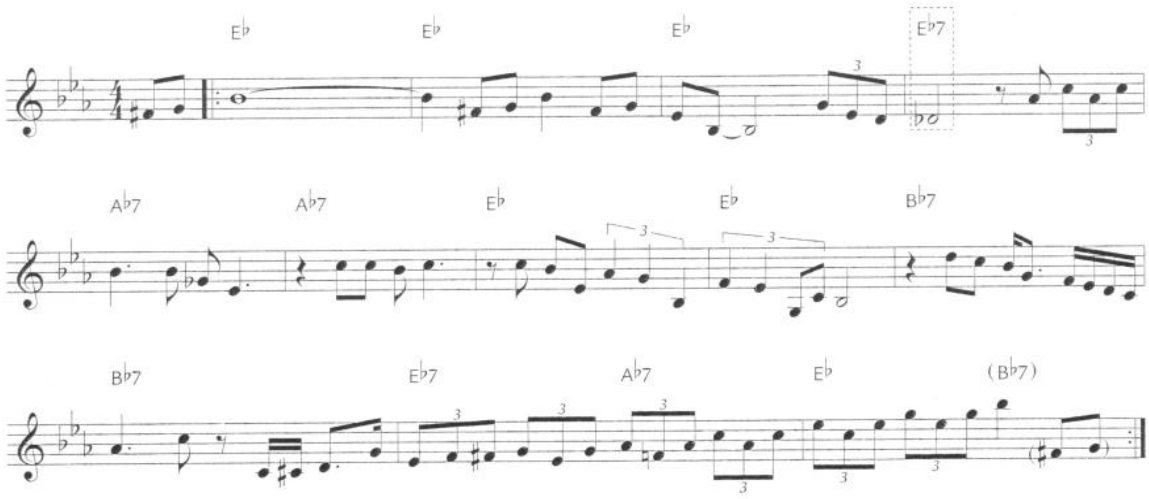


In some early Blues, the tonic chord is a simple triad, only becoming a dominant seventh chord in m.4, making the move to the IV chord in the fifth measure sound even more dramatic. A good example of this is *West End Blues* by Joseph Oliver and Clarence Williams, from 1928.

EXAMPLE 3.5

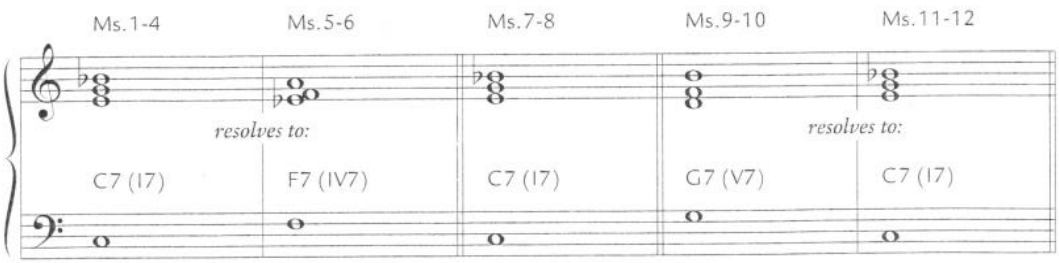
West End Blues – Joseph Oliver/Clarence Williams (as performed by Louis Armstrong)



In ms.9-10, in the final cadence of the Blues, we have yet another V7 cadence. Therefore, we may think of the Blues progression as being in constant motion from one dominant seventh chord to the next, or as a series of dominant seventh resolutions.

EXAMPLE 3.6

PRIMARY BLUES CHORDS
(key/root = C)

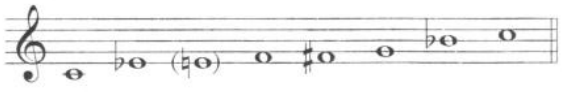


The Blues Scale and its Effect on the Evolution of Contemporary Jazz Harmony

The term "Blues scale," though widely used, is really a misnomer. The Blues scale is more of a common practice phenomenon than a formal scale per se. The following is the generally accepted sequence of pitches of the so-called Blues scale:

EXAMPLE 3.7

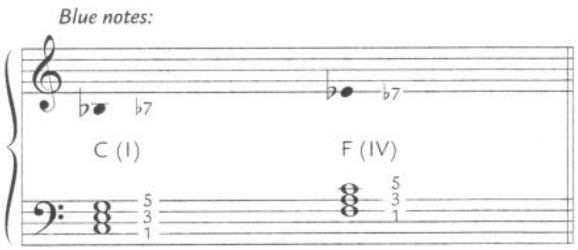
C Blues scale



Interestingly, this scale contains all of the same pitches relative to the tonic which were used in Example 3.1. Obviously, the melodic elements of the Blues are African in origin. Coincidentally of course, there is some overlap between the pitches in the Blues scale and those in the diatonic scale. Therefore, the pitches in the Blues scale which turn out not to be included in the parallel diatonic scale; ♭3, ♯4/♭5, and ♭7 known collectively as the "Blue Notes," are the ones which bear the closest scrutiny in terms of their effect on the evolution of harmonies characteristic of the jazz and Blues idioms. Western European music, whether classical or secular, employs the kinds of chord progressions and cadences discussed in Chapter 2. The three primary triads borrowed from the diatonic system for use in the Blues, are I, IV, and V. The superimposition of the notes of the Blues scale on these three primary triads has two important effects. First, it converts the tonic and subdominant triads into dominant seventh chords:

EXAMPLE 3.8

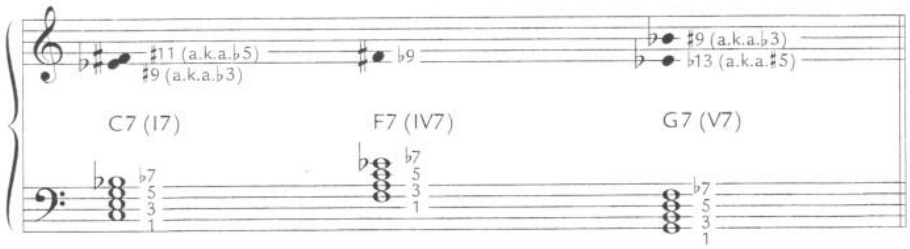
HARMONIC EFFECTS of BLUE NOTES
on PRIMARY BLUES TRIADS



Second, it creates interesting relationships in terms of the addition of color tones or "extensions" ("tensions"), especially on the V7 chord.

Example 3.9

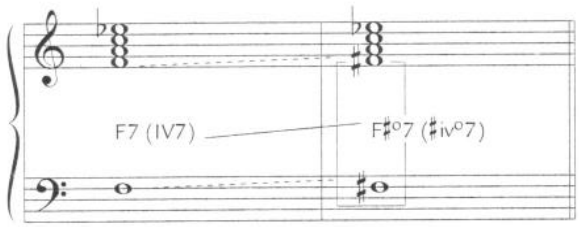
COLORATION EFFECTS of BLUE NOTES
as EXTENSIONS of PRIMARY BLUES SEVENTH CHORDS



Third, the blue note ♯4 often occurs in the bass in ms.2 or 6, immediately following the IV chord, replacing its root in the bass to create the ♯iv°7 chord (also refer here to Chapters 5 and 11):

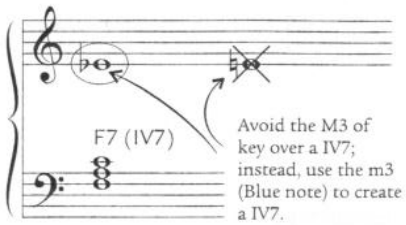
Example 3.10

IV7 – ♯iv°7, in ms.5-6 of BLUES



In actual performance, the notes of the Blues scale are often sung or played in such a way that their pitch falls slightly between the discrete tones of the chromatic scale. This effect can be achieved in various ways. A vocalist may sing between pitches, a brass instrumentalist may mute the instrument in such a way that its pitch can be "bent." Guitar players may bend the strings, sometimes in conjunction with striking a drone string at the same time. Pianists may slide from black note to an adjacent white note using the same finger, also possibly while at the same time playing another note above or below (probably an imitation of the drone performance style as having been learned from guitar or banjo. A pianist to listen to for this effect, the so-called "crushed note," is New Orleans pianist James Booker.) The only harmonic prohibition which really exists between accompaniment, harmony, and Blues melodic practice occurs on the IV7 chord. On the IV7 chord, it is important to play the minor third of the key (blue note ♭3). This note is the -7 of the IV7 chord. This melodic emphasis on the blue note ♭3 creates the illusion of temporary shift to the parallel minor. Likewise, it is equally important to *avoid* the major third of the *key* when playing the IV chord.

EXAMPLE 3.11



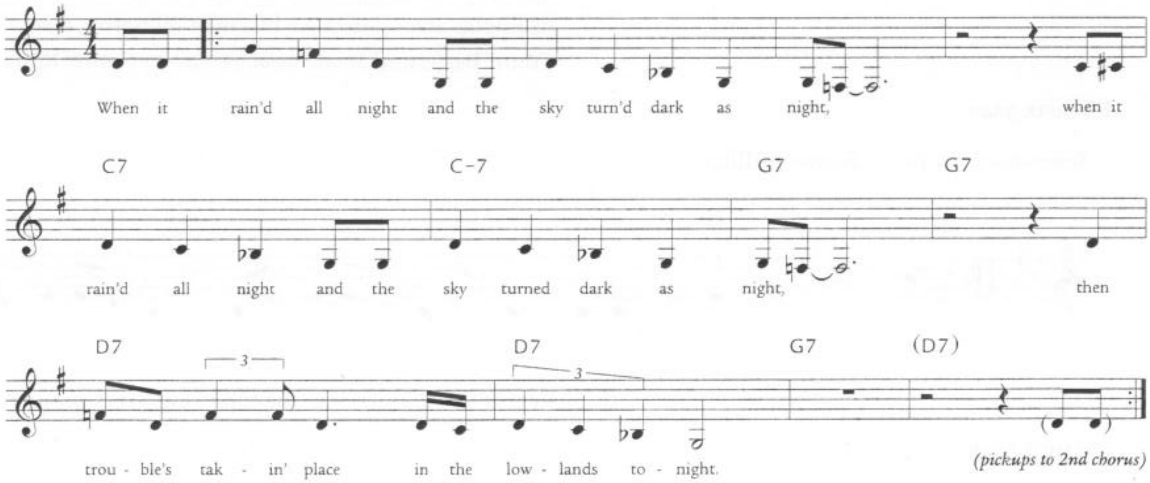
It is important to note here, as will become obvious from examination of the suggested examples listed later in this chapter, that Blues melodies do not always contain notes exclusively from the Blues scale, that often a Blues melody contains notes from the diatonic or chromatic scale as well. It is important also to understand that as a larger principle, the superimposition of blue notes on other diatonic and diatonically related harmonies both within and outside of the Blues form, has had an impact on the evolution of jazz harmony.

The Three Primary Types of Twelve-Bar Blues

The aab Blues form, is a twelve-bar form involving two repetitions of a four-bar a phrase or lyric through measures 1-8, followed by a four-bar b phrase or answer in ms.9-12, coinciding with the cadence. This form clearly has its origins in vocal Blues form; it tells a story. The first line is repeated twice as a call over ms.1-8, then answered as a response in ms.9-12. Good examples of this in the vocal form are: *Backwater Blues* by Bessie Smith, *Everyday I Have the Blues* by Joe Williams with Count Basie, *Sent For You Yesterday* by Jimmy Rushing with Count Basie, and *Everybody Wants to Know Why I Sing the Blues* by B.B. King.

EXAMPLE 3.12 (3.3)

Backwater Blues – Bessie Smith

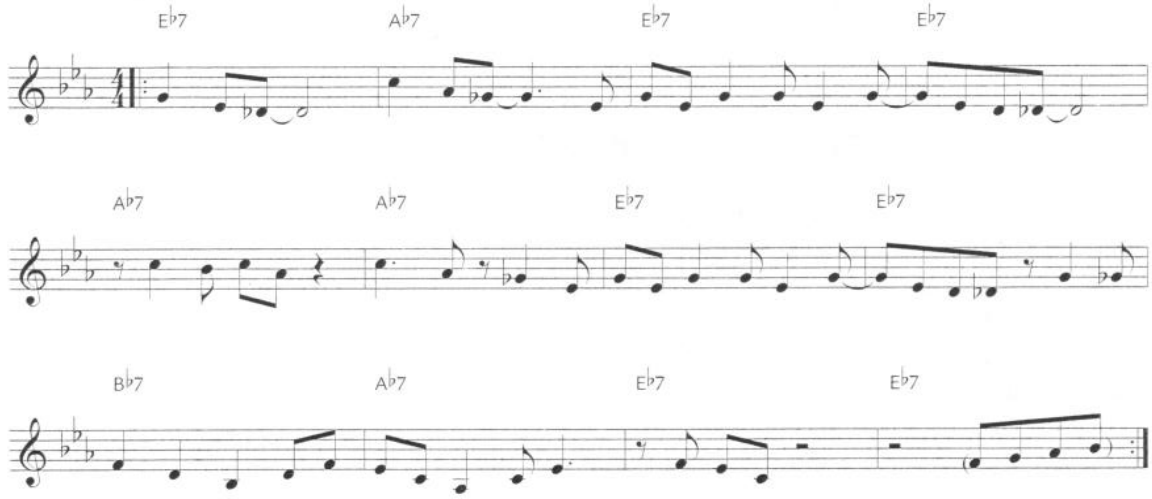


Examples of instrumental Blues in the aab melodic form are: *Billie's Bounce* by Charlie Parker, *My Blues* by Slide Hampton (from the Dexter Gordon album *A Day in Copenhagen*), and *Equinox* by John Coltrane.

The next most common twelve-bar Blues melodic form used in the jazz idiom is a variation of the aab form in which the second repetition of a in ms.5-8 is varied in its first two bars before returning in ms.7-8 to the same material as was used in ms.3-4. This form could then be termed aa'b. Examples of this variation form are *Bessie's Blues* by John Coltrane and *Straight, No Chaser* by Thelonious Monk.

Example 3.13

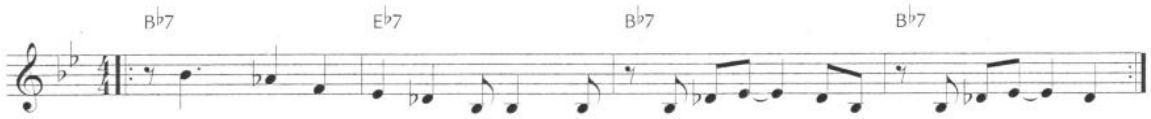
Bessie's Blues – John Coltrane



The third category of Blues melodic form in widespread use in the twelve-bar Blues form is the "riff" Blues, in which the same melody repeats throughout the twelve bars, without any variation. Examples are: *C Jam Blues* by Duke Ellington, *One O'Clock Jump* by Count Basie, and *Sonnymoon for Two* by Sonny Rollins.

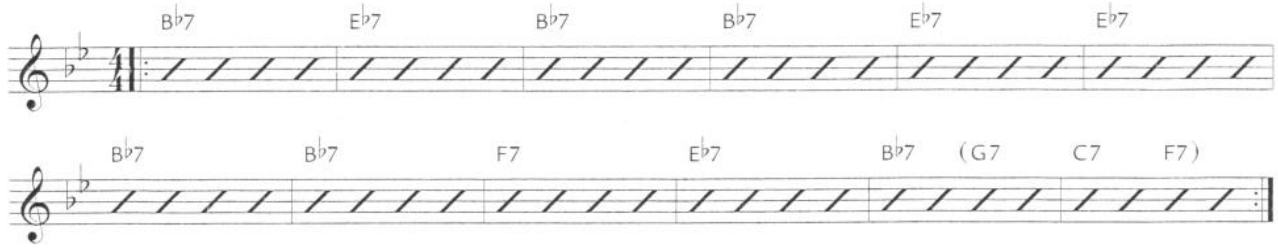
Example 3.14a

Sonnymoon for Two – Sonny Rollins



Repeat three times over the following Blues progression:

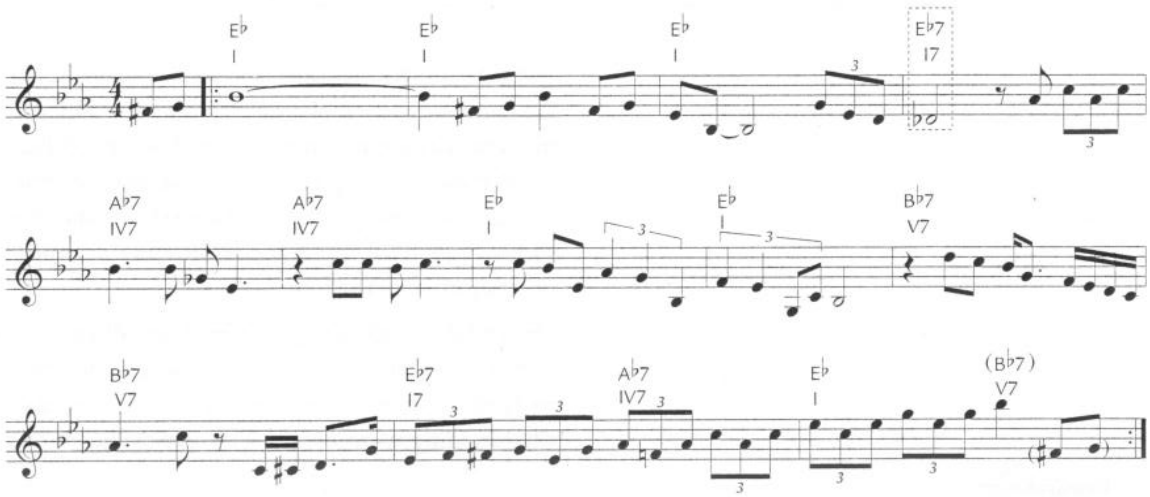
Example 3.14b



In each of these three styles of Blues, there is a point of harmonic inactivity prior to the primary cadences in ms.5 and 9. These points of inactivity, in ms.4 and 8, originally existed as points at the ends of phrases where vocalists could breathe prior to beginning the next phrase. As blues harmony evolved, incorporating increasingly more sophisticated harmonic devices, we see these measures being filled in by instrumentalists in ways that reflect this evolution. If we go back to the earlier example of *West End Blues* by by Joseph Oliver and Clarence Williams, we can see how in m.4 the primary tonic triad became a dominant seventh chord, creating more momentum and drama in the resolution to the IV7 chord in m.5.

EXAMPLE 3.15 (3.5)

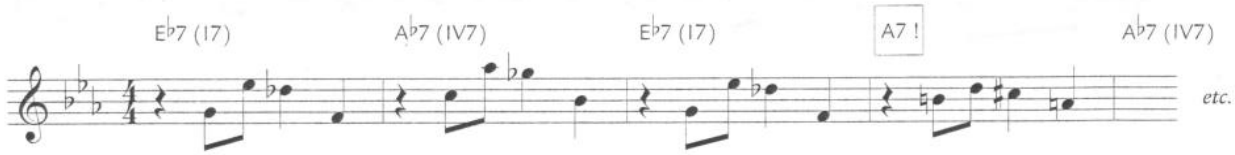
West End Blues – Joseph Oliver/Clarence Williams



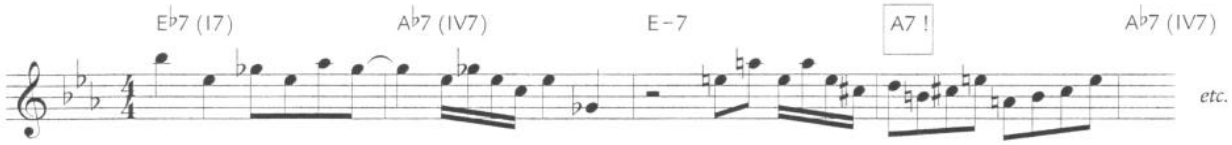
In an interpretation which reflects a more modern harmonic vocabulary, McCoy Tyner's solo on Coltrane's *Bessie's Blues*, mentioned earlier, shows the systematic use of a dominant seventh chord a half-step above the IV chord in m.4, creating a chromatic resolution to the IV7 chord in the fifth bar of the form. In subsequent choruses he develops this harmonic device by preceding the added A7 chord with related cadential harmony.

EXAMPLE 3.16

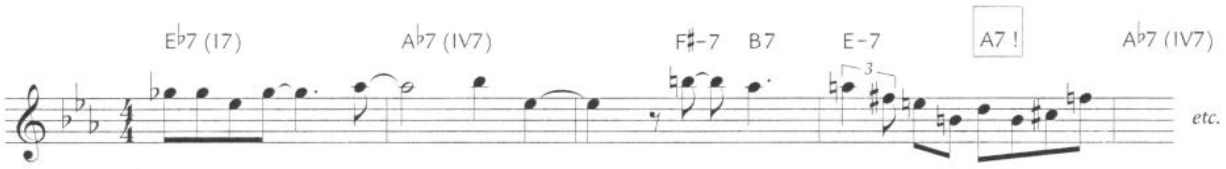
Bessie's Blues – J. Coltrane (McCoy Tyner's solo)
first chorus; ms.1-4



second chorus; ms. 1-4



fourth chorus; ms.1-4
(approximate rhythms)

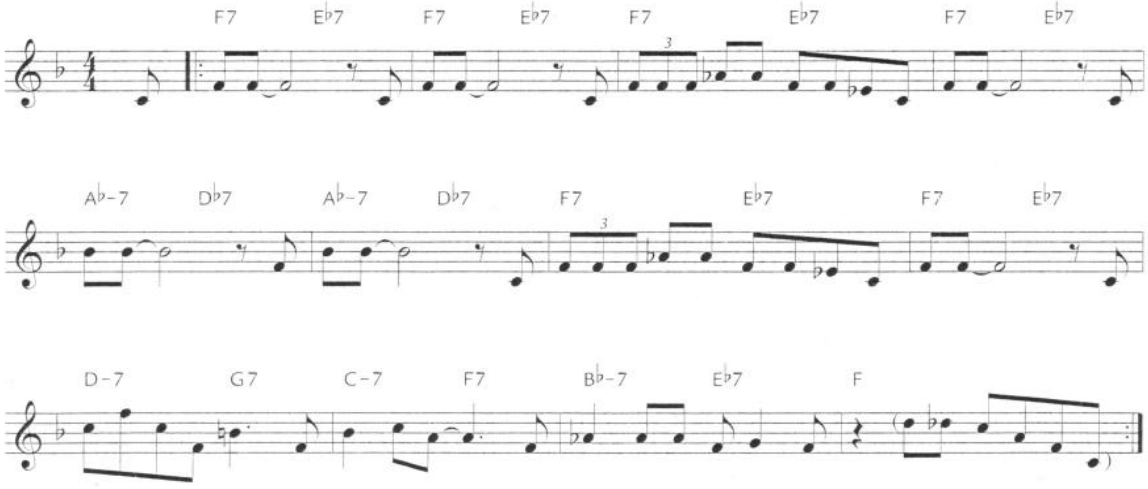


As we discuss further categories of non-diatonic harmonies which are commonly used, we will see how virtually all of these more modern harmonic techniques are brought to bear on the Blues form, always with a goal of enhancing the movement to the three primary harmonic goals of a Blues: the IV chord in the fifth bar, the cadence in the ninth and tenth, and the return to the tonic at the beginning of the form.

The strophic (aab), or verse form of the Blues, is so strong that it is even possible to convey the sense and feeling of Blues form without using the three primary Blues chords. For example, Charles Mingus creates a melody in *Nostalgia in Times Square*...

EXAMPLE 3.17

Nostalgia in Times Square (originally recorded in the key of E♭) – **Charles Mingus**



...which has a complete aab twelve-bar melodic form of the first type. However, when one examines the harmony Mingus puts beneath this melody, it is difficult to analyze in terms of the traditional three primary chords or harmonic phenomena which one associates with Blues form. Specifically, there is no IV chord in the fifth bar. Is this a Blues?

Suggested Exercises and Assignments:

An obvious project for the end of this unit is to write a twelve-bar Blues. Try to stay strictly within one of the three styles (aab, aa'b, or riff Blues). However, do not feel confined exclusively to the Blues scale when writing the melody. As in such melodies as *Straight, No Chaser* and *Bessie's Blues*, it is possible to have chromatic and diatonic notes in a Blues melody as well. However, strive to keep the melody simple and singable. Remember the origins of the Blues are vocal and you should be able to sing anything you write. Once you've written your Blues, harmonize it. Again, stick to basic harmonies. Choose a I7 chord in the beginning, a IV7 chord in m.5, and either the ii-V or V-IV cadence in ms.9-10. Use a Blues ending of your choice or a diatonic *turnaround* (see glossary) for ms.11-12 (which one sounds best may depend in part on the nature of your melody). Be sure you have points of rest in ms.4 and 8 as you may wish to return to this project when we learn more sophisticated harmonic techniques in later chapters, filling in these measures at that point with these more advanced *interpolated* harmonies (see Glossary). Remember, if you use melody notes from the diatonic or chromatic scale in addition to the notes of the Blues scale in creating your melody, you must be sure to emphasize the flatted third of the tonality on the IV7 chord in m.5. Once you are satisfied with the Blues melody and progression you have created, learn it another key, but without music (i.e., do it entirely by ear).

Charles Mingus (© Ray Avery's Photo Archives)

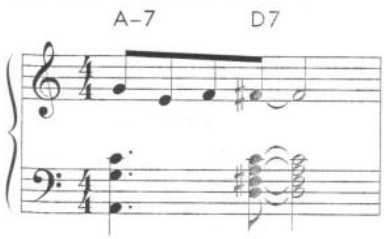
LEAD SHEETS, SONG FORMS, AND MELODIC VARIATIONS

A lead sheet is the format generally used by jazz musicians working in a solo or small group context. The notation of a lead sheet includes the unembellished melody and basic chord symbols for the composition. Elements of interpretation and style are up to the performer. Chord symbols are placed above the melody and measure to which they apply. When one chord symbol is indicated per measure it is assumed to apply to the entire measure. Accompaniment may occur with whatever rhythm is stylistically appropriate to the composition. When two chords per measure are indicated in 4/4 meter, it is generally assumed that they will occur in half note, or two beat per chord harmonic rhythm. It is further assumed that the performer will make adjustments to the harmonic rhythm to accommodate points at which the melody *anticipates* chord changes rhythmically (see below).

EXAMPLE 4.1A & 4.1B

written:

interpreted:

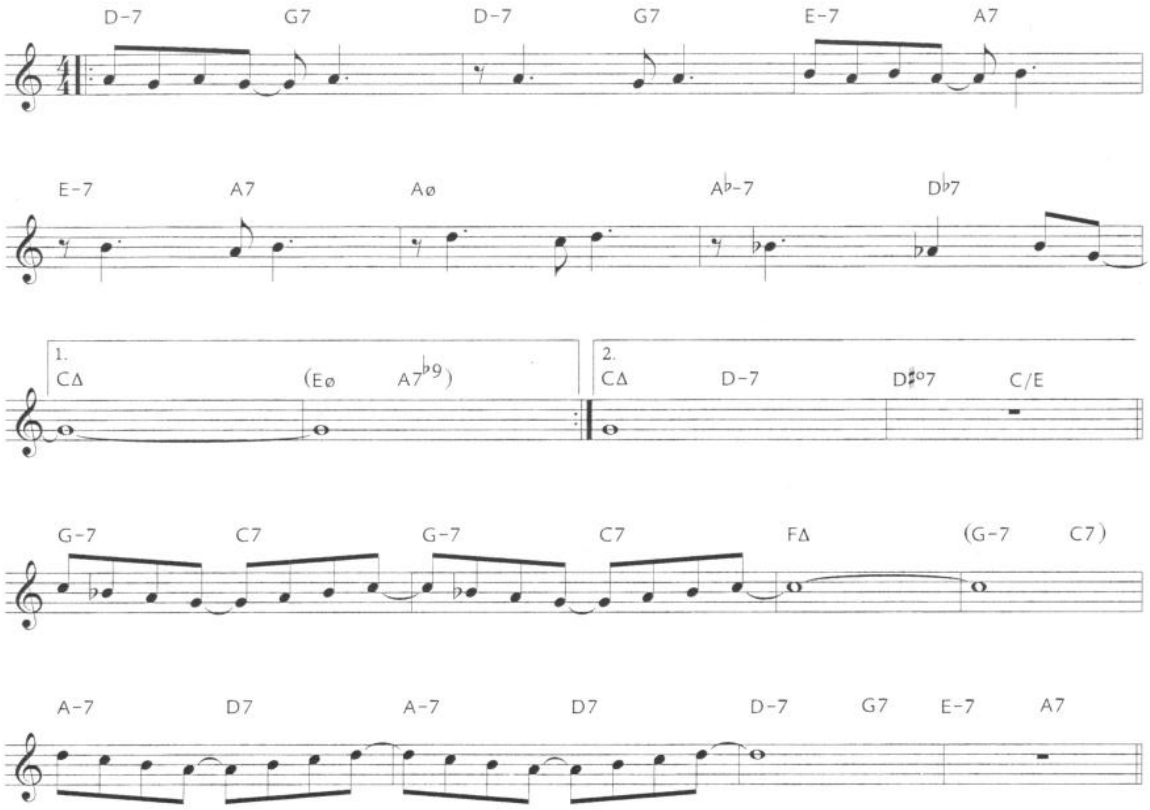


Forms

Aside from the twelve-bar Blues, the most commonly occurring song form in use within the repertoire of jazz and popular compositions employed by jazz musicians is the thirty two-bar song form. There are two basic types of thirty two-bar song forms in use, the AABA song form and the ABAC song form. Each section of the form is generally eight bars in length, though there are exceptions, of course. The AABA thirty two-bar song form, as its name implies, involves two repetitions of an eight-bar A section, followed by an eight-bar B or bridge section, which connects the first two As to the final A, which in turn completes the form. The following example, *Satin Doll* by Duke Ellington, presented in lead sheet form, illustrates an AABA song form.

Example 4.2

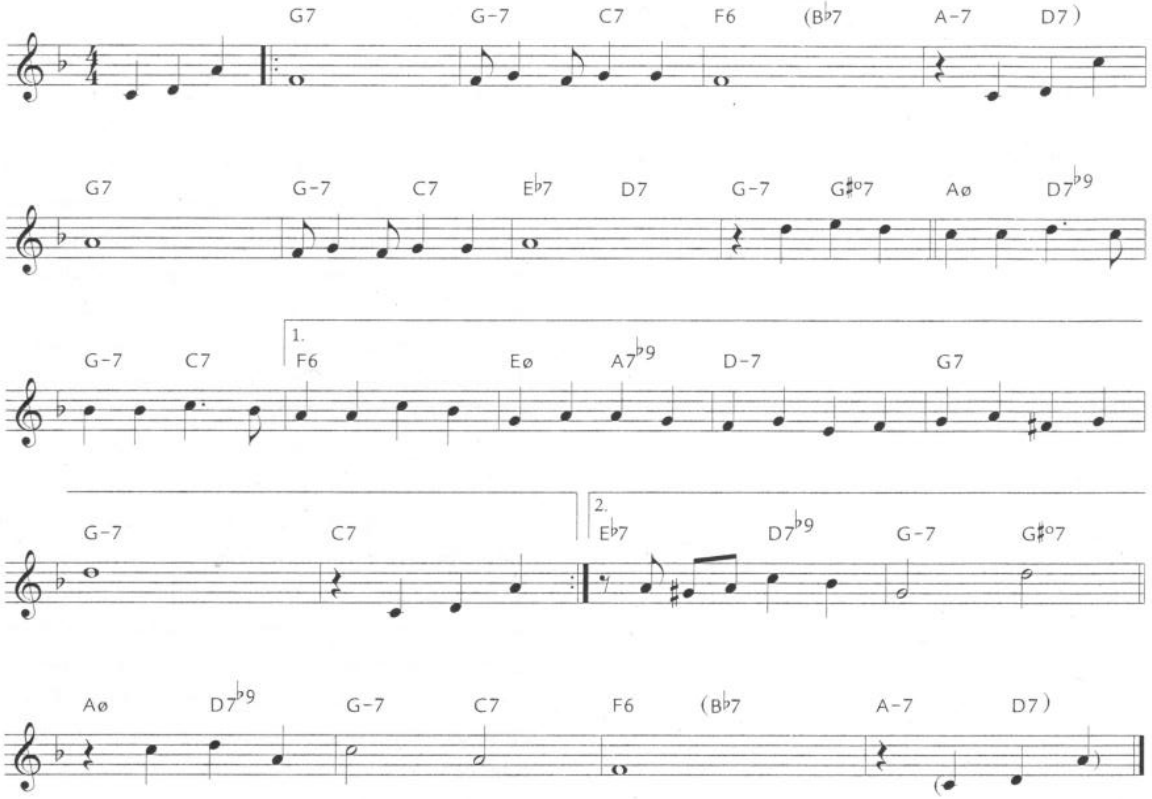
Satin Doll – Billy Strayhorn & Duke Ellington



Many of Duke Ellington's popular standard songs fall into the AABA thirty two-bar format (e.g., *Sophisticated Lady*, *In a Sentimental Mood*, and *Prelude to a Kiss*). Another very famous thirty two-bar AABA song form is, of course, George Gershwin's *I Got Rhythm*. A good example of the ABAC song form mentioned above is Gershwin's *Our Love is Here To Stay*. Note the use of first and second endings to reinforce the concept of the initial A in the form serving as a common beginning to different endings:

EXAMPLE 4.3

Our Love is Here to Stay – George Gershwin
(as interpreted by Wynton Kelly)



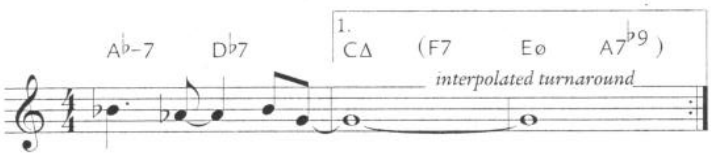
The ABAC song form, in contrast to the AABA song form, features two repetitions of the A section, each with its own ending. It is sometimes the case that the B and C sections, effectively first and second endings to the common A, are not eight bars in length. Occasionally, as in *Our Love Is Here To Stay* (see above), the common A portion of the form is ten bars in length, and the endings (B and C) are each six bars in length. Variations on the AABA or ABAC song forms may involve transpositions of the A material to a different key, creating what one might call an A'. Examples of this would be Clifford Brown's *Joy Spring*, or Jerome Kern's *All the Things You Are*, in which the second eight bars of the composition contain the same musical material as the first, only in a different key. Another common variation is the extension of an A section, particularly the last one, to include a turnaround, or extension, which lengthens the form. The last twelve bars of Kern's *All the Things You Are* does this by extending the first A section with an additional four bars of material. Gershwin's *I Got Rhythm* or *Nice Work If You Can Get It* both extend the last A section an extra two bars by incorporating a turnaround, or repetition of the last phrase of the A section, into the final A section.

Harmonic Variations Used to Create Different Endings in Song Forms

It is very common to use *interpolated* harmonies to help differentiate between first and second endings of A sections within an AABA song form. Interpolation, a theoretical term brought to the jazz theory language by the influential theorist Nicholas Slonimsky (see also Chapter 13), simply means insertion of additional material between that which already exists. In jazz harmony this often means adding harmonic connecting material to the preexisting chord progression in order to create stronger resolutions to the predetermined primary chords. Looking at the example *Satin Doll* above, one might add an A7 chord in the first ending, or perhaps a full cadence, E-7 or Eø going to A7 or A7♭9, which would have the effect of creating a cadence to the D-7 chord which begins the second A section. Looking at the second ending, one might resolve as indicated to the CΔ chord, and then put a C7 chord in the second measure of the second ending, so as to create a dominant chord of the new key at the beginning of the bridge. In other words, whether or not the lead sheet indicates it, the first ending of an AABA song form can be harmonically manipulated so as to incorporate a cadence which has the effect of directing the progression back to the first chord of the second A section. The second ending harmony may likewise be manipulated so as to create a full cadence to the tonic chord, followed by a cadence to the key of the bridge, if it is different from the key of the A section. Final endings, or third endings of AABA song forms are generally like second endings in that they complete a full cadence to the tonic chord. However, they might subsequently fill in the remainder of the two bar ending by the use of a turnaround, Blues ending, or simple I-IV-I, or I-iv-I cadence, any of which have the effect of reiterating the tonality, rather than creating a cadence which moves the progression forward. Note that such interpolations are most effective when they occur at points where the original melody, as well as its accompanying harmony, is more or less inactive.

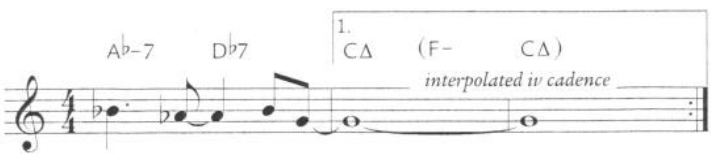
EXAMPLE 4.4A & 4.4B

Satin Doll: creating a FIRST ending, ms.6-8



Purpose: to return to D-7

Satin Doll: creating a SECOND ending, ms.14-16



Purpose: to stabilize the primary tonality.

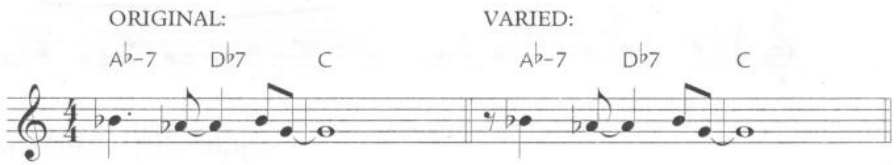
The process of harmonic interpolation, or on-the-spot reharmonization, presents a great challenge to the rhythm section as it uses its ears to potentially reinvent the progression *each chorus.*

Melodic Improvisation

There are many ways to create an improvisational feeling in the presentation of a theme without dealing with the harmonies involved. Louis Armstrong, Billie Holiday and Chet Baker were all important practitioners of melodic improvisation. Listen to any of their interpretations of the presentation of the melody to a standard song for which you have a lead sheet (this is not only a *great assignment*, but tremendous practice in developing your transcribing chops, as the rhythmic nuances used by vocalists in melodic presentations can be incredibly challenging in terms of notation). Compare their variations, rhythmic and melodic, to the basic melody as presented in your lead sheet. It makes a further interesting study to compare the same composition as interpreted by various artists to see how each personalizes his or her presentation of the melody. The following rhythmic devices, commonly referred to as *syncopations*, are frequently used in presenting variations on a given melody. First, let's consider delaying the melody by presenting it off the beat:

EXAMPLE 4.5A

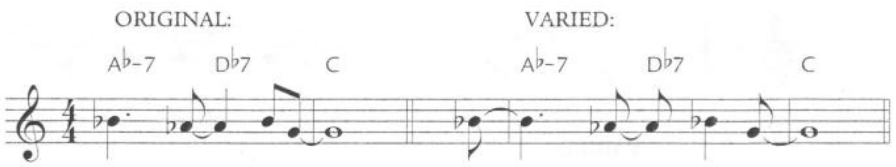
delayed melodic phrasing



Second, let's consider anticipating or advancing the melody, which involves placing it ahead of the beat.

EXAMPLE 4.5B

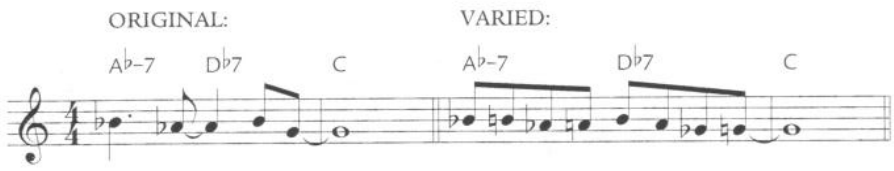
anticipated melodic phrasing



Either one of these variations can be interpreted with shorter, longer, or more or less accented attacks of the note. (For example, there is a difference between a short quarter note and a long quarter note, etc.). Melodic variations in thematic presentation which are non-rhythmic may include the addition of chromatic notes...

Example 4.5c

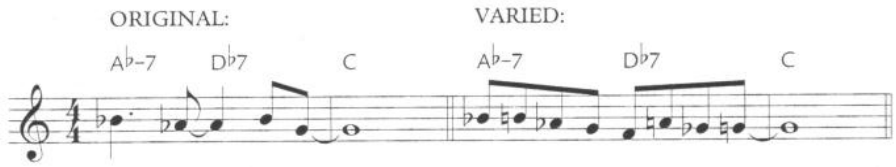
chromatic melodic variation



...and/or chromatic notes in conjunction with scale tones:

Example 4.5d

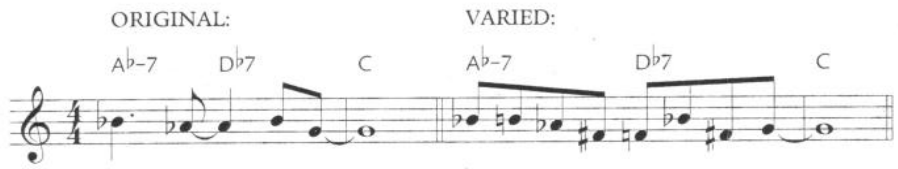
"mixed" chromatic & melody-derived melodic variation



Any of these may be presented in lieu of or in addition to existing notes within the melody:

Example 4.5e

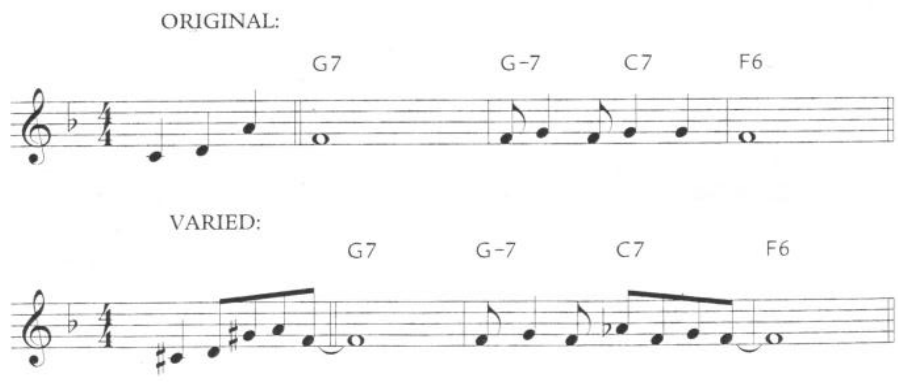
"mixed" chromatic & melody-derived melodic variation



A particularly effective technique can be to add blue notes (see Chapter 3) to diatonically oriented melodies, or to alter existing diatonic melody notes to make them into blue notes:

Example 4.6a & 4.6b

Blues-derived melodic variation

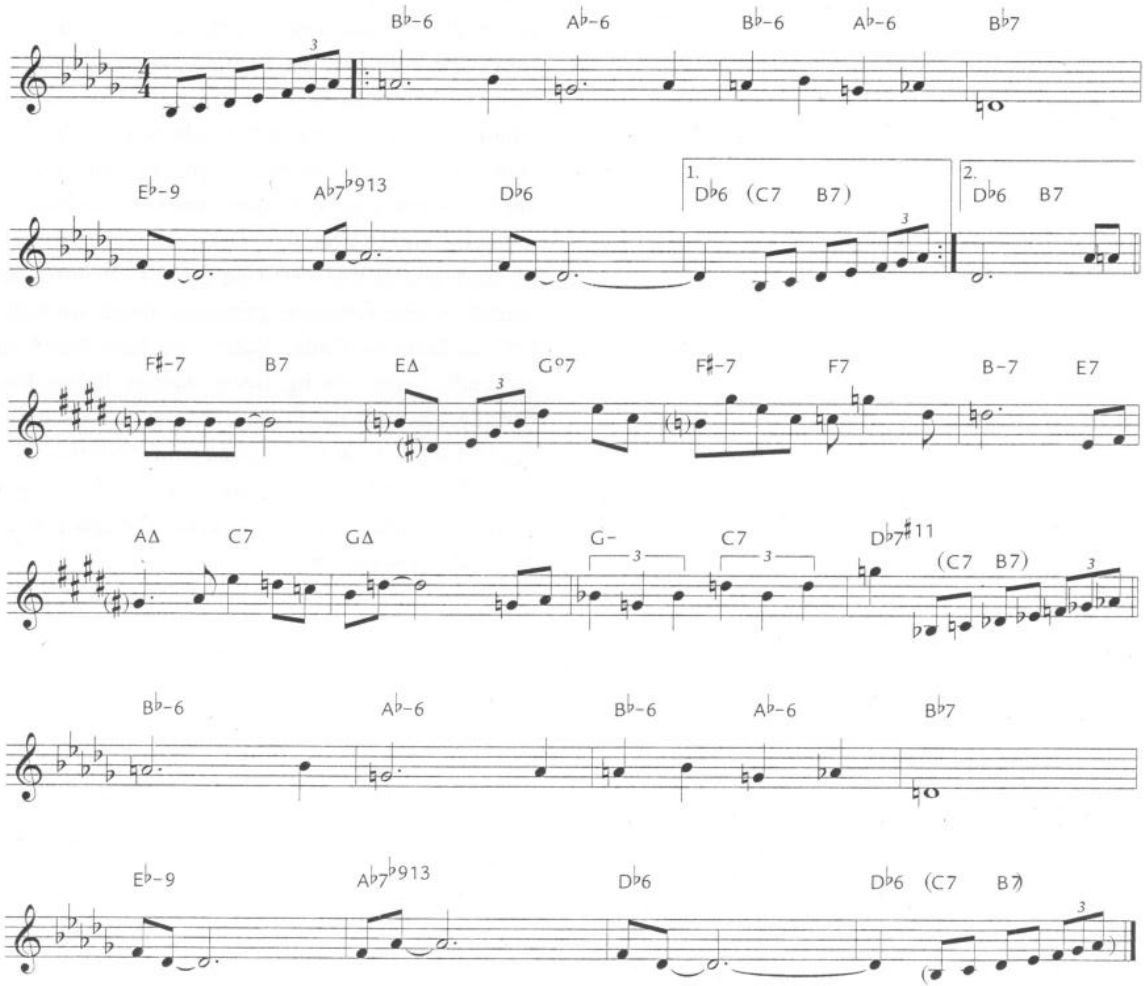


Listen to and compare versions of this tune as recorded by either Billie Holiday, Carmen McRae, Ella Fitzgerald, or Frank Sinatra to see this process at work (see Discography).

Note that chromatic notes, when presented as additional material to the existing melody, are often presented rhythmically in a way that puts them before the beat or accented note, further enhancing the sense of arrival at the note which they approach. In any event it is important to understand that jazz interpretation, or a sense of improvisation, can be created in ways that are non-harmonic (variations of rhythms and melodies). Note also that the characteristics of melodic variation discussed above are also the characteristics of compositions by jazz composers. For example, compare the melody of Jerome Kern's *All the Things You Are* (see earlier examples), which is all chord tones (thirds), and very simple rhythmically, with Billy Strayhorn's *Chelsea Bridge* (see below), which features more complex rhythms involving triplets and anticipations, and is based melodically around extensions of the harmonies (♮9, ♭9, ♯11, ♮11, ♮13). In other words, a more jazz-oriented style in a given composition can be effected by employing improvisational gestures in the *written* melody.

EXAMPLE 4.7

Chelsea Bridge – Billy Strayhorn



Obviously, within the jazz idiom, rhythmic presentation often occurs in conjunction with a phenomenon known as "swing." Technically, swing might be described as a way of playing pairs of eighth notes within a given beat so that the first one becomes worth something more like two-thirds than one-half of the beat. The accents and durations of the two notes of the eighth note pairs can vary as a function of style, but all swing-based music shares this underlying swing feel, roughly implying a 12/8 meter within the general 4/4 meter. Obviously, notating swing eighth notes exactly is difficult, because the relationship and length between the notes in a pair of eighth notes may vary from player to player, or as a function of tempo or style. Therefore, except for the notation "swing," which is occasionally used in ensemble arrangements as a stylistic marking, it is assumed that the player involved has an understanding of how to create the swing feel on the basis of his or her listening and experience.

In conjunction with this phenomenon of uneven eighth notes, one often finds that quarter notes played off the beat are played short, and those notes placed on off-beat eighth notes prior to rests tend to receive accents. This way of playing applies mostly to music in 4/4, where we feel the pulse of the music on two and four (where the drummer's high-hat plays, or where we snap our fingers). In bossa novas, Latin music, or rock-oriented music, where the pulse is more "on the beat," it is less likely for the eighth notes to be swung or for these rhythmic phenomena to apply. To examine these phenomena more closely, listen to solos involving eighth notes by players from the Swing and Bebop eras. To understand the accenting of off-beat notes, and the feel and sound of the resultant phrasing, listen to *9:20 Special* or *One O'Clock Jump* by Count Basie. The Basie band, and its soloists, especially Lester Young, Buck Clayton, Jimmy Rushing, and Roy Eldridge, as well as its later arrangers, especially Ernie Wilkins, Frank Foster, Neal Hefti, and Sammy Nestico, tend to epitomize the value and essence of swing and make for good listening in better understanding this crucial, though generally unnotated, musical phenomenon.

Suggested Exercises and Assignments:

- Regarding melodic variation: Trancribe various versions of the same tune for which you have a lead sheet, as interpreted by different artists, as suggested earlier in the chapter text. Analyze and compare these variations in melodic and rhythmic interpretation.
- Regarding the interpolation of appropriate harmonies in endings in song forms: take an AABA lead sheet which indicates no distinction between first and second endings, and create one by replacing part of the duration of the tonic chord at the end of the phrase with appropriate harmonies as outlined earlier in this chapter. Try to find examples in your listening of interpretations of standards in which the harmonic form varies from chorus to chorus by means of spontaneous interpolation by the rhythm section, especially in endings.
- Find examples similar to *All the Things You Are* and *Chelsea Bridge* in order to compare standard versus jazz compositions in terms of presence or absence of improvisational devices and harmonic extensions in the composition proper.

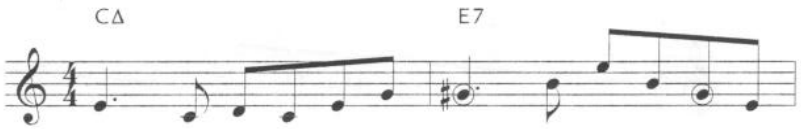
Billy Strayhorn and Willie "the Lion" Smith (© Ray Avery's Photo Archives)

SECONDARY DOMINANT CHORDS

There are many categories of non-diatonic harmony which are used in the harmonic progressions typical of the jazz idiom and its repertoire. Non-diatonic chords tend to enliven the diatonic context, creating temporary tension which gives more momentum to the chord progression. In most cases, non-diatonic harmonies used in a primarily diatonic context serve to create a strong sense of motion to a specific destination within the diatonic system to which they are related. Even without getting into specific categories of non-diatonic harmony, or knowing the function of a specific non-diatonic chord within the key, it is possible to improvise successfully on the chord in a harmonic sense by simply emphasizing the notes within the chord which are non-diatonic to the key, and surrounding them with other notes diatonic to the primary key.

(In the following example, an E7 chord in the key of C major, the G♯ is the non-diatonic note in the chord, and therefore becomes the note to emphasize in the improvisation. As we will see later in this chapter, the third of the secondary dominant seventh chord is most often its distinctive non-diatonic note):

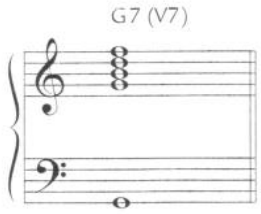
EXAMPLE 5.1



While this and subsequent chapters will systematically go through the various categories of non-diatonic harmony most commonly used in the jazz idiom, it is still important to remember that the basic principle use in improvising over non-diatonic chords is to place emphasis on the the non-diatonic note(s) which they contain.

Secondary Dominants

Example 5.2

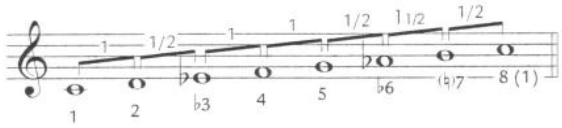


To review, the dominant chord of the key in the diatonic system is called V7. By implication, this is understood to mean V7 of I. The following is the dominant V7 in the key of C major:

The term dominant derives from the fact that the V7 chord in the key is expected to resolve to the tonic of the key. This is true in both major and minor keys (see below). In order to proceed with our discussion on the secondary dominant seventh chord concept, it will be necessary for us now to introduce the harmonic minor scale. The following is the C harmonic minor scale:

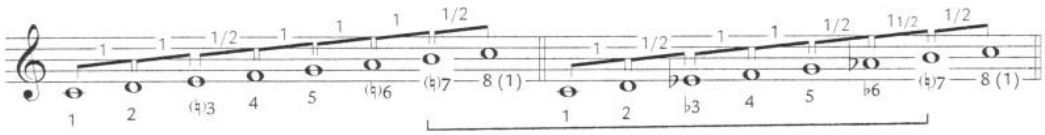
Example 5.3

C harmonic minor scale



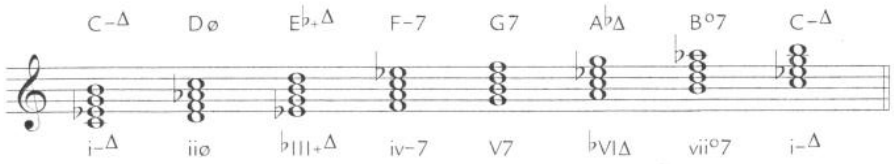
Notice that the harmonic minor scale, unlike some other forms of the minor scale with which you may be familiar, contains a leading tone, or ♮7, just like its parallel major.

Example 5.4

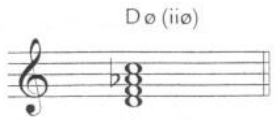


The presence of this leading tone enables this minor scale to have a bona fide dominant seventh chord on the fifth degree, just as its parallel major scale does. The following chart shows the diatonic seventh chords in the key of C harmonic minor.

Table 5.1

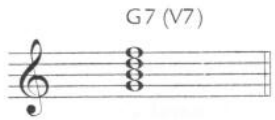


EXAMPLE 5.5



Notice that we have now derived a new set of chords and associated Roman numerals, which obviously differs from that which we derived from the parallel major. The most important among them are those which are used in cadences. (As the term harmonic minor suggests, this is the form of minor which is used most frequently to create cadences in minor tonality.) The ii chord in the harmonic minor tonality is a ø rather than the -7 found in its parallel major tonality.

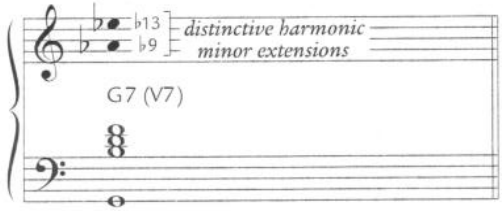
EXAMPLE 5.6



The V chord, in its simple seventh chord form, is no different from the V7 chord in the parallel major.

However, when we *extend* the V7 chord to include its ninth, eleventh, and thirteenth, we find that the ninth and the thirteenth are both flat in harmonic minor. Thus it is the *extensions* which distinguish the minor key dominant from its major key counterpart.

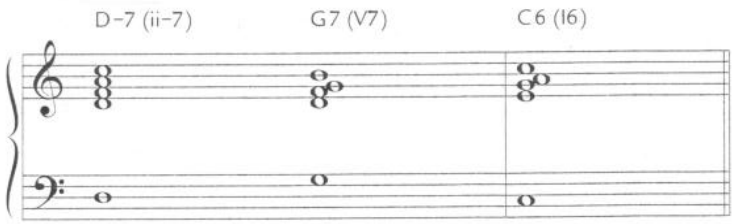
EXAMPLE 5.7



Thus the ♭9 and ♭13 on a dominant seventh chord imply that has been derived from a harmonic minor and not the major form. One might likewise say that the presence of the flatted fifth on the iiø chord also implies the derivation from harmonic minor. Thus, when one sees a chord progression iiø-V7$^{\flat 9}$, or iiø-V7$^{\flat 9\flat 13}$, it can be assumed that the cadence implies that the chords have been derived from the parallel harmonic minor rather than the parallel major scale.

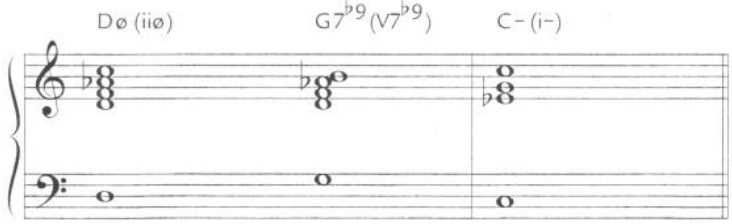
EXAMPLE 5.8A

C major cadence:



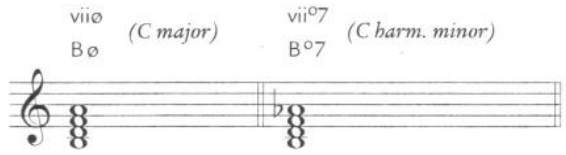
EXAMPLE 5.8B

C harmonic minor cadence:



Note that in the above example the V7♭9 chord is voiced so that the notes in the treble clef, or those other than the root, make up a °7 chord, in this case B°7. Note that this is a fully-, and not half-diminished seventh chord as was the case in the parallel major.

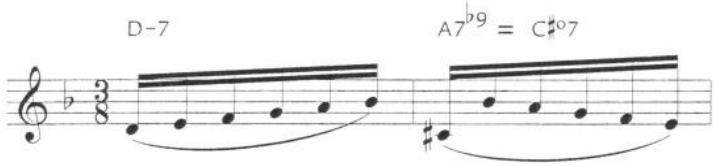
EXAMPLE 5.9



Note also that the tones of the vii°7 chord are also equivalent to the third, fifth, 7th, and flatted ninth of the V7 of the G7 chord. Therefore, the V7♭9 and vii°7 chords are virtually interchangeable, and are often used as substitutes. This is not a phenomenon unique to jazz harmony; rather, this tonal device has been in use for as long as the harmonic minor scale has been in use. We often find this in the music of Bach; for example, note the D harmonic minor scale Bach uses in ms.2 of the following excerpt (from his *Two-Part Invention #4 in D minor)* to communicate a (C♯°7=A7♭9) dominant harmony:

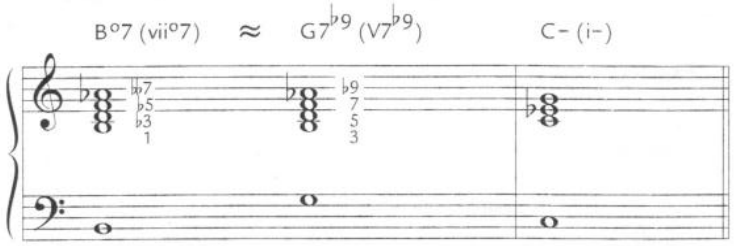
EXAMPLE 5.10

Two-Part Invention #4 in D minor - Johann Sebastian Bach
("Allegro," ms.1-2)



Thus a simple substitution rule involving these two chords can be derived: any dominant $7^{\flat 9}$ chord can be thought of as being equivalent to a $^{o}7$ chord a major third higher. Conversely, any $^{o}7$ chord is the same as the dominant $7^{\flat 9}$ whose root is a major third lower. Obviously, both chords imply a common resolution to the minor tonic; i.e., they imply a cadence from $vii^{o}7$ or $V^{7\flat 9}$ to i-.

EXAMPLE 5.11



Note that the minor tonic to which we have resolved is a simple triad. Without getting into discussions of the various parallel minor scale forms at this point, we can simply say that while the cadence in minor key harmony often is derived from harmonic minor, that the resolution or tonic chord rarely is, since the $I^{-\Delta}$ found in harmonic minor scale is not a frequently used tonic chord in minor tonality. Rather, simple minor triads or seventh chords, or the minor sixth chord (which is derived from the parallel Dorian or melodic minor scales), are more frequently used. Therefore we can see that in minor key harmony it is frequently the case that the cadence comes from harmonic minor while the tonic chord may come from another minor form. However, it is not our goal at this point to discuss minor key harmony in general, but rather only to discuss it as it applies to the secondary dominant seventh chords used to create "keys of the moment" in relation to a primary tonality.

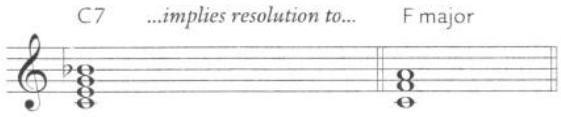
Secondary Dominant Sevenths Defined

A secondary dominant seventh chord is defined as being a dominant seventh chord whose root is diatonic to the primary tonality, and whose implied target or resolution (a perfect fifth lower) is also a diatonic chord. In the key of C, the following chords meet the criteria of the above definition: C7 (called V7 of IV), D7 (called V7 of V), E7 (called V7 of vi), A7 (called V7 of ii), and B7 (called V7 of iii). F7 we have already encountered as a Blues chord (IV7). Since it is most commonly used in this way, and since it has no chord within the diatonic system a perfect fifth lower (a perfect fifth below F would be B♭, a non-diatonic note in the key of C), by definition F7 would not be a secondary dominant. Obviously, G7 is not a secondary dominant since it is the primary dominant of the key. Therefore, we have five secondary dominants in any major key.

They are based on the first, second, third, sixth, and seventh degrees of the scale, and have the effect of creating a temporary key a perfect fifth lower. The quality of the temporary key is either major or minor, depending on the quality of the diatonic triad found on that degree. For example, a C7 chord in the key of C *tonicizes* (this term means that the chord creates a key-of-the-moment or temporary key) F major, since F is diatonically major in the key of C. (This effect can also be heard when moving from ms.4 to ms.5 in a blues form.)

Example 5.12

Key of C, C7 = V7/IV:

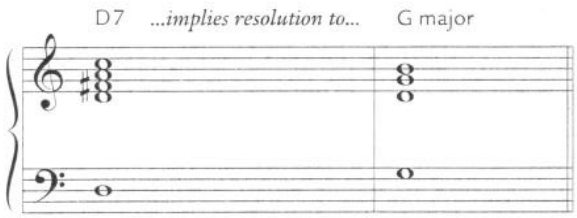


In actual practice this simply means that one improvises temporarily in the key of F major when playing a C7 chord encountered in the key of C. This is more or less in keeping with the initial discussion of emphasis of non-diatonic chord tones within non-diatonic chords with which this chapter began. (Of course, the C7 is somewhat of a special case, as it has a heavy Blues connotation, being so frequently used as a tonic chord in the Blues. Therefore, in this specific case, one might not just play in the key of F but also in the key of "C Blues.")

Similarly, D7 in the key of C major implies a temporary key of, or tonicizes, G major (G major because the triadic quality of the V chord in C major, G7, is major).

Example 5.13

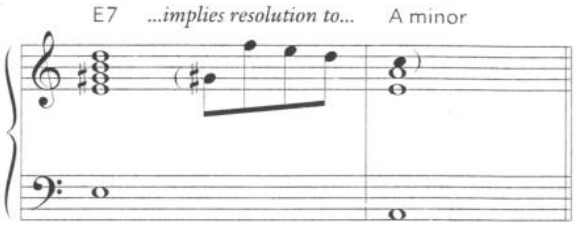
Key of C, D7 = V7/V:



Continuing through the list of secondary dominant sevenths, E7 in the key of C, being V7 of vi–, a diatonically minor triad, implies the temporary tonality of A minor. In order to be sure that the G♯ which creates or implies the E7 chord is incorporated into the temporary minor key, it is necessary to use *A harmonic minor*, as discussed above. Therefore, by implication E7 in the key of C, or V7/vi, generally speaking in any major tonality, implies the use or presence of a temporary tonality of vi harmonic minor for the duration of the dominant chord itself.

EXAMPLE 5.14

Key of C, E7 = V7/vi:

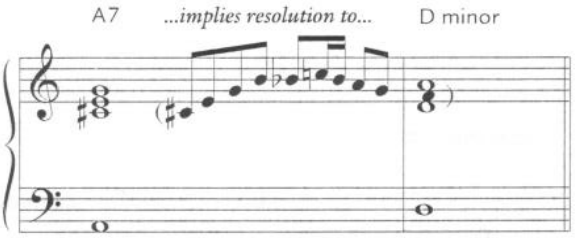


Of course it must be reiterated here that by the time the A-7 chord happens (if indeed it does, since a secondary dominant seventh chord, or for that matter any chord, still retains its primary function within the key whether or not it resolves in the expected fashion), we might be thought to be playing in C major again, since the A- chord is in turn itself diatonic to C major. Or, we might be playing in A Dorian or A melodic minor, depending on the quality of the A minor chord to which we cadence.

Similarly, the A7, which is V7/ii in the key of C major, implies the temporary key of D harmonic minor for its duration,

EXAMPLE 5.15

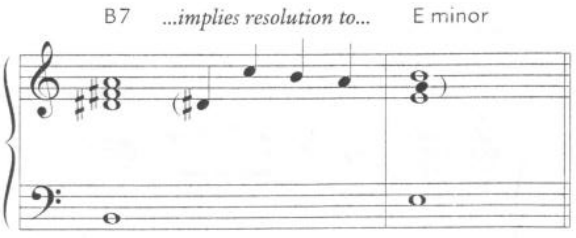
Key of C, A7 = V7/ii:



while the B7, V7/iii in the key of C major, likewise operates within or implies the tonality of E harmonic minor.

EXAMPLE 5.16

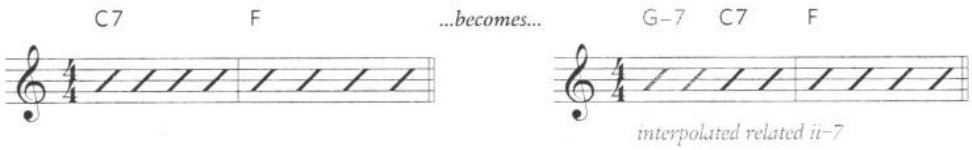
Key of C, B7 = V7/iii:



In each of these last examples, all of which involve dominant cadences to minor triads, the vii^{o7} built off the third of the dominant seventh; being used is an available substitution for that dominant seventh chord, and should be thought of as being equivalent to it. In other words, the third, fifth, seventh and flatted ninth of any dominant seventh chord form a diminished seventh chord, and these two chords (V7$^{\flat 9}$ and vii^{o7}), are equivalent functionally and in sound, differing only in the roots which support them.

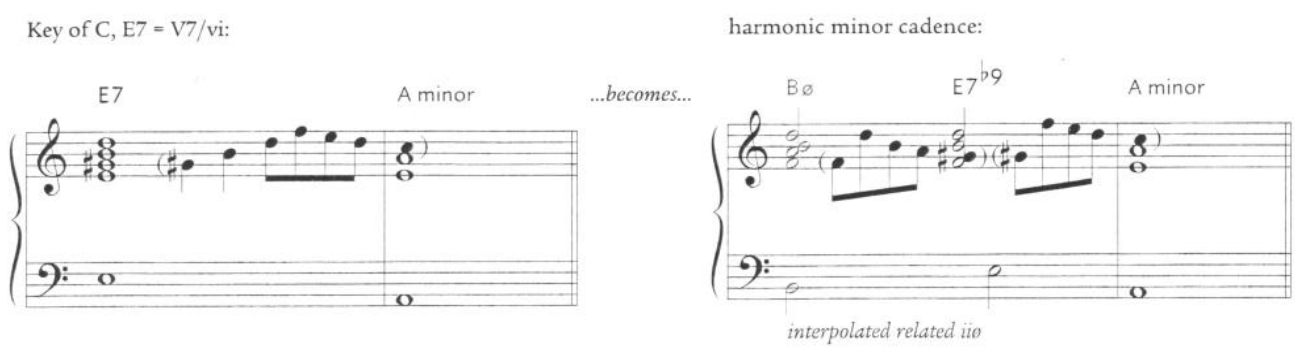
It is an important general principle in chord substitution that chords a third apart, containing many common tones, are frequently used to substitute for one another. The result of the common tones they share is obviously a similar voice leading to the expected target chord. Again, we must reiterate here that it is important to improvise on secondary dominants or non-diatonic chords generally as if they were going to be used in the way they most commonly are. In the case of the above-mentioned secondary dominants, this means playing on the secondary dominant in the temporary key which it establishes, whether or not it actually resolves there. This approach heightens the effect of any other (deceptive) resolution which may occur. Another modern jazz improvisation concept which may also be used in conjunction with secondary dominants might be stated as follows: wherever one finds a dominant seventh chord, it may be preceded by its interpolated related ii– or iiø chord. In other words, if one finds a C7 resolving to an F chord in the harmonic rhythm of one measure each, one may interpolate (insert) the G–7, or the related ii of the C7 in the first part of the C7 measure, increasing the harmonic rhythm, and creating a compound cadence.

EXAMPLE 5.17



Obviously, when the dominant seventh chord is by implication a V7$^{\flat 9}$, (as in the case of V7/ii, iii, or vi), the interpolated ii chord would more than likely be a iiø chord.

EXAMPLE 5.18



In conclusion, the secondary dominants V7/ii, iii, and vi in any major key tonicize or create a temporary key of ii, iii, or vi. Further, this temporary key is by implication a harmonic minor key for the duration of the dominant chord, or the full iiø-V7♭9 cadence which may be used to replace the simple secondary dominant chord. It is important to understand that these secondary dominants may not always be stated explicitly in the chord symbol to have ♭9 or ♭13. It is understood that the improviser will relate the chord's function to the listener in his/her improvisation in a way which reflects an understanding of the existence of this temporary harmonic minor key, in the case of V7/ii, iii, or vi. Another way of looking at this reverts to our original discussion in the beginning of the chapter, which is to say that by emphasizing the non-diatonic tones within the secondary dominant and surrounding them in a diatonic context, one will more or less achieve the same result. For example, an E7 in the key of C (V7/vi) can be thought of either as being diatonic to the key of A harmonic minor or as being simply a chord with one non-diatonic tone (G♯) operating within the key of C. This non-diatonic tone turns out to be its third, G♯, also the leading tone of the A harmonic minor tonality which is implied. In other words, the same result can be achieved whether one simply chooses to emphasize the non-diatonic chord tone, G♯, or whether one actually thinks of the chord functionally as establishing a temporary key of A harmonic minor. *The third of any dominant seventh chord is always the leading tone of a temporary tonality which the dominant chord implies.* We suggest that you use the harmonic minor scale on the secondary dominant chords of V7/ii, iii, or vi simply because it seems to be the most commonly used improvisational procedure for this category of harmonies.

DIATONIC SEVENTH CHORDS:

CΔ	D-7	E-7	FΔ	G7	A-7	Bø
IΔ	ii-7	iii-7	IVΔ	V7	vi-7	viiø

RELATED SECONDARY DOMINANT SEVENTH CHORDS:

(G7)	A7	B7	C7	D7	E7	none
(V7/I)	V7/ii	V7/iii	V7/IV	V7/V	V7/vi	-

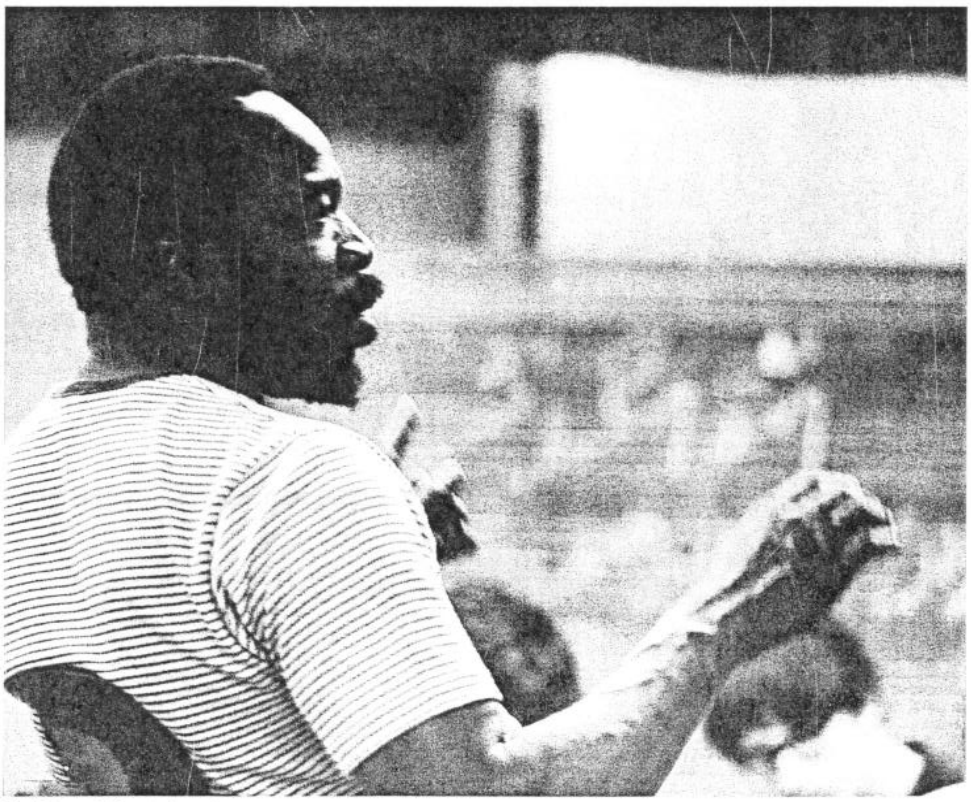
TEMPORARY KEY (Key-of-the-moment):

CΔ	D-*	E-*	FΔ	GΔ	A-*

** minor keys-of-the-moment are harmonic minor*

Suggested Exercises and Assignments:

In any event, it now obviously becomes necessary for the student to memorize and be able to recognize this new set of relationships within this specific category of non-diatonic chords. A good assignment is to take several different major keys and derive the five secondary dominants and review the temporary keys which they imply in each case, using Examples 5.12-16 as models. Another useful assignment is to practice interpolating related ii's or iiø's of secondary dominants in chord progressions where only the basic secondary dominant chord is being used (similar to Examples 5.17 and 5.18). Finally, it is important to practice improvising and applying these principles to standard compositions from the repertoire which use these secondary dominant/key-of-the-moment principles. Some examples of standard tunes using these chords might be *There Will Never Be Another You, Our Love Is Here to Stay, Satin Doll,* and *All of Me.* (Indeed, most standards contain secondary dominant seventh harmony of some sort.) Also, it is always useful to transcribe solos of the great masters on any of the compositions one is studying, or any composition with similar harmonies (i.e., a melodic pattern or idea which works well on V7/ii in *Our Love is Here To Stay* will also work over the chord with the same function in *Satin Doll*). This is an excellent topic around which to create a transcription/performance project. Notate, analyze, and learn to play an improvised recorded solo based on a chord progression involving secondary dominants.

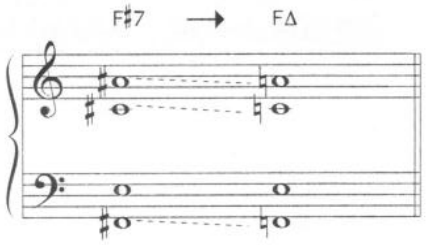


Thad Jones (© Louis Ouzer)

SUBSTITUTE DOMINANT SEVENTH CHORDS AND TRITONE SUBSTITUTION

Along with secondary dominant seventh chords, the category of dominant seventh chords most commonly used in jazz harmony and repertoire are known as the substitute dominant sevenths. Like a secondary dominant seventh, a substitute dominant seventh chord helps to create a key-of-the-moment by tonicizing a diatonic chord other than I. Unlike a secondary dominant seventh chord, however, it does so by creating the implication of a descending chromatic resolution. Therefore, by definition, a substitute dominant seventh chord has a non-diatonic root as well as having a diatonic target a half-step lower. In the key of C, for example, this would mean that an F♯7 is a substitute dominant seventh chord by virtue of the fact that its root is non-diatonic, and also because there is a diatonic chord found a half-step lower (in this case, F or FΔ).

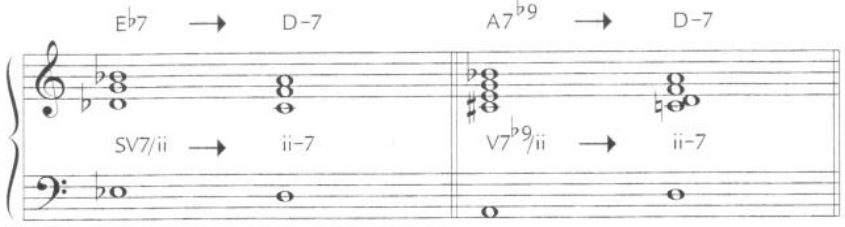
EXAMPLE 6.1



Nomenclature

Just as with the secondary dominant seventh, the nomenclature derives from the relationship of the chord to its implied target. Therefore, just as, for example, A7 in the key of C is V7 of ii, so E♭7 in the key of C is known as *subV7* of ii, abbreviated *SV7/ii*. In other words, the Roman numeral to the left of the slash indicates whether the dominant is found a perfect fifth (V) or half-step (subV) above the target, while the Roman numeral to the right of the slash indicates the implied diatonic target.

EXAMPLE 6.2



Note that, in the key of C, both the A7 and the E♭7 imply resolution to D-7. This is why A7 is V7/ii while E♭7 is subV7/ii. The slash in the Roman numeral analysis translates to the word "of" and implies the key-of-the-moment or implied target chord established by the presence of either the secondary or substitute dominant seventh of that chord. Substitute dominant seventh chords, like secondary dominants, must have implied diatonic targets. Therefore, the following five substitute dominant seventh chords exist in the key of C:

TABLE 6.1

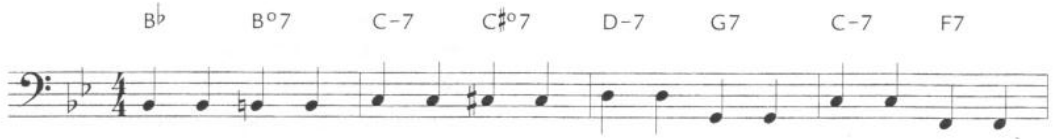
The Five SubV7's in C MAJOR

D♭7	E♭7	G♭7	A♭7	B♭7
SV7/I	SV7/ii	SV7/IV	SV7/V	SV7/vi
substitutes for G7	substitutes for A7	substitutes for C7	substitutes for D7	substitutes for E7

Although chromatic dominant seventh harmonies existed in jazz and popular music harmony long before the bebop era (examples abound in Ellington's and Gershwin's work - for example, Ellington's *Prelude to a Kiss* and Gershwin's *Nice Work if You Can Get It*, both of which were written well before the advent of bebop), the chromatic dominant resolution became a common practice device used frequently in jazz composition and performance during the mid- to late-1940s as a part of the bebop era (composers such as Thelonious Monk come to mind). Perhaps one of the reasons that the substitute dominant seventh chord came to be used so often is an expedient one: bassists playing without amplifiers and required to perform at the increasingly fast tempos necessitated by bebop found repetition of roots in the so-called "two-beat" feel of the swing bass playing style of the 1930s increasingly cumbersome.

EXAMPLE 6.3

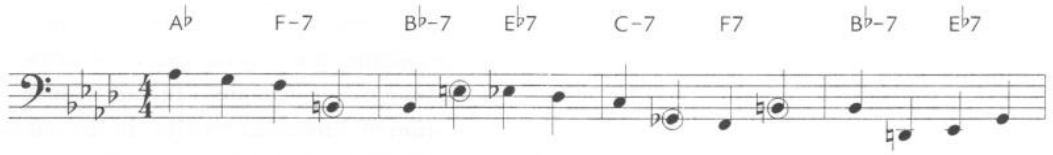
Teddy Kotick, bass on Charlie Parker's *Kim*



Rather than repeating the roots on the weak beats (2 and 4) as in the above example, many bassists began to play chromatic approach notes to the upcoming roots of the chords at the point of chord changes on beats 1 and 3. As a result, the lines were less cumbersome to play since they did not involve as many repeated notes. Also, when the bass notes on the weak beats 2 and 4 were found a half-step above the roots of the upcoming chords, jazz composers and improvisers probably began to hear harmonic relationships of a dominant nature between these roots and the upcoming resolutions. Compare Example 6.3 above with the following example from a more recent recording which is based on the same "Rhythm Changes" progression:

EXAMPLE 6.4

George Mraz, bass on Thad Jones' *The Little Pixie*

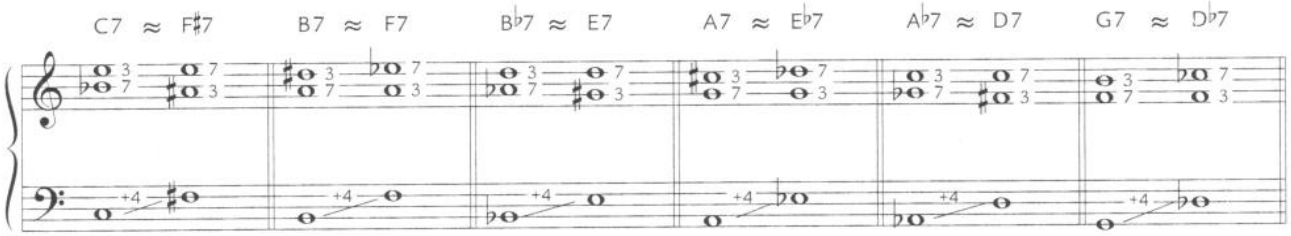


Composer/performers like Thelonious Monk and Dizzy Gillespie may have perceived these chromatic weak beat resolutions as having dominant implications. Indeed, the dominant seventh chord found a half-step above any diatonic target chord will share the same third and seventh as the dominant seventh chord found a fifth above that same chord. This principle is at the heart of what is known as "tritone substitution." It is, simply stated, a rule that *dominant seventh chords whose roots are an augmented fourth (diminished fifth) apart share the same third and seventh.* The interval of an +4 is sometimes referred to as a tritone interval. The third and seventh of a dominant chord, also an +4 apart from one another, are sometimes referred to as an entity as the *tritone* of a dominant seventh chord itself.

Therefore these two uses of the same term might be incorporated in the following definition of a substitute dominant seventh chord: *any dominant seventh chord has a related dominant seventh chord a tritone away which shares the same tritone (the first use of the term referring to intervallic distance between the roots of the two related chords, the second use of the term referring to their shared third and seventh)*. By implication, this means that there are six pairs of possible tritone substitutes:

TABLE 6.2

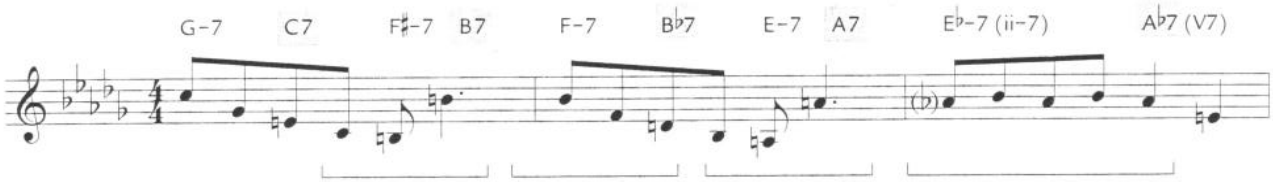
The Six Pairs of TRITONE SUBSTITUTES



Note that no Roman numerals have been assigned to the chords listed in the above table. This is because these relationships obtain in any key, regardless of the function of either chord of the pair in relation to the primary tonality of the piece. In other words, it is common for dominant seventh chords to be linked by resolutions between adjacent dominant chords or cadences. Sometimes these mechanical interrelationships involving resolutions between cadences can exist in such a way as to create a sensation of *transitional* tonality. In the following chord progression from Thelonious Monk's *Ask Me Now*, the chaining together of the ii-7-V7 cadences which descend chromatically creates a series of substitute dominant seventh resolutions descending by half-step, even though the primary tonality to which they will eventually lead does not become obvious until the harmonic rhythm slows down in m.3:

EXAMPLE 6.5

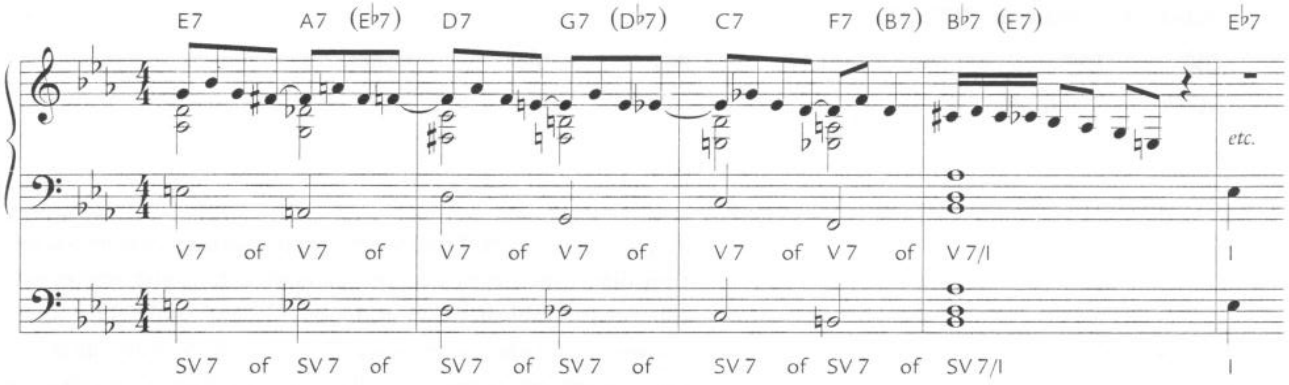
Ask Me Now - Thelonious Monk
(ms.1-3)



Ellington's *Who Knows?* from the 1953 piano trio recording Piano Reflections, contains a similar progression. Interestingly, Duke Ellington purposefully alternates from chorus-to-chorus between the chromatic and Cycle of Fifths dominant progressions, sometimes doing one and sometimes the other, but in either case the cycle begins so far from the tonic that the relationship between the dominant chords becomes the primary one perceived by the listener, until the end of the A section, when the primary tonality is finally established.

EXAMPLE 6.6

Who Knows? – Duke Ellington
(ms.1-4)



Regardless of function or tonality, however, it is always true that dominant seventh chords whose roots are a tritone apart share the same pitches for their third and seventh, and therefore have the same potential resolutions in common as well, whether a perfect fifth or a half-step below either chord. As with any such harmonic phenomenon in the jazz idiom, this can be used spontaneously by a rhythm section as an improvised or communicated device or, as in the above examples, as a compositional device.

In any event, it is obviously necessary to memorize the six pairs of tritone dominant substitutions. It is also worth updating our table from the past chapter involving the categories of diatonically related chords.

TABLE 6.3

DIATONIC & NON-DIATONIC CHORDS
(by function within the key of C)

Diatonic:

CΔ	D–7	E–7	FΔ	G7	A–7	Bø
IΔ	ii–7	iii–7	IVΔ	V7	vi–7	viiø

Secondary Dominant SEVENTHs:

(G7)	A7	B7	C7	D7	E7	none
(V7/I)	V7/ii	V7/iii	V7/IV	V7/V	V7/vi	–

Substitute Dominant SEVENTHs:

D♭7	E♭7	none	G♭7	A♭7	B♭7	none
SV7/I	SV7/ii	–	SV7/IV	SV7/V	SV7/vi	–

As you can see from Table 6.3, there are a series of systematic relationships which exist between pairs of tritone substitutes once tonality is established. For example, V7/I and subV7/I are always tritone substitutes in any key, V7/ii and subV7/ii are always tritone substitutes in any key, and so on. Therefore, to complete our discussion of substitute dominant nomenclature, it is worth noting that the five notes not found in any major scale, which complete the chromatic scale when combined with the notes in that major scale, are each roots of substitute dominants functioning in that major key. Therefore, an important corollary to our earlier definitions would be that *a substitute dominant seventh chord in any key has a non-diatonic root.* These definitions assume the parallel major scale as a point of comparison.

TABLE 6.4

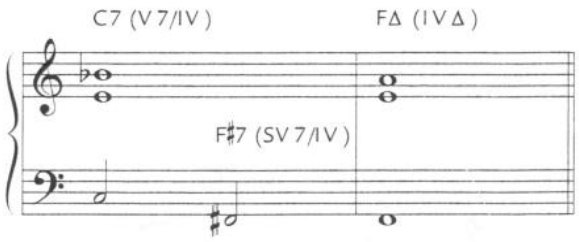
The Five SubV7's in C MAJOR

D♭7	E♭7	F♯7	A♭7	B♭7
SubV7/I	SubV7/ii	SubV7/IV	SubV7/V	SubV7/vi

It is not unheard of for both the dominant and its substitute to approach their common destination, creating what one might call a compound resolution of the same chord.

EXAMPLE 6.7

in C major:

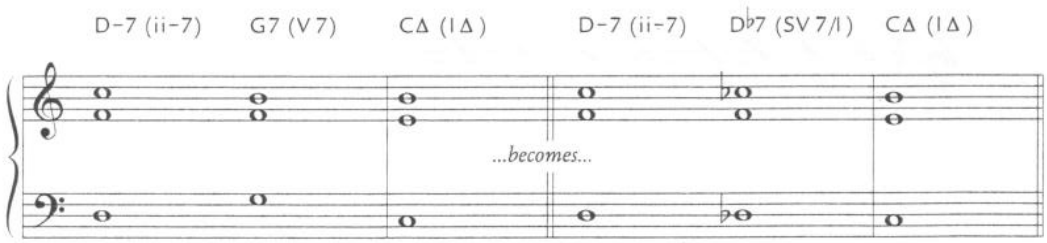


Common Uses of Substitute Dominants

First, as seen in the above examples of compositions by Ellington and Monk, the notion of the interchangeability of Cycle of Fifths and chromatically descending dominant cycles is often exploited by composers and accompanists. As shown in the examples, this sort of chaining together of dominant chords often supersedes any particular harmonic function of the individual chords in the progression within the eventual tonality. Put simply, cycling through the V/V/V, etc. series of dominants (e.g., C7-F7-B♭7-E♭7, etc.) can be used interchangeably with the notion of chromatic descent of dominant seventh to arrive at the same eventual goal (e.g., C7-B7-B♭7-A7, etc.), since at any vertical point the thirds and sevenths of the chords still resolve chromatically downward to one another in exactly the same way, regardless of which of the two root motion possibilities is chosen (again, refer to Example 6.6 above).

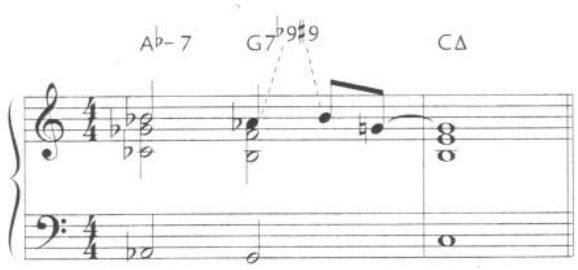
As seen in the Thelonious Monk example above (Example 6.5), it is further possible to interpolate the related ii or iiø chords prior to each or any of the dominant sevenths in such a chain. Another frequent use of dominant substitution is in the creation of chromatic resolutions (ii-subV/I-I) in lieu of the more traditional ii-V-I progression:

EXAMPLE 6.8



The same sort of chromatic root motion can be created by retaining the original V chord while preceding it with the related ii–7 of its substitute (this seems to work best when the melody or improvisation over the dominant seventh involved contains altered or non-diatonic notes). Using tritone substitution in Ellington's *Satin Doll* in m.6 of the A section would create such a situation, again illustrating that such improvised devices are often exploited by jazz composers.

EXAMPLE 6.9



The Brackets-and-Arrows System

It is worth noting here that there is no Roman numeral analysis available for the A♭–7 chord in Example 6.9. In fact, such interpolations often involve chords which are not related to the primary tonality except insofar as they are part of such extended cadences. One method which has been used by the Berklee College of Music for analyzing such progressions involves the use of a series of symbols designed to identify the various sorts of extended and substitute cadences discussed in this chapter. This system may be used in conjunction with Roman numeral analysis or as an alternative to it when such analysis seems inappropriate or impossible.

Basically, it uses four symbols:

THE SOLID ARROW indicates the resolution of a dominant seventh chord to a chord whose root is a *perfect fifth lower*:

EXAMPLE 6.10A

in C major:

This might also be used where such resolutions are interrupted by interpolated ii–7 or iiø chords in cases of extended cadences:

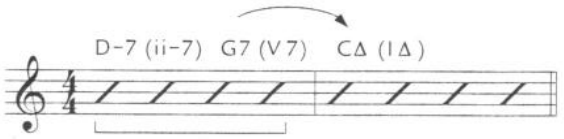
EXAMPLE 6.10B

in C major:

THE SOLID BRACKET indicates a ii–7-V7 cadence:

EXAMPLE 6.11A

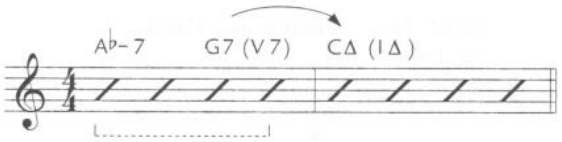
in C major:



THE DOTTED BRACKET indicates a cadence in which the dominant seventh involved is a half-step below the ii–7 which precedes it:

EXAMPLE 6.11B

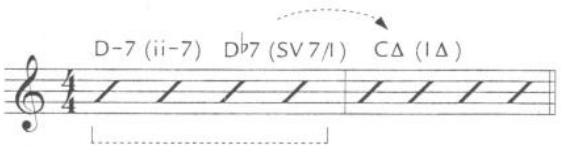
in C major:



THE DOTTED ARROW indicates a subV7 cadence, i.e., the resolution of a dominant seventh chord to a chord whose root is a *half-step lower*, rather than the more traditional descent by perfect fifth:

EXAMPLE 6.12

in C major:



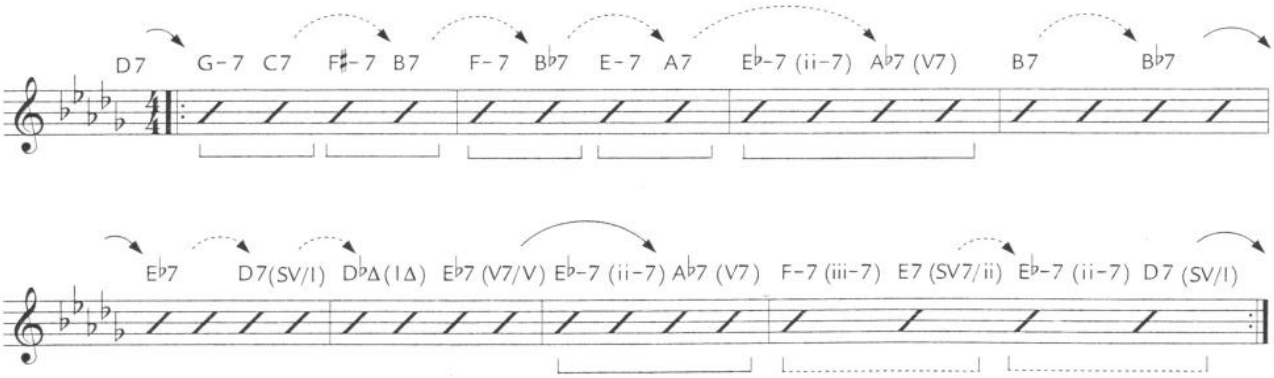
To summarize, we have seen how a substitute dominant, by definition a dominant seventh chord built on a non-diatonic root in relation to the major scale of the tonality in which it operates, implies resolution to the diatonic chord found a half-step lower. We have further found that dominant seventh chords, or cadences involving dominant seventh chords, may resolve chromatically or down a fifth regardless of whether or not they have a primary function within the given tonality, or whether or not there is even an obvious tonality present. Furthermore, there are six pairs of tritone substitute dominant seventh chords, all related by the interval of a tritone, or half an octave. These chords share the same third and seventh (another use of the word tritone might be applied here), and therefore share the same common implied resolutions, either down a half-step or down a perfect fifth.

While one or the other of these resolutions may be more or less likely to be based on the function of the chord within a given primary tonality at any point in the progression, it is always possible for a dominant seventh chord to resolve in either way at any time (or not to resolve at all). A dominant seventh chord which does not resolve in the expected way in cases where its tonal function is obvious constitutes a type of deceptive resolution. Returning to complete a harmonic analysis of the first eight bars of Monk's *Ask Me Now*, we can see all of these phenomena at work in an integrated whole.

This also provides a good opportunity to apply some of the brackets and arrows analysis symbols.

Example 6.13

Ask Me Now – Thelonious Monk
(ms.1-8)



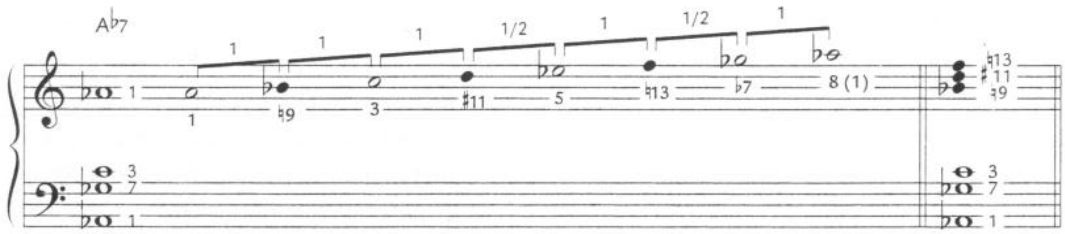
Note that parentheses and/or other notational conventions may be used to indicate points at which traditional tonal harmonic function is ambiguous, as in the case of the deceptive resolution of the last chord of this example (D7) which goes down a perfect fifth as it returns to the G-7 to begin the second A section, here indicated by a continuing solid arrow at the repeat.

Scales for Substitute Dominants

The chord scale most commonly used for a substitute dominant seventh chord is Lydian ♭7 based on its own root. There is no truly consistent theoretical explanation for it; this just seems to be the situation which most often occurs. This means that, in general, the extensions ♮9, ♯11, and ♮13 are the ones most frequently applied to substitute dominant seventh chords.

EXAMPLE 6.14

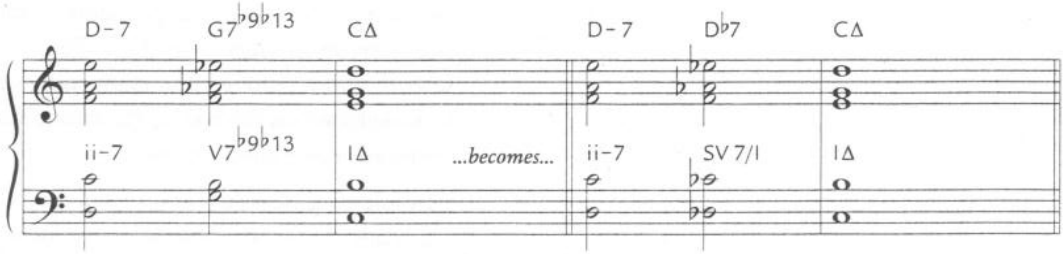
Key of C; Function: SV/V



It is well worth experimenting with various voicings of altered and unaltered dominant seventh chords and playing the tritone substitute root beneath them in order to fully appreciate the changes in the sound of the voicing which can occur without affecting the basic voice leading of the chord to its target. The importance of understanding and anticipating the effects of a tritone bass substitution on the sound of the voicing and/or melody which it may support cannot be overstated. Put otherwise, this means that for an accompanist, before making a tritone substitution, especially during the presentation of a melody, it is important to fully understand the effect on the sound of the voicing which this substitution will have. Tritone substitution not only changes thirds into sevenths; it also changes unaltered ninths into altered fifths and natural fifths or thirteenths into altered ninths. Some examples follow:

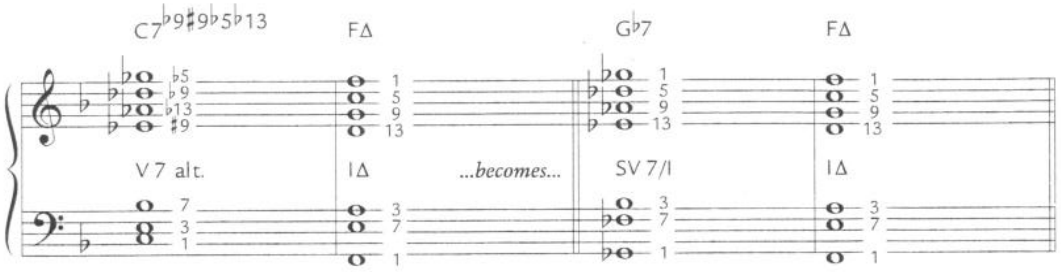
EXAMPLE 6.15A

EFFECTS of TRITONE SUBSTITUTIONS



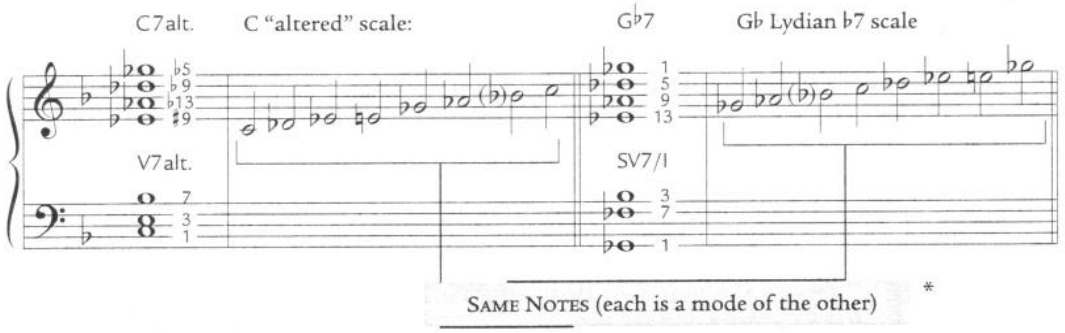
Example 6.15b

EFFECTS of TRITONE SUBSTITUTIONS



Just as we might regard the two chord symbols in Example 6.15B, C7 and G♭7, or those used for any pair of tritone substitutes for that matter, as essentially being different names for the same set of notes, it should not be surprising to find that reducing these voicings to scales within one octave also yields the same scale, but with different names or starting points (refer also to Chapter 2, the modes of melodic minor):

Example 6.16



In other words, just as dominant seventh chords a tritone apart share the same third and seventh, and therefore common potential resolutions and voice-leading, and so they are derived from a common scale, which changes names depending on which of the two notes is considered the root. The rule is that any dominant seventh chord's altered dominant scale is the same as the Lydian ♭7 scale based on the root of its tritone substitute, and vice-versa (again refer to Example 6.16).

* In referring to Table 1.7, we can see that these two scales are actually the fourth and seventh modes of the melodic minor scale (in the case of example 6.16 this parent melodic minor scale would be D♭ melodic minor).

Summary

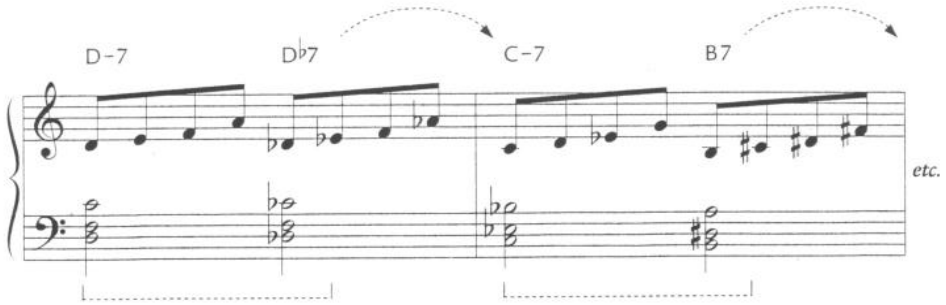
- Any non-diatonic note in relation to any major scale is potentially the root of a substitute dominant (see Table 6.1).
- Such a substitute dominant seventh chord has an implied target of diatonic quality a half-step lower within the diatonic system, just as the secondary dominants discussed in Chapter 5 had implied diatonic targets a perfect fifth lower (see Example 6.2).
- Substitute dominant seventh chords normally take the Lydian ♭7 scale (see Example 6.14).
- An *altered dominant* seventh is the same as its unaltered tritone substitute, except for the root, and vice-versa (see Examples 6.15B & 6.16).
- There are six pairs of tritone substitutes (see Table 6.2).
- Always consider the effect of the substitution on the sound of the voicing.

Suggested Exercises and Assignments:

Obviously, it is necessary for there to be two sorts of assignments in conjunction with this chapter. The first should be to analyze relevant repertoire containing examples of substitute dominant seventh chords (*Ask Me Now*, by Monk, analyzed above, is an excellent example, and students should be required to bring in others for in-class analysis). A second, and related assignment is to take any standard tune and to attempt tritone substitutions in the bass under the dominant chords within the tune. See how the substitution in the bass affects the sound of the chord voicing as well as the melody. Discuss whether or not the proposed substitution constitutes an improvement on the original. *Only* dominant seventh chords may be substituted for in this manner. Obviously the twin goals are to be able to recognize and use these tritone substitute dominant seventh chords in performance, and to be able to integrate them into one's compositional process. It is also obviously important to be able to hear these substitutions, so much ear training around the basic chord progressions involved is suggested (see also Chapter 8). A good exercise for reinforcing the interrelationship between the Cycle of Fifths and descending chromatic dominant sevenths is illustrated in the following examples. Play these exercises through the entire Cycle of Fifths over each of the indicated progressions (NOTE: substitutions in the Cycle of Fifths context work most easily when they are applied to every *other* chord to yield a completely chromatic progression).

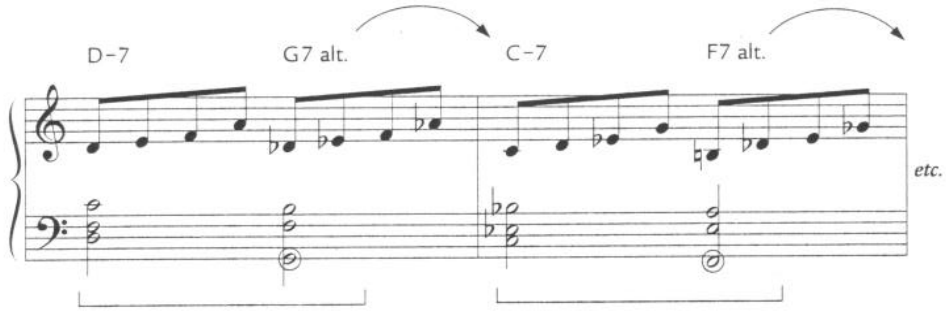
EXAMPLE 6.17A

EXERCISE PATTERNS for ii-7-SV7 CADENCES



EXAMPLE 6.17B

EXERCISE PATTERNS for ii-7-V7alt. CADENCES



MINOR KEY HARMONY, MODAL INTERCHANGE, AND MINOR BLUES

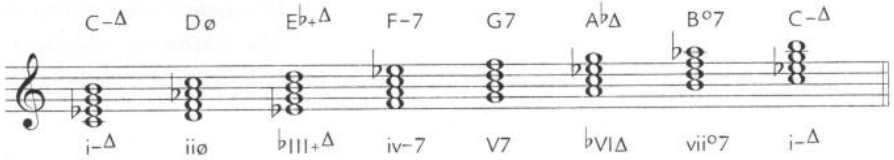
To review, we have now expanded the diatonic system to include the following categories of non-diatonic seventh chords which are functionally related to the primary diatonic sevenths:

TABLE 6.1

D♭7	E♭7	G♭7	A♭7	B♭7
SV7/I	SV7/ii	SV7/IV	SV7/V	SV7/vi
substitutes for G7	substitutes for A7	substitutes for C7	substitutes for D7	substitutes for E7

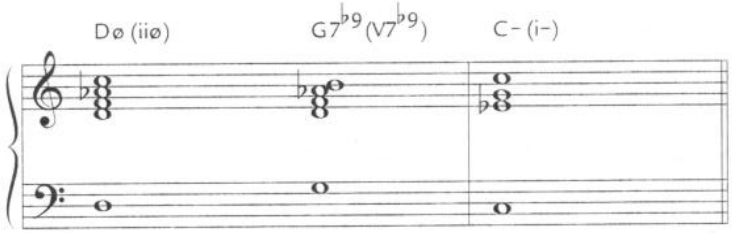
Also, by way of review, in Chapter 5 we discussed briefly the harmonic minor scale and its diatonic cadences:

TABLE 5.1



EXAMPLE 5.8B

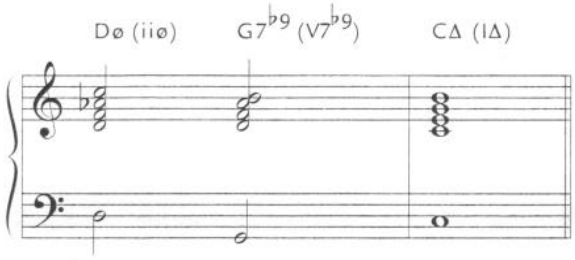
C harmonic minor cadence:



We will now examine the diatonic harmony available in the remaining minor modes: Aeolian (natural minor), Dorian, and melodic minor. We will also examine the harmony diatonic to the Phrygian mode. It is for two purposes that we examine these diatonic harmonies: first, we might be interested in being able to analyze and compose music using the resources available in the various minor scales and their diatonic harmony. Second, we are interested in being able to identify chords from these diatonic systems when they appear in music in the parallel major.

This process is known as *modal interchange.* By definition, modal interchange occurs when a chord is borrowed, generally into the parallel major, from one of its parallel modes or minor scales. A common example is the frequently occurring deceptive resolution, illustrated below, in which the harmonic minor cadences used to precede a major tonic.

Example 7.1

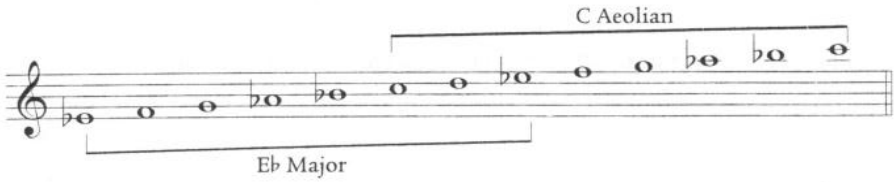


Such chord progressions are not limited to cadences, however. It is important to understand this as a resource which is often used in conjunction with the secondary and substitute dominant seventh chords, and other connecting non-diatonic harmonies frequently used within the diatonic system. In other words, all of the harmonic resources which we are examining categorically coexist in actual chord progressions.

Aeolian

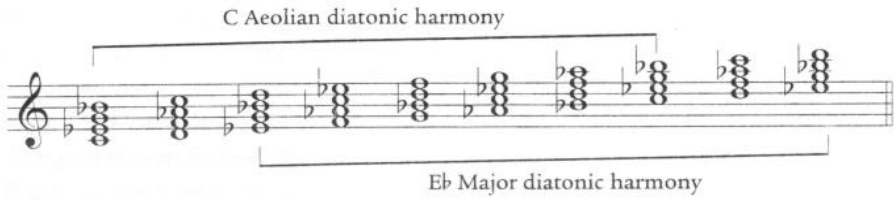
Going mode by mode, we can derive the following diatonic systems for the various minor modes mentioned above. The Aeolian, or natural minor scale contains the same notes as the major scale a minor third higher, or its *relative major*. In other words, the notes and chords of the Aeolian minor scale are the same as those found in its relative major. For example, the notes in C Aeolian turn out to be the same as those in E♭ major.

Example 7.2



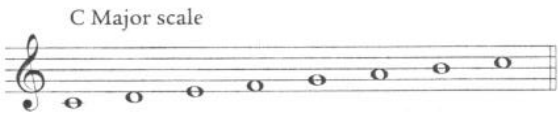
Similarly, the related diatonic harmonies of the two modes are the same as well.

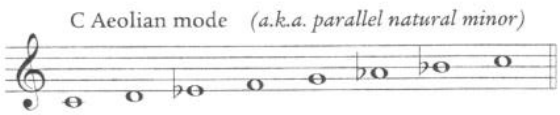
Example 7.3



What is interesting about this process, of course, is that by recreating the same notes and intervals on any degree of the chromatic scale one can arrive at parallel forms:

Example 7.4

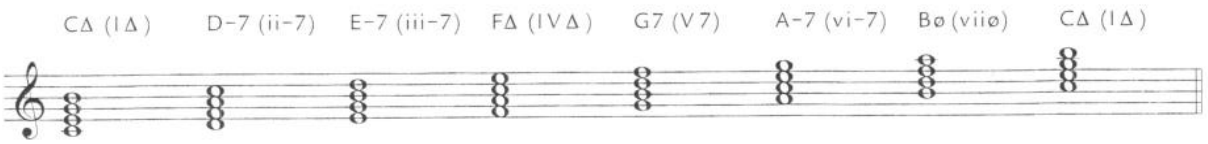




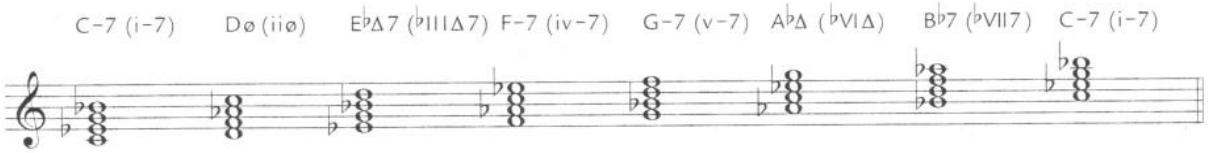
Having done this, it is then easy to compare the differences in the two systems in terms of their diatonic harmonies. Note the new sets of Roman numerals which result from generating the diatonic harmony in the Aeolian system:

EXAMPLE 7.5

DIATONIC HARMONY in C MAJOR *(review)*



DIATONIC HARMONY in C AEOLIAN (parallel natural minor)



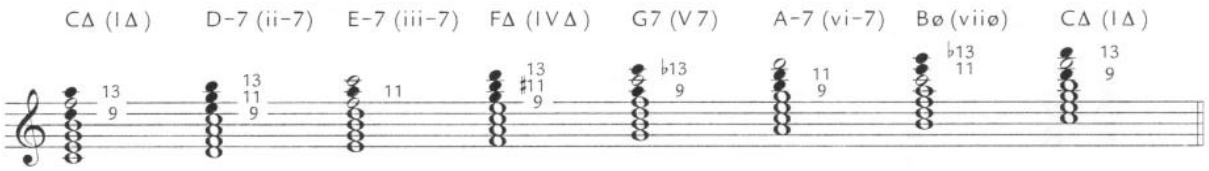
Modal interchange (MI), is thus defined as the process by which harmony diatonic to one modal system is "borrowed" for use in another, parallel system. By far the most frequent use of this process occurs when harmonies from the parallel Aeolian or other minor forms are used to enrich chord progressions in their parallel major tonalities (good examples of standard tunes containing such progressions are *What's New?*, *Here's that Rainy Day*, and *Ladybird*).

Melodic Minor

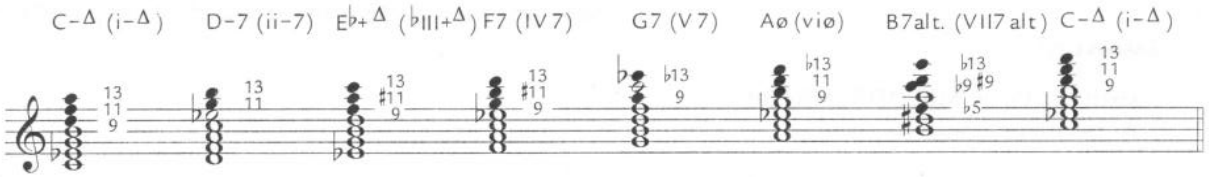
The melodic minor scale can be thought of as being the same as the major scale except with a minor third instead of a major third. As with any of these modes, this change affects not only the notes in the primary seventh chords, but also the extensions of those chords whose primary sevenths remain the same. In other words, taking the example of the parallel major and melodic minor scales on the root C, one can see that a CΔ chord results in C major whereas a C-Δ chord results as the tonic in C melodic minor, whereas the basic D-7 chord on the second degree is common to both scales, differing only in the quality of its ninth, which is consonant in C major but dissonant when derived from C melodic minor. In order to illustrate this comparison, each chord in Example 7.6 (see below) has been extended to include all seven scale tones.

Example 7.6

DIATONIC HARMONY & EXTENSIONS in C MAJOR
(o – denotes dissonant ton(es) in relation to the basic seventh chord)



DIATONIC HARMONY & EXTENSIONS in C MELODIC MINOR



or G+7 (V+7)

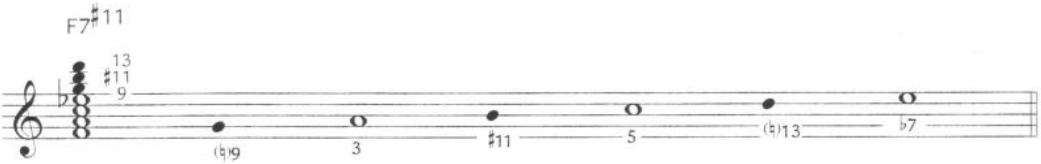
It is worth carefully examining these two parallel systems in order not only to become familiar with the diatonic seventh chords which are unique to each, but also to compare how the diatonically-available extensions of the basic diatonic sevenths they have in common differ. Most important among these is the V7 chord, which, when being derived from the minor form, contains the ♯5 (if used as a chord tone in an +7), or ♭13 (if described as an extension). The presence of this note on the V7 chord immediately relates it to the minor scale.

The melodic minor scale is interesting not just because it has many chords in common with the parallel major, but also because of its modes. For example, the fourth mode of the C melodic minor scale is the F Lydian ♭7 scale (see also Example 6.14).

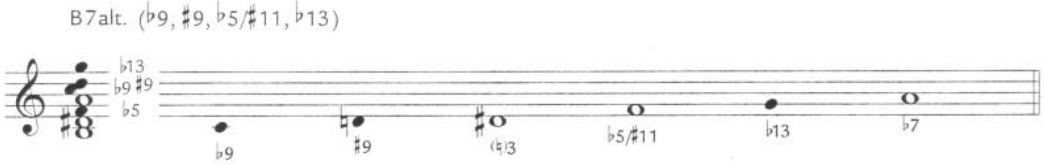
As discussed previously, given the tritone substitution phenomenon it is obvious that a B7alt. and its accompanying scale are also present diatonically in the melodic minor system (indeed, the VII7alt., though theoretically not as "correct" as the viiø chord, which could also be built on the leading tone in melodic minor, is a much more significant and more frequently used chord). Extracting these two modes from Example 7.6, above, yields:

EXAMPLE 7.7

fourth MODE of MELODIC MINOR:
F Lydian ♭7 scale



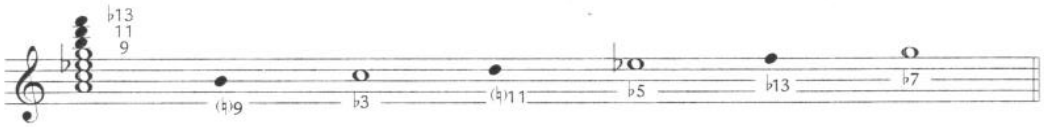
SEVENTH MODE of MELODIC MINOR:
B "altered" scale



The sixth mode of melodic minor is frequently used for ø chords, since all three of its diatonically available extensions are consonant (this is sometimes referred to as the "Locrian ♮9" scale):

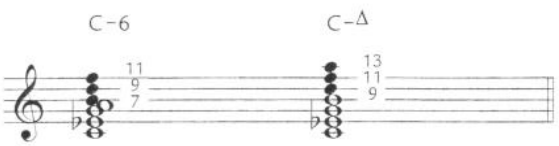
EXAMPLE 7.8

sixth MODE of MELODIC MINOR:
A "Locrian ♮9" scale



Finally, the melodic minor scale is useful in generating tonic chords in minor key harmony, either a i–6 or a i–$^{\Delta}$, each of which is diatonic to melodic minor.

EXAMPLE 7.9



Dorian

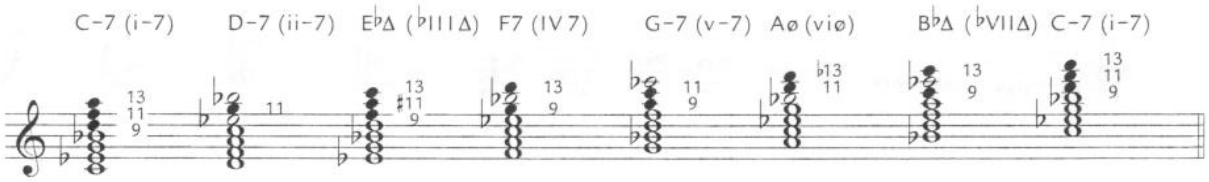
The diatonic harmony in the Dorian mode is interesting because it contains a minor seventh chord on the tonic and also a IV7 chord as one would expect to hear in Blues. Unlike the IV7 chord diatonic to melodic minor (see above), the IV7 from Dorian does not contain a ♯11. In other words, the fourth mode of Dorian turns out to be a Mixolydian scale, whereas the fourth mode of melodic minor was a Lydian ♭7 scale.

The chord progression from i-7 to IV7, when repeated over and over, is characteristic of introductions and endings and solo sections used in montunos (the solo section in salsa music) as well as in bossa novas. Compositions by Brazilian composer Antonio Carlos Jobim which employ this device are *Wave* and *Triste*, both of which alternate structurally between major and parallel minor tonality.

When used repetitively in this fashion, then, the chord progression C-7-F7 does not necessarily have to sound like a ii-7-V7 progression in B♭ major. It may also sound like a i-7-IV7 progression in C Dorian. As with any modal cadence (a cadence involving the tonic chord and some other chord within a given mode), the reiteration of the tonic in a redundant fashion gives us a stronger sense of tonality based on that tonic. Examining the system of diatonic harmonies in Dorian, one can see that the Dorian mode, like the Aeolian mode, contains a ♭IIIΔ chord. In the Dorian mode this chord extends to yield the extensions ♮9, ♯11, ♮13, whereas in Aeolian the ♯11 was not available. Therefore, most improvisers treat the ♭IIIΔ as if it came from the Dorian mode; i.e., they use a Lydian mode based on the Δ chord's root.

EXAMPLE 7.10

DIATONIC HARMONY & EXTENSIONS in C DORIAN



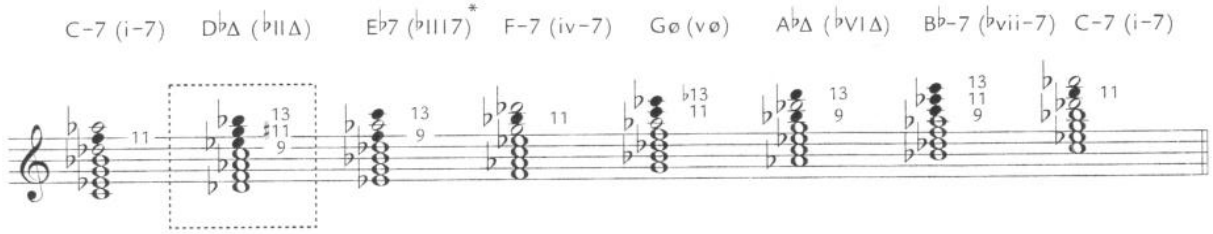
Also of interest in the Dorian mode are the v-7, also common to the Mixolydian MI harmonic system, and the viø chord, also common to melodic minor (see Example 7.8 above). Unique to the Dorian modal system is the ♭VIIΔ chord. Therefore, any time you encounter a modal progression from tonic (either minor or major) to a ♭VIIΔ chord, it can be said that the second chord has been "borrowed" from the parallel Dorian mode.

PHRYGIAN

The most commonly used harmony which is derived diatonically from the Phrygian mode is the ♭IIΔ chord, also known in European classical harmony as the Neapolitan chord.

EXAMPLE 7.11A

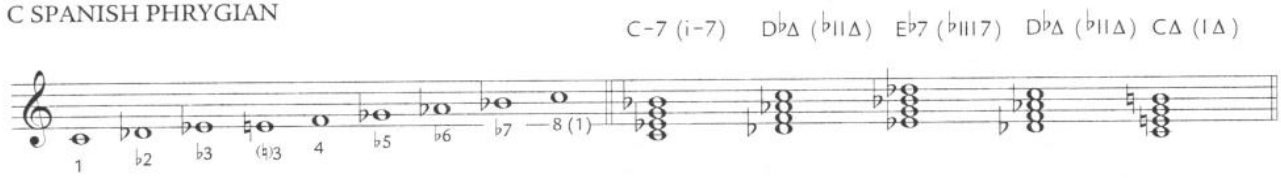
DIATONIC HARMONY & EXTENSIONS in C PHRYGIAN



* A mode very similar to the Phrygian mode is the "Spanish Phrygian" mode. It is the same as Phrygian except that it adds a major third in addition to the minor third in ordinary Phrygian, thereby creating an asymmetric octatonic scale. The Spanish Phrygian scale figures prominently in music of the Iberian peninsula, especially in Flamenco music. The ♭III7 chord, E♭7 in C Phrygian or Spanish Phrygian, is often used cadentially in this style, a commonly occurring progression being i-7-♭IIΔ-♭III7-♭IIΔ, then possibly returning to a tonic of IΔ, i-Δ, or I7♯9, all of which can be used to exploit the presence of *both* thirds in the scale. Chick Corea's *La Fiesta* is an example of a jazz composition using this harmonic device:

EXAMPLE 7.11B

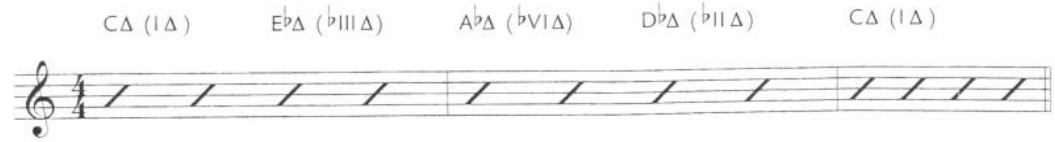
C SPANISH PHRYGIAN



The ♭IIΔ chord, when used in jazz harmony, often occurs in the same harmonic rhythm and position as the substitute dominant seventh based on that same root (SV7/I), and can often occur as the final chord in a cadence involving other MI chords taken primarily from the parallel Aeolian mode.

EXAMPLE 7.12

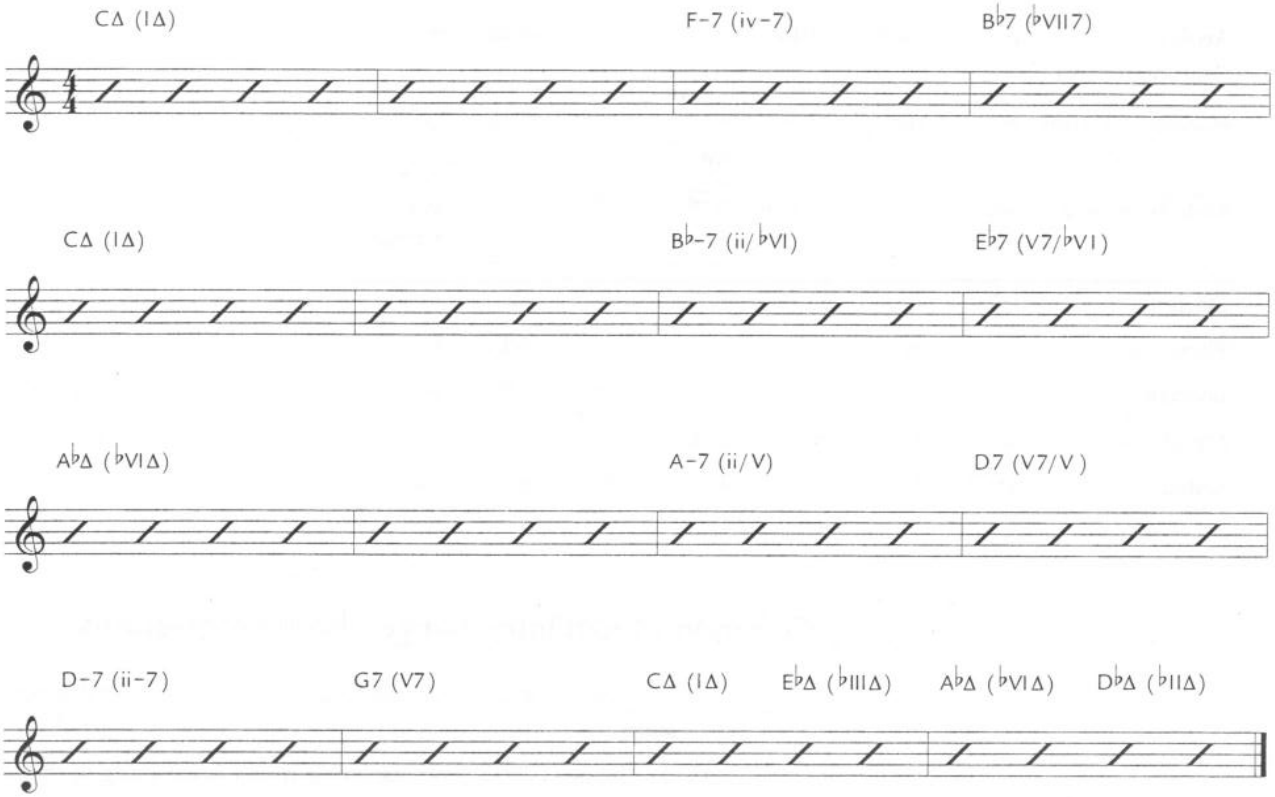
Ladybird CADENCE



(The above mentioned cadence is normally referred to by jazz musicians as the *Ladybird* cadence since it comes from the chord progression to the Tadd Dameron composition *Ladybird* shown below.)

EXAMPLE 7.12A

Ladybird – Tadd Dameron



Note that in the *Ladybird* progression, in addition to MI harmonies from the various modes discussed above, there is also a ii-V cadence which precedes the MI chord ♭VIΔ. This is another frequently used process: tonicizing one of the MI Δ chords by preceding it by its ii-V, thus giving us yet another means of using MI harmony to further expand the harmony of the diatonic system.

At this point it would probably be extremely useful to list all of the Roman numerals available from the various modes discussed to this point, beginning with the diatonic system in major, then following it with the Roman numerals generated by each of the systems from all of the remaining parallel modes:

TABLE 7.1

Diatonic seventh chords in the major scale and its parallel modes:

Ionian (major)	IΔ	ii–7	iii–7	IVΔ	V7	vi–7	viiø

Modal Interchange Possibilities:

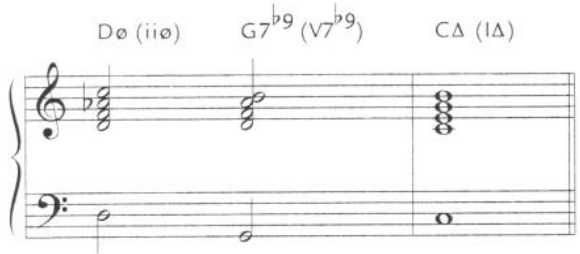
Aeolian (Natural minor)	i–7	iiø	♭IIIΔ	iv–7	v–7	♭VIΔ	♭VII7
Harmonic minor	i–Δ	iiø	♭III+Δ	iv–7 ivø	V7♭9 V7♭9♭13	♭VIΔ	vii°7
Melodic minor	i–6 i–Δ	ii–7	♭III+Δ	IV7♯11	V+7 V7♭13	viø	viiø VII7alt
Dorian	i–7	ii–7	♭IIIΔ	IV7	v–7	viø	♭VIIΔ
Phrygian	i–7	♭IIΔ	♭III7	iv–7	vø	♭VIΔ	♭vii–7
Locrian	i–7	♭IIΔ	♭III–7	iv–7	♭VΔ	♭VI7	♭vii–7
Mixolydian	I7	ii–7	iiiø	IVΔ	v–7	vi–7	♭VIIΔ
Lydian	IΔ♯11	II7	iii–7	♯ivø	VΔ	vi–7	vii–7

Common Modal Interchange Chord Progressions

The following are the most frequently used MI chord progressions:

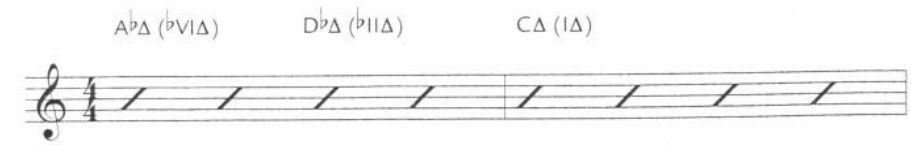
1. The iiø-V7♭9♭13 from harmonic minor (used going to the parallel major):

EXAMPLE 7.1



2. The compound cadence ♭VIΔ-♭IIΔ:

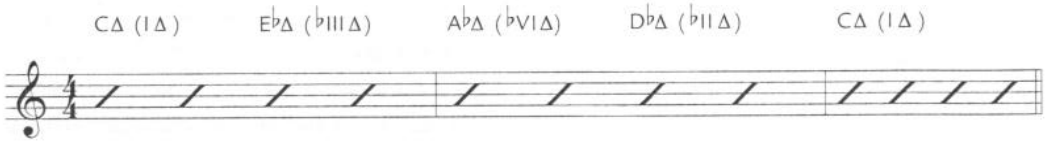
EXAMPLE 7.13



3. The *Ladybird* cadence mentioned above: I∆-♭III∆-♭VI∆-♭II∆:

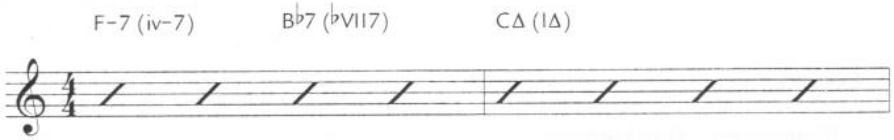
EXAMPLE 7.12

Ladybird CADENCE



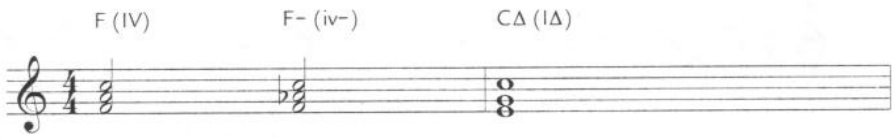
4. The iv-7-♭VII 7 (also used in *Ladybird* in ms.3-4):

EXAMPLE 7.14



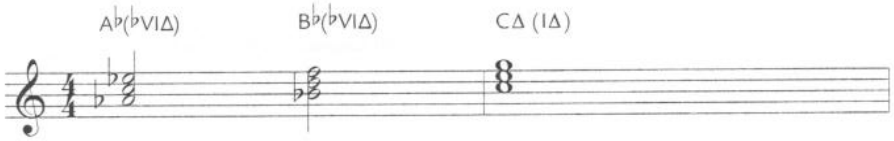
5. IV∆-iv- (used frequently in songs by the Beatles when preceding the tonic):

EXAMPLE 7.15A



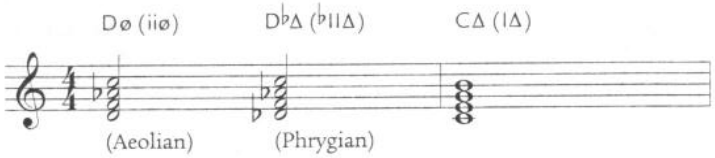
6. ♭VI-♭VII-I (also frequently used by pop music composers [the quality of the chords might be major or dominant; for example either A♭ or A♭7 going to B♭ or B♭7, to create a cadence to the tonic C∆]):

EXAMPLE 7.15B

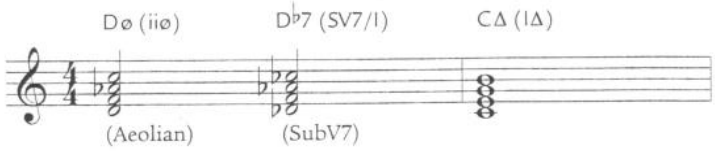


7. Mixed cadences borrowing subdominant chords from the parallel major or other forms of minor (e.g., D-7-D♭∆):

EXAMPLE 7.16A



EXAMPLE 7.16B

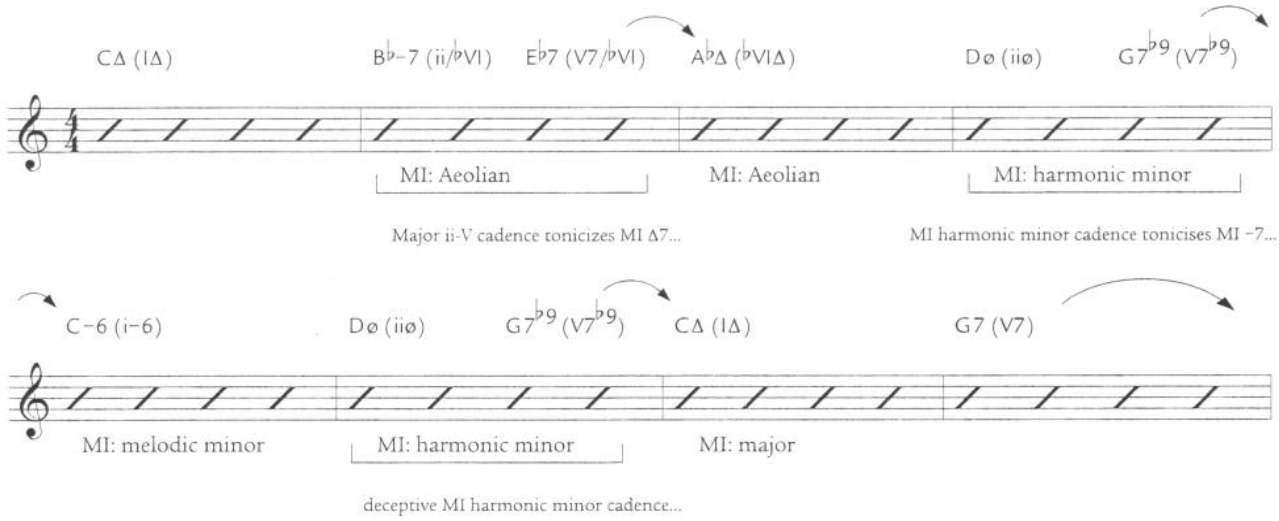


Useful General Rules for Improvising on and Analyzing Modal Interchange Major Chords

Major chords which are not I (non-tonic) take the Lydian mode based on their root. Otherwise stated, this means that these major chords are extended with ♮9, ♯11, and ♮13, or the major triad based on their second degree. The list of these available major chords would be as follows: IV (diatonic); ♭III; ♭VI; ♭II; and ♭VII (all MI possibilities). The presence of major chords other than the tonic itself and the additional five listed above would indicate a modulation, the subject of a later chapter. To conclude this chapter, it would be useful to analyze the chord progression from the Bob Haggart standard *What's New?*.

EXAMPLE 7.17

What's New? – Bob Haggart
(ms.1-8)



Note the many MI seventh chords here, and the way in which the chord progression cleverly juxtaposes expectations of resolution to major and minor by use of these chords. Also note the ii-V that precedes the MI chord ♭VIΔ. Other tunes whose progressions are useful to analyze for this are *Here's That Rainy Day* by Jimmy Van Heusen and *Lament* by J.J. Johnson.

Minor Blues

Minor Blues, as the name suggests, is a Blues form which derives its primary chords and cadences from minor tonality. Minor Blues melodies occur in the same strophic or verse forms (aab, riff, etc.) as do major Blues. A good example of a minor Blues is *Equinox* by John Coltrane. Another good example is *The Shepherd Who Watches Over the Night Flock* from Duke Ellington's SECOND SACRED CONCERT. *Footprints* by Wayne Shorter on the MILES SMILES album is also a good example.

Minor Blues generally observes the following form: i- of some form for the first four measures, sometimes interrupted by a move to its dominant (V7alt.), or to its related iv- in m.2, and possibly featuring a cadence to prepare the iv- chord in m.5. The expected iv- chord in m.5 is generally minor and can last two bars, or may be followed in m.6 by a descending bass line and subsequent cadence back to the tonic minor chord in m.7. The i- chord returns in ms.7-8. If it does not occupy both measures, this is generally because in m.8 it has been replaced by some kind of connecting or cadential chord(s) leading to the chords found in the cadence, which accompanies the b phrase in an aab strophic form, beginning in m.9. (Not surprisingly, all the cadences in this generalized minor Blues form tend to be the same sorts of cadences one would have in music in a minor key, with half diminished seventh's or altered dominants functioning as "ii" chords and V7alt. or V7$^{\flat 9}$ dominant chords. In other words, the altered dominant and subdominant chords on the root of ii in any minor key cadence are often freely substituted.) Ms.11-12 may be a static reiteration of the tonic minor harmony or may involve a move from i to V, or may involve a turnaround of some sort (perhaps a *Ladybird* or other MI cadence). Therefore, we might evolve the following paradigm of minor Blues possibilities in a measure-by-measure format:

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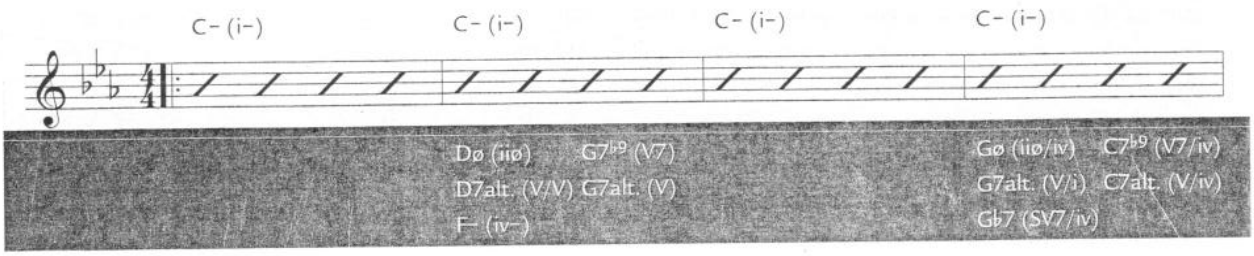
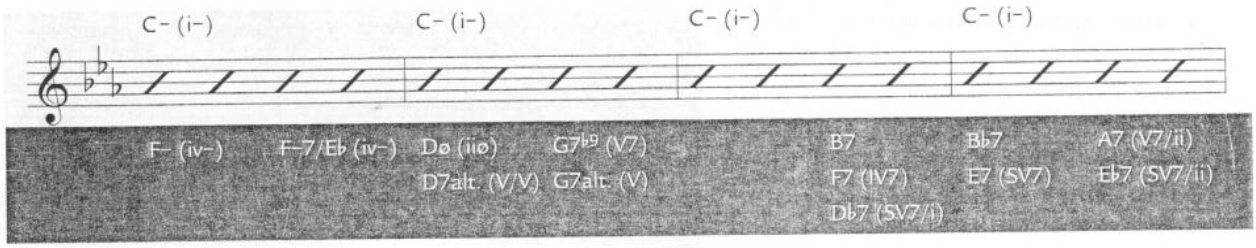
Example 7.18

MINOR BLUES PARADIGM
(key = C minor)

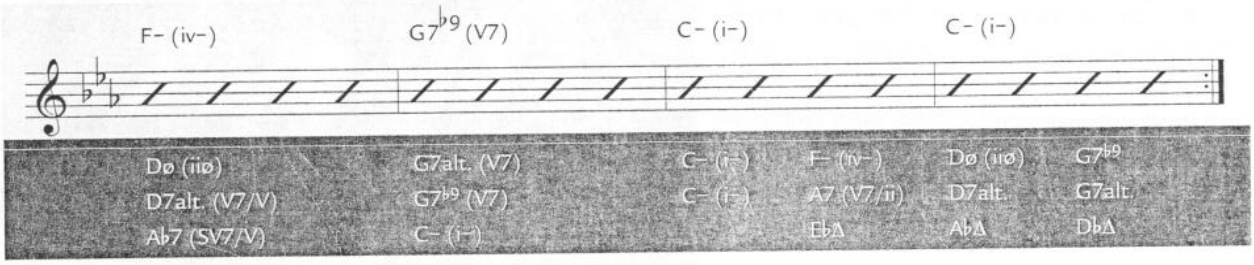
Ms.1-4:



Ms.5-8:



Ms.9-12:



Suggested Exercises and Assignments:

Write a chord progression using MI harmony and also find and analyze other standard compositions which employ MI harmony.*

Also, a good project is to have students write a minor Blues melody in the aab format, and then to choose different cadences and harmonic possibilities according to the above formula. It is also helpful for students to find other examples of minor Blues in their own listening.

* Specifically, transcribe the chord progressions to the compositions *The Shephard Who Watches Over the Night Flock* and *Footprints* which are mentioned in this chapter. How do these progressions differ from the model shown in Example 7.18 or from other minor blues which you have studied?

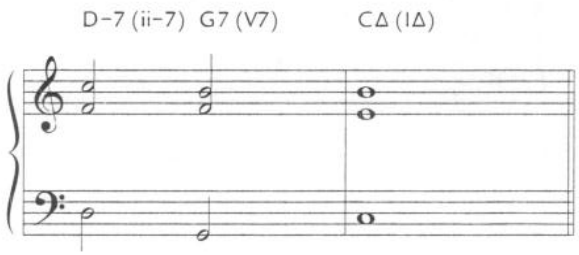
CHAPTER **Eight**

COMMON CHORD PROGRESSIONS AND VOICE-LEADING

While this is not a jazz improvisation or jazz piano method book per se, ear training and the ability to recognize chord progressions aurally are indispensable, whether studying theory or improvisation in the jazz idiom. Therefore, before proceeding to further theoretical topics, we feel it is important to review musical examples which illustrate the basic voice leading for the following common chord progressions discussed to this point. All students of jazz theory and improvisation need to be able to voice lead such chord progressions in their most basic form at the keyboard, whether they are pianists or not, as this is the best way for the player or writer to be able to learn to hear these progressions.

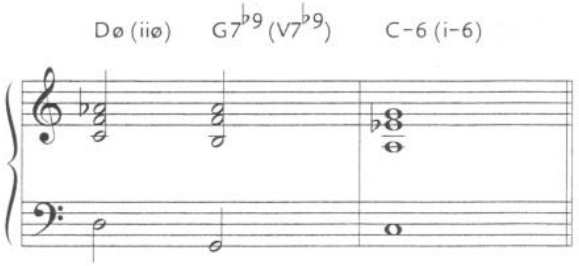
Basic voice-leading may involve simply playing the root in the left hand, with the voice-led thirds and sevenths of the chords in the right.

EXAMPLE 8.1



Or it may require more involved voicings with greater numbers of voices, according to the complexity of the chord symbols involved.

EXAMPLE 8.2

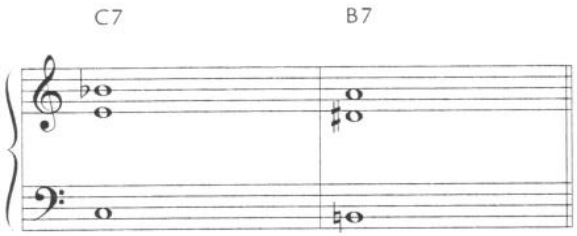


Note that in many chord voicings the fifth, when natural, is deleted. This is simply because chords like major 7, dominant 7, and minor 7 are most obviously characterized by the intervallic relationships of their roots, thirds, and sevenths. Simplifying every seventh chord into roots, thirds, and sevenths is useful since it reduces the number of voices involved and makes it easier to hear and play the essential changing notes between harmonies. In voice-leading, the most important rule is to maintain tones which are common to adjacent chords in the *same* voice as you *move* from chord to chord. This also makes it easier to focus on those chord tones which move, which in effect create the chord *change*. Voice-leading between chords can occur in three basic types of root motion:

1. By step or half-step (in which case there is more or less an absence of voice-leading due to the parallelism inherent in the progression):

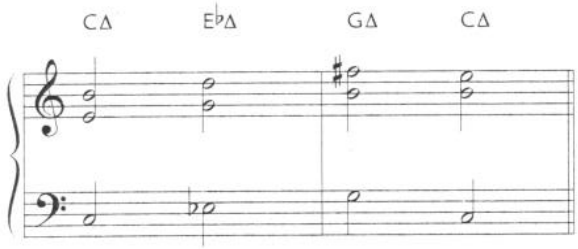
EXAMPLE 8.3

PARALLEL (step-wise) VOICE-LEADING



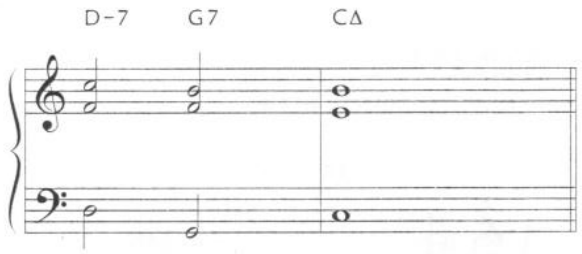
2. By cycles of thirds (or sixths), relatively rare, and without any established rules to govern voice-leading:

EXAMPLE 8.4



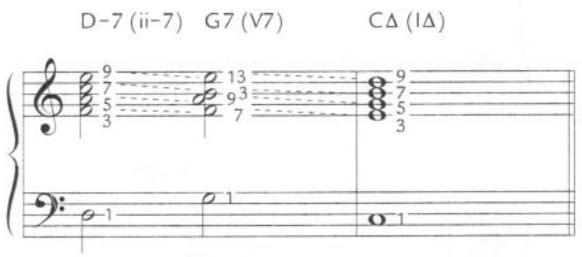
3. And, of course, the most common scenario, which is voice-leading by the Cycle of Fifths (Fourths):

EXAMPLE 8.5



With the Cycle of Fifths there are many useful observations to be made, and these can be best seen by examining a fully-voiced chord progression.

EXAMPLE 8.6A



The voice-leading generalizations which can be drawn from this example (which, importantly, would still obtain even if the qualities of the chords were changed) are as follows:

EXAMPLE 8.6B

(1) 9 ⟷ 13 (5)

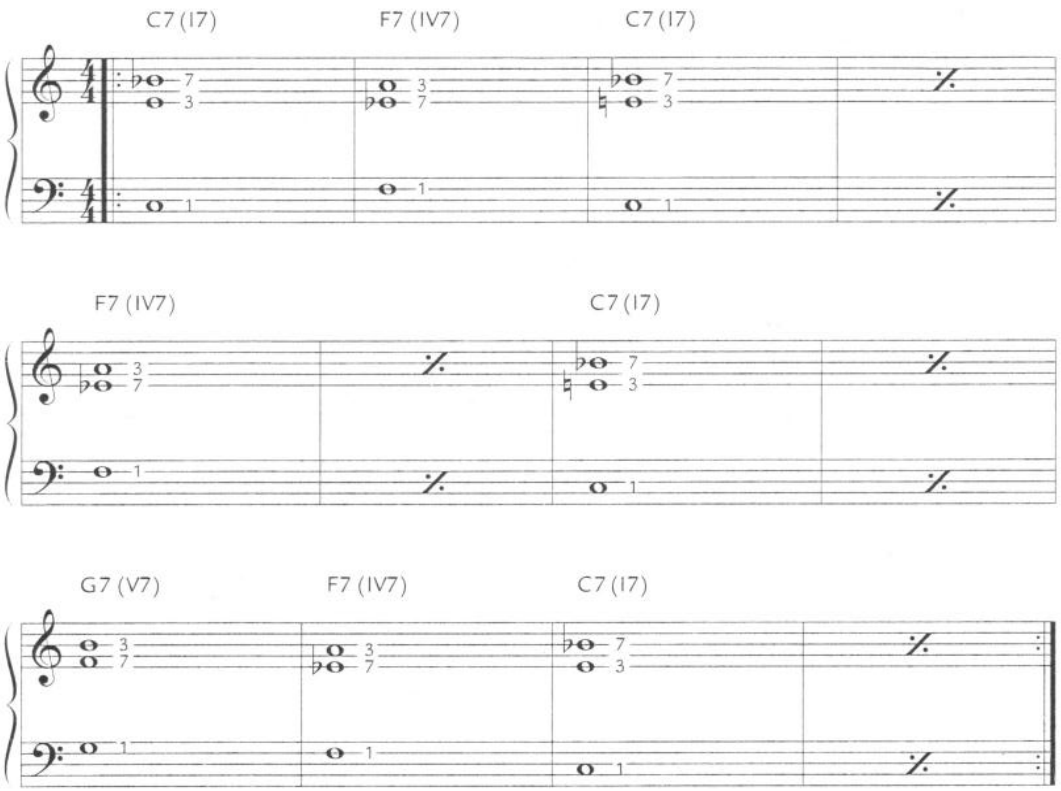
7 ⟷ 3

1 ⟷ 1

The most obvious chord progressions and most widely used of those discussed to this point are, without a doubt, the Blues chord progressions. Here we will deal with the most basic ones, the more complex variations being the topic of a subsequent chapter.

EXAMPLE 8.7

BASIC C MAJOR BLUES

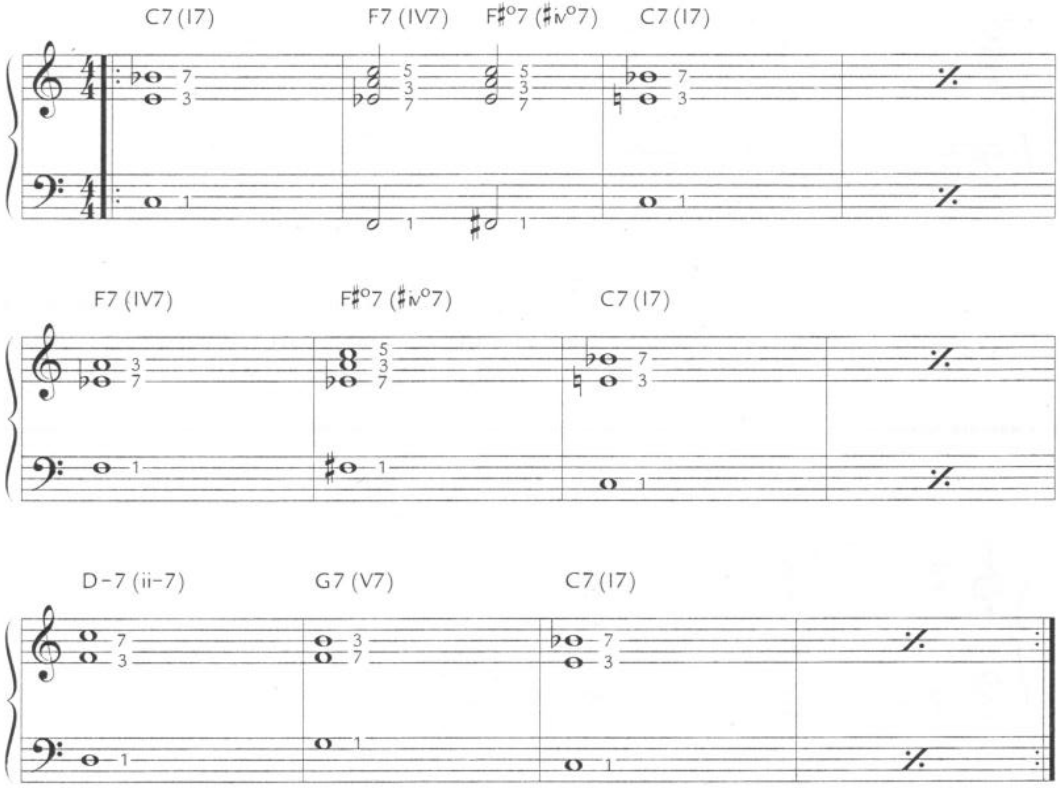


Note that in terms of the basic voice-leading of a simple three-chord Blues, the thirds and sevenths resolve entirely chromatically, given Cycle of Fifths voice-leading tendencies.

As mentioned in Chapter 3, it is very common to have a ♯IV°7 chord in the second half of m.2 and again in m.6 of a Blues, as well as possibly a ii-V-I cadence instead of V-IV-I. The basic voice-leading would then become:

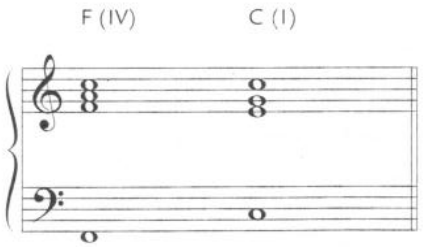
EXAMPLE 8.8

MODIFIED C MAJOR BLUES

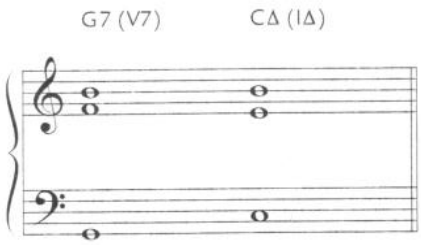


Aside from Blues progressions, and indeed a part of these or any others for that matter, are the various simple and compound cadences discussed in the first two chapters. To review, simple cadences involve a move from a IV or V chord to the tonic...

EXAMPLE 8.9A

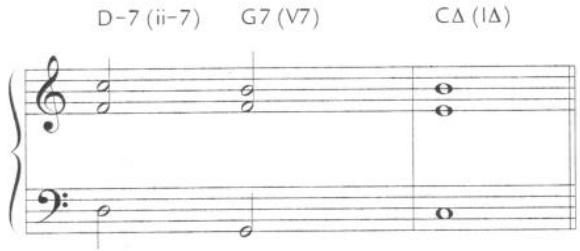


Example 8.9b

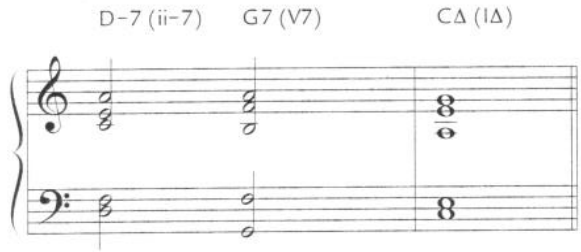


...whereas compound cadences involve two chords progressing to the tonic (also refer to Chapter 2). These might be the standard ii-V-I cadence...

Example 8.10a

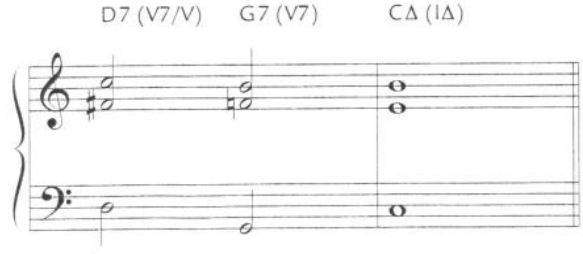


Example 8.10b

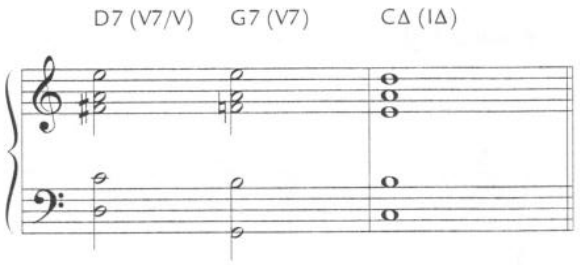


...or the V/V cadence:

Example 8.11a

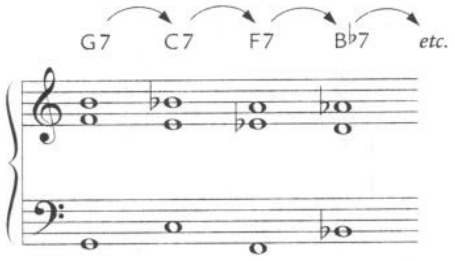


EXAMPLE 8.11B



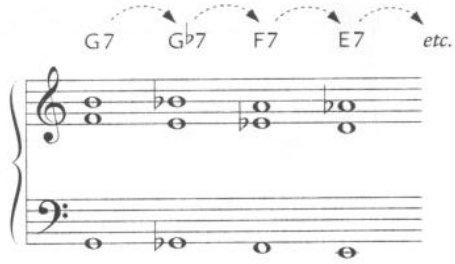
The basic voice-leading of secondary dominant chords (see Chapter 5) is chromatic if reduced to thirds and sevenths:

EXAMPLE 8.12



The same obviously happens with the thirds and sevenths of substitute dominants.

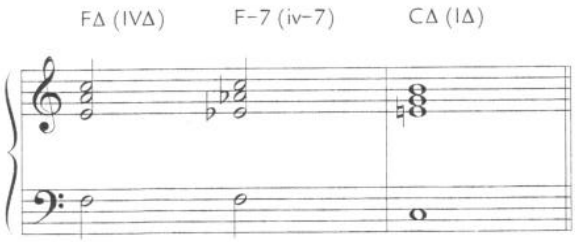
EXAMPLE 8.13



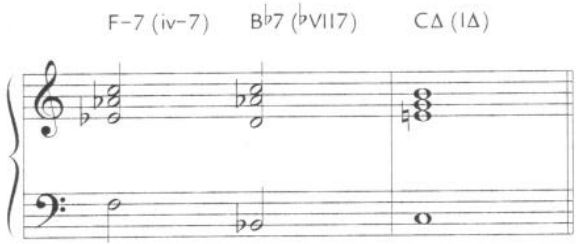
Note that the basic difference between the secondary and substitute dominants mentioned above is that the secondary dominants use Cycle of Fifths root motion, while the substitute dominants use descending chromatic root motion. There is no difference in the voice-leading of their respective thirds and sevenths, or in their potential resolutions.

Commonly occurring MI progressions (see also Chapter 7) could be voiced in as follows:

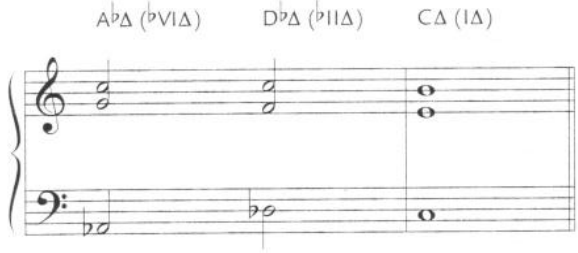
EXAMPLE 8.14



EXAMPLE 8.15

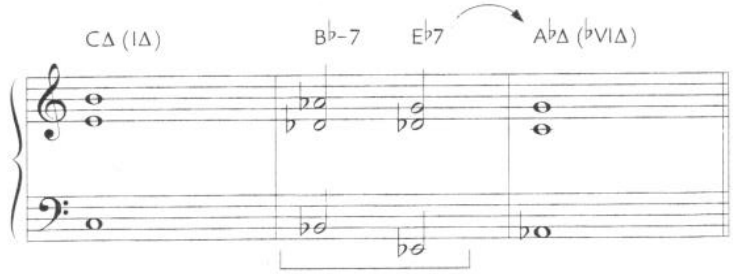


EXAMPLE 8.16



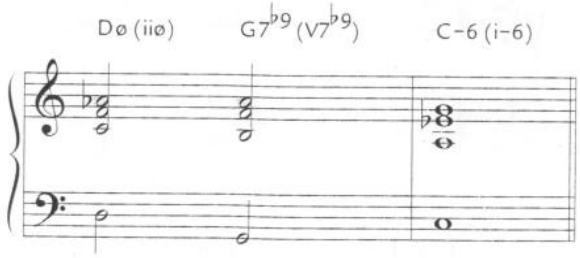
EXAMPLE 8.17

"ii-7-V7" of MI Δ CHORDS



The voice-leading of the standard minor key cadence, iiø-V7♭9, requires the addition of the flatted sixth scale tone (A♭ in the key of C minor) as a fourth voice in each of these two cadential chords. It functions as ♭5 of the ii chord and ♭9 of the dominant.

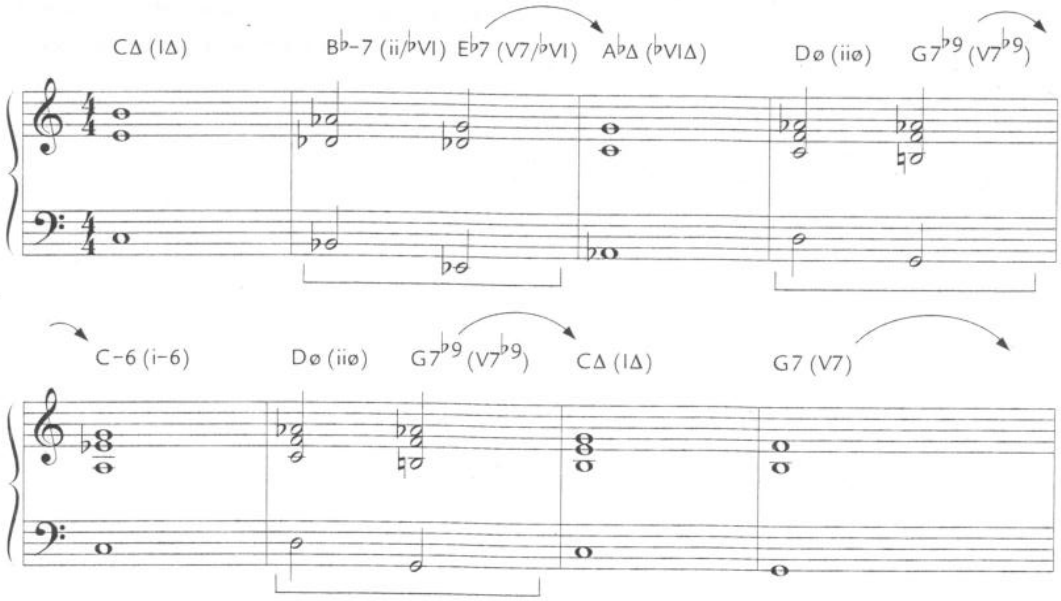
EXAMPLE 8.18



Returning to Example 7.17, the basic voice-leading for the chord progression for the first 8 bars of *What's New* could be expressed as follows, first illustrated with simple roots, thirds, and sevenths, then with more fully-voiced chords:

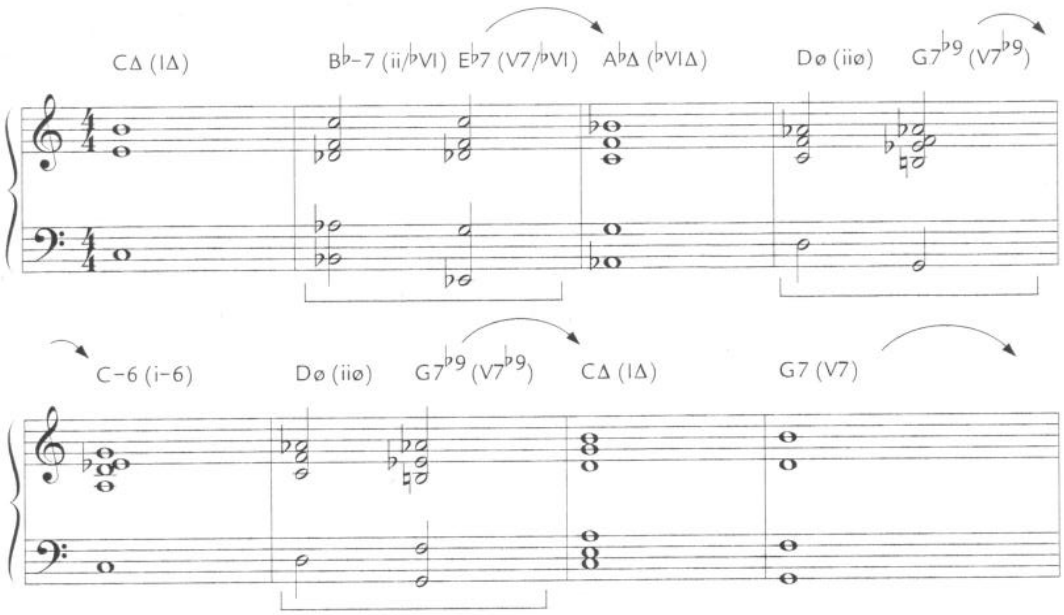
EXAMPLE 8.19A

What's New? PROGRESSION *(roots, thirds, and sevenths)*



Example 8.19B

What's New? PROGRESSION *(full voicings)*



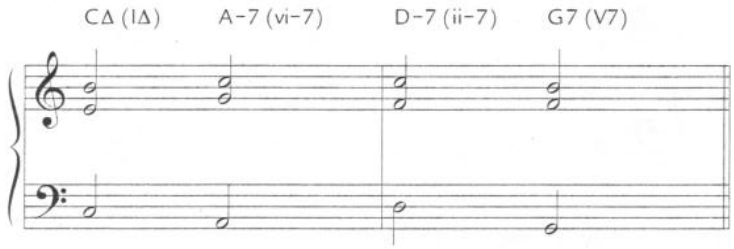
Analyze the chord voicings in Example 8.19B to be sure you understand the mechanics of the voice-leading, as well as the function of each note within the voicings.

Turnarounds

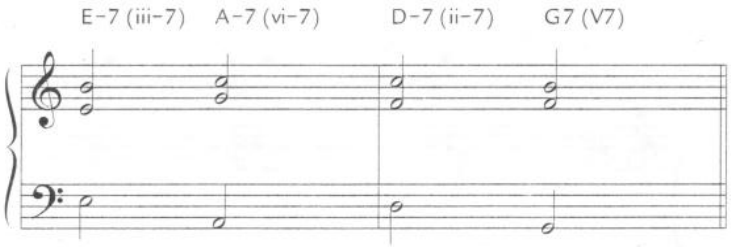
The next category of common chord progressions would be turnarounds. A turnaround (again refer to Chapter 2) is a series of four chords, generally in half notes or whole notes, beginning with the tonic or a tonic substitute and then progressing in some manner to a vi, ii, and V chord (or any of their available substitutes). Turnarounds are the most basic harmonic building blocks of standard chord progressions, and can employ any of the various categories of functional harmony (diatonic, secondary and substitute dominant, MI harmony, or chromatic connecting chords). The following are the most common turnarounds in their most basic voicings:

EXAMPLE 8.20A & 8.20B

TURNAROUNDS w/ DIATONIC SEVENTHs



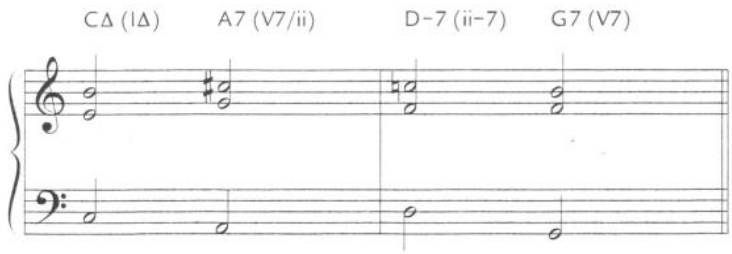
(see *I Got Rhythm* – George Gershwin)



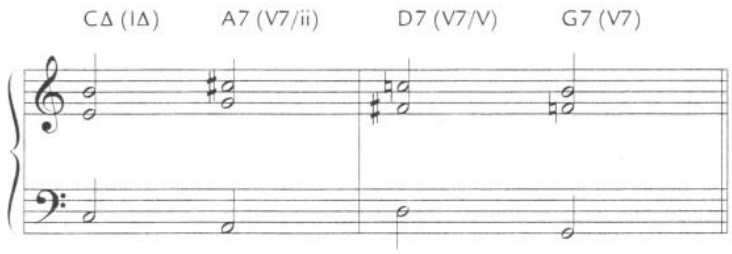
(see *Polka Dots and Moonbeams* – Jimmy Van Heusen)

EXAMPLE 8.21A & 8.21B

TURNAROUNDS w/ SECONDARY DOMINANTS



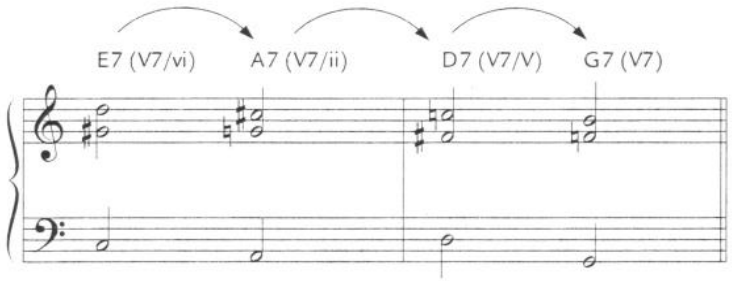
(see *Stars Fell on Alabama* - Marvin Parish)



(see *My Ship* - Kurt Weill)

EXAMPLE 8.22

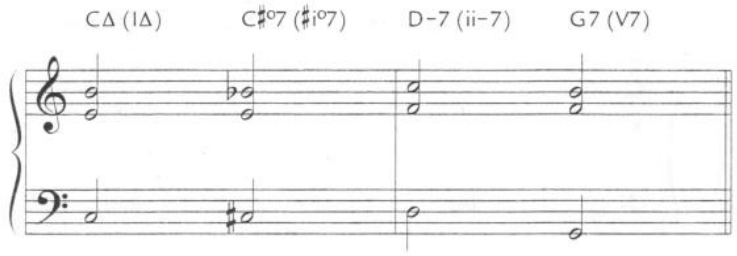
TURNAROUNDS w/ EXTENDED DOMINANT CHAINS



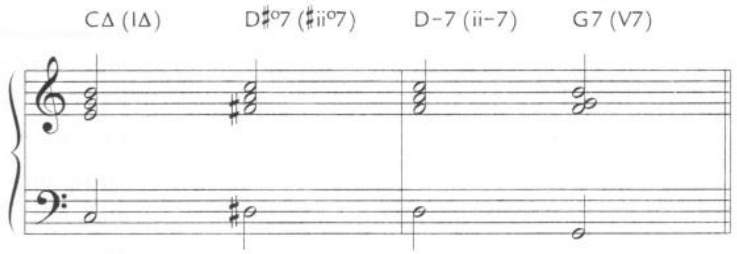
(see *Nice Work If You Can Get It* - George Gershwin)

EXAMPLE 8.23A & 8.23B

TURNAROUNDS w/ PASSING °7 CHORDS



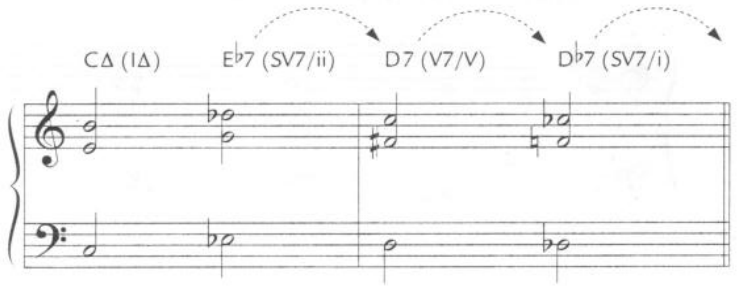
(see *Ain't Misbehavin* – Thomas "Fats" Waller)



(see *A Foggy Day* – George Gershwin)

EXAMPLE 8.24

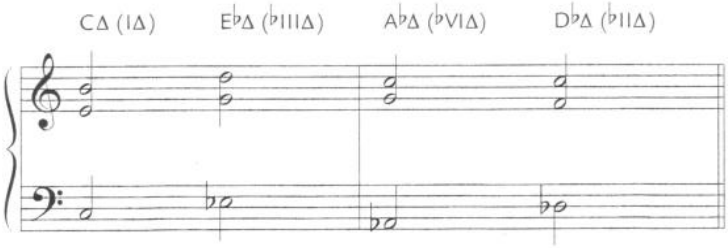
TURNAROUNDS w/ SUBSTITUTE DOMINANTS



(often used for intro and coda vamps)

EXAMPLE 8.25

Ladybird TURNAROUND



(see *Ladybird* – Tadd Dameron; *Here's that Rainy Day* – Jimmy Van Heusen)

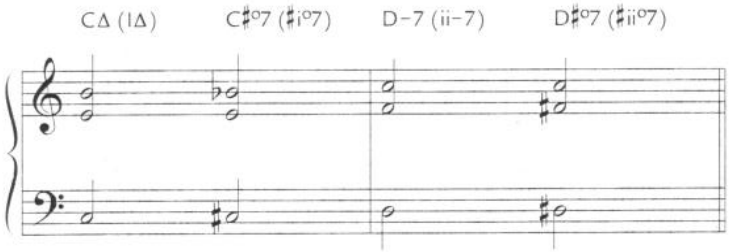
In many, many standard tunes (Gershwin's *I Got Rhythm* comes most notably to mind, see also Chapter 12), entire sections of the form are built out of turnarounds placed back to back to create 8-bar harmonic phrases.

Other important two-bar chord progressions and turnarounds and their basic voice-leading would be:

The ascending diminished progression, found often in the first two bars of "Rhythm Changes" (see also Chapter 12), as well as in *Easy Living* and *Memories of You*:

EXAMPLE 8.26

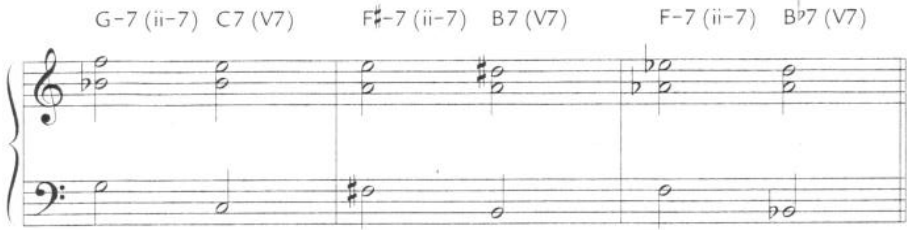
ASCENDING °7 CHORD PROGRESSION



Extended ii-V progressions, in which the ii–7-V7 progression is used as a unit. These can be chained together chromatically (see also Example 6.5, *Ask Me Now* by Thelonious Monk):

EXAMPLE 8.27

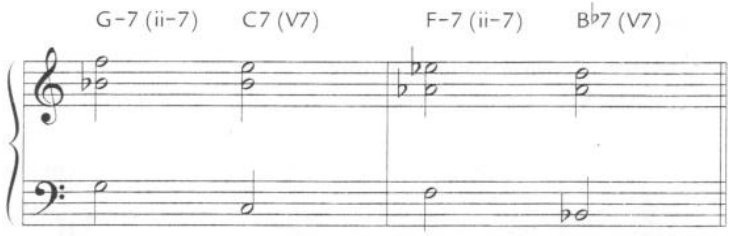
EXTENDED CHROMATIC ii-V CHAIN *(descending by half-step)*



Or in whole-steps (i.e., related ii-V cadences), creating the effect of a turnaround:

EXAMPLE 8.28

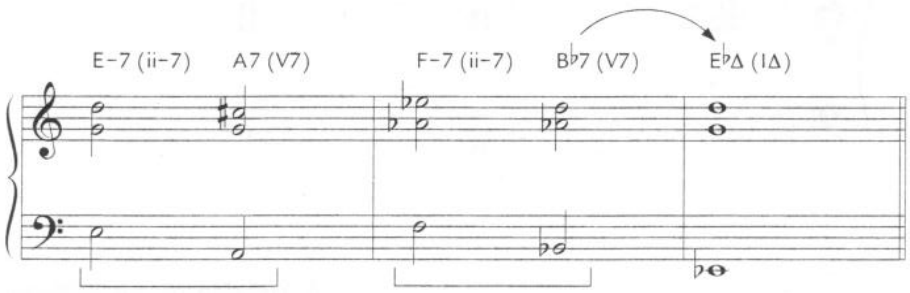
EXTENDED RELATED ii-V CHAIN *(descending by whole-step)*



Or by moving upward, as in John Coltrane's *Moment's Notice:*

EXAMPLE 8.29

EXTENDED CHROMATIC ii-V CHAIN *(ascending by half-step)*

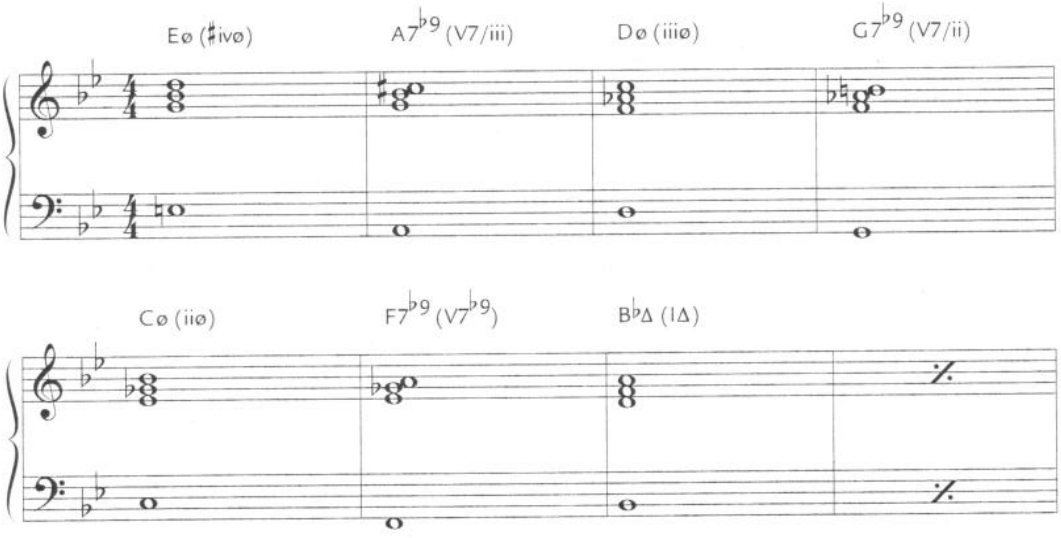


The notion of chaining ii-V progressions together in extended chromatic relationships, both ascending and descending, has been an important compositional tool in the hands of modern writers like Thelonious Monk, John Coltrane, and Horace Silver. Listen to Horace Silver's *Yeah* on the HORACE-SCOPE album for a further example.

A final progression worth learning to hear, which is closely related to the notion of working through the Cycle of Fifths (combining both major ii-7-V7 cadences and harmonic minor iiø-V7♭9 cadences), is found in the last eight bars of Victor Young's *Stella by Starlight*. Note the Roman numeral analysis:

EXAMPLE 8.30

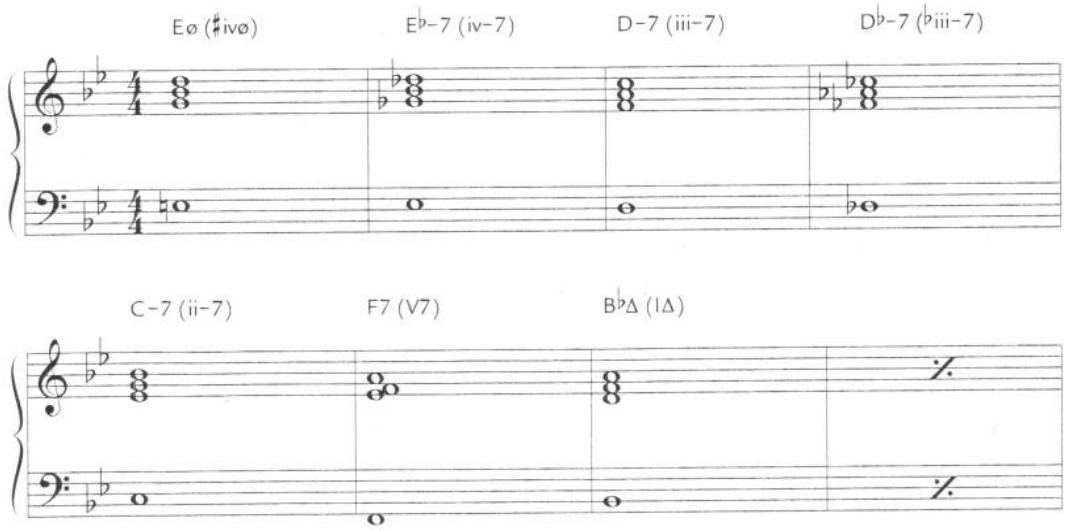
Stella by Starlight – Victor Young
(ms.25-32)



A variation of this progression, also usually found in the last eight bars of a standard song form (e.g., *It's You or No One* by Jule Styne) is:

EXAMPLE 8.31

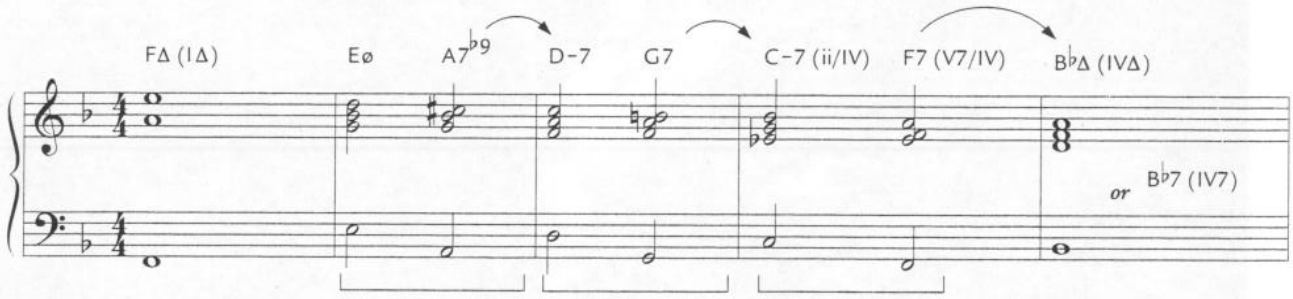
It's You or No One – Jule Styne
(ms.25-32)



This progression may also be used beginning on the second measure of a harmonic phrase, a half-step below a IΔ chord (*Bluesette* by Toots Thielemans is a good example, as is Charlie Parker's *Blues for Alice* and *Confirmation* [see also Chapter 11]). In such cases the progression is being used as a means of leading through a series of cadences to land on the IV chord in the fifth bar of the phrase, similar to a Blues progression.

EXAMPLE 8.32

EXTENDED RELATED ii-V CHAIN
(descending by whole-step) in ms.1-4 of BLUES



Suggested Exercises and Assignments:

Good exercises to work on in this chapter involve laborious ear training in class, working first on playing simply the roots of the above progressions, then adding thirds and sevenths. This should be done in a variety of keys, with emphasis placed on the students' ability to discriminate between diatonic and chromatic motion, whether in the bass or between harmonic voices. If the instructor or person doing ear training is a good pianist, the simpler roots, thirds, and sevenths voicings can be extended to create more pianistic multi-voiced chords, to see if the students can still recognize the progressions when they are expressed in more complex voicings. Students should be required to be able to play these basic tonal progressions at the piano, and to be able to transpose them to various keys. A companion exercise which is extremely valuable is for students to bring in examples of chord progressions like the ones being worked on for ear training in this chapter. Finally, it would be useful to consult Mark Levine's *The Jazz Piano Book*, Sher Music Publishing, and other similar sources (see Bibliography) for further examples of pianistic realizations of these chord progressions. Ear training is the most important element of the student's training!

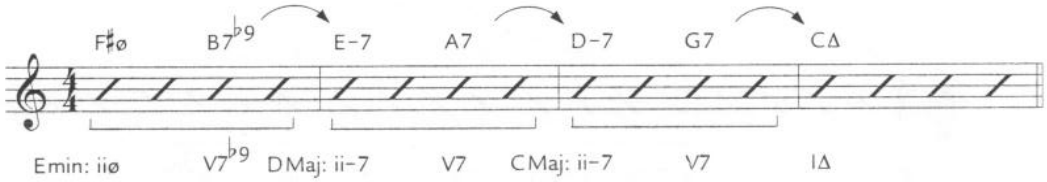
Duke Ellington (© Louis Ouzer)

CHAPTER **Nine**

MODULATION

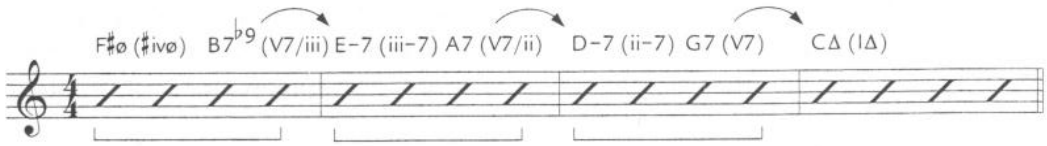
Modulation is defined as a change in tonality. It is generally assumed that when one discusses modulation one is discussing a change of key between two areas of a composition in which functional tonal harmony exists. Modulations most frequently occur in ways which coincide with major landmarks in the form of a composition (for example at the bridge of an AABA or at the B section of an ABAC song form). However, this need not be the case. Modulations within phrases, while relatively rare, may still occur (*Giant Steps* by John Coltrane is a good example of such a progression). It is also possible for modulations to be perceived differently by different listeners or players. For example, some players perceive each additional cadence or turnaround in a given chord progression as establishing a new tonality. In the following example, perhaps one might say that each of the ii-V progressions involved establishes a new tonality.

EXAMPLE 9.1



Still others might perceive the above progression as simply being a series of cadences which are related in the Cycle of Fifths, all related to the same tonality through a series of secondary key areas:

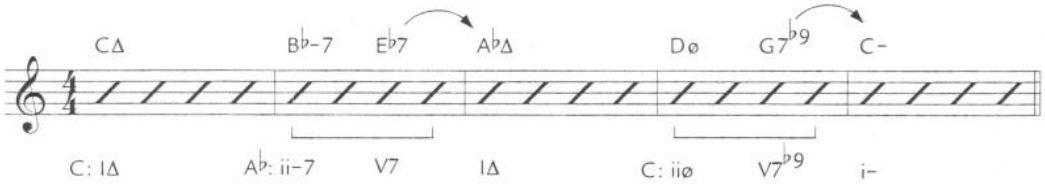
EXAMPLE 9.2



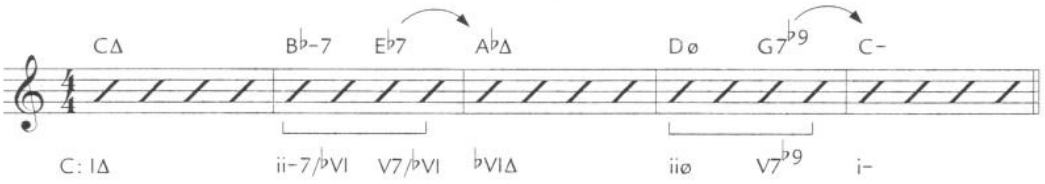
Given the fact that jazz harmony is so chromatic, and employs so much Modal Interchange or other sorts of non-diatonic chord progressions, it is not surprising that people would hear and analyze similar chord progressions differently. For example, to return to our example of the Bob Haggart song *What's New?* used earlier in Chapter 7 during the discussion of Modal Interchange, it is possible for some musicians to perceive a modulation to the key of A♭ in the first four measures, while others might simply relate to this cadence as the tonicization of a Modal Interchange chord:

Example 9.3a & 9.3b

What's New? PROGRESSION
analyzed as ii-V modulations



What's New? PROGRESSION
analyzed as Modal Interchange tonicizations

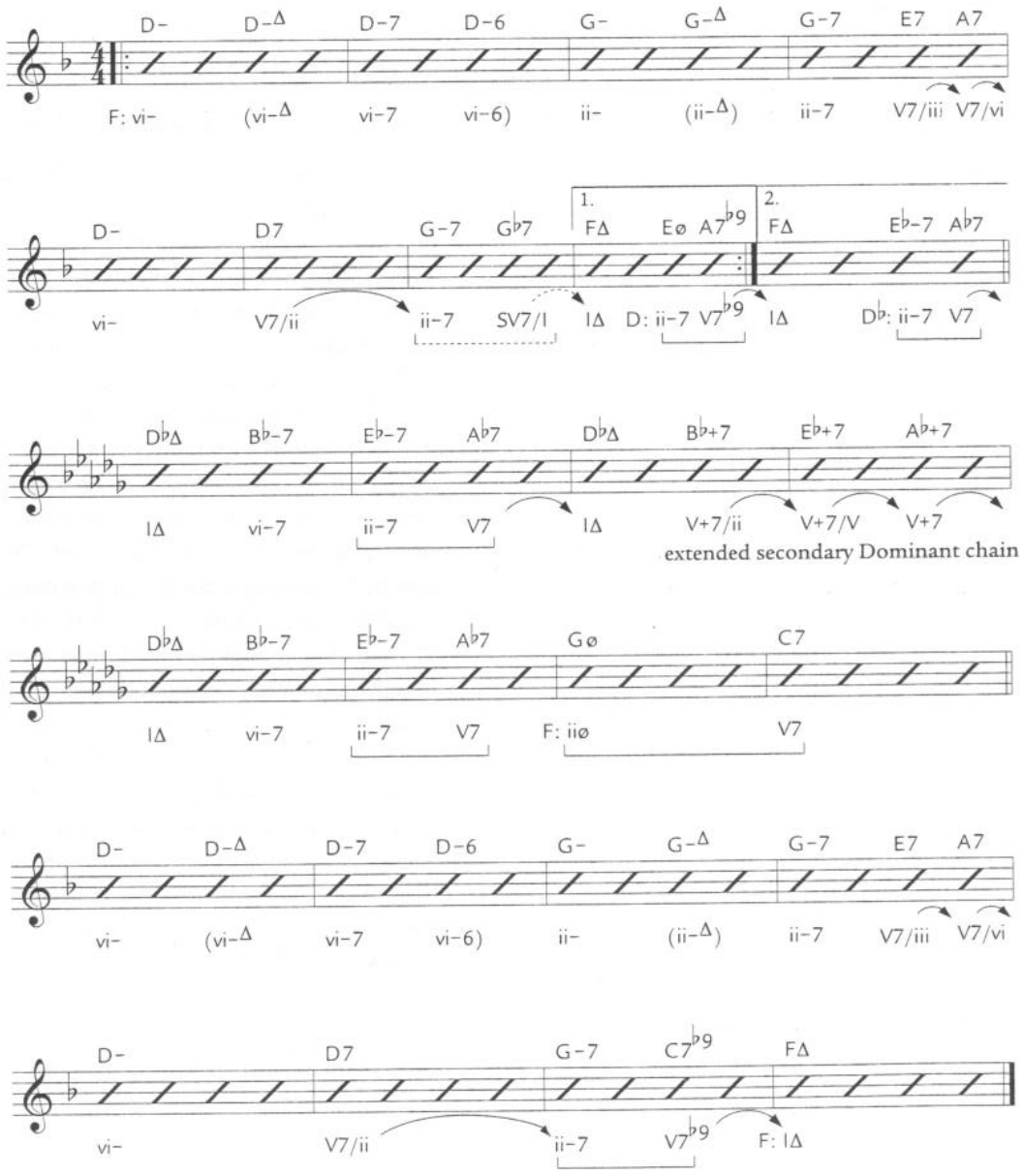


Practically speaking, such discrepancies make little difference in performance or composition. What is important is that the player/improviser be aware of the existence of these various harmonic options, and that if harmonic analysis is an issue, that it be done clearly. Be sure that perceived changes in tonality are clearly labelled as in the above examples, and that the Roman numeral analysis of each chord in the progression indicates both its chord quality and precise location within the tonality.

As mentioned above, modulations frequently and most obviously occur when they coincide with the new section of the form. For example, many of Duke Ellington's AABA song forms feature a modulation at the bridge. Often, this new key is one which might also have been rationalized as a key-of-the-moment within the temporary key or Modal Interchange frameworks outlined in earlier chapters (e.g., ♭VI, ♭II, IV). What leads us to perceive them as modulations is precisely their strategic location in the form.

EXAMPLE 9.4

Chord Progression to *In a Sentimental Mood* – Duke Ellington



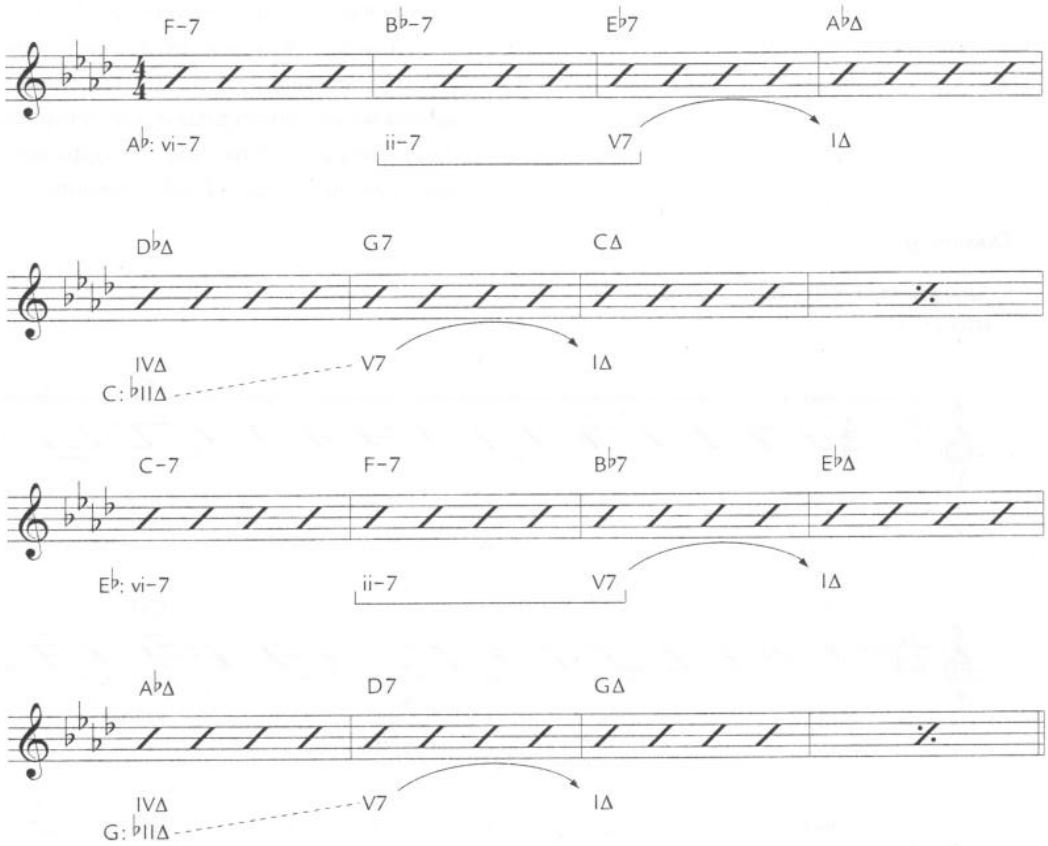
In the chord progression to *In a Sentimental Mood*, shown in the above example, we go from a key center of the relative minor (D–) in the beginning of the A section to its relative major (F) at the end of the A section. When we go to the bridge, there is a modulation to the key of ♭VI (D♭). We perceive this as a modulation not only because it occurs at the bridge, but because the new key is followed by a turnaround in its own tonality. This is another mitigating factor in our perception of modulation: the establishment of a turnaround or other cadential chord progression in the new tonality.

Types of Modulation

Modulations come in three basic types: *direct, pivot* (common chord), or *transitional*. In a direct modulation, there is no perceived shared harmony between the two adjacent keys. The examples mentioned in the text of this chapter to this point, *In a Sentimental Mood* (where the modulation is direct to the key of D♭ from the key of F at the bridge) and *Giant Steps* (where the modulation is direct into a new key with each new dominant chord, see also Chapter 13), are both examples of direct modulations. In a pivot chord modulation, one perceives a given chord or cadence to have function both in the old key and in the new key. It is possible, thus, to hear the first eight bars of Jerome Kern's *All the Things You Are* as containing a pivot modulation in m.5 of both the A and the A' sections of the form. Note the existence of two tiers of Roman numerals for the portion of the progression which could be heard in both keys (in this case, this is only one chord). The return to a single level of Roman numerals indicates analysis in only the new key. Pivot modulations may also involve cadences or turnarounds. To "prove" a pivot modulation, simply resolve the chord or chords you hear in both keys as you would normally to each tonic, according to the tonal functions which you have assigned them. In the following example, if you agree that the D♭Δ chord is ♭IIΔ in C major, simply play the progression and then follow the D♭Δ with CΔ and decide if it sounds plausible. If you hear the chord as potentially still being a IV chord in A♭ major, then follow it with a tonic chord or other progression which would normally involve a IV chord from that point to return to the tonic to see if *that* sounds plausible (keyboard skills as outlined in Chapter 8 are indispensable here!).

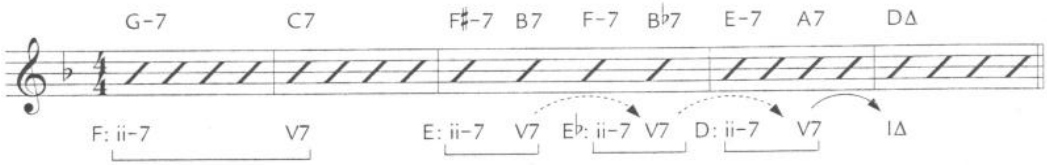
EXAMPLE 9.5

All the Things You Are – Jerome Kern
(ms.1-16)



The last sort of modulation, transitional, is extremely rare as an original portion of a standard composition. *Transitional* modulations depend on extended cadences or parallelism to organize a section of a piece so that tonal relationships *are* still perceived, though a primary *tonality* is not. More than likely a transitional modulation, rather than being a compositional device, is an arranger's device used to create tension. Transitional modulation often involves extended chromatic ii-V's or dominant chords, or substitute dominants, used sequentially in such a way as to establish a logical chord progression based on various sorts of dominant resolutions which create a sense of harmonic stability without real tonality.

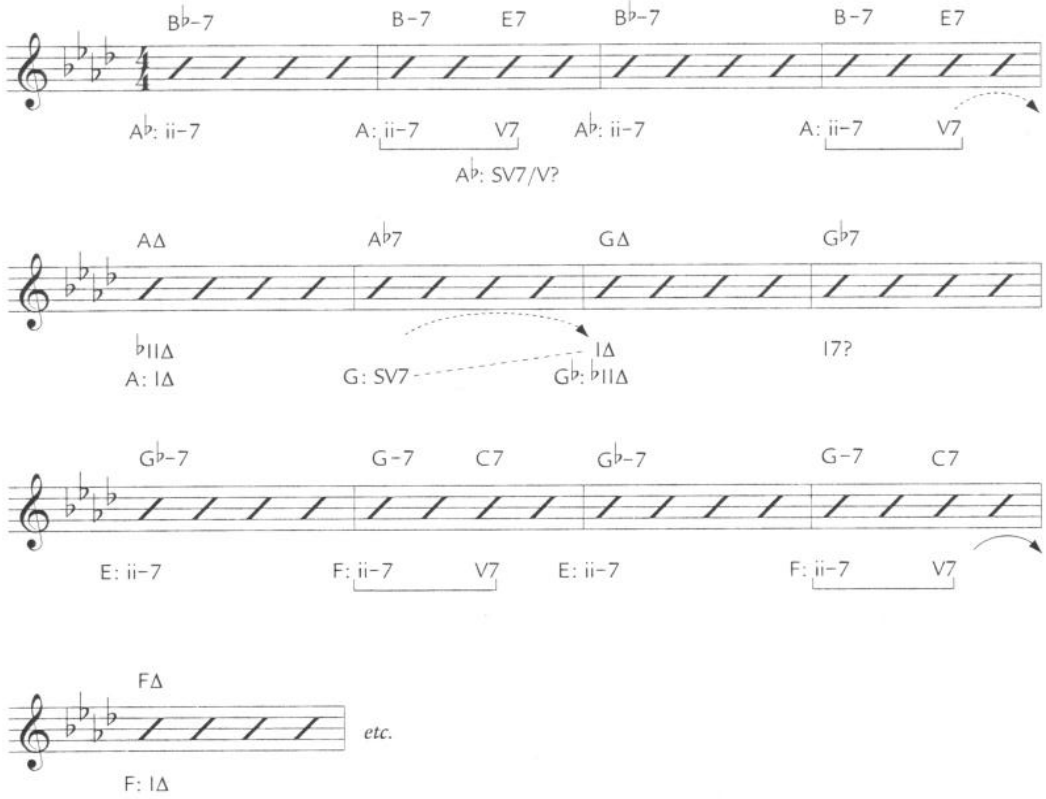
EXAMPLE 9.6



As you can see from the above example, although it began in the key of F∆, this series of sequential ii-V cadences moving down chromatically eventually landed in the key of D∆. During the duration of the extended chromatic ii-V's, there was functional harmony due to the resolution of the chromatic cadences involved. However, there was no primary tonality. An example of a chord progression featuring a transitional modulation or modulations which are original to the composition is Benny Golson's *Along Came Betty*. Note how the emphasis on harmonic sequence disguises the absence of stable tonality:*

EXAMPLE 9.7

Along Came Betty – Benny Golson
(ms.1-13)

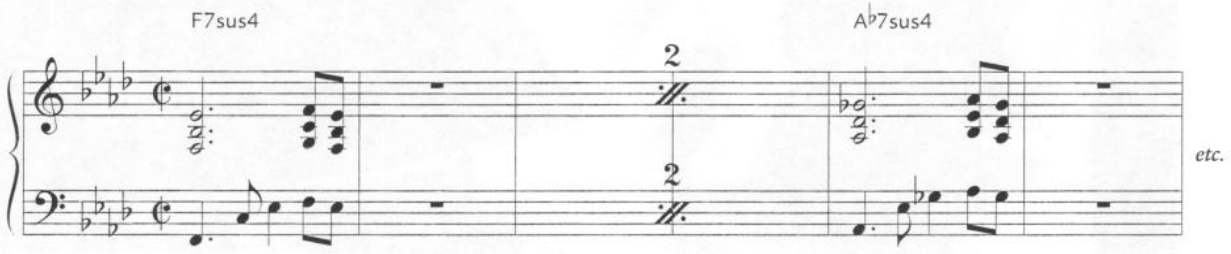


* When you listen to this tune, notice how its sequential melody unifies the piece in spite of the tonal ambiguity of these harmonies.

Constant Structure Modal Progressions

Although these progressions are not tonal and therefore, in a way, the notion of "modulation" is moot, they nonetheless are modulatory in the sense that the key center or modal tone center changes pitch. In modal music there is a strong sense of key center, which is established through repetition of simple cadences or ostinato rather than through the use of complex harmonic relationships. Miles Davis' *So What* is a clear example of this – the B of its AABA form going from D Dorian to E♭ Dorian. This process, the use of repetitive parallel modal progressions, might be thought of as a sort of modal modulation. The term "constant structure" is sometimes used to refer to this process. Good examples of this sort of progression can be found in John Stubblefield's *Free Spirits*, as recorded by Mary Lou Williams, or *Maiden Voyage*, from the album of the same name by Herbie Hancock. An example follows:

EXAMPLE 9.8



Suggested Exercises and Assignments:

Each student should bring in an AABA or ABAC song form illustrating a direct or pivot chord modulation. See if you can find examples in big band arrangements or other extended compositions you may be working on, where tonality is suspended via the use of extended cadences as discussed above, which would illustrate a transitional modulation.

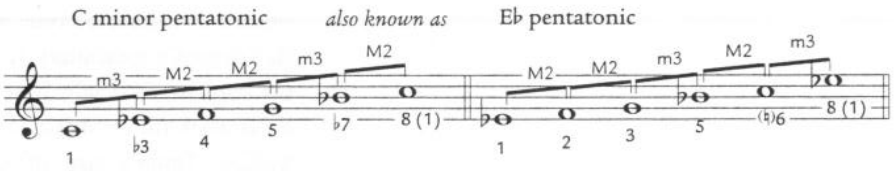
Try also to find examples of modal compositions involving changes in key center, and/or mixed modal/tonal compositions which illustrate the kinds of modal "modulations" discussed above (examples to study might be *Bolivia* by Cedar Walton from the EASTERN REBELLION album and *Yeah* from Horace Silver's HORACE-SCOPE album).

McCoy Tyner (© Hans Kumpf)

PENTATONICS AND OTHER SYMMETRIC SCALES

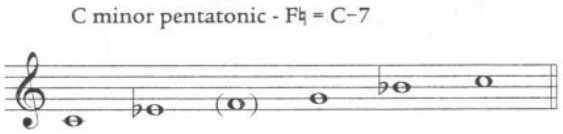
A pentatonic scale by definition means a scale with five notes (*penta*, from the Greek, for five). Technically, a pentatonic scale is any scale with five notes. However, the most widely used form of pentatonic scale is the one with the following intervallic form.

EXAMPLE 10.1



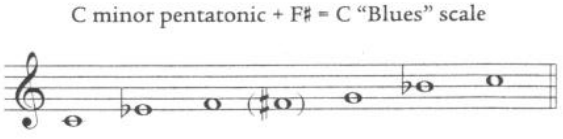
This is called the C the minor pentatonic scale, or sometimes, referring to its "relative major" form (meaning the same notes with E♭ as the root), E♭ pentatonic. We will refer to it as C minor pentatonic for the purposes of our discussion. Note that it is symmetric, with two minor third intervals surrounding two major second intervals. Note also that it has a parallel relationship to a −7 chord on the same root (removing the fourth or middle note of the scale yields a −7 on the same root):

EXAMPLE 10.2



and to a minor Blues scale on the same root:

EXAMPLE 10.3

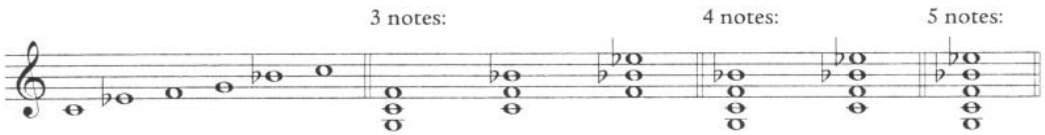


(Adding a raised fourth to the scale in addition to the regular fourth and fifth creates this Blues tonality.) Understanding these relationships will give you the option to play either the pentatonic, or the parallel minor seventh chord arpeggio or Blues scale in the same harmonic situation. Pentatonic scales are rarely used in and of themselves to create a tonality, but are one of the indispensable adjuncts in contemporary jazz playing in either tonal or modal settings. Furthermore, the pentatonic scale is among the most widely used scales in the world, if not *the* widely used. It is found in diverse musical cultures on every continent, a fact which was lost on neither Bela Bartók nor John Coltrane, both of whom deliberately used such folk-based materials in an effort to create music which was more universally accessible. John Coltrane's pianist in his classic 1960s quartet, McCoy Tyner, codified the use of the pentatonic scale pianistically to the point where his applications of it have become an indispensable part of every modern jazz pianist's vocabulary. It is strongly suggested at this point that the student, especially if a pianist, consult Mark Levine's *The Jazz Piano Book* (Sher Music Publishing, see Bibliography) regarding McCoy Tyner's use of pentatonics and associated chordal voicings.

There are two ways in which the minor pentatonic scale is important in improvisation. First, since the minor pentatonic scale is intervallically symmetric, the voicings which can be derived diatonically from it are also symmetric, not voiced in thirds as are standard diatonic harmonies, but rather in fourths:

EXAMPLE 10.4

AVAILABLE QUARTAL VOICINGS
DIATONIC to C MINOR PENTATONIC

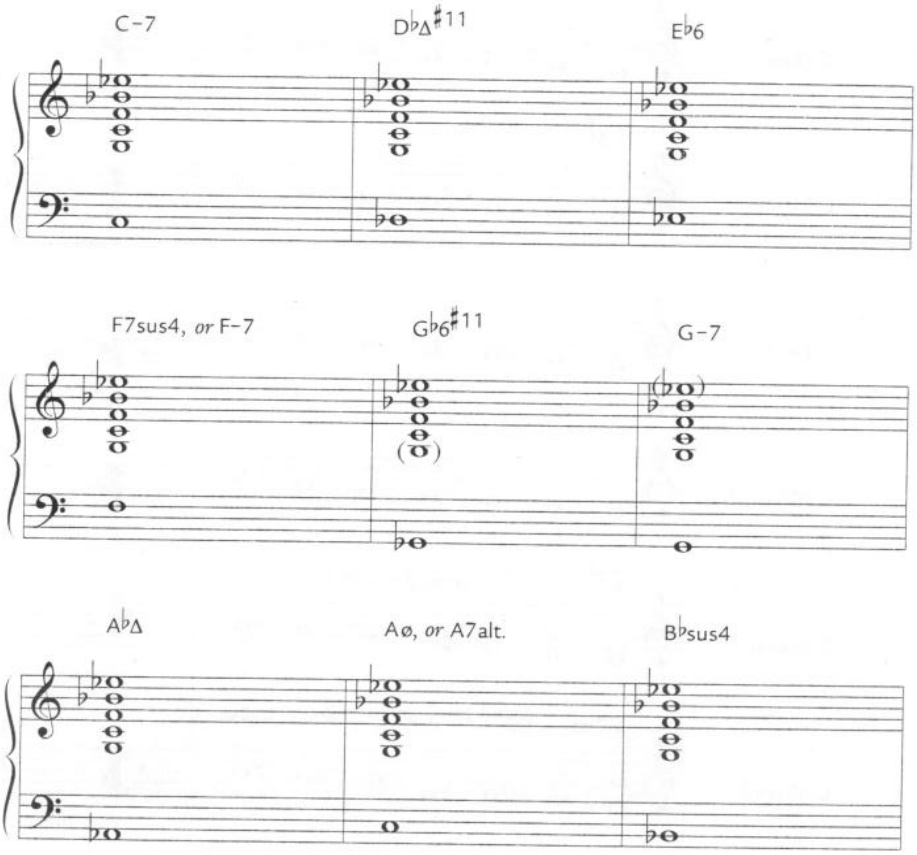


It stands to reason that any melody built primarily from this scale could be related to an associated harmonic system constructed with these voicings. A further expansion of this concept which is quite interesting involves superimposing the pentatonic scale and the harmonies it generates over the various notes of the chromatic scale. This is of course, one way of arriving at generalizations concerning where pentatonic scales work (because there are so few notes in each scale we are only dealing with those situations in which at least four of the pitches are consonant):

EXAMPLE 10.5

AVAILABLE CONSONANT HARMONIC RELATIONSHIPS
of C MINOR PENTATONIC VOICINGS

(( ) denotes a chord tone dissonant over the basic seventh chord)

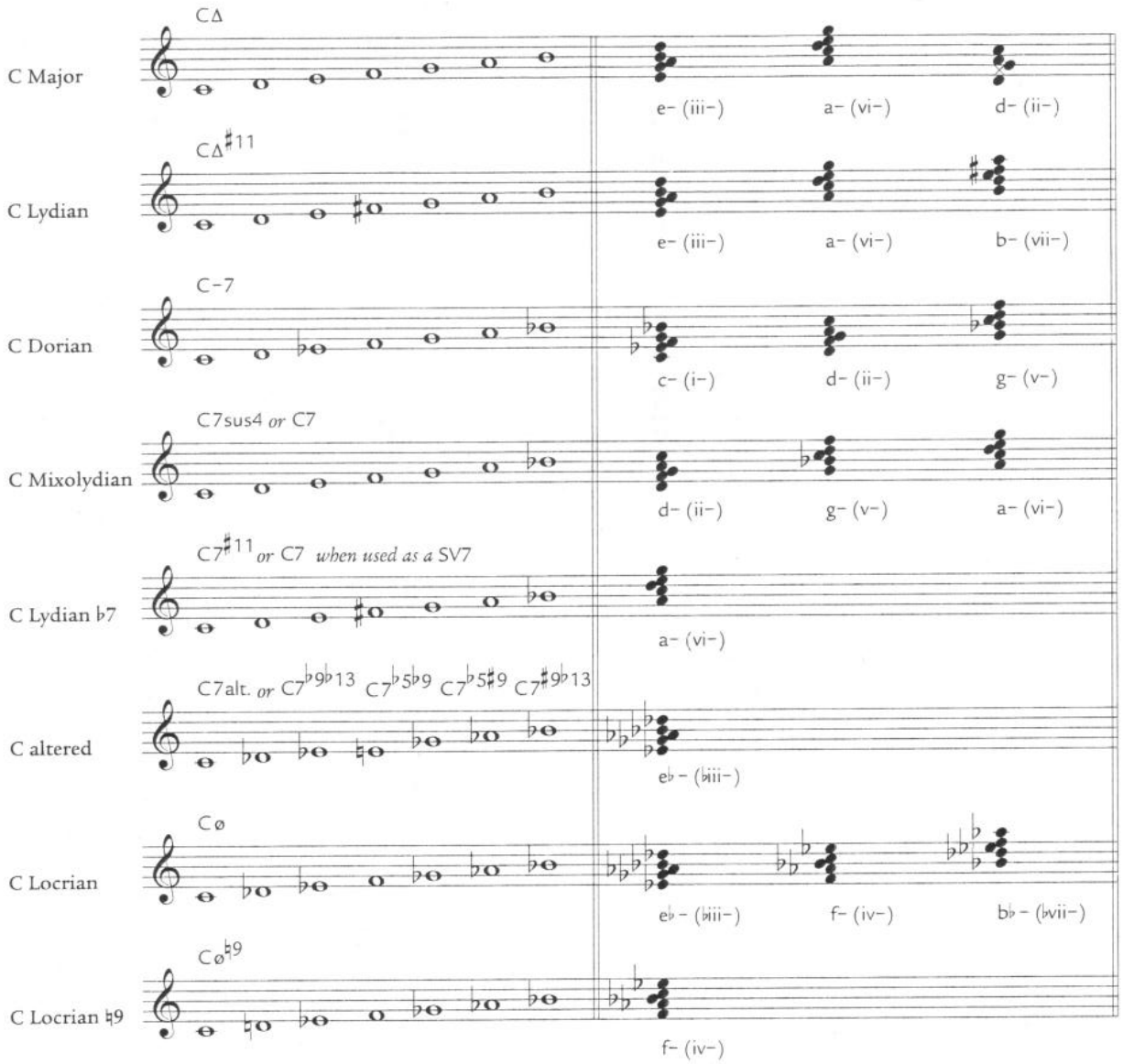


Note that, with the exception of the major third and major seventh of the tonality, the minor pentatonic creates a consonant harmonic relationship of some sort with every root in the chromatic scale! Note also that there are situations where the scale works over a given chord as an improvisational device without containing all the chord tones (as in the F-7 and A7alt. in the above example), as opposed to those in which the chord is complete within the voicing (like the C-7).

Another useful application is to examine each of the scales and modes traditionally used for improvisation to determine where indigenous minor pentatonics are located.

EXAMPLE 10.6

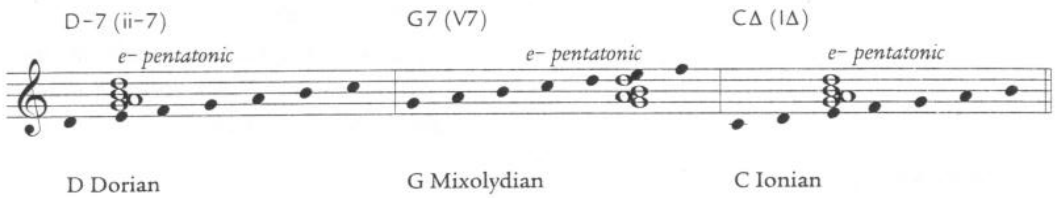
TRADITIONAL MODES for IMPROVISATION
& their DIATONICALLY AVAILABLE MINOR PENTATONICS



(NOTE: there are no minor pentatonics diatonic to wholetone or diminished scales.)

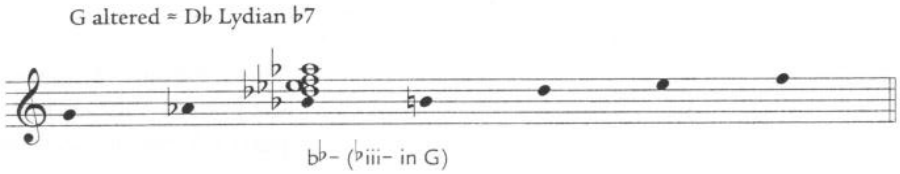
Obviously a terrifically worthwhile exercise is to take a particular chord progression, work out the scales and modes which would work for the various chords, and then systematically practice the various available pentatonics. Taking the commonly occurring ii-7-V7-IΔ chord progression in the key of C (i.e., D-7-G7-CΔ) for example, we find that the E minor pentatonic scale is diatonic to each of the appropriate modes in the progression:

EXAMPLE 10.7



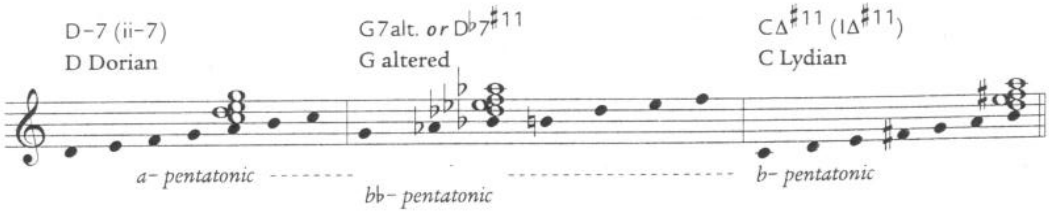
Obviously, altering the G7 (or substituting D♭7 for it, depending on how you want to look at it) limits the pentatonic options on the dominant:

EXAMPLE 10.8



This same standard ii-V-I progression could be interpreted much differently by extending this process to each of the three modes in the following way:

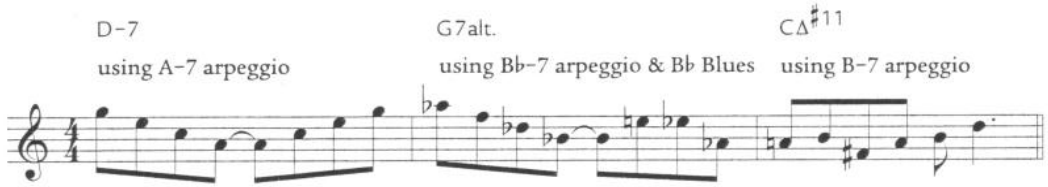
EXAMPLE 10.9



By starting on the minor pentatonic based on the fifth of the minor seventh chord in a ii-V-I progression, then, and ascending chromatically with this resource throughout the progression, we create the effect of a subV7/I or a V7alt. and then a Δ♯11 tonic chord, a much different and less stable sound then simply playing the e- pentatonic scale over all three chords in the progression as we did earlier. It is obviously useful to know systematically where all the available minor pentatonic scales are located within each of the traditional scales or modes, and how to "voice-lead" them through a progression.

Remember, too, that the root of any minor pentatonic is also the root of a minor seventh chord or Blues scale which is available in any of the same situations:

Example 10.10



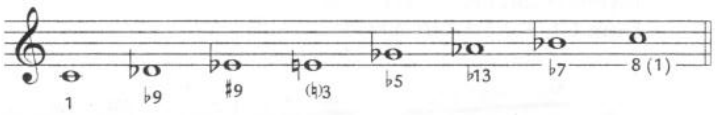
This technique of superimposing minor seventh arpeggios over the primary chord is one which can be found in many of saxophonist Dexter Gordon's solos.

Symmetric Scales

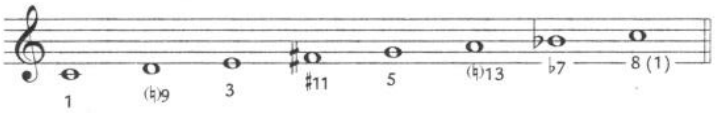
Two other symmetric scales which are widely used in improvisation and composition by jazz musicians are the diminished (a.k.a., symmetric diminished, octatonic) and whole-tone scales. Both are used primarily for dominant seventh chords, although the diminished scale may also be used for °7 chords as well. Referring to Chapter 6 and to Example 10.6 earlier in this chapter, we know that an altered dominant chord has an altered ninth (either ♭ or ♯), in addition to an altered fifth (also either ♭ or ♯, though the ♭5 may also be referred to as a ♯11, and the ♯5 may also be referred to as a ♭13). The Lydian ♭7 scale, by contrast, has a ♮9 and ♮13, in combination with a ♯11.

EXAMPLE 10.11A & 10.11B

C altered scale



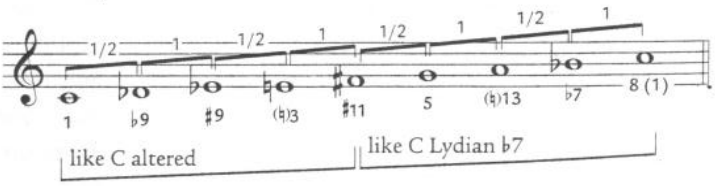
C Lydian ♭7 scale



The octatonic and whole-tone scales, as related to dominant chords, can be thought of as combinations of the two available upper and lower tetrachords of the altered and Lydian ♭7 scales which accommodate those dominant seventh chords in which the ninth is altered and the fifth is not, or vice-versa:

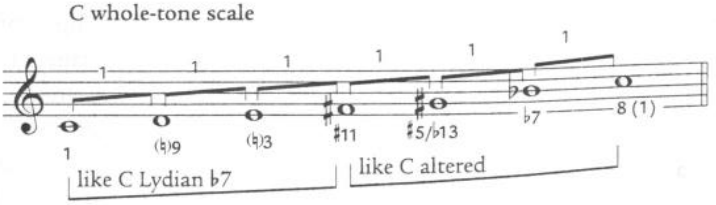
EXAMPLE 10.12A

C 1/2-1 diminished scale



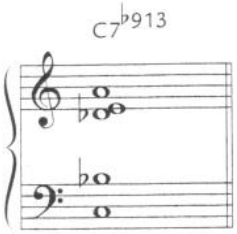
EXAMPLE 10.12B

C whole-tone scale

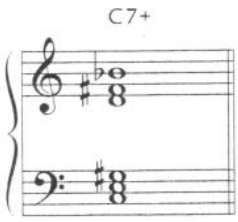


These scales generate very interesting and characteristic sounds, whether used in voicings...

EXAMPLE 10.13A



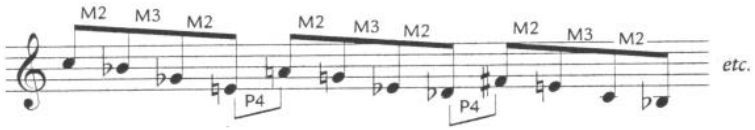
EXAMPLE 10.13B



...or in improvisation.

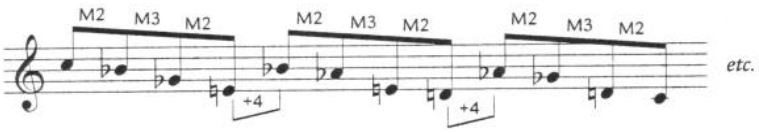
EXAMPLE 10.14A

IMPROVISATION PATTERN for C7
from C1/2, 1 DIMINISHED SCALE



EXAMPLE 10.14B

IMPROVISATION PATTERN for C7
from C WHOLE-TONE SCALE



The two improvisation patterns used in Examples 10.14A and 10.14b illustrate the prominent influence of Thelonious Monk and John Coltrane's recorded solos in popularizing the use of these materials. Listen to their performance of Monk's *Trinkle Tinkle* on the MONK/TRANE album to hear examples of the use of these and other similar patterns.

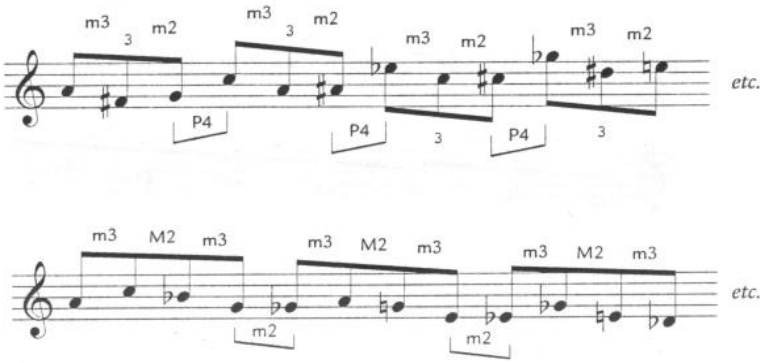
The use of these two scales, though commonly associated with modern players like Trane and Monk, can actually be traced to much earlier musicians. Virtually all stride pianists used the whole-tone scale in their compositions and improvisations (James P. Johnson's composition *April in Harlem* is a wonderful example among many), and Ellington was using voicings like those found in Example 10.13A. above in at least the early 1930s, if not earlier (♭9, ♮13 dominant seventh chord voicings can be found in *Lightnin'*, 1932, and *Clarinet Lament*, 1936).

It is also important to acknowledge that the use of these resources is not limited to jazz musicians. Other 20th Century composers such as Igor Stravinsky, Olivier Messaien, Claude Debussy, and, of course, Bela Bartók (after whom the scale which we know as Lydian ♭7 is known in France!) have made extensive use of these scales to generate both melodic material and chord voicings.

As an improvisational device, the use of these two symmetric scales is not *required* that often. While the whole-tone scale is generally regarded as *de rigeur* for +7 chords, and the half-step, whole-step version of the octatonic scale shown in Example 10.12A above is required for the dominant $7^{\flat 9\sharp 13}$ chord, these resources are used much more often by soloists because they *want* to use these sounds than because they are required to by a specific harmonic situation. Some typical diminished and whole-tone scale clichés follow:

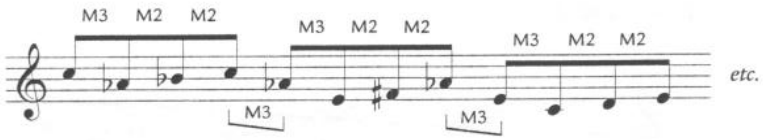
EXAMPLE 10.15A & 10.15B

DIMINISHED SCALE CLICHÉS
(for C7, E♭7, F♯7, A7, or for C♯°7, E°7, G°7, B♭°7)



EXAMPLE 10.15C

WHOLE-TONE SCALE CLICHÉ
(for C+7, D+7, E+7, F♯+7, A♭+7, B♭+7)



Note the extensive list of chords for which each resource can be used. Because these scales are symmetric (the octatonic scale is the same intervallic formula of alternating half- and whole-steps starting from every other note; while the whole-tone scale obviously has the same sequence of whole-steps starting from every note), they are each useful in many situations. Further, their symmetric nature means that there are only *two* whole-tone scales and only *three* diminished scales.

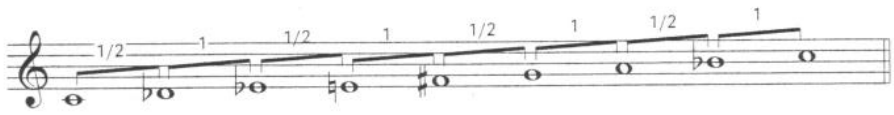
We will come back to this point in just a moment.

Use of the Diminished Octatonic Scale on the Diminished Chord

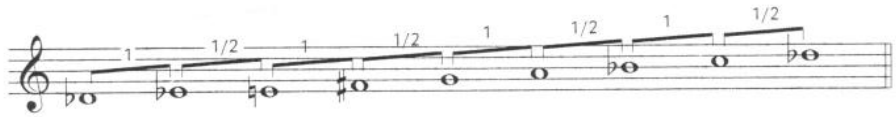
As the use of the term "diminished scale" suggests, it can be used on °7 chords as well. The same scale which is illustrated in Examples 10.15A and 10.15B above also works on the following diminished seventh chords: C♯°7, E°7, G°7, and B♭°7. When this same set of notes is started from any of these notes within the scale the intervallic formula becomes 1-1/2 (ascending), instead of the 1/2-1 formula seen earlier. Therefore the notes are the same; only the starting point changes:

Example 10.16A & 10.16B

for C7, E♭7, F♯7, A7, the C 1/2-1 diminished scale:

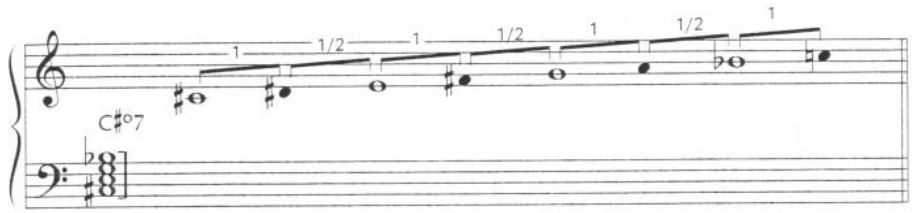


for D♭°7, E°7, G°7, B♭°7, the D♭ 1-1/2 diminished scale:



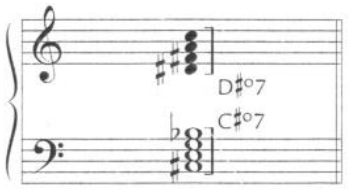
To remember which version of the scale works for which type of chord, think of the ♭9 on the dominant chord (this is the same as the ascending half-step with which it starts), and for the °7, think of the fact that any note a whole-step above a chord tone is consonant with a °7 chord.

Example 10.17



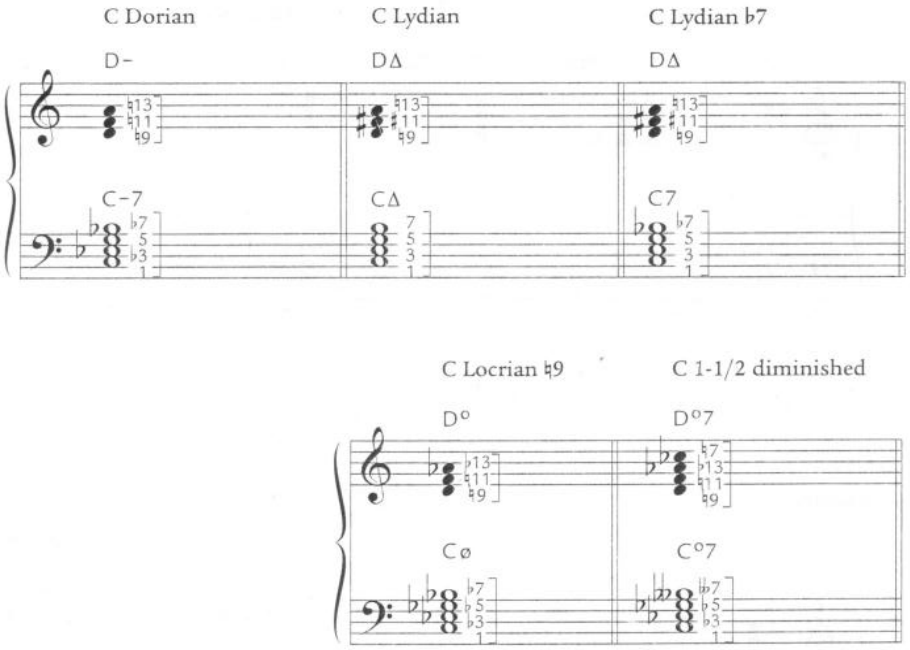
Of course this means that the available color tones which can extend the °7 chord in turn create another °7 chord one whole-step higher. The scale can be expressed as the following bitonal chord:

EXAMPLE 10.18



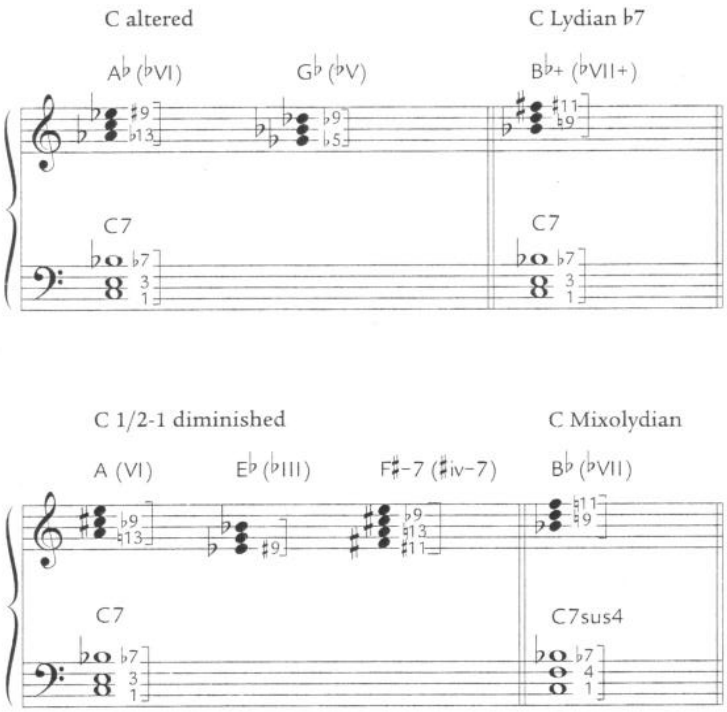
In this way the diminished scale, when used on the °7 chord, is similar to the Dorian, Lydian, Lydian ♭7, and Locrian ♮9 scales, meaning that we can think of all of these scales as vertical entities as well, in which their extensions create chords of the same quality as their primary chord, built on the ninth, or second scale degree:

EXAMPLE 10.19A – 10.19E

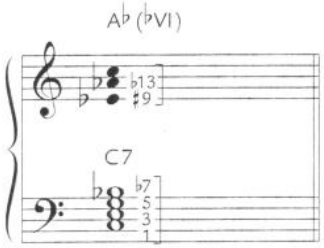


There are many other interesting chord voicings which create characteristic sounds by exploiting the notion of extending primary chords with other chords diatonic to these and other modes. The concept outlined in Examples 10.19A–10.19E is mainly a useful mnemonic device. Some other characteristic and interesting extended chord voicings from the various modes and scales discussed to this point which operate in this manner follow:

EXAMPLE 10.20A – 10.20D



EXAMPLE 10.21



This process can be applied to create polychordal or polytonal extensions of triadic and seventh chords within any given mode. This technique has been used by big band arrangers and composers since Ellington, and is certainly an important one in the writing of Thad Jones. Note that each of the extended chords could be inverted to create different sounds and intervallic spacing and to accommodate different melodic situations (for example, in Example 10.20A, the tonic, C, could also be harmonized with the A♭ triad superimposed on the C7 chord, simply in a different inversion).

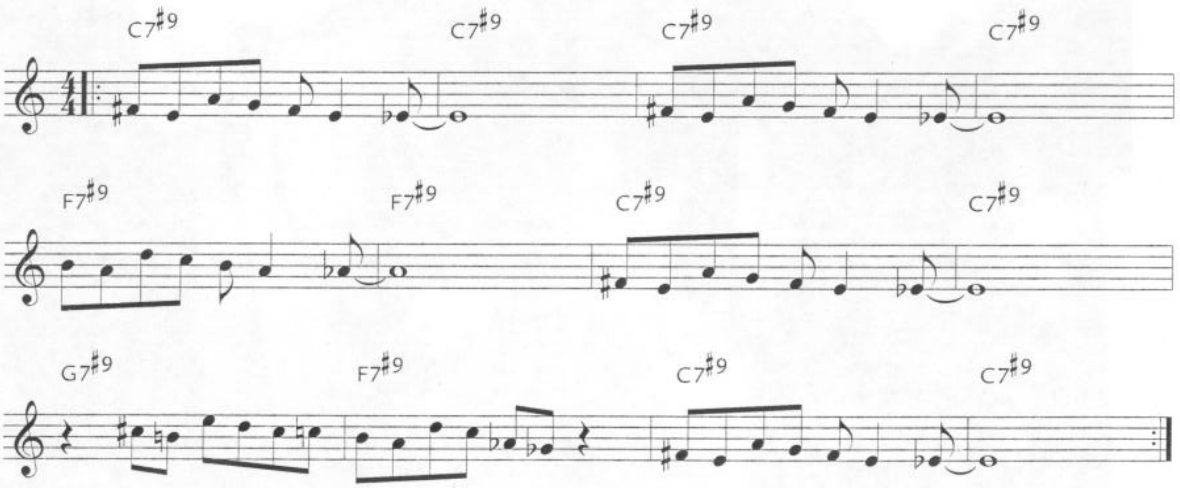
Note in the above example how the A♭ triad is not in root position; i.e., it is inverted. Often extended triads occur in inverted form so as to yield quartal intervals, since fourths add greater harmonic richness and variety.

Suggested Exercises and Assignments:

- Write a pentatonic melody, and then harmonize their melodies by exploiting the concept illustrated in Example 10.5.
- Analyze examples of pentatonic scales as used in composition and improvisation.
- Analyze examples of the diminished and whole-tone scales as used in composition and improvisation (see Discography).
- Write a simple I, IV, V, three-chord Blues and use the diminished scale appropriate to each of the three primary chords to create the melody (this will coincidentally require the use of each of the three different diminished scales). This assignment is most successful if the motif used on the tonic chord has a simple, riff-type quality, and is then transposed fairly literally to the IV chord. It can then transposed to the V chord and slightly manipulated to create the sense of a consequent phrase if an aab Blues phrase structure is desired.

EXAMPLE 10.22

Diminished Blues – Andy Jaffe



- Using Example 10.16 as a model, write out the remaining two diminished scales in both half-, whole- and whole-, half-step forms with the accompanying list of dominant and diminished seventh chords they work on (NOTE: as with any diminished scale resource, this can be easily accomplished by taking the given example and transposing it chromatically twice in the same direction, either up or down).

Charlie Parker, Chet Baker, Carson Smith and unidentified pianist (© Ray Avery's Photo Archives)

CHAPTER **Eleven**

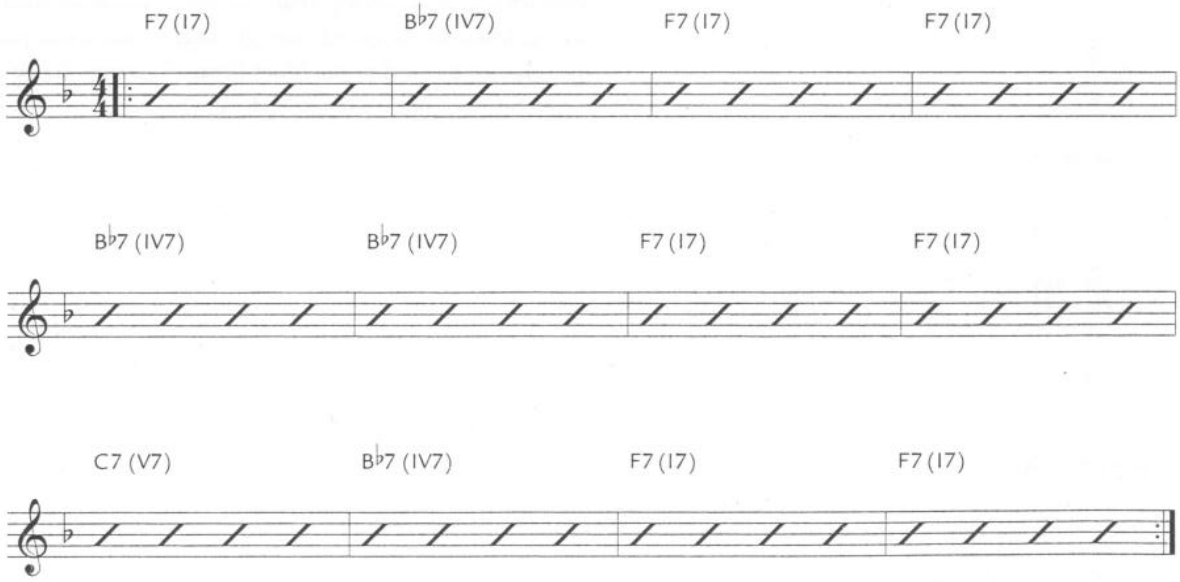
BLUES VARIATIONS

Now that we have exhaustively studied the various harmonic resources which can be brought to bear to enhance the diatonic system, it will be useful to return to the twelve-bar Blues progression in order to examine the ways in which these various categories of non-diatonic harmony are most commonly applied to the twelve-bar Blues. As one might expect, these various tonal devices are most frequently used to fill space between and/or to prepare the movement to the three most important harmonic destinations in the Blues progression; the tonic chord in m.1, the IV chord in m.5, and the cadence in m.9. The specific devices used may vary according to the type of cadence used in ms.9-10. It should also be noted that none of these devices need be thought of as being used to the exclusion of any of the others. Indeed, it is common, especially in an improvised context, for rhythm sections and/or soloists to use these materials conversationally, varying the progression each chorus.

To review, the basic harmonic structure of the twelve-bar Blues is:

EXAMPLE 11.1

BASIC TWELVE-BAR BLUES
(key = F)

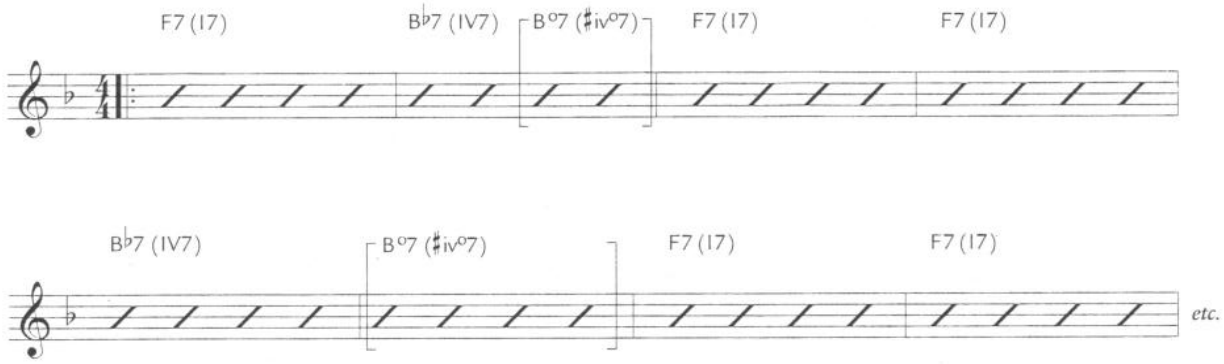


Added IV and ♯IV Diminished 7th Chords

As mentioned earlier in Chapters 3 and 8 (see Examples 3.10 and 8.8), the IV chord may be followed by the ♯iv°7, whether in the second half of m.2, or in m.6:

EXAMPLE 11.2

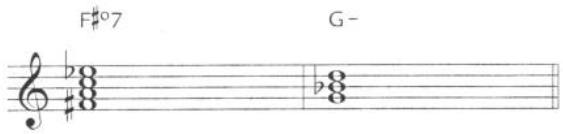
MODIFIED twelve-bar BLUES
(key = F, ms.1-8)



We have noted that this chord is created by replacing the root, IV, with the blue note ♯4, and that this is the only difference between the two chords.

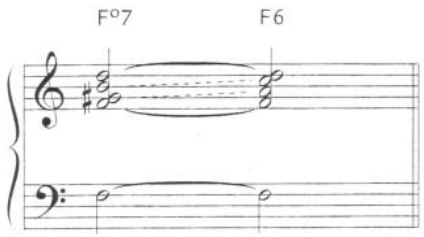
(Notice that in each case the resolution from the ♯iv°7 is to the tonic chord. Even though there is no direct resolution from the ♯4 to the tonic in the bass line, the presence of the fifth within the tonic chord is so strong that our ear is satisfied with the resolution. It should be noted, though, that with the exception of this specific case as used in the Blues form, °7 chords are generally followed by a harmony which produces *chromatic*...

EXAMPLE 11.3



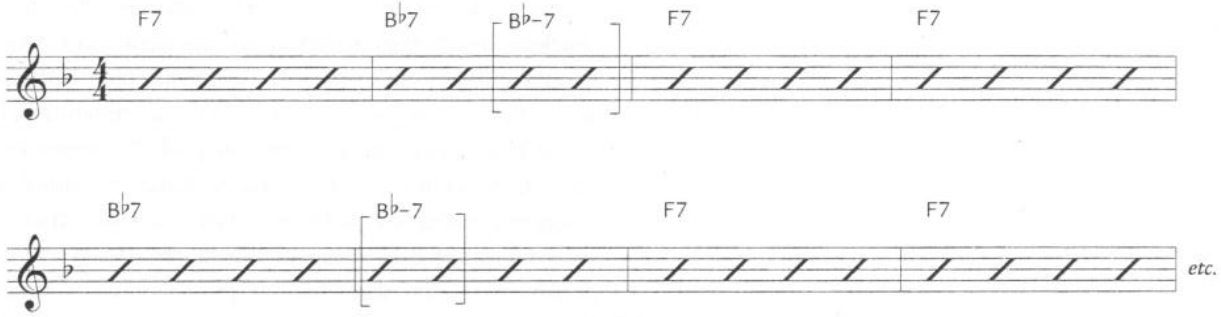
...or *static* root motion.)

EXAMPLE 11.4



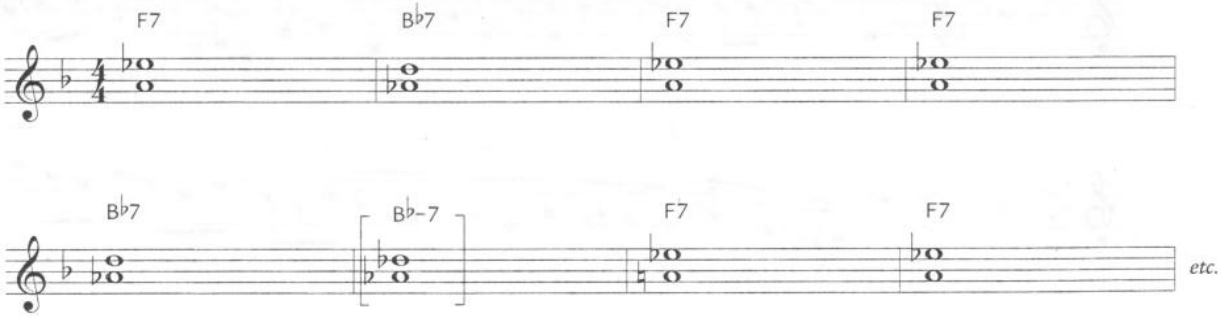
Another type of IV chord which is frequently used in Blues progressions is the IV minor chord. The iv– chord usually follows the iv7, and can be thought of as an alternative to the ♯iv°7 chord in m.6.

EXAMPLE II.5



Although these progressions are generally associated with the Blues innovations of Charlie Parker (which we will discuss later in this chapter), it is hard to say exactly where they originated. Examples can certainly be found in the music of arrangers and pianists much before Bird's time (the *West End Blues* example from Chapter 3, for example). As with any basic progression, voice leading the thirds and sevenths of the harmonies involved will express them most clearly.

EXAMPLE II.6

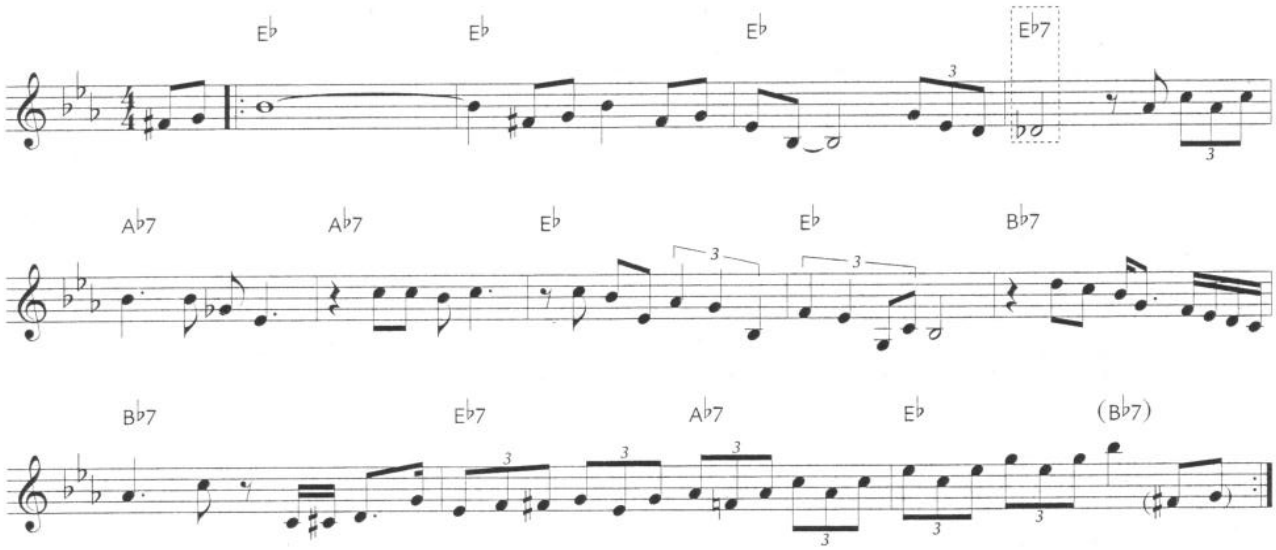


Interpolated Dominant and Substitute Dominant Chords

As one might expect, the categories of dominant and substitute dominant seventh chords are frequently employed to enhance the resolution to the I chord, the IV chord or the cadence in m.9. This can be accomplished with simple cadences, or with extended, "back-cycling," types of cadences. (The term "back-cycling," used by jazz guitarist and educator Joe Pass, refers to the process of using a cycle of dominant or substitute dominant resolutions to arrive at a predetermined harmonic goal.) To review from Chapter 3, where we initially discussed the Blues, in Louis Armstrong's interpretation of Joseph Oliver's *West End Blues*, which is in many ways typical of Blues practice during the 1920s, the tonic triad occupies the first three bars of the progression, followed by a dominant seventh in bar four. The addition of the seventh to this basic triad creates tension and enhances the expectation for resolution to the IV chord in m.5:

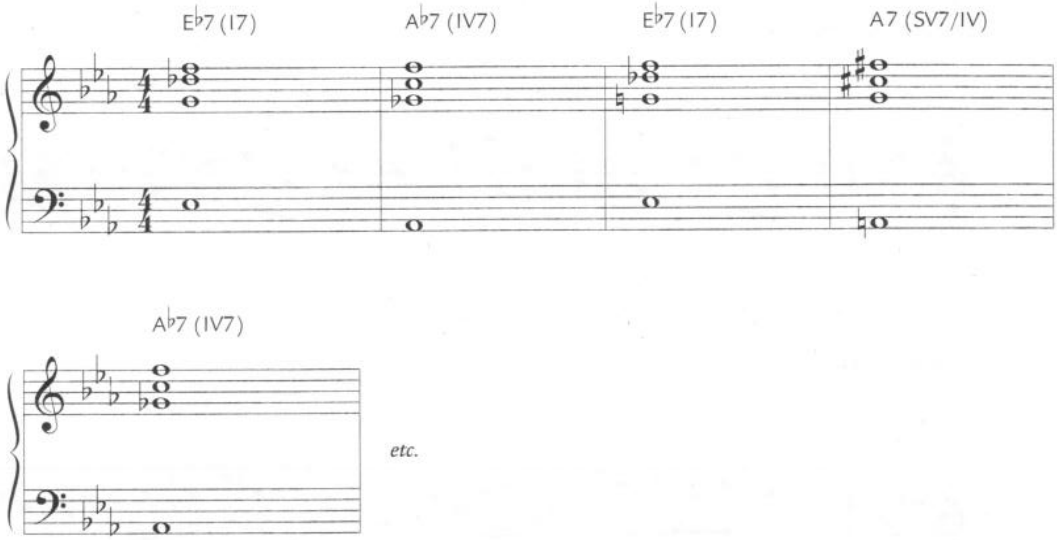
EXAMPLE 11.7

West End Blues – Joseph Oliver/Clarence Williams

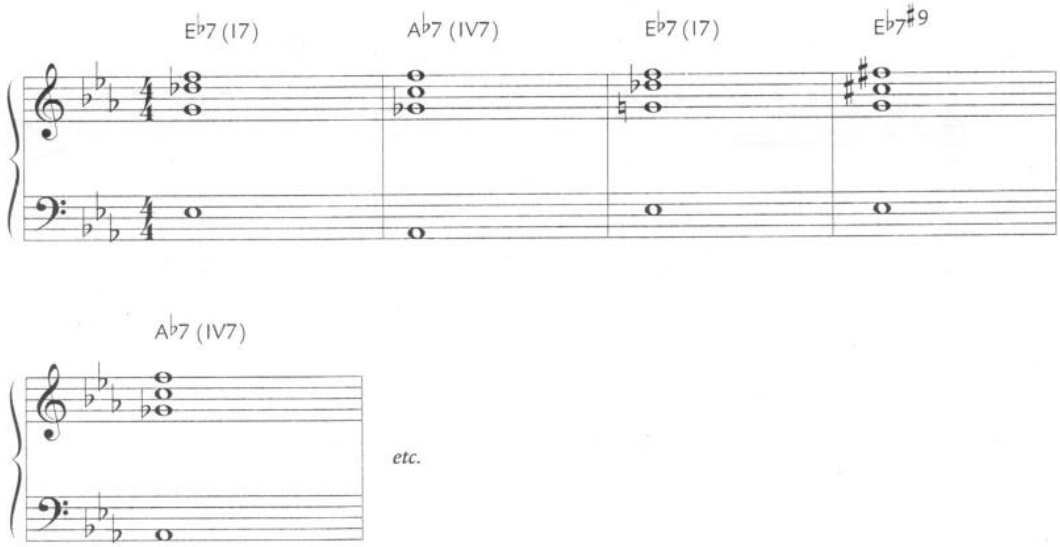


Secondary and substitute dominants often occupy the fourth bar in more modern chord progressions within the Blues form, yet accomplish the same goal as the I7 did in Armstrong's music of the 1920s. For example, it is very common to find a subV7/IV or a I7alt. in m.4 of the Blues form (remember, in terms of tritone substitution these two chords are really the same, and their voice-leading to the IV7 chord will be identical and chromatic regardless of which root supports it):

EXAMPLE II.8A



EXAMPLE II.8B

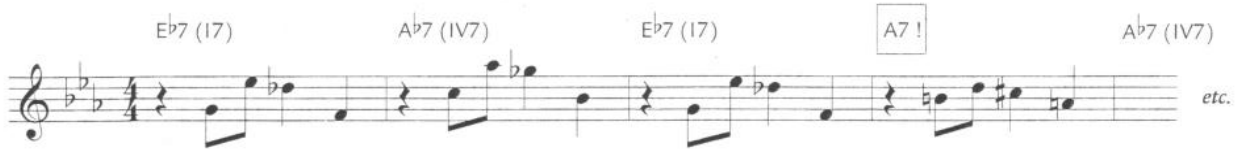


As mentioned in Chapter 3, a very interesting solo to study in the development of this concept is McCoy Tyner's solo on John Coltrane's *Bessie's Blues*. In it, a Blues in E♭ major, McCoy Tyner begins his first chorus by inserting an A7 chord, or subV7/IV, in m.4 descending chromatically to the A♭7 or IV7 chord in m.5. In subsequent choruses McCoy Tyner interpolates the related ii-7/A7 (second chorus excerpt), then back-cycles from there into the third measure to add a cadence to the interpolated E-7 chord, creating an entire turnaround with the original A7 as its dominant (fourth chorus excerpt):

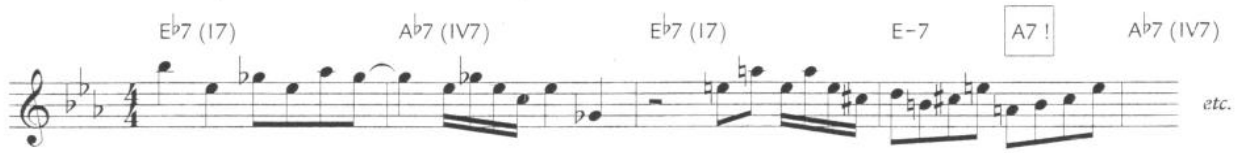
EXAMPLE 11.9

Bessie's Blues – John Coltrane (McCoy Tyner's solo)

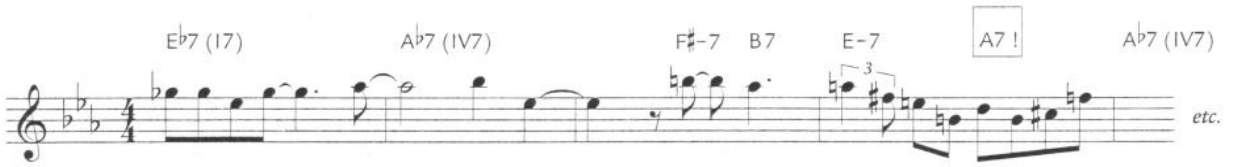
first chorus; ms.1-4



second chorus; ms.1-4



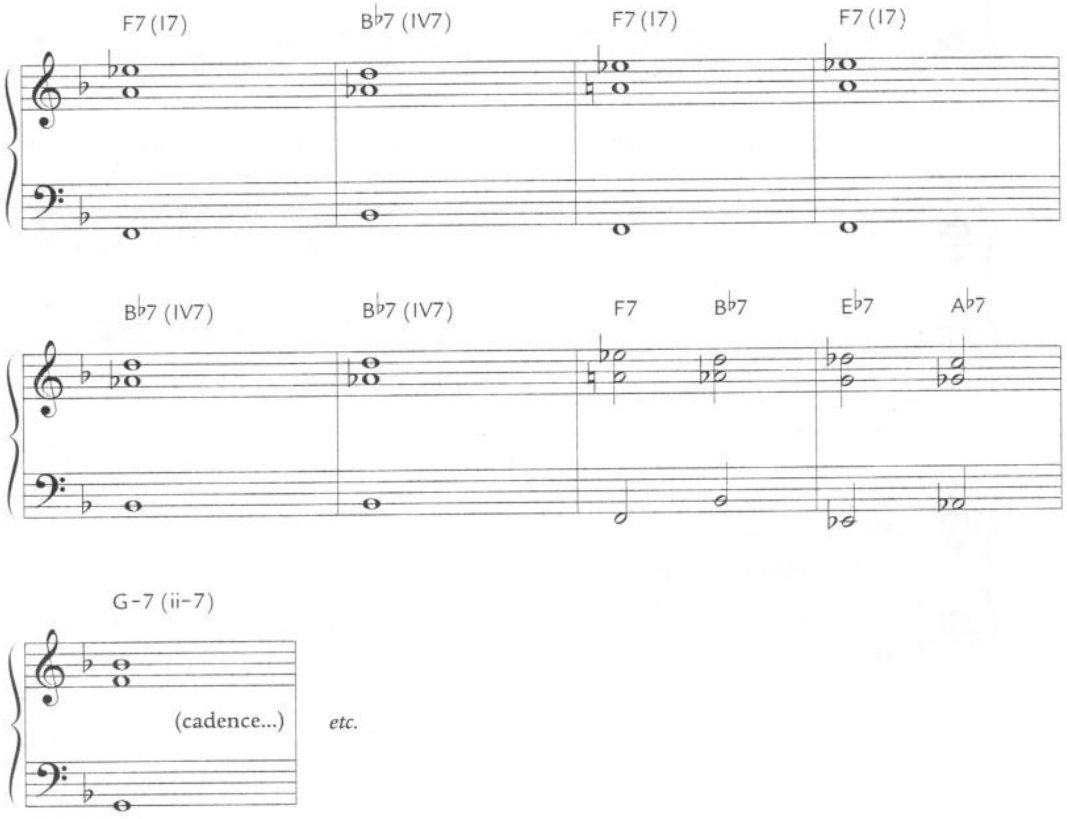
fourth chorus; ms.1-4 (approximate rhythms)



Extended dominant or substitute dominant seventh chords may also be added to ms.7-8 to prepare the cadence in m.9. Remember that descending chromatically and moving through the Cycle of Fifths with dominant seventh chords may produce identical voice-leading :

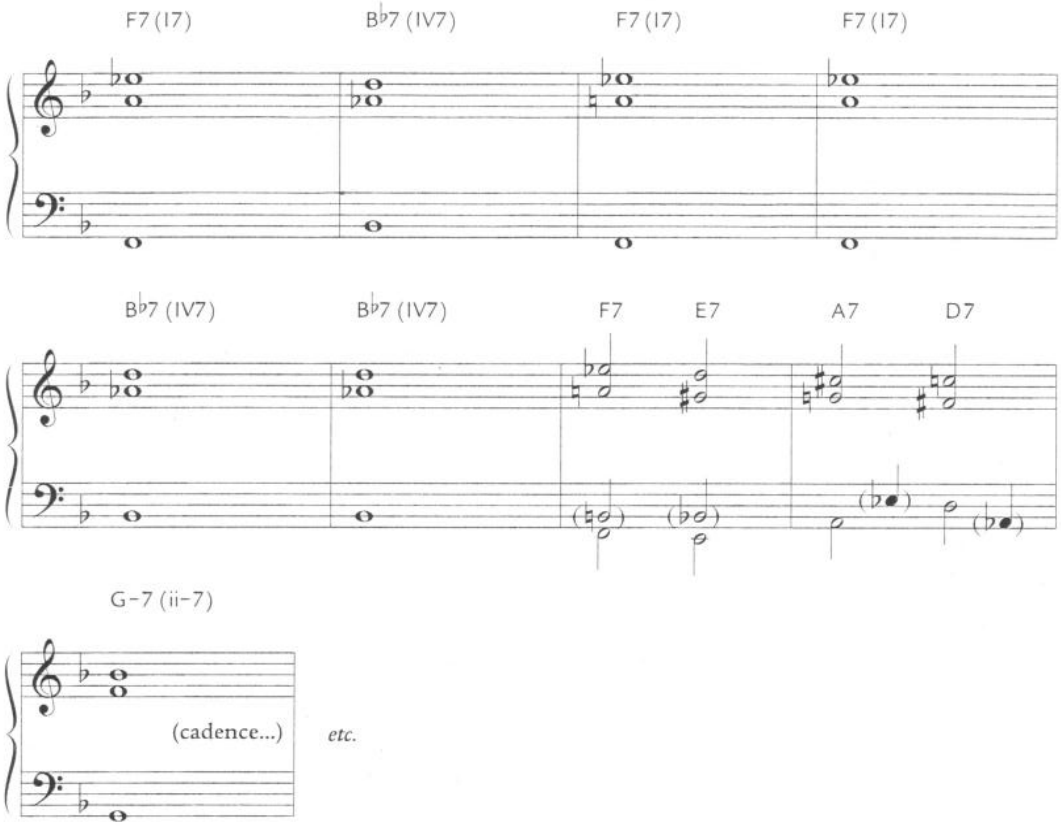
EXAMPLE 11.10A

EXTENDED SECONDARY DOMINANT SEVENTH CHAIN in ms. 7-8
(voice-led thirds & sevenths)



EXAMPLE 11.10B

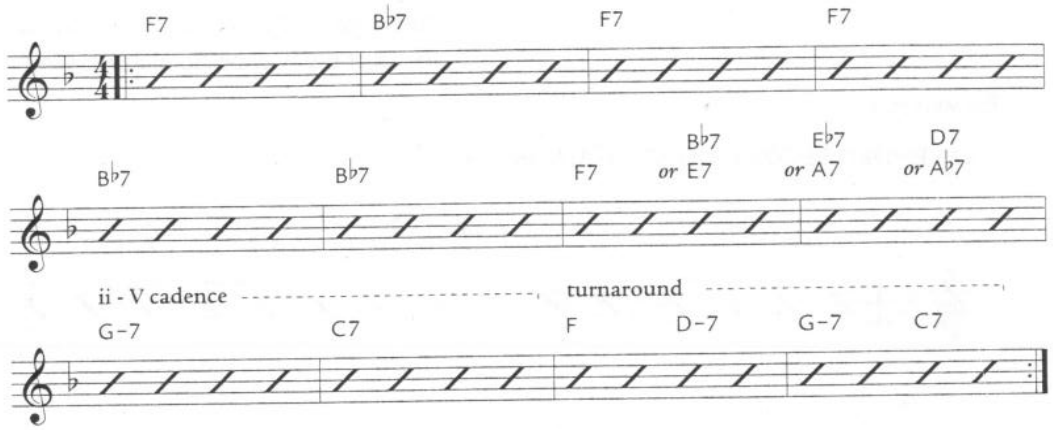
EXTENDED DOMINANT SEVENTH CHAIN in ms.7-8,
with SUBSTITUTE ROOTS
(voice-led thirds & sevenths)



And any tonal turnaround may replace the traditional Blues endings in ms.11-12:

EXAMPLE II.II

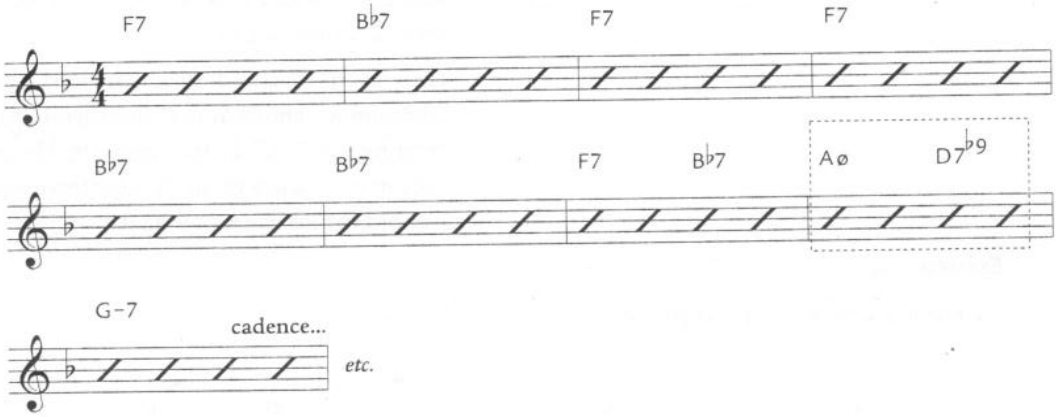
SUBSTITUTE TURNAROUND in ms.11-12



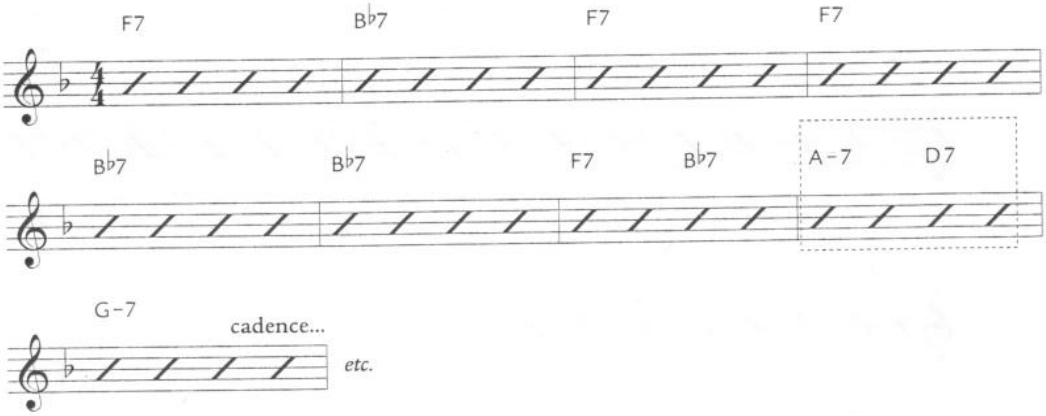
M.8 may contain traditional ii-7-V7 or iiø-V7$^{\flat 9\flat 13}$ cadences as well:

EXAMPLE II.12A & II.12B

iiø-V7$^{\flat 9}$ of ii in ms.8



ii-7-V7 of ii in ms.8

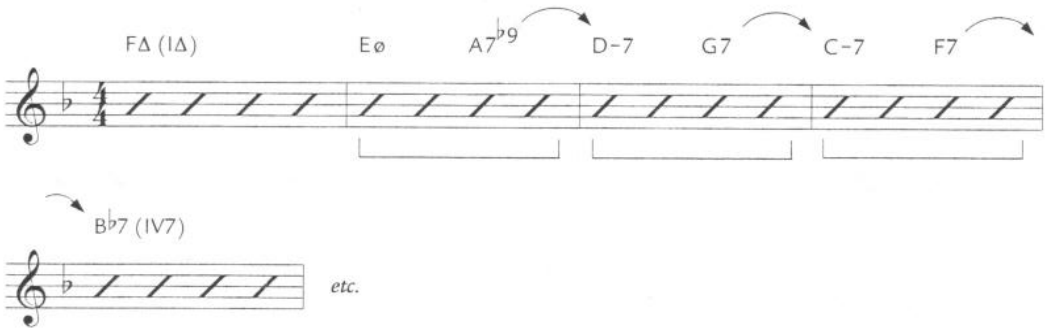


Charlie Parker Variations

Two commonly used variations on the Blues progression which employ diatonic harmony and interpolated cadences are Charlie Parker's *Au Privave* and *Blues for Alice*. In *Blues for Alice*, Parker begins not with a tonic dominant 7, but with a tonic major chord. This is generally followed by a descending cycle of ii-V's which arrives at the IV chord in m.5 (see also Example 8.31):

EXAMPLE 11.13

EXTENDED SECONDARY V7 CHAIN, ms.1-5

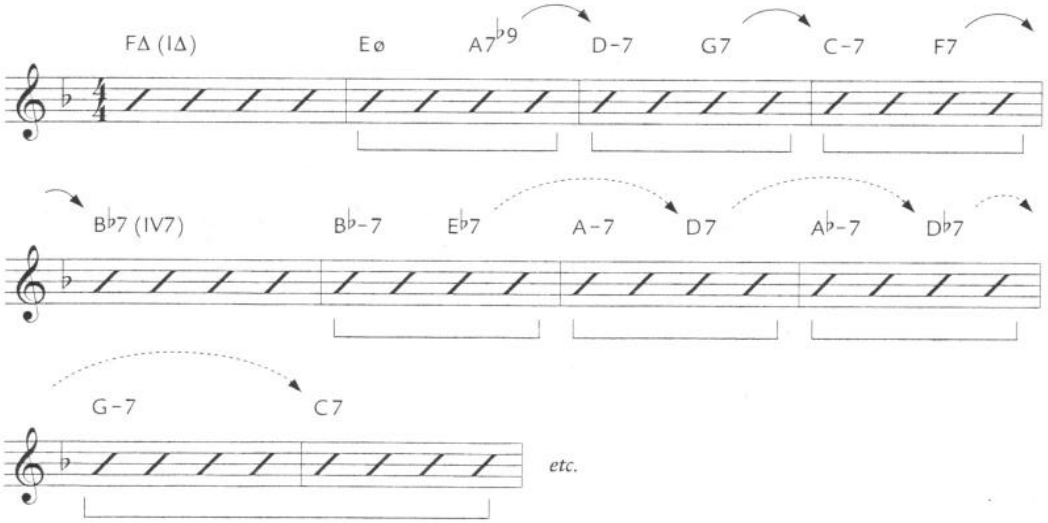


(Charlie Parker may have arrived at these changes by back-cycling cadentially from the IV chord. He also uses this chord progression in *Confirmation*, though it is the beginning of the A section of an AABA song form.)

Once at the IV chord, Bird went to the relatively traditional and common iv- chord in m.6, but then followed it by its dominant, creating a ii-7-V7 in that measure. He then descends chromatically in ii-V cadences for the next three measures, to resolve to the ii chord for the cadence in m.9.

EXAMPLE 11.14

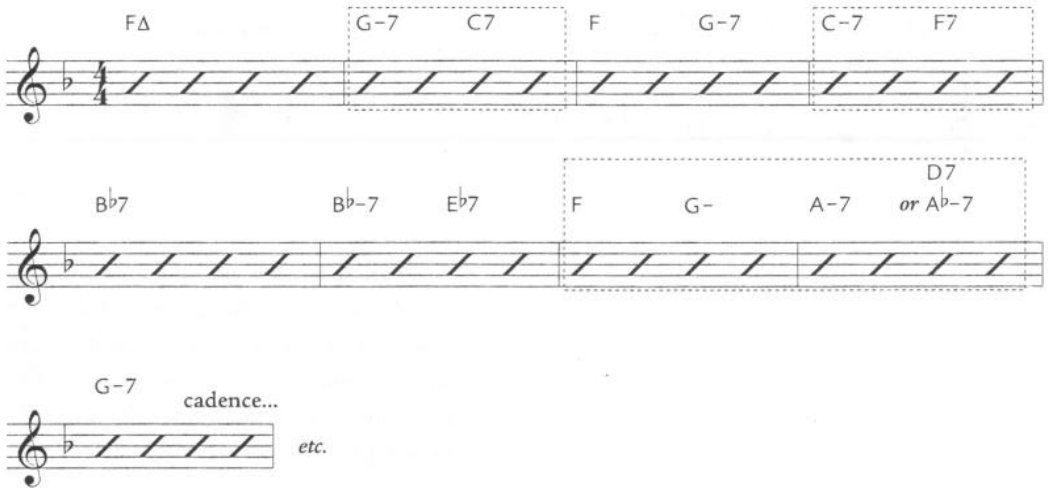
CHROMATICALLY DESCENDING ii-V's, ms. 2-5, 6-9



In *Au Privave*, Bird again begins with a major chord but then puts a ii-V in the major key in m.2 and a ii-V of IV in m.4. The next most significant deviation in the chord progression from the standard Blues form is in m.7-8, where Bird puts in diatonic root motion, I-ii-iii-IV (or I-ii- iii-♭iii, a variation on this progression favored by Dexter Gordon).

EXAMPLE II.15

ii-V of I in m.2,
ii-V of IV in m.4,
& DIATONIC ROOT MOTION in ms.7-8



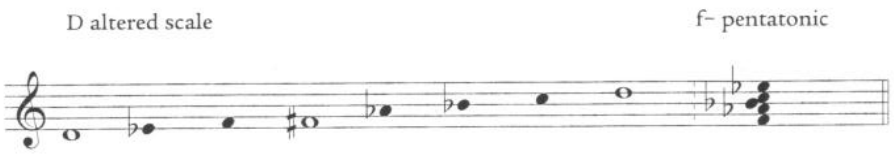
These progressions have become so commonplace that it is important to be able to recognize them so that they can be communicated successfully back and forth between rhythm section players or between soloists and the rhythm section. Soloists can infer these progressions by use of a single, carefully placed note in these alternate harmonies. As with many Bebop composers, Bird was probably using these tunes as vehicles for working on specific harmonic situations during improvisation, so it's always a good idea to learn Bird's melodies (or to write one of your own!) to study how to play on these changes.

The Minor Pentatonic Scale in the Blues Progression

There is obviously a close relationship between the minor pentatonic scale and the Blues scale. Coincidentally, the tonic minor pentatonic turns out to be diatonic to the altered scale for the V7/ii chord (see Example 10.6), and works very well over this particular interpolated dominant seventh chord, if you decide to use it in m.8:

EXAMPLE 11.16

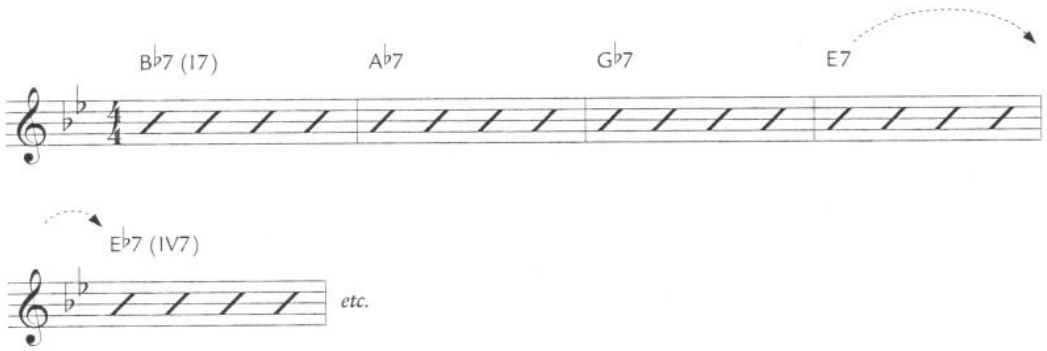
INTERPOLATION of V7/ii (D7alt.) in ms.7-8 of BLUES in F



There are still other ways of getting from I to IV and from IV back to I in the Blues context, though they are nowhere near as commonplace as the above-mentioned variations. Descending dominants in whole-steps may be used over the first four bars to arrive at the more traditional subV7/IV in the fourth measure, creating somewhat of a whole-tone effect:

EXAMPLE 11.17

BLUES in B♭ USING DOMINANTS DESCENDING in WHOLE STEPS
(ms.1-5)



George Mraz uses this device in the first four bars of his second solo chorus on *I'm in the Mood for Swing*, from the 1987 album of the same name by Benny Carter.

Of course it is especially useful for composers and arrangers to study the work of Ellington, Thad Jones, Sammy Nestico and other influential arrangers to see the full spectrum of reharmonization at work as it applies to the Blues. A great study in this

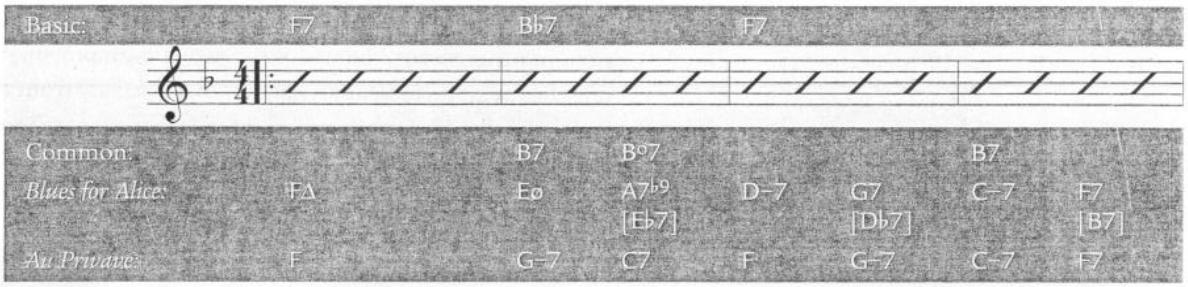
regard is the 1956 Ellington performance of *Diminuendo and Crescendo in Blue*, recorded on ELLINGTON AT NEWPORT. Ellington's ensemble writing (originally dating from 1936) shows masterful integration of various diatonic and tonal devices within the Blues form, as does Paul Gonsalves' legendary improvised 27-chorus solo in the middle of the piece.

The following "Major Blues Paradigm" shows a measure-by-measure overview of the options discussed in this chapter.

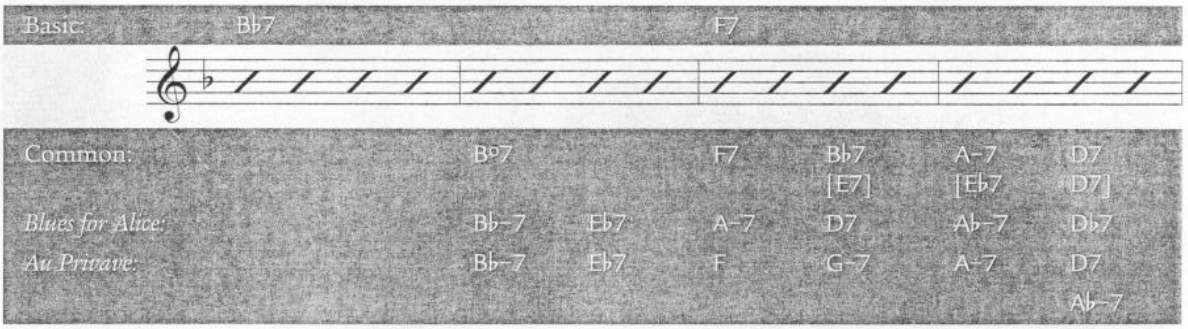
EXAMPLE 11.18

MAJOR BLUES PARADIGM
(key = F major)

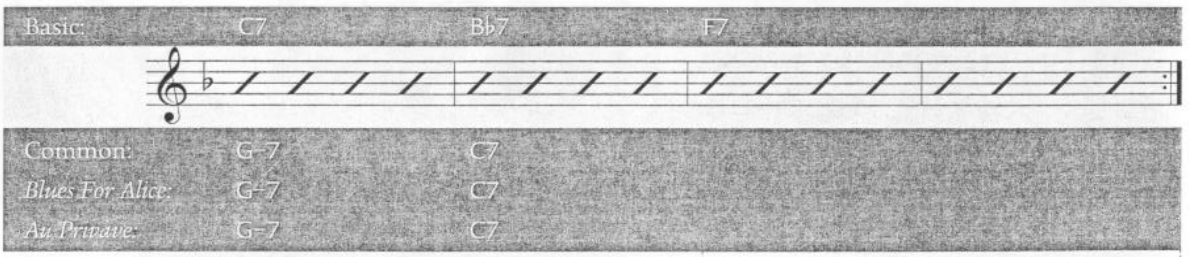
Ms.1-4:



Ms.5-8:



Ms.9-12:



(any turnaround/Blues ending [see Example 3.4])

Suggested Exercises and Assignments:

A suggested assignment for this chapter is to have students write out a bebop or improvisationally based head to both *Blues for Alice* and *Au Privave* chord changes. Another very interesting project is is to revisit the original blues written as an assignment for chapter 3 and reharmonize it with the Blues changes studied in this chapter. Practice playing the arpeggios, and 1-2-3-5 in eighth notes, of all the chords involved in the various progressions. (In other words, the goal, whether improvising or writing, is to create melodic lines which clearly imply the various progressions referred to.) It is important to acknowledge, too, that when using these sorts of substitute chord progressions that simple Blues melodic devices will not necessarily work over the entire progression, in other words, the use of substitute harmony may necessitate the use of melodic material not drawn strictly from the blues scale. Finally, the examination of relevant transcriptions (see Discography) is indispensable in studying this topic.

George Gershwin, unidentified listener (© Ray Avery's Photo Archives)

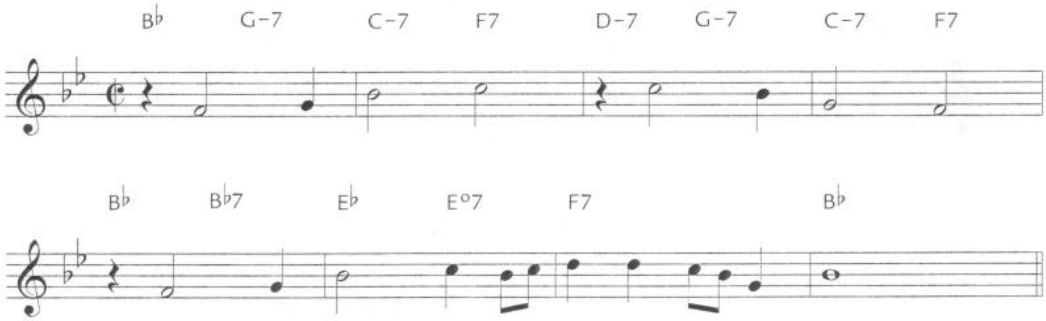
CHAPTER **Twelve**

"RHYTHM CHANGES"

"Rhythm changes," or the chord progression to Gershwin's 1930 composition *I Got Rhythm,* forms the basis for the most commonly used chord progression in jazz aside from the Blues. Hundreds, if not thousands of compositions have been based on the chord progression to *I Got Rhythm*, including Charlie Parker's *Anthropology* and *Dexterity*, Duke Ellington's *Cottontail*, Sonny Rollins' *Oleo*, innumerable compositions by big band arrangers (for example *Little Pixie* by Thad Jones), and even the theme for *The Flintstones* television show are based on the *I Got Rhythm* chord progression. The simple four-note pentatonic motif of *I Got Rhythm* occurs often elsewhere, for example at the outset of the third movement of William Grant Still's First ("Afro-American") Symphony.

EXAMPLE 12.1

I Got Rhythm – George Gershwin

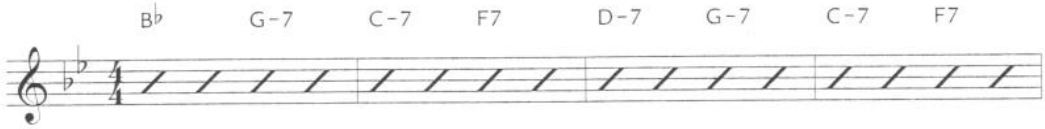


Gershwin, steeped as he was in the American popular music and the stride piano idioms of his time, created a vehicle for improvisation which has been in widespread use ever since by all jazz musicians. The chord progression itself, is, paraphrasing Rudyard Kipling, "not the least bit astonishing." It is an AABA song form, comprised of various turnarounds, Blues endings, and extended dominant chord cycles. Like the Blues variations discussed in the previous chapter, "Rhythm Changes" variations can vary from chorus to chorus in a sort of a mix-and-match format. Just because a soloist or accompanist begins a particular improvisation with a specific set of chord changes does not mean that he or she will continue along that same route each time the A or B section of the song form repeats. And like the Blues variations discussed in the last chapter, it is common for improvisers to work

out or learn one another's specific melodic patterns in learning to deal melodically with the various commonly used alternatives. At its most basic level, a "Rhythm Changes" progression involves a series of turnarounds based on the common diatonic progression: I-vi-ii-V, enabling the improviser to play diatonically over the progression:

EXAMPLE 12.2

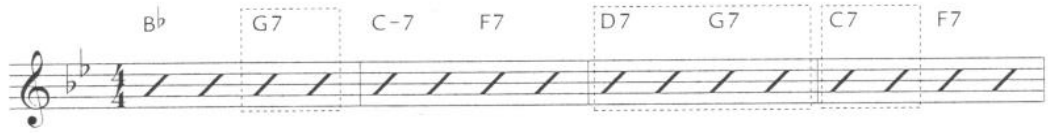
DIATONIC "RHYTHM CHANGES," ms. 1-4



The process of reharmonizing this basic progression can be subtle or drastic. For example, it doesn't change the sound of the chord progression too much to retain the same root motion but make each chord in the initial cycle dominant:

EXAMPLE 12.3

"RHYTHM CHANGES," with SECONDARY V7's, ms. 1-4



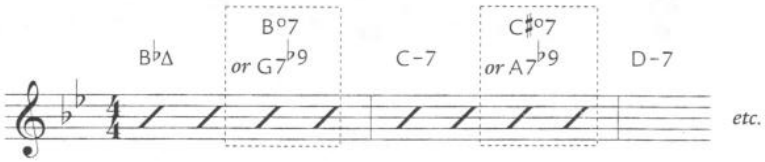
This would probably require a more specific, non-diatonic melody line in an improvisation:

EXAMPLE 12.4

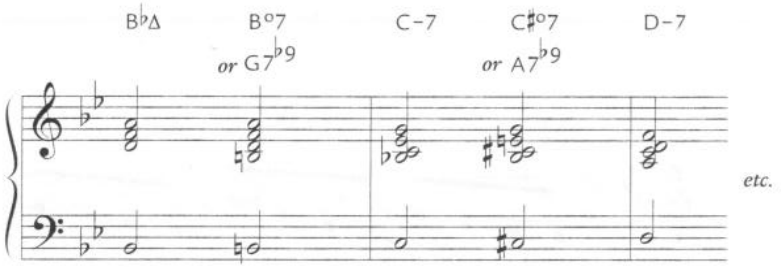
MELODIC ARPEGGIATION of ABOVE PROGRESSION

A common and related alternative to this secondary dominant reharmonization involves replacing the V7/ii and V7/iii chords in the first two measures with their equivalent ascending diminished seventh chords (see also Example 5.10):

EXAMPLE 12.5



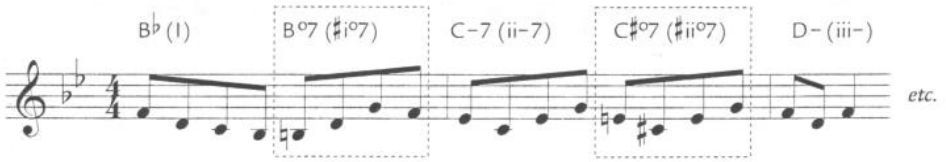
voice-led:



This reharmonization is based on the substitution of vii°7 for V7♭9, derived from the harmonic minor keys-of-the-moment of the two minor target chords, C- (ii-) and D- (iii-). A good example of a melody which utilized these substitutions is Miles Davis' *Serpent's Tooth*:

EXAMPLE 12.6

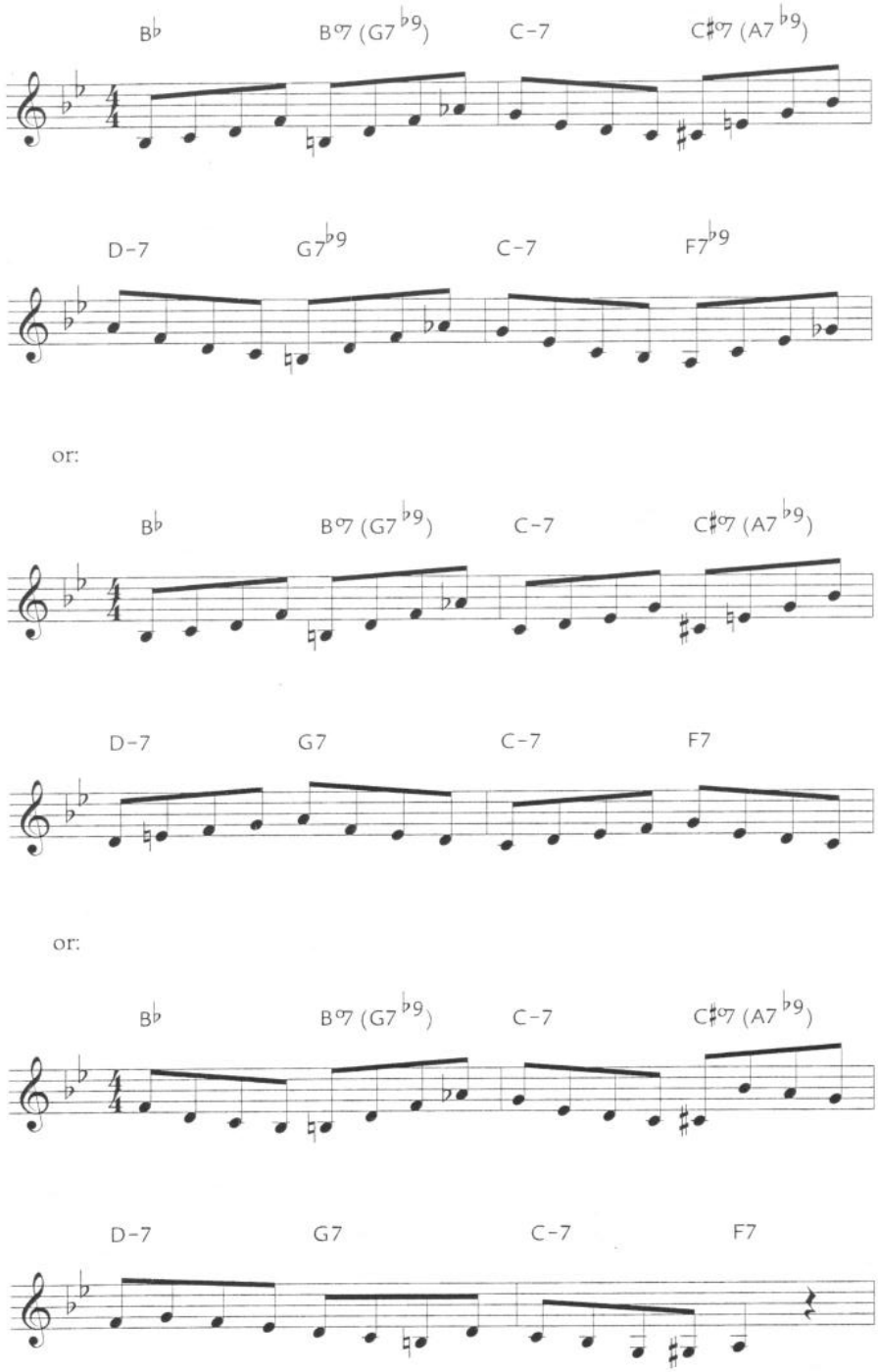
Serpent's Tooth – Miles Davis
(ms.1-2...)



Clearly, with the rapid harmonic rhythm that occurs in "Rhythm Changes," it is definitely worthwhile having eighth note patterns worked out which are appropriate to the various harmonic possibilities. Some additional examples might be:

EXAMPLE 12.7A – 12.7C

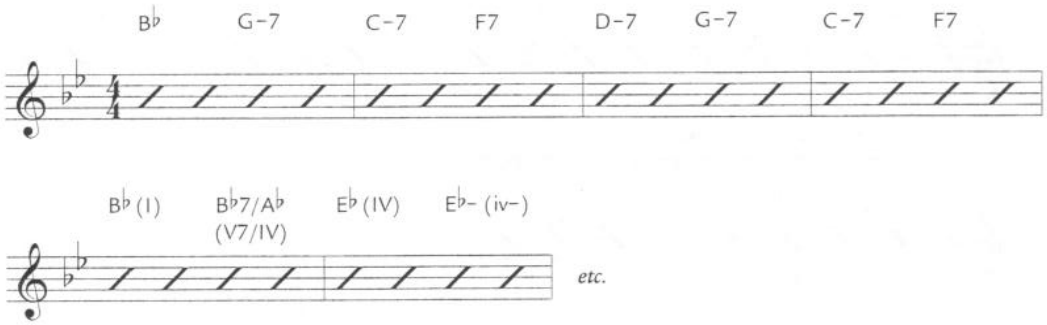
"RHYTHM CHANGES" PATTERNS, ms.1-8



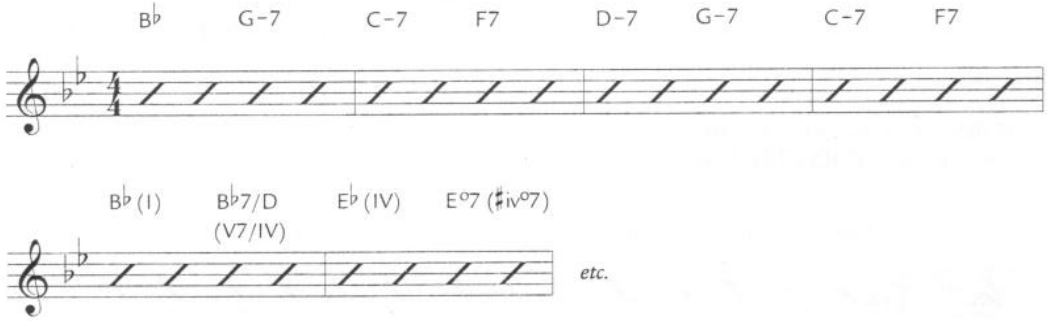
In any event, the first four bars of the progression in its most standard form usually involve some sort of turnaround or I-vi-ii-V, based root motion. Ms.5-6 of the "Rhythm Changes" A section may contain a progression similar to a Blues ending (see Example 3.4).

EXAMPLE 12.8A & 12.8B

INTERPOLATED BLUES ENDINGs, ms.5-6



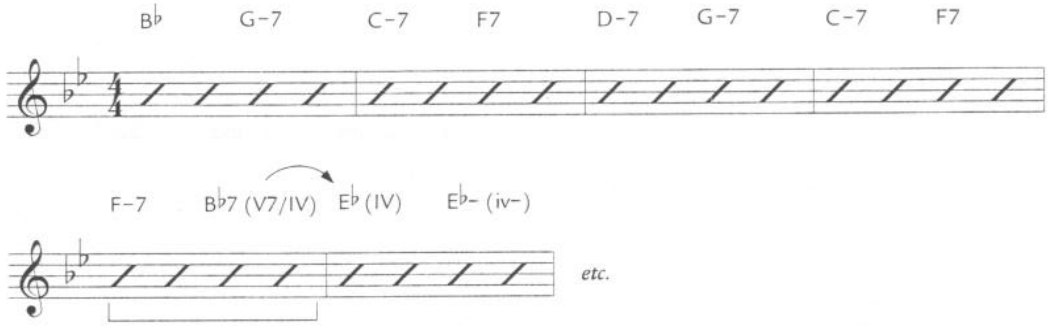
or:



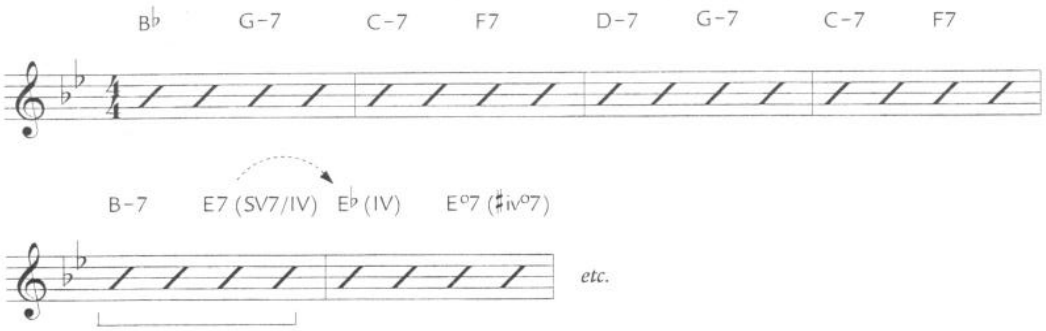
...or perhaps either a ii-V cadence followed by a IV chord, ...

EXAMPLE 12.9A & 12.9B

INTERPOLATED ii-V to IV in m.5



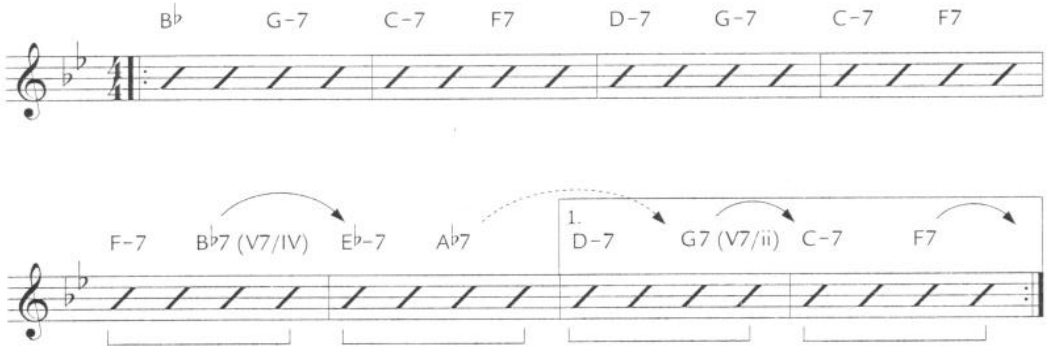
or:



...or consecutive ii-V7s operating like a turnaround to the iii-chord in m.7 (i.e., the first ending, which in turn is usually some sort of turnaround in the primary key itself):

EXAMPLE 12.10

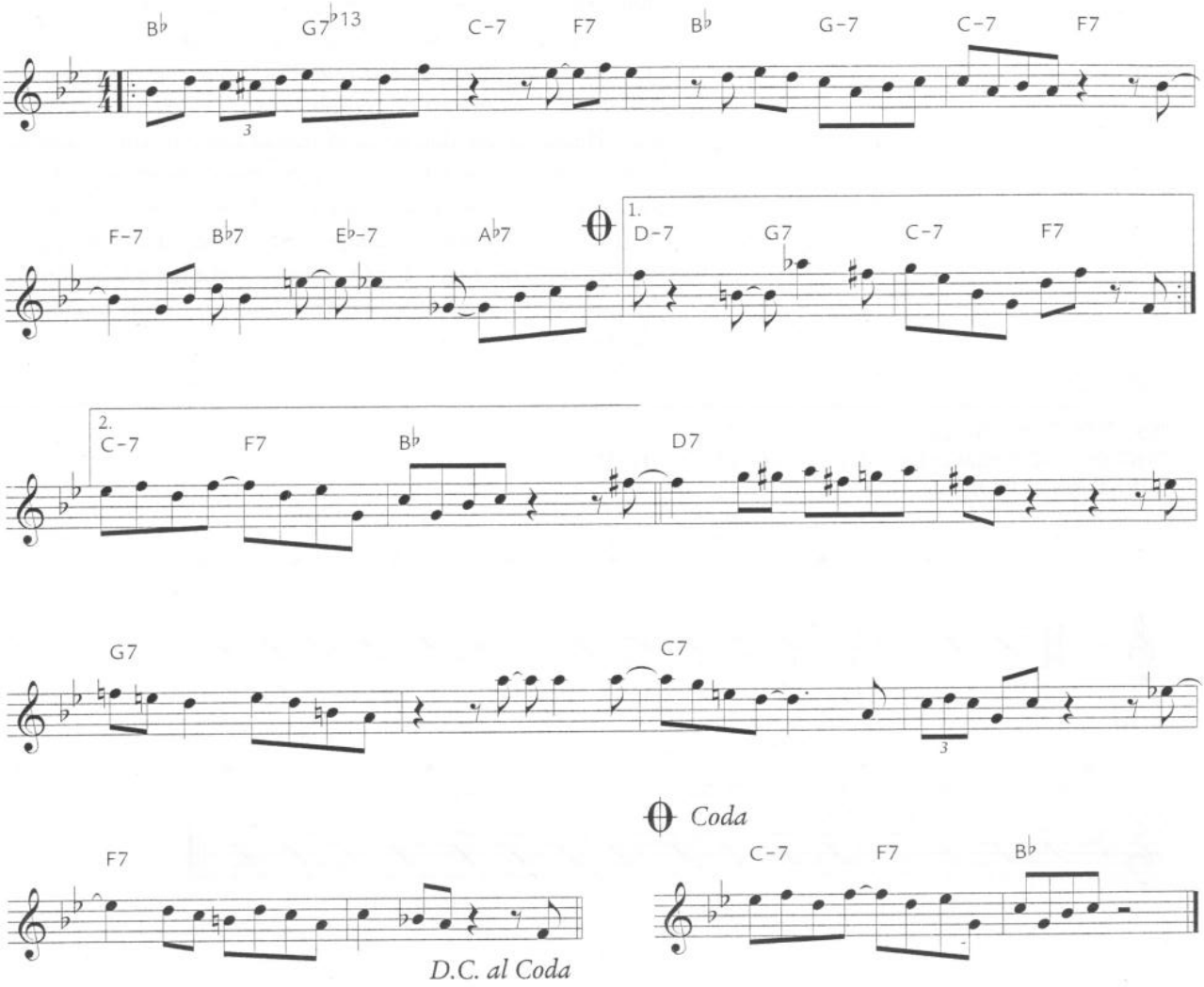
TURNAROUNDS to iii-7 in m.7,
& to I in m.7 (FIRST ENDING)



(This last option was used by Charlie Parker in his composition *Anthropology*.)

EXAMPLE 12.11

Anthropology – Charlie Parker



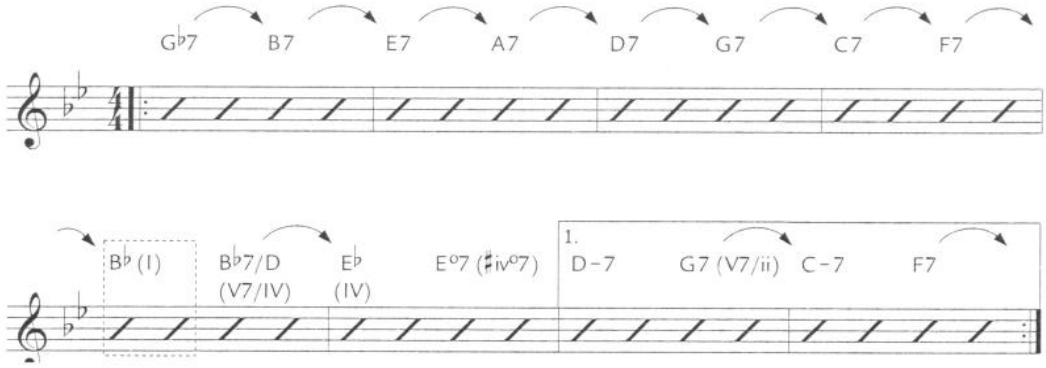
Virtually any turnaround in half-note harmonic rhythm (see Examples 8.20-8.25) may be used in the first ending of "Rhythm Changes," with the diatonic I-vi-ii-V or some closely related variation being most common.

Alternate "Rhythm Changes" A Sections

The most commonly used alternate changes for the A section of "Rhythm Changes" are created by back-cycling. In Monk's recordings of his composition *Rhythm-a-Ning* or on the Slam Stewart/Don Byas recording of *I Got Rhythm* from the Smithsonian Collection, one can hear this process at work. Back-cycling from a tonic chord on the downbeat of measure five of the A section through the Cycle of Fifths, these progressions begin on a G♭7 in the key of B♭ (the most common, though by no means the only, key in which "Rhythm Changes" are played), and then cycle through until the tonic chord is reached at the downbeat of m.5, thereafter continuing with "standard" changes for the rest of the A section.

EXAMPLE 12.12

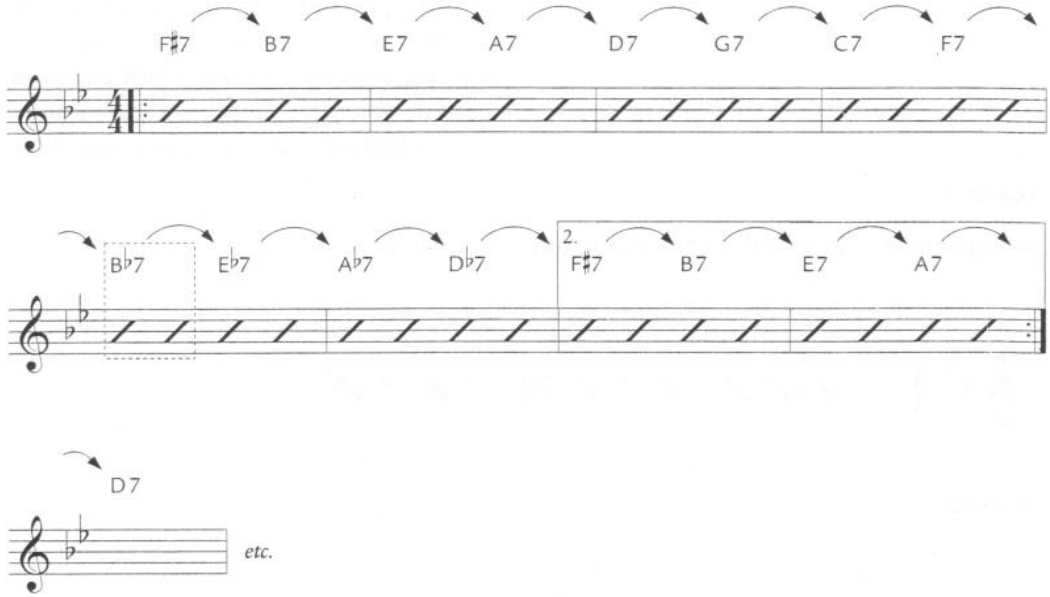
"RHYTHM CHANGES":
"MONK" EXTENDED DOMINANT SEVENTH CHAIN
(FIRST A SECTION, ms.1-8)



Another variation on these alternate changes for the "Rhythm Changes" A section involves extending the same chord progression during the second A section so that it continues through the Cycle of Fifths without returning to the original changes. This results in completing the cycle and then continuing on to create a turnaround which lands on the D7 at the beginning of the bridge.

EXAMPLE 12.13

"RHYTHM CHANGES":
"MONK" EXTENDED DOMINANT SEVENTH CHAIN
(SECOND A SECTION [to BRIDGE], ms.9-16...)

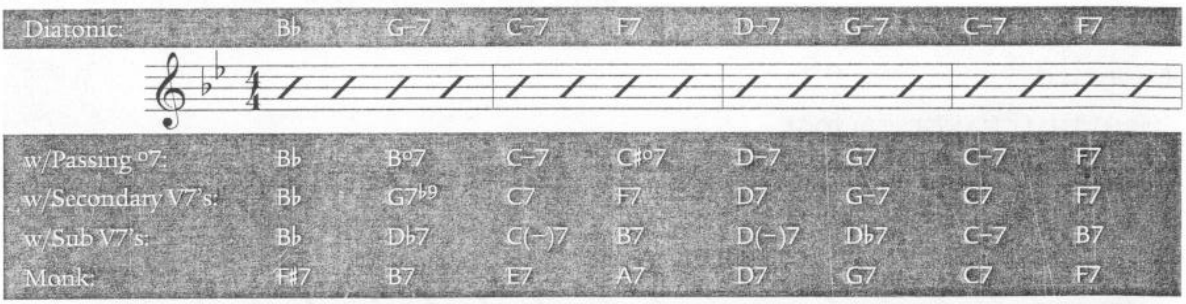


These various possibilities for the "Rhythm Changes" A sections might be summarized by the following paradigm:

TABLE 12.1

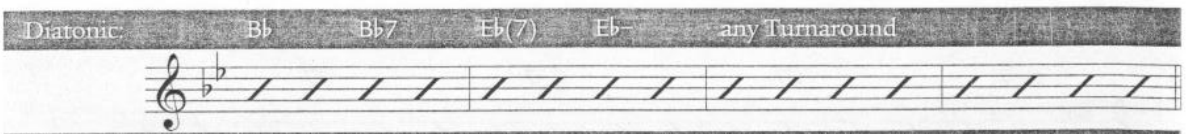
"RHYTHM CHANGES" A SECTION PARADIGM
(A SECTION, ms.1-8) (key = B♭)

Ms.1-4:



Diatonic:	B♭	G–7	C–7	F7	D–7	G–7	C–7	F7
w/Passing °7:	B♭	B°7	C–7	C♯°7	D–7	G7	C–7	F7
w/Secondary V7's:	B♭	G7♭9	C7	F7	D7	G–7	C7	F7
w/Sub V7's:	B♭	D♭7	C(–)7	B7	D(–)7	D♭7	C–7	B7
Monk:	F♯7	B7	E7	A7	D7	G7	C7	F7

Ms.5-8:



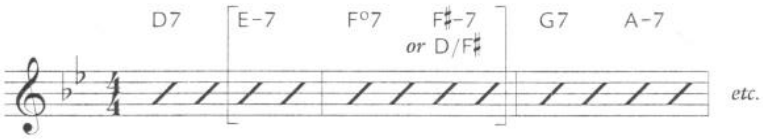
Diatonic:	B♭	B♭7	E♭(7)	E♭–	any Turnaround
	B♭	B♭7/D	E♭(7)	E°7	any Turnaround
	B♭7	B♭7/A♭	E♭/G	E♭–/G♭	any Turnaround
	F–7	B♭7	E♭Δ	A♭7	any Turnaround
	B♭7	B♭7/A♭	E♭/G	E♭–/G♭	any Turnaround
			E♭–7	A♭7	any Turnaround

The "Rhythm Changes" Bridge

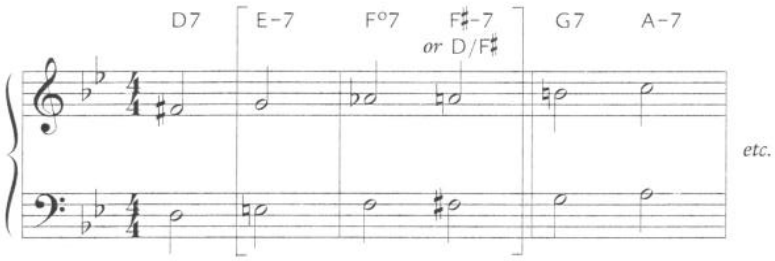
The bridge of "Rhythm Changes," as originally conceived by Gershwin, involved dominant chords in harmonic rhythm of two bars each based on the roots iii, VI, ii, and V. In the key of B♭, this would be D7 - G7 - C7 - F7 for two bars each. In his own recordings, Gershwin liked to connect these chords with ascending stepwise and chromatic bass motion which one might find in a walking bass line or in the connecting chords which are characteristic of Cycle of Fifths chord progressions as used by the stride pianists.

EXAMPLE 12.14

STRIDE PIANO INTERPOLATION of PASSING °7 CHORDS



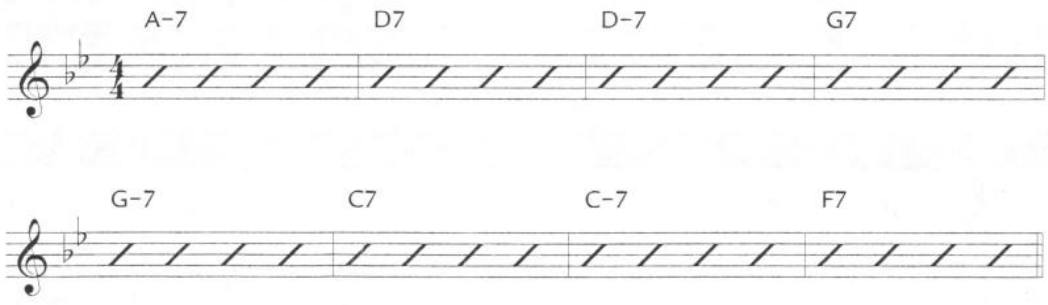
voice-led:



More recent jazz performers have interpolated the related ii chords, creating ii - Vs out of each dominant.

EXAMPLE 12.15

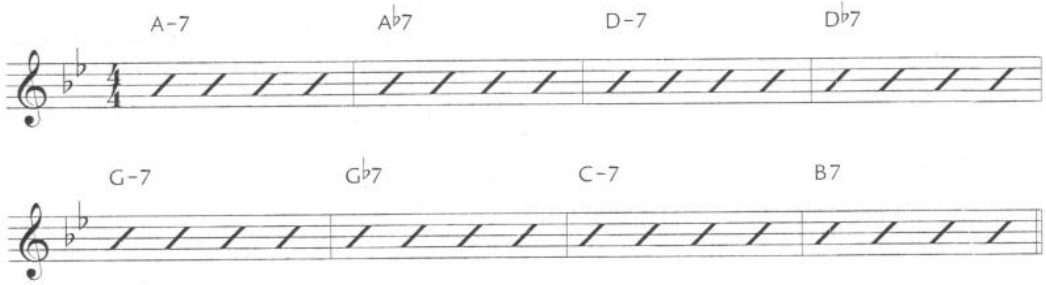
"RHYTHM CHANGES" BRIDGE,
w/ INTERPOLATED ii - V's
(BRIDGE, ms.17-24)



Other possibilities would be to substitute for the existing dominant with its tritone substitute, or, indeed, with its related ii–.

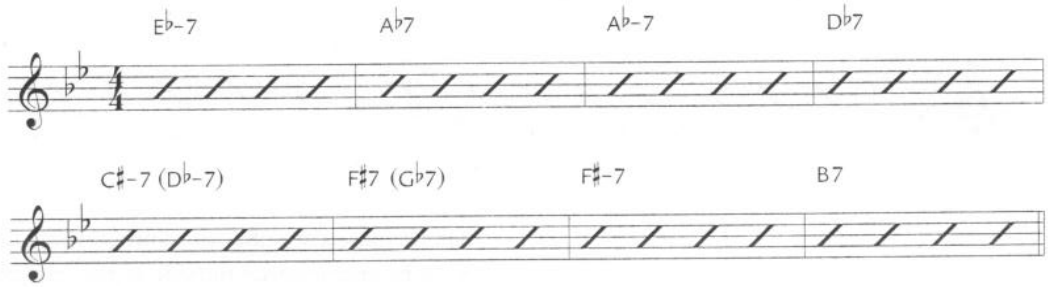
EXAMPLE 12.16A

"RHYTHM CHANGES" BRIDGE,
w/ INTERPOLATED SubV7's



EXAMPLE 12.16B

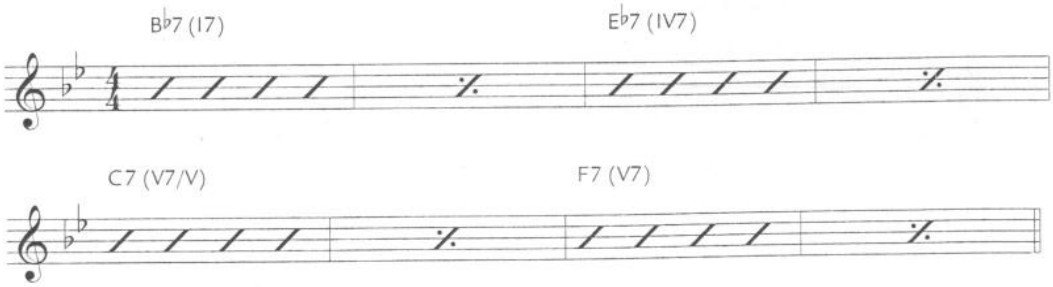
"RHYTHM CHANGES" BRIDGE,
w/ TRITONE SUBSTITUTIONS for ENTIRE CADENCE



Again, these may be mixed-and-matched in various combinations. There is another bridge which is equally common to that found in *I Got Rhythm* which is often used in the AABA song forms upon which it is based: the I-IV-ii-V bass line. In the key of B♭, this progression would be B♭7-E♭7-C7-F7 for 2 bars each. The bridge of Count Basie's *Jumpin' at the Woodside* is a good example of this more Blues-related progression.

EXAMPLE 12.17

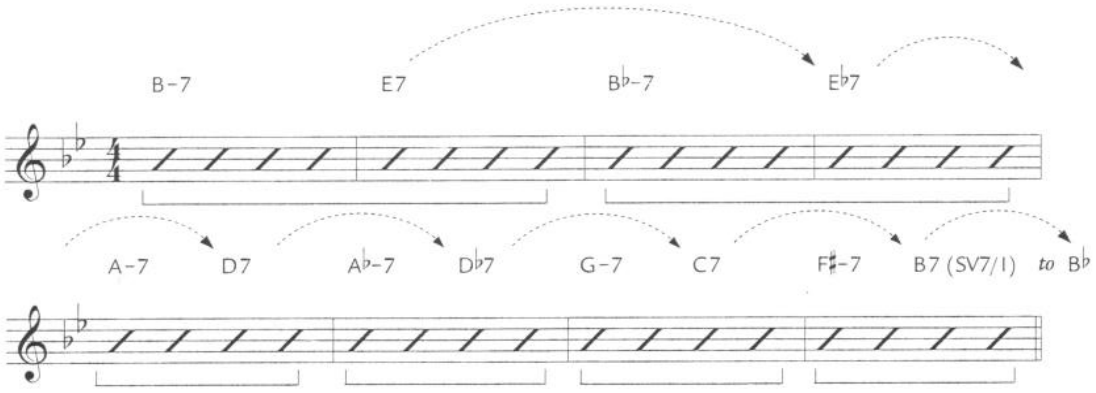
Jumpin' at the Woodside – Count Basie
(BRIDGE, ms.17-24)



A very specific and non-traditional variation on the changes to the "Rhythm Changes" bridge is found in the Dizzy Gillespie/ Sonny Stitt composition *Eternal Triangle* from the recording of the same name featuring Dizzy, Sonny Stitt, and Sonny Rollins. In it, the bridge in the key of B♭ begins on B-7, then cycles to its related dominant E7 in whole note harmonic rhythm. The same progression is then repeated in ms.3-4 of the bridge a whole-step lower, followed by a diminution of the harmonic rhythm to half notes and continuing descending chromatic ii-Vs, so that the chord progression ends up on subV/I, or B7 in the key of B♭.

EXAMPLE 12.18

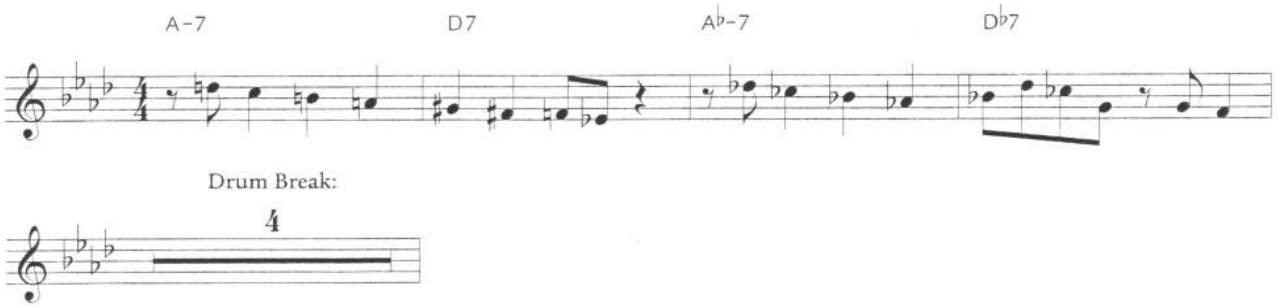
Eternal Triangle - Dizzy Gillespie/Sonny Stitt
(BRIDGE, ms.17-24)



This is quite a specific chord progression, however, and is unlikely to be encountered outside of the context of the piece *Eternal Triangle* itself or when implied in specific arrangements (for example Thad Jones' *The Little Pixie,* where he makes use of this progression in one of his ensemble bridges in an exchange of "fours" with drummer Mel Lewis):

EXAMPLE 12.19

The Little Pixie - Thad Jones
(BRIDGE, ms.17-24)

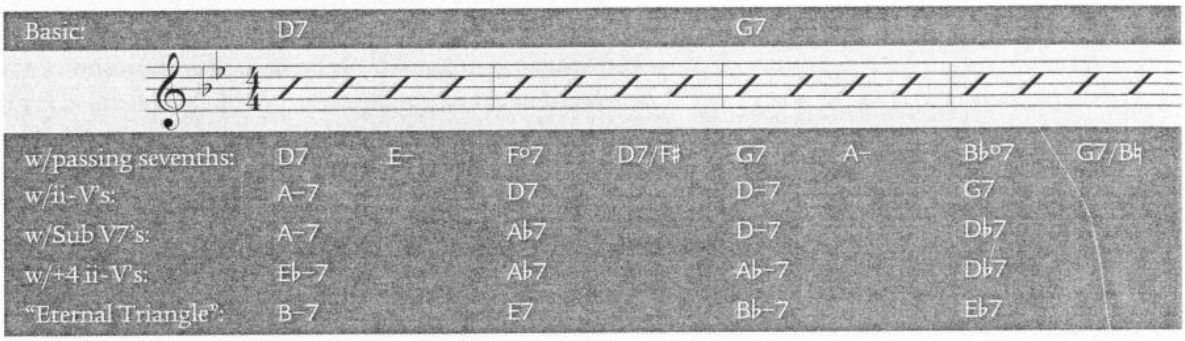


To summarize the options for a "Rhythm Changes" bridge, we might arrive at the following paradigm:

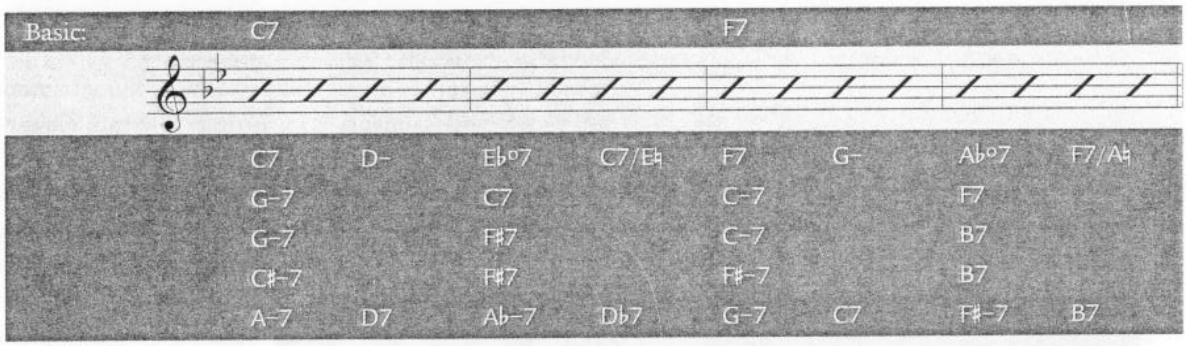
TABLE 12.2

"RHYTHM CHANGES" BRIDGE PARADIGM
(BRIDGE, ms.17-24) (key = B♭)

Ms.17-20:



Ms.21-24:



Notes on Performance

How a player plays "Rhythm Changes" is very much a reflection of the stylistic era in which he or she learned to play. There's a great difference between the approach taken by Lester Young, primarily diatonic with occasional blue notes interspersed, as compared with, for example, Charlie Parker, who is often literally outlining the various functional chord progressions and turn-arounds. Therefore, it is indispensable for students to study solos of the various major interpreters of this form. Some examples that students might want to transcribe might include Lester Young on *Jumpin' at the Woodside*, Don Byas on *I Got Rhythm* (the example mentioned earlier from the Smithsonian Collection), Johnny Griffin on *Rhythm-a-Ning* (LIVE AT THE FIVE SPOT with Thelonious Monk), Thelonious Monk on *Rhythm-a-Ning*, Sonny Rollins on *Oleo*, Bill Evans on *Oleo*, Charlie Parker on *Kim*, or *Anthropology*, and Ben Webster on *Cottontail* among many, many others (see Discography). The proportion of diatonic or Blues playing within the tonality versus literal arpeggiation of specific chord progressions may vary from chorus to chorus, as may the

degree to which the accompaniment is altered chromatically according to the specific variations employed by the rhythm section. It's very important to understand that this sort of juxtaposition can be extremely useful in building tension in a solo or arrangement. (For example, the use of a dominant pedal tone under the entire A section, or the strict playing of the Blues scale over the entire A section as if it were eight bars of B♭7, can provide interest and contrast.) The juxtaposition of these sorts of tension-building techniques with literal arpeggiation and/or more traditional or diatonic playing can be quite successful, and the balance between these devices can make or break a solo or arrangement.

Suggested Exercises and Assignments:

Students obviously need to transcribe and learn to play solos by the great masters over the "Rhythm Changes" form. They also need to develop a repertoire of patterns appropriate to the various chord progressions most commonly used. There is no shortage of literature/methods/transcription books (see Bibliography) which they might study to achieve this end. Another useful exercise for students is to write a "Rhythm Changes" tune, which is essentially a harmonically specific, or worked out, improvisation. Students might use a tune like *Anthropology* as a model for this, where the melody actually sounds like a written out solo. This is a good way to learn how to deal with the issues relating to connecting improvised rehearsed patterns for specific progressions in way that creates coherent solo lines. An especially useful recent publication is the book of transcribed solos of Sonny Stitt by Gary Keller (see Bibliography).

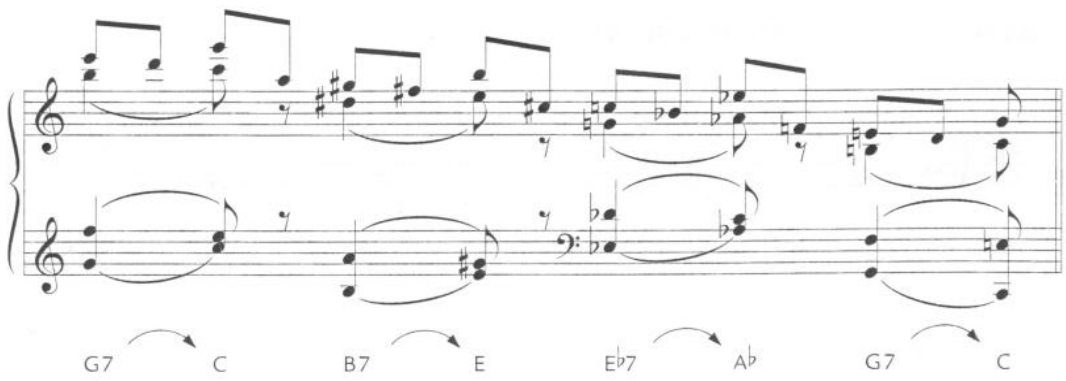
Dizzy Gillespie (© Ken Franckling. All rights reserved.)

COLTRANE'S THREE-TONIC SYSTEM

In addition to being one of the great bebop and modal improvisers, and one of the innovators in the "free" jazz genre, John Coltrane was one of the most important *composers* in the jazz idiom. His best know composition, *Giant Steps*, shows how he was influenced by principles of harmonic and melodic symmetry, and even atonality (note his use of twelve-tone principles). By the late-1950s, Coltrane had made his mark as an influential improviser, working with both Thelonious Monk and Miles Davis. Working with Monk, 'Trane became familiar with angular melodic lines and chord progressions involving chromatic and substitute dominant harmony – indeed, in his recording with Monk, MONK/TRANE, 'Trane can be heard employing symmetric intervallic patterns based on the diminished and whole-tone scales (note especially his solos on *Nutty* and *Trinkle Tinkle)*. From his work with Miles he gained exposure to the extended modal settings which were the harmonic antithesis of Monk's complex progressions. Both influences can be heard in his own later groups. As Dave Demsey points out in his important article "Chromatic Third Relations in the Music of John Coltrane" (see Bibliography), Coltrane's formal musical studies included a heavy dose of the late-19th Century German repertoire, as well as an introduction to the work of the late Nicholas Slonimsky. Slonimsky's *Thesaurus of Scales*, which appeared in the late-1940s, has many exercises based on twelve-tone melodic principles as well. Compare the following example, taken from the introduction to Slonimsky's *Thesaurus of Scales and Melodic Patterns*, with the melody of *Giant Steps* (Example 13.7):

EXAMPLE 13.1

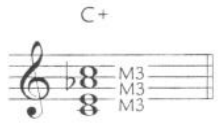
"Tonal Harmonization of a Twelve-Tone Pattern"



Slonimsky, Nicolas. *Thesaurus of Scales and Melodic Patterns.* New York, Scribners, 1947, vi

There is no question that these three influences – i.e., complex, late bebop chromatic and substitute harmony; modal playing (or, the absence of progression); and the intervallically-based symmetric melodic and harmonic patterns discussed by Slonimsky – were all influential on Coltrane's playing and writing. We are not attempting to analyze his playing style or its deep spiritual underpinnings here. These tasks have already been undertaken (see Bibliography). Rather, our goal is to shed some light on Coltrane's "three-tonic" harmonic system through the examination of three important Coltrane compositions and arrangements: *Giant Steps* and *Countdown* (both from the album GIANT STEPS), and his version of the Gershwin standard *But Not For Me* (from the album MY FAVORITE THINGS).

EXAMPLE 13.2

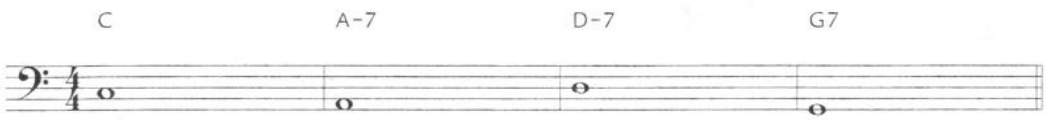


Coltrane's use of the three-tonic system is based on the following principle: *any octave can be divided into three equal parts (major third's) using an augmented triad:*

Coltrane's concept was to imply all three major keys based on these notes whenever he was in the primary tonality defined by the octave. Applying Slonimsky's principle of *interpolation*, 'Trane used the system to enliven traditional four-bar phrases in his arrangements of standards (not only *But Not For Me*, but most of the selections from the album *Coltrane's Sound*, especially *Body and Soul* and *The Night Has a Thousand Eyes)*, as well as to compose his own original compositions. Speaking about the freedom he had to apply these principles in improvisation while working with Miles, Coltrane put it simply, saying he "played three chords in one" (see Bibliography). In other words, by playing rapid arpeggios of the three tonics implied by an augmented triad, and their related dominant chords, it is possible to cycle a return to the primary tonic. Thus, over a standard four-bar, tonic-based phrase, it is possible to interpolate three relatively distant keys before returning to the primary one.

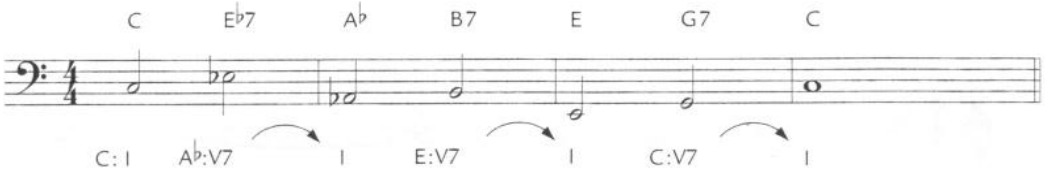
EXAMPLE 13.3A

BASIC DIATONIC TURNAROUND in C



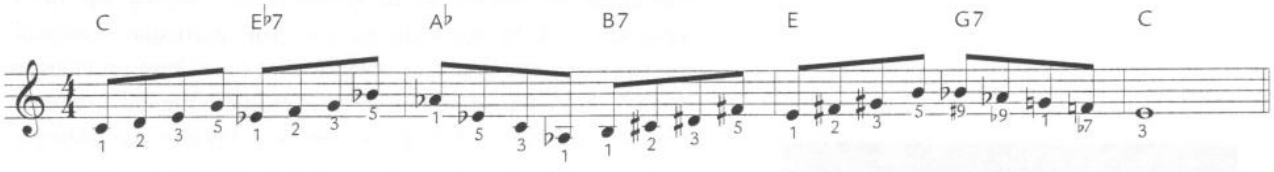
EXAMPLE 13.3B

SAME TURNAROUND, w/ THREE TONICS INTERPOLATED



Note that each of these three key areas is established by its preceding dominant seventh, creating a series of direct modulations. A minor third above any tonic chord is the dominant in the key a major third below it; repeating this cycle three times returns you to the primary key, as in the above example. Improvising over these interpolated changes while the rhythm section plays an ordinary four-bar phrase obviously creates temporary dissonance and a great deal of tension before the resolution to the primary key occurs. Typically, Coltrane played very close to these sorts of interpolated changes when improvising (the harmonic rhythm being as rapid and angular as it is in such a progression, there isn't much time to express the chord changes otherwise). Check out Andrew White's transcription of the Coltrane solo on *Countdown* (see Bibliography) for improvised lines similar to those in the following example:

EXAMPLE 13.4

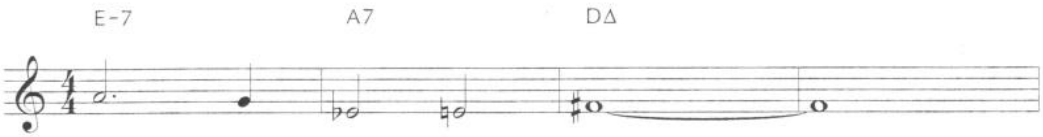


Note also that the root motion in this progression initially sounds very standard, almost like a *Ladybird* turnaround.

The most obvious example of Coltrane's use of this sort of interpolation within a composition is his reworking of Miles Davis' (or Eddie Vinson's) jazz standard *Tune-Up*. *Tune-Up* is based on three standard ii-V7-I four-bar phrases, each successively a step lower. Each phrase has the harmonic formula of ii–7-V7-IΔ-IΔ, in whole note harmonic rhythm:

Example 13.5

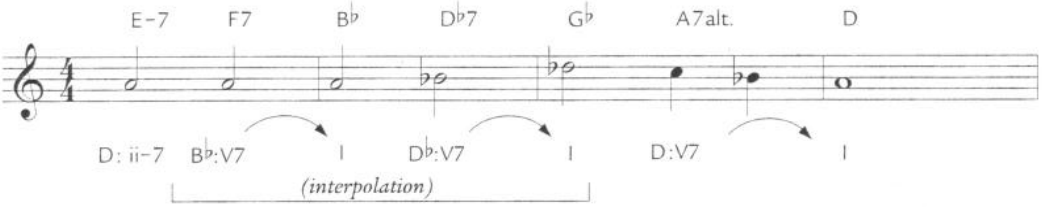
Tune-Up – Miles Davis/Eddie Vinson
(ms.1-4)



Coltrane's version is entitled *Countdown*, and interpolates the three-tonic system between each ii-7 and V7 chord as follow:

Example 13.6

Countdown – John Coltrane
(ms.1-4)



Note that since the first chord of the phrase is a ii-7 chord, and not the tonic as in previous examples, the interval to the dominant of the second key in the system is up a *half-step* and not a minor third. Although Coltrane used this particular interpolation to structure a tune, it's obvious that *Countdown* provides us with a formula for expressing the three-tonic system in an improvisation within any standard four-bar, ii-V-I phrase. An additional interesting aspect of the performance of this piece, found on the *Giant Steps* recording, is its form. Coltrane eschews the traditional melody-*solo*-melody format by beginning with a drum solo, then layering in the rhythm section beneath a lengthy improvisation, and then finally playing the melody only at the end of the piece.

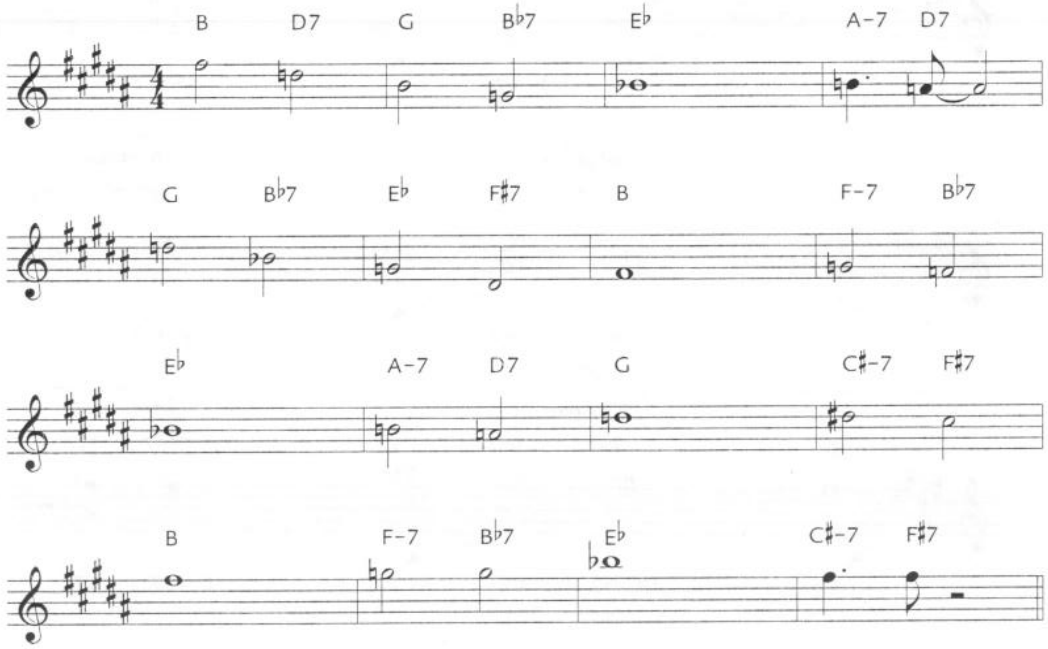
Miles Davis (© Ray Avery's Photo Archives.)

"Giant Steps"

In his well-known masterpiece *Giant Steps*, John Coltrane pays homage to Nicholas Slonimsky with a subtly-organized phrase structure which allows each of the three tonalities to achieve equal weight and communicate a sense of constant harmonic movement. Before we analyze the piece, however, let's again review Example 13.1 above. Note especially that Slonimsky titles the example "Tonal Harmonization of a Twelve-Tone Pattern." With that in mind, let's now turn to *Giant Steps*.

EXAMPLE 13.7

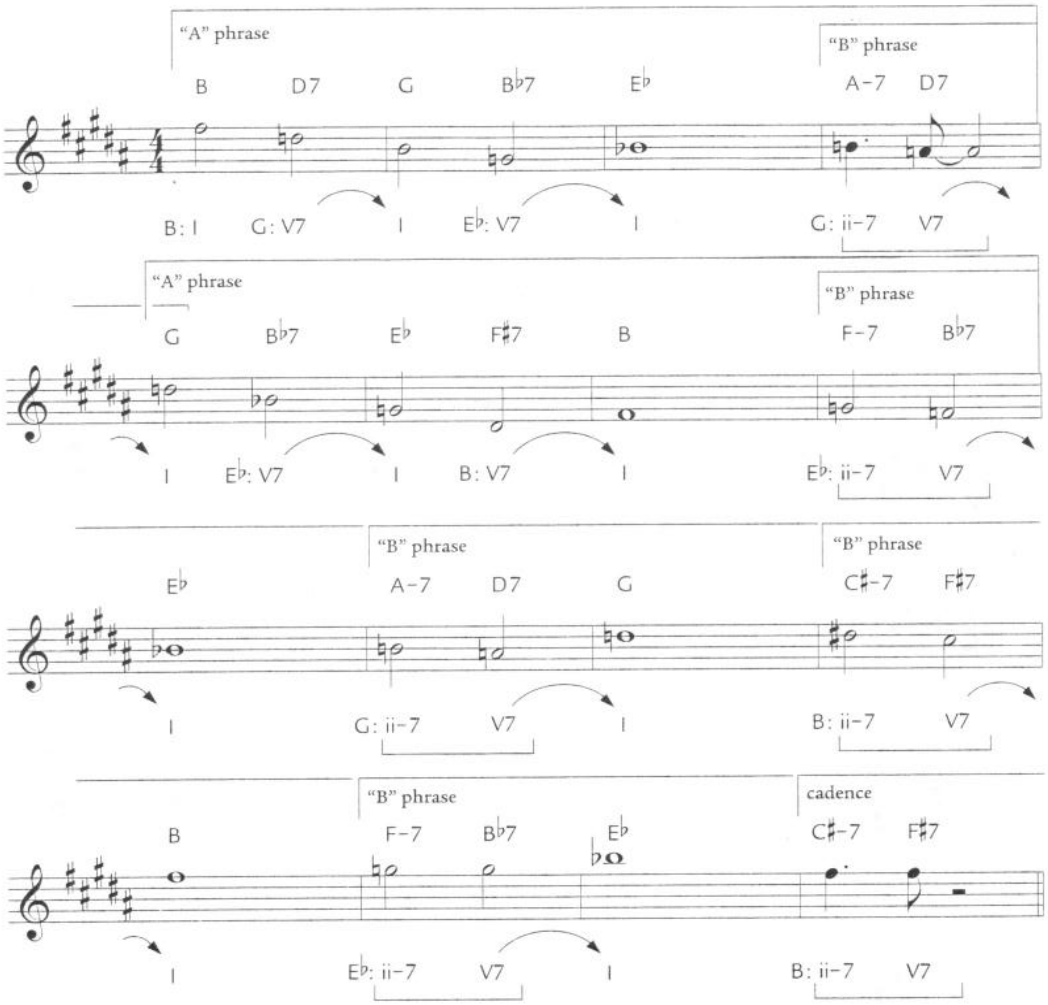
Giant Steps – John Coltrane
(melody chorus after solos)



On the harmonic level, it is clear that Coltrane begins in B major, then cycles through two of the three keys, G and E♭. He then creates a harmonic and melodic sequence, beginning the same progression on G the second time. He then *elides* this "A" melodic material with what becomes the "B" material of ms.7-15, which is in fact derived from the last measure of the first phrase combined with the first measure of the second (ms.3 & 4). The following representation of the lead sheet to *Giant Steps* includes a thorough motivic and harmonic analysis:

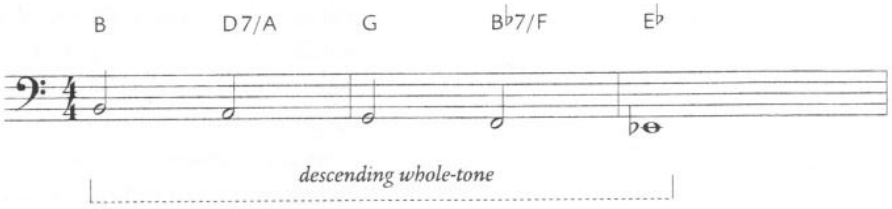
Example 13.8

Giant Steps – John Coltrane
(with phrase analysis)



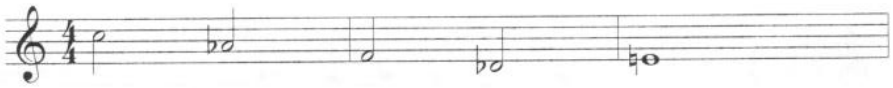
Note that the derivation of the "B" phrase from the fourth bar of the "A" phrase creates an overlapping phrase structure. In other words, m.8 of the tune is not only the end of the second four-bar sequence, but also the beginning of the series of ii-V-I two-bar phrases which reiterate the three tonalities in the second part of the composition. This explains the need for the simple repeated note melody in the final measure of the form, and the fact that the end of the composition is actually on m.15 on the recording (E♭ major). Note also that when you listen to the recording, the bass sometimes alternates between playing the roots of the tonics and the fifths of the dominant chords. In this progression, this results in a bass line of a descending whole-tone scale, a fact which Coltrane also exploited in his arrangement of *But Not For Me* (see also Example 13.12):

EXAMPLE 13.9



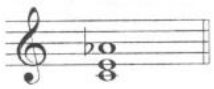
Compositionally, there is another very creative and interesting aspect to the unique organization of *Giant Steps* – taken from a twelve-tone perspective, the "A" phrases, as outlined in ms.1-7 of the form (see Example 13.8), use seven of the twelve possible pitches in the chromatic scale. Those which are *not* used can be organized melodically into an additional "A" phrase as follows:

EXAMPLE 13.10



Further, in the "B" phrases, (ms.8-15), nine of the twelve possible pitches appear. Those left out spell out a single augmented triad, the significance of which is obvious for Coltrane.

EXAMPLE 13.11



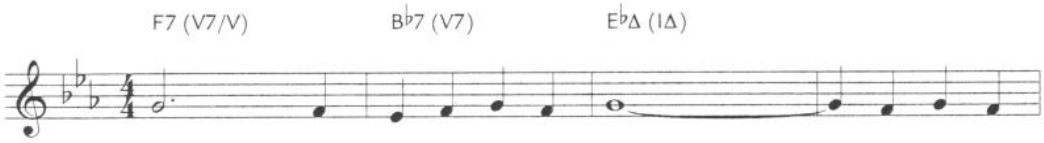
In my experience of presenting this analysis to students, the typical first reaction is, "Do you think he knew about this?," or something to that effect. Given what we know about his interest in intervallic symmetry and his exposure to the twelve-tone compositional techniques, I have no doubt about the answer. Read the Demsey article and take a look at the Slonimsky book (not to mention the excellent biographies of Coltrane also listed in the Bibliography). Also, listen to Coltrane's *Miles Mode* (a short, twelve-tone melody); then answer the question for yourself.

"But Not For Me"

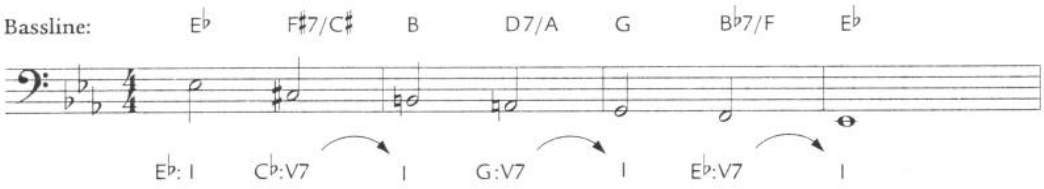
On the MY FAVORITE THINGS album, best known for its seminal, modal title cut, 'Trane performs his arrangement of Gershwin's *But Not For Me*. Like *Countdown*, this arrangement illustrates the larger principles of how to use the three-tonic system in standard four-bar harmonic phrases. Like *Giant Steps*, it creates subtle twelve-tone relationships. As you listen to it, notice how Coltrane uses the three-tonic system only for the A's of this ABAC form, retaining original, basic IV-iv- changes for the different endings which are B and C. Notice also how drastically Coltrane has changed Gershwin's melody in the first four bars in order to accommodate the new changes: it's barely recognizable. He uses the descending whole-tone bass line discussed earlier as well. The original progression and 'Trane's variation compare as follows:

EXAMPLE 13.12

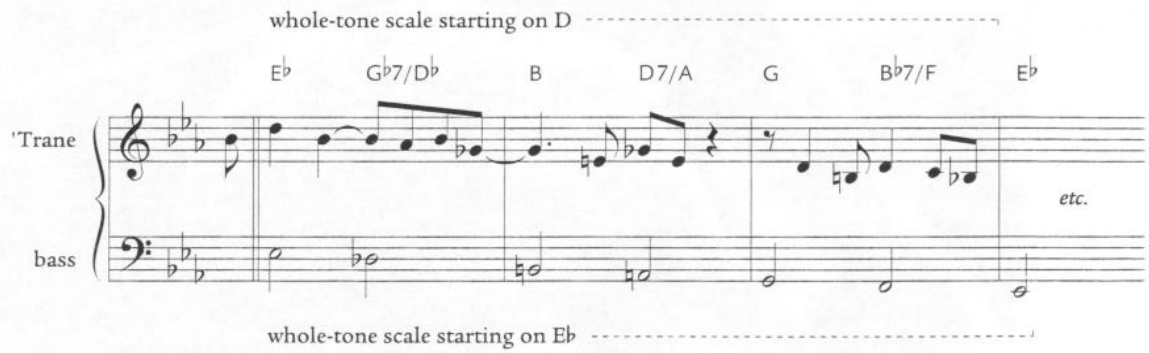
But Not For Me – George Gershwin



as arranged by John Coltrane:



In one of the most concise and subtle musical statements in the history of recorded music, Coltrane begins his improvised solo over these changes with a melody carefully constructed out of the whole-tone scale *not* used in the bass line, creating a resultant four-bar phrase which contains *both* whole-tone scales (and therefore all twelve tones) with the three-tonic system sandwiched in between:



Suggested Exercises and Assignments:

Obviously, first and foremost, do the listening. All recordings referred to in this chapter should be listened to very carefully. In addition to attempting to improvise on *Giant Steps* and *Countdown*, students should carefully analyze Coltrane's solos on these compositions, so as to gain a full appreciation for the necessity of being able to express these complex progressions melodically in a very literal, straightforward manner using eighth note patterns such as 1-2-3-5 of each chord, or simple voice-led arpeggiation. A further assignment is to practice interpolating these changes over tonal four-bar phrases in compositions from the standard repertoire. A good in-class exercise is to compare the original chord changes of the bridge of *Body and Soul* to Coltrane's (from the COLTRANE'S SOUND album). Transcribe these as a class, starting with the root motion as your point of departure.

Yusef Lateef's latest album, FULL CIRCLE, contains a composition of his entitled *Hexatology*. The piece is written using a symmetric scale built out of minor thirds and half-steps known as the Hexatonic scale. It's diatonic harmony coincidentally includes three major and minor triads whose roots are major thirds apart. In other words, it is an intervallically symmetric scale whose diatonic harmony contains all three of the key centers used in the three-tonic system. Give it a listen (see Discography)!

John Coltrane (© Ray Avery's Photo Archives)

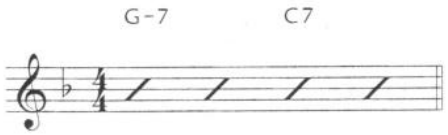
SLASH CHORDS AND HYBRID CHORD VOICINGS

One of the modern applications of the concept of triadic extensions which we have not yet discussed is the so-called "slash chord", or hybrid chord voicing. The diagonal slash symbol can be used for three basic purposes in jazz shorthand notation:

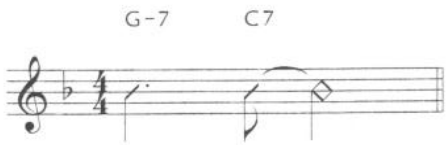
First, the slash can be used to indicate rhythmic duration of harmonies. This is especially useful in cases where specific rhythmic anticipations are required (see Examples 4.1A & 4.1B and the rest of Chapter 4 for a discussion of rhythmic anticipations in the melodic presentation and their effect on accompaniment). Thus, in the following examples, the slash is used as rhythmic shorthand.

EXAMPLE 14.1A & 14.1B

STANDARD HARMONIC RHYTHM
(whole notes & half notes in 4/4)

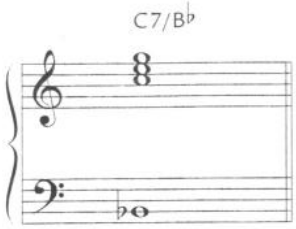


SPECIFIED HARMONIC RHYTHM
(notes of varying duration)



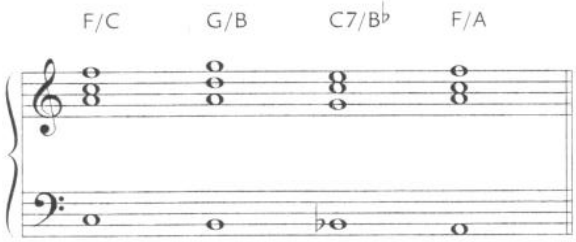
In rhythmic notation, the slashes are either treated as *substitutes for beats*, in which case they represent the standard beats within the measure (as in Example 14.1A above), or as a means of indicating syncopated rhythmic attacks in the harmonic rhythm of the accompaniment, in which case they are attached to standard stems, with slashes standing for quarter notes, and diamond shaped noteheads representing half or whole notes (see Example 14.1B).

EXAMPLE 14.2A



Secondly, the diagonal slash may be used to indicate that a specific bass line should occur beneath the chord progression, and/or to indicate a series of inversions (Example 14.2A & B).

EXAMPLE 14.2B



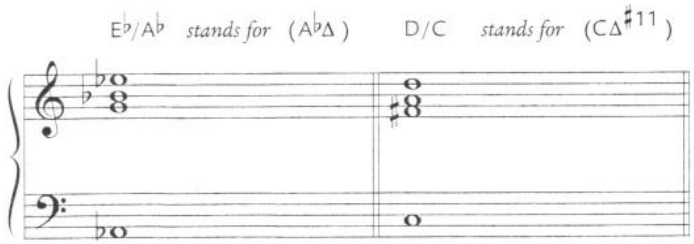
This latter process occurs frequently in bossa novas. Since these compositions are often written at the guitar, they often employ sequences of chords with moving bass lines and inversions.

In appearance, the slash chord symbol is identical to the inversions shown in the above examples, with the chord, often a triad or a seventh chord, written above the line in the chord symbol, and the desired bass note written below the line. The following two examples were used by the trombonist/arranger Slide Hampton in his arrangement of *What's New* written for the *A Day in Copenhagen* session with Dexter Gordon (see Discography). In these examples, the slash chord symbol is aligned with the appropriate chord and is notated as triad-over-bass, while the original chord from which it was derived sits to the right and is notated with conventional symbols.

EXAMPLE 14.3A & 14.3B

POSSIBILITIES FOR
What's New? - Bob Haggart

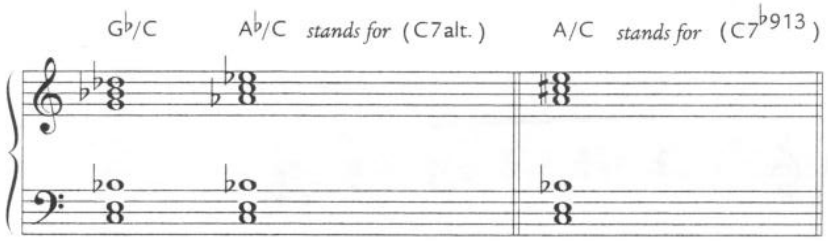
Ms.4, 12 & 28 Ms.7, 15 & 31



Such voicings are often used in three-horn writing, since they establish a strong triadic sonority for the horns which does not duplicate the chord voicings being played by the rhythm section unnecessarily. (This technique is a favorite of the writers for Art Blakey over the years.) In a larger ensemble, it is not uncommon to employ this technique between two different sections of horns, e.g., trumpets over saxophones or trombones in a big band. These voicings are sometimes referred to as "hybrid" chords, since the triadic sound they present, when superimposed over the bass note, yields a somewhat tonally-ambiguous chord sonority, usually because of the absence of either the third or seventh (or both) of the chord which the triad originally extended. Two commonly used dominant seventh hybrids follow:

EXAMPLE 14.4A & 14.4B

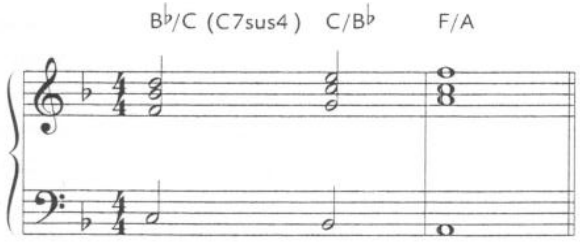
from C altered: from C 1/2-1 diminished



A common cadence in major key tonality which employs this hybridization technique is the (Mixo)Lydian cadence (Donald Fagan's *Maxine* contains hybrid cadences like this – see Discography):

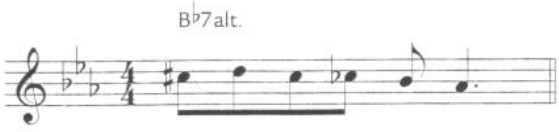
EXAMPLE 14.5

(Mixo)LYDIAN CADENCE



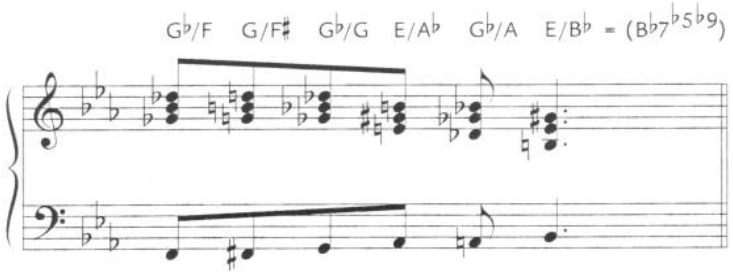
As an arranger's device, these voicings can provide an interesting source of reharmonization. First, we begin with the desired melody and the basic chord symbol, for example, a written-out break on the dominant seventh in the key of E♭:

EXAMPLE 14.6A



Secondly, we might hang triadic harmonies beneath the melody line, then combine these triads with a linear (in this case, chromatic) bass, and cadence on a functional hybrid voicing which represents the original chord involved (the resultant vertical sonorities should be taken more as consequences of our linear harmonizations than as a series of real, functional chords as they were in the earlier Slide Hampton example):

EXAMPLE 14.6B



Suggested Exercises and Assignments:

Do some additional listening from the selections provided in the Discography, paying special attention to the use of rhythm section anticipations and sonorities possibly conceived as hybrid chords. If you hear a rhythm section play certain syncopated figures in concerted rhythm, try to transcribe their attacks in slash notation. Also, try transcribing any unorthodox hybrid chords you hear. Then try writing some passages for three horns and rhythm section, in which the horn voicings contain some hybrid/slash chord symbols over unrelated and/or linear bass lines (as in Example 14.6B above) and the rhythm section part utilizes some slash rhythmic notation. Bill Dobbins' *Jazz Arranging and Composing: a Linear Approach* and Paul Rinzler's *Jazz Arranging and Performance Practice* (see Bibliography) are highly recommended if a review of rhythm section notation is necessary.

Chapter Two

Tune	Recording	Composer/Artist
Prelude No.1 in C (WTC, Book 1)	The Well-Tempered Clavier 1 Sony Classical SM2K 52600	J. S. Bach/Glenn Gould, piano
All The Things You Are	Ella Fitzgerald Sings The Jerome Kern Songbook Verve 314 519832-2	Jerome Kern, Oscar Hammerstein II
All The Things You Are	The Clifford Brown Sextet in Paris/1953 Fantasy OJCCD-358-2	Jerome Kern Oscar Hammerstein II
So What	Kind of Blue Columbia Jazz Masterpieces CK-40579	Miles Davis
My Favorite Things	John Coltrane: My Favorite Things Atlantic 1361-2	Richard Rodgers Oscar Hammerstein II
Take Five	Time Out Columbia Jazz Masteriees CK-40585	Dave Brubeck
Ugetsu	Ugetsu Fantasy OJCCD-090-2	Cedar Walton/Art Blakey and The Jazz Messengers
Speak Like A Child	Speak like a Child Blue Note B21Y-46136	Herbie Hancock
Yeah!	Horace-Scope - Blue Note B21Y-84042	Horace Silver
Piano Sonata No. 15 in C K. 545	W. A. Mozart: The Complete Piano Sonatas Vol. 5 Denon DEN 8075	W. A. Mozart/ Maria Joao Pires, piano

Chapter Three

Tune	Recording	Composer/Artist
Blackwater Blues	Bessie Smith: The Complete Recordings, Vol.3 Columbia/Legacy C2K 47474	Bessie Smith
West End Blues	Swing That Music EPM (Jazz Archives) 15731-2	Louis Armstrong
Every Day I Have The Blues	The Complete Roulette Studio Recordings of Count Basie and His Orchestra Mosaic MD 10-149	Count Basie, E. Durham, Jimmy Rushing
Sent For You Yesterday	[same as above entry]	Count Basie
(Everybody Wants To Know) Why I Sing The Blues	Why I Sing The Blues MCA Special Products MCAD 20256	B.B. King
Billie's Bounce	Charlie Parker Memorial, Vol. 2 Savoy Jazz SV-0103	Charlie Parker
My Blues	[formerly A Day In Copenhagen, now on:] Jazz Club: Tenor Sax Verve 840031-2	Dexter Gordon
Bessie's Blues	Crescent - MCA/Impulse MCAD-5889	John Coltrane
Straight, No Chaser	Thelonious Monk: The Complete Blue Note Recordings Riverside RCD-022-2	Thelonious Monk
Sonnymoon For Two	A Night at the Village Vanguard, Vol. 2: Sonny Rollins - Blue Note B21Y-46518	Sonny Rollins
C Jam Blues	Duke Ellington: The Great London Concerts Music Masters 01612-65106-2	Duke Ellington
One O'Clock Jump	The Complete Roulette Studio Recordings of Count Basie and His Orchestra Mosaic MD10-149	Count Basie
Nostalgia in Times Square (Strollin')	The Complete 1959 CBS Charles Mingus Sessions Mosaic MQ4-143 [LP only]	Charles Mingus

Chapter Four

Tune	Recording	Composer/Artist
Satin Doll	Duke Ellington: The Great Paris Concert Atlantic 2-304-2	Duke Ellington, Billy Strayhorn, Jonny Mercer
In A Sentimental Mood (1935)	Duke Ellington and His Orchestra, 1935-36 Classics 659	Duke Ellington, Irving Mills Manny Kurtz
Prelude To A Kiss	Ellington Indigos Columbia Jazz Masterpieces CK-44444	Duke Ellington, Irving Gordon, Irving Mills
I Got Rhythm	Gershwin Performs Gershwin: Rare Recordings 1931-35 - Music Masters 5062-2-C	George Gershwin, Ira Gershwin
Our Love Is Here To Stay	Ella Fitzgerald Sings the Gershwin Songbook Verve 3-825024-2	George Gershwin, Ira Gershwin
Our Love Is Here To Stay	Frank Sinatra: Songs for Swingin' Lovers Capitol C21Y-46570	George Gershwin, Ira Gershwin
Our Love Is Here To Stay	Carmen McRae: Here to Stay Decca Jazz GRD-610	George Gershwin, Ira Gershwin
Joyspring	Clifford Brown and Max Roach EmArcy 814645-2	Clifford Brown
Nice Work If You Can Get It	Thelonious Monk: The Complete Blue Note Recordings - Blue Note 4-B2PP-30363	George Gershwin, Ira Gershwin
Chelsea Bridge	Duke Ellington: The Blanton-Webster Band (1939-1942) - RCA Bluebird 3-5659-2-RB	Billy Strayhorn

Chapter Five

Tune	Recording	Composer/Artist
Two-Part Invention *No. 4, BWV 775*	J.S. Bach: The Toccatas and Inventions CBS 2-M2K 42269	J.S. Bach / Glenn Gould, piano
There Will Never Be *Another You*	Chet Baker: Out Of Nowhere Milestone MCD-9191-2	Harry Warren, Mack Gordon
Our Love Is Here To Stay	[See Chapter 4]	
All Of Me	Count Basie (Compact Jazz Series) - Verve 831364-2	Seymour Simons, Gerald Marks

Chapter Six

Tune	Recording	Composer/Artist
Kim	Charlie Parker: Now's The Time Verve 825671-2	Charlie Parker
The Little Pixie	The Complete Solid State Recordings of the Thad Jones/Mel Lewis Orchestra Mosaic MD5-151	Thad Jones
Ask Me Now	Thelonious Monk: The Complete Blue Note Recordings - Blue Note 4-B2PP-30363	Thelonious Monk
Who Knows?	Piano Reflections Capitol Jazz CDP 7 92863	Duke Ellington

Chapter Seven

Tune	Recording	Composer/Artist
What's New?	John Coltrane: Ballads MCA/Impulse MCAD-5885	Bob Haggart, Johnny Burke
Here's That Rainy Day	The Artistry of Stan Getz: The Best of The Verve Years, Vol. 1 - Verve 2-314-511468-2	Jummy van Heusen, Johnny Burke
Ladybird	The Complete Pacific Jazz Live Recordings of the Chet Baker Quartet With Russ Freeman Mosaic MD3-113	Tadd Dameron
Wave	Wave - A & M 75021-0812-2	Antonio Carlos Jobim

Triste	[same as above entry]	Antonio Carlos Jobim
La Fiesta	Return To Forever ECM 78118-21022-2	Chick Corea
La Fiesta	The Lyrical Stan Getz Columbian Jazz Masterpieces CK-44047	
Equinox	The Best of John Coltrane - Atlantic 1541-2	John Coltrane
The Shepherd Who Watches Over The Night Flock	Duke Ellington: Second Sacred Concert Prestige PCD-24045-2	Duke Ellington
Footprints	Miles Smiles Columbia Jazz Contemporary Masters CK-48849	Wayne Shorter

Chapter Eight

Tune	Recording	Composer/Artist
What's New?	[See Chapter 7]	
I Got Rhythm	Coleman Hawkins & Lester Young: Classic Tenors Signature AK-38446	George Gershwin, Ira Gershwin
Polka Dots and Moonbeams	Bill Evans: The Complete Prestige Riversinde Recordings - Riverside 12-RCD-018-2	Jimmy van Heusen, Johnny Burke
My Ship	Miles Davis: Miles Ahead Columbia CK-53225	Kurt Weill, Ira Gershwin
Nice Work If You Can Get It	[See Chapter 4]	
Ain't Misbehavin'	The Last Years: Fats Waller & His Rhythm, 1940-1943 - Bluebird 3-9883-2-RB	Thamas Fats Waller, Harry Brooks, Andy Razaf
A Foggy Day	Sarah Vaughan: Live In Japan Mainstream J2K-57123	George Gershwin, Ira Gershwin
Stars Fell On Alabama	Christian McBride: Gettin' To It Verve 314-523989-2	Frank Perkins, Mitchell Parrish
Easy Living	Clifford Brown Memorial Album Blue Note B21Y-81526	Ralph Rainger, Leo Robin
Memories of You	Memories of You - Biography BCD-112	Eubie Blake, Andy Razaf
Moment's Notice	Blue Train Mobile Fidelity UDCD-01-00547	John Coltrane
Yeah!	Horace-Scope Blue Note B21Y-84042	Horace Silver
Stella By Starlight	Stan Getz, Kenny Barron: Anniversary! EmArcy 838769-2	Victor Young, Ned Washington
It's You Or No One	Dexter Gordon: Nights At The Keystone, Vol. 1 Blue Note B21Y-94848	Jule Styne, Sammy Cahn

Chapter Nine

Tune	Recording	Composer/Artist
What's New?	[See Chapter 7]	
In Aa Sentimental Mood	Black, Brown & Beige Bluebird 3 6641-2-RB	Duke Ellington
	[for 1935 version, See Chapter 4]	
Giant Steps	Giant Steps - Atlantic 1311-2	John Coltrane
All The Things You Are	[See Chapter 2]	
Along Came Betty	Art Blakey and The Jazz Messengers: Moanin' Blue Note B21Y-46516	Benny Golson
Free Spirits	Free Spirits - SleepleChase SCCD-31043	Mary Lou Williams
Maiden Voyage	Maiden Voyage - Blue Note B21Y-46339	Herbie Hancock
Bolivia	Freddie Hubbard: Bolivia MusicMasters 50632-C	Cedar Walton

Chapter Ten

Tune	Recording	Composer/Artist
Trinkle Tinkle	Monk with Coltrane - Fantasy OJCCD-039-2	Thelonious Monk
April In Harlem (From Harlem Symphony)	The Symphonic Jazz of James P. Johnson Musical Heritage Society MHS 4888	James P. Johnson
Lighnin'	Duke Ellington and His Ochestra, 1932-33 Classics 626	Duke Ellington
Clarinet Lament	Duke Ellington and His Orchestra, 1935-36	Duke Ellington

Chapter Eleven

Tune	Recording	Composer/Artist
Bessie's Blues	[See Chapter 3]	
West End Blues	[See Chapter 3]	
Au Privave	The Essential Charlie Parker Verve 314-517173-2	Charlie Parker
Blues For Alice	Bird: The Complete Charlie Parker On Verve Verve 10-837141-2	Charlie Parker
Confirmation	[Same as above entry]	
Red Top	Dexter Gordon: Sophisticated Giant CBS 457181-2	Lionel Hampton, Ben Kynard
Knucklebean	Bush Dance - Galaxy GXY-5126 [LP]	Johnny Griffin
Diminuendo And Crescendo	Ellington At Newport Columbia Jazz Masterpieces CK-40587	Duke Ellington
I'm In The Mood For Swing	In The Mood For Swing Musical Heritage Society MHS 512375M	Benny Carter

Chapter Twelve

Tune	Recording	Composer/Artist
Anthropology	Charlie Parker in Sweden Storyville STCD-4031	Charlie Parker
Dexterity	Charlie Parker Story on Dial, Vol. 2: New York Days Stash 25	Charlie Parker
Cottontail	Duke Ellington: The Blanton-Webster Band (1939-1942) - RCA Bluebird 3-5659-2-RB	Duke Ellington
Oleo	Sonny Rollins: The Complete Prestige Recordings Prestige 7 PCD-4407-2	Sonny Rollins
Thw Little Pixie	[See Chapter 6]	
Serpent's Tooth	Sonny Rollins: The Complete Prestige Recordings Prestge 7 PCD-4407-2	Sonny Rollins
Rhythm-a-ning	Thelonious In Action [with Johnny Griffin] Fantasy OJCCD-103-2	Thelonious Monk
	Criss-Cross - Columbia/Legacy CK-48823	
I Got Rhythm	The Smithsonian Collection of Classic Jazz, Vol. 3 (Don Byas and Slam Stewart) Smithsonian Collection of Recordings - CDRD-033-3	George Gershwin, Ira Gershwin
I Got Rhythm	Coleman Hawkins & Lester Young: Classics Tenors - Signature AK-38446	George Gershwin, Ira Gershwin
I Got Rhythm	Gershwin Performs Gershwin: Rare Recordings 1931-1935	George Gershwin, Ira Gershwin
Jumpin' At The Woodside	The Complete Roulette Studio Recordings of Count Basie And His Orchestra Mosaic MD 10-149	Count Basie

Eternal Triangle	DIZZY GILLESPIE: SONNY SIDE UP Verve 825674-2	Sonny Stitt, Dizzy Gillespie
Oleo	EVERYBODY DIGS BILL EVANS Fantasy OJCCD-068-2	Sonny Rollins
Symphony No. 1: Afro-American	SYMPHONY NO.1 - Chandos CHAN 9154	William Grant Still

CHAPTER THIRTEEN

Tune	Recording	Composer/Artist
Nutty	MONK WITH COLTRANE Fantasy OJCCD-039-2	Thelonious Monk
Trinkle Tinkle	[Same as above entry]	
But Not For Me	JOHN COLTRANE: MY FAVORITE THINGS Atlantic 1361-2	George Gershwin, Ira Gershwin
Body And Soul	COLTRANE'S SOUND Atlantic 1419-2	Johnny Green, Ed. Heyman, Robert Sour, Frank Eyton
The Night Has A Thousand Eyes	COLTRANE'S SOUND Atlantic 1419-2	Jerry Brainin, Buddy Bernier
Tune-Up	COOKIN' WITH THE MILES DAVIS QUARTET Fantasy OJCCD-128-2	Miles Davis
Countdown	GIANT STEPS Atlantic 1311-2	John Coltrane
Giant Steps	[same as above entry]	John Coltrane
Satellite	COLTRANE'S SOUND Atlantic 1419-2	John Coltrane
Hexatology	FULL CIRCLE YAL-000	Yusef Lateef

CHAPTER FOURTEEN

Tune	Recording	Composer/Artist
What's New?	[formerly A DAY IN COPENHAGEN, now on:] JAZZ CLUB: TENOR SAX Verve 840031-2	Bob Haggart, Johnny Burke Dexter Gordon
Maxine	THE NIGHTFLY Warner Bros. 23696-2	Donald Fagen

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GLOSSARY

Aeolian	sixth mode of the major scale (a.k.a. *natural minor)*
Altered scale	seventh mode of the melodic minor scale
Anticipation	process of advancing a melody note, and/or its associated harmony
Antecedent phrase	opening, "calling," or otherwise unresolved phrase
Arpeggio	outlining a chord one note at a time
Augmented	made one half step higher (usually this refers to the fifth of a chord)
Augmented seventh	dominant seventh chord with a raised fifth
Back cycling	determining a starting point for a cyclic progression by backing up from the desired point of resolution
Bebop	style of music created by Charlie Parker and his generation of jazz musicians, featuring fast tempos, functional harmony, extremely syncopated melodies, and harmonically complex improvisations often based on extended harmonies
Bitonal	referring to a chord built out of extensions superimposed on the primary chord (a.k.a. *polychord)*
Blue notes	flatted third, fifth, and seventh of a key (the non-diatonic notes in the Blues scale)
Blues	twelve-bar musical form, the most commonly used in 20th century music, featuring a I-IV-V, progression or any of its many variants; also a style of music using exclusively this form
Borrowed	(harmony) taken from one mode and used in another (usually being used *in* the parallel major)
Bossa nova	Brazilian musical form, technically samba with instruments; as used by jazz musicians the term means the songform and rhythmic style popularized by A. C. Jobim and his generation of composer/songwriters in the late 1950s and early 1960s
Break	point in a solo in which the accompaniment is stopped and the soloist continues alone briefly
Cadence(s)	movement from a non-tonic (unstable) chord to a tonic (or more stable) one
Call and response	form of improvisation, singing, or playing, in which a statement by one individual is answered by another or the group (African in origin)
Chord	combination of notes sounded together
Chord changes	harmonies to a phrase or composition
Chord progression	sequence of chords used in a phrase or composition
Chord voicing	particular configuration of chord tones and available extensions
Chromatic	related by one half step, the smallest possible interval on the keyboard
Chromatic scale	scale containing all the possible adjacent notes, in half steps
Close position	a seventh chord which is voiced so that all four notes fall within one octave (as contracted with "open position")
Color tones	sixths, ninths, elevenths and thirteenths (synonymous with "tensions" or "extensions")
Compound cadence	cadence involving two consecutive non-tonic chords resolving to the tonic

Compound interval	interval larger than one octave (ninths, elevenths, and thirteenths)
Conjunct	stepwise melody
Consequent phrase	final, or answering phrase
Constant structure	a voicing, mode, or chord structure which is transposed and repeated
Crushed note	blues piano device in which a single note blues melody is accompanied above or below by a repeating or "drone" tone played in tutti rhythm, or in such a way as to reinforce main rhythmic accents of the phrase
Cycle of Fifths	sequence produced by moving in intervals of perfect fifths (c, g, d, a, etc.)
Diatonic	built exclusively from the scale
Diminished	made one half step lower (this may often refer to the fifth of a chord)
Diminished scale	see octatonic scale
Diminished seventh	seventh chord comprised exclusively of minor third intervals
Direct modulation	change in key center in which no harmony is perceived to be shared between the two keys
Disjunct	leaping, or non-scalewise motion
Dominant seventh	seventh chord found on the fifth degree of the major scale (chord produced by lowering the seventh of the major seventh chord by one half-step)
Dorian	second mode of the major scale
Eleventh	fourth degree of the scale in the presence of a seventh chord (on a major or dominant seventh chord this may be raised, or "sharp")
Extended dominants	a series of dominant seventh chords moving through the Cycle of Fifths extended substitute dominants a series of dominant sevenths occuring in downward chromatic root motion
First inversion	chord with the third on the bottom, and the other notes in normal order above it, within one octave
Half-diminished	synonym for minor seven flat 5 ($-7^{\flat 5}$ or ø)
Half-step	smallest possible increment between pitches on the keyboard
Harmonic minor	minor scale with a flatted sixth, and natural seventh, or leading tone
Harmonic rhythm	rate of chord change
Heptatonic	containing seven notes (usually pertains to scales)
Hexatonic	containing six notes (usually pertains to scales)
Hexatonic scale	symmetric scale built out of alternating minor third and half step intervals
Hybrid chord	chord created by superimposing one chord (usually a triad) over an unrelated bass, or by extending a chord to create a polychord and then leaving the third or seventh out so that only the triadic extensions and bass note remain (a.k.a. *slash chord)*
Interpolation	process of inserting additional chords or cadences between those which are original to the progression
Interval	distance, in pitch, between two notes, chords, or other harmonic or melodic units
Inversion	1. Substitution, between a pair of notes, of highest for lowest or vice versa 2. In a chord, the result of moving the lowest note to the highest voice (there are always as many possible inversions of a chord as there are notes in it).

Ionian	modal name of the major scale
Key of the moment	temporary key created by any dominant seventh chord or cadence other than the primary V7 in the key
Lead sheet	basic guide to a musical compostion, containing basic melody, chords, and form
Leading tone	natural seventh degree of a scale, as found in major and harmonic minor
Locrian	seventh mode of the major scale
Locrian natural nine	sixth mode of the melodic minor scale
Lydian	fourth mode of the major scale
Lydian flat seven	fourth mode of the melodic minor scale
Mainstream	style of jazz mixing influences from the bop, post-bop and modal styles
Major	scale or chord containing a major third degree (as found in a major scale)
Major pentatonic scale	pentatonic scale built in the form: 1, 2, 3, 5, 6
Major seventh	chord containing the first, third, fifth, and seventh degrees of a major scale based on its root
Major sixth chord	major triad with an added sixth
Melodic minor	scale produced by lowering the third of the major scale chromatically
Minor	scale, chord or tonality containing a minor third degree (as found in a minor scale)
Minor blues	blues form in which the tonic, and generally the iv chord and cadence as well, are derived from some form of minor
Minor/major seventh	chord built by flatting only the third of a major seventh chord
Minor pentatonic scale	pentatonic scale built in the form: 1, ♭3, 4, 5, ♭7
Minor seventh	chord built by flatting the third and seventh of a major seventh chord
Minor seven (♭5)	chord built by flatting the third, fifth, and seventh of a major seventh chord
Minor sixth chord	minor triad with an added sixth
Mixolydian	fifth mode of the major scale
Modal	of or pertaining to the modes or their use, technically or stylistically
Modal interchange	borrowing of chords from parallel modes, generally minor, for use in the parallel major
Mode	set of notes produced by beginning a scale on any of its degrees other than the tonic, in effect, inverting it to start on different degrees
Modes	names of the inversions of the scale (see Tables 1.6 and 1.7 for the names of the most commonly used modes of the major and melodic minor scales).
Modulation	change in tonality
Montuno	repeated, or *vamp* figure in *Salsa* music, over which solos may occur
Natural minor	a.k.a. *aeolian*
Ninth	second degree of a scale in the presence of a seventh chord (may be flat or sharp on a dominant seventh chord)
Octatonic	containing eight notes
Octatonic scale	eight-note scale alternating half and whole steps (synonymous with symmetric diminished scale)

Octave	distance between a note and the same note in its next higher or lower appearance (twelve half-steps)
Open position	chord voicing which disrupts the normal hierarchy of pitches (normally 1, 3, 5, 7; 3, 5, 7, 1, etc.). An example would be a chord voiced 3, 7, 5, 1
Ostinato	repeated bass or rhythmic figure which organizes a section of the form, often an introduction or coda
Parallel	having the same root
Pentatonic	containing five notes
Pentatonic scale	scale with the interval structure 1, ♭3, 4, 5, ♭7 (minor form), or 1, 2, 3, 5, 6 (major form)
Phrygian	third mode of the major scale
Pivot chord	chord common to both the old and new tonalities involved in a modulation
Pivot chord modulation	modulation involving a chord or chords common to both the old and new tonalities
Polychord	chord built out of two chords, one superimposed on the other (generally built out of extensions of the primary, lower, chord)
Polyrhythm	coexistence of implication of more than one meter concurrently
Post-bop	after bebop (mid-to-late fifties)
Quartal	built in intervals of fourths
Reharmonize(ation)	changing the harmony to a phrase
Related	scales or modes containing the same notes
Related ii–7 or iiø	subdominant chords in cadences which combine with their related V7 to create ii-V cadences
Resolving(resolution)	arrival at the tonic, or temporary tonic, concluding a cadence
Rhythm changes	32-bar AABA songform based on Gershwin's *I Got Rhythm*
Riff	simple, repeated rhythmic and melodic figure often improvised by horn players behind soloists
Root	note after which a scale or chord is named
Root position	when a chord has not been inverted
Salsa	Puerto Rican or Afro-Cuban dance music characterized harmonically by the use of the *montuno*, and orchestrally by the combination of African percussion combined with conventional jazz ensemble instrumentation
Samba	Brazilian (originally Yoruban *Semba*) drum music with heavy spiritual connotations; as used by jazz musicians, essentially a double-time bossa nova
Second inversion	chord with the fifth on the bottom, and other notes in normal order within an octave
Secondary dominant	dominant seventh chord with a diatonic root and also a potential diatonic resolution a perfect fifth lower
Seventh chord	four note chord in thirds
Simple cadence	motion from one subdominant or dominant chord to the tonic
Simple interval	interval of less than one octave
Sixth chord	four note chord built by adding a sixth scale degree to a major or minor triad

Slash chord(s)	see *hybrid chord(s)*
Spanish phrygian	octatonic variant of the phrygian scale, with an added major third
Stride piano	piano style predominant in the 1920s and 1930s in which the left hand alternates between the root, or a tenth based on the root, and the basic chord structure, in 4/4 time
Subdominant	functional category of diatonic chords containing the fourth degree, but not the leading tone
Substitute dominant	one of a pair of dominant sevenths containing the same third and seventh; also a category of dominant seventh chords with non-diatonic roots
Sus 4	chord with a fourth, rather than a major third, as its second note in root position
Syncopation	displacement of rhythmic attacks or accents so that they fall either between beats or on ordinarily weak beats
Symmetric diminished scale	synonymous with octatonic scale
Swing	12/8 implication in 4/4 time created by the use of uneven, or swing eighth notes and syncopations; also, a style of bigband dance music predominating from approximately 1935 to 1945
Temporary key	see key-of-the-moment
Tensions	ninths, elevenths, or thirteenths (chordal extensions)
Tertian	built in intervals of thirds
Third inversion	chord with the seventh on the bottom and the other notes in normal order within one octave
Thirteenth	sixth degree of a scale in the presence of a seventh chord (on a dominant seventh chord this may be "flat")
Three-tonic system	harmonic system which forms the basis of Coltrane's *Giant Steps*, in which three equally important key centers exist, each a major third apart
Tonic	I of the scale or key
Transcribing	the process of notating a recorded solo, arrangement, or composition
Transitional modulation	a modulation created by the use of sequential harmonies, during which our sense of tonality may be suspended, and at the end of which it has changed
Transposition	moving a note, chord, part or entire composition to another key
Tritone	half an octave; also the interval between the third and seventh of a dominant seventh chord
Tritone substitution	substitution for a dominant chord by the dominant whose root is a tritone distant and which shares the same third and seventh
Turnaround	repeating four-chord progression, usually some variation harmonically of I-vi-ii-V, often used for improvised introductions and endings
Voice-leading	efficient motion between adjacent chords, created by exploiting exploitation of common tones
Whole-tone scale	six note scale built exclusively out of whole steps

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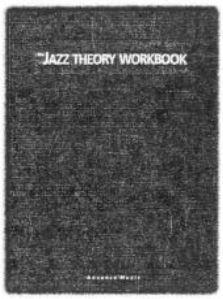
About the Author

Pianist/composer, and arranger Andy Jaffe has been active in jazz education on both sides of the Atlantic for over twenty years. He is the author of over one hundred original compositions, ranging from 32-bar songs to works for piano duo and various other jazz ensembles, large and small. As an award-winning jazz composer, his compositions for sextet, such as those recorded on his CD "Manhattan Projects," are his best known.

As an educator, he has taught at the Berklee College of Music (1977-81), as well as having lectured and done clinics throughout the United States and Europe, on topics such as the music of Duke Ellington, Jazz Composition techniques, and Jazz Theory. He currently is Artist-in-Residence in Jazz and Director of Jazz Performance at Williams College in Williamstown, Massachusetts, and Director of Jazz Studies at Amherst College in Amherst, Massachusetts.



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