

CHAPTER 5: MODERN JAZZ TECHNIQUES

The history of harmonic practice in jazz can be viewed as a continuum of steadily increasing complexity from its inception at the beginning of the twentieth century until the early 1960s when Free Jazz experiments were underway. What had taken 200 years in Western art music had taken roughly 50 years in jazz: a development from basic diatonic structure to one of extreme chromaticism. Many performers from the 1950s onward began experimenting with “playing outside the changes,” an approach that expands harmonic complexity by venturing freely outside of key centers. The Art Tatum example shows an early step in this process by substituting chords outside the tonality for the turnaround (see *Sunday*, ex. 4.17 in Chapter 4). Many jazz artists, including Ornette Coleman, Miles Davis, and Gerry Mulligan, achieved greater harmonic freedom by reducing the texture either by eliminating homophonic instruments like piano and guitar, or limiting what they played to occasional chords and monophonic solo lines. In this context, the absence of chords de-emphasizes harmony, allowing contrapuntal freedom between the bass line and solo improvisations on top of it. Because a chordal instrument is not creating a defined harmonic structure, tonality is more ambiguous and open to interpretation and variation. Musicians have used different devices to develop and structure this leaner, more linear music, for example, using patterns and pentatonics as well as diminished and quartal harmony. Since all of these methods exist in the most dissonant passages in Kapustin’s music, this provides a strong link to modern jazz. These

influences will be apparent in the analysis of the B sections of *Prelude I* and *Prelude XXII* in chapters 12 and 14.

5.1 Quartal Harmony and sus Chords

Quartal Harmony uses the interval of the fourth as a basic building block instead of the more typical third. In jazz, quartal harmony became popular in the 1960s with pianists McCoy Tyner, Herbie Hancock, and Chick Corea, among others. Corea's 1968 album *Now He Sings, Now He Sobs* is an almost single-minded exploration of quartal harmony. Example 5.1 below, the tune *Matrix*, will illuminate the use of quartal harmony and sus chords. *Sus Chords* are suspensions, used in jazz to be tonally ambiguous (the fourth does not resolve to the third), and are often derived from, and used with, quartal harmony.

The image displays a musical score for a piano piece titled "Matrix" from Corea's album "Now He Sings, Now He Sobs". The score is written in G major (one sharp) and 4/4 time. It consists of six systems of music, each with a treble and bass staff. The piece is structured around a twelve-bar blues progression, with improvisation indicated by various musical notations and labels.

- 1st Chorus:** The first system shows the beginning of the first chorus. A circled chord in the bass staff is labeled "Fsus".
- Diminished:** A circled melodic line in the treble staff of the second system is labeled "Diminished".
- F7#9 Bb13:** Chord labels are placed below the bass staff in the second system.
- Pentatonic:** Two circled melodic lines in the treble staff of the third system are labeled "Pentatonic".
- 2nd Chorus:** The second chorus begins in the third system, marked with a "2nd Chorus" label.
- Pentatonic:** Two circled melodic lines in the treble staff of the fourth system are labeled "Pentatonic".
- 3rd Chorus:** The third chorus begins in the fifth system, marked with a "3rd Chorus" label.
- Diminished:** A circled melodic line in the treble staff of the sixth system is labeled "Diminished".

Example 0.1, *Matrix* from Corea's *Now He Sings, Now He Sobs*

Matrix is an original tune by Corea that is loosely structured on a twelve-bar blues, and this example shows the first three and a half choruses of improvisation. With

two exceptions, every left-hand chord is quartal in nature, using two types of quartal-based chords. One is purely quartal, consisting of three notes separated by fourths. The second type is quartal in nature but includes a tritone between the lower two intervals (it is often written as an enharmonically diminished fifth instead of an augmented fourth). This chord is dominant in nature, as it is typically used as an upper-structure chord containing the flat-seventh, third, and thirteenth. For example, the chords in the second line, bars 8-10, would be B7, B^b7, and A7. Also note that these chords can assume their alternate identities as tritone substitutions, becoming F7, E7, and E^b7. The many instances of the chord F-B^b-E^b are examples of tonic sus chords as there is no third in the chord and the B^b never resolves down to the A. Although there are many patterns in the right-hand part that could be construed as being quartal, a more accurate explanation is that they implement another common jazz harmonic device—pentatonics. The other key element in this example is the frequent use of blue notes, minor third, flat-fifth, and minor seventh.

5.2 Pentatonics

Art Tatum was among the first jazz pianists to use pentatonic scales and runs in the 1930s, and jazz musicians have employed pentatonic techniques ever since. In this context, these techniques fit nicely with standard diatonic, tertian harmony. However, in the 1960s when jazz musicians were experimenting with quartal harmony, pentatonics were used more chromatically than diatonically, with the three pianists already mentioned, Tyner, Hancock, and Corea, as primary exponents. When pentatonics are

used chromatically, they create a rich, complex sound and allow the improviser to step outside of the key area while maintaining a motivic relationship to the home key. The previous examples from Waller, Wilson, Tatum, and Corea will illuminate tertian and quartal uses of pentatonic scales.



Example 0.2, *Sunday*, Art Tatum, pentatonic run, measure 15

A pentatonic scale based on the tonic will use the scale degrees 1-2-3-5-6, which together creates a chord with the second (or ninth) and the sixth in addition to the tonic triad. It is a very pleasing, harmonious sound, and one that early jazz innovators quickly adopted. In Waller's arrangement of *Between the Devil and the Deep Blue Sea*, the right-hand figure of the four-bar introduction uses a pentatonic scale in F, the tonic (ex. 4.13). In measure 11 of the Tatum arrangement of *Sunday*, he uses an F pentatonic scale over a D minor chord (this is also thought of as being a D minor pentatonic), and a C major pentatonic run in measure 15 (ex. 4.17).

In a more modern context, pentatonic scales are used chromatically, often in brief patterns that move up or down by half step or whole step. While these patterns have an unmistakable pentatonic flavor, it is often impossible to identify the key relationships of these patterns. There are several of these distinctive chromatic pentatonic patterns in

measures 15-17 and 19-20 of Corea's *Matrix*. In measures 15-16, a B pentatonic is arpeggiated down, with a quick sidestep up to resolve to a B^b pentatonic in measure 17. A short pentatonic pattern in measures 19-20 steps down chromatically, E-D-B-A | E^b-D^b-B^b-A^b | D-C-A-G. This type of pentatonic harmony is more fluid and, instead of reinforcing the tonal center like the earlier examples, is used instead to render tonality more ambiguous.

5.3 Diminished scales and harmony



Example 0.3, Diminished scale with sharp-ninth chords

Diminished seventh chords have been used since at least the Classical era to provide color and drama in tonal music. The diminished seventh occurs naturally on the raised seventh scale degree in minor keys and is often borrowed for use in major keys, where it provides both dramatic color and a flexible way to modulate. Since it is symmetrical, a single diminished seventh chord can lead to four different destinations. For example, B-D-F-A^b can resolve to C, E^b, G^b, or A. Since it is comprised of minor thirds, there are only three different diminished seventh chords before inversions begin.

While the diminished seventh chord was used as far back as the Classical Era, the diminished scale did not become widely used until late in the late nineteenth century.

Like the diminished chord, the diminished scale is symmetrical, an eight-note (octotonic) collection of alternating whole and half steps, or half and whole steps.¹ As Stefan Koska states, “The octotonic scale is a rich source of melodic and harmonic material. It contains all of the intervals, from minor 2nd up to major 7th. All of the tertian triads except for the augmented triad can be extracted from this scale, as can four of the five common 7th-chord types (the major-7th cannot).²

Diminished scales and patterns derived from them are now part of modern jazz harmonic vocabulary and are used primarily to complement altered dominant chords. For example, a half-whole diminished scale over a G7 chord will include most of the common extensions and alterations: $\flat 9$, $\sharp 11$, and 13. Another common hybrid scale, the diminished-whole tone, is usually implied by the “alt” chord symbol. This scale, in figure 5.3.1 above, includes a $\flat 9$, both major and minor thirds (also referred to as a $\sharp 9$), and a $\flat 5$. Its use can be more clearly seen in the Herbie Hancock example below, the D7 alt in bar 49.

Diminished scale patterns are present in the Chick Corea’s *Matrix* above (ex. 5.1). In the Herbie Hancock examples below, he uses diminished scale patterns in the first example in measures 23-24 and 35-36 (ex. 5.6). The second example is full of diminished patterns, with most of the material in measures 39-48 using diminished scale patterns to create a highly chromatic improvisation (ex. 5.7).

¹ There are two types of diminished scale. One alternates a half step-whole step pattern, the other alternates whole-step-half step pattern. A half-whole diminished scale on C includes C, D $\flat$, E $\flat$, E, G $\flat$, G, A, B $\flat$. A whole-half diminished scale on C would include C, D, E $\flat$, F, G $\flat$, A $\flat$, A, B.

² Stefan Koska, *Materials and Techniques of Twentieth-Century Music*, (Upper Saddle River: Pearson Prentice Hall, 2006), 32.

5.4 Jazz-rock straight-eighths

In the late 1960s, jazz-rock burst on the scene. Most critics have commented on the use of electronic instruments and loud volume, but when jazz musicians experimented with rock styles, it was mostly the straight-eighths rhythm and style of drumming that influenced them. Most of the younger generation of jazz musicians in the 1960s and 1970s began experimenting with jazz-rock style and electronic instruments, creating a broad range of hybrid styles. Miles Davis was one of the primary innovators, and his influential band of the late 1960s included many musicians who would later distinguish themselves in jazz and jazz-rock settings, including Chick Corea, Herbie Hancock, Keith Jarrett, Joe Zawinul, John McLaughlin, and Wayne Shorter. Keith Jarrett's albums from the early 1970s are an interesting example since he incorporates these rhythms without the use of electronic instruments



Example 0.4, Mark Harrison, Funk piano with quartal chords



Example 0.5, Mark Harrison, Funk piano with flat-fifth blue notes

The rhythmic element of pop and funk piano styles is well documented in Mark Harrison's *The Pop Piano Book*.³ In chapter 15, *R'nB Funk*, the rhythmic and accompaniment patterns bear a very close resemblance to many of Kapustin's themes in *The Preludes*. In the introduction to the chapter, he discusses the importance of "... 16th note rhythms and emphasizing anticipations (at medium-to-fast tempos) in order to achieve a 'funky' effect."⁴ In addition to the sixteenth note anticipations, the other striking characteristic is the left hand's "rhythmic conversation" with the right-hand part.⁵ This conversation creates a sort of rhythmic counterpoint that is a key element of the style. It is also noteworthy that these examples also include quartal chord voicings, double notes, and blue and bent notes. All of these elements are part of Kapustin's stylistic footprint.

5.5 Modal Jazz

Just as the stylistic elements of the Classical era were a direct reaction against the Baroque, so the Cool jazz movement of the 1950s was a reaction against the Bebop style of the 1940s. The complex harmony and furious tempos of Bebop led to a desire for a more relaxed approach and the modal style that appeared in the 1960s included modal harmony, slower tempos, and slower harmonic rhythm. Instead of chord changes every

³ Mark Harrison. *The Pop Piano Book*, (Sherman Oaks: Harrison Music Education Systems, 1993). (must get current publication info and rights to reproduce!)

⁴ Ibid., 289.

⁵ Ibid., 289.

measure, this music was intended to allow a soloist to stretch out on much longer chord changes. The modal approach de-emphasized the tonic-dominant axis of Bebop, leading to a more pan-diatonic approach to harmony.

While there is nothing relaxed about the harmonic rhythm in Kapustin's music, there are modal elements in some of his themes. Probably the most popular of the modes is Dorian and one of the first popular modal pieces, *So What* by Miles Davis, uses a Dorian riff.



Example 0.6, *So What* by Miles Davis

In the original recording of *So What*, the bass plays the riff and the punctuating chords are played by the piano. Bill Evans's voicing of the chords has become a staple—so much so that this particular type of voicing is referred to as “So What” chords.

5.6 Playing “outside the changes”

To illuminate techniques of “outside” playing, an excerpt of Herbie Hancock’s solo on the standard tune *There is No Greater Love* will show its application within the context of a standard AABA song form. This performance from a live recording demonstrates Hancock’s skill at moving from “inside” to “outside” and back again within the space of three choruses.

While the first chorus is both inventive and swinging, it stays within the context of the harmonic framework of the song for the first three quarters of the form, the first two A sections and the B section (the bridge). In the last A section of the chorus, Hancock’s solo line becomes more chromatic, setting up movement away from the tonal center for the beginning in the second chorus. During the “inside” section, Hancock accompanies regularly with left-hand chords; their absence is noticeable once he starts to move away from the tonal center. From measures 25 to 37 in ex. 5.7, Hancock omits chords in the left hand, and uses them afterward only in sections that have a clear harmonic context.

21 $D7^{\flat 9}$ G^- $C7$ $F7$

25 $B^{\flat}7$ $E^{\flat}7$ $D7$ $G7$

29 $C7$ $F7$ $B^{\flat}$ $F7$

33 $B^{\flat}7$ $E^{\flat}7$ $D7^{alt.}$

2. CHORUS

36 $G7$ $C7$

The musical score is written for piano in B-flat major (two flats). It consists of five systems of music, each with a treble and bass staff. The first system (measures 21-24) features a melodic line in the treble staff with a descending eighth-note pattern, and a bass line with chords. The second system (measures 25-28) continues the melodic line with a descending eighth-note pattern. The third system (measures 29-32) features a melodic line in the treble staff with a descending eighth-note pattern, and a bass line with chords. The fourth system (measures 33-35) features a melodic line in the treble staff with a descending eighth-note pattern, and a bass line with chords. The fifth system (measures 36-39) features a melodic line in the treble staff with a descending eighth-note pattern, and a bass line with chords. The score includes various chords and melodic lines, with some measures containing triplets.

Example 0.7, *There is No Greater Love*, first to second chorus

The device used to move away from the tonal center is a descending chromatic whole-step pattern that begins in the final A section of the first chorus (ex. 5.7, measures 25-29). Hancock ends this chorus with a strong dominant but supplies only the root of F in bar 32. Though the second chorus begins clearly with a B^b broken chord in the first set of triplets, Hancock moves immediately outside of the harmonic framework with triplet patterns that rely strongly on diminished scale patterns. In measure 37, he lands firmly on a C7, both melodically and harmonically, but moves away from it immediately.

Example 0.8, *There is No Greater Love*, second chorus

The musical score is written for piano in B-flat major (two flats). It consists of five systems of music, each with a treble and bass staff. The key signature is B-flat major (two flats). The time signature is 4/4.

System 1 (Measures 39-41): Measure 39 has a treble staff with a triplet of eighth notes (F4, G4, A4) and a bass staff with a whole note chord (F2, Bb2, F3). Measure 40 has a treble staff with a triplet of eighth notes (G4, A4, Bb4) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 41 has a treble staff with a triplet of eighth notes (A4, Bb4, C5) and a bass staff with a whole note chord (F3, Bb3, F4).

System 2 (Measures 42-44): Measure 42 has a treble staff with a triplet of eighth notes (Bb4, C5, D5) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 43 has a treble staff with a triplet of eighth notes (C5, D5, Eb5) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 44 has a treble staff with a triplet of eighth notes (D5, Eb5, E5) and a bass staff with a whole note chord (Bb2, F3, Bb3).

System 3 (Measures 45-47): Measure 45 has a treble staff with a triplet of eighth notes (E5, F5, G5) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 46 has a treble staff with a triplet of eighth notes (F5, G5, Ab5) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 47 has a treble staff with a triplet of eighth notes (G5, Ab5, A5) and a bass staff with a whole note chord (Bb2, F3, Bb3).

System 4 (Measures 48-50): Measure 48 has a treble staff with a triplet of eighth notes (A5, Bb5, C6) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 49 has a treble staff with a triplet of eighth notes (Bb5, C6, D6) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 50 has a treble staff with a triplet of eighth notes (C6, D6, Eb6) and a bass staff with a whole note chord (Bb2, F3, Bb3).

System 5 (Measures 51-53): Measure 51 has a treble staff with a triplet of eighth notes (Eb6, F6, G6) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 52 has a treble staff with a triplet of eighth notes (F6, G6, Ab6) and a bass staff with a whole note chord (Bb2, F3, Bb3). Measure 53 has a treble staff with a triplet of eighth notes (G6, Ab6, A6) and a bass staff with a whole note chord (Bb2, F3, Bb3).

Chord Progression: The chords are F7, Bb7, Eb7, D7alt., G7, C7, F7, Bb, A-7, D7alt., G-7, and G-7.

Between measures 37 and 43 (ex. 5.8 above), Hancock uses chord structures in the left-hand that are consistent with the harmonic progression while the melodic lines have no obvious relationship. Another unaccompanied section with triplet diminished patterns in measures 44 to 48 prepares for the bridge of the second chorus. By this point, Hancock introduces more left-hand chords, breaks out of the almost constant triplet eighth notes that he has used for most of the solo, and starts to move back within the harmonic framework of the form. The solo ends with a bluesy repeated pattern in the first A section of the song. In addition to “outside” playing and diminished scale patterns, Hancock makes effective use of anticipation in left-hand in measures 21, 22, 25, 32, 48, and 51. It seems likely that Kapustin has heard and been influenced by techniques similar to the ones that Hancock so effectively employs in this performance.

5.7 Summary

All of the stylistic elements of jazz explored in the last two sections are part of Kapustin’s vocabulary as a composer. This is perhaps extraordinary given that he has spent his whole life in Russia, far from the American source of this music. The way that Kapustin has integrated jazz style with structural elements of classical music is perhaps even more extraordinary, and the result is a complex and distinctive blend of musical influences. In the following chapter will explore key elements of classical composition that have influenced Kapustin’s sense of structure and development.