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Layered analytical graphs: analysing and composing using the harmonic techniques of Wayne Shorter and Chick Corea

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Layered analytical graphs: analysing and
composing using the harmonic techniques of
Wayne Shorter and Chick Corea

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Western Australian Academy of Performing Arts

Edith Cowan University

This dissertation is presented for the Bachelor of Music (Honours) 2018

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Abstract

The music of Wayne Shorter is renowned for its harmonic complexity, mainly due to Shorter's application of "conventional jazz compositional ideas... in unconventional ways" (Ritchie, 2008, p. 15). While Shorter's melodies are often based on a pentatonic scale and relatively simple and lyrical such as in "Deluge" from the album *Juju* (Shorter, 1964a) and "Oriental Folk Song" from *Night Dreamer* (Shorter, 1964b), the accompanying harmony he writes is often complex and unusual. The harmonic progressions Shorter uses in his works often include unusual techniques such as the use of non-functional neighbour chords, minor dominant chords, stepwise bass movement and chord movement in thirds. This dissertation outlines a way of identifying the harmonic devices being used in a Shorter composition, and applying them in writing new works. The layered analytical graphing analysis technique of Patricia Julien was used to analyse Shorter's harmonic choices in two of his compositions recorded in 1964: "Speak No Evil" and "Fee-Fi-Fo-Fum" from the album *Speak No Evil* (Shorter, 1964c). This selection exemplifies his compositional style in this period.

Two works by Chick Corea, a contemporary of Shorter who uses some of the same compositional techniques, were also analysed through the same process. These works are "Tones for Joan's Bones" from his album *Tones for Joan's Bones* (Corea, 1966) and "Captain Marvel" which he recorded on *Light as a Feather* (Corea, 1973).

The layered analytical graph method of analysis involves reducing the harmonic progression of a composition down to its basic key centres, thus revealing the relative importance of each chord in the progression and providing insight into how the harmonic choices made by the composer inter-relate. This dissertation demonstrates the use of this approach in reverse as a compositional tool, to assist in applying the harmonic techniques learned from these compositions to a new one that is harmonised in the style of the analysed works. By also investigating music by Corea, the versatility of this method as an analytical tool and compositional process is demonstrated, as well as the potential for its use in further research in composition beyond the scope of this paper.

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Chapter 1: Introduction

Introduction

The music of Wayne Shorter is renowned for its harmonic complexity, mainly due to Shorter's application of "conventional jazz compositional ideas... in unconventional ways" (Ritchie, 2008, p. 15). While Shorter's melodies are often based on a pentatonic scale and relatively simple and lyrical such as in "Deluge" from the album *Juju* (Shorter, 1964a) and "Oriental Folk Song" from *Night Dreamer* (Shorter, 1964b), the accompanying harmony he writes is often complex and unusual. Shorter's compositional and improvisational abilities were first introduced to the wider jazz community during his time with Art Blakey's Jazz Messengers. Shorter spent five years with the band, rising to the role of musical director for the group and recording many of his original compositions with them for the record label Blue Note. In early 1964 Shorter left the Jazz Messengers and later that year joined what would be known to jazz aficionados as Miles Davis' Second Great Quintet (Kernfeld, 2007). In 1964 Shorter also recorded his first three albums as a leader for Blue Note: *Night Dreamer*, *Juju* and *Speak No Evil*. In Michelle Mercer's *Footprints: The life and work of Wayne Shorter* she writes "Wayne's work as a sideman was a mere sketch of the genius that his Blue Note sessions would present as a complete picture." (Mercer, 2007, p. 93) The three albums from 1964 are perhaps Shorter's most famous as a leader as well as for Blue Note, with many of the tracks he released on these albums becoming jazz standards now commonly found in jazz song reference books. At least fourteen of Shorter's works are listed as jazz standards in *Jazzology* (Rawlins & Bahha, 2005, pp. 211-215). It is compositions from this time that this dissertation explores, due to their popularity from the 1960s to the present, and the "successions of non-functional and dense harmonies that at times are grouped in asymmetrical phrases" (Kernfeld, 2007) that Shorter employed in writing them.

The composing talents of Chick Corea were first heard on Blue Mitchell's 1964 album *The Thing To Do*, on which "Chick's Tune" by Corea is the final track (Cerra, 2012). After playing with Mitchell, Corea recorded his first album as a leader in 1966: *Tones for Joan's Bones*. In 1968 Corea

“replaced Herbie Hancock in Miles Davis’ band with Ron Carter, Wayne Shorter and Tony Williams.”(Corea, 2016). Corea played on *In a Silent Way* and *Bitches Brew* during this time, two important albums from Davis’ electric period on which Shorter was also featured. When Corea left Davis’ group in 1970, he soon formed Return to Forever, the band that would record *Light as a Feather* in 1972 on which his composition “Captain Marvel” was released. Compositions from *Tones for Joan’s Bones* and *Light as a Feather* were chosen for analysis in this dissertation because they best demonstrate similar harmonic concepts to those that Shorter used in his compositions from the 1960s, thus complementing the other chosen works.

Research Aims

The first aim of this research is to gain insight into the compositional devices of Wayne Shorter and Chick Corea with respect to harmony in selected works. The primary research question branching from this aim is: what compositional processes do Shorter and Corea use to create unconventional yet aesthetically pleasing chord progressions?

The existing literature on the compositional styles of Wayne Shorter and Chick Corea are consulted to answer this question, as well as in-depth analysis on selected works “Speak No Evil,” “Fee-Fi-Fo-Fum,” “Tones For Joan’s Bones,” and “Captain Marvel.” This analysis is conducted using the layered analytical graph method of Patricia Julien.

The second aim is to implement these techniques in my own composition. I aim to use the information gathered from my analysis and Julien’s method in reverse to generate harmonic progressions in the styles of Shorter and Corea.

Rationale

While there is much literature on Wayne Shorter’s compositional style, the possibility of using layered analytical graphs to compose harmonic material has not been explored. This dissertation investigates a possible method for creating harmonic progressions in the style of Shorter thus working towards addressing this gap in the literature. By also employing this method to some of Corea’s

compositions, its broader potential for investigating more composers and their use of harmony outside the scope of this research is shown.

Chapter 2: Literature Review and Methodology

Literature Review

There is literature on many of Shorter's compositions from the period of 1959-1967. Many of these papers suggest that Shorter often uses commonplace harmonic devices in unusual ways. J. C. Ritchie analysed many of Shorter's compositions in his 2008 thesis "*Soundtrack for the Imagination*": *The Career and Compositions of Wayne Shorter*, and he noticed for example that in the 1959 work "Lester Left Town" the young Shorter used tritone substitutions in uncommon places. A tritone substitution is usually used in the context of a ii-bII-I chord progression where the dominant bII chord is the tritone substitute, taking the place of the traditional dominant V chord. The bass note is a tritone away from the original V chord bass note (hence the name) and creates a descending bassline stepping down in semitones (Rawlins & Bahha, 2005, p. 100). See figure 1 below in bars 9-11:



Figure 1 "Lester Left Town" bars 1-16 (Wong, 1992)

The composer uses the Cbm7 substitution as a prolongation of the Fm7 and as the link between the two before a descending chromatic chord progression of E7 - Ebm7 - D7#9... Shorter bucks the traditional usage of the technique. (Ritchie, 2008, pp. 10-11)

The tritone substitution was "one of the most common chord substitutions in bebop" (Meeder, 2008, p. 90) and so was not a revolutionary harmonic concept in 1959 but, as Ritchie points out, Shorter's application of it in "Lester Left Town" was innovative. Ritchie highlights another instance where Shorter has used a tritone substitution in an unfamiliar way in bar 11, where after an Ebm7 chord we hear a D7#9 chord used instead of an expected Ab chord, only to be followed by an Abmaj7 chord. Another example of this can be heard leading from the end of the first A section back to the top to link

a ii-V-I in Ab with a ii-V-i in C minor, following the Abmaj7 chord with Dm7b5. Following this logic, in bar 9 where the D7#9 chord is substituting for the Abmaj7 chord, it would suggest that the Ebm7 chord is acting as a V chord even though it is not a dominant 7th chord. Patricia Julien wrote in her 2003 dissertation *The Structural Function of Harmonic Relations in Wayne Shorter's Early Compositions: 1959-1963* that this was standard practice for Shorter. She writes:

Stepwise chord roots often are more significant to Shorter's 'progressions' than traditional harmonic motion. In his frequent use of minor dominant chords, Shorter demonstrates that chord quality may be structurally inconsequential. This is part of Shorter's general practice of granting functional primacy to chord roots over chord quality and the function that might be suggested by such chord quality. (Julien, 2003, p. 3)

Steven Strunk agrees that this is an aesthetic propensity of Shorter's, writing in his journal article "Notes on Harmony in Wayne Shorter's Compositions 1964-1967" that "one of Shorter's basic techniques for the violation of harmonic expectancy is to use the 'wrong' structure over the right root, particularly in circle-of fifths bass situations." (2005, p. 303) He then demonstrates Shorter's usage of the technique in "Black Nile" from the album *Night Dreamer* where as early as bar 4 Shorter follows an Fm7 chord with a Bbmaj7 chord, an unexpected change. Strunk explains that Shorter uses and greatly expands upon techniques occasionally seen in bebop, which aligns with Ritchie's suggestion that Shorter does indeed use conventional jazz compositional ideas but with an innovative twist.

Strunk also writes that Shorter often uses non-functional neighbour chords in his harmonic progressions (that is, a chord is followed by another chord that is not diatonically related but is made up of neighbour tones to the notes in the first chord (2005, p. 328)), though always with smooth voice-leading. One such progression is imin7 to bIIImaj7. In this progression, the bIIImaj7 chord is a non-functional neighbour to the tonic imin7 chord. He uses this progression in the first seven bars of "Deluge", bars 5-8 of "El Gaucho" and in "Speak No Evil" for the first eight bars. Another usage of non-functional neighbour chords described in Strunk's paper is their usage as a prefix or suffix incomplete neighbour chord. These chords are placed between two related chords as a neighbour to either or both, and their relationship to the two related chords is "frequently strikingly non-functional and disruptive of tonality. Such elaborations are not part of the bebop style." (2005, p. 307)

There is some literature linking the compositional styles of Wayne Shorter and Chick Corea, leading to some of Corea's works being chosen for analysis. In his article "Trans-Cultural Composition in the 20th Century" (*Craig, 1986*) Dale A. Craig lists Shorter as one of Corea's compositional influences, and Steven Strunk writes in his article "Chick Corea's 1984 Performance of 'Night and Day'" that the progressions Corea uses in "Tones for Joan's Bones" and "Litha" are "nonfunctional, and represent part of a general trend toward increasing use of non-functional progressions in jazz at that time" (Strunk, 1999). These non-functional progressions resemble those used by Shorter, but there is no analysis in the literature to support this similarity. Another composer who worked frequently with Shorter in the 1960s is Herbie Hancock. In Keith Waters' article "Modes, Scales, Functional Harmony, and Nonfunctional Harmony in the Compositions of Herbie Hancock" Waters refers to the way that modern jazz composers "adopted many of the compositional approaches forged in the 1960s by Hancock (and such contemporaries as Chick Corea and Wayne Shorter)" (2005), suggesting that all three were pioneering similar techniques in their composing at that time. There is reference to one familiar technique of Shorter's (although he is not credited) in Corea's compositional style in the 2013 thesis *A Formulaic Analysis Of Three Performances From Chick Corea's Recording: "Now He Sings, Now He Sobs"* in which the author Scott Ballin analyses the composition "Steps". Ballin describes smooth voice leading between non-functional neighbour chords in the harmonic progression. "Although the chords from measures 9 and 12... are from unrelated tonalities, which is part of their aural appeal, they each contain two enharmonic common tones." (Ballin, 2013). Shorter also uses common tones or semitonal steps between non-functional chords to create smooth voice-leading, and here it is suggested that Corea does the same.

The main trends evident in the literature on Wayne Shorter's use of harmony in his early compositions are: use of elements of bebop harmony with expansion and innovation, use of unexpected chord progressions that favour functional bass movement over functional chord movement, and smooth voice leading is employed in unconventional chord progressions.

Methodology

Julien's layered analytical graphing technique is used to examine the four works analysed in this dissertation. This method is displayed in her articles "'Sakeena's Vision': The Trifocal Organization of Harmonic Relations in One of Wayne Shorter's Early Compositions" (Julien, 2009) and "Harmonic Plateaus in Two Works by Wayne Shorter" (Julien, 2011). These graphs are used to analyse the function of the chords and to understand which are the most structurally important. They filter out the other chords to simplify the structure of the work, and thus shed light on the harmonic choices Shorter has made. Julien's layered analytical graph (Figure 2 below) in *Harmonic Plateaus in Two Works by Wayne Shorter* shows the chord changes of the composition "El Toro" from the 1961 album "Freedom Rider" from bars 1-7 (2011, p. 179).

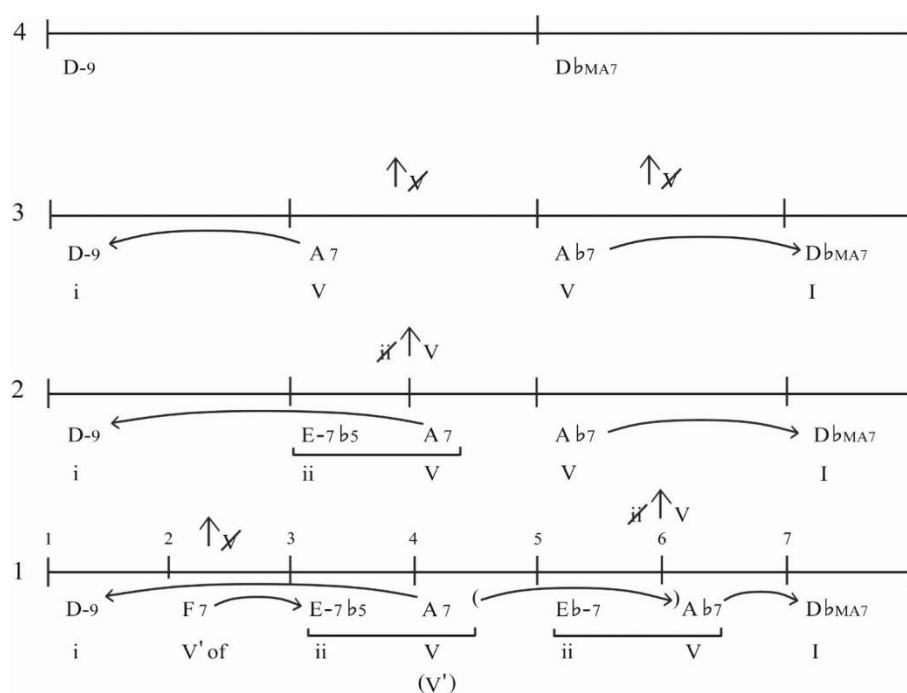


Figure 2 "El Toro," layered analytical graph, bars 1-7 (Julien, 2011)

The diagram shows the different depths to which the chords can be examined, from the foreground (the chords written by Shorter) to the background (the most simplified version of the changes, indicating the key centres of this passage). The foreground is labelled '1' on the vertical axis and the background is the highest level on this vertical scale, while the horizontal axis depicts the

relative time that each chord sounds for. Chords are labelled with Roman numerals indicating their relationship to the home key, with uppercase and lowercase depicting major chords and minor chords respectively. “V” is used to indicate a chord that is acting as a V chord, an example of this is a tritone substitution, while non-functional neighbour chords are labelled “N.” Some chords relate to more than one other chord in the diagram. When this occurs the most important relationship is listed first while the secondary label is placed beneath it in brackets. If an arrow is required to point to the related chord, this arrow is also bracketed for secondary relationships.

In the graphing process, the first step is to analyse the chords and how they relate to each other. The chords of least structural significance are the first to be removed between the foreground and the middle-ground; these are the neighbour chords or passing chords (defined by Rawlins and Bahha as “any chord that moves between one diatonic chord and another” (2005, p. 104)). From the middle-ground to the background the ii and V chords are reduced out in that order (signified by the Roman numerals being slashed out between layers) until in this case two distinct key centres are obtained. Once the background level is obtained, the harmonic choices in the foreground can be better understood. While the movement from A7 to Ebm7 looks unusual, when examined in the context of moving from the key of D minor to Db major it becomes clear that these are both pivot chords, that is they have “a particular harmonic function in the initial key but a different function in the second key” (Latham) The A7 in bar 4 functions as both the V7 in a ii-V cementing the key centre of D minor, and a tritone substitute secondary dominant of the Ab7 in bar 6 in the key of Dbmaj. Concurrently the Ebm7 can be heard to prolong the sound of the A7 (as it shares a C# common tone with A7), but it can also be viewed as the ii7 chord in a ii-V in Db major.

This dissertation uses the above analysis strategy to investigate Shorter’s harmonic choices in “Fee-Fi-Fo-Fum” and “Speak No Evil”. Chick Corea’s “Tones For Joan’s Bones” and “Captain Marvel” are also examined using the same graphical method.

The final section of this paper is my application of harmonic techniques from Shorter and Corea to one of my own compositions. In order to apply these devices, a similar diagrammatical

method to Julien's layered analytical graphs is used in reverse to produce harmonic material. The first step is choosing the key centres for each section of the composition before it is written. I then write a chord progression to connect these key centres with functional and non-functional chords chosen for their voice leading or adherence to another device that Shorter or Corea have used. Once the chords are written through this process the melody and rhythms are added to complete the composition.

Chapter 3: Analysis

“Speak No Evil” – Wayne Shorter

One of Shorter’s more complex works from his 1964 albums is “Speak No Evil.” See Appendix A for the leadsheet from *Volume 33: Wayne Shorter* (Aebersold, 1985). On the surface level the harmony may appear non-functional and random, but investigation using Julien’s method provides some insight into Shorter’s harmonic choices. Figure 3 is a layered analytical graph representing the first eight bars of “Speak No Evil.”

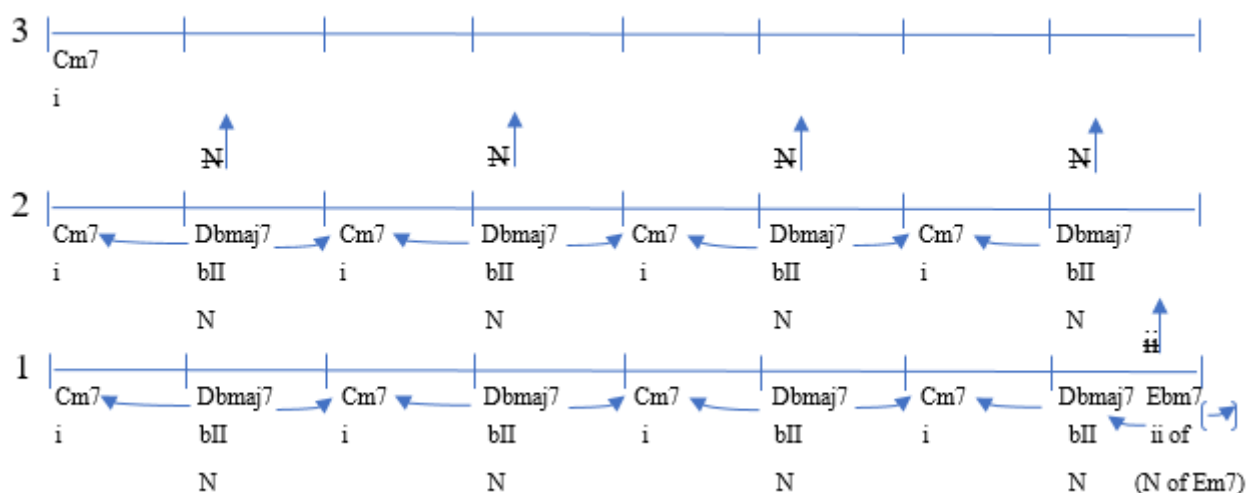


Figure 3 "Speak No Evil," layered analytical graph, bars 1-8

The opening vamp between Cm7 and Dbmaj7 is an example of a “characteristic phrygian-mode progression” (Strunk, 2005, p. 305), which refers to how Cm7 and Dbmaj7 are both diatonic to the C phrygian mode parent scale as according to phrygian scale diatonic harmony. Rawlins and Bahha define diatonic harmony as “the series of diatonic (scale-based) seventh chords created by harmonising the parent scale: building chords on each step, by stacking thirds of only scale notes” (2005, p. 22). In this case the Dbmaj7 can be thought of as a non-functional neighbour chord to the tonic Cm7, and is removed in the background level above. The Ebm7 is removed in the middle-ground as it serves to link the Dbmaj7 in bar 8 and the Em7 in bar 9 seen below. Again, a non-functional neighbour in Ebm7 is used to approach the Em7, but Ebm7 is also diatonically related to

the preceding Dbmaj7. The Ebm7 also creates an ascending stepwise bass line from the Cm7 in bar 7 to the Em7 in bar 9, another technique Shorter often favours.

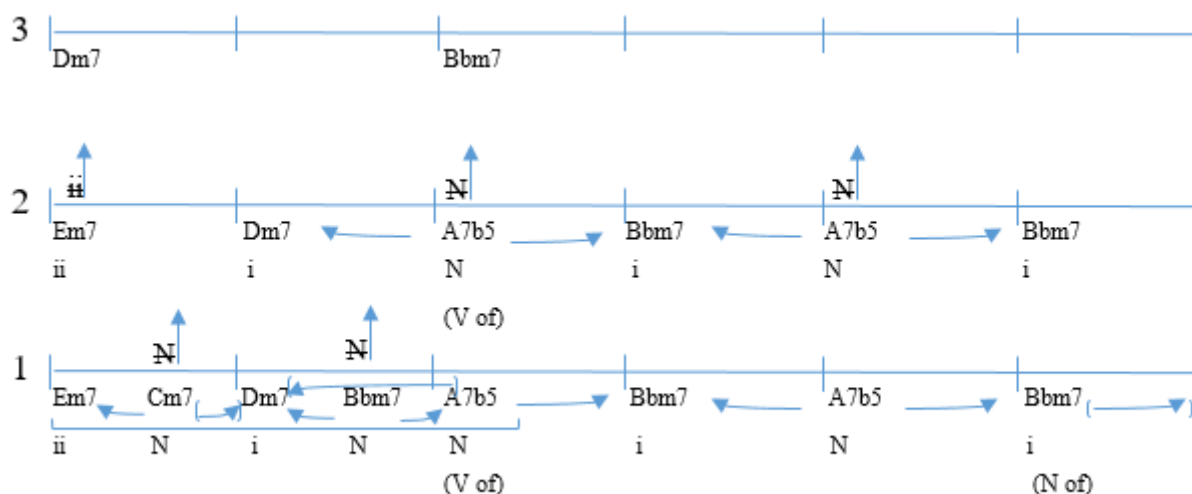


Figure 4 "Speak No Evil," Layered analytical graph, bars 9-14

In figure 4 bars 9-14 are represented in a layered analytical graph. Bars 9 and 10 involve a sequence of chords descending by a minor third and ascending by a whole step. The first chord of each bar carries the most weight as they are emphasised by their placement and duration (the Em7 and Dm7 are played long on the original recording whereas the Cm7 and Bbm7 are played softer and shorter). If the Cm7 and Bbm7 are considered non-functional neighbour chords to both the chords preceding and following them, they are then removed from the foreground to the middle-ground leaving the Em7 and Dm7. Since Em7 is the ii chord in D minor, these two bars are centred around the tonicized Dm7. In bar 11 the A7b5 begins another brief vamp-like passage using non-functional neighbour chords. In these bars the harmony alternates between the tense A7b5 and the relatively stable Bbm7 chord. The A7b5 also serves to link these bars with the preceding two by also being the V chord of the D minor key centre, so it is the pivot chord between these two key areas. From the middle-ground to the background the A7b5 chords are filtered out as they lead to Bbm7, leaving Bbm7 to be revealed as the tonic chord of the four bars.

The bridge of "Speak No Evil" is not analysed here by layered analytical graph as it does not have a home key centre; it simply links the Bbm7 at the end of the previous A section to the Cm7 at the start of the next A section. This transition is achieved via a series of descending chords in

contrary motion with the ascending melody, and is an example of Shorter's use of unusual chord qualities. While the sequence seems to lead to Ebmaj in bar 7 of the bridge, the chord heard instead is the tense D/Eb, which avoids giving the Eb chord a feeling of resolution and allows it to act as another non-functional neighbour chord to the following Dbmaj7.

In summary, Shorter frequently uses non-functional neighbour chords in "Speak No Evil" to produce his unconventional chord progression. He uses the phrygian-mode progression im7-bIIImaj7 in particular, as well as other progressions that involve stepwise bass movement. Shorter also favours the use of unusual or non-functional chord structures.

"Fee Fi Fo Fum" – Wayne Shorter

Shorter's "Fee Fi Fo Fum" has a very bluesy flavour. Many of Shorter's seemingly unorthodox harmonic choices in this work can be explained due to their common blues usage. See Appendix B for the leadsheet from *Volume 33: Wayne Shorter* (Aebersold, 1985). The chord extensions of the Eb7, D7 and C7 chords shown on the leadsheet were removed in figure 5 for the sake of clarity.

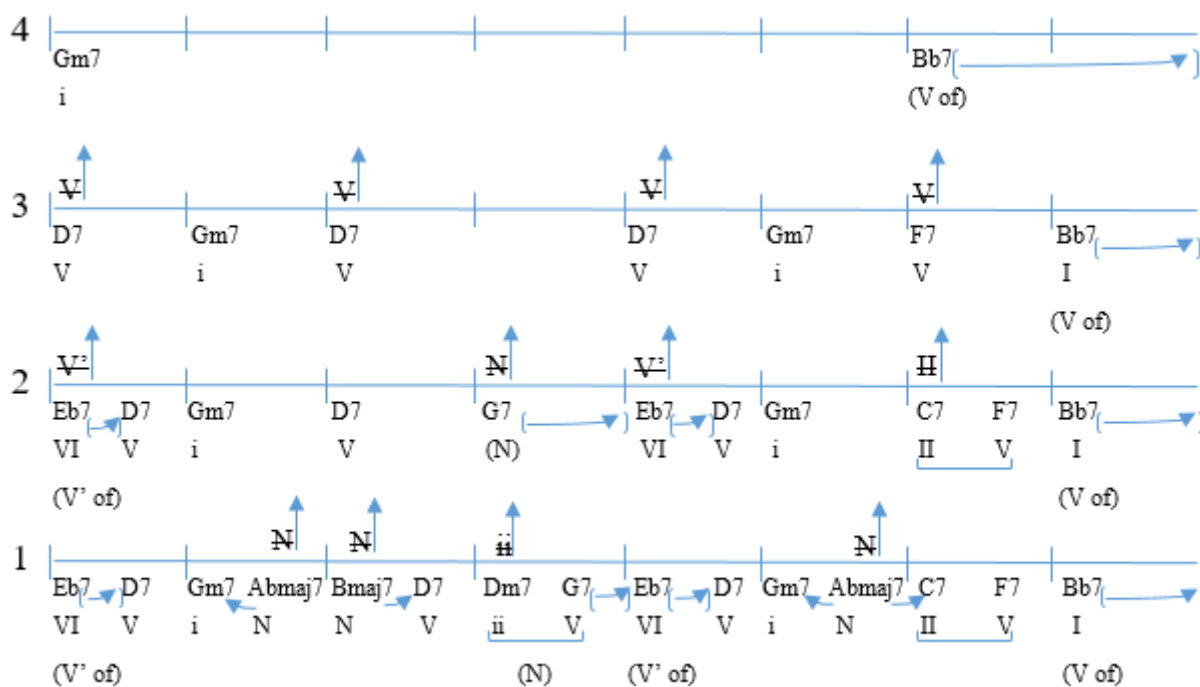


Figure 5 "Fee Fi Fo Fum," Layered analytical graph, bars 1-8

Figure 5 is a layered analytical graph of the first eight bars of the work. Opening on the bVI dominant chord of the tonic key is an unorthodox choice, but the progression bVI7-V7-im7 where bVI7 acts as a tritone substitute of iim7 is used in bars 9-11 of a standard minor blues form (see *Jazz Composition: Theory and Practice* (Pease, 2003, p. 115)). It is perhaps the placement of this progression in bars 1-2 and 5-6 of the A section that is unusual rather than the harmonic material, which is another example of Shorter's tendency to use commonplace compositional techniques in unconventional ways. In bars 2 and 3 at the foreground level, the interval of a fifth from Gm7 to D7 is prolonged by the bass line moving up a half-step and then splitting the remaining tritone interval between Ab and D equally into two leaps of a major third with the Bmaj7 chord. This dividing up of a large interval with non-functional neighbour chords moving in thirds is an uncommon technique. Another neighbour chord that is filtered out in the foreground level is the Abmaj7 chord in bar 6. This chord relates to the C7 it precedes as a non-functional neighbour, and it creates tension by extending the wait for the resolution chord.

The other chord that is removed from foreground to middle-ground is the Dm7 in bar 4. The Dm7 and G7 function as a ii-V pair which ordinarily would lead to a C chord but instead returns to Eb7 in bar 5. In this way a Cm7 chord is expected in bar 5, contributing to the bluesy sound of "Fee Fi Fo Fum" as the iv chord would usually be heard in bar 5 of a blues. The Eb7 chord works instead as a substitute as it shares three common tones with Cm7 (Eb, G and Bb), but there is no modulation here as the Eb7 chord leads back to G minor quickly via the bVI7-V7-i progression discussed above. Thus the Dm7-G7 unit is considered an interesting false modulation and removed in the middle-ground as it adds colour but is non-functional. From level 2 to level 3 of the graph the Eb7 substitute dominant chords are also removed and the C7 in bar 7 is also removed. C7 is the start of a cycle of dominant chords in fifths leading to the first bridge chord Eb7, but given the extra time spent on the Bb7 chord and the establishment of Bb as the key in the bridge, Bb7 is heard as a new I chord. C7 is therefore a II7 in the new key and is filtered out. Finally, in level 4 the V7 chords of D7 and F7 are removed to leave only the tonic Gm7 and new tonic Bb7 remaining in the background layer.

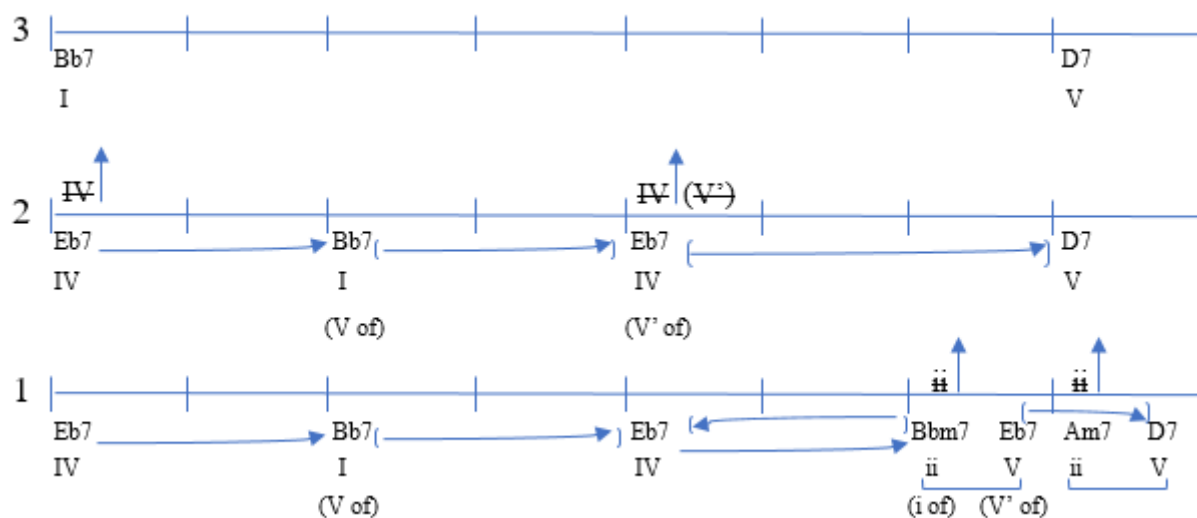


Figure 6 "Fee Fi Fo Fum," Layered analytical graph of the bridge

The harmony in the bridge of "Fee Fi Fo Fum" is represented above in figure 6. Here Shorter has borrowed more harmony from the standard blues form, this time using the IV-I (or subdominant-tonic) movement borrowed from the middle four bars of a traditional blues form (Pease, 2003, p. 113). The Eb7 gravitates towards the Bb7, and on the recording the melody instruments play the tonic in two octaves to conclude the first four bars of the bridge which further cements the key centre. On the second return to Bb after Eb7, Bbm7 is played beginning a turnaround to the key of Gm for the last A. From the foreground to the middle-ground the ii chords are reduced out leaving Eb7 acting as both the IV chord in Bb and a V' chord leading to the D7. Finally, the IV chords are reduced out in the background as they serve to suspend the resolution to the tonic Bb7.

The bassline of the final four bars descends in semitones: Eb7, D7#9, Dbmaj7, C7b9, Bmaj7. Ending on Bmaj7 is unorthodox, but if the "Fee Fi Fo Fum" is thought of in two keys, G minor for the A sections and Bb major (the relative major) for the bridge, then it would not be unusual to return to the key of Bb major at the end. The bIIImaj7 is a common substitute for the final Imaj7 chord in jazz, for example it is heard in Bill Evans' "Interplay" (Aebersold, 1999a, p. 7) and in Chick Corea's "Tones for Joan's Bones" (analysed below) so this Bmaj7 can be thought of as a substitute for returning to the key of Bb major. Shorter's use of dominant and major chords in the descending bass

line makes it non-functional, and therefore the Bmaj7 is heard as a sonority instead of a new tonic chord as it would if it were set up with a standard ii-V or iii-vi-ii-V progression.

The most notable techniques used in the harmony of “Fee Fi Fo Fum” are Shorter’s use of blues form in unusual ways, his use of neighbour chords to split large bass intervals including placing the chord between the ii and V in a ii-V progression, and his use of false modulation. Shorter also once again uses non-functional neighbour chords extensively.

“Tones for Joan’s Bones” – Chick Corea

In “Tones for Joan’s Bones” Corea’s harmonic approach exhibits some similar techniques to that of Shorter, see Appendix C for the leadsheet. A layered analytical graph of the first section of the work is shown below in figure 7. In bars 1-8 (and bars 25-31) of the melody Corea also uses non-functional neighbour chords, but writes these changes over a repeated D in the bass line for the first six bars. This is called pedal point and is when “a single note... is sustained or repeated, usually in the bass

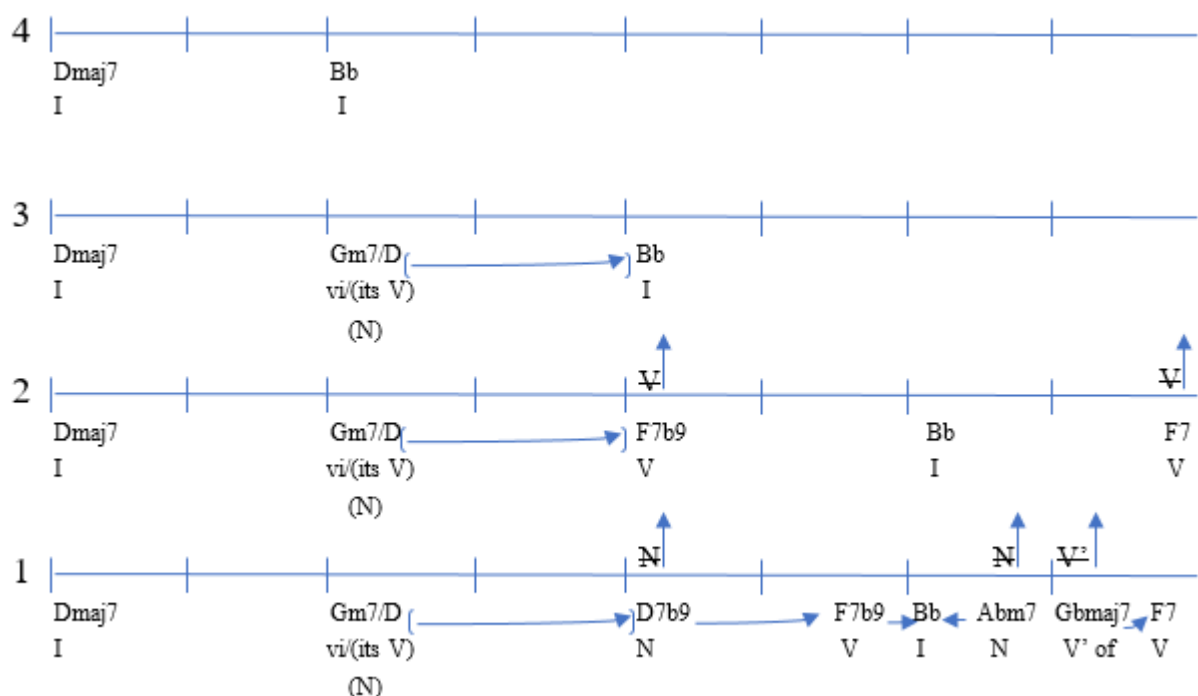


Figure 7 “Tones for Joan’s Bones,” Layered analytical graph, bars 1-8

voice” (Pease, 2003, p. 92).

The Gm7/D chord is not diatonically related to D major, but because the two chords are non-functional neighbours with the same D pedal played beneath and A and E melody notes played above, the abrupt key change is less jarring. From here the section gradually approaches Bb major. The D7b9 can be considered a substitute for the following F7b9, because dominant seven-flat-nine chords are made up of the bass note and an upper-structure diminished seven chord starting a major third above the bass note. D7b9 contains the diminished seven chord made up of F#, A, C, and Eb, while the upper-structure of F7b9 is A, C, Eb, and Gb. Thus the two chords contain the same enharmonic diminished seven chord and are essentially the same chord with a different bass note (Rawlins & Bahha, 2005, p. 106), so the D7b9 is removed in the middle-ground. The non-functional neighbours Abm7 and Gbmaj7 in bars 7 and 8 are also removed as they simply provide colour and bass line motion but resolve back to F7. The Gbmaj7 is interesting as it is an example of Corea using a major seven chord as a V' chord, abandoning the expected dominant chord structure of a V chord just as Shorter often does. From levels 2 to 3 the V chords are reduced out, but the neighbour Gm7/D remains. This chord belongs to the key of Bb as it is diatonically within the key, and could be spelled

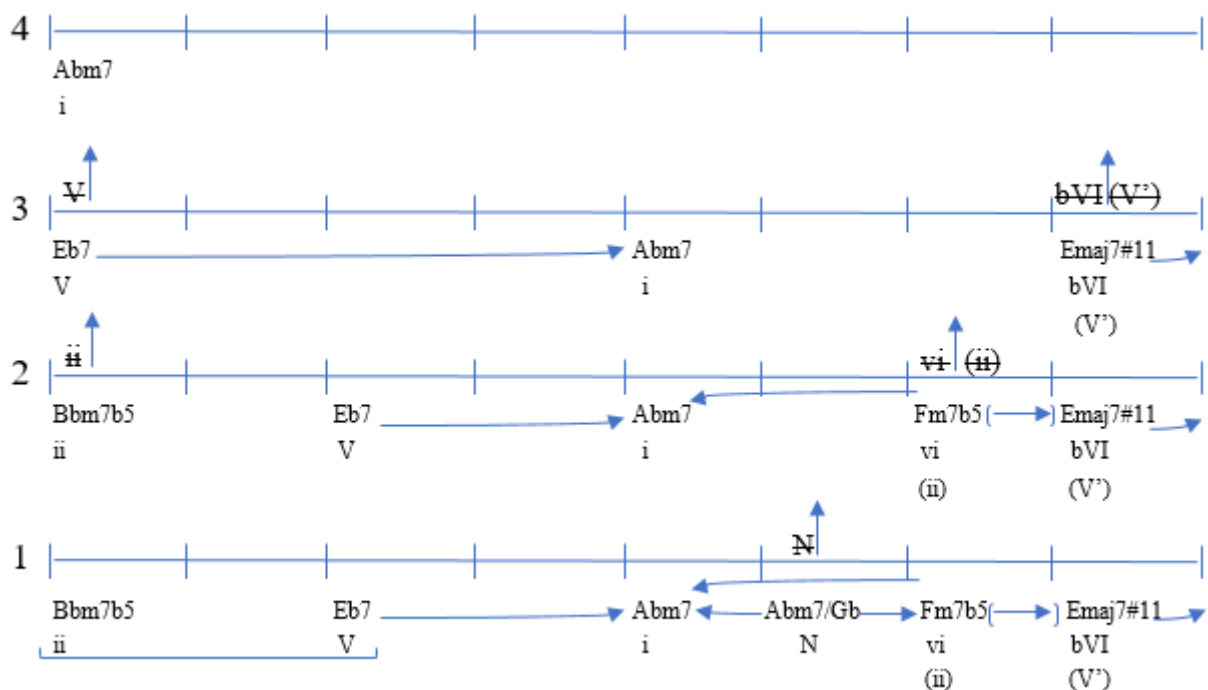


Figure 8 "Tones for Joan's Bones," Layered analytical graph, bars 9-16

as a Bb6/D. In other words, it is a first inversion tonic major chord so it is removed in the background.

Figure 8 is a representation of bars 9-16 of the form, which modulate to the key of Ab in which the turnaround beforehand in bars 7 and 8 leads to a Bbm7b5 which is the ii chord in the new key. The Abm7/Gb is first to be culled as it accomplishes a smoother bass line movement from Abm7 to Fm7b5 but is otherwise the same sound as Abm7 as it is just an inversion of the same chord. Next, the ii chords are cut in level 3 and finally the V chords in level 4 resulting in the key of Ab minor for the whole section. Even the Emaj7#11 chord which acts as a V' chord to move the key to Eb in the next section is diatonically part of Ab aeolian mode. Given that the melody notes played above it are also from this scale, the key centre has not shifted until after this chord. This is another example of Corea using a major seven chord as a V'.

In bars 17-22 many parallel major seven chords are heard in succession. This type of progression does not lend itself to analysis by layered analytical graph as none of the chords relate functionally with any of the others. The fact that the time signature changes to compound duple time and the bass and drum parts are very sparse in this part of the composition add to the mysterious sound of the section, which contrasts strongly with the rest of the composition. The only portion of this section that sounds like it is in a key is the first four bars, because the first three chords are I-bIII-II which is the beginning of the common I-bIII-II-bII-I most notably heard in Bronislau Kaper's "On Green Dolphin Street" (Aebersold, 1984, p. 1). The progression from "Tones for Joan's Bones" is I-bIII-II-IV-VI-I, and since it does eventually reach the I chord again it could be conceived as an extended version of the progression from Kaper's work. Given that there is no bII-I to finish the progression, and the I chord is instead approached by three large leaps from the II of a minor third, major third and minor third respectively, the Ebmaj7 no longer sounds like a resolved I chord by bar 22. Perhaps this use of parallel major seven chords in thirds is a useful way of creating tonal ambiguity in a section of music. The melody includes all notes from the Eb major scale apart from one A natural which could be deemed a lydian inflection, so it is possible Corea initially wrote this

section in Eb major and then chose to harmonise it with non-functional major seven chords to escape the sense of strong Eb tonic. The Ebmaj7 is then followed by the tense non-functional neighbour Dbmin(maj7) chord in bar 23 which again extends the feeling of atonality, before the A7b9 abruptly sets up the return to D major in bar 25. The Dbm(maj7), A7b9 and Dmaj7 all share C# and E

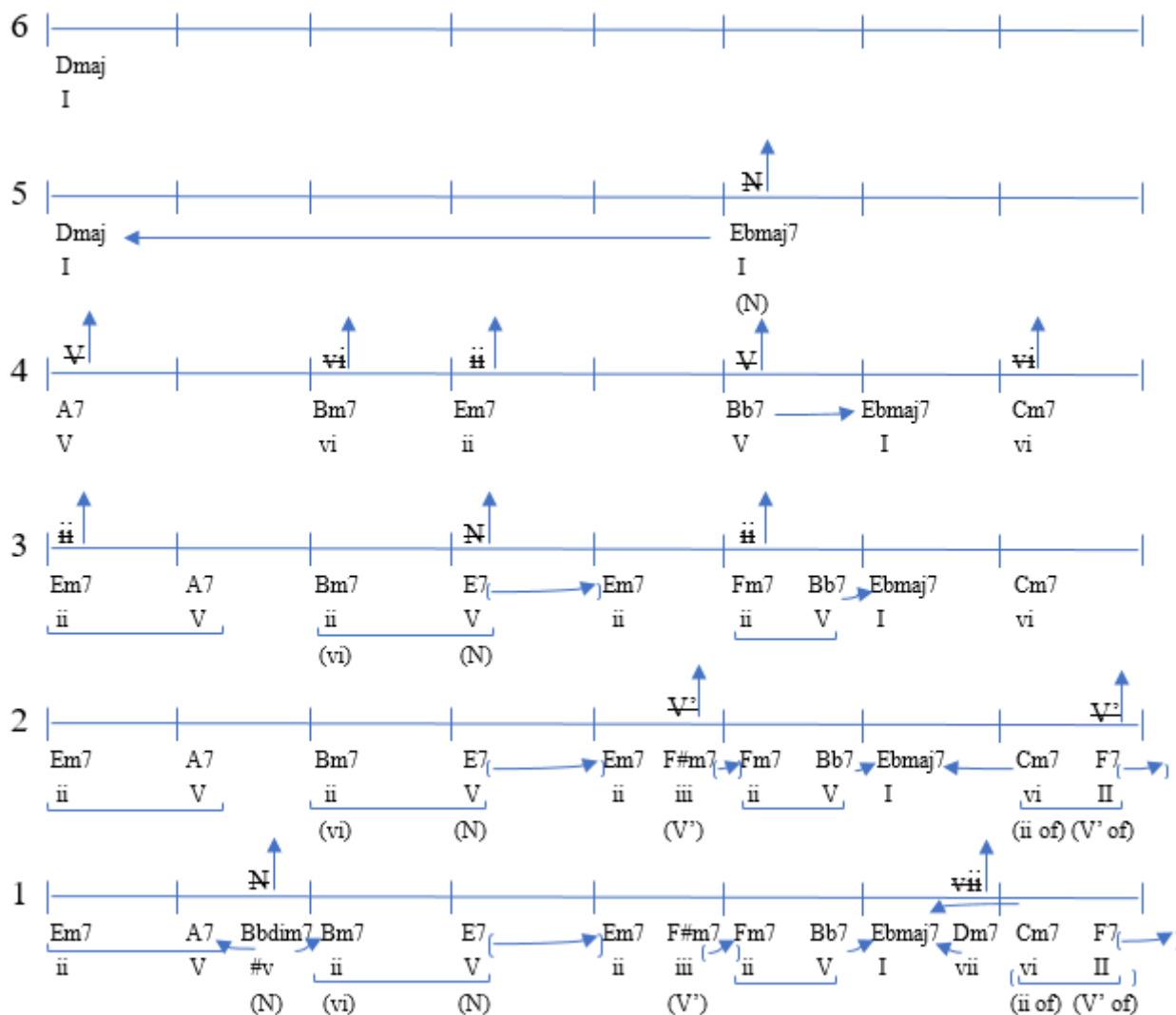


Figure 9 "Tones for Joan's Bones," Layered analytical graph, bars 33-40

common tones, which perhaps explains the choice of progression. The V-I in D major is a stark contrast to the ambiguous harmony of the previous eight bars, and re-introduces the melodic and harmonic material from the first six bars.

Figure 9 above shows that "Tones for Joan's Bones" returns to D major in bars 33-40. The Bbdim7 chord in bar 34 can be thought of as an A7b9 chord with Bb in the bass (since A7b9 contains all the chord tones of Bbdim7), thus it prolongs the A7 chord before it and creates an ascending bass

line movement from the A7 to the Bm7 in bar 35. Since it serves as a linking neighbour chord, the Bbdim7 is reduced out in level 2. In bar 39, the Dm7 serves to link Ebmaj7 and Cm7 with a stepwise descending bass line, but is another passing chord so it is removed in level 2. The F#m7 in bar 37 is a continuation of Em7 in that both are chords built from notes in the D major scale. The F#m7 can also be considered a minor seven tritone substitute for the V chord of Fm7, which would be C7, or even just a non-functional neighbour chord to the Fm7. Either way the Fm7 is a linking chord and it is removed in middle-ground level 3.

The F7 in bar 40 serves as a link between the Cm7 in the same bar and the Em7 in bar 41 (see figure 10). Since it is just a pivot chord moving back from the Eb major key centre to D major, it is left out of level 3. In middle-ground level 4 the Em7 in bar 33 and the Fm7 in bar 38 are removed as they are both ii chords in ii-V progressions and can be simplified to just their respective V chords, A7 and Bb7. The E7 is reduced out here also because even though it is a V chord in the Bm7-E7 ii-V pair, it embellishes the following Em7 chord, so it can be considered an extension of the Em7. This progression of Bm7-E7-Em7 or vi-II-ii is a common one in jazz standards. Two examples are the end

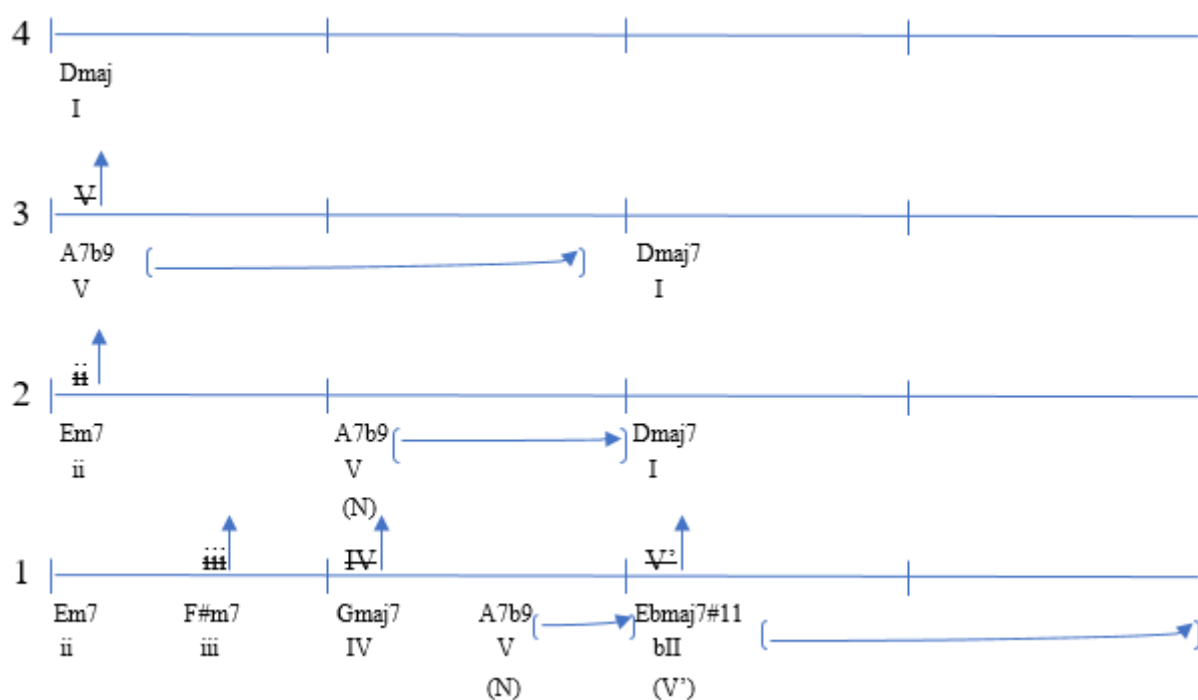


Figure 10 "Tones for Joan's Bones," Layered analytical graph, bars 41-44

of the bridge of “Cherokee” by Ray Noble (Aebersold, 1999b, p. 4), and the end of the first half of “It Could Happen To You” by Jimmy Van-Heusen (Aebersold, 1980, p. 9).

From level 4 of figure 9 many chords are reduced out as all the remaining chords in bars 33-37 are diatonic to D major, so this key centre is established for the whole passage, while bars 38-40 contain only chords diatonic to Eb major when simplified as seen in level 4. Level 5 is then left as D major from bars 33-37 and Eb major from bars 38-40. The Eb major section resolves to Em7 in bar 41 which is the beginning of another D major section, and the fact that it is so brief makes it more of a slide-slip providing harmonic motion rather than an actual modulation. Hence the background at level 6 is simplified to just D major.

The last four bars of the melody of “Tones for Joan’s Bones” are quite clearly in D major as shown in figure 10 above. From the foreground to the middle-ground the F#m7 and Gmaj7 chords are removed as they are diatonic to D major and serve to create an ascending bass line link between the ii and V chords of this home key. The Ebmaj7#11 is also simplified to D maj7, as it serves to colour the tonic in the melody and delay the resolution to Dmaj7 at the top of the form two bars later. This use of the bII as an ending chord substitute for the tonic is common in jazz, and Shorter uses it frequently (for example “Speak No Evil” or “Deluge”). From level 2 to level 3 the Em7 is reduced out as it is a ii chord, and finally the A7b9 chord is removed in level 4 to leave the background tonality of D major.

Corea uses non-functional neighbour chords and unconventional chord structures as V chords in a similar manner to Shorter in this work. His use of parallel major seven chords to create tonal ambiguity is noteworthy, as well as his use of brief modulations and both functional and non-functional descending bass line movement.

“Captain Marvel” – Chick Corea

“Captain Marvel” is a composition from Corea’s album *Light As A Feather* that he recorded with his group *Return to Forever*, the leadsheet is included in Appendix D.. It is in a latin style and is very

different to “Tones For Joan’s Bones,” which was recorded seven years earlier, but Corea has employed some similar harmonic techniques in both works. The two-bar melody pick-up is not included in the bar numbering of the composition.

Bars 1-6 of “Captain Marvel” are a sequence of minor chords moving down by an interval of a perfect fourth. This is unusual as often chords cycle in fifths but rarely fourths. As it is just a cycle it does not lend itself to the layered analytical graph method, but it does provide a way of getting from the E minor chord in bar 1 to the Bb minor chord in bar 7. The change from F#m to Bbm works even though the fourths cycle is broken by this change because the voice-leading is smooth. F#m has the chord tones F#, A and C while Bbm has chord tones Bb, Db and F. F# moves down a semitone to F while A moves up a semitone to Bb, and C# and Db are enharmonically the same resulting in either no movement or semitonal movement by all voices in the chords.

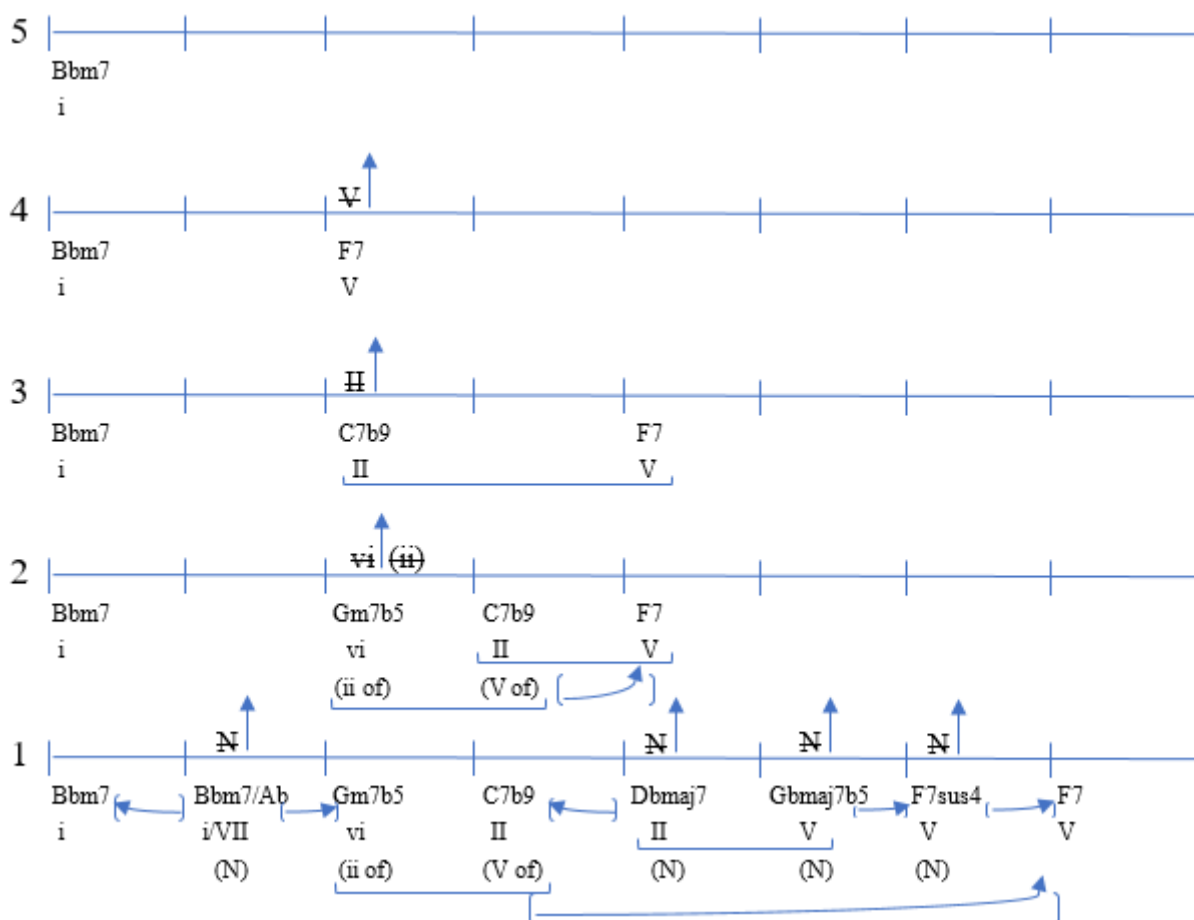


Figure 11 "Captain Marvel," Layered analytical graph, bars 7-14

Bars 7-14 of “Captain Marvel” are in the key of Bb minor. In figure 11 above the Bbm7/Ab chord in bar 8 is reduced out immediately as it is merely a continuation of the Bbm7 sound with an Ab bass note providing a link to the Gm7b5 chord via descending bass line. In the foreground the Dbmaj7 and Gbmaj7b5 chords suggest a change to Db major, but their position as neighbour chords to the surrounding chords indicates that they are there to prolong the arrival of the F7sus4, so they are removed in level 2. These chords are reminiscent of the usage of major neighbour chords to divide up a large interval in the analysis of “Fee Fi Fo Fum” above, but instead of dividing up the interval Corea introduces a side-slip II-V meaning he uses a “chromatic ii-V progression a half step above or below... which then moves back to the first key area” as defined in *Jazzology* (Rawlins & Bahha, 2005, p. 107). Corea’s use of a side-slip II-V is notable because he extends the II-V of C7b9-F7sus4 by inserting the Dbmaj7-Gbmaj7b5 II-V in between the existing II and V. Descending ii-V progressions are often seen in jazz compositions such as at the end of “Four” by Miles Davis and in the middle four bars of “Blues For Alice” by Charlie Parker (Aebersold, 1995, pp. 1,11), but placing a side-slip ii-V between the embellished ii and V chords as opposed to before them is quite unusual. The F7sus4 chord serves the same function as the F7 chord as a V chord and is considered an embellishment of the F7, so it is also filtered out at level 2. In level 3 the Gm7b5 is a vi chord or ii

chord in the key of F and is removed. The C7b9 chord is next to be removed as it functions as a II to the F7, and finally F7 is removed leaving the key of Bb minor shown as the over-arching key centre.

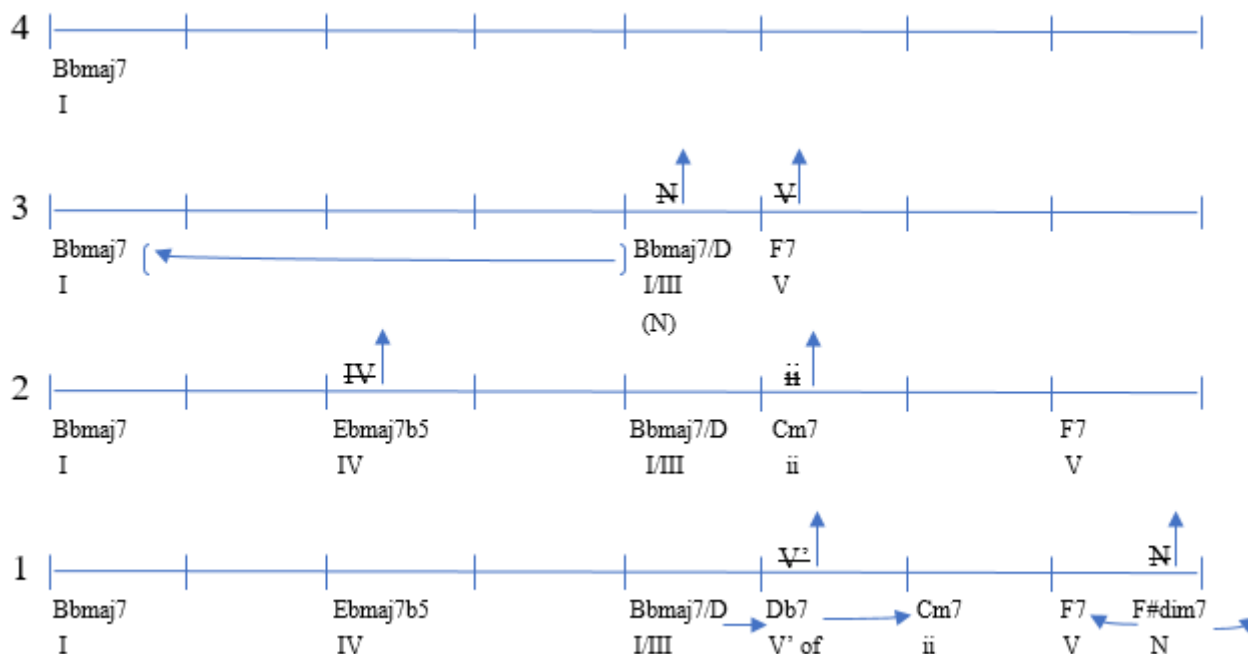


Figure 12 "Captain Marvel," Layered analytical graph, bars 15-22

In bars 15-22 there is a modulation to Bb major. Only two chords in the foreground (shown above in figure 12) are not diatonic to the home key: Db7 and F#dim7. The Db7 chord seems to be present to perpetuate the descending bass line that descends by semitones from Ebmaj7b5 in bar 17 to the Cm7 in bar 21. Since it also functions as a V' of the Cm7, it is removed in level 2 as it is a linking chord. The F#dim7 is also reduced out in level 2 as it is a neighbour chord and creates an ascending bass line from the F7 before it (which shares three common chord tones of A, C, and Eb) and the Cm7 in bar 23. In level 3 the Ebmaj7b5 is removed as it is a IV chord in the key of Bb and the b5 is A natural making it diatonically belong to Bb major as opposed to Eb major. The Cm7 is a ii chord so it is also removed. Finally in level 4 the Bbmaj7/D is considered a continuation of Bbmaj7 as the bass note is part of the descending bass line but the chord tones are of course those of Bbmaj7, while the V chord is removed also leaving Bb major the remaining key.

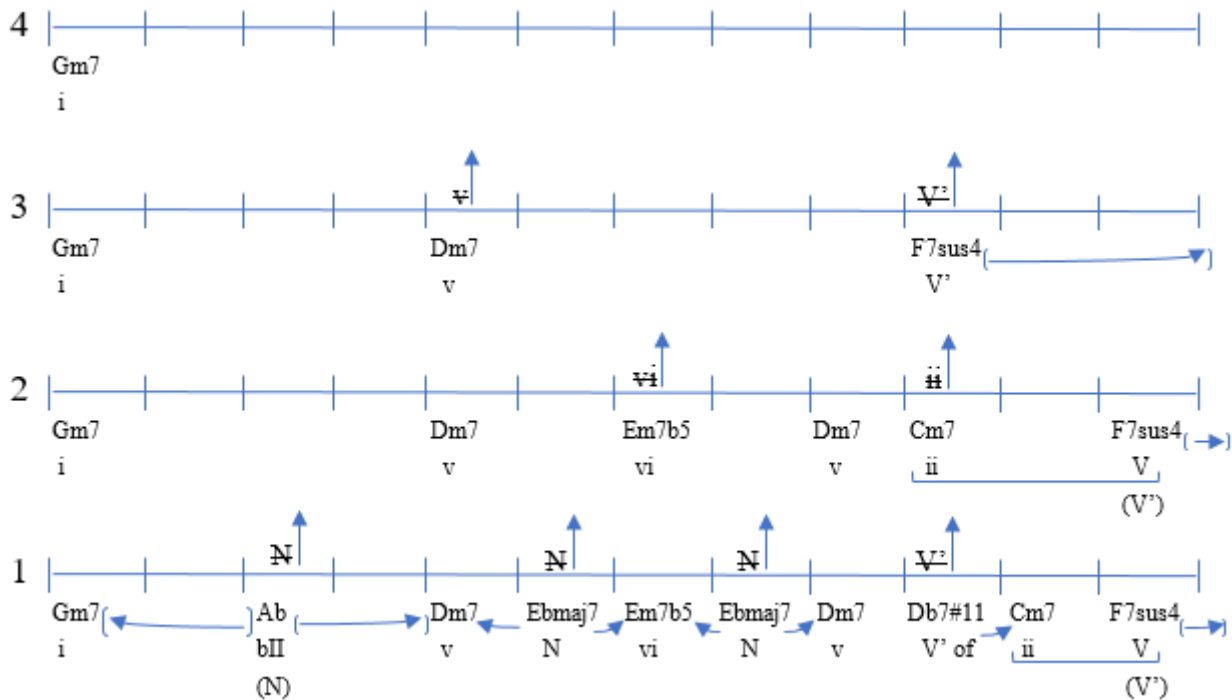


Figure 13 "Captain Marvel," Layered analytical graph, bars 23-34

Figure 13 is a layered analytical graph of bars 23-34. "Captain Marvel" is predominantly in the key of G minor, but bar 23 is the first time the work modulates there. The Ab chord in the foreground is reduced out in level 2 as it is a passing chord between i and v (Gm7 and Dm7). Interestingly the movement from im7 to bIImaj is the same phrygian-mode progression Shorter uses in "Speak No Evil" and "Deluge," while the transition from Ab to Dm7 echoes Corea's use of the same progression up a tone in bars 32-33 of "Tones For Joan's Bones" and the last chord change of the A sections of Shorter's "Yes or No" (Aebersold, 1985, pp. 21-22). While Ab and Dm7 relate non-functionally, the two chords share a C guide tone (the third of Ab and seventh of Dm7) and the remaining chord tones of Ab (Ab and Eb) step up a semitone and down a semitone respectively to equivalent chord tones of Dm7 (A and D). This smooth voice-leading seems to be the key to this unusual chord change. The Ebmaj7 chords in bars 28 and 30 are also neighbour chords, again Corea uses the phrygian-mode progression in the key of D this time, and the change from Ebmaj7 to Em7b5 is non-functional but the two chords share three common chord tones (G, Bb, and D) and only the bass note shifts by a semitone, so this is again smooth voice-leading. These Ebmaj7 chords are

reduced out in level 2, as is the Db7#11 in bar 32 as it is a V' chord to the following Cm7 chord in bar 33. In level 3, the Em7b5 chord is removed as the whole Dm7-Ebmaj7-Em7b5-Ebmaj7-Dm7 is a prolongation of the Dm7 v chord, and Cm7 in bar 33 is also removed as it is a ii chord. Finally, level 3 has been reduced to three chords: Gm7, Dm7 and F7sus4. The F7sus4 functions as a V' to the following Gm7 chord in bar 35. A ii-V progression followed by a i chord a whole step above the V is an example of a back-door cadence (Rawlins & Bahha, 2005, p. 94), and it is used in some jazz standards such as "Stella By Starlight" by Victor Young and "It Could Happen To You" by Jimmy Van-Heusen (Aebersold, 1980, pp. 1,9). The F7sus4 is reduced out at level 4 as it serves to resolve to G minor again. Finally, the Dm7 is removed as it is the v chord in the key of G minor.

The repeated section starting at bar 35 is a vamp between the chords Gm, F, and Eb. All three have chord tones belonging to G aeolian scale so this passage is clearly in G minor as the chords are all diatonic to G minor.

Bars 43-50 involve a transition from the tonic of G minor back to the Em chord that starts the cyclic progression at the beginning of the form. The whole section is over a G pedal until the rhythm section stop on F major at the end of bar 48. The chords seem to be a series of non-functional neighbour chords leading to the F major chord. Due to the G pedal, the section still sounds like it is in G minor. This gradual approach to F major is achieved through smooth voice-leading once again. Each chord tone moves by a tone or less to a chord tone in the next chord and there is an F common tone throughout the progression, aiding to the cohesiveness of this non-functional line.

The coda is another example of a non-functional chord progression with smooth voice-leading. The Ebmaj7 and Em7 share G and D as chord tones, and the F9sus4 chord also has a G in it while the rest of the chord tones move semitonally.

Corea's unusual use of the side-slip ii-V progression as well as his use of more non-functional neighbour chords over a pedal note in the bass part are perhaps the most unconventional harmonic traits of this composition.

Chapter 4: Composing with Layered Analytical Graphs

After completing the analysis above, I devised a diagrammatical strategy for composing harmonic progressions with elements from Shorter and Corea works. This method uses the layered analytical graphing process in reverse. The diagram used for each section of the work resembles a layered analytical graph, apart from some important differences. Firstly, the levels are labelled in reverse order as the process starts at the background layer with one chord/key centre and then expands to the foreground layer at the end. Secondly, this method only produces the harmonic progression of the composition; the melody, rhythm and timing of the chords are added later to complete the work. For this reason, there are no divisions in the diagram to indicate bar lines or the relative length that each chord sounds for.

The steps required to complete each diagram are outlined below. At level 1, a key centre is chosen. In level 2, at least one V or V' chord to the tonic chord is added (this can be diatonic or non-diatonic). These can be placed either before or after the tonic chord. Level 3 is when any other diatonic chords from the key centre such as ii or vi are added. Again, the order does not matter. In level 4, V or V' chords that relate to any of the existing chords are introduced. Finally, neighbour chords are added in level 5 to create smooth voice-leading and step-wise bass lines. Any devices observed in Shorter and Corea compositions can be incorporated in this level. Once the progression is completed, the diagram for the next section is created and so on. When all section diagrams are done, they can be tweaked to ensure the end of one section leads smoothly into the beginning of the next one. An example of this method is shown below.

Case Study: Original Composition “No-Show”

The harmony in the A section of “No-Show” was produced using figure 14 below.

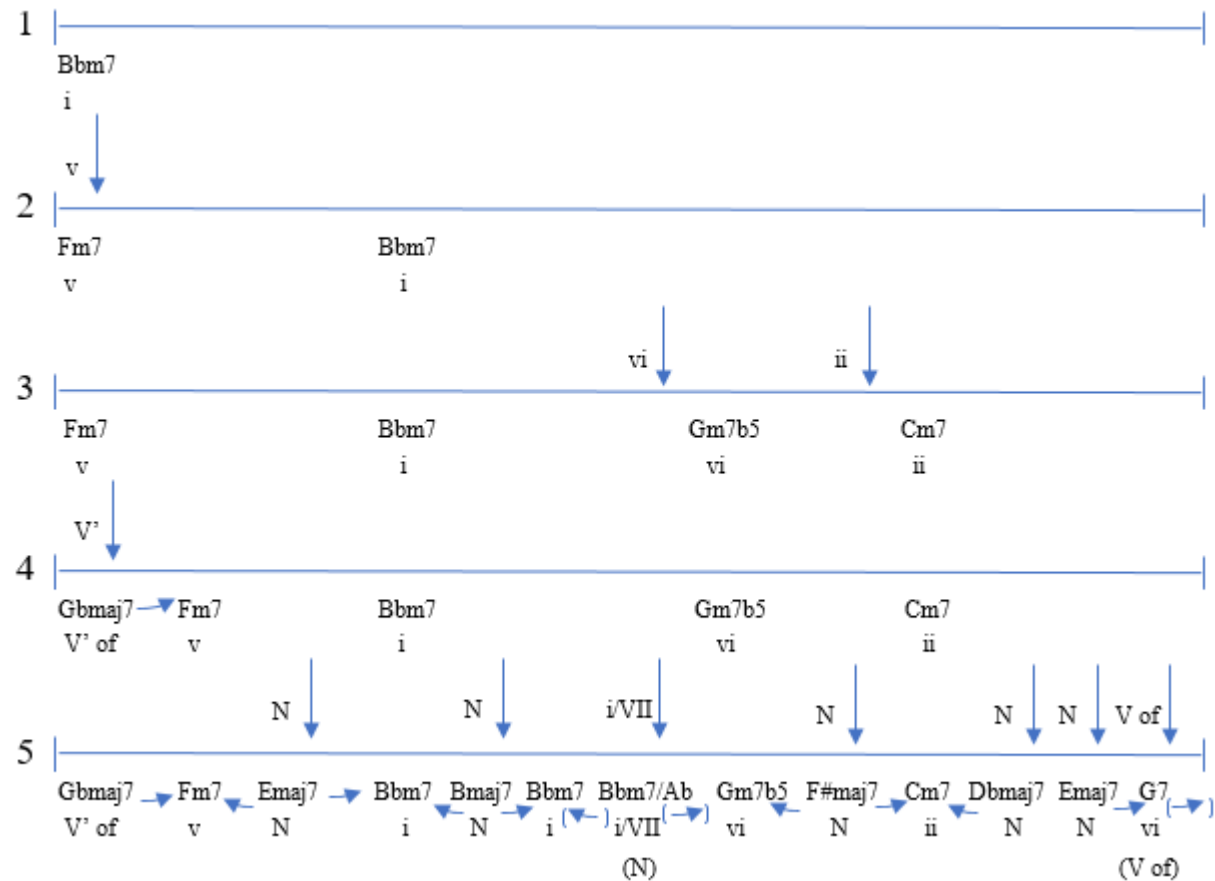


Figure 14 "No-Show" A section diagram

In level 1, Bb minor was chosen as the tonic key for this section. Level 2 involves adding a V or V' chord. I chose to use Fm7 (the v chord in the key) and place it in front of the Bbm7. In level 3 other diatonic chords were included, I chose Gm7b5 and Cm7 (vi and ii of Bb minor respectively) and placed them both after the Bbm7 chord. I added Gbmaj7 in level 4, which acts as a V' chord to the Fm7. Once at level 4, level 5 is produced by adding neighbour chords in a Shorter or Corea style. The Emaj7 was added to create the tritone bass movement between Emaj7 and Bbm7, while the same relationship is seen further on in the progression between the added F#maj7 and Cm7. This same progression is seen in different keys in Corea's "Tones for Joan's Bones" and "Captain Marvel," and also in Shorter's "Yes Or No." Bmaj7 was included to produce more harmonic motion, and Bbm7-Bmaj7 is the phrygian-mode progression noted in Shorter's "Speak No Evil" and "Deluge," and also

Corea's "Captain Marvel." To smoothly transition from Bbm7 to Gm7b5, a Bbm7/Ab chord was placed between them. This descending bass line progression of i-i/VII-vi achieves smooth voice-leading and Corea used it in both "Tones for Joan's Bones" and "Captain Marvel." Finally, the second diagram begins with Cmaj7, so the Dbmaj7, Emaj7 and G7 chords were added at the end to link Cm7 and Cmaj7. This progression is the same one analysed in Shorter's "Fee Fi Fo Fum," where the bass leap of a fifth from i to V is divided with two major seven neighbour chords.

In the final version of "No-Show" I made one adjustment, leaving out the F#maj7 chord. It is important to note at this point that this method generates harmonic progressions in the style of Shorter and Corea, but that tweaking the final progression to make it more musical is suggested. The method still provides most of the material and the end result is still a new work with harmonic language adopted from Shorter and Corea.

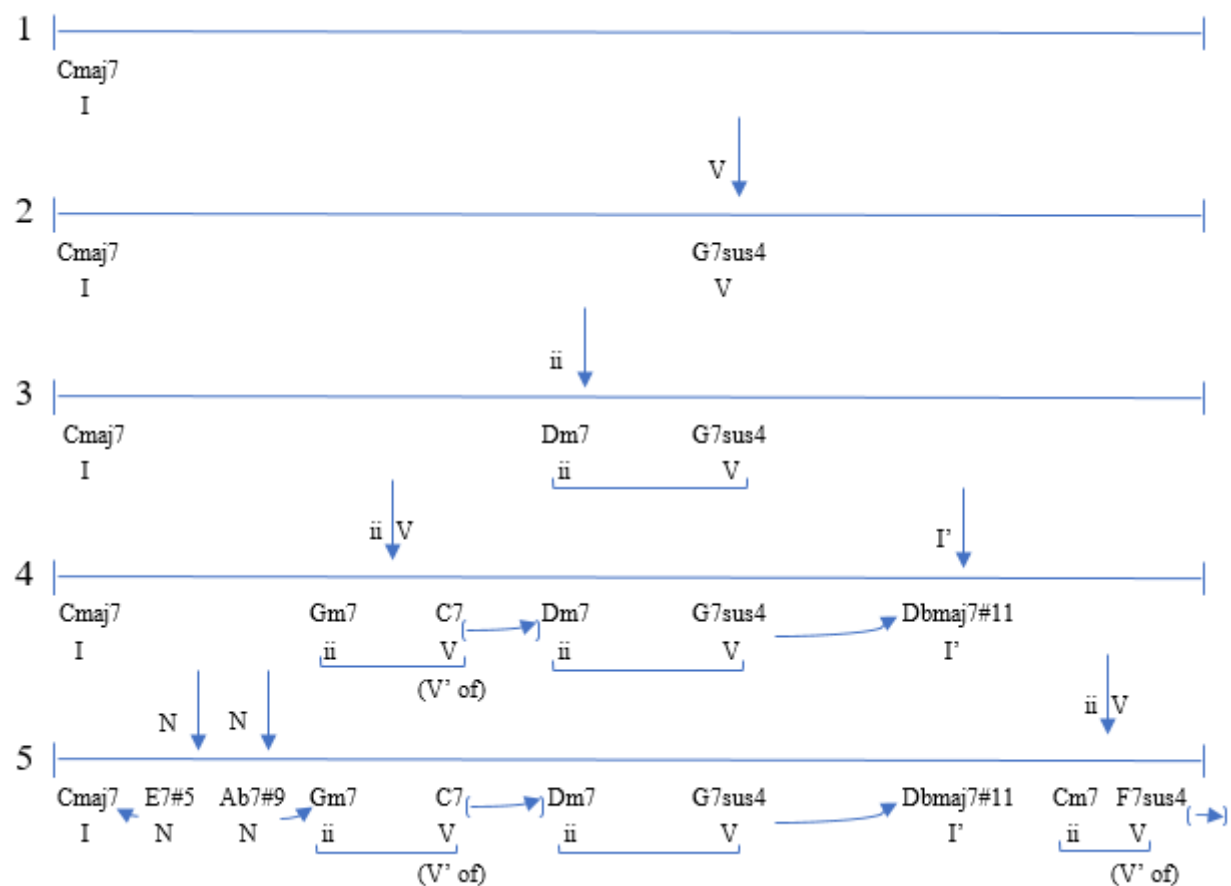


Figure 15 "No-Show" B section diagram

Figure 15 above depicts the harmony of the B section of “No-Show.” For this section I chose to start in C major. From there the V chord I chose in level 2 was arbitrarily G7sus4, while in level 3 I simply added the ii chord, Dm7. In level 4 I opted for a complete ii-V pair as opposed to just a V’ chord, using Gm7-C7 as a back-door ii-V pair leading to the Dm7 (a technique seen in “Captain Marvel” as well as in other standards as mentioned in my analysis of “Captain Marvel”). The other addition in level 4 was a I’ (a chord substituting for the I chord). bIIImaj7 was used here as a I’ just as Corea used an Ebmaj7#11 to end “Tones for Joan’s Bones” to substitute for the tonic Dmaj7. In level 5, two neighbour chords were again used to divide a leap of a fifth from Cmaj7 to Gm7; this time the bass line steps up two major thirds before side-slipping down a semitone to the Gm7. This is a variation on Shorter’s usage of neighbour chords to divide large bass intervals. The two neighbour chords were originally E7 and Ab7 but the extensions (#5 and #9 respectively) were included to reflect the melody notes I chose later. In “Captain Marvel” Corea resolves a minor ii-V progression (Gm7b5-C7b9) to Dbmaj7 which is up a semitone from the V chord, instead of the expected Fm7. This works as a back-door cadence because the chord tones of Dbmaj7 are Db, F, Ab and C, three of which are chord tones of Fm7. Thus in level 5 the ii-V pair of Cm7-F7sus4 was added on the end of the progression to act as a back-door ii-V leading to Gbmaj7 (once I had decided the next section would begin with the A section material, which starts on Gbmaj7), which is a semitone up from the V’ chord F7sus4.

In section C I chose to briefly revisit the melody and harmony from section A, so section C is the same as the first four bars of section A and thus the harmony has already been discussed. Figure 16 below is a diagram referring to the harmony in section D.

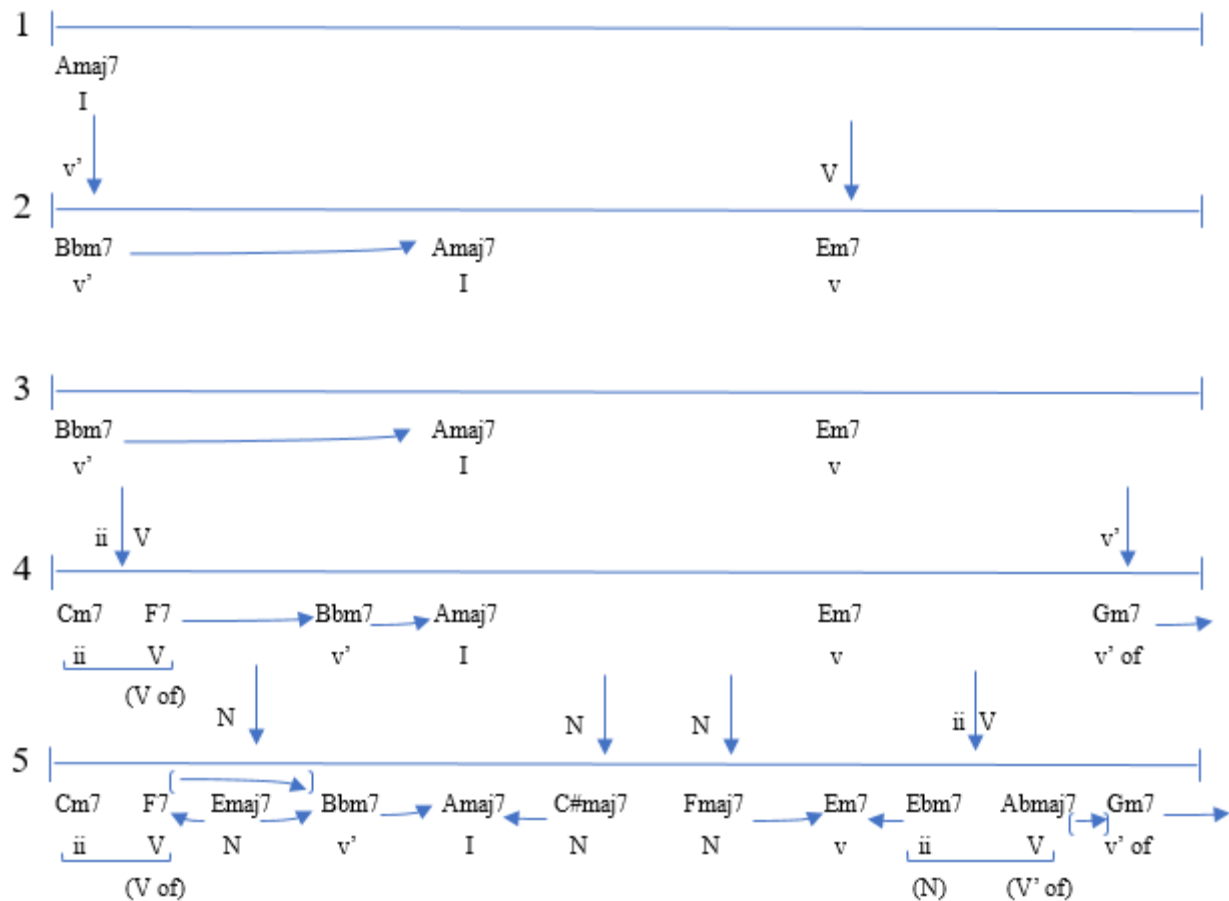


Figure 16 "No-Show" D section diagram

Level 1 of section D starts with the chosen key of A major for the section. I chose to add both a v' chord and a v chord in level 2, with one either side of the Amaj7. In level 3 I chose not to add any more chords diatonic to A major, so nothing changes between levels 2 and 3. A ii-V leading to Bbm7 (Cm7-F7) was added in level 4, as was a Gm7 v' chord leading to the Gbmaj7 (as I had decided this would be the last section and would need to resolve to the Gbmaj7 at the start of section A). In level 5 I again added an Emaj7 to separate the Fm7 and Bbm7 chords as I did in the A section, as well as using my ascending major third variation on Shorter's division of a fifth with neighbour chords again, this time using major seven chords to form the progression Amaj7-C#maj7-Fmaj7-Em7. Finally, a ii-V pair was added to link the Em7 and Gm7 chords, as Ebm7 is a neighbour chord to the Em7 and Abmaj7 is a major V' to the following Gm7.

Once the harmony of all sections was complete, I decided on the harmonic rhythm and duration of the chords and added a melody. Some extensions were added to the chords to accommodate the chosen melody. The leadsheet for “No-Show” is attached in Appendix E.

Chapter 5: Conclusion

The first aim of this research was to use layered analytical graphs to successfully reveal many techniques used by Wayne Shorter and Chick Corea in the composing of their unconventional harmonic progressions, and this has been achieved. While analysing more compositions would have been ideal as this may have uncovered more different harmonic methods, this was outside the scope of this dissertation due to time constraints. It is hoped that Patricia Julien's layered analytical graph method, demonstrated here, could be used in more research to analyse the works of other jazz composers.

Using Julien's layered analytical graph technique in reverse to compose was a challenge, but this research has produced a stepwise method for doing so. The method produced an original harmonic progression with elements of the harmonic writing of Shorter and Corea, which I was able to develop into a new composition by later adding a melody and rhythms. Thus the second aim to use the harmonic devices of the two composers in my own original composition was completed, and it is hoped that other composers will be able to use this method to apply the harmonic devices of other great composers to their own works. Again, with more time I would have liked to include more compositions and further demonstrate the effectiveness of this compositional method.

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Appendix A: "Speak No Evil" leadsheet



SIDE 2/TRACK 3
Play 4 Choruses
♩ = 134

Speak No Evil

Chord progression for the first system:

C- DbΔ+4 C- DbΔ+4

Chord progression for the second system:

C- DbΔ+4 C- DbΔ+4 Eb- E- C- D-

Chord progression for the third system:

D- Bb- A7+4 Bb- A7+4 1. Bb-

Chord progression for the fourth system:

2. Bb- A6 Ab7 G- Gb7+4 F- Bb7+5 EbΔ+9 DbΔ+4

SOLOS D.C. AL 2ND ENDING

Chord progression for the fifth system:

C- DbΔ+4 2 2 C-

Chord progression for the sixth system:

DbΔ+4 Eb- E- C- D- Bb- A7+ Bb- A7+ Bb-

Chord progression for the seventh system:

A6 Ab7 G- Gb7+11 F- Bb7+5 EbΔ+9

Chord progression for the eighth system:

DbΔ+4 C- DbΔ C- DbΔ C- DbΔ

Chord progression for the ninth system:

C- DbΔ+4 Eb- E- C- D- Bb- A7+5 Bb- A7+5 Bb-

ENDING: FADE OUT ON

Chord progression for the tenth system:

C- DbΔ+4

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Appendix B: "Fee Fi Fo Fum" leadsheet



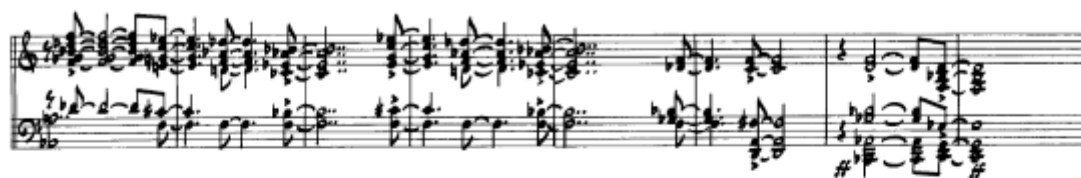
Fee-Fi-Fo-Fum

SIDE 2/TRACK 1

Play 5 Choruses

♩=112

[This piano intro was played on Wayne's original recording. It is not included in the play-a-long record. We show it here for your use if you play this song in a combo situation]



MELODY (BASS PLAYS WITH "TWO" FEEL ON 1st AND 3rd EIGHT-BARS DURING THE MELODY)

E♭7+4 D7(+9) G- A♭Δ BΔ D7 D- G7

E♭7+4 D7(+9) G- A♭Δ C7♭9 F7 B♭7

(BASS WALKS) *E♭7 B♭7*

E♭7 B♭- E♭7 A- D7

E♭7+4 D7(+9) G- A♭Δ BΔ D7 D- G7

E♭7+4 D7(+9) D♭Δ C7♭9 BΔ BΔ

SOLOS *E♭7+4 D7(+9) G- A♭Δ BΔ D7 D- G7 E♭7+4 D7(+9) G- A♭Δ C7 F7 B♭7* *fine*

(BASS WALKS DURING SOLOS)

E♭7 B♭7 E♭7 B♭- E♭7 A- D7

E♭7+4 D7(+9) G- A♭Δ BΔ D7 D- G7 E♭7+4 D7(+9) D♭Δ C7 BΔ BΔ *fine*

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Appendix C: “Tones for Jones Bones” leadsheet

Tones for Joan's Bones

Intro
Slow swing

Chick Corea
Transcribed by Samuel Hadlow

Em⁷ Em⁷(b5) Eb⁷

Medium swing

1 Dmaj⁷ Gm⁷/D 3

5 D⁷(b9) F⁷(b9) Bb Abm⁷ Gbmaj⁷ F⁷ 3

9 Bbm⁷(b5) Eb⁷

13 Abm⁷ Abm⁷/Gb Fm⁷(b5) Emaj⁷(#11) 3

17 Ebmaj⁷ Gbmaj⁷ Fmaj⁷ Abmaj⁷

21 Cmaj⁷ Ebmaj⁷ Dbm⁷ A⁷(b9)

25 Dmaj⁷ Gm⁷/D 3

29 D⁷(b9) F⁷(b9) Bbmaj⁷ 3

33 Em⁷ A⁷ Bb^{o7} Bm⁷ E⁷

37 Em⁷ F[♯]m⁷ Fm⁷ B[♭]⁷ E[♭]maj⁷ Dm⁷ Cm⁷ F⁷

41 Em⁷ F[♯]m⁷ Gmaj⁷ A⁷(b⁹) E[♭]maj⁷([♯]10)

Appendix D: “Captain Marvel” leadsheet

Captain Marvel

Chick Corea
Transcribed by Samuel Hadlow

Samba
♩ = 116

1 8 Em Bm F#m

7 Bbm Bbm/Ab Gm7(b5) C7(b9)

11 Dbmaj7 Gbmaj7(b5) F7(sus4) F7

15 Bbmaj7 Ebmaj7(b5)

19 Bbmaj7/D Db7 Cm7 F7 F#o7

23 Gm Ab

27 Dm7 Ebmaj7 Em7(b5) Ebmaj7

31 Dm7 Db7(#11) Cm7 F7(sus4)

35 Gm F Eb F Gm **To Coda** 1. Eb F 2. Eb F

40 Gm Fm(maj7)/G

44 Dm7/G Fmaj7 D.S. al Coda

48 Ebmaj7 Em F9(sus4)

52 N.C. F Gm

Appendix E: “No-Show” leadsheet

No-Show

S. Hadlow

A **Swing**
♩ = 170

1 2 3 4

$G\flat maj13$ $Fm7$ $Emaj13$ $B\flat m11$ $Bmaj7$

5

5 6 7 8

$B\flat m7$ $B\flat m9/A\flat$ $Gm7(b5)$ $Cm7$ $D\flat maj9$ $Emaj7$ $G7(sus4)$ $Cmaj7$

B

9 10 11 12

$Cmaj7$ $E7(\sharp 5)$ $A\flat 7(\sharp 9)$ $Gm7$ $C9$ $Dm11$ $G9(sus4)$

13 **Pedal**

13 14

$D\flat maj7(\sharp 11)$ $Cm7$ $F9(sus4)$

17 **C** **Swing**

17 18 19 20

$G\flat maj13$ $Fm7$ $Emaj13$ $B\flat m11$ $Bmaj7$

21 **D**

Chords: Cm¹¹ F⁷(#11) Emaj¹³ Bbm¹³ Amaj⁷ Dbmaj⁷ Fmaj⁷ Em⁷

25

Chords: Ebm¹³ Abmaj⁷ Gm⁷