

Or we could perform both of these operations concurrently to render it “upside down and backwards” (or in *retrograde inversion*).

Ex. 2.4:



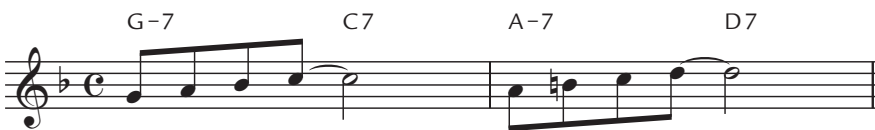
We can *reharmonize* it.

Ex. 2.5:



We can repeat it *sequentially*.

Ex. 2.6:



We can *transpose* it.

Ex. 2.7:



We can *displace* it rhythmically (i.e. change its relationship to the beat, the rhythmic analogue of *reharmonization*).

Ex. 2.8:



We can *fragment* it (i.e. break it down into smaller component parts which can then be subject to all of these same manipulations).

Ex. 2.9:



It can be “embellished” (decorated melodically), either chromatically or diatonically, or both.

Ex. 2.10A



Ex. 2.10B



Embellishment or melodic alteration may also be blues-based (“bluesified”).

Ex. 2.10C



Here are some examples of the various techniques listed above from the real world. “Satin Doll”, by Duke Ellington and Billy Strayhorn is illustrative of many of them, reinforcing the following notions:

- 1.) Not *every* technical device need be used in every composition (just as every improvised solo need not contain every technique or device) and, conversely;
- 2.) It is rare to find a single compositional technique used in isolation.

Ex. 3.4

“Blues for Alice” chord changes⁸

The musical notation for "Blues for Alice" chord changes is presented in three staves, each containing four measures of chords. The first staff (measures 1-4) shows: IΔ (FΔ), E∅, A7^{b9}, D-7, G7, C-7, F7. The second staff (measures 5-8) shows: IV7 (B^b7), B^b-7, E^b7, A-7, D7, A^b-7, D^b7. The third staff (measures 9-12) shows: G-7, C7, F, D-7, G-7, C7.

Of course, many other harmonic variations are possible within this basic framework, and it would be incorrect to state that Parker’s tunes or improvisations demonstrate a universal reliance on harmonic content (listen also to “Au Privave” or “K. C. Blues” for example), or that the reverse was necessarily true of Armstrong.

Minor Blues

Minor Blues is also a common form, differing from its major counterpart in that its tonic chord and iv chord are of minor quality, while its cadential options are those found in minor tonality (most commonly either ii∅ in measure 9, followed by V7^{b9} or (b9, b13) in measure 10, or bVI7 in measure 9, followed by the minor key dominant in measure 10):

Ex. 3.5

Minor Blues schematic

The musical notation for the Minor Blues schematic is presented in three staves, each containing four measures of chords. The first staff (measures 1-4) shows: Tonic (i-), Subdominant (iv-), i-. The second staff (measures 5-8) shows: iv-, i-. The third staff (measures 9-12) shows: subV7/V (ii∅), V7^{b13} (V7^{b9}), Cadence (i-), Tonic or turnaround (i-). The label V7alt. is positioned below the second staff.

⁸ *ibid.*, p. 144

It is worth reiterating that most of these devices were in use from the very beginnings of the music (even though they may be generally associated with later styles), and that the tonal resources available to the jazz composer had not changed appreciably from the beginnings of the music through the 1950's.

Consider Jelly Roll Morton's "King Porter Stomp", in which the opening bars employ the "bVII7" chord (Gb7) preceding the V7/ii chord (F7):

Ex. 4.8

The coda of James P. Johnson's "Carolina Shout" (1918) illustrates the use of substitute dominant seventh chords (compare with the "Ladybird" cadence, shown in Ex. 4.7 above):

Ex. 4.9

Substitute Dominant Harmony and Sideslipping

Of course in later years such harmonic practice was unquestionably more commonplace. It can be found frequently in the work of both Ellington and Monk.

Ex. 4.10

Opening bars of Monk's "Pannonica"

“In a Sentimental Mood” analysis of changes

IN A SENTIMENTAL MOOD

Duke Ellington

Key: F

A

vi- D- D-Δ D-7 D-6 ii- G- G-7 V7/iii E7 V7/vi A7

5 vi- (= relative minor) D- V7/ii D7 ii-7 G-7 subV7/I Gb7 1. F (V7/ii) A7

Key: Db

9 2. F Ab7 B I Db vi-7 Bb-7 ii-7 Eb-7 V7 Ab7 I Db V7/... Bb7#5 V7/... Eb7#5 V7 Ab7#5

(chain of extended V7's)

14 I Db vi-7 Bb-7 ii-7 Eb-7 V7 Ab7 Key: F iiø* Gø V7 C7 (implied V7/ii) (N.C.)

* borrowed cadence from parallel (F) harmonic minor

Another type of modulation, based on the concept of the *pivot chord* (or chords), works based on the potential for a given chord or cadence to work in both the old and new keys. “All the Things You Are” works in this manner, for example, exploiting the fact that the $D\flat\Delta$ chord in measure 5 is at once the diatonic IV chord in the primary key (Ab) and the \flat III Δ in the new key C.

vi-7 F-7 ii-7 Bb-7 V7 Eb7 IΔ AbΔ C: \flat IIIΔ DbΔ IVΔ G7 V7 CΔ

To begin this discussion, let's review the basic "church modes" of the diatonic major scale⁴.

Ex. 4.26

Diatonic modes of a major scale (C major)

C Ionian (parent scale)

Musical notation for C Ionian (parent scale) in treble clef, showing the notes C, D, E, F, G, A, B, C. Below the notes are the interval numbers: 1, 2(9), 3, 4(11), 5, 6(13), 7, 8(1).

D Dorian (2nd mode)

Musical notation for D Dorian (2nd mode) in treble clef, showing the notes D, E, F, G, A, B, C, D. Below the notes are the interval numbers: 1, 2(9), b3, 4(11), 5, 6(13), b7, 8(1).

E Phrygian (3rd mode)

Musical notation for E Phrygian (3rd mode) in treble clef, showing the notes E, F, G, A, B, C, D, E. Below the notes are the interval numbers: 1, b2(b9), b3, 4(11), 5, b6(b13), b7, 8(1).

F Lydian (4th mode)

Musical notation for F Lydian (4th mode) in treble clef, showing the notes F, G, A, B, C, D, E, F. Below the notes are the interval numbers: 1, 2(9), 3, #4(#11), 5, 6(13), 7, 8(1).

G Mixolydian (5th mode)

Musical notation for G Mixolydian (5th mode) in treble clef, showing the notes G, A, B, C, D, E, F, G. Below the notes are the interval numbers: 1, 2(9), 3, 4(11), 5, 6(13), b7, 8(1).

A Aeolian (6th mode, aka "relative minor")

Musical notation for A Aeolian (6th mode, aka "relative minor") in treble clef, showing the notes A, B, C, D, E, F, G, A. Below the notes are the interval numbers: 1, 2(9), b3, 4(11), 5, b6(b13), b7, 8(1).

B Locrian (7th mode)

Musical notation for B Locrian (7th mode) in treble clef, showing the notes B, C, D, E, F, G, A, B. Below the notes are the interval numbers: 1, b2(b9), b3, 4(11), b5, b6(b13), b7, 8(1).

Some important notes:

- Each mode obviously represents the parent scale, displaced to each make each of its successive degrees the "root".
- Note use of compound interval nomenclature (i.e. 9, 11, 13) were appropriate.

⁴ Jaffe, Andy. *Jazz Harmony, Second Edition*. Advance Music, Rottenburg, Germany, 1996, p.21

Example of variable melodic and harmonic modal sequence

Musical notation for Ex. 4.34B. The notation is on a single staff in treble clef with a common time signature (C). The melody consists of a sequence of notes: C4, Eb4, F4, G4, Ab4, Bb4, C5, Bb4, Ab4, G4, F4, Eb4, C4. Above the staff, four chords are indicated: C-7 (under C4), Eb-7 (under Eb4), F#-7 (under F4), and A-7 (under A4).

We see this latter device at work in Joe Henderson’s “Inner Urge” also, which is based on transposed lydian sounds. Note that unlike “Forest Flower”, which is more like Ex. 4.33 above, “Inner Urge” features more variability in the contour of the various melodic expressions of the mode.

Musical notation for Ex. 4.35, showing four transposed Lydian modes. Each mode is on a single staff in treble clef with a common time signature (C).
 - Ms. 1-4: C Lydian: Notes C4, D4, E4, F#4, G4, A4, B4, C5.
 - Ms. 5-8: F Lydian: Notes F4, G4, A4, Bb4, C5, D5, E5, F6.
 - Ms. 9-12: Eb Lydian: Notes Eb4, F4, G4, Ab4, Bb4, C5, D5, Eb6.
 - Ms. 13-16: Bb Lydian: Notes Bb4, C5, D5, Eb5, F5, G5, Ab5, Bb6.
 The word "etc." appears at the end of the Eb Lydian and Bb Lydian staves.

“Un Poco Loco” by Bud Powell, referred to earlier, also illustrates the use of parallel lydian sonorities (the descending chromatic bassline adds further harmonic implications not considered here).

Musical notation for Ex. 4.36. The notation is on a single staff in treble clef with a common time signature (C). The melody consists of notes: Eb4, F4, G4, Ab4, Bb4, C5, Bb4, Ab4, G4, F4, Eb4. Above the staff, three chords are indicated: EbΔ#11 (under Eb4), DbΔ#11 (under Db4), and CΔ#11 (under C5).

Joplin's illustrious "Maple Leaf Rag"¹⁰ from 1898, illustrates these various characteristic elements:

Ex. 5.1

The cakewalk rhythm in the A theme (labeled "Tempo di Marcia")

The musical notation for the A theme of "Maple Leaf Rag" is presented in a grand staff (treble and bass clefs) with a 2/4 time signature. The key signature has three flats (B-flat, E-flat, A-flat). The melody in the treble clef features a characteristic cakewalk rhythm, which is a steady eighth-note pattern. A bracket above the first few measures of the melody is labeled "Cakewalk rhythm". The bass clef provides a harmonic accompaniment with chords and single notes.

The cakewalk rhythm in the B theme

The musical notation for the B theme of "Maple Leaf Rag" is presented in a grand staff (treble and bass clefs) with a 2/4 time signature. The key signature has three flats. The melody in the treble clef continues the cakewalk rhythm. The bass clef accompaniment consists of chords and moving lines that support the melody.

The cakewalk rhythm in the C theme (note the modulation), labeled "Trio"

The musical notation for the C theme (labeled "Trio") of "Maple Leaf Rag" is presented in a grand staff (treble and bass clefs) with a 2/4 time signature. The key signature changes to two flats (B-flat, E-flat), indicating a modulation. The melody in the treble clef maintains the cakewalk rhythm. The bass clef accompaniment features chords and moving lines that reflect the new key signature.

Ex. 5.2

Use of Blue notes

The musical notation for the A theme of "Maple Leaf Rag" is presented in a single staff (treble clef) with a 2/4 time signature. The key signature has three flats. The notation highlights the use of blue notes, which are notes that are lowered by a quarter or half step from their natural pitch. A bracket above the first few measures is labeled "Blue Notes".

¹⁰ Joplin, Scott. *The Best of Scott Joplin*. Charles Hansen, New York, 1972, pp. 6-8

Ex. 5.6

A theme of "King Porter Stomp"

Musical score for the A theme of "King Porter Stomp". The piece is in 2/4 time and the key signature has three flats (B-flat major or D-flat minor). The melody in the right hand consists of eighth and quarter notes, while the left hand provides a steady accompaniment of eighth notes.

B theme of "King Porter Stomp"

Musical score for the B theme of "King Porter Stomp". This section features a more complex rhythmic pattern with sixteenth notes in the right hand and eighth notes in the left hand. It includes various articulations such as slurs and accents.

Modulatory transition and C theme of "King Porter Stomp"

Musical score for the modulatory transition and C theme of "King Porter Stomp". This section shows a key change from the previous section, indicated by the change in the key signature to two flats (F major or D minor). The melody in the right hand is primarily quarter notes, and the left hand features a simple accompaniment.

C Theme

Musical score for the C theme of "King Porter Stomp". This section continues in the new key signature of two flats. The right hand melody is composed of quarter and eighth notes, while the left hand provides a consistent accompaniment of eighth notes.

A musical score for 'King Porter Stomp' in 2/4 time, featuring a call and response pattern and blue notes. The score is written for piano with a grand staff (treble and bass clefs). The key signature has three flats (B-flat, E-flat, A-flat). The melody in the treble clef consists of eighth and quarter notes, while the bass clef provides a harmonic accompaniment with chords and single notes. A call and response pattern is visible in the first few measures, and a blue note (a flattened third) is present in the melody.

Note the use of “Blue notes” and “call and response” as well, similar to the “Maple Leaf Rag”

Ex. 5.7

Blue note (“b3”) in “King Porter Stomp”

A close-up of a blue note in the melody of 'King Porter Stomp'. The note is a flattened third (b3) and is circled in red. The surrounding notes are in a 2/4 time signature with a key signature of three flats.

Ex. 5.8

Call and response in “King Porter Stomp”

A close-up of the call and response pattern in the melody of 'King Porter Stomp'. The 'Call' is a triplet of eighth notes, and the 'Response' is a triplet of eighth notes. The notes are circled in red. The surrounding notes are in a 2/4 time signature with a key signature of three flats.

Of course, the “clave” based rhythm, famously described by Morton as the “Spanish tinge”, is pervasive as well.

Ex. 5.9

A musical score showing a clave-based rhythm in the melody of 'King Porter Stomp'. The notes are circled in red. The surrounding notes are in a 2/4 time signature with a key signature of three flats.

Comparison of the 3rd measure of the respective introductions of
 “Carolina Shout” and “King Porter Stomp” – consilience or signi-
 fication?

Ex. 5.11

Musical notation for Ex. 5.11. The top system shows the 3rd measure of the introduction for "Carolina Shout" in G major, 4/4 time. The melody starts with a quarter rest followed by a dotted quarter note G4, then a half note A4, and a quarter note B4. The bass line consists of a dotted quarter note G2, a quarter note A2, and a quarter note B2. A "7" is written below the first bass note. The second system shows the "Reduced:" version of the same measure, with a dotted quarter note G4, a quarter note A4, and a quarter note B4 in the treble clef, and a dotted quarter note G2, a quarter note A2, and a quarter note B2 in the bass clef.

Musical notation for Ex. 5.12. The top system shows the 3rd measure of the introduction for "King Porter Stomp" in B-flat major, 4/4 time. The melody starts with a quarter note Bb4, followed by a quarter note C5, a quarter note D5, and a quarter note Eb5. The bass line consists of a dotted quarter note Bb2, a quarter note C3, and a quarter note D3. The second system shows the "Reduced:" version of the same measure, with a dotted quarter note Bb4, a quarter note C5, and a quarter note D5 in the treble clef, and a dotted quarter note Bb2, a quarter note C3, and a quarter note D3 in the bass clef.

Ex. 5.12

A theme #1 of “Carolina Shout”

Musical notation for Ex. 5.12, showing the theme #1 of "Carolina Shout" in G major, 4/4 time. The melody starts with a quarter note G4, followed by a quarter note A4, a quarter note B4, and a quarter note C5. The bass line consists of a dotted quarter note G2, a quarter note A2, a quarter note B2, and a quarter note C3. The melody continues with a quarter note D5, a quarter note Eb5, a quarter note D5, and a quarter note C5. The bass line continues with a dotted quarter note D2, a quarter note Eb2, a quarter note D2, and a quarter note C2.

Variation of A (same harmony but with embellishment and fea-
 turing the “secondary ragtime” rhythm in accompaniment):

Musical notation for Variation of A, showing the theme #1 of "Carolina Shout" in G major, 4/4 time. The melody starts with a quarter note G4, followed by a quarter note A4, a quarter note B4, and a quarter note C5. The bass line consists of a dotted quarter note G2, a quarter note A2, a quarter note B2, and a quarter note C3. The melody continues with a quarter note D5, a quarter note Eb5, a quarter note D5, and a quarter note C5. The bass line continues with a dotted quarter note D2, a quarter note Eb2, a quarter note D2, and a quarter note C2. A "3" is written below the third bass note, indicating a triplet.

Ex. 5.13

The B theme of “Carolina Shout”

Musical score for the B theme of “Carolina Shout”. The score is in G major (one sharp) and common time (C). It consists of two staves: a treble clef staff and a bass clef staff. The melody in the treble staff features a series of eighth and quarter notes, with some chords. The bass staff provides a harmonic accompaniment with chords and single notes.

The C theme

Musical score for the C theme of “Carolina Shout”. The score is in G major (one sharp) and common time (C). It consists of a single treble clef staff. The melody is characterized by a series of eighth and quarter notes, with a prominent blue note (F natural) in the middle.

Ex. 5.14

Blue notes in “Carolina Shout”

Musical score showing blue notes in “Carolina Shout”. The score is in G major (one sharp) and common time (C). It consists of a single treble clef staff. The melody features a series of chords, with a blue note (F natural) circled in the first measure.

Ex. 5.15

Call and response in “Carolina Shout”

Musical score showing call and response in “Carolina Shout”. The score is in G major (one sharp) and common time (C). It consists of two staves: a treble clef staff and a bass clef staff. The “Call” is indicated by a bracket over the first measure of the treble staff. The “Response” is indicated by a bracket over the first measure of the bass staff. The two staves are connected by a diagonal line, indicating a call-and-response relationship.

Finally, as mentioned in Chapter 4 (see Ex. 4.9), The coda of “Carolina Shout” contains *substitute dominant* root motion similar to that found in much later compositions such as “Ladybird” and “Satin Doll”.

Ellington's 1947 composition "The Clothed Woman" is another piece in which he uses variations on the Blues, appropriated materials, and even an angular, Monkish interlude (though, interestingly, Ellington had not yet acknowledged having heard Monk's music¹⁹). The piece begins with what seems to be an atonal multi-octave run, that upon repeated listening reveals a Blues form cloaked in extreme *dissonance*.

Ex. 5.31A:

The musical score for "The Clothed Woman" is presented in four systems. The first system shows a multi-octave run in the right hand, starting with a *8va* marking and a dashed line indicating the octave shift. The second system begins with a measure marked '1' and contains several measures with fingering numbers (1, 5, 3) and a sharp sign. The third system starts with a measure marked '5' and includes a Roman numeral 'IV' and a measure with a '3' and a sharp sign. The fourth system is labeled 'Cadence' and begins with a measure marked '9'. The score is written in 4/4 time with a key signature of one flat (B-flat).

(based on the Ellington manuscript score found in the Smithsonian collection).

¹⁹ Dance, Stanley. *The World of Duke Ellington*. C. Scribner's Sons, New York, 1970, p.139)

Following this Blues form, the Monkishly spare, riff-based interlude, establishes a medium bounce tempo.

Ex. 5.31B

This abruptly leads to an appropriated Willie “The Lion” Smith (one of Ellington’s mentors) stride piano piece²⁰ in AABA form, the theme of which follows.

Ex. 5.31C

Finally the original distorted Blues theme returns, adding a common practice ending before reiterating the initial run of the piece for its coda.

Ex. 5.31D

Don Redman’s “The Stampede”, as recorded by Fletcher Henderson, is another example of an early Big Band composition that created *compound* form by combining discrete *songforms* within the same piece, while retaining the use of modulatory interludes and other such signature stylistic devices of its time as the *whole tone scale*, duple time feel, and *call and response* between the instrumental sections. (“The Stampede” may be heard on the Smithsonian Collection of Classic Jazz.)

²⁰ Hasse, *Beyond Category*, p. 301

Ex. 5.32

The formal outline of “The Stampede”

<i>Introduction</i>	Call and response between sections (ms.1-4). Trumpet solo over rhythm section (in “2” feel ms.5-9). The resultant first 8-bar phrase repeats, but this does not turn into the first two A sections of a songform.
<i>1st chorus</i>	ABAC songform (32 bars) in A \flat .
<i>2nd chorus</i>	ABA form repeats for tenor solo with simple backgrounds. Then reiterates the C from the first chorus to conclude the solo chorus.
<i>Interlude</i>	4-bar whole tone passage.
<i>4th chorus</i>	ABAC songform (30 bars) in relative minor key (F $^-$), truncated to enable the <i>elision</i> of the previous Interlude beginning in ms.31 of the minor key form (see also Chapter 6).
<i>Final chorus</i>	Reprise of the initial ABAC songform, with some variation, notably the final 4 bars, which deftly <i>recapitulate</i> both the opening and closing figures of the 1st chorus to create the coda.

The following examples illustrate some of the interesting points in the form described above.

Ex. 5.33

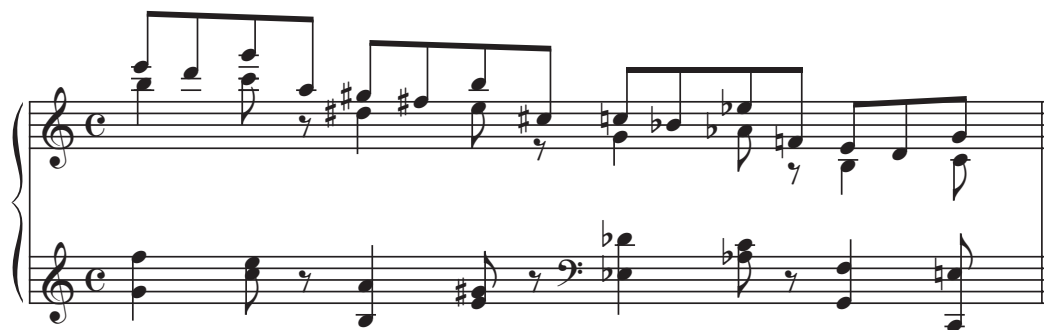
The call and response between sections in the first four bars

The musical score for Ex. 5.33 illustrates the call and response between sections in the first four bars. It is written in 4/4 time and features Piano (Pno.), Saxophones (Saxes), Trumpets (Trps.), and Trombone (Trbs.). The piano part has a bass line with a 'cakewalk' rhythm. The saxophones and trumpets play a call-and-response pattern. The trombone part is shown in the final two bars.

Use of retrograde “cakewalk” rhythm in background riff figures responding to the trombone theme in the first chorus

The musical score for Ex. 5.33 shows the use of retrograde “cakewalk” rhythm in background riff figures responding to the trombone theme in the first chorus. The score is in 4/4 time and features Trumpets and Saxophones (Tps. & Saxes).

Example from Slonimsky Introduction referred to above



The A phrase of “Giant Steps” is constructed from the *hexatonic scale* (of which there are four, produced by the alternation of 1/2 steps and minor thirds, also described by some jazz theorists as the “Augmented” Scale). This *symmetric scale* was also used frequently by Bartók, another composer whose work was surely familiar to Coltrane¹¹.

“Giant Steps” melody



Although the “hexatonic scale” is not so named per se by Slonimsky, it does appear in his book¹²:

Example of a Hexatonic Scale, as found in Slonimsky (see “Ditone Progression” #181 in *The Thesaurus of Scales*)¹³



“Giant Steps” melody showing hexatonic relationships



¹¹ Porter, p. 125
¹² Slonimsky, p. 27
¹³ *ibid.*

Ex. 7.38

Example of the use of an inverted triad; $C\Delta^{11}$ voiced with a D major triad

$C\Delta^{11}$

Ex. 7.39

Example of a quartal (fourth) voicing

$C\Delta$

(Note that these voicings are both harmonically incomplete in and of themselves.)

The variety of available harmonic settings for these last two examples is such that it is nearly pointless to attempt to list them all systematically. Suffice it to say that in some of these cases, the result will define the chord...:

Ex. 7.40A

Quartal voicing used to express the 3, 6, 9 of a major chord

$C6^9$

...while in other cases it may yield a sound that includes a combination of chord tones and color tones, necessitating rhythm section support to complete the chord sound:

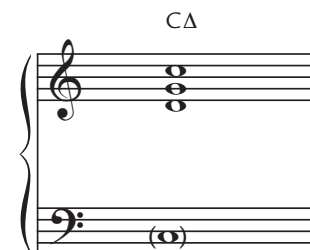
Ex. 7.40B

F7

In the A section of Slide Hampton's arrangement of the standard "What's New" from the Dexter Gordon recording "A Day in Copenhagen" (a tour de force for Hampton's three horn writing), we see a combination of the above sounds being used.

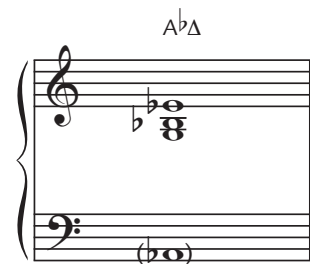
Ex. 7.41A

Ms. A-1 illustrates the use of a voicing in perfect 4ths that does not define the chord sound



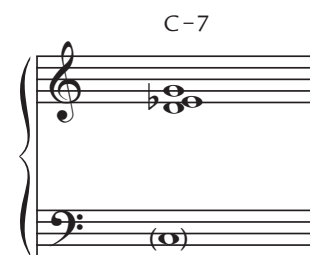
Ex. 7.41B

Ms. A-3 shows the use of an inverted triad in an incomplete chord sound



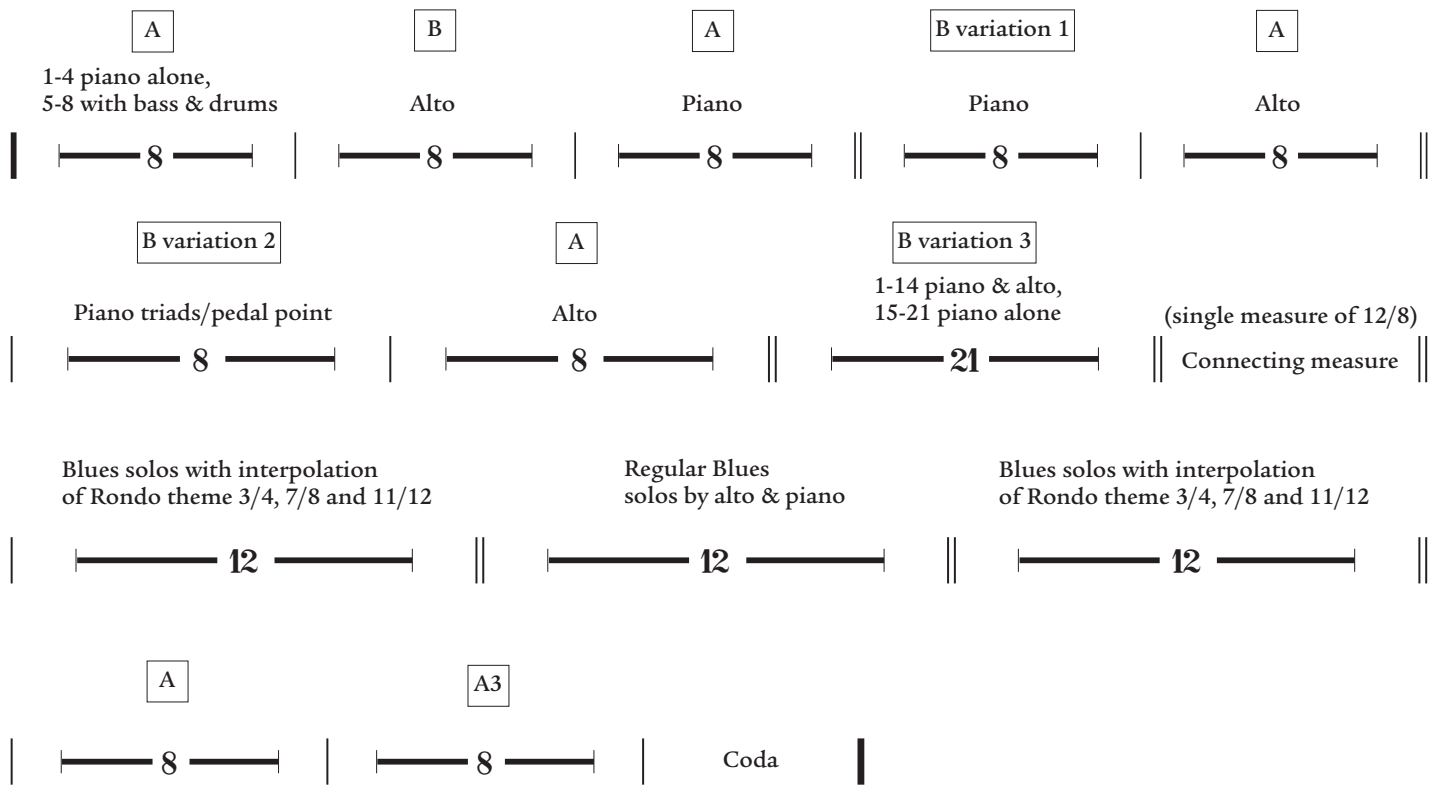
Ex. 7.41C

Ms. A-5 illustrates the use of the major 3rd and 1/2 step voicing



By making use of these characteristic three horn sounds the composer/arranger is placing the value of intervallic timbre above that of harmonic completeness. In other words, choosing sound over function as a means of harmonic organization.

The formal structure of “Blue Rondo à la Turk”
(based on “The Great Concerts”, Columbia CD 44215)



It is interesting to note the adaptability of the Blues to yet another seemingly incongruous setting. The Blues has proven itself to be a favorite foil of Jazz composers, regardless of their compositional goals. This is at least in part due to the implicit potential for contrast and coexistence between major and minor thirds in the Blues. The resolution of the conflict between the major and minor harmonic elements of this particular piece is an important part of its dramatic resolution. So even though there may be a great deal of distinction aesthetically between the music of Ellington, Coltrane, and Brubeck, we find that there is an important communality to be found in their use of the ubiquitous Blues-based resource of major and minor third relationships, both melodic and harmonic.

Pentatonically-based intervallic similarities
between themes of "The Queen's Suite"

Movement 1 - Theme



Movement 2 - Theme



Movement 2 - Pyramid



Movement 4 - Tenor sax theme



Movement 5 - Theme excerpt



Movement 3 - Theme

