

**Identification and analysis of Wes Montgomery's solo
phrases used in 'West Coast Blues'**

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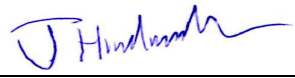
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Declaration

I, Joshua Hindmarsh hereby declare that this submission is my own work and that it contains no material previously published or written by another person except for the co-authored publication submitted and where acknowledged in the text. This thesis contains no material that has been accepted for the award of a higher degree.

Signed:



Date: 4/4/2016

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Abstract

The thesis investigates Wes Montgomery's improvisational style, with the aim of uncovering the inner workings of Montgomery's improvisational process, specifically his sequencing and placement of musical elements on a phrase by phrase basis. The material chosen for this project is Montgomery's composition '*West Coast Blues*', a tune that employs 3/4 meter and a variety of chordal backgrounds and moving key centers, and which is historically regarded as a breakthrough recording for modern jazz guitar.

The thesis reports on an analysis of Montgomery's 4 single note choruses of '*West Coast Blues*', covering the three categories of Harmonic Elements, Melody, and Rhythmic Diversions. The solo is transcribed from the recording and divided into phrases, which are then examined for harmonic elements, element sequences and structural or form devices. Harmonic elements are identified into chordal and scalar categories, and Montgomery's rhythmic elements are identified and catalogued. Melodic investigation analyses each phrase according to three categories and these are compared throughout the solo. Montgomery's use of rhythmic diversions, or instances when the predominant eighth note subdivision is not in effect, are identified and cataloged. Finally structural devices such as phrase length are examined, whereby phrases are compared to the harmonic background for beat placement.

This thesis illuminates Montgomery's element sequencing, his preferred combinations of elements, and the length and placement of these elements relative to the harmonic background. It gives an insight into Montgomery's improvisational process and his incredibly sophisticated juxtaposition of musical ideas, harmonic, melodic and rhythmic, and puts forth strategies by which this process may be developed into a jazz pedagogy program.

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1. Introduction

Wes Montgomery is one of the most revered figures in jazz, renowned for his brilliant improvisations and individual crystalline tone. He has been the subject of many jazz and guitar magazine articles, and research has been conducted on his style. His playing has been scrutinized and analysed, and explained in articles such as "10 things you gotta do to play like Wes Montgomery" (Gresse, 2008). However, while this approach reveals the elements of Montgomery's style – the "pieces of the puzzle" – it does not show how the puzzle is assembled, nor does it give an insight into the different ways this could occur. The elements Wes Montgomery used to construct his phrases and how they are sequenced in an effective way is therefore an important topic that needs to be investigated.

This research aims to highlight the musical elements and examine Montgomery's methods for assembling them into phrases. This is important because, like spoken word, improvised musical soloing is created on a phrase by phrase basis. If the goal is to understand improvisation, then it is not enough to know the component parts as presented in a piecemeal fashion, such as can be found in the various trade music magazines and books. Additionally, while a complete solo transcription can show a whole improvised solo, it does little to explain the inherent parts and how these weave together into a complete holistic work. How these phrases fit into the context of the musical piece is also vital, and the exact placement of Montgomery's phrasing relative to the harmonic background is examined in this research with the aim of finding effective starting and ending points to phrases. This research therefore aims to enable a more in-depth understanding and appreciation of Montgomery's unique style.

The primary musical characteristic of jazz is improvisation (Briody, 2010, p. 1). For Montgomery, even though trumpet and saxophone were a more natural fit to jazz music (De

Stefano, 2001, p. 221), the new horn-like approach to electric guitar playing was the sound he was searching for. The unique timbre of the guitar, the faster decaying sound compared to horns, the acceptance of the guitar in rhythm sections but the resistance to the guitar as a solo instrument, all created excitement and challenges for Montgomery (De Stefano, 2001, p. 222). He accepted and overcame these limitations and created long, fluid solos with dramatic effectiveness and intensity (De Stefano, 2001, p. 89).

Montgomery's melodic improvisational style was developed through his distinctive melodic techniques, improvisational material and idiosyncratic devices. He used a three tiered approach that developed the tension and release climaxes of his solos. The first tier, the single line melodic idea, was played with moderate dynamics. This was followed by octaves (tier 2) and culminated in block chords (tier 3) (Ingram, 2008, p. 21). Montgomery used fast passages of single note melodies, arpeggios and bebop lines with great fluency. He often connected several positions up and down the fret board in a single phrase. His uncommon thumb technique, used in all three tiers, consisted of mostly down strokes and provided Montgomery with a unique instrumental timbre (De Stefano, 1995, p. 108) and sonority (De Stefano, 1995, p. 103), which is a description of a musician's individual sound or tone, achieved on the guitar by means of choices such as plucking technique, left hand articulation, string and amplifier settings, and type of instrument used.

In Montgomery's octave approach he played dyads articulated like a 2 note chord. The string pairs used were 6-4, 5-3, 4-2 and 3-1 while the string in the middle was muted. Montgomery also applied muting with his left hand fingers to deaden idle strings during octaves and chordal playing (Marshall, 2001, p. 7). These octaves, when played on an electric guitar, fattened texture and dynamics (Ingram, 2008, p. 47). This octave playing, culminating into chordal passages, defined Montgomery's playing. Montgomery's chordal playing style was

one of the most compelling aspects of his solos (Marshall, 2001, p. 8). This chordal approach reharmonized and rendered the melody as well as adding uncommon and peculiar voicings to the harmonic framework. Montgomery would harmonize each melody note with a different chord (Lewis, 2007, p. 8), always aware of his location in the harmonic scheme, and thus he was able to increase dynamics, textual density, rhythmic density and sound mass within his solos (De Stefano, 2001, p. 90).

Montgomery utilized the lower and middle register of the guitar into a warm, deep and mellow sound (De Stefano, 1995, p. 236). His use of call and response (a blues technique) is heard in much of his music. The blues also gave Montgomery the most important aspect of his playing: 'feelings' (Nunes, 2010, p. 46). His highly individualized and personal musical system produced clearly defined emotional and melodic content (De Stefano, 1995, p. iv).

His distinctive use of superimpositions that generated diatonic and altered extensions over varying harmonic backgrounds testifies to this. His tonal colours were produced by major and minor arpeggiated structures that generated diatonic extensions. Altered extensions were produced through use of polychordalism, chord substitutions, tri-tone substitutions, diminished and augmented structures. Montgomery's melodic tension and continuity was achieved through the use of jazz techniques such as contrapuntal elaboration static harmony. Systematic and invariable superimpositions and other harmonic techniques were used by Montgomery to create multifarious tonal colours, shading, and harmonic tensions for his solos (De Stefano, 1995).

This research begins by examining Montgomery's improvisation on '*West Coast Blues*', identifying the phrases and elements that formed them. These phrases are then examined for their unique and common elements, and the sequence of the elements is identified. Harmonic, rhythmic and melodic elements are also identified, and structural form devices such as phrase

length and phrase stop/start points are examined. Harmonically, the elements are examined by two primary means: chordal and scalar. Rhythmic elements identified include the use of a primarily rhythmic subdivision, and the "rhythmic diversions" or ways which Montgomery created contrast from this. Melodic investigation analyses each phrase according to three categories and these are compared throughout. Structural devices such as phrase length are examined, and each phrase is compared to the harmonic background for beat placement of both start and finishing points.

This multifarious analysis illuminates Montgomery's element sequencing, his preferred combinations of elements, and the length and placement of these elements over the harmonic background. Although it is impossible to speculate on the actual thought process of Montgomery, this analysis serves as a document of his "musical" thoughts and the order in which they occurred. This study aims to work as an aid to jazz pedagogy, with the focus on the identification of elements and their sequencing providing a method to learning jazz improvisation. This "elements and their sequence" method could be applied by any student or jazz artist.

2. Literature Review

In order to investigate the elements Wes Montgomery used to construct his improvised phrases, and how these elements were sequenced, this research looked at previous academic publications such as De Stefano (1995), Salmon (2011), Van der Bliet (1987), Briody (2010), Nunes (2010), and Baumann (2012). In reviewing the existing literature for Montgomery's musical elements, three main areas were examined: identification of elements, sequence of elements, and length and context of phrases.

Much research has been devoted to the identifying the elements that form improvised musical phrases, and these elements have been well catalogued in the literature. The predominant method of identifying elements has been to categorize them into harmony, melody and rhythm. Of these, harmony has received the most examination, specifically how Montgomery superimposed alternate chords and scales over the underlying harmonic changes set forth by the rhythm section. These superimpositions or harmonic substitutions have been thoroughly documented and can be thought of as in keeping with today's jazz pedagogy.

2.1 Harmonic Elements

One of the earliest publishers on Montgomery, Van der Bliet (1987) in his masters thesis, *'Wes Montgomery: A Study of Coherence in Jazz'*, identified two classes of main ideas, one being ideas based on the tonic, and the other being ideas based on the fifth degree of the scale. These were strongly related to harmonies and dependent on tempo and chorus structure (Van Der Bliet, 1987, p. 102). De Stefano (1994), in his masters thesis *'The Blues in Wes Montgomery's Improvisational and Compositional Style'*, focused on the following

questions: which blues elements did Montgomery use to define his style; and how were the elements used in compositions and improvisations. De Stefano (1994, p. 1) found that the call and response technique was an integral and pervasive component of Montgomery's performance. Montgomery used chain progressions that moved downwards by half steps, secondary dominants and dominant preparation chords, significantly altered chords, extensive harmonic permutations and novel harmonies during his solo sections. De Stefano (1994, p. 9) showed that Montgomery's style is intensively personal and idiosyncratic while being deeply rooted in the blues.

Published one year later, De Stefano's (1995) doctoral dissertation, '*Wes Montgomery's Improvisational Style (1959-63): The Riverside Years*', detailed Montgomery's playing and is perhaps the most comprehensive academic paper on Wes Montgomery published to date. The purpose of De Stefano's investigation was to determine specific constructive elements, distinctive techniques and idiosyncratic traits that characterized Montgomery's playing. De Stefano (1995) found that Montgomery used various types of major and minor arpeggiated structures that yielded predominantly diatonic extension in his solos. He went on to explain that Montgomery frequently used ascending major sevenths and major ninth arpeggios with the major ninth presenting a larger tonal colour with its 5 note construction (De Stefano, 1995, p. 136). Stefano concluded Montgomery's use of tonal colour is both skillful and systematic and the formulaic improvisation or use of fragmentary musical ideas he employed were artfully concealed in the improvised solo, achieved by mixing formulaic fragments with other melodic materials which helped to maintain melodic coherence (De Stefano, 1995, p. 175).

De Stefano's (1995) findings were expanded on by Lewis (2007) in his article '*Wes Montgomery - Round Midnight: Expressions and Interpretations*', in which he examines Montgomery's treatment of the Theolonius Monk composition '*Round Midnight*'. Lewis found that the features of harmony employed by Montgomery included frequent use of polyharmony or upper structure harmony. The superimposition of one chord upon another is a strategic thinking method that enhances the richness of the harmony (Lewis, 2007, p. 13).

Montgomery's harmonic improvisational style was explored further when Salmon (2011) in his doctoral dissertation, '*Imitation, Assimilation, and Innovation: Charlie Christian's Influence on Wes Montgomery's Improvisational Style in His Early Recordings (1957-1960)*', identified and examined significant improvisational traits that Montgomery developed. Salmon (2011, p. 15) was interested in how Montgomery applied the following elements: scale choice, arpeggio usage, use of chromatic or non-diatonic pitches, formulas and enclosures and harmonic substitutions. He concluded that Montgomery used arpeggios to create tension and highlight upper harmonic extensions in long phrases of eight-note melodies (Salmon, 2011, p 187), as well as dominant and major bebop scales and chromatic tones.

The key findings of these authors were that Montgomery used primarily major and minor arpeggios superimposed by varying substitutions, most notable from the tonic and the fifth. Montgomery employed a variety of scale choices, including major, minor, Mixolydian and the blues scale. Many examples of tension were created by his superimpositions, where the superimposed structure while being consonant in itself, created dissonance by its placement against a seemingly unrelated chord.

2.2 Melodic Elements

Van Der Blik (1897) examined Montgomery's improvisational form including an investigation into motivic development (pp. 3-4), which was further explored by De Stefano (1995) when he looked at Montgomery's use of melodic paraphrasing, which involves embellishment or ornamentation of the melody. Montgomery added blues notes and blues tetrachords to the original melody, as well as diatonic and chromatic scalar material that was unrelated to the theme. Non-harmonic tones, formulaic patterns, passing tones, neighbour notes, and escape tones added to the theme, as well as non-thematic flourishes (De Stefano, 1995, p 166). Subsequent research by Lewis (2007) applied structural, melodic and harmonic analysis to identify the elements Montgomery used to perform '*Round Midnight*' and found that Montgomery's melodic embellishments consisted of vocal-sound descending slurs, bebop motives and paraphrasing leading to improvisation (Lewis, 2007, p. 11). He describes Montgomery's playing as demonstrating a

...very logical and effective use of this technique (3 tiers) to build excitement throughout the performance. The melody is initially stated simply - an unharmonized single line. We then get a taste of what's to come when Montgomery improvises over the bridge of the first chorus with octaves, returning to the single-line technique to close out the chorus. He then launches into an octave-voiced solo over the two A sections of the second chorus. The climax is reached in the bridge of the second chorus which he takes using his breathtaking block chord technique. The melody is then restated as a single line, to bring the listener "home" (Lewis, 2007, p 11).

Research by Baumann (2012) in his music analysis essay, '*Says You*', provided an analysis of one of Montgomery's solos, and the identification of elements including a chord/scale categorisation system adopted by this research, in which each phrase was analysed according to diatonic tone, tension tone and chromatic tone (Baumann, 2012. p 21). Both tension tones

and chromatic tones were examined by Salmon (2011) and he concluded the use of the sharp-eleventh became a focal point in several of Montgomery's melodies and compositions while also using the flat- and sharp-ninth and flat-thirteenth to create immense chromatic tension (Salmon, 2011, pp. 191-192).

2.3 Rhythmic Elements

De Stefano (1995) expanded this analysis of melody, harmony, and rhythm to include sound and form/growth to identify different elements in these five categories, and devotes an entire chapter to Montgomery's rhythmic devices. He found that Montgomery's frequent use of cross-rhythms is effective in creating contrast within the improvised line, momentarily disengaging the conventional and idiomatic eighth-note jazz pulse (De Stefano, 1995, p. 189). Montgomery's use of a predominant rhythmic subdivision was further explored by Baumann (2012), who found that Montgomery employed primarily eighth note bebop lines alternated with syncopated simple rhythmic figures and motifs (Baumann, 2012, p. 19). Briody (2010) echoes this when he found that rhythmic variations are very important in Montgomery's linear improvisational solos, as is his use of parallel ideas (p. 138).

2.4 Sequence of elements

Although much research exists identifying the musical elements used by Montgomery, significantly less literature examines the use of them beyond how they relate to the harmonic background. In particular, the various sequencing possibilities are seldom discussed, and the principles used to sequence these ideas are lacking from the literature. However, topics such as call and response, repetition, coherence and larger forms are discussed.

Van der Blik (1987, pp. 3-4) examined Montgomery's improvisational forms through motivic analysis and sought to establish coherence throughout Montgomery's improvisations, pinpointing identical melodic motifs or gestures with varying transpositions and differing contexts. He concluded that the relation of these motifs to their own context is essentially different in each case (Van der Blik 1987, pp. 102).

De Stefano (1994), after establishing which elements Montgomery used, examines how the elements are used in compositions and improvisations. De Stefano (1994, p. 1) found that the call and response technique was an integral and pervasive component of Montgomery's performance. Montgomery used chain progressions that moved downwards by half steps, secondary dominants and dominant preparation chords, significantly altered chords, extensive harmonic permutations and novel harmonies during his solo sections. De Stefano (1994, p. 9) showed that Montgomery's style is intensively personal and idiosyncratic while being deeply rooted in the blues. In his subsequent dissertation De Stefano (1995) analysed five musical elements: sound, harmony, melody, rhythm and form/growth, and his chapter on form/growth provides insight into Montgomery's sequencing methods. Baumann (2012) used structural, harmonic and melodic analysis to provide a reference for Montgomery's solo. When discussing the sequencing of elements, Baumann (2012, p. 19) summarised the melody as containing diatonic triadic arpeggios which occasionally used chromatic approach notes. Scalar passages referenced C major, C major bebop and F dominant bebop scales, and eighth note bebop lines alternated with syncopated simple rhythmic figures and motifs (Baumann, 2012, p. 19). Baumann's examination of Montgomery's solo form and structure or shape consisted of an analysis of 3 choruses, an 8 bar tag over the B section, and the final section. He found that in the first chorus Montgomery used note density to gradually build up the solo intensity over 3 sections, before bringing it back down in the last A section. The second

chorus was of medium level density, of which the final section had reduced density. The third chorus is where the peak of intensity was played (Baumann, 2012, p 21). Marshall (2001), in his instructional book '*Guitar Signature Licks: Best of Wes Montgomery*', gave a technical explanation when he explained that Montgomery's "note by note solos were linear while connecting several positions up and down the fret board in one phrase and many times on one string" (Marshall, 2001, p 6).

2.5 Length and context of phrases and structural or formal elements

There is limited research examining aspects of structure and form in Montgomery's improvised phrase construction and this became the focus for the investigation undertaken in this thesis. Van der Blik (1987, pp. 3-4) examined Montgomery's improvisational forms through the analysis of chorus phrase/schematics (the relationship between pitch, harmony, and rhythm). Van der Blik tabulated and categorized these devices and found that creative flow was achieved through motivic continuity. On examining Montgomery's phrases, De Stefano (1995) reports that Montgomery's improvisations consisted of single note sequences, octave playing, block chords and interactions between these elements through devices such as call and response (p. 230). De Stefano concludes that Montgomery used the process of motivic improvisation through sequences, retrogrades, transpositions and repetitions to improvise (p 168) and took advantage of the design of the guitar to play his motivic sequences, moving the original fingering up or down the fret board (horizontally) to new positions, whereby melodic patterns can be immediately transposed. Motivic development occurred when motifs were introduced with each new chorus or when a motif reappeared several times during a solo (De Stefano, 1995, p. 171). De Stefano states that mixing formulaic fragments with other melodic materials helped to maintain melodic coherence (p. 175). Direction or contour of improvised phrases was also explored by Briody (2010), who

reports that Montgomery's melodic lines changed direction often and presented a wave-like appearance (pp. 153-164). Montgomery used a substantial amount of linear melodic material, blues, motifs, variations in rhythms, angular and frequently introduced rapid and arpeggio based licks.

Baumann (2012) used structural analysis to provide a reference for Montgomery's solos. He portrayed Montgomery's style by identifying the structure of the solo and its dynamic profile, and he examined the construction of phrases. Even though Montgomery used various methods to construct phrases, the two main features are lyrical lines and motivic ideas. Motifs were usually one bar long and rhythmically displaced (Baumann, 2012, p. 51). Baumann (2012, p. 19) also states that Montgomery played using predominantly eighth note bebop lines alternated with syncopated simple rhythmic figures and motifs. Montgomery raised the intensity level of the solo from beginning to end (Baumann, 2012, p. 67). Montgomery used rhythmic devices that included phrase length, note values, starting and ending points, and the use of space and rests. Most phrase lengths were between 8 and 12 beats. Long phrases were used to connect choruses while short phrases, less than 4 beats, were used to create tension or to play a motif (Baumann, 2012, p. 57). He found that Montgomery's starting and ending points were important structural components of Montgomery solos. He varied the start and end points using all beats of the bar, including both down beats and upbeats. Two adjacent phrases were often started or ended at the same place. Space and rests were used to create interest, tension and release, and to provide breathing space. Montgomery played motivically with long notes, rests and syncopations and used these to change the pace of his playing (Baumann, 2012, pp. 58-60).

The origins of Montgomery's choice of solo vehicles or forms were examined by Nunes (2010) when he investigated the influence blues has had on Montgomery's compositions and improvisations. Nunes' (2010, p 34) harmonic analysis of Montgomery's '*West Coast Blues*' showed that the changes used were comparative to a traditional blues shape. The use of IV or V chord in the second bar, substitutions of ii-V progressions for a jazz feel, turn-arounds and changes in chord progressions during improvisations, all originated from a blues progression (Nunes, 2010, p 34).

2.6 Conclusion

Previous research primarily covers Montgomery's improvisations as they relate to the harmonic background, and are examined through categories such as melody, harmony and rhythm. Form/Growth has also been explored, in particular, how Montgomery preplanned his improvisations. The most obvious method was explained by De Stefano (1995) who found that Montgomery's improvisations consisted of single note sequences, octave playing, and block chords (p 230). Furthermore, the call and response technique was an integral and pervasive component of Montgomery's performance (De Stefano, 1994, p. 1). Earlier research by Van der Blik (1987) concluded that the unique features were either a product of context or of Montgomery's choices, and that Montgomery established coherence in a balanced composite of unity and variety (p. 105). Subsequent research by Salmon (2011) into Montgomery's improvisations focused on harmonic based material, and found that sequences, anticipation and delaying resolutions, harmonic generalization and 7-3 voice leading resolutions are all key jazz traditions assimilated into Montgomery's playing (p. 188).

While directional aspects like contour and shape were touched on, a thorough investigation into phrase construction including length, sequence of elements, and start and stop points of

improvised phrases was less prevalent in the literature. The existing literature tells us much about Montgomery's musical elements incorporated into his improvisations, and how these elements relate to the harmonic background laid down by the rhythm section. Numerous chord/scale and harmonic relationships have been covered and rhythmic devices are explained in the literature. However, while Baumann (2012) investigated phrase length, note values, starting and ending points and the use of space and rests, Montgomery's cohesive phrase construction has yet to be fully documented. Specifically, his method of combining or "gluing" his preferred musical elements together in a cohesive and musically tasteful way has yet to be investigated, and this thesis will address this gap.

3. Method

3.1 Musical Material

'West Coast Blues' is one of Montgomery's own blues composition that used 3/4 meter, and is a track from his fourth album entitled *The Incredible Jazz Guitar of Wes Montgomery*. Montgomery's recording of 'West Coast Blues' ranks alongside Django Rinehart's 'Nuages' and Charlie Christian's 'Solo Flight' (Ingram, 2008, pp. 23-24) as one of jazz's most historic guitar recordings within the Smithsonian Jazz Collection, sitting alongside such historical figures as Duke Ellington and Louis Armstrong.

Montgomery extended the traditional 12 bar blues form by changing it into a waltz meter and doubling the bars, which resulted in an additional 24 downbeats occurring in every chorus. Additionally Montgomery transformed the chord progression from 12 tradition blues using only tonic, subdominant and dominant chords to a sophisticated set of substitutions, revealing the influence of the jazz icons Charlie Parker and John Coltrane. A chordal analysis of the final 4 bars of 'West Coast Blues' shows similarities to John Coltrane's composition 'Giant Steps' while bars 9-16 are similar to Charlie Parker's blues composition 'Blues for Alice'.

WEST COAST BLUES SOLO CHANGES

The image displays three staves of musical notation for the solo changes in 'West Coast Blues'. Each staff begins with a treble clef and a key signature of two flats (B-flat and E-flat). The notation consists of a series of slanted lines representing chords, with specific chord symbols written above each measure. The first staff (measures 25-32) contains the following chords: Bb7, Ab7, Bb7, B-, and E7. The second staff (measures 33-40) contains: Eb7, Eb-, Ab7, D-, G7, Db-, and Gb7. The third staff (measures 41-48) contains: C-, F7, Bb7, Db7, Gb6, and F7. The notation ends with a double bar line and repeat dots.

Coltrane and Parker's influence on Montgomery is hardly surprising considering research reports that Montgomery had followed and absorbed the modal experiments of trumpeter

Miles Davis and had learnt the art of side-slipping, momentarily playing outside the chord changes, from saxophonist John Coltrane (De Stephano, 1995, p. 53).

3.2 Analytical Method

This research utilized an analytical method, built from previous researchers' work, to develop a 'critical tool' that could identify, analyze and demonstrate the sequencing of the note choices, elements and rhythmic diversions that Wes Montgomery used to develop his phrasing in '*West Coast Blues*'.

After a transcription was done of the single line portion of the solo, the solo was documented using computer notation software, and individual phrases were identified and catalogued.



Chord/Scale degrees were added to identify Montgomery's harmonic choices, in preparation for element identification and classification.



Phrase analysis documented the use and sequence of chordal or scalar elements for each phrase. Types of chordal or scalar elements provided a detailed analysis of how

Montgomery's phrases were constructed. Various arpeggios, R, 3, 5, b7 or 3, 5, b7, 9 were considered as a type of chordal element. Scales, such as Mixolydian, blues, pentatonic scales, leaps or tetrachords, were identified as scalar. This information determined how Montgomery used these techniques to develop his phrases.

The image shows a musical staff in 3/4 time with a key signature of two flats (Bb and Eb). The staff is divided into three phrases, each with a specific chord and analysis:

- Ch.1-Phr. 1:** Chord $Bb7$. Analysis: Bb Lower Tetrachord with tension tones. Notes: R, #9, 3, 11, #11, 5, 4, 3, R.
- Ch.1-Phr. 2:** Chord $Ab7$. Analysis: Chord Tone Resolution. Notes: 3, R, 3.
- Ch.1-Phr. 2:** Chord $Eb-7$. Analysis: Eb-7 Arpeggio mixed direction. Notes: 11, 9, b7, 5, 9, 11.
- Ch.1-Phr. 3:** Chord $Bb7$. Analysis: Mixolydian Scale Ascending. Notes: 6, b7, R, 2.

Melodic analysis of the phrases categorised note choice with a system developed by Baumann (2012) where notes contained within the musical phrases are catalogued into 3 categories of diatonic, tension and chromatic tones (Baumann, (2012, p. 21). For the purpose of this research, diatonic tones will be referred to as a chord tones.

The image shows a musical staff in 3/4 time with a key signature of two flats (Bb and Eb). The staff is divided into three phrases, each with a specific chord and analysis:

- Ch.1-Phr. 1:** Chord $Bb7$. Notes: R, #9, 3, 11, #11, 5, 11, 3, R, 3.
- Ch.1-Phr. 2:** Chord $Ab7$. Notes: 11, 9, b7, 5, 9, 11.
- Ch.1-Phr. 3:** Chord $Bb7$. Notes: 6, b7, R, 9.

Analysis key: X = chord tone, X = Tension Tone X = Chromatic tone

Rhythmic analysis showed Montgomery's primary rhythmic subdivision to be the use of eighth notes in his phrases. Using the concept identified by (Baumann, 2012, p. 19) where he described Montgomery's technique of using predominantly eighth-note bebop lines that are altered or temporarily diverted from the eighth note pattern through the use of a syncopated simple rhythmic figures or motifs, this research sought to further identify these 'rhythmic diversions' and Montgomery's use of them.

Example of eighth note flow and rhythmic diversion through musical rests.



Montgomery's use of phrase start beats and duration, break duration and rhythmic diversions demonstrated his use of diversity in applying rhythmic variations to his phrases. These rhythmic diversions were identified as quarter notes, tied notes, eighth note triplets, and sixteenth note triplets. Additionally the space between the phrases was considered and identified as break durations, phrase starting beat and duration of phrases. The combination of these analyses generates insight into the interactions of both elements and rhythmic diversions, and how Montgomery skilfully juxtaposed these into a musically cohesive phrase. Melody analysis gave an overview of the note choices which in turn uncovered his melodic procedures, specifically his use of diatonic tones used in a dialogue with both tension tones and chromatic tones.

4. Results

4.1 Introduction

This chapter details the results of the analysis, and begins by identifying Montgomery's harmonic elements within his improvised phrases. These elements are divided into categories, and their sequence examined for both repetition and variety. The chapter then examines Montgomery's phrases from a melodic perspective, with the aim of uncovering his preferred choices of notes as they relate to the moving key centers of the chordal progression. Finally, this chapter examines Montgomery's use of rhythmic diversions, which Montgomery employed in order to break up the predominantly eighth note rhythmic subdivision. These include quarter notes, tied notes, eighth note triplets, sixteenth note triplets, as well as break durations, phrase starting beat and duration of phrases. The placement of these rhythmic diversions within the phrase will be examined for sequence, repetition and variety.

4.2 Elements

The analysis of phrases identified jazz elements that fit into 2 major categories, chordal and scalar approaches. Chordal elements are those that contain chord tones of the particular harmonic or its extension tones and maintain a sequential chordal interval. For example, an element that is superimposed on a Cm7 chord could contain any of the following notes C, Eb, G, Bb, D, F or A and be considered a chordal approach as long as there is a chordal interval sequence. Scalar elements consist of tones that maintain scale tone sequential intervals. Tones from the Mixolydian and blues scale were commonly identified.

Montgomery's superimpositions are also identified, and divided into two categories. His chordal substitution method of applying an arpeggio beginning on a scale degree of the underlying chord, created a vertical chordal structure highlighting the tension tones and/or chromatic tones. The starting point of these superimpositions is catalogued and noted through the use of brackets i.e. (perfect 5), which describes a superimposition built from the fifth degree of the underlying chord or harmonic background. Montgomery's scalar superimpositions follow the same procedure, and are most commonly pentatonic, i.e. a pentatonic scale starting on the perfect 5th to highlight different tension tones against the underlying chord.

Phrase 1, chorus 1 consisted of 2 scalar and 1 chordal element (See Transcript 1 Chorus 1). The scalar elements were lower tetrachords, the first one ascending while the second descended. The third element is a chordal resolution chord tone. Phrase 2 consisted entirely of chordal arpeggios (perfect 5) which descended. Phrase 3, chorus 1 started with a scalar ascending Mixolydian scale, followed by an arpeggio and scalar colour tone. The phrase continued with a scalar bebop scale which descended followed by a diminished arpeggio. The phrase finished with a 2 note chordal descending element and a scalar bebop descending. Phrase 4 began with a scalar colour tone as a pick up into a chordal ascending arpeggio. A (perfect 5) descending arpeggio is followed by a scalar approach tone to the chordal (perfect 5) descending arpeggio. There is a 1/8 note triplet followed by repeated scalar colour tones. The phrase finished with a chordal descending 2 note arpeggio. Phrase 5 started with an ascending Dorian scale, followed by a chordal arpeggio ascending (major 2). This pivoted into an arpeggio maj6 which descended. These are made up of two 16th note to quarter note embellishments that resolved in a chordal 3rd. The longest phrase of the chorus, phrase 6 started with a scalar enclosure and used a descending minor Dorian scale. This is followed

by a descending arpeggio, (major 2), followed by a 2 note ascending Mixolydian scale. An eighth note triplet arpeggio preceded a 2 note 9th arpeggio. A chordal leap from b3 to 5 is followed by a sequence of chromatic colour tones. A mixed directional arpeggio and a 4-3 scalar resolution led into a chordal anticipation. Eighth note triplet, (perfect 5), ascending arpeggio is preceded with scalar repetition notes. The phrase concluded with a major triad descending arpeggio which incorporated a 4th degree note. Phrases within this chorus changed directions with each change of elements and at times changed direction within elements. A mix of chordal and scalar elements is used in each phrase. Phrase 1 and 2 are primarily scalar and chordal, respectively. All other phrase used both types of elements. Tetrachords, resolution notes, arpeggios of various types, Mixolydian scale, colour tones, bebop scale, pick up notes, Dorian scale, enclosures, chromatic tones and repetition are the elements that Montgomery used throughout the phrases of chorus 1.

Transcript 1 Chorus 1

Ch.1-Phr. 1 Ch.1-Phr. 2 Ch.1-Phr. 3

R #9 3 11 #11 5 4 3 R 3 11 9 b7 5 9 11 6 b7 R 2

Ch.1-Phr. 3 Ch.1-Phr. 4

3 4 5 6 b7 R R 5 b7 5 6 R R 7 b7 R 6 #11 b7 5 6 b6 5 R #9

Ch.1-Phr. 4 Ch.1-Phr. 5

3 5 b7R 9 9 5 11 9 b7 5 #11 5 3 R b7 6 11 6 11 7 5 5 R 2 b3 4

Ch.1-Phr. 5 Ch.1-Phr. 6

9 11 6 b7 6 5 3 4 3 2 5 9 11 3 b7 9 6 #11 5 6 b3 5 b7 9 11 b3 5

Ch.1-Phr. 6 Ch2-Phr.1

b9 6 b6 3 #9 b9 5 7 R 11 3 b7 b7 9 11 6 6 R 5 11 R 3 #11 #5 7

Phrase 1 of chorus 2 started with an eighth note pick up triplet which is an ascending Major pentatonic scale (See Transcript 2 Chorus 2). A mix direction, ascending to descending Mixolydian scale follows. The phrase ends with a (major 2) substitution arpeggio, descending. The second phrase starts with a pick up (perfect 5) that continued to an eighth note triplet arpeggio. This is followed by 4 sets of 16th notes to dotted quarter note chromatic approach tones. Phrase 3 and 4 are rhythmic the same as phrase 2. Phrase 3's eighth note triplet arpeggio started on the b7 and continued with chromatic approach tones. Phrase 4's eighth note triplet arpeggio b3 substitution followed by the 16th to dotted quarter note chromatic sequence. Phrase 5 started with a super Locrian scale descending eighth note triplet. A descending arpeggio follows. A repetitious flatted 7 to 5 arpeggio is followed by a scalar 4-b3 resolution. The phrase continues with a 2 note descending arpeggio into a Minor pentatonic descending scale. A descending bebop scale is followed by a double scalar enclosure followed by a chord tone and a resolution to end phrase 6. The ten bar long phrase 7 starts with a chord tone pick up followed by six chordal arpeggios. The first is an ascending arpeggio, a colour tone descending arpeggio, 3 more colour tones descending arpeggios followed by a colour tone ascending/ descending arpeggio. These are followed by a single scalar tone, a chord tone pick up and 4 more colour toned descending arpeggios. An ascending/descending arpeggio and a descending scalar bebop scale is followed by a descending arpeggio and a scalar colour tone to end the phrase. Montgomery used arpeggios, arpeggios connected to colour tones, 4-3 resolutions, enclosures and chromatic heavy scales such as the Bebop and super Locrian scales.

Transcript 2 Chorus 2

Ch.2 - Phr.1 Ch.2 - Phr.2

#11 #5 7 3 4 3 2 R b7 6 5 b6 11 9 5 b7 9 11 6 b7 #11 5 3 11 b9 9

Ch.2 - Phr.3 Ch.2 - Phr.4

6 b7 9 11 6 b7 #11 5 3 11 9 b3 9 b3 5 b7 9 b3 #11 5 3 11 #9 3

Ch.2 - Phr.5

3 #9 b9 R b7 5 b7 5 b7 5 11 b3 b7 5 13 5 11 9

Ch.2 - Phr.6 Ch.2 - Phr.7

5 4 3 b3 4 6 #11 5 9 11 3 9 5 b7 3 5 b7 9 11 13 9 b9 9 b7 5 b3

Ch.2 - Phr.7

5 #11 5 3 R 6 b7 6 b7 5 3 R 3 #9 3 R b6 5 11

Ch.2 - Phr.7 Ch.3 - Phr.1

9 R 3 5 7 5 R 7 b7 9 6 5 R 5 3 R 9 R b5 7

Phrase 1, chorus 3 started with a chordal pick up note into a mixed direction arpeggio that included a 6th note (See Transcript 3 Chorus 3). A scalar 4-3 resolution followed with an eighth note descending arpeggio and a two note arpeggio finished the phrase. Phrase 2 started with a (perfect 5) four note arpeggio. The first note served as a pick up to the eighth note triplet. Two additional eighth note arpeggio triplets resolved to a resolution note. A Mixolydian descending scale with an added b5 colour tone started phrase 3 and is followed by a second Mixolydian descending scale that resolved to a repeated 5th note. The phrase continues with a chordal descending arpeggio and a descending scalar enclosure. Three arpeggios finalized the phrase, i.e. a (major 2) arpeggio ascending, a descending arpeggio and a descending arpeggio. Phrase 4 the longest phrase of the solo of 27 beats started with ascending Minor pentatonic scale, then a chordal arpeggio followed by a chordal eighth note triplet. A Minor pentatonic scale is used again then an ascending Dorian scale to a descending scalar leap. A sequence of mixed direction Mixolydian sequence followed by a Dorian mixed direction sequence with another Mixolydian mixed direction scale occurred. These scales are followed by a 2 note arpeggio into an eighth note triplet. Two ascending chordal 16th notes are followed by a tied eighth note to quarter note sequence. The phrase ends with an ascending arpeggio. Phrase 5 starts with a chordal ascending arpeggio. A rest and two notes form an eighth note triplet followed by 2 scalar tones. A chordal (perfect 4) arpeggio led into a scalar sequence of three notes. The phrase ended with a two tone descending arpeggio with the last tone repeated. Phrase 6 starts with a (perfect 5) ascending arpeggio followed by a second mixed directional arpeggio. Note sequence from dominant bebop scale resolved to a chordal double stop. Montgomery introduced the use of repetition notes and a double stop, and both of these dramatic devices along with other previously used elements helped him develop tension throughout the chorus.

Transcript 3 Chorus 3

Ch.2 - Phr.7 Ch.3 - Phr.1 Ch.3 - Phr.2

b5 7 3 6 5 R 11 3 3 R b7R 5 5 b7 9 11 13 3 5 b7 9 11 13

Ch.3 - Phr.3

5 b5 4 3 2 R b7 6 5 5 5 3 R 11 9 3 9 11 6 R b7 9 R b7 5

Ch.3 - Phr.4

9 5 b7R 9 R b7 5 R b9 R 11 9 R 6 5 5 6 b7 R 9 11 b7 6 5 R 6 5

Ch.3 - Phr.4

11 9 R 11 9 R 3 11 9 b7 6 5 R 9 b3 5 7 b9 9 b7 9 11 13 R

Ch.3 - Phr.5

(11) b7 b9 3 b3 b13 11 #9 R 7 b7 #5 11 3 R R R R

Ch.3 - Phr.6 Ch.4 - Phr.1

9 5 6 b7 9 5 3 2 R 7 9 b7 6 #5 #11 3 #9 R R 3 5

Phrase 1 of chorus 4 started with an ascending arpeggio followed by a resolution repetition of the root note (See Transcript 4 Chorus 4). Phrase 2 started with a chordal pick up note into a mixed direction Mixolydian scale that resolved with a 4-3 resolution. A scalar pick up note started phrase 3, which is followed by a mixed direction Mixolydian sequence and ended with a Mixolydian mixed direction eighth note triplet. Phrase 4 is similar to phrase 3 as it started with a scalar pick up note, followed by a scalar mixed direction Dorian scale and finished with a mixed direction Mixolydian eighth note triplet. Phrase 5 started with three Minor pentatonic scale, the first one ascending, second descending to ascending and the third one ascending to descending. This is followed by a mixed direction Mixolydian sequence and a chromatic passing tone into an ascending arpeggio. Two colour tones and a chromatic passing tone lead into a scalar descending Mixolydian sequence. The phrase ended with a 16th note triplet descending arpeggio followed by a 2 note descending arpeggio. Phrase 6 started with a mixed direction arpeggio, an ascending to descending arpeggio to an eighth note ascending arpeggio. A colour tone is played followed by chordal arpeggio notes, which led into a descending Minor pentatonic scale that resolved to a chordal repetition. The last phrase of the single note solo started with an ascending Mixolydian sequence, a pick up note to a chordal descending arpeggio and ended with a chord tone resolution. Montgomery played scalar material interspersed with chordal material such as arpeggios. Mixolydian and Minor pentatonic scales are primarily used followed by limited use of the Dorian scale. Pickup notes are played on the first four phrase's of this chorus.

Transcript 4 Chorus 4

Ch.3 - Phr.6 Ch.4 - Phr.1 Ch.4 - Phr.2

R 5 R 3 5 R R R b7 6 R 5 b7 11 3 6

Ch.4 - Phr.3 Ch.4 - Phr.4

R 6 b7 R 6 3 6 b7 5 #9 3 4 5 3 9 11 5 9 4 5 3

Ch.4 - Phr.5

5 b7 R 9 11 9 R b7 5 b7 R 9 11 9 R b7 5 R b7 11 5 6 #5

Ch.4 - Phr.5

b3 5 b7 6 11 3 b7 6 5 4 3 2 5 3 9 3 9 R 5

Ch.4 - Phr.6

11 3 5 R b7 b3 5 b7 9 11 9 b7 9 11 13 R b7 b9 9 b7 11 3 b7

Ch.4 - Phr.6 Ch.4 - Phr.7 Ch.5 - Phr.1

R b7 #5 b7 #5 11 #5 b7 #5 11 3 5 5 5 5 9 5 6 11 5 3 7 6 9 5 b5

4.3 Melody

In order to gain a picture of the types of notes used in Montgomery single-note choruses, this investigation has analysed each phrase according to diatonic tone, tension tone and chromatic tone (Baumann, 2012, p. 21). For the purposes of this research these will be labelled chord tone, tension tone, and chromatic tone.

R b9 9 #9 3 11 #11 5 #5 6 b7 nat7 R

Chord tones = red, Tension tones = blue, Chromatic tones = yellow

The analysis of note choice found that Montgomery used diatonic or chord tones most often, which is considered great use by Taylor (2002), while scale or tension tones, ranked as safe notes, were used at the next highest level. Chromatic or colour tones were used sparingly and with caution. Individual phrases tended to follow these principles and Montgomery showed a high level of sophistication with his choice of notes as he created a comfortable sound with the use of chord tones, interweaving tension with the use of scales tones and creating temporary dissonance with chromatic tones.

Chorus 1, phrase 1 used 10 tones; 6 (60 %) chord tones, 2 (20 %) tension tones and 2 (20 %) chromatic tones (See Table 5 - Phrase Level Chromatic Analysis Chorus 1). Phrase 2 with only 6 tones used 2 chord tones and 4 for tension tones. Phrase 3 used the most chord tones of 17, 7 tension tones and 3 chromatic tones. Phrase 4 used 22 tones with the spread of 12, 8 and 1. Phrase 5 used 15 tones and used the most tension tones measured by percentage, i.e. 53 % or 8. Chord tones used were 7 and no chromatic tones were used. The last phrase used

the most tension tones for a tally of 14 (37%), but chord tones matched phrase 3 use of chord tones at a tally of 17. The percentages were higher for the other four phrases.

Table 1 - Phrase Level Chromatic Analysis Chorus 1				
Phrase	Chord Tone	Tension Tone	Chromatic Tone	Total Notes Percent
1	6	2	2	10
	60	20	20	%
2	2	4	0	6
	33	67	0	%
3	17	7	3	28
	61	25	11	%
4	12	8	1	22
	55	36	5	%
5	7	8	0	15
	47	53	0	%
6	17	14	7	38
	45	37	18	%

Chorus 2 phrase analysis indicated (See Table 6 - Phrase Level Chromatic Analysis - Chorus 2) that phrase 1 used 16 tones, i.e. 7, 6 and 3 respectively of chord, tension and chromatic tones. Phrase 2 with 12 tones used 5 each of chord and tension tones and 2 chromatic tones. Phrase 3 also used 12 tones with a 1 tone decrease in chord tones and 1 tone increase in tension tones. Again, phrase 4 also used 12 tones but used 7 chord tones, 3 tension tones and the same as phrase 2 and 3 two chromatic tones. Out of the three short phrases, phrase 4 with 58 % chord tones ranked the highest. Phrase 5 used the highest percentage of chord tones, i.e. 12 out of 18. There were 4 tension tones used and a consistent 2 chromatic tones. Phrase 6, another short phrase of 13 tones, used 5 chord tones, 6 tension tones and again 2 chromatic tones. Phrase 7, the longest phrase of the chorus with 50 tones, used 33 (65%) chord tones,

12 (24%) tension tones and 5 (10%) chromatic tones. Phrase 7, with its length and mix of tones provides a comfortable level of diversity across chord, tension and chromatic tones.

Phrase	Chord Tone	Tension Tone	Chromatic Tone	Total Notes Percent
1	7	6	3	16
	44	38	19	%
2	5	5	2	12
	42	42	17	%
3	4	6	2	12
	33	50	17	%
4	7	3	2	12
	58	25	17	%
5	12	4	2	18
	67	22	11	%
6	5	6	2	13
	38	46	15	%
7	33	12	5	50
	65	24	10	%

Chorus 3 starts with 3 short phrases of 11, 11 and 12 tones (See Table 7 - Phrase Level Chromatic Analysis - Chorus 3). Phrase 4 has the highest number of tones, 51. Phrase 5 and 6 have 15 and 18, respectively. Phrase 1 used a significant number of chord tones (8 at 73%), followed by 2 tension tones (18%) and 1 chromatic tone (9%). Phrase 2 with the same number of tones used 5 chord tones and 6 tension tones. Phrase 3 used 4 (33%) chord tones, more tension tones at 6 (50) and 2 chromatic tones. The highest number of tones used is in phrase 4, i.e. 51. Thirty chord tones (59%), 19 tension tones (37%) and 2 chromatic tones. This phrase is the longest of the chorus and provided a good mix of chord and tension tones,

with only 2 chromatic tones to provide minimal diversity. Phrase 5 used 15 tones with 10, 1 and 4 tones across the categories. The last phrase completed the chorus with 18 tones, 9 chord tones, 6 tension tones and 3 chromatic tones, 50, 33 and 17 % respectively.

Table 3 - Phrase Level Chromatic Analysis Chorus 3				
Phrase	Chord Tone	Tension Tone	Chromatic Tone	Total Notes Percent
1	8	2	1	11
	73	18	9	%
2	5	6	0	11
	45	55	0	%
3	4	6	2	12
	33	50	17	%
4	30	19	2	51
	59	37	4	%
5	10	1	4	15
	67	7	27	%
6	9	6	3	18
	50	33	17	%

Phrases in Chorus 4 started with 100 % (5) chord tones (See Table 8 - Phrase Level Chromatic Analysis - Chorus 4). This short phrase led to 3 more short phrases but with more tension tones added. Phrase two, 6 and 2, phrase three, 5 and 3, phrase four, 6, 5, and 1. Phrase 5 had 42 tones with a mix of 25 (60%), 15 (36%) and 2 (5%). Phrase 6, another long phrase with 31 tones, had a mix of 19 (61%), 10 (32%) and 2 (6%). The last phrase used 5

chord tones and 5 tension tones. Phrase 5 and 6 showed a similar percentage mix of tones and created a diverse approach.

Table 4 - Phrase Level Chromatic Analysis Chorus 4				
Phrase	Chord Tone	Tension Tone	Chromatic Tone	Total Notes Percent
1	5	0	0	5
	100	0	0	%
2	6	2	0	8
	75	25	0	%
3	5	3	0	8
	63	38	0	%
4	6	5	1	12
	50	42	8	%
5	25	15	2	42
	60	36	5	%
6	19	10	2	31
	61	32	6	%
7	5	5	0	10
	50	50	0	%

4.3.1 Melody Conclusion

For each chorus, diatonic chord tones were used the most frequently, followed by tension tones and the rarely used chromatic tones. Although some phrases were entirely constructed of chord tones (Chorus 4 phrase 1), Montgomery never constructed his phrases exclusively from either tension or chromatic tones alone. It is also important to note that although chord tones were always present, Montgomery did not always add to his phrase both the tension and chromatic tones. In fact many phrases were a juxtaposition of the two categories of chord tones and tension tones.

4.2. Rhythmic Diversions

Wes Montgomery used a variety of rhythmic diversions, such as, quarter notes, tied notes, eighth note triplets, sixteenth note triplets, as well as break durations, varying phrase starting beats and varying duration of phrases, to create diversity in his playing. The placement of these diversions demonstrated the flexibility Montgomery was able to employ while maintaining a strong 'eighth note feel' throughout his solo.

Montgomery played six phrases in his first chorus solo for *West Coast Blues* (see Table 1 - Chorus 1 Analysis). Phrase 1 in chorus 1 has a duration of 5 1/2 beats and consisted of eighth notes and one quarter note at the end of the phrase. The eighth notes started on the 'and' of the first beat. The quarter note combined with the break between phrases (1 1/2 beats) to create a rhythmic diversion. The second phrase duration is three beats and consisted of all eighth notes. The first note is played on an 'and' of the third beat of the bar that helped to promote an eighth note feel. Phrase 3 commenced after a one and an eighth beat break and started on the second beat. It consisted of fourteen beats of eighth notes and had one tied eighth notes at the end of the phrase. These three phrases created a strong eighth note 'feel' by used a substantial percentage of eighth notes. Phrase 4 contained a number of diversions. Four out of the five bars contained at least one. An eighth note started the phrase on the third beat, followed by tied eighth notes, a second set of tied eighth notes juxtaposed with eighth note triplets and finished with 2 beats of eighth notes in the last bar of the phrase. Phrase 5 showed the command Montgomery had over the eighth note feel. It started with 3 1/2 beats of eighth notes and then 2 sets of 16th note triplets tied to an eighth note followed. This phrase finished with a quarter note. Phrase 6 the last phrase of the chorus and also the longest at 17 beats contained a number of diversions. It started on the 'and' of the second beat closely followed by tied eighth notes, two separate eighth notes and two tied eighth notes.

These are followed by an eighth note triplet and five beats of eighth notes. Tied eighth notes are present in the following bar which is followed by an eighth note triplet and tied eighth notes. The last bar has two beats of eighth notes and is finished with a quarter note. The number of diversions and their frequent placement in each phrase demonstrates Montgomery's rhythmic diversity and the control he exhibits to maintain an 'eighth note feel'.

Chorus 1 Phrases	Duration (beats)	Bar	Type	Break Duration
1	5 1/2	3	1/4 note	1 1/2
2	3	4	N/A	1 1/2
3	14	9	tied 1/8 notes	2
4	12	10	1/4 note	1 1/2
		10-11	tied 1/8 notes	
		11	tied 1/8 notes	
		12	tied 1/8 notes	
		12	1/8 note triplet	
5	6 1/2	15	16th note triplets with 1/8 note	2
		15	16th note triplets with 1/8 note	
6	19 1/2	16-17	tied 1/8 notes	2
		17	tied 1/8 notes	
		18	1/8 note triplet	
		20	tied 1/8 notes	
		21	1/8 note triplet	
		21	tied 1/8 to 1/4 notes	
		22	1/4 note	

In the second chorus Wes Montgomery played 7 phrases (See Table 2 - Chorus 2 Analysis). He has created a high tension, fast paced feel with short eighth rests between phrases. Phrase 1 started with an eighth note triplet followed by five beats of eighth notes and finished with a quarter note. After only an eighth rest, phrase 2 started with a pick up note into an eighth

note triplet followed by four consecutive sixteenth notes tied to a dotted eighth note. This rhythm changed the emphasis of the eighth note feel from an 'eighth note off beat' to an 'eighth note on the beat' feel. Phrases 3 and 4 continued this same rhythmic diversion. In phrase 5 Montgomery changed the rhythmic diversion and used a triplet that had an eighth note rest followed by two eighths notes. Two beats of eighth notes finished the bar and lead to an eighth note rest, an eighth note to quarter note tie and finished with eighth notes that lead to phrase 6. This phrase has a dotted quarter note with three eighth notes, an eighth note rest, tied eighth notes and finished with three eighth notes. Phrase 6 re-established a comfortable eighth note feel with $5 \frac{1}{2}$ beats of eighth notes supported by Montgomery's choice of starting the phrase on an offbeat or what could be seen as an 'and' beat. The phrase ended with an eighth note to quarter note sequence. The seventh phrase started on an 'and' beat and continued with primarily eighth notes for 25 beats. There were only three rhythmic diversions that interrupted these eighth notes, beats 15, 16 and 17 (5th and 6th bar of the phrase). A tied triplet, a quarter note and a triplet provided the diversions amongst this long eighth note sequence. The eighth note feel is firmly reinforced by the 3 longest phrases of the chorus, i.e. 5 ($11 \frac{2}{3}$ beats), 6 ($7 \frac{1}{2}$ beats) and 7 (25 beats). These are the last three phrases of the chorus. The variety of rhythmic diversions played throughout the phrases of this chorus clearly demonstrated the command Montgomery has over his use of a variety of rhythmic diversions while he maintained an eighth note 'feel'.

Table 6 - Chorus 2 Analysis

Chorus 2 Phrases	Duration (beats)	Bar	Type	Break Duration
1	7	23	1/8 triplet	1/2
		25	1/4 note	
2	5 1/2	26	1/8 note triplet	1/2
		26	16th note tied to dotted 1/8 note	
		27	16th note tied to dotted 1/8 note	
		27	16th note tied to dotted 1/8 note	
		27	16th note tied to dotted 1/8 note	
		28	1/8 triplet	
		28	16th note tied to dotted 1/8 note	
		29	16th note tied to dotted 1/8 note	
		29	16th note tied to dotted 1/8 note	
		29	16th note tied to dotted 1/8 note	
		3	5 1/2	
4	5 1/2	30	16th note tied to dotted 1/8 note	1/3
		31	16th note tied to dotted 1/8 note	
		31	16th note tied to dotted 1/8 note	
		31	16th note tied to dotted 1/8 note	
5	11 2/3	32	1/8 triplet - rest, 2 notes	1/2
		33	1/8 rest	
		33	1/8 note	
		33	1/4 note	
		34	1/4 note dotted	
		35	1/8 rest	
		35	tied 1/8 notes	
6	7 1/2	36	1/8 rest	1/2
		38	1/8 rest	
		38	1/4 note	
7	25	43	1/8 note triplet	2
		44	1/4 note	
		44	1/8 triplet	

Montgomery played 6 phrases in his third chorus solo (See Table 3 - Chorus 3 Analysis).

The first phrase started on beat '3 and' and uses 4 1/2 beats of eighth notes and a one beat eighth note triplet. One eighth note is tied to the triplet and the last two notes of the triplet are tied together. The break is 1 1/2 beats duration. The second phrase started on beat '1 and'

with an eighth note pick up, this led to three sets of triplets and ended the 4 1/2 beats with a quarter note. Between these two phrases half the beats contained rhythmic diversions. This led into a thirteen beat third phrase that reinforced the eighth note feel with twelve beats of eighth notes. The twelfth beat was a quarter note. Phrase 4 the longest phrase of the chorus contained 27 beats with a variety of rhythmic diversions spread across the phrase. A quarter note and a triplet are tied together followed by an eighth note placed on the third, fifth and sixth beat. Eighth notes continued until the twenty-second and twenty-third beats whereupon there was an eighth note triplet and a pair of sixteenth notes followed by an eighth note tied to a quarter note. The phrase ended with five eighth notes the last two tied together. The next phrase, i.e. 5, started after an eighth note rest and an eighth note triplet rest. The last two notes of the triplet led into three beats of eighth notes. Three slurred sixteenth notes and one articulated sixteen note is followed by four eighth notes and one quarter note. Montgomery played two difficult diversions, where he split the triplet into a rest and two notes, followed by a group of four sixteenth notes. Phrase six, begins with 5 1/2 beats made up exclusively of eighth notes, before diverting to an eighth note triplet, an eighth note, quarter note and double stop quarter note combination. The short eighth note rest quickly re-established the eighth note feel and eliminates any feel of a completed solo.

The first phrase established an eighth note feel with a sequence of eighth notes and one eighth note triplet. This triplet is in anticipation of the 3 triplets played in the second phrase. The long 3rd and 4th phrases, (13 and 27 beats, respectively) used mostly eighth notes that reinforced the eighth note feel. The fifth and sixth phrases each used 7 2/3 beats with two and three diversions, respectively. The 5th phrase contained one beat of four sixteenth notes. Montgomery's returned to his primarily subdivision when his dominant use of eighth notes in phrase 6 reinforced the eighth note 'feel'.

Table 7 - Chorus 3 Analysis

Chorus 3 Phrases	Duration (beats)	Bar	Type	Break Duration
1	6	48 40	tied 1/8 note to 1/8 triplet 1/8 triplet tied	1 1/2
2	4 1/2	50 50 50 50	1/8 note triplet 1/8 note triplet 1/8 note triplet 1/4 note	2
3	13	55	1/4 note	1 1/2
4	27	57 57 63 63 64 64-65	1/4 note 1/8 tied notes triplet tied 1/8 note 1/8 note triplet 1/8 triplet (2 16th notes) 1/8 note tied 1/4 tied to previous 1/8 note triplet tied 1/8 notes	1
5	7 2/3	65 66 67	1/8 triplet - rest, 2 notes 16 notes (1 beat) 1/4 note	1/2
6	9 1/2	70 70 71	1/8 note triplet 1/4 note 1/4 note	1/2

Montgomery played 7 phrases in the fourth chorus (See Table 4 - Chorus 4 Analysis). The first phrase started on beat '2 and' and consisted of five eighth notes. After a short eighth note break phrase 2 started and ended with an eighth note to quarter note sequence. These sequences had two beats of eighth notes between them. Phrase 3 started with an eighth note tied to a quarter note followed by four eighth notes and ended the phrase with an eighth note triplet. The fourth phrase continued in a similar fashion, i.e. eighth notes with a diversion. The diversion is a triplet at the end of the phrase. Phrase 5 is 20 1/2 beats with just one sixteenth note triplet juxtaposed with a tied eighth note at the end of the phrase. The 17 1/2

beats of eighth notes presented a strong eighth note feel for this chorus. Phrase 6 also provided a strong eighth note feel with five beats out of 17 1/2 being diversions. The third bar contained an eighth note triplet and a quarter note. The fifth bar contained two beats of sixteenth notes and the final bar finished the phrase with a quarter note. The last phrase had 4 1/2 beats of eighth notes and finished with a quarter note. The length of phrases 5 and 6 with predominantly played eighth notes presented a strong eighth note feel. The scattered diversions across the 7 phrases presented a variety of rhythmic diversions. The placement and range of phrases played in this chorus again demonstrate the strength of Montgomery's playing.

Table 8 - Chorus 4 Analysis

Chorus 4 Phrases	Duration (beats)	Bar	Type	Break Duration
1	2 1/2	73	1/4 note	1 1/2
2	5 1/2	74	1/8 rest	1/2
		74	1/4 note	
3	4	75	1/4 note	1 1/2
		76	1/8 triplet	
4	5 1/2	78	1/8 triplet	1 1/2
5	20 1/2	85	16 note triplet	1/2
		85	tied 1/8 notes	
6	17 1/2	88	1/8 note triplet	1 1/2
		88	1/4 note	
		90	16th notes 2 beats	
		91	1/4 note	
7	5 1/2	94	1/4 note	1

3.3.1 Rhythmic Diversions Conclusion

Montgomery started his phrases and used all beats of the bar except the first beat. The use of 'and' beats throughout the solo supports the eighth note feel. Phrases in chorus one tended to start on all beats (except 1). In chorus 2 there is a concentration of phrases started on the '1 and' beat, i.e. 5 out of 7. Chorus 3 also had a concentration of phrases started on '1 and', i.e. 3 out of 6. The other three start beats are spread across other beats, one each. In chorus 4 the phrases started on the 'and' of each beat, i.e. 2 start points on '1and', 2 on '2and' and 3 on '3and'. Duration of phrases varied between 2 1/2 beats to 27 beats. All phrases were different lengths with the exception of 7 phrases which had 5 1/2 beats. Chorus 1 had two long phrases in the middle, 14 and 12 beats, and a 19 1/2 phrase duration at the end. Chorus 2's longest phrase is the 5th one out of 6. Chorus 3 had two long phrases in the middle, i.e. phrase 3, 13 beats and phrase 4, 17 beats. The last phrase had 9 1/2 beats. Chorus 4 has the 2 longest phrases toward the end, i.e. 5 and 6. These phrases helped to re-establish the eighth note feel from the short phrases and diversion that surround them. Montgomery used space through rests that were mostly placed between phrases. The second chorus is fast paced as all but 2 breaks are 1/2 beats. One is 1/3 of a beat which contributed to this pace and the last break which leads into the next chorus is the only 2 beats break. Chorus 1, 3 and 4 used 1 1/2, 2, 1, 1/2 beats for break durations. The 1/2 and 1 1/2 beats break were the most common with 9 used each.

Montgomery utilized phrase start points, durations and use of space combined with quarter notes, tied notes, triplets (both eighth beat durations and sixteenth beat durations) and half notes to create rhythmic diversity that created tension and release. The predominant eighth note subdivision was temporarily diverted into these rhythmic diversions to create rhythmic

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diversity, which when coupled with Montgomery's harmonic elements created a seamless flow, seemingly devoid of any formulaic construction devices.

5. Discussion

The results of this analysis show that Montgomery's command of harmonic elements, melodic note choices and rhythmic diversions allowed him to create a highly developed musical system for jazz improvising. The phrase by phrase element identification and analysis undertaken in this research has illuminated both the type of elements and the varying frequencies with which they are used. Additionally this research has explored the sequencing possibilities of these elements within a phrase, and various possible combinations that were characteristic of Montgomery within his improvising.

Specifically, the investigation of chordal and scalar elements in this research found that various styles of arpeggios, 2 note sequences and repetitive notes were alternated with scalar material such as Mixolydian, Blues, Dorian and Super Locrian scales and note sequences. Montgomery used these elements in a combination of sequences, and additionally performed them in a variety of directions or contours. These consisted of ascending, descending or mixed directional contours.

The investigation of melodic elements found that Montgomery favoured the use of chord tones beyond all other possible note choices, and these chord tones made up each improvised musical phrase. Tension tones were his next choice, followed by chromatic tones. While percentages for chord, tension and chromatic tones used in each phrase should not be adhered to as a formulaic approach to improvisation, understanding this trend of use across phrases can provide some insight into improvising. That is, chord tones are at the level of 'great use' and should be used the most, followed by tension tones, and finally the use of chromatic

tones with caution. Analysis of the number of tones used in each individual phrase show Montgomery tends to follow this principle throughout his improvisations.

For each chorus diatonic chord tones were used most frequently, followed by tension tones and the rarely used chromatic tones. Although some phrases were entirely constructed of chord tones (Chorus 4 phrase 1), Montgomery never constructed his phrases exclusively from either tension or chromatic tones alone and many phrases were a juxtaposition of the two categories of chord tones and tension tones. It is interesting to note that the final combination of chord tones with chromatic tones was never used by Montgomery in any of the 26 phrases he improvised throughout his solo on '*West Coast Blues*'.

The analysis of rhythmic diversions found that placement of these diversions demonstrated the flexibility Montgomery was able to employ while maintaining a strong 'eighth note feel' throughout his solo. His range of rhythmic diversions created diversity but did not infringe on the established eighth note feel. The continuum of devices involved quarter notes, tied notes, eighth note triplets, sixteenth note triplets, 16th note to dotted eighth note, 16th notes as well as break durations, phrase start beats and duration of phrases. Some of these diversions, such as rests and quarter notes suspend or "break up" the simple eighth note feel. Additional devices such as phrase start beat positions contributed to the feel, while others, such as 16th note triplets to 1/8 note and 16th note to dotted eighth note provided potential disturbances. The 16th note triplet to 1/8 note introduced more note density to the rhythm. In addition, the 16th note to dotted eighth note diversion switched the eighth note feel from the upbeat to the downbeat, providing the same 'feel' but on a different beat of the bar. Repetition and

proximity to other diversions created intrusions that temporarily altered the predominant eighth note feel.

Montgomery used these improvisation techniques to enhance his music and create a diversified interpretation of '*West Coast Blues*'. Montgomery was a highly proficient jazz musician, possessing an extensive vocabulary of idiomatic jazz elements, gleaned from many sources, including his contemporaries Charlie Parker and John Coltrane. In addition the development of a highly personal technique allowed him to execute these ideas in a unique manner and gave him a distinct sonic or tonal identity. The ability to perform solos using his signature three tier approach of single lines, octaves and chords gave Montgomery the ability to juxtapose these three tiers and create an endless musical conversation within his own improvisations. Previous to this, guitarists had only mastered the single line solos and were unable to create this conversational interplay within their soloing forms.

It could well be that Montgomery's advanced system of call and response gave rise to the spontaneous invention we see in this research. The ability to juxtapose, elongate and recontextualise a repertoire of elements to such a degree that it is impossible to tell that it has been preplanned would lead the listener to believe it was a spontaneous improvisation that was being created, when in fact there was a highly developed motivic development system at work. Montgomery was regarded as an intuitive natural player with an immense talent. Indeed upon first glance it is difficult to pinpoint any musical system within his phrasing as it appears to be consistently changing and moving in a spontaneous and organic way, achieved in part by changes of phrase direction, variations in phrase and element length, and juxtaposition of rhythmic patterns. However, closer inspection reveals how Montgomery had developed a sophisticated system for achieving this ability to spontaneously vary his musical ideas. Montgomery contrasted his harmonic elements by moving on to a new element or

simply altering the element itself by adding a rhythmic diversion, effectively creating a motivic development system allowing him an endless flow of creativity.

Thinking beyond the phrase and looking at larger forms, Montgomery approached each chorus differently as he implemented a system of moving his phrase starting points to different beats within the bar. This gave his chorus level playing an individual shape, which he in turn varied to give his complete solo a rounded and balanced form. The spontaneous creative process is the goal of all improvisers and Montgomery's unique ability to create improvised solos is one of the reasons he is held in such high regard as a historical figure in jazz.

Using '*West Coast Blues*' as the musical material for analysis, this thesis has looked at both the construction of each phrase, the relationship between these phrases, and explored patterns of repetition and diversity that lie within. Beyond the construction of each phrase, it has given insight into Montgomery's method of creating phrases of varying element type, length, and placement against the harmonic background. Identification of these elements and the procedure in which they are used could inform jazz students and professional musicians alike in the development of cohesive and flowing improvised musical phrases. For example, learning strategies that may be employed by an aspiring improviser include beginning with a steady stream of eighth note ideas, from which one might temporarily divert the eighth note pulse into other subdivisions, thus creating variety of a rhythmic nature, before returning to the eighth note subdivision. In creating melodic variety, an aspiring improviser may start with chordal tones and juxtapose them alternatively with tension tones, and subsequently chromatic tones.

Harmonic learning strategies may include juxtaposing scalar material with chordal material, leading to a deliberate and diversified approach. The aspiring improviser might also deliberately start the improvised phases on pre-planned and varying points within the bar. The outcome of these learning strategies would be the attainment of fluency in varying both the elements and the sequence, and the placement of these elements, which would result in a diverse approach. Diversity to both improviser and listener is vital in maintaining musical interest and, some would say, is the primary goal of spontaneous improvisation.

In conclusion it is worth noting that Montgomery played within one idiom throughout his entire career, thus creating a distinct unity to his style. Indeed it is quite possible that Montgomery's choice to stay within confines gave rise to his unique improvisational method. This disciplined approach is of significance to the developing improviser in the search for musical artistry and the attainment of an individual style.

6. Conclusion

This research has uncovered principles of Montgomery's improvisational method, notably his use of rhythmic diversions and their use within phrases, his melodic procedures and favoured use of chord tones beyond all other possible note choices, and the varied sequencing methods of combining these elements to create repetition and variety. Rhythmic diversion analysis revealed Montgomery's preferred starting points of his phrases, most notably his avoidance of beat 1 as a beginning point for his phrases. While this analysis was conducted on a tune in 3/4 and showed results from this meter, it could be further investigated in future research to include the more frequently used 4/4 meter.

While a wealth of books demonstrates phrases by Montgomery, and many contain descriptive analysis, much of this information is only a partial view of Montgomery's jazz improvisational method. Learning individual elements, much like learning words from a dictionary do not guarantee the ability to speak expressively, is perhaps an ineffective method for understanding jazz improvisation. Even the imitation of complete phrases will not guarantee the ability to create a cohesive solo, and it could be compared to studying a foreign language guide book where as a tourist one can speak basic phrases but with limited comprehension of their meaning. What is truly needed is a thorough understanding of phrase based elements, their construction and sequence, and also the timing in which they are delivered. Indeed, it is these "cohesion" elements that help combine or "glue" the musical elements together into cohesive phrases to create variety and interest. Perhaps of most significance is that if applied to a pedagogical method, these principles could reach beyond the scope of Wes Montgomery's jazz guitar improvisational method, and be applied to any jazz

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artist regardless of instrumentation. That is beyond the scope of this investigation, but surely an interesting proposition for future research.

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