

Compositional Approaches in the jazz-funk and electro-jazz musical genres

Bachelor of Arts (Honours)

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Abstract

The fusion of other musical genres with jazz has been a part of the jazz tradition since its inception, with early jazz itself being a concoction of influences from the blues, spirituals, work songs and minstrelsy. Despite this, there is a lack of literature that deconstructs and analyses more modern ‘fused’ jazz styles such as ‘jazz-funk’ (a fusion of jazz and funk music) and ‘electro-jazz’ (a fusion of electronic music and jazz). This study attempts to rectify the situation by analysing and deconstructing two ‘jazz fusion’ compositions in order to discover their use of musical devices and compositional techniques. The two compositions are: the jazz-funk tune *Chameleon* by Herbie Hancock from his 1973 album *Head Hunters*, and the electro-jazz tune *Stadium Jazz* by Donny McCaslin from his 2012 album *Casting for Gravity*. Musical devices and techniques have been selected from both compositions and then used in the creation of two original compositions by the author in order to demonstrate their use outside their original contexts. This study will hopefully be able to serve as a resource for composers and musical practitioners, showcasing some of the compositional and musical insights that can be gained from studying ‘jazz fusion’ music.

Statement of Authorship

This thesis contains no material which has been accepted for the award of any other degree or diploma in any tertiary institution and, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed,

Reginald Santiago Ashman

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Glossary

Chord Scale Theory: A method to describe how different chords relate to each other and how they relate to a key centre. A major scale could be split up into seven different modes based on each scale degree. From these modes chords can be derived. This shows that both the chords and scales are related, hence the term chord scale. E.g. For the C Major scale (C D E F G A B C) you would have the following modes: C Ionian, D Dorian, E Phrygian, F Lydian, G Mixolydian, A Aeolian and B Locrian. From the modes the following chords can be derived: C Major7, D minor7, E minor7, F Major7, G dominant7, A minor7 and B half-diminished. If you were to hear several of these chords played in succession you could guess that the key centre is C Major, since all these chords are derived from modes of the C Major scale (and thus are related). Each of the chords within a chord scale can also be assigned a function, shown through the use of roman numerals. The function of each chord within the C Major chord scale is as follows: CM7 = I^{M7}, Dm7 = ii⁷, Em7 = iii⁷, FM7 = IV^{M7}, G7 = V⁷, Am7 = vi⁷, Bm7(b5) = vii^{7(b5)}. An upper-case roman numeral shows that a chord is a Major chord (e.g. I, IV & V), while a lower-case roman numeral shows that a chord is minor (e.g. ii, iii, iv & vii). The superscript following the roman numerals are to designate the exact quality of chord (e.g. Major 7th chord could be I^{M7}). It is with these roman numerals that you will see chord progressions described. For example, a perfect cadence would be described as a V - I progression, and a plagal cadence would be described as a IV - I progression.

Clave: A two bar rhythmic pattern which almost all Afro-Cuban music is based on (Levine, 1995). Generally speaking, the clave originates from Africa. The pattern can often appear in two variants, a '2-3' clave (with two played notes in the first bar and three in the second) and a '3-2' clave (with three notes played in the first bar and two in the second).

Comping: Playing in accompaniment or an accompanying role in a musical situation

Dead: lacking in reverberation

Delay effect: An electronic effect applied to audio that generates echoes of the inputted audio signal.

Downbeat: Beats one and three of a 4/4 bar.

Dry: 1. The absence of overtones or 'ring' from the sound of drum being struck. 2. The absence of reverberation or echo on a sound.

Functional Harmony: (see Chord-Scale Theory).

Head: 1. The composed melody and changes of a tune. 2. The first time through the melody of a tune, before the solos begin. (Levine, 1995)

Key velocity: The ability for keys on a keyboard to respond to the force with which they are played. Softer keystrokes will produce a softer sound while harder keystrokes will produce a louder sound.

Leakage: Sounds other than an intended sound source on an audio recording.

Multi-track recording: Technology which allowed multiple sound sources to be recorded at different times and then combined to sound as if they were recorded simultaneously.

Offbeat: A note that does not occur on a beat. E.g. A group of two quaver on beat one of a bar would have first quaver on the beat and the second quaver off the beat. Off beats can also be used to describe the off beats within a subdivision. E.g. A group of four semiquavers

starting on a beat would have the second and fourth semiquavers occur on 'semiquaver off-beats'.

Open: The sonic character of a drum that is not muffled and is allowed to vibrate freely.

Ostinato: A frequent, successively repeated musical pattern or musical pattern in the context of a single song or composition.

Palm-mute: To mute the strings of a guitar by resting the base of the picking hand on the strings near the bridge of the instrument.

Parallel Harmony or parallelism: When all voices in a succession of chords move in the same direction, parallel harmony occurs...The term includes both strict parallel motion in which all the chords are identical in construction, and similar motion in which the chords change as the voices move freely but in the same direction. The direction and intervallic transpositions may vary and be either real or tonal. Real parallel harmony (exact transposition) has a tendency to sever connections with any one key and may be used as a means of entering and leaving atonality. This kind of harmony functions freely in modularity transitions and in thematic statements where tonality is meant to be obscure. Tonal parallel harmony (intervallic changes determined by the scale in force) tends to preserve a modality. (Persichetti, 1961)

Pitch-wheel: A wheel that can be used to alter the pitch of a played sound on an electronic instrument such as a keyboard or synthesizer. Rocking the wheel forward raises the pitch and rocking it backward lowers the pitch.

Recording take or 'take': A single attempt at recording audio. A musician will often and record multiple 'takes' of a musical performance then keep the one with the best performance.

Reverberation or reverb: sound reflections and echoes of a sound

Ringy: A description for the presence of overtones in the sound produce by a drum being struck.

Room Tone: The echoes and sound reflections in a room

Schenkerian Analysis: A method of musical analysis devised by Heinrich Schenker which focusses on the harmony and melodies of tonal music.

Thuddy: The characteristic of a 'thud' like sound that is short in duration.

Turnaround: A chord progression occurring (1) at the end of a repeated section of a tune, leading back to the repeat; (2) at the end of the tune, leading back to the top. (Levine, 1995)

Upbeat: Beats two and four of a 4/4 bar.

Vamp: A frequent, successively repeated musical phrase or pattern in the context of a single song or composition. A vamp can serve as the basis for a single musical section or even an entire composition. Synonymous with an ostinato.

Wah-wah or wah: An electronic effect applied to an audio signal that causes audio to sound similar to a human voice saying 'wah'.

Warbly: (adjective) Sounding similar to the onomatopoeic 'wah' sound.

Introduction

The fusion of musical styles has been a part of the jazz genre since its inception and has remained so as the style has evolved through the 20th century and into the 21st. With the roots of early jazz including the blues, work songs, spirituals and minstrelsy, the progression of the 20th century brought a multitude of additional influences and fusions with other styles to the jazz genre. These influences include trumpeter Dizzy Gillespie's fusions with Afro-Cuban music and the advent of the Bossa Nova pioneered by Antônio Carlos Jobim and João Gilberto; combining jazz harmony with the samba of Brazil. The late sixties and seventies saw the birth of the jazz fusion movement, in which artists such as Miles Davis and Herbie Hancock were influenced by both modern technology and the rock and funk music of the time. In more recent decades, jazz has seen the influence of hip-hop (exemplified in the music of pianist Robert Glasper) and electronic music and synthesizers (seen in the music of saxophonist Donny McCaslin and the band *Kneebody*). With the fusion of styles being so common throughout jazz history, it is surprising that there is a dearth of literature that explores the musical construction of 'fusion' compositions; leaving a wealth of musical and compositional knowledge and insight untapped. **This research attempts to rectify this situation; seeking to act as a resource on the musical and compositional lessons that can be learnt from 'fusion' music.** This will be achieved by providing an in-depth analysis of select compositions by two 'fusion' artists and by demonstrating the application of musical devices and techniques used by these artists through original compositions by the author.

As the title of the thesis, '***Compositional approaches in the jazz-funk and electro-jazz musical genres***', suggests, this research attempts to discover the different compositional approaches used in fusions of funk and electronic music with the jazz

genre. The focus is specifically on the musical and compositional techniques used in fusions of jazz, funk and electronic music. This entails musically analysing and deconstructing how different fusions of funk, electronic music and jazz are put together and identifying the musical devices and techniques used; as well as determining what influence the pre-fusion genres have on the fused music. Techniques identified from the musical analysis have been used in original compositions by the author in order to both demonstrate and explore their use. The use of the techniques in these original compositions will then be discussed and their overall effect on the music will be determined. The completion of this research will yield knowledge on different musical and compositional techniques used in the 'fusion' genres of jazz-funk and electro-jazz and how they can be utilised.

The first chapter of the thesis will discuss research methodology and literature. This includes a discussion of the different methods of analysis used; including musical elemental analysis, aural analysis and transcription, and a discussion of the different literature used in the creation of this study. The second chapter is an analysis of the jazz-funk composition *Chameleon* (1973) by pianist Herbie Hancock. This serves as a representation of the 'jazz-funk' genre, and the different musical elements and techniques used within the composition will be discussed. The third chapter is an analysis of the electro-jazz composition *Stadium Jazz* (2012) by Donny McCaslin, and, like the chapter on *Chameleon*, will discuss the different musical elements and techniques used in the composition. Both the analysis chapters on *Chameleon* and *Stadium Jazz* respectively end with the selection of musical techniques to be used in the author's compositions. The fourth chapter discusses the compositions that have been

created by the author to demonstrate the chosen musical techniques from the previous chapters.

Ultimately, analysing fusions of jazz and other genres yields compositional and musical insights that can benefit composers and musical practitioners, and thus the subject is worthy of study.

Note: The contents of this study presume that the reader has a basic understanding of musical elements such as rhythm, tempo, meter, dynamics, harmony, melody, timbre, texture and form; as well as concepts such as tension and release, syncopation, roman numeral analysis and functional harmony.

Chapter 1: Literature & Methodology

Literature

When searching for relevant literature during the creation of this study, the most useful resource by far was a book written by Steven Pond titled '***Head Hunters: The Making of Jazz's First Platinum Album***'. The book details many of the aspects that went into the creation of Herbie Hancock's first jazz-funk album titled *Head Hunters* (1973). These aspects include how the music of *Head Hunters* related to other jazz fusion music of the time, the musical and aesthetic influence of Africa, the influence of the funk genre, the musical background of Hancock and his reasoning for pursuing a more funk-influenced music. It also includes the backgrounds of the other musicians that played on the album and their individual stylistic contributions, and how production techniques and the recording technology of the time shaped the music. Importantly, it was the only resource found that included an in-depth musical analysis of different aspects of the jazz-funk music on *Head Hunters*. Much of the analysis of the composition *Chameleon* in chapter two draws from the analysis included in this book. Additionally, the section within the book on the backgrounds of all the musicians who played on the *Head Hunters* album served as inspiration for the inclusion of similar sections in both of the analysis chapters. Ultimately, this book was an irreplaceable resource that contributed much to chapter two of this thesis.

Another resource that covered Hancock's jazz-funk music was ***Birds of Fire: Jazz, Rock, Funk and the Creation of Fusion*** by Kevin Fellezs. The book focusses on a selection of artists who explored genre fusions during the sixties and seventies and their reasons for pursuing genre fused music. These artists include Hancock, Miles Davis, Tony Williams, Joni Mitchell and John McLaughlin. Additionally, the book also touches upon the social, political and cultural

aspects of the time and their influence on the 'fusion' movement. While there is pertinent information on the circumstances surrounding Hancock and his 'fusion' music in the aforementioned areas, the book does not contain any detailed musical analyses on the construction of Hancock's 'fusion' compositions, which is a focus of this study.

Unfortunately, this was also the case with many of the other resources investigated. Since there were limited scholarly resources that investigated the musical construction of 'fusion' compositions, the majority of chapter two on Hancock's *Chameleon* relies upon musical analyses by the author.

The search for scholarly literature on the electro-jazz music played by Donny McCaslin proved to be fruitless. Since the music is still recent, with McCaslin's first electro-jazz album *Casting for Gravity* being released in 2012, it appears that sufficient time has not passed for significant bodies of work to have been written about the music. For this reason, chapter three on the electro-jazz music of Donny McCaslin consists mostly of music analyses by the author, with the remainder utilising published interviews with McCaslin and the other musicians involved with his groups.

The book ***Live Wires: A History of Electronic Music*** by Daniel Warner, documents the history of the use of electronic technologies in music over the past century up until the present. It explores five key technologies and their use within music. These technologies are: the tape recorder, circuitry and synthesizers, the vinyl record and turntables, the microphone, and computers. This resource proved to be very informative, with some of the musical technologies discussed being used by both Hancock and McCaslin in the creation of their genre fused music. Since technology proved to be a vital part in the creation of the fused genres of music, some discussion of this topic is included in chapters two and three.

Overall, there were few literary resources with relevant information on the topic of compositional techniques in 'fusion' music. Therefore, as has already been mentioned, the majority of this thesis is based on musical analyses by the author.

Methodology

The research for this study is split into two distinct parts, one musicological and the other practice-based. The musicological part of the research involved the analysis of the composition *Chameleon* by Herbie Hancock and the composition *Stadium Jazz* by Donny McCaslin. The knowledge gained from these analyses inform the practice-based part of the research; the creation of original compositions which utilise musical techniques from both *Chameleon* and *Stadium Jazz*.

The primary method of analysis used is musical elemental analysis. This style of analysis examines the contributions of eight musical elements to the composition under analysis. These elements are: song form (how the music is structured); harmony (the harmonic content of the music analysed using 'Chord Scale Theory' and Roman Numerals to show the harmonic function of chords); rhythm (the use of syncopation, subdivisions and rhythmic groupings and patterns); meter (the different time signatures used), tempo (how fast or slow the music progresses); melody (the use of melodies and their relation to scales and harmony); instrumentation and ensemble size (how the music is orchestrated and the contribution of the other musicians); timbre and texture (the characteristic qualities of instruments and sound within the music); and dynamics (the variations in loudness and softness throughout). Overall, each element has been investigated to determine its overall musical effect on a composition.

Additionally, the use of these elements in the genre fusions will be compared, where relevant, to their use in pre-fusion genres (i.e. for jazz-funk the elements will be compared to their use in jazz and funk and for electro-jazz the elements will be compared to their use in jazz and electronica). While a thorough exploration of all eight elements has been included in the analysis of *Chameleon* in chapter two, the analysis of *Stadium Jazz* in chapter three has had their inclusion streamlined in order to be succinct; only mentioning an element where relevant to the music.

The strength of elemental musical analysis lies with how it allows the analyst to see how each musical aspect works both individually and collectively within a composition. For example, a section of a tune might use both gradually increasing harmonic dissonance and increasingly syncopated rhythms to create tension throughout the section. These two elements create a greater sense of tension together than they would separately; which would eventually lead to a greater sense of resolution when the tension is released. Therefore, analysing each element allows the analyst to gain a comprehensive perspective on a composition as a whole. Considering that the focus of this thesis is on compositional techniques, this method of analysis is well suited to the task.

Concerning the analysis of harmony, the use of Schenkerian analysis has been ruled out due to its being designed to analyse music of a previous era and focusing mainly on harmony, thus rendering it unsuited to analysing the more modern genres of jazz, electronica and funk. Functional harmony and 'Chord-Scale Theory' have been chosen due to their widespread use in jazz education. The use of this type of analysis originated at the Berklee School of Music in Boston, Massachusetts. However, there are situations where functional harmony and 'Chord Scale Theory' are not suited to harmonic analysis. This is usually when

the music being analysed is atonal and has no true tonal centre. In these cases, other literature on harmony has been consulted (e.g. *Twentieth-Century Harmony: Creative Aspects and Practice* by Vincent Persichetti was consulted to explain the use of parallel harmony in *Chameleon* in chapter two).

The method of collecting the data that will be used in the elemental musical analysis will be a combination of transcription and aural listening; with both pre-existing transcriptions by other authors and original ones by the author being used. The aural listening material will include recordings by both Hancock and McCaslin, and recordings within the funk, electronica and jazz genres.

The practice-based half of the thesis consists of the creation of original compositions. The compositions are included to show how the techniques learnt through the analyses are useful to other practising composers and musicians, and to provide an example of how they could be used. Concerning the composition process itself, instead of trying to imitate the composing styles of Herbie Hancock and Donny McCaslin, the choice was made to incorporate certain selected techniques used by both Hancock and McCaslin into the author's own style. This use of the techniques is likely to be more useful to other musicians and composers (since musical imitations are rarely as good compared to their original versions). Also, attempting to imitate another composer's style would have worked against the author's natural creative process, leading to an inferior product. Once the compositions are complete and have been recorded, they will be analysed to see how the included musical techniques were used and also to determine how musically effective they were.

Ultimately, the combination of both a musicological and practice-based aspect to the methodology will allow the study to provide a greater insight into the different compositional techniques used by 'fusion' artists.

Chapter 2: Herbie Hancock & the Head Hunters

Becoming the Chameleon

When choosing a single artist's jazz-funk fusion material to analyse, the obvious choice would be Herbie Hancock. The author's reasons for choosing Hancock (and the composition *Chameleon* from the *Head Hunters* (1973) album) are as follows: Hancock is a true jazz artist, his jazz-funk album *Head Hunters* was a landmark fusion album, his reasons for playing fusion stem from a creative and artistic desire rather than a commercial one and the author thoroughly enjoys his music and wishes to understand how it was constructed.

Herbie Hancock can be seen as an artist with true jazz credentials, as evidenced by the numerous prolific jazz musicians he has both played and recorded with. These musicians include Freddie Hubbard, Dexter Gordon, Hank Mobley, Paul Chambers, Wayne Shorter, Thad Jones, Ron Carter and Miles Davis as the pianist of the 'Second Great Quintet'. Because of this it is important to know how Hancock made the transition from playing jazz to playing jazz-funk fusion music on his 1973 album *Head Hunters*.

After leaving Davis' band in 1969, Hancock formed a new sextet which strove to further explore the musical direction used by Davis on the album *In a Silent Way* (1969); an experimental, avant-garde and early electric jazz endeavour. This new sextet, which eventually evolved into a septet, would go on to release three albums; *Mwandishi* (1971), *Crossings* (1972) and *Sextant* (1973), before disbanding, partly due to poor economic viability; but, also due to Hancock's belief that the band had run its course (Fellezs, 2011).

By 1973, Hancock had become tired with the musical direction of his septet and had a desire to change direction and play music that was "lighter" with more of "a connection to the

earth,” than the spacy, avant-garde experiments of his sextet. The moment where the new musical direction came to Hancock was during meditation while chanting and is described in the liner notes on the *Head Hunters* (1973) album.

“The more I chanted, the more my mind opened up, relaxed and began to wander. I started thinking about Sly Stone and how much I loved his music... Then I had this mental image of me playing in Sly’s band playing something funky.”

Hancock initially scoffed at the idea, although soon reconsidered.

“What I saw in this reaction was seeing in myself the same things I hated about many other jazz musicians that put jazz on a pedestal, and at the same time [put] Funk and Rock on a secondary level. I don’t like that about anything. There’s room for everything... I said to myself, ‘Whoa! What are you doing?’ I knew I had to take the idea seriously. Would I like to have a funky band that played the kind of music Sly or someone like that was playing? My response was, ‘Actually, yes.’”
(Hancock, 1973).

Hancock’s next album *Head Hunters* (1973) was a landmark fusion release and featured an all new band with a sound that was more aligned with funk music than jazz. Kevin Fellezs, author of *Birds of Fire*, states that: *“The importance of Head Hunters cannot be understated, for it not only set the stage for subsequent fusions of funk, rhythm and blues, and jazz but also resonated broadly with a mainstream audience—one of the explicit desires for early fusion musicians such as Miles Davis, John McLaughlin, and Tony Williams* (Fellezs, 2011).

The album was a commercial success, with the Recording Industry Association of America (RIAA) certifying the album as gold (having sold 100,000 copies) on the 23rd of April, 1974

and as platinum (having sold one million copies) on the 21st of December, 1986 (RIAA, 2019). Perhaps due to this success, music critics made the assertion that Hancock had chosen to play this fusion of styles for commercial reasons; they accused him of selling out. David Robinson, who produced *Head Hunters*, addresses this.

“So what happened with all these critics was that they confused making money with the desire to make money... The motivation was to make the music they [Hancock and the band] wanted. And the fact that it sold was a side effect.”
(Pond, 2010).

Additionally, in a 1985 interview, Hancock elaborates on his reasons for making *Head Hunters*.

“When I ... started getting into jazz [in high school], I didn’t want to hear anything but classical music and jazz. No R&B, nothing, until I heard James Brown’s ‘Papa’s Got a Brand New Bag’ (1965). Later on, when I heard [Sly and the Family Stone’s] ‘Thank You Falettin Me Be Mice Elf Agin’ (1969), it just went to my core. I didn’t know what [Sly] was doing. I mean, I heard the chorus, but how could he think of that? I was afraid that that was something I couldn’t do. And here I am, I call myself a musician. It bothered me. Then at a certain point I decided to try my hand at funk, when I did Head Hunters. I was not trying to make a jazz record. And it came out sounding different from anything I could think of at the time.”
(Pond, 2010).

From this we can see that Hancock’s transition into the funk-jazz fusion music of *Head Hunters* was not driven by commercial interest; but, rather was driven by an artistic and

creative desire to evolve and expand on his own musical facilities and sensibilities. It is for this reason, combined with *Head Hunters*' significance as a landmark fusion record, that Hancock's composition *Chameleon*, the single from the album, has been chosen for analysis.

Deconstructing Chameleon

"The opening bass riff to "Chameleon" may be one of the most recognized riffs to emerge from the fusion movement of the 1970s. It is so well known that Hancock once used it as the opening soundtrack to his official web-site" (Fellezs, 2011). Chameleon is an excellent representation of the jazz-funk fusion music created by Hancock and his band on albums such as Head Hunters (1973) and Actual Proof (1974). The following text will be a deconstruction of musical elements found in the composition such as song form, melody, harmony, rhythm, tempo, timbre and texture, dynamics and instrumentation and the ensemble. Aspects of how the Head Hunters album was recorded in the studio and some of the technologies and production techniques that were used will be touched upon; as this element also affects the music heard on the final recording. Once again, the reasons for conducting this analysis are to find out how Hancock's jazz-funk fusion music has been constructed, to see where the influence of the jazz and funk genres can be found in the music, and to uncover musical elements and techniques that can be used by composers and musical practitioners in their own musical compositions. Note: The time codes (with this format 'minutes : seconds') refer to specific sections of the audio recording (an online link is available in the references) for Chameleon throughout this chapter.

Form

At its core, *Chameleon* follows a simple AB binary form with additional repeats, interludes and two solo sections. This can be seen in **Figure 1** below, **Figure 2** on page 14 and **Figure 3** on page 15.

Figure 1: Chameleon Form Timeline

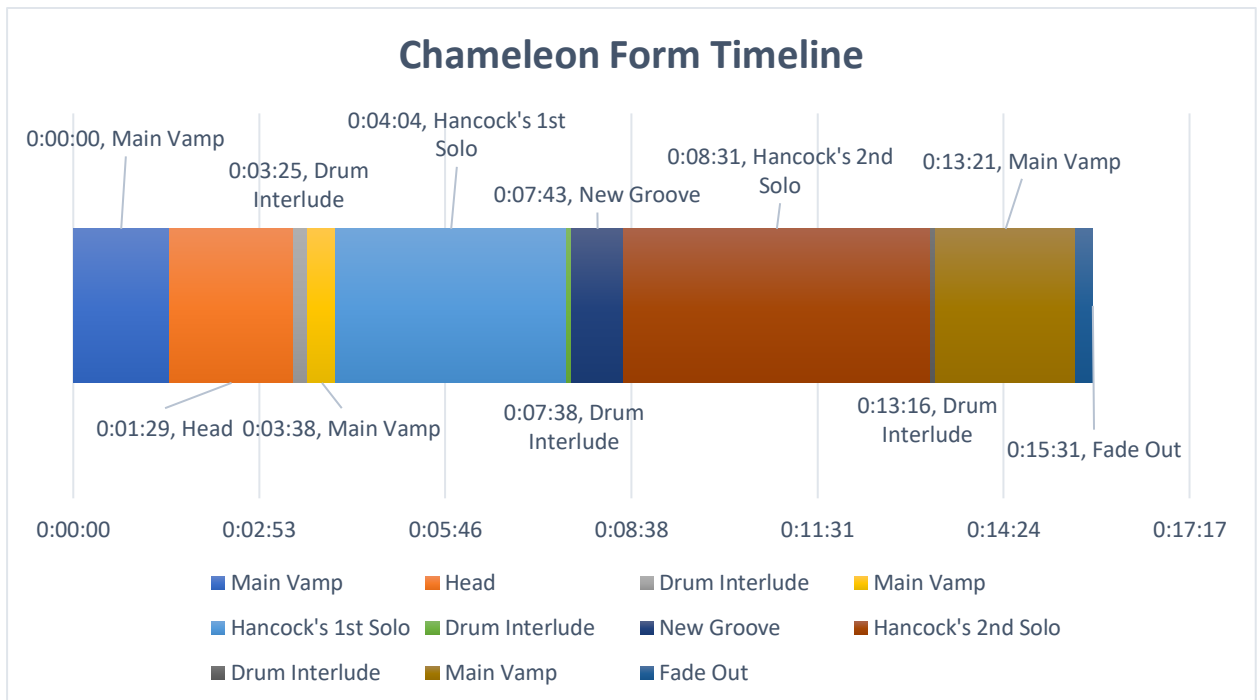


Figure 1 shows the different sections in *Chameleon* on a timeline.

Figure 2: Chameleon Head Timeline

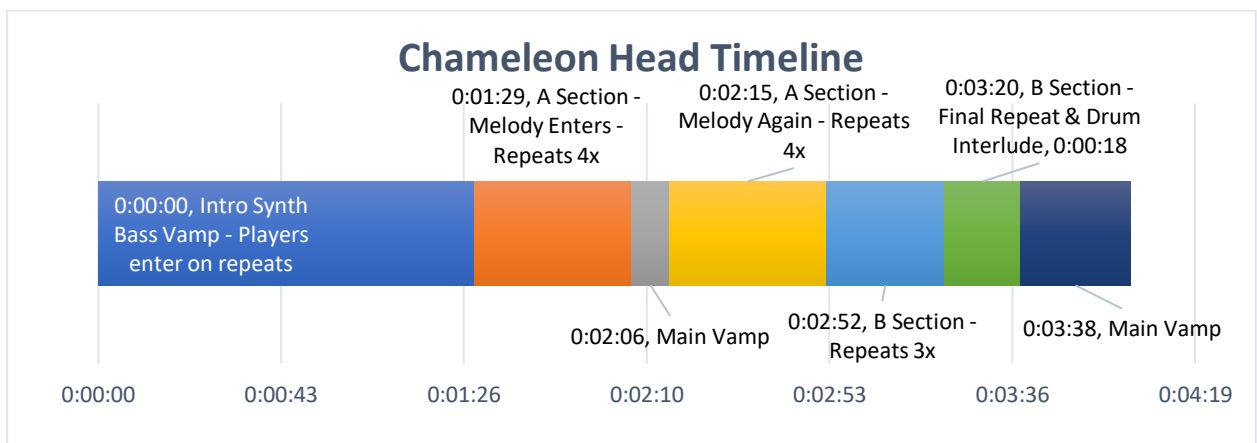


Figure 2 shows the different sections contained within the head of *Chameleon*.

Figure 3: *Chameleon* Solos Timeline

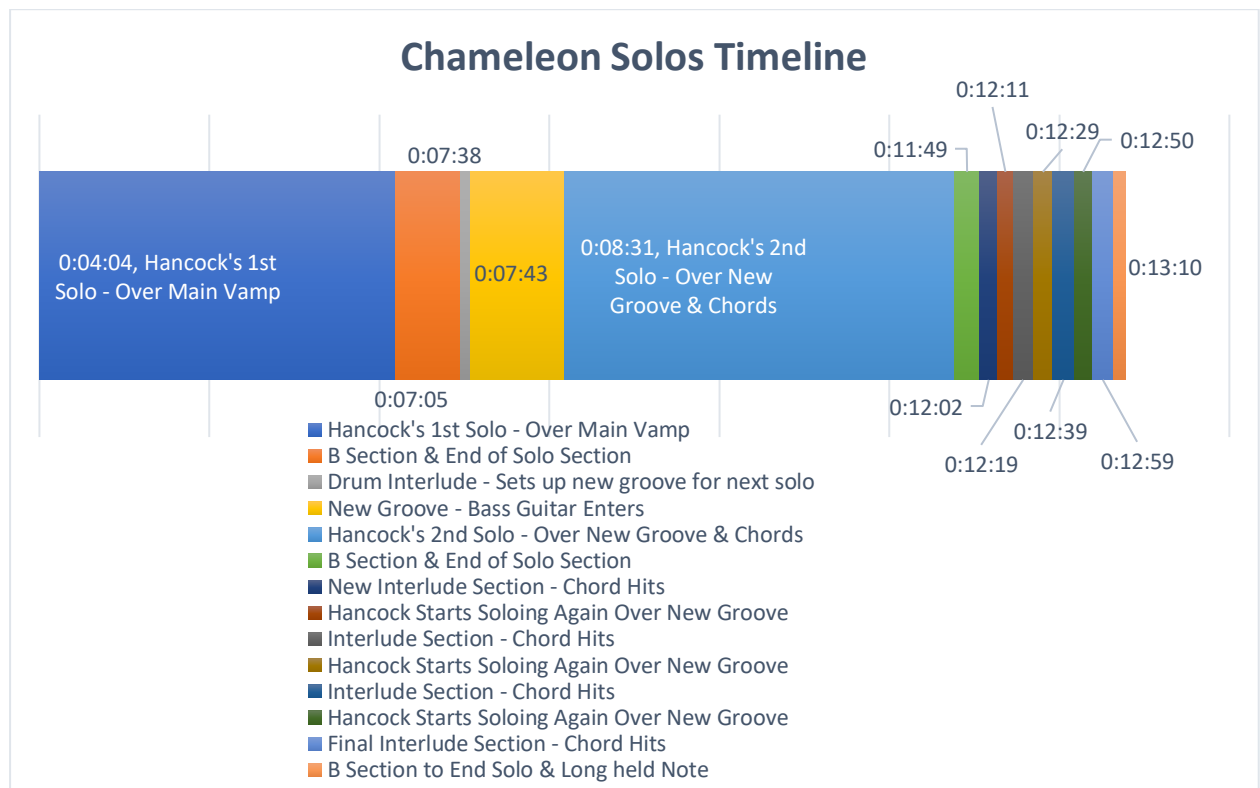


Figure 3 shows important events and different sections within the solo sections of *Chameleon*.

The use of an AB form is very common in jazz, but neither is it unique to the style. This can be seen in **Figure 66** on page 96, with the original jazz composition *Blue Bossa* by Kenny Dorham, and in **Figure 67** on page 97, with popular song *Take Me Home, Country Roads* by John Denver.

Another notable feature of the form in *Chameleon* are the extended vamp sections, which can be heard at the start of the track (0:00 to 1:26), before the second repeated A section (2:06 to 2:15), before Hancock's first solo (3:38 to 4:04), before Hancock's second solo section (7:43 to 8:31) and after Hancock's second solo before the track fades out (13:21 to

15:31) (refer to **Figure 1** on page 14 & **Figure 2** on page 14). While extended vamp sections do occur in jazz (e.g. Cedar Walton's composition *Bolivia* (1975), see **Figure 68** on page 98), the vamp sections in *Chameleon* are more closely related to vamps found in funk music. Consider funk group Sly and the Family Stone's funk song, *Thank You Falettin Me Be Mice Elf Agin* (1969): almost the entire song (the exception being the short interludes after each chorus and before the following verse) occurs over the same bass vamp (even the melody in the verses sticks closely to the bass vamp). As such the focus of the music is on the rhythm and sense of groove created by the vamp played by the rhythm section. The purpose for this emphasis on rhythm and groove is to make people dance. Steven Pond, writer of *Head Hunters: The Making of Jazz's First Platinum Album*, attests to this, writing:

"Funk recordings live or die on their dance grooves. The groove, structurally a matrix of ostinato figures, is built to coordinate with funk dance steps... The ostinatos, short, repeated melodic cycles of one- or two-measure duration, creatively combined as dance grooves, put bodies onto the dance floor." (Pond, 2010).

This description of danceable funk grooves can also be applied to *Chameleon*; with its multiple extended vamp sections which are always built up slowly, one instrument at time. This gives the listener time to become accustomed to the groove and maybe even cause them to bob their heads or dance.

The final notable feature of the form would be the two extended solo sections that Hancock takes. If one were to listen to a jazz record it would be safe to assume that it would contain an instrumental solo of some kind; the same could not be said for a funk song. For example, *Thank You...* by Sly Stone is a funk song that has no instrumental solo sections at all, whilst

Super Bad by James Brown (1970), has a sax solo in the middle of the song. As such, extended soloing could be part of what Hancock is referring to when he states:

“When I did Head Hunters I was trying to make a funk album, not a jazz album.

Not anything having to do with jazz. But as it developed it became what it was.

So I let it be what it was.” (Fellezs, 2011).

Hancock did not necessarily intend for jazz to hold such an influence over the album, but this happened anyway; as evidenced by the two extensive improvised solos that Hancock takes. This result is understandable when you consider that Hancock had spent most of his career before making the *Head Hunters* album being primarily known as a jazz musician.

Ensemble

Hancock’s rationale for leading a band and choosing the musicians for *Head Hunters* is one that is rooted in his experience playing with Miles Davis, and as such a jazz sensibility. Davis’ style of leadership amounted to hiring the musicians he knew would play in a way he liked, and then giving them mostly free rein to make their own playing decisions in live musical situations. To this effect, the bands Davis’ put together were truly collaborative. Regarding the band that recorded the album *E.S.P.* (1965) with Davis (which Hancock was a part of), Davis said: *“I didn’t have to write for the band; all I did was arrange the music in a way we could play after they wrote it, put the finishing touches on it.”* (Pond, 2010). When asked on whether Davis’ had an influence on his leadership style, Hancock agreed.

“Steven Pond: I’m gathering that your style of leadership has taken some lessons from Miles as well. In the sense of who you collect into the same room together and the kinds of directions that you give.

Hancock: *Yeah, yeah. That too.*" (Pond, 2010)

Hancock then elaborates, mentioning that the avant-garde music on *Mwandishi* (1971) required *"a more empathetic kind of playing"* between the musicians; and that with *Head Hunters* *"...the core of the spirit of constantly trying to find a new way of doing things was still there... That's a part of what I got from Miles's band that I want to keep..."* (Pond, 2010).

The personnel for *Head Hunters* consisted of Hancock on Fender Rhodes, clavinet and synthesizers, Bennie Maupin on tenor saxophone and woodwinds, Bill Summers on percussion, Paul Jackson on electric bass and Harvey Mason on drums. This ensemble could simply be dismissed as a jazz quartet with electronic instruments, plus a percussionist. However, I believe a more insightful way to investigate the group would be to see what each member brought to the musical fusion that was *Head Hunters*.

Hancock stated that he wanted to create a funk album, and due to his desire to hire musicians who needed little direction to play in the ways he liked (much like Miles Davis), it makes sense that Hancock hired funk musicians to make up the core of the rhythm section for his new band. Dr. Patrick Gleeson, who played synthesizers on the album *Crossings* (1972) and became a part of Hancock's then septet, confirms this stating:

"[Hancock] was relying on the fact that Harvey [Mason] was playing as a groove player... and that Paul [Jackson] was basically a rhythm-and-blues guy. And that they would therefore have that. And I think...that Herbie [Hancock] would have in mind the kind of music he wanted to make, and then he—just like you cast parts—he would cast guys that would do that. And therefore [he would] never have to [correct them]." (Pond, 2010)

The reasoning behind hiring Mason and Jackson is clear; Hancock wanted to make a funk album and so hiring players who could create an excellent funk groove was paramount.

Bill Summers started playing percussion at the age of twelve and, with an interest in West African ritual drumming traditions and Afro-Cuban music, joined the music program at the University of California Berkley studying ethnomusicology. What Summers brings to *Head Hunters* is a deep African influence, not just to the groove that he, Jackson and Mason collectively helped create, but also to the rhythmic language used throughout the album by all the musicians.

“Summer’s influence can also be felt in the Africanized composite rhythms and percussive playing style that suffuse the album. That is, not only can Hancock’s playing of the clavinet as a percussion instrument be attributed to his attraction to the guitar line in James Brown’s recordings, but it is also a response to the African and Afro-Caribbean playing of Summers throughout the album,” (Pond, 2010).

While Summers’ influence on the sound of *Head Hunters* is clear, he can only be heard on the album version of *Chameleon* during Hancock’s second solo (starts at 8:32), although more of his playing can be heard on live versions (Tuna, 2011).

Bennie Maupin was the only player that Hancock brought over from his former sextet/septet that played on the *Mwandishi*, *Crossings* and *Sextant* albums. Maupin is the only other player, apart from Hancock, who comes from a mainly jazz background; having played with hard bop players such as Horace Silver, Lee Morgan and Roy Haynes and with Miles Davis on the seminal album *Bitches Brew* (1970). Based on Hancock’s preference for

choosing musicians based on their characteristic playing styles, Maupin was hired to bring his jazz influence, sound and experience to the album. Pond attests to this writing:

“... the presence of Maupin, whose background included various jazz styles but comparatively limited experience in funk, ensured that the album would not abandon Hancock’s basic jazz orientation.” (Pond, 2010)

Pond then provides the example of Maupin’s soprano saxophone solo on the track *Sly* from *Head Hunters*; likening it to the avant-garde sound of saxophonist John Coltrane.

“Additionally, Maupin’s meta-melodic gestures—particularly the ‘sheets of sound’ runs, silences, and altissimo squeals—use the language of avant-gardism, and the emphasis on modal scales furthers the accord of modal jazz with avant-gardism that stands as a hallmark of Coltrane’s middle and as theme of Davis’s Bitches Brew.” (Pond, 2010).

From this we can gather that for *Head Hunters* album, Hancock wanted the avant-garde sound that Maupin had utilised on Davis’ *Bitches Brew* and on Hancock’s own albums. Ultimately, the collective group of musicians that made *Head Hunters* were not chosen to simply play pre-written musical parts, but rather, were chosen to use their cultivated musical tastes and talents to create and contribute their own musical parts.

Timbre, Texture & Instrumentation

The actual sound characteristic of music, otherwise known as timbre and texture, has an equal if not greater effect on the music than the notes themselves. If you were to listen to the same piano voicing played on piano, Fender Rhodes, clavinet with auto-wah and synthesizer (audio of this can be heard on **track 4 of the Appendix C audio CD** on page 124)

you'd notice that each instrument sounds vastly different, despite the chords being made up of the same notes. In the case of *Chameleon*, timbre and texture amounts to the unique sonic characteristics that place it closer to the funk genre than jazz. The use of electric instruments such as bass guitar, Fender Rhodes, Clavinet and synthesizers contributes greatly to the unique sound characteristic of *Head Hunters*. Both the choice of instruments and how they are played affect timbre and texture, and the following analysis will show how these elements were chosen to create a specific musical effect.

Drums

The character of the drums on *Chameleon* could be described as 'dry', 'dead', muffled, tuned-low, and with a 'thuddy' bass drum. There is both a musical and a historical reason for these characteristics. The low tuning of drums was a trend during the seventies for funk music; as can be heard on funk group *Kool & the Gang's* song *Hollywood Swinging* (1973). Comparatively, the sound of a bebop jazz drum set could be described as 'open' or 'ringy', with the drums being tuned relatively high. A good example would be drummer Max Roach's kit on the track *Take the 'A' Train* on the album *Study in Brown* (1955). The reason for this high tuning has to do with the fact that the bebop style was generally played without amplification in small venues, and as such the drums would be tuned higher, with the batter side drum head tuned above the resonant head, in order to project the sound of the drums to the audience more effectively (Maxwell, 2015). The higher tunings in bebop drumming also allowed for melodies to be imitated and played around the kit; as jazz drummer Daniel Glass attests.

"This allowed [bebop] drummers like Max Roach and Kenny Clarke to be more melodic ... They could [listen] to these new complex bebop melodies ... and they

could play those melodies themselves using the very small kick drums and the snare drums.” (Glass, 2014).

For the funk music of the sixties and the seventies, melodies were not usually played by the drums, nor were the drums unamplified when performing live; so there was no need for high tunings that projected sound to the audience.

A historical reason for the dry and ‘muffled’ drum sound was the recording environment where *Chameleon* was recorded. In the seventies, the trend at the time was for recording rooms in studios to use a large amount of sound absorption, which ultimately resulted in a ‘dry’ sound from recorded instruments without much reverberation or ‘room tone’. Frank Catero, the recording engineer for *Head Hunters* explains this.

“...remember, [the album Head Hunters] was done in the seventies. And in the mid-seventies, it[the trend] reached its peak of deadism. I mean studios were made like clothes closets. You know, full of fur coats... And the idea—it was all born of necessity. It was born of the rock necessity to have no leakage. And so the attempt was to design studios that sucked up as much sound as possible, so there would be no resonance possible in the room, so that it could be as ‘dead’ as possible. In addition to which, they had just discovered all these wonderful reverbs and flangers... and if there were some kind of resonance in the room, and then you tried to add reverb, it sounded kind of weird. So by having the instruments without any resonance whatsoever, then you could add your own. That was the concept of these studios... David Robinson [the producer for Head Hunters] ... didn’t want the drums to have any resonance whatsoever. And so you get this very dry, dead sound. But as producer that’s his choice.” (Pond, 2010).

Ultimately the muffled drum sound on *Chameleon* was a decision by producer David Robinson while also being a sign of the times in which the album was recorded. However, the muffled sound also yielded additional production choices in the creation of the recording.

A possible musical side effect for the dry, muffled sound of the drums is that it allows for the intricacies of the parts played, both by the drums and the other instruments, to be more easily distinguished within the music. This suits the very rhythmic and groove-driven aspect of funk music. When listening to *Chameleon*, note the use of the hi-hat as the main timekeeper on the drum set, as opposed to *Take the 'A' Train* played by Max Roach, where the ride cymbal is heard fulfilling this role, as is common in bebop. In the rhythmic, groove and funk-oriented music of *Head Hunters* the long sustain of the ride cymbal would not only obscure the other instruments, but also be less effective at establishing a groove than the short staccato sound of the hi-hat. The use of a closed hi-hat as timekeeper is commonplace in funk and can also be heard on other funk songs like *Thank You...* by Sly Stone and *Super Bad* by James Brown. As such the use of hi-hat here indicates the sound of *Chameleon* being more funk-oriented than jazz oriented.

Electric Bass

The use of electric bass on *Chameleon* and *Head Hunters* instead of upright bass is a significant indicator that Hancock was trying to achieve a more funk-influenced sound, due to the electric bass's widespread use in the rock, pop and funk music of the seventies. However, the role that the electric bass plays during the main vamp of *Chameleon* is uncharacteristic for a bass instrument in both funk and jazz.

While the main vamp is played by a synth bass loop, the electric bass plays a syncopated ostinato pattern high in its register as shown in **Figure 4** below.

Figure 4: Bass Guitar Ostinato on Chameleon (1973)

Example A - Main Vamp Bass Ostinato - 0:31



This pattern is reminiscent of something an electric guitar might play on a James Brown song, like *Give It Up or Turnit a Loose* (1969)(shown in **Figure 5** on page 24), so much so that one might mistake this pattern as being played by electric guitar instead of bass.

Figure 5: Electric Guitar ostinato from 'Give it Up or Turnit a Loose' (1969) by James Brown; Charles Bobbit

Give it Up or Turnit a Loose

James Brown; Charles Bobbit



Since the typical role that the electric bass would take is being fulfilled by the looped synth bass (**Figure 6** on page 25), it is likely that the electric bass needed a part and so imitated a 'James Brown-esque' guitar pattern.

Figure 6: Main Bass Vamp for Chameleon (1973). Played on synth.



If one were to try and play this same part on upright bass, the person playing would have a difficult time. This is due to the design differences between upright bass and electric bass, that make electric bass more suited to this style of playing. Firstly, it takes more force to play a note on the upright bass than it does on the electric bass. This is due to the length of the strings on an upright being much longer than those of an electric bass; the string length for a $\frac{3}{4}$ size upright bass being approximately 106 cm and the length for a long scale 34-inch electric bass being approximately 86 cm (Mottola, 2018). Secondly, there is a greater distance between notes on the fingerboard of an upright bass than the fretboard of an electric bass. This makes playing the fast, syncopated and staccato ostinatos and basslines (such as **Figure 4** on page 24, **Figure 7** below & **Figure 8** on page 26) heard on *Chameleon* difficult. Audio samples of these bass lines can heard on **tracks 1 through 3** of the **Appendix C audio CD** on page 124.

Figure 7: New Bass Guitar Vamp before Hancock's 2nd Solo on Chameleon (1973)

Example B - New Bass Vamp - 7:42



Figure 8: New Bass Guitar line for Hancock's 2nd Solo from Chameleon (1973)

Example C - 2nd Solo Bassline - 8:33

♩ = 114



For Example A (notation in **Figure 4** on page 24), the upright bass does not have the range to play in as high a register as the electric bass (and so plays the part an octave below). In this attempt, the upright bass does not manage to imitate the sound of a palm-muted electric guitar, and so is unable to evoke the same ‘James Brown-esque’ feeling that the electric bass does. For Example B (**Figure 7** on page 25) and Example C (**Figure 8** above) the upright bass fares better. For these bass lines the electric bass was fulfilling the instrument’s intended role and so the upright bass does not have any trouble doing the same. However, this does not discount the fact that the upright bass cannot perform the same function as the electric bass in some situations, as in Example A (**Figure 4** on page 24). These differences and shortcomings from the upright bass mean that the electric bass is much more suited to the rhythmic, syncopated and funk-influenced sound of *Chameleon* and *Head Hunters*.

Electric Keys & Synthesizers

Hancock uses a variety of electric keyboards and synthesizers throughout *Chameleon*. These are listed below.

- Fender Rhodes
- Clavinet
- ARP Odyssey synthesizer
- ARP Soloist synthesizer

(Hancock, 1973)

As has already been mentioned, the main bass vamp that serves as the basis for *Chameleon* (as seen in **Figure 6** on page 25) is doubled on two synthesizers (Pond, 2010). The combined sonic result of the two synthesizers playing the same part are bass notes with a short, staccato quality to them, with a slight ‘wah-like’ effect on the note which causes it sound ‘warbly’. While this same vamp could have easily been played on electric bass, the combined sound of the two synthesizers gives *Chameleon* a unique and instantly recognisable sound. Its importance can be confirmed by the fact that it is the first instrument that we hear on the track; which also suggests that the vamp was the first musical idea that Hancock wrote; thus, becoming the core for the entire composition.

The **clavinet** is used by Hancock as a comping instrument during the head of *Chameleon*, on his first solo and before his second solo. The clavinet has also had its sound altered with the use of an ‘auto-wah’ effect. The manual ‘wah’ effect had been famously used by psychedelic rock guitarist Jimi Hendrix (and can be heard during the introduction of his song *Voodoo Child* (1968)) and was variably applied to his guitar sound using a rocking foot pedal.

Hancock uses an automated version of the ‘wah’ effect that activates every time the sound

outputted from his clavinet passes a specified volume threshold. The unaltered clavinet (as can be heard on Stevie Wonder's *Superstition* (1970)) has a sharp, percussive and twangy quality that fits in well with the rhythmic grooves of funk, and at times is reminiscent of the sound of funk electric guitar (e.g. the guitar on James Brown's song *It's a New Day* (1970)). As such it can fulfil a similar role to that of funk guitar as a comping instrument; using its sharp attack to make short, syncopated chordal stabs (see **Figure 9**).

Figure 9: Clavinet comping pattern during the main vamp for *Chameleon* (1973) (Pond, 2010)



Using the auto-wah effect on the clavinet softens its sharp attack slightly and adds a 'warbly' character to the sound; helping the instrument blend with the rest of the band. Blending the clavinet with the band is desirable since Hancock only comps with it; never using it to solo.

For Hancock's first solo on *Chameleon* (at 4:04) he uses the clavinet for accompaniment and a synthesizer to solo. The synthesizer has a similar wah effect applied to it like the clavinet, but in addition has a large amount of reverb affecting its sound. This added reverb is in stark contrast to the rest of the instruments playing during the solo, which are all relatively 'dry' (have little reverberation). This draws the attention of the listener to Hancock's reverb affected synthesizer solo. In addition, Hancock alters the sound of his synthesizer while he solos; changing the pitch after a note has been played (with a pitch wheel), adding a delay effect to create artificial echoes, and altering parameters on his synth to change the character of the sound. Many of these effects and techniques are not possible on a regular

piano. Once you strike a note on an acoustic piano there is not much you can do to change the sound; for synthesizers this is not so.

For Hancock's second solo (which starts at 8:32), he switches to the Fender Rhodes for both comping and soloing. The physical method of sound production used by the Rhodes is analogous to a piano; using hammers which strike metal tines (instead of strings) which in turn excite resonating tubes which are electronically amplified to produce sound (Warner, 2017). Despite the mechanical origins of the sound of a Rhodes, compared to a piano it has a softer attack and a warmer, fuller sounding sustain (as can be heard in on **track 4 of the Appendix C audio CD** on page 124). This more piano-like tone enables Hancock to play more pianistic, jazz like soloing ideas (**Figure 10** on page 29, note the flowing semiquaver lines); as opposed to his first solo on the synthesizer which mainly focusses on the real-time sound altering capabilities of the device.

Figure 10: Start of Hancock's 2nd solo (8:32) on Chameleon (1973). Transcription by Bert Ligon (Ligon, n.d.)

The musical transcription shows the beginning of Hancock's second solo. It is written in 3/4 time and the key signature has three flats (B-flat major). The first staff starts with a treble clef and a common time signature 'C'. Above the staff, the chords $Bbm9$ and $Abm9/D^b$ are indicated. The music consists of flowing semiquaver lines with some triplet markings. Measure numbers 1, 5, 9, and 12 are marked at the beginning of the first, second, third, and fourth staves respectively.

The synths used by Hancock did not have key velocity (pressure sensitive keys) like most electric keyboards do today; instead the volume of a note would be adjusted by the various control knobs (KORG Global, 2019). As such, playing piano-like phrases and melodies which rely on varying key velocities and dynamics are not possible on the synthesizer.

Alternatively, the Rhodes does have key velocity, with it being a physical instrument that has been amplified; with the character as well as volume changing depending on how hard a key is struck. This makes the Rhodes well suited to the more dynamic, piano-like soloing that Hancock utilises for his second solo.

Over the top of certain sections of this second solo, Hancock has overdubbed string-like synthesizers in order to enhance moments of tension and release (these can be heard at 9:05, 10:44 and 11:36). In addition to creating tension and release, the synths add an additional 'string-like' texture to the music, giving a sense of orchestral grandeur at high points and adding tonal variation to help keep the listener interested. Hancock learnt this technique from working with Patrick Gleeson, and the contributions Gleeson made on Hancock's album *Crossings* (1972). Much like Hancock on *Chameleon*, Gleeson used multi-track recording to record his synth parts over the band's already recorded performance (Pond, 2010). Hancock became incredibly interested in the use of such technology, which ultimately effected the *Head Hunters* album, as Bill Summers attests.

"...what happened with Head Hunters, what Lee Morgan and the others did not have before was electronics. That's what made the difference, Herbie coming up after his being influenced by Pat Gleeson." (Pond, 2010)

When asked about the use of overdubs, Hancock confirms their use, but emphasises his role in recording live with the band as well.

Steven Pond: And you recorded more or less live? Well, you recorded it live with some synth overdubs, I guess.

Hancock: Yeah, with synth overdubs. We had the whole rhythm section live. I did all the clavinet parts live.” (Pond, 2010)

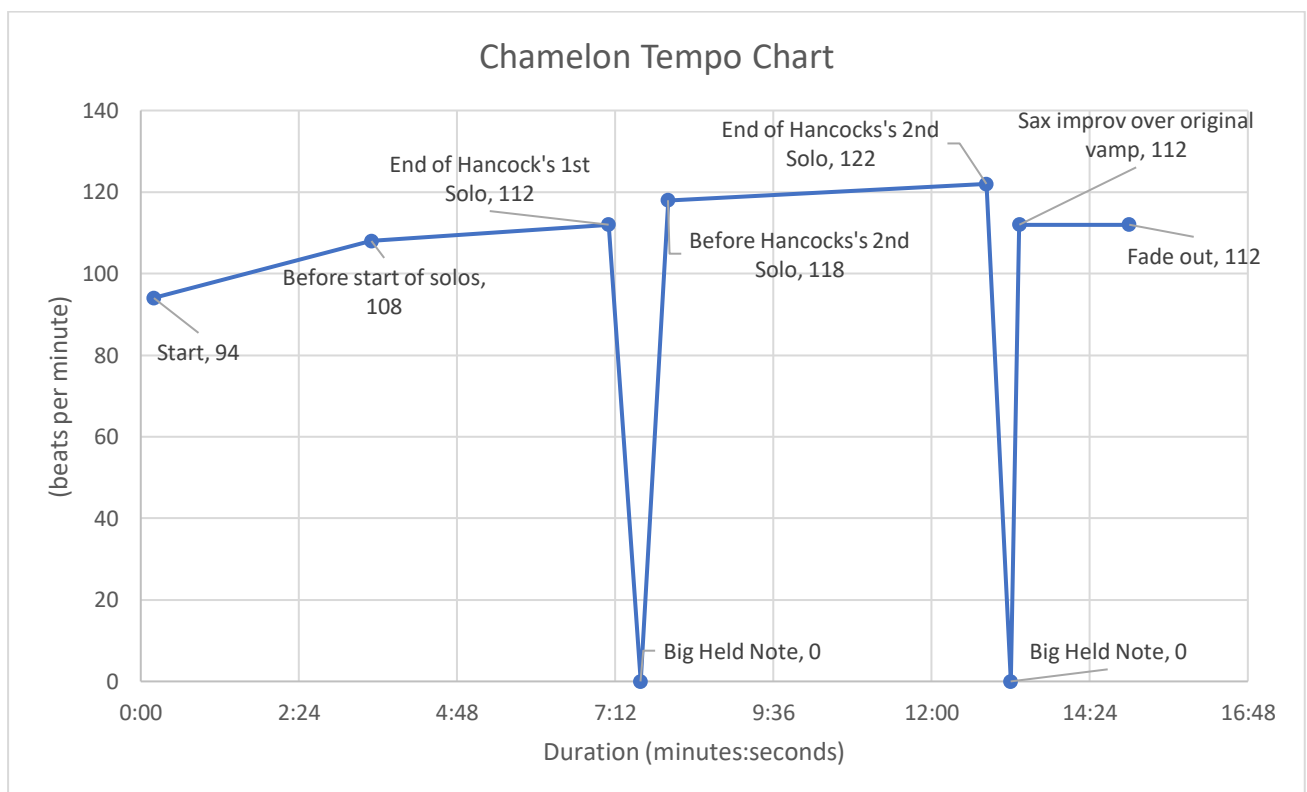
Hancock’s use of synths adds to the sonic palette of *Chameleon* and helps to create a sound that was previously unattainable with a live quartet with percussion.

As has been discussed, the choice of instruments had a significant impact on the sound of *Chameleon*; helping to create the signature sound characteristic for which the track is known.

Tempo

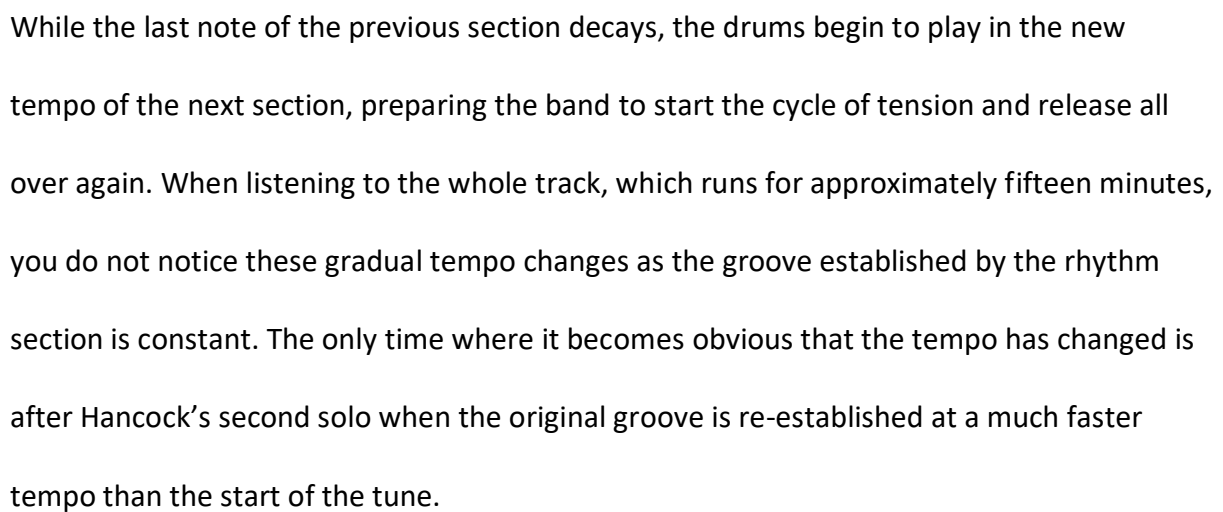
The use of tempo in *Chameleon* results in three effects: the first being a gradual increase in tension and energy as a section progresses, the second being the releasing of that tension at the end of a section before the next begins the cycle all over again, and the third being the character that different tempos impart on the music. A chart of the tempos present in *Chameleon* can be seen in **Figure 11**.

Figure 11: Tempo chart of *Chameleon* (1973)



Instances of this cycle of tension and release can be seen in **Figure 11** from the beginning of the track (0:00) till the end of Hancock's first solo (7:38) and from the beginning of Hancock's second solo (8:31) till its completion (13:16). The sense of tension in these sections is created by the gradual increases in tempo throughout. For both examples, the rhythm section is maintaining the groove while gradually increasing the tempo until the very

Figure 12: The fragment of the B section that is played at the end of a section or solo in Chameleon.



33

new groove that is more suited to this faster tempo (**Figure 7** on page 25 & **Figure 8** on page 26).

A final aspect worth noting, is that the tempo changes that occur after the ends of both of Hancock's solos weren't necessarily recorded in the same take and are likely to have been edited together after the fact. Recording engineer Frank Catero explains this:

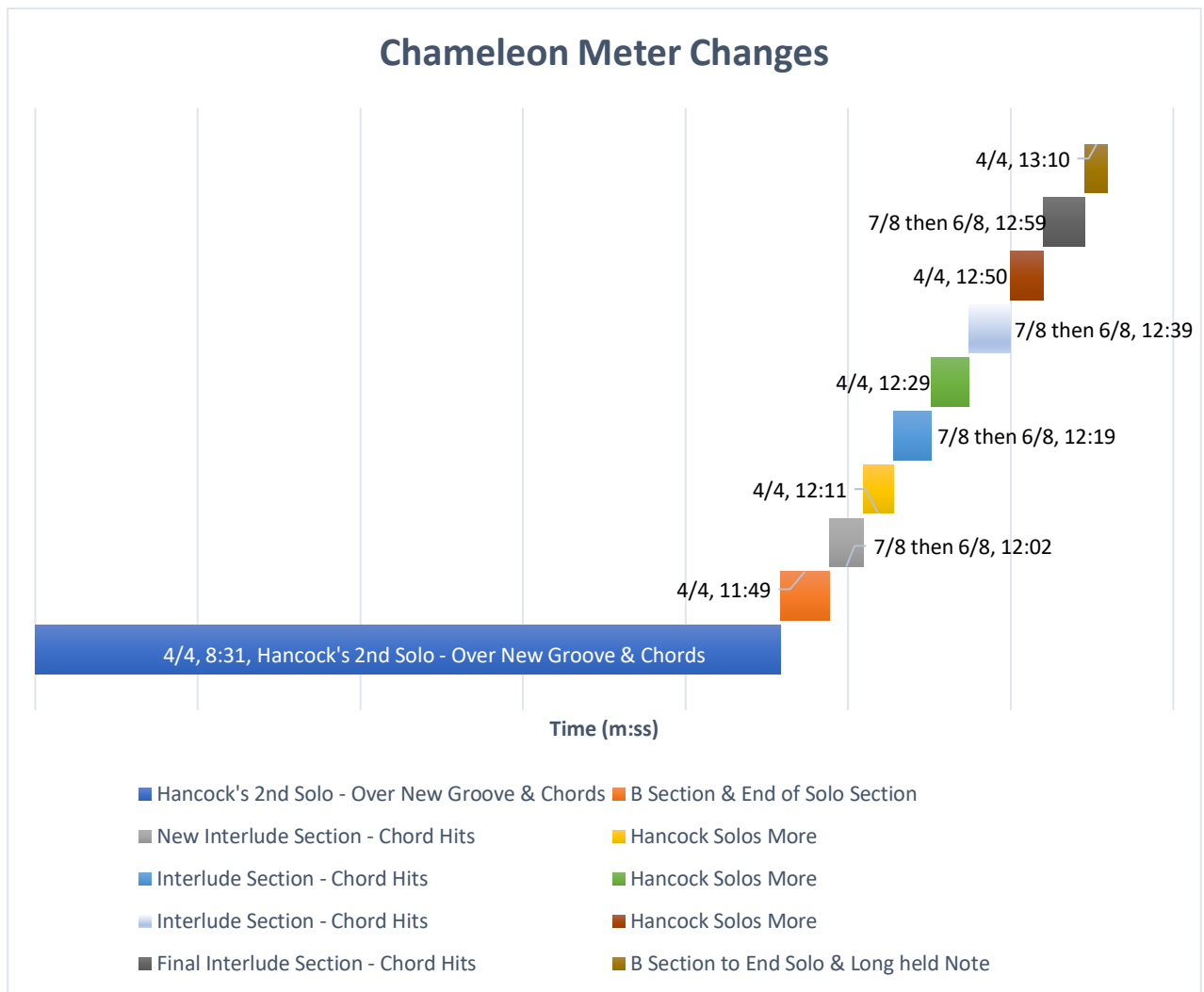
"[Hancock] generally knew what he wanted. It was just a matter of that it was expedient for him to keep recording and take the best groove, rather than just do it from beginning to end and then keep doing a bunch of takes...Because that's another way to do it... But [Hancock] didn't do that. A lot of times he would do one or two takes, and they were 'longies,' and then he'd edit." (Pond, 2010)

So rather than record the whole performance in one take, the final version of *Chameleon* was spliced together using the best sections from multiple takes. The long silences after the held notes at the ends of Hancock's solos are perfect opportunities to cut between separate recorded takes. This can also explain why the tempo changes between sections are so prominent; because they were different recorded performances altogether. Whilst the tempo changes might have been a side-effect of the editing process used by Hancock to create the final version of *Chameleon*, they still have the musical side effect of creating effective cycles of tension and release.

Meter

Most of *Chameleon* is in a 4/4 meter, the most common time signature in western music, including jazz and funk. There are however four instances where the time signature changes during the song (as shown in **Figure 13** on page 35).

Figure 13: Chameleon Meter Changes



All of these occur towards the end of Hancock's second solo. The first meter change occurs at approximately 12:03 where there is a bar of 7/8, followed by four bars of 6/8, after which the meter returns to 4/4. The rest of the meter changes follow a similar pattern, with a bar of 7/8 followed by seven 6/8 bars before returning to 4/4. These meter changes occur at 12:19, 12:39 and 12:59 (a transcription of this can be seen in **Figure 14** on pages 36 to 37).

Figure 14: The end of Hancock's 2nd solo. Transcription by Bert Ligon & Tom Grady

Chameleon - End of Hancock's 2nd Solo

Rhodes

(12:03)

♩ = 122

Transcription by
Bert Ligon & Tom Grady

F#m11 F13(#5)/A Dmaj7/Eb D7(b13) Abm9

6 Bbm9 Abm9/Db Bbm9 Abm9/Db

10 Bm9 Cmaj7/D Bbmaj7/C

13 E(sus2)/F# Bbm9 Bm9 Am9/D

17 Abm9/Db Bbm9 Abm9/D

20 Bbm9 Abm9/Db Bm9

V.S.

2

Rhodes

23

Cmaj7/D Bbmaj7/D E(sus2)/F# Bbm9 Bm9

28

Am9/D Abm9/D Bbm9

31

Abm9/D Bbm9 Abm9/D

34

Bm9 Cmaj7/D Bbmaj7/C E(sus2)/F# Bbm9 Bm9

40

Am9/D

Figure 15: Groove and chords behind Hancock's 2nd solo in Chameleon

6

30

Solo
Bbm¹¹

E. Piano

Syn. Str.

Bass

Dr.

Bbm¹¹

D^b13(sus)

Figure 16: Hancock's 2nd Solo Comping Voicings

Bbm¹¹

(Abm9/Db)
D^b13(sus)

Bbm¹¹

(Abm9/Db)
D^b13(sus)

Each of the 6/8 bars have the rhythm section play a different chord held for the length of each bar. The groove has stopped by this point, so the listener has no easy way to keep track of the pulse. The meter changes in combination with the held chords create a feeling of both the time and pulse being obscured; suspended momentarily before returning when the meter changes back to 4/4 and the groove from the rhythm section resumes. By the time these meter changes start to occur, the listener has become so used to the groove of the rhythm section in the 4/4 time feel that the sudden switch to 6/8 feels foreign (with the 7/8 bar initiating the transition). The switch in metre in conjunction with the ensemble hits being played generate tension that keeps growing the longer the 6/8 metre is held, until the

tension is eventually released when the original groove and chords in 4/4 return. This simple metre change, in combination with the chords and ensemble hits create the high point in terms of energy and intensity for the composition and are the most memorable moments of the entire piece. The effect that these meter changes have is one of exceptional tension and release. Tension is created when the meter changes from 4/4 to 7/8 and then immediately to 6/8, and tension is released when the meter switches back to 4/4 and the groove from the band resumes. This effect is further intensified by the fact that this series of meter changes repeats four times, with Hancock and the band leaving only a few bars of 4/4 between these transitions for the listener to try and settle in with the groove before it's pulled away from them again. This use of changing meters by Hancock may be simple, but it has a significant impact on the music at this point.

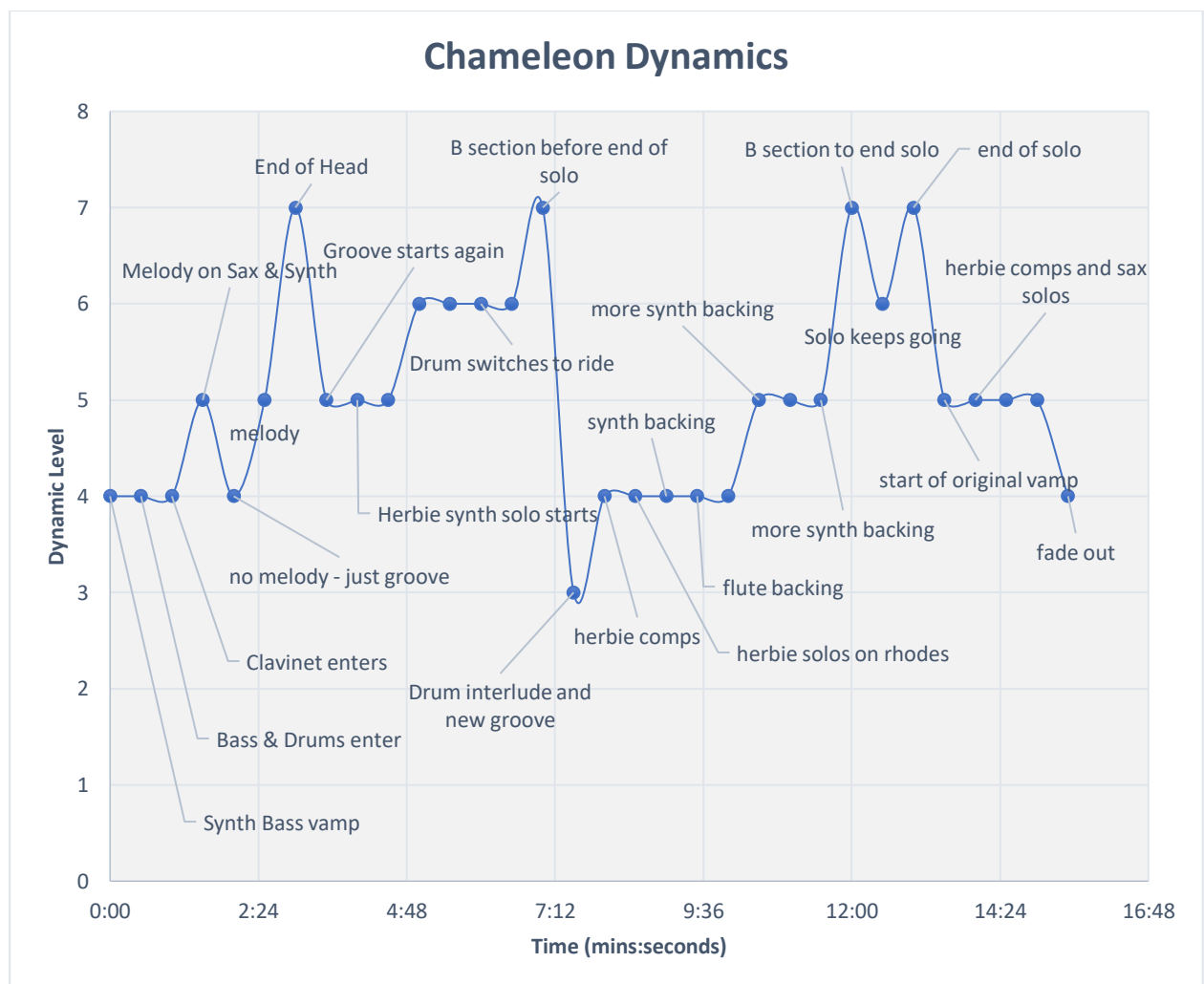
Dynamics

The use of dynamics can be seen throughout *Chameleon* as seen in **Figure 17** below.

Figure 17: Dynamic Chart for *Chameleon*.

Note: Dynamic level goes from 0 to 10.

0 = silent, 1 = piano, 3 = mezzo piano, 5 = mezzo forte, 7 = forte, 9 = double forte, 10 = fortissimo



From the chart we can see multiple cycles of tension and release over individual sections of the form. Note that the dynamic climaxes that occur at the end of the first head (3:00), towards the end of Hancock's first solo (7:00) and towards the end of Hancock's second solo

(12:00 & 13:00). Before these climaxes the dynamic and intensity builds slowly throughout each section, with the sustained groove assisting in creating tension. At the end of each section the climax occurs before the dynamic falls to a low level and then starts to build all over again in the next section.

The end of Hancock's second solo on Fender Rhodes is worth noting. The first half of the B section is played to signal the end of his solo (11:49), but instead of ending the solo the band goes into a new interlude, after which Hancock solos again. A back and forth of Hancock soloing and then playing the interlude repeats three more times, the dynamic and intensity reaching greater heights on each repeat, delaying the much-desired resolution of Hancock's solo to the listener. The interlude is played for the last time before the first half of the B section to end the solo plays. The dynamic falls and the tension is released.

Another use of dynamics to note are the smaller, 'micro' cycles of tension and release that occur within both of Hancock's solos beneath the overarching dynamic rise. The peaks of these smaller cycles occur when backing synths start to play, with the release coming when they stop. These smaller cycles accumulate to create the greater overall cycle of tension and release for their respective sections within *Chameleon*.

Although there are no dramatic or rapid changes of dynamics in *Chameleon*, the smaller, 'micro' cycles of dynamic tension and release that occur throughout, and the gradual dynamic increase work together to create a significant musical effect on the composition.

Harmony

The majority of *Chameleon* occurs over a Bbm7 to Eb7 vamp. With the key signature being Bb minor or Bb Dorian, this amounts to a $i^7 - IV^{M7}$ progression in Bb minor (see **Figure 18**).

Figure 18: Head for Chameleon. Transcribed by Ville V. (Ville V., 2009)

The musical score for the head of *Chameleon* is presented in two systems, A and B. Section A is marked 'BASS & DRUMS AS IN INTRO' and features a 4/4 time signature. It begins with a Bbm7 chord, followed by a sequence of chords: Eb7, Bbm7, Eb7, Bbm7, Eb7. Section B is marked 'B' and also features a 4/4 time signature. It begins with a Bbm7 chord, followed by a sequence of chords: Eb7, Bbm7, Eb7, Bbm7, Eb7. The score includes a first ending (1. Bbm7) and a second ending (2. N.C. UNIS.) leading to a 'FINE' marking. A 'DRUM FILL' is indicated with a dashed line and a final drum note.

This could also be potentially thought of as a $ii^7 - V^7$ chord progression in the key of Ab Major; however, the end for each B section clearly resolves to the Bb minor chord (with the whole band playing a Bb in unison), effectively treating it as the tonic. This indicates that the tonality, at least for the head of *Chameleon*, is Bb minor.

However, if we entertain the thought of a $ii^7 - V^7$ progression (which is essentially just a $ii^7 - V^7 - I^{M7}$ progression the most common chord progression in jazz (Levine, 1995) without the resolution back to the I^{M7}) there are further musical insights that we can glean. In comparison to an average funk song which uses very few chords, *Chameleon* uses a greater

variety and number of chords; with two chords used during the head and many more during Hancock's second solo (see **Figure 14** on page 36). For example, *Thank You* by Sly Stone uses only two chords, E minor and E7#9 (see **Figure 19**).

Figure 19: Main Groove played for the whole of Sly Stone's *Thank You* (Falettinme Be Mice Elf Agin)

The image displays two identical musical staves for the main groove of Sly Stone's 'Thank You'. Each staff system includes three parts: Electric Guitar (E. Gtr.), Electric Bass (E. Bass), and Drums (Dr.). The key signature is one sharp (F#), indicating E minor or E7#9. The E. Gtr. part features a melodic line with a change in harmony from E minor (Em) to E7#9. The E. Bass part provides a rhythmic foundation with a repeating pattern. The Dr. part shows a simple drum pattern with 'x' marks indicating specific drum hits.

But if we simply compare the main groove from *Thank You* and the head from *Chameleon* we see that they are quite similar. Both are based around two bar minor pentatonic bass grooves, with *Chameleon* being in Bb minor pentatonic and *Thank You* being in E minor pentatonic. The use of the minor pentatonic scale is quite common in funk. Where *Chameleon* stands out is the use of what is essentially a $ii^7 - V^7$ progression to create tension and delay a harmonic resolution indefinitely, whereas a funk song might simply stay on one chord for a whole section (as is common in many James Brown songs e.g. *Super Bad* (1970)).

When you hear a $ii^7 - V^7$ chord progression you anticipate the resolution of the cadence to the I^{M7} chord. *Chameleon* never plays the I chord and simply repeats the progression over and over, never releasing the tension it generates. This harmony works in conjunction with the groove established by the rhythm section and helps the music maintain this tension and provide a sense of forward momentum.

The harmony of *Chameleon* changes for Hancock's second solo, with the $Bbm7$ to $Eb7$ vamp being replaced with a $Bbm11$ to $Db13sus$ (or $Abm9/Db$) vamp (see **Figure 14** on page 36).

The tonality seems to have changed to Ab Major with the progression being essentially a $ii^7 - IV^7$ progression. However, this progression gives the music a sense of never being at rest, with the switch to $Db13sus$ chord sounding like a modulation to a different key every time it is played, creating uncertainty about what exact key this is in. Because of this, I believe that this $Bbm11$ to $Db13sus$ progression is more likely to be a case of **parallel harmony (or parallelism)**, and as such functional harmony and chord scale theory are not fully equipped to analyse it.

Vincent Persichetti, author of *Twentieth-Century Harmony*, describes parallel harmony as:

"When all voices in a succession of chords move in the same direction, parallel harmony occurs...The term includes both strict parallel motion in which all the chords are identical in construction, and similar motion in which the chords change as the voices move freely but in the same direction. The direction and intervallic transposition may vary and be either real or tonal." (Persichetti, 1961).

He also makes the distinction between tonal and real parallel harmony. **Tonal parallel harmony** has movement that stays within the same key, where a $G7$ chord in the key of C

might move up a scale degree to become an Am7 chord or down a scale degree to become an FM7 chord. So, in tonal parallel harmony, the chords are simply moving up or down in scale degrees of the current key. **Real parallel harmony** means that the chord construction between the start and destination chords are of the same intervallic construction. For example, a G7 chord moving up a tone would become an A7 chord and moving down a tone would become an F7 chord. Persichetti also states that:

“Real parallel harmony has a tendency to sever connection with any one key and may be used as a means of entering and leaving atonality. This kind of harmony functions freely in modularity transitions and in thematic statement where tonality is meant to be obscure (Persichetti, 1961).

This description seems to fit *Chameleon’s* Bbm11 to Db13sus (or rather Abm9/Db) progression very well, with the progression sounding like a modulation, being tonally uncertain and with a minor 3rd upward root movement. The overall effect of this is to create tension and maintain it, similar to the Bbm7 to Eb7 progression in the head of *Chameleon*, but with a different chordal colour altogether.

Parallelism is also used later in Hancock’s 2nd solo during the multiple 6/8 interludes (see **Figure 14** on page 36). The use of parallelism is clear when looking at the multiple minor 9th chords and suspended chords that are played in succession within close intervallic proximity of one another (see **Figure 14** - Bars 10 to 16. This pattern of chords is repeated at bars 22 – 28 and bars 34 - 40). With the use of these parallel chords there is no fixed key centre and they amount to rapid changes in chord colour and texture, ramping up the musical tension and energy. These chords in combination with the meter change to 7/8 and 6/8 create the climax of Hancock’s solo, and also the entire composition.

Rhythm

The first rhythm of note is the synth bassline that underpins the majority of *Chameleon* (see **Figure 20**). As this bassline repeats, the other members of the band come in with their own parts, playing different overlaying and contrasting rhythms, eventually forming the basis of the groove for *Chameleon*. The rhythmic qualities of each instrument's part will be examined in this section.

Figure 20: Synth bass ostinato for Chameleon



The first element to notice within the synth bassline in **Figure 20** above is the three eighth-note long anacrusis that leads to beat one of bar one. The same 8th note walk-up happens again at the end of the first bar leading into the second. The walk-up to beat one gives beat one emphasis, and beat one is essentially the start and end of the bassline vamp that underpins the entire song. This emphasis on the beat one downbeat of each 4/4 bar is characteristic of funk music. Ricky Vincent, author of the book *'Funk: The Music, the People, and the Rhythm of the One'*, cites singer and bandleader James Brown as the first funk artist to place rhythmic emphasis on beat one of a bar.

"By turning rhythmic structure on its head, emphasizing the downbeat—the 'one' in a four – beat bar—the Godfather[James Brown]...started a new pop trend and made a rhythmic connection with Africa at the same time." (Vincent, 2014)

Figure 21: 3-2 clave highlighted in blue as part of the main synth bass ostinato in Chameleon

Figure 22: A 3-2 clave pattern.

Figure 23: The drum beat played with the main synth bassline in Chameleon.

The first system of the musical score for 'The Rose Tree' consists of two staves. The upper staff is a treble clef with a key signature of one flat (B-flat). It contains a melody of eighth notes: G4, A4, Bb4, A4, G4, F4, E4, D4. The lower staff is a bass clef with a key signature of one flat, containing a bass line of eighth notes: G3, A3, Bb3, A3, G3, F3, E3, D3. The melody and bass line are synchronized, with each note in the melody having a corresponding note in the bass line.

If we compare Mason's drumbeat with a basic funk beat we can see how Mason's beat matches an underlying 3-2 clave. The basic funk drum beat would have the bass drum on beats one & three, the snare drum on beats two & four and the hi-hat playing every quaver of a 4/4 bar (as shown in **Figure 24** below).

Figure 24: A basic funk drum beat.



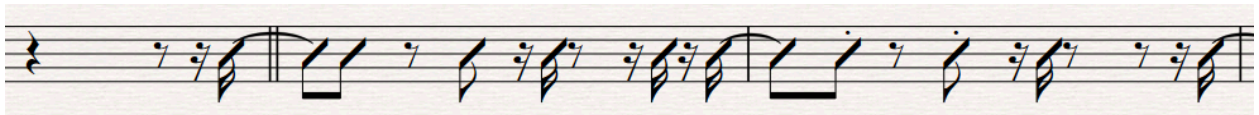
Instead of playing a beat such as this in *Chameleon*, Mason anticipates beat two by placing the snare hit on the last semiquaver of beat one, in unison with the bass vamp. Mason also places the bass drum on the second quaver of beat three. Notably, all the bass and snare hits line up with notes played by the bass vamp, reinforcing the underlying 3-2 clave.

The next element enter is the electric bass, high in its register playing what might sound like a palm-muted electric guitar riff. As the main vamp plays the bass player Paul Jackson plays variations of the backing figure played in **Figure 4** on page 24. The first element worth noting is the bent crotchet note on beat four of the two-bar pattern. With every other note in the two-bar pattern being either a quaver or semiquaver, this crotchet emphasises the downbeat of the next bar; with the emphasis on beat one being a signature characteristic of funk. This emphasis is created by a cycle of rhythmic tension and release, where syncopation is the main vehicle. Over the two bars the level of syncopation increases gradually, with notes played in the first half of the first bar landing on the crotchet beats,

notes played in the second half using more semiquavers and becoming more syncopated, and with the second bar of the pattern being almost entirely syncopated with no emphasis being placed on any of the crotchet beats before beat four; which sets up beat one of the next bar to release the tension that has been created over the two bar pattern.

The next element that enters the *Chameleon* vamp is Hancock comping with a clavinet. The general pattern that Hancock comps with over the main vamp can be seen in **Figure 25** below.

Figure 25: Comping pattern used by Hancock on clavinet during the main vamp on Chameleon.



Of note is the use of syncopation, with Hancock either avoiding or anticipating the main beats of the bar. The cadence of this pattern is similar to that of a clave that is prolonged slightly, however the pattern itself seems to be offset to start earlier and effectively anticipates what would usually be expected when playing a clave pattern. The 'clave-esque' pattern can be seen outlined in blue in **Figure 26** on page 49.

Figure 26: Clave-esque rhythms highlighted in Hancock's clavinet comping patterns during the main vamp for Chameleon.



The final rhythmic aspect to the *Chameleon* vamp would be the melody line played by tenor saxophone and synthesizer (see **Figure 27** on page 50).

Figure 27: Melody for the A section of Chameleon. (Ville, V. 2009)



Like the bass guitar ostinato pattern, the melody has the first half of its pattern landing on crotchet beats before the second half becomes more syncopated. In this case the second half of the melody anticipates the downbeats of bars three and four of the pattern (again showcasing syncopation and the emphasis of beat one). The rhythmic stresses of the pattern can be seen in **Figure 28** below, and clearly how the melody transitions from being tied to the beat to utilising syncopation.

Figure 28: Rhythmic stresses in the melody from the A section of Chameleon.



Next is the melody in the B section shown in **Figure 29** below.

Figure 29: Melody in the B section of Chameleon.(Ville, V. 2009)



The second half of the B section is effectively the same as the A section, with the first half containing some new rhythms. Note how the melody does not emphasise the downbeat on beat one in the first bar of the section. Instead; it emphasises beat two and then the 'and' of beat three using the same rhythmic figure before finally hitting beat one in the second bar of the section. In terms of tension and release, this deliberate avoidance of the downbeat

through syncopation creates tension, with the release arriving in bar two where beat one is played. This can be seen more clearly with the melody reduced to its main rhythmic stresses as seen in **Figure 30** below.

Figure 30: Main rhythmic stresses of the melody for the B section of Chameleon.



Once again, we can see how the melody uses syncopation, either avoiding or anticipating beats, thus creating cycles of tension and release. Further evidence of this can be seen in how each melodic phrase starts on an off-beat (see **Figure 31** below).

Figure 31: Highlighted phrases of the rhythmic stresses for the B section melody of Chameleon



The use of syncopation in the first half of the B section melody has a jarring effect on the listener. By the time the B section is first played (2:52) the listener has become used to the 'on the beat' melody of the first half of the A section, with it being repeated multiple times at this point in the recording. The syncopated first phrase of the B section would sound unexpected, creating a point of interest for the listener.

With all these parts combined, we ultimately end up with the rhythmically driving groove that is so well known. However, each player does not simply stick to their parts. In a usual funk song, such as *Thank You* by Sly Stone, once the groove is set, the players maintain and do not alter their parts. However, in *Chameleon* we hear all the players altering and improvising variations on their parts. Pond attests to this writing:

“The Headhunters group, while bowing deeply to the funk groove, struck a different path, based on their own sensibilities. The modus operandi of the group was to Signify[improvise] on the funk groove...these musicians could not turn their backs on the jazz aesthetic’s demand for improvisation,” (Pond, 2010).

This is a key part of what separates the funk-fusion of *Head Hunters* from both straight-ahead jazz and funk; the combination of the rhythmically intense funk groove and the free-spirited improvisation of jazz.

Melody

Saxophonist Bennie Maupin can be credited with contributing to the melody for *Chameleon* and mentions that his inspiration came from seeing people dance to funk music.

“I wrote that melody as the result of go[ing] to see the Wattstax concert in Los Angeles ... And I remember at the time, one of the dance steps that had... become popular was called the funky robot. So I was sitting there and I was just looking at these kids. When the music would start playing, everybody would start doing the funky robot... I was looking at their body movement. And I start to just hear in my mind melodies centred around that kind of movement. And that’s when the melody fragments for ‘Chameleon’ came into my head. I was just sitting there.” (Pond, 2010).

From this we can see that the melody for *Chameleon* was partially inspired by a popular funk dance in the early seventies, *the funky robot*, and demonstrates a clear funk influence in terms of the composition’s melody.

Harmonically speaking, the melody of *Chameleon* is simple. The entire melody is derived from the Bb minor pentatonic scale, as seen in **Figure 32** below (the *Chameleon* melody) and **Figure 33** below (the Bb minor pentatonic scale).

Figure 32: Melodic analysis of *Chameleon*.

Chameleon Melody

Herbie Hancock
Transcription by Ville V.

♩ = 94

A Bbm7 Eb7 Bbm7 Eb7

1 b7 1 b3 5 5 4 9 4 b7 1 b3 b7 1

M2↓ M2↑ m3↑ m3↓ M2↓ M2↓ m3↓ m3↑ M2↑ m3↑ M2↑

B Bbm7 Eb7 Bbm7 Eb7

5 4 4 b3 b3 4 b7 4 1 b7 5 5 4 9 4 b7 1 b3 b7 1

M2↑ M2↓ U M2↓ U M2↑ M2↓ P4↓ P4↓ M2↓ m3↓ M2↓ M2↓ m3↓ m3↑ M2↑ m3↑ M2↑

The figure shows the melody of 'Chameleon' in Bb minor, 4/4 time, with a tempo of 94 bpm. It is divided into two sections, A and B. Section A consists of 8 measures, and Section B consists of 8 measures. The melody is transcribed in treble clef. Above the staff, the chords Bbm7 and Eb7 are indicated for measures 1-2, 3-4, 5-6, and 7-8 respectively. Fingering numbers (1, b7, 1, b3, 5, 5, 4, 9, 4, b7, 1, b3, b7, 1) are written above the notes. Interval analysis (M2, m3, U, P4) is written below the staff. The notation includes various accidentals (flats, naturals) and a key signature of three flats (Bb, Eb, Ab).

Figure 33: Bb minor pentatonic scale.

Bb minor pentatonic

The figure shows the Bb minor pentatonic scale in 5/4 time, transcribed in treble clef. The scale consists of the notes Bb, Ab, Gb, F, and Eb. The key signature is three flats (Bb, Eb, Ab).

The use of the minor pentatonic scale is common to both jazz and funk, with their presence in the blues form in jazz being particularly commonplace. We can see this in **Figure 34** on page 54, with the blues composition *Bag's Groove* by Milt Jackson. Here the melody is made up entirely of the F minor pentatonic scale (see **Figure 35** on page 54).

Figure 34: Bag's Groove by Milt Jackson. A twelve-bar blues in the key of F.

Bag's Groove

Milt Jackson



Figure 35: F minor pentatonic scale.

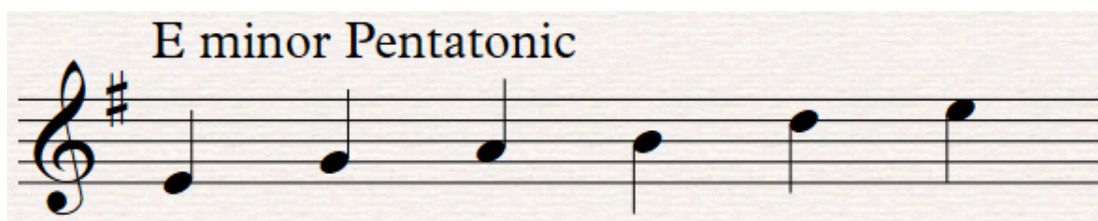


In funk we can see the use of the pentatonic scale in Sly Stone's *Thank You (Fallettinme Be Mice Elf Agin)* (see **Figure 36** on page 55) with the E minor pentatonic scale being used (**Figure 37** on page 55).

Figure 36: Melody for Thank You (Fallettinme Be Mice Elf Agin) by Sly & the Family Stone.



Figure 37: E minor pentatonic scale.



Another element of the melody is the use of intervals. In **Figure 32** on page 53 we see the melody for *Chameleon* with annotations. The red annotations indicate the notes' scale degrees in relation to the relative chord in effect and the blue annotations indicate the intervallic jumps between notes in the melody. By looking at the scale degree annotations in red, we see how the minor pentatonic scale fits over the Bbm7 and Eb7 chords, mostly hitting chord tones and some extensions of both chords. From the interval annotations in blue we can see that the interval jumps are all relatively small, the majority being minor thirds and major seconds with only two unison notes and two perfect fourths. The use of these relatively small intervals causes the melody to have a more memorable and singable quality, allowing the average listener to recall the melody and sing along, especially at the medium tempo of 94 beats per minute. Compare this with a jazz bebop tune such as *Joy*

Spring by Clifford Brown, with the melody of the first A section shown in **Figure 38** on page 56 with the interval jumps annotated in blue.

Figure 38: The melody of the first A section of *Joy Spring* (1954) by Clifford Brown. Interval jumps annotated in blue.

Joy Spring - First A

Clifford Brown

$\text{♩} = 160$

Interval jumps annotated in blue:

Staff 1 (Measures 1-4): P4↑ P5↑, m3↓ M2↓ M2↑↓ M2↑ M2↑, M6↓ P4↑ M6↑ M2↓ m3↓ M2↑↑↓ M2↑↑↓, m3↑ m3↓ M3↓ m3↓ M3↑.

Staff 2 (Measures 5-7): M2↓↑ P5↑ P5↓ U U P4↓ P4↑ P4↑ m2↑↓ M3↓ m3↓ M2↓.

Staff 3 (Measures 8-9): P4↑ P4↓ P5↑ M2↓, P4↑ M2↓ M2↓ m2↓ M3↓ P4↑ P4↑.

Whilst most of the intervals are smaller than a major sixth, making the range of intervallic jumps almost the same size as *Chameleon*, *Joy Spring* features rapid interval changes which change direction (such as at the end of bar 4), and multiple consecutive jumps of fourths and fifths in the melody (beginning of bar 7 and bar 8). These features make the melody of *Joy Spring* difficult to sing for the average person, especially at its fast tempo of crotchet equals 160 bpm. Comparatively, *Chameleon* is at a slow tempo, has only one consecutive large interval jump (perfect 4ths in bar 6 of **Figure 32** on page 53), and no rapid interval direction changes with most phrases either ascending or descending with at most one direction change. These qualities combined with the use of the pentatonic scale make the melody for *Chameleon* both singable and memorable.

Summary & Compositional Insights

To summarise, Hancock has used a variety of musical devices, techniques and elements with both funk and jazz influences that have shaped the final recording of *Chameleon* that we all know today. Whilst there are a multitude of musical devices and techniques to be found in the music of *Chameleon*, only a select few have been incorporated into the original compositions in chapter four. The reasoning for only using a few chosen elements in a composition as opposed to simply writing a composition in the style of Herbie Hancock on *Head Hunters* is based on a desire for the author to retain his own artistic voice. While writing in the style of Hancock would showcase what has been learnt through creating this analysis, it would result in a poor imitation of Hancock's music while also lacking the author's musical signature. This is due to the irregular compositional process that would come with imitating someone else's sound. Therefore, a select few musical elements have been chosen to be incorporated into the original compositions so that the resulting product can be the combination of the author's natural compositional process with influence from Hancock's work through some of the included musical elements.

The first technique to be included is the **overdubbing of new parts** onto an already recorded performance in order to enhance the music. Hancock used this to great effect during his second solo on *Chameleon* with the addition of string-like synthesizer. Whilst overdubbing was a new technique in the seventies, it is now commonplace. The additions made to the original compositions will hopefully have as positive an impact on the music as it had on Hancock's.

The second technique to be used is known as **extended vamps**. These were used in *Chameleon* to place an emphasis on the rhythmic groove and to generate more tension and energy, the longer the vamps continued.

The final technique to be used is **parallel harmony**. Hancock's use of parallel harmony at the end of his second solo on *Chameleon* creates drastic chordal colour changes full of excitement, creating the climax of the entire piece. It may not be used in the same manner as Hancock's use of the technique but finding the different ways in which this musical device can be used will be enlightening.

Ultimately, this analysis of *Chameleon* has proven fruitful, yielding an array of musical insights and techniques from funk and jazz origins to incorporate into new musical compositions.

Chapter 3: Donny McCaslin

A Fast Future

The ‘fusion music’ of Herbie Hancock on the album *Head Hunters* (1973) fused jazz with funk and was also part of a movement consisting of many jazz artists from the late sixties and seventies who experimented with the combination of jazz elements and other genres (Fellezs, 2011). A more recent musical fusion of jazz would be the electronica influenced music of saxophonist Donny McCaslin; with albums such as *Castling for Gravity* (2012), *Fast Future* (2014) and *Beyond Now* (2016). Much like Hancock, McCaslin did not venture into genre fusion until after he had already become an accomplished acoustic jazz player. The reasoning behind choosing to analyse the music of McCaslin is as follows: Like Hancock, McCaslin was an already accomplished ‘straight-ahead’ jazz musician before venturing into genre fusion; showing that McCaslin’s musical approach originates from the jazz tradition. Secondly, McCaslin’s music is a more current example of fusion between jazz and another genre when compared to the music of Hancock on *Head Hunters*. McCaslin’s music also appeals to me greatly and I wish to further understand how it is constructed in order to incorporate elements of it into my own musical compositions.

After spending four years studying at the Berklee College of Music in Boston, Massachusetts, McCaslin toured and performed in vibraphonist Gary Burton’s band. After leaving Burton’s band, he went on to play with a variety of artists including bassist Eddie Gómez, pianist Danilo Pérez, arranger and composer Maria Schneider and in the group *Steps Ahead*, where he replaced his personal idol Michael Brecker (O’Connell, 2015). As a band leader, McCaslin would go on to release eight acoustic albums as a leader before his first ‘electric’ album *Perpetual Motion* (2010).

In an interview with *Downbeat Magazine* McCaslin himself cites that the impetus for the 'electric' element for the album came from saxophonist and producer David Binney.

"[Binney] suggested, 'You've got to make an electric record.' My initial reaction was, 'Maybe yes, maybe no.' But the more I talked about it, the more I thought it was a good idea." – Donny McCaslin (Lutz, 2016)

In the same interview McCaslin recalls the positive reaction of trumpet player Dave Douglas after hearing the material from *Perpetual Motion* played live.

"Dave said, 'You should go further into electronica territory'... I totally agreed. I was feeling that myself, and the end result was Casting for Gravity." (Lutz, 2016).

Whilst the idea for McCaslin's new electric sound was not his own, judging from his continued output of electronic sounding albums, beginning with *Perpetual Motion* and continuing to his most recent release titled *Blow* (2018), McCaslin has certainly fully embraced this change.

McCaslin's second electronic album *Casting for Gravity* (2012), showcases a deeper influence from the sound of electronica than *Perpetual Motion*. The greater use of synthesizers, studio overdubs and effects pedals demonstrates this, causing the sonic aesthetic of *Perpetual Motion* to sound 'acoustic' in comparison. It is from the *Casting for Gravity* album that the track *Stadium Jazz* has been chosen for analysis. Note: The time codes (with this format 'minutes : seconds') refer to specific sections of the audio recording for *Stadium Jazz* (an online link is available in the references) throughout this chapter.

Deconstructing Stadium Jazz

Ensemble

The personnel on *Stadium Jazz* consisted of McCaslin on tenor saxophone, Jason Lindner on synthesizers and acoustic and electric pianos, Tim Lefebvre on electric bass and Mark Guiliana on drums. Creating music as part of an ensemble is a collaborative process, therefore it is important to investigate the musical backgrounds of each of the contributing members to see how their influences fit within the musical context of *Stadium Jazz*.

Mark Guiliana began playing the drums at the age of fifteen, inspired by rock drummers that he heard on the radio such as Chad Smith of the *Red Hot Chili Peppers* and Dave Grohl of *Nirvana*. It was not until he heard the playing of jazz drummer Buddy Rich that he began to seek out jazz music, eventually leading him to listen to jazz drumming greats such as Tony Williams, Max Roach and Elvin Jones (Matzner, 2008). Apart from jazz, Guiliana also found himself attracted to electronic music after hearing the artist *Squarepusher* for the first time (London Jazz News, 2018). Guiliana's first professional job as a musician came when he joined bassist Avishai Cohen's band; where he played drums for seven years. After leaving the band, Guiliana went on to play in pianist Jason Lindner's electro-jazz group *Now vs Now*, and began to lead his own groups such as the acoustic jazz *Mark Guiliana Quartet*, and the electronica influenced group *Beat Music* of which bass player Tim Lefebvre was also a part. With such a varied number of influences, it is understandable that Guiliana is best known for his signature playing style on drums; a fusion of rock, jazz and electronica influences. When asked about this genre fused style of playing Guiliana mentions an experience seeing avant-garde drummer Jim Black play live.

"I had never heard anyone playing like that... [Black's] intension was so strong and so unique. He kind of gave me the courage to reintroduce the rock element and break the rules that I had built for myself: everything is cool, it's all good, it's music." (Matzner, 2008).

Ultimately, Guiliana brings all of his jazz, rock and electronic experience and influences to McCaslin's music, utilising his unique playing style to give *Stadium Jazz* an attention-grabbing rhythmic identity.

While pianist **Jason Lindner** is presently known more for his use of electronics and synthesizers, in his youth he played acoustic jazz before later leading his own big band which held a residency at *Small's Jazz Club* for several years in New York City. It wasn't until he joined the band of rapper, singer, bassist Meshell Ndegeocello that he began to fully explore the sonic possibilities that synthesizers could provide (Matzner, 2014). Eventually he started his own electro-jazz group titled *Now vs Now* (of which Mark Guiliana was also a member). When asked in an interview about how the use of synthesizers compared to writing for a big band, Lindner stated:

"...when you're sculpting on a synth, you're sculpting in real-time...When you're sculpting for a big band arrangement you're in your head. The result might be the same in the sense that it's a textural result or it's a sound design. Big band arranging is sound design too, it's just sound design for orchestral instruments." (WBGO, 2018).

In a similar vein, when asked about the jazz and electronica influences on *Now vs Now's* album *Earth Analogue* (2013) Lindner states: *"...when I play synthesizers live I improvise the*

sonic texture,” and in relation to soloing, goes on to state *“I feel much more comfortable creating parts that connect with other parts and developing that as my creative, improvisatory contribution to the moment rather than trying to play some scales and arpeggios.”* (Matzner, 2014). With such a predilection for texture and creating parts for a composition it is no wonder the Linder thinks of himself as more of a composer and arranger than a pianist or synth player (WBGO, 2018). Ultimately, Lindner’s contribution to the composition *Stadium Jazz* is based around timbre and texture, using the intrinsic sonic characteristics of piano, Fender Rhodes and various synthesizer sounds to the musical benefit of the composition.

Tim Lefebvre is an experienced bass player, having played in a variety of styles on film and TV soundtracks, in the house band for American television show *Saturday Night Live* and with artists and groups such as Elvis Costello, *The Tedeschi Trucks Band* and Donald Fagen (Johnson, 2016). However, the experience that Lefebvre names as having the most significant impact on his musical development, especially in terms of improvising, was his time playing in guitarist Wayne Krantz’s band.

“On gigs [Krantz] was adamant that I not play anything derivative. His message was, ‘Strive to play originally, at all times,’ and when that comes from someone who has developed his own harmonic language and plays completely outside the box, it has a huge impact...Some of the heaviest musical experiences of my life came in [Krantz’s] band... Wayne instilled in me the confidence and ability to improvise in any context.” – Tim Lefebvre (Jisi, 2018).

Around the same time he was playing with Krantz, Lefebvre further exercised his improvisational skills in the live electronic music realm playing with drummer Jojo Mayer.

“Once a week we used to set up and play, completely free. We’d sort of imitate what the DJ’s were doing at the time; they were playing all these drum and bass sides...I was trying to emulate that stuff with the pedal setup I had.”

(Gregory, 2013).

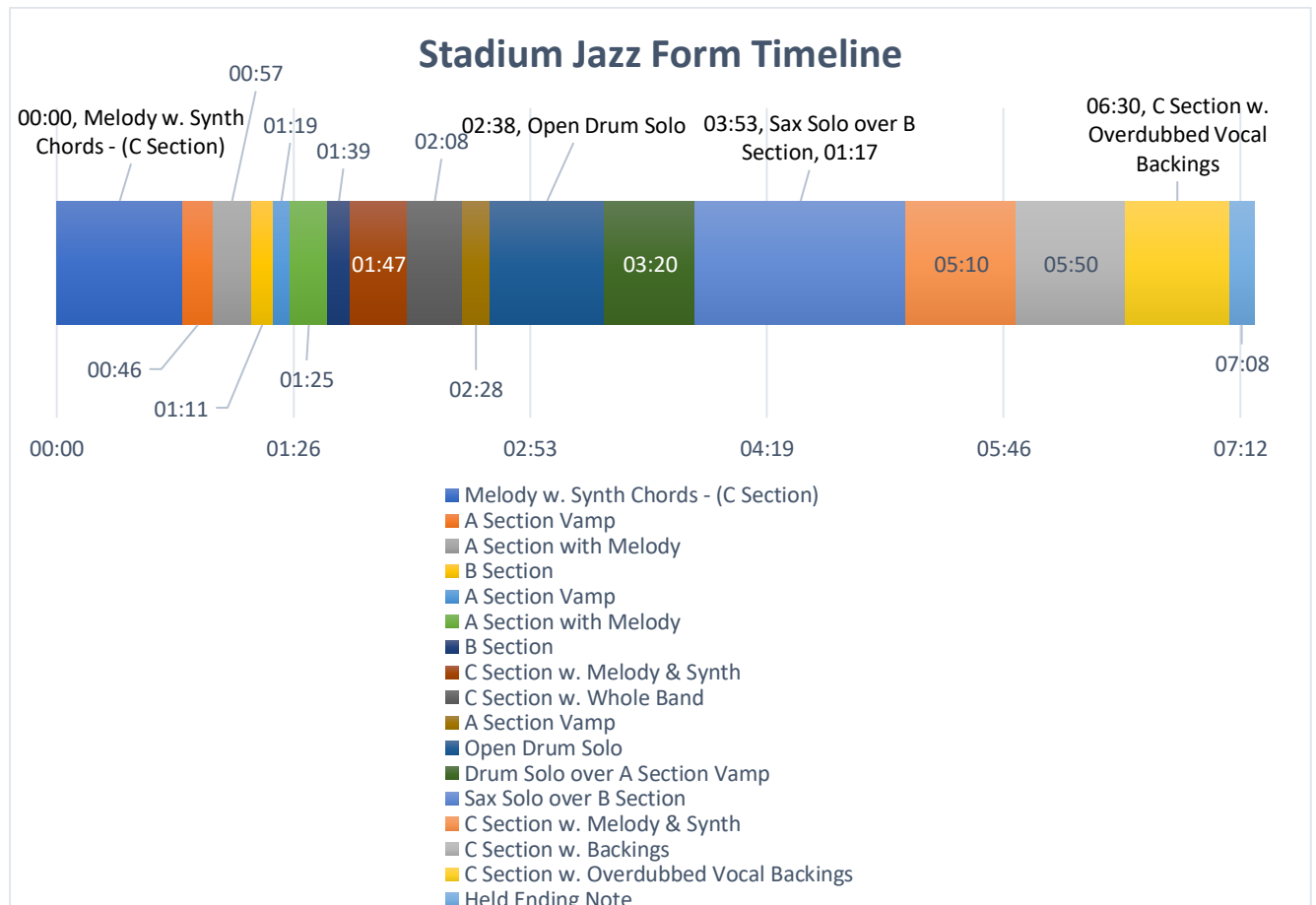
Ultimately, Lefebvre’s combined experience playing live electronic music mixed with his experience with improvisation, made him the ideal choice, for McCaslin’s electro-jazz fusion on *Stadium Jazz*.

With all the band members bringing their own personal musical influences and being experienced in the vocabulary of electronica and improvised music, they were well suited to McCaslin’s jazz influenced foray into electronic music.

Form

The form for *Stadium Jazz* can be seen in **Figure 39** below. The different sections of the composition are shown in chronological order.

Figure 39: Form of *Stadium Jazz* (2012) by Donny McCaslin



The form of *Stadium Jazz* consists of three distinct sections with the addition of two instrumental solos. It is essentially an ABC form, with numerous repeats of each section. Despite the ABC form, the first section of the composition is the C section. This has been labelled as such due to the C section's role as the climax for the entire form, where it is played both softly (1:47) before being played again with the repetition having a stronger and more bombastic character (2:08). Its purpose at the start of the composition (0:00), where it is softly played in rubato by 'string-like' synthesizer and tenor saxophone, is to

gently introduce the tune to the listener before the raw intensity of the A section vamp begins.

The A Section

The A section of *Stadium Jazz* (0:46) consists of a rhythmic, heavy vamp played by the piano and electric bass, with the drums playing a matching groove beneath; a stark contrast to the soft and lyrical tenor saxophone melody supported by synthesizer in the previous section. Notation for the A section vamp can be seen in **Figure 40** below. Compared to the slow C section intro before it (0:00), the A section changes to a fast tempo of crotchet equal 240 beats per minute. In combination with the timbre change, this tempo change provides the music with momentum and helps to create the boundless energy that is present for the rest of the piece.

Figure 40: A section from *Stadium Jazz* (2012) with intervals marked in red.

The vamp itself is constructed of alternating ascending and descending minor 7th intervals, with the only exception being the major 7th interval at the end of the three-bar pattern. The exclusive use of such large intervals in a vamp is not common in jazz-related genres, as can be seen by comparing the vamps from Herbie Hancock's *Chameleon* (see **Figure 41** on page 67) and Cedar Walton's *Bolivia* (see **Figure 42** on page 67).

Figure 41: Main Vamp from Herbie Hancock's *Chameleon* (1973) with intervals marked in red

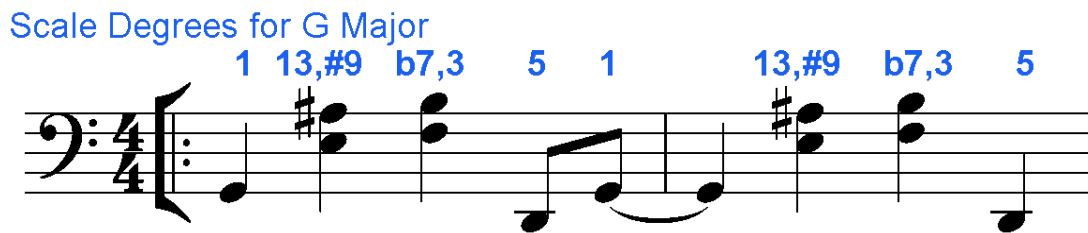


Figure 42: Vamp from Cedar Walton's *Bolivia* (1975) with intervals marked in red and blue



In contrast to *Stadium Jazz*, the main vamp to *Chameleon* consists of a greater variety of intervals, with mostly semitones being used (as seen in the walk-up to beat one of each bar in the pattern). In addition, there are major 2nds, a perfect 5th, minor 7ths, and an augmented 11th (with the augmented 11th being inconsequential since it leads to the semitone walk-up). *Bolivia*'s vamp also consists of a larger variety of intervals with a major 6th, minor 2nd, minor 10th, and a perfect 4th. However, the harmonic musical effects of both the vamps in *Chameleon* and *Bolivia* are different to that of the A section vamp in *Stadium Jazz*. Both the *Chameleon* and *Bolivia* vamps are trying to establish the tonality of the vamps; with *Chameleon* using the Bb minor pentatonic scale (see chapter two) to indicate the key of Bb minor and with *Bolivia* indicating a G13#9 chord using chord tones and extensions (see **Figure 43** on page 68).

Figure 43: Vamp for Cedar Walton's *Bolivia* (1975) with chord scale degrees notated in blue



By comparison, the A section vamp for *Stadium Jazz* alone does not indicate a particular tonality or key centre and is instead using the minor and major 7th intervals for their individual harmonic characters. The minor 7th and major 7th intervals, when played in isolation, sound dissonant (especially when compared to consonant intervals such as the major 3rd, perfect 4th and perfect 5th). McCaslin uses this inherent dissonance from the intervals to create tension while the vamp is played. The interval of the major 7th which is played at the end of the three-bar pattern serves to further increase the tension; with the major 7th sounding more dissonant than the minor 7th interval which comes before it. This increased dissonance at the end of the pattern causes the switch back to alternating minor 7ths when the pattern repeats to seem like a release of tension, although this release has less impact than what would usually be expected from a tension release (e.g. a $V^7 - I^{M7}$ cadence). This is due to the dissonance of the alternating minor 7th intervals continuing to perpetuate a heightened level of tension as both the vamp and the cycle of tension and release repeat until the A section has finished.

Whilst the vamp alone does not contain enough harmonic information to accurately assign chords to the A section, the addition of the melody played by tenor saxophone (0:58) changes this. The melody for the A section (as seen in **Figure 44** on page 69) is derived from the A Half-Diminished scale (seen in **Figure 45** on page 69) and shows that the majority of

the vamp occurs over an A half-diminished chord, before switching to A^{dim}(maj7) (which is implied by the Major 7th interval within the vamp. See **Figure 46** on page 69). Both these chords are dissonant in nature and, much like the alternating ascending and descending minor 7th intervals of the vamp, create tension for the listener that is only released upon the start of the next section.

Figure 44: Melody for the A section of Stadium Jazz with annotated scale degrees.

Scale Degrees for A Major

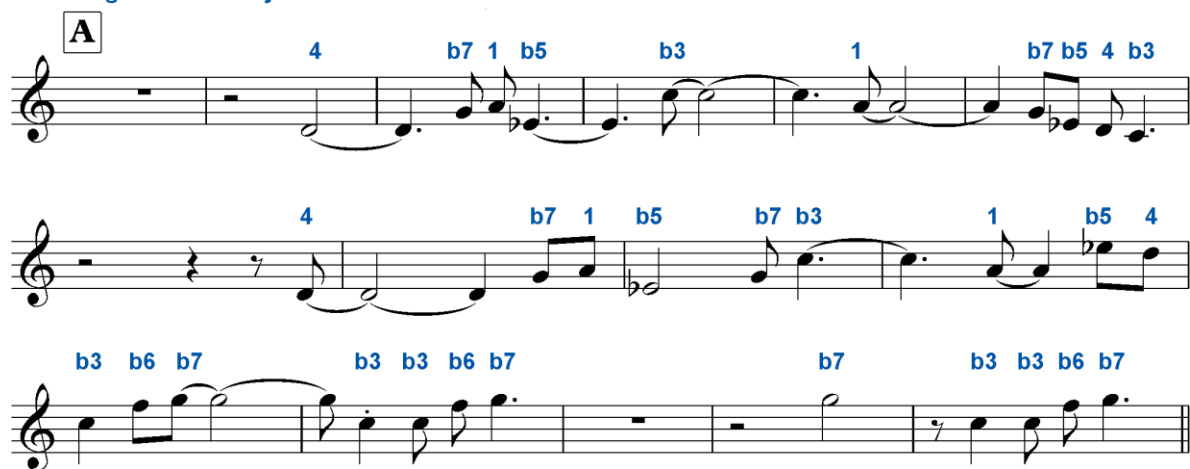


Figure 45: The A Half-Diminished scale. The blue annotations are the scale degrees relative to A major. The green annotations are the intervals between the notes (T = tone, S = semitone).

A Half-Diminished Scale

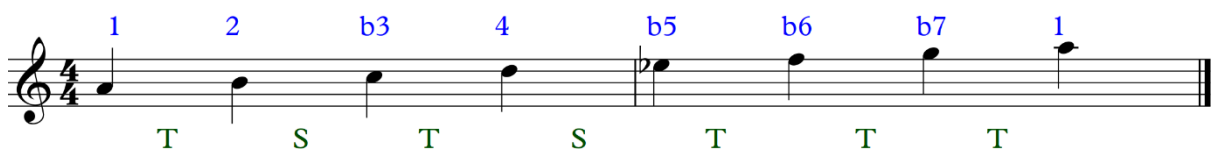


Figure 46: A section vamp with chords implied by the melody for Stadium Jazz by Donny McCaslin.



Rhythmically, the A section vamp is a three-bar pattern in 4/4 meter (it could also be viewed as a single 6/4 bar) and made up of mostly crotchet and quaver note values, with the exceptions being one dotted crotchet and a minim. Both the syncopated placement of the alternating low A and high G notes, and the moving starts and ends of phrases within the pattern create tension. In **Figure 47** on page 70, both the low A notes and high G notes can be seen shifting from being 'on the beat' to 'off the beat' throughout the pattern. In **Figure 48** on page 70 we see that the rhythmic placement the starts and ends of phrases also change. The first phrase in **red** begins on beat one, ends on beat three and is three beats long. The second phrase in **blue** starts on beat four, ends on beat two and is also three beats long. The **third** phrase in green starts on beat four, ends on beat one and is two beats long. The final phrase in **yellow** starts on beat two, ends on the 'and' of beat three and is two and a half beats long. This rapid changing of different elements such as the placement of low A and high G notes, the starts, ends and lengths of phrases all create a sense of uncertainty in the listener, thus generating tension.

Figure 47: A section vamp from Stadium Jazz by Donny McCaslin. 'A' notes notated in blue and 'G' notes notated in red.



Figure 48: A section vamp from Stadium Jazz by Donny McCaslin. Rhythmic phrases are highlighted in different colours.



These examples show that using dissonant intervals, syncopation and varying phrase lengths, McCaslin intends to generate tension through the A section vamp of *Stadium Jazz*; tension which is not released until the next section of the tune begins.

The B Section

The B section of *Stadium Jazz* (1:11 & 1:39) consists of a series of syncopated F#m9 chord hits played by the rhythm section, with the tenor sax playing a new melody over the top (see **Figure 49** on page 73). The most notable aspect of this section is the syncopated chord hits. Apart from the first and last hits of the four-bar pattern (which is played twice in a single B section), the hits are played entirely on off-beats. The corresponding drum pattern has loose hi-hats playing mostly minims on beats one and three of each bar while the snare and bass drum match the syncopated hits of the rhythm section. The exception to this is at the end of the second bar of the four bar pattern (bars 49 & 52 in **Figure 49** on page 73), where the hi-hat pattern changes to match the syncopated chord hits. The regular minim pulse of the hi-hats provides a reference to the listener whilst overlapping and contrasting with the syncopated chord hits played by the piano and bass. The change by the hi-hats to match these section hits in the second bar of the pattern comes as a surprise to the listener and removes the pulse-like reference that the hi-hats provided. The combination of the both contrasting and matching drum pattern to the syncopated rhythm section hits provides a point of interest and excitement to the listener, whilst generating tension as the section of the composition continues.

In terms of the melody, the tenor saxophone matches the harmony of the F#m9 chords, with the note choice deriving entirely from the F# Dorian scale (see **Figure 50** on page 73 & **Figure 51** on page 74). Overall the change to the B section is a release from the dissonant

vamp of the A section; and this is achieved through several means. Harmonically, the change to the F#m9 chord acts as a release for the A section that came before the B section. This is assisted by a change in timbre and texture coming from the rhythm section. Keys player Jason Lindner switches from piano to the Fender Rhodes, providing a thicker sound without the attack of an acoustic piano. Bass player Tim Lefebvre engages an octave pedal on his electric bass, also creating a thicker and heavier sound. Drummer Mark Guiliana changes the drum groove, switching from the rapid-fire 'popcorn-like', busy note-filled groove of the A section to a sparser and more spacious drum groove which emphasises the rhythm of the chord hits. Combined with an increase in dynamic level, these timbre and textural changes create a heavier and forceful character to the section, in contrast to the previous A section. Apart from creating a release of tension from the previous section, these musical elements start a new cycle of tension and release (albeit short in length); with the release occurring when the section ends.

Figure 49: B section of Stadium Jazz by Donny McCaslin. Notation in concert pitch.

6 **B**

48 F#m⁹

Ten. Sax.

Electric Piano
F#m⁹

E. Piano

E. Bass

B Half-Open Washy H.H.

Dr.

52 *f*

Ten. Sax.

E. Piano

E. Bass

Dr.

Figure 50: F# Dorian Scale. Annotations in blue are the scale degrees relative to the F# Major scale.

F# Dorian

1 2 b3 4 5 6 b7 1

Figure 51: Melody for the B section of Stadium Jazz. Blue annotations are scale degrees relative to F# Major and its extensions, red annotations are note intervals. Notation in concert pitch.

B

48 $b3$ $b7$ 13 11 $b3$ 11 9 $b3$ $b7$ 13 11 9 $b3$ $b7$ 13 9 $b3$

$P4\downarrow$ $m2\downarrow$ $M3\downarrow$ $M2\downarrow$ $M3\uparrow$ $m3\uparrow$ $m2\uparrow$ $P5\uparrow$ $m2\downarrow$ $M3\downarrow$ $M2\downarrow$ $m2\uparrow$ $P4\downarrow$ $m2\downarrow$ $P4\uparrow$ $m2\uparrow$

52 $b3$ $b7$ 13 11 $b3$ 11 13 $b7$ 9 11 9 $b3$ $b7$ 13 $b3$

$8ve\uparrow$ $P4\downarrow$ $m2\downarrow$ $M3\downarrow$ $M2\downarrow$ $M3\uparrow$ $m6\downarrow$ $m2\uparrow$ $M3\uparrow$ $m3\uparrow$ $M3\downarrow$ $m2\uparrow$ $P4\downarrow$ $m2\downarrow$ $dim5\uparrow$

The C Section

The C section of *Stadium Jazz* (see **Figure 52** on page 75 for notation) (1:47) initially consists of just tenor saxophone and synthesizer at a soft dynamic (in contrast to the previous section), before the section repeats and the entire band plays at a much louder dynamic (2:07). Rhythmically, the melody consists entirely of consecutive minims. In contrast to the previous sections which featured heavily syncopated vamps, the consecutive use of on the beat minims provides the music with a constant and steady sense of momentum and allows more space for the melody and harmony to be the focus.

Figure 52: The 'C' section for Stadium Jazz by Donny McCaslin in concert pitch. Red annotations above the staff are the intervals between the notes and the green annotations below the staff are relative scale degrees to the respective chords in effect.

The musical score for the 'C' section of Stadium Jazz by Donny McCaslin is presented in five staves. Each staff contains a melody line with red annotations above the staff indicating intervals between notes and green annotations below the staff indicating relative scale degrees to the respective chords in effect.

Staff 1: Chords: D13(sus), C#9(sus). Intervals: M7↓, M3↑, P4↑, M2↑, m7↓, P4↑, dim5↑. Scale degrees: 13, b7, 9, 5, b7, 1, 4, 7.

Staff 2: Chords: B9(sus), Bb7(#11). Intervals: m2↑, M6↓, P4↑, m3↑, m2↑, U, P4↑, M2↓. Scale degrees: 9, 4, b7, b9, #9, #9, 5, #11.

Staff 3: Chords: Am7, Bb7/Ab. Intervals: M2↓, m7↓, m3↑, P4↑, M2↑, M6↓, M9↑, M2↓. Scale degrees: 11, 5, b7, b3, 3, 5, 13, 5.

Staff 4: Chords: C#m7, Cmaj7(#5). Intervals: m2↓, m6↓, m2↑, M6↑, M2↓, m6↓, m3↑, M2↓. Scale degrees: b3, 5, b6, 11, 3, #5, 7, 13.

Staff 5: Chords: Gm9, Em11, E7. Intervals: m3↑, P5↓, P4↑, m2↓, U, m2↓. Scale degrees: 11, b7, b3, 9, 11, 3.

The melody for the C section is based around two core melodic phrases; the first, a four note melodic phrase (see **Figure 54** on page 76) and the second, a two note phrase (see **Figure 55** on page 77). Both phrases are developed and played in variations and in combination throughout the section. The first phrase, and variations of it, can be seen in **Figure 53** on page 76 and highlighted in **red**; with the second phrase highlighted in **blue** and the combinations of both phrases highlighted in **yellow**.

Figure 53: The 'C' section of Stadium Jazz. The first core melodic phrase and its variations are highlighted in red, the second core melodic phrase is highlighted in blue and combinations of the two are highlighted in yellow.

The musical score for the 'C' section of Stadium Jazz consists of five staves of music in 4/4 time. The notes are color-coded to show core melodic phrases and their combinations:

- Staff 1:** Chords D13(sus) and C#9(sus). The entire staff is highlighted in red.
- Staff 2:** Chords B9(sus) and Bb7(#11). The first half is red, and the second half is blue.
- Staff 3:** Chords Am7 and Bb7/Ab. The first half is red, and the second half is yellow.
- Staff 4:** Chords C#m7 and Cmaj7(#5). The first half is red, and the second half is yellow.
- Staff 5:** Chords Gm9, Em11, and E7. The first half is yellow, and the second half is blue.

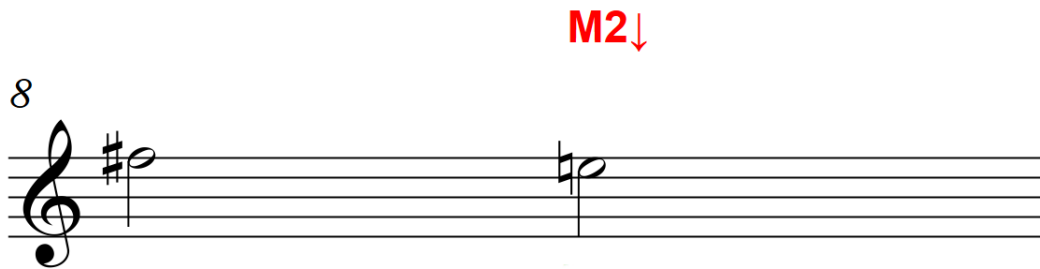
Figure 54: The first core melodic phrase from the 'C' section of Stadium Jazz by Donny McCaslin. Annotations in red are the intervals between the notes. Occurs at (1:47).

The musical score for the first core melodic phrase from the 'C' section of Stadium Jazz is shown in 4/4 time. The intervals between the notes are annotated in red:

- D13(sus)** chord.
- M7↓** (Major 7th descending) between the first and second notes.
- M3↑** (Major 3rd ascending) between the second and third notes.
- P4↑** (Perfect 4th ascending) between the third and fourth notes.

The first phrase and its variations are based around the same intervallic shape of a descending interval between a perfect 5th and major 7th, followed by an ascending interval between a minor 2nd and perfect 4th, followed by a final ascending interval between a minor 3rd and major 6th. The simplicity of this intervallic shape, one descending interval followed by two ascending intervals, makes the phrase particularly memorable and recognisable to a listener. The use of the phrase and variations of it creates the impression that the pitch of the notes rise further with each time the phrase is repeated; increasing the level of tension with it.

Figure 55: The second core melodic phrase from the 'C' section of Stadium Jazz by Donny McCaslin. The annotation in red shows the interval between the notes. Occurs at (1:54).



The second phrase (see **Figure 55** above) is a simple descending major 2nd or minor 2nd interval and its use in the melody is to provide further variation beyond the first core phrase. After it is initially played in bar 12 (see **Figure 53** on page 76) we see it played as part of a combination with the first phrase; with the second core phrase replacing the last two bars of the first phrase (highlighted in **yellow** in **Figure 53** on page 76).

When combined with the bombastic playing of the rhythm section when the section repeats (2:07), the effect of the seemingly ever rising melody and tension creates a sense of excitement and a level of energy that allows the C section to become the climax of the composition. This characteristic of the C section is exploited at the end of the entire composition where the C section is repeated multiple times (5:10 to 7:17), at ever increasing dynamic levels and with additional overdubbed parts being added on each repeat. The effect is a spectacularly satisfying release of tension and ending for the whole composition.

The harmony for the C section is not limited to a single tonality or key and attempting to explain it using solely functional harmony are ineffective and not informative. Therefore, the focus of the following analysis will focus on root movement, harmonic rhythm and the relationship between the harmony and melody in terms of voice leading.

The first three chords of the section are dominant suspended chords ($D^{13}\text{sus}$ in bar 1, $C\sharp^9\text{sus}$ in bar 3 and $B^9\text{sus}$ in bar 5. See **Figure 52** on page 75). This is an example of parallel harmony, moving the same chord construction consecutive times in the same direction, in this case descending in semitones. The next chord in bar 6 is a $Bb7(\sharp 11, \sharp 9)$ chord which then resolves to an $Am7$ chord in bar 9. This progression is a $V^7 - i^{m7}$ cadence in the key of A minor, with the $Bb7$ being a tritone substitution of $E7$. Bar 10 has $Bb7/Ab$ (again a tritone substitution of $E7$) with the bass note resolving down a perfect fifth to $C\sharp m7$ in bar 13, which can be considered the $iii-7$ chord of A Major. The $CM7(\sharp 5)$, a somewhat dissonant chord, in bar 14 can be seen as the III^{+M7} chord in the key of A melodic minor which then resolves to $Gm9$ in bar 17. This resolution can be justified through voice leading rather than functional harmony (as the two chords do not diatonically relate), with all voices except the roots between $CM7(\sharp 5)$ and $Gm9$ moving a semitone between chords as seen in bars 14-18 of **Figure 56** on page 79. Apart from this example, the notion of voice leading creating seamless transitions could also be applied to all the chord changes in the C section.

Figure 56: C section piano chart of Stadium Jazz by Donny McCaslin.

The piano chart for the C section of Stadium Jazz by Donny McCaslin is presented in five systems, each with two staves (treble and bass clef) and a 4/4 time signature. The chords and their durations are as follows:

- System 1:** D¹³(sus) (4 bars), C^{#9}(sus) (4 bars).
- System 2:** B⁹(sus) (4 bars), B^{b7}(^{#11}) (4 bars).
- System 3:** A^{m7} (4 bars), B^{b7}/A^b (4 bars).
- System 4:** C^{#m7} (4 bars), C^{maj7}(^{#5}) (4 bars).
- System 5:** G^{m9} (4 bars), E^{m11} (4 bars), E⁷ (2 bars, marked "To Pno.").

The E^{m11} in bar 19 (see **Figure 52** on page 75) is another example of parallel harmony (following the G^{m9} in bar 17) and the E⁷ could be seen as a V⁷ chord in A minor, which would then resolve down a perfect fifth to an A bass note in the vamp of the following A section (2:27) (see **Figure 40** on page 66 for the A section).

When focusing on the root movement of the chord progression, descending semitone movement can be seen on every chord change from the D¹³sus in bar 1 till the B^{b7}/A^b in bar

10 (see **Figure 52** on page 75). The first note of each four-bar phrase moves counter to this, ascending in pitch by a semitone at the start of every four-bar pattern (e.g. bar 1, 5, 9 and 13 of **Figure 52** on page 75). This further emphasises the effect of the melody seeming to rise in pitch endlessly, creating greater tension during the section.

Both how the melody fits within chords and moves between them are further aspects worth investigating. With the majority of the C section melody being based around one core melodic phrase (see **Figure 54** on page 76), we can see how McCaslin has reused this phrase by altering the notes to fit within the harmony of the changing chords (see bar 1-10 of **Figure 52** on page 75). Also worth noting is the smooth voice leading of the melody between every chord change, where each melody interval between chords are less than a minor 3rd (see the ends of bars 2, 4, 6, 8, 10, 12, 14 and 16 of **Figure 52** on page 75).

By using simple phrases as the basis for the melody, maintaining the same melodic shape through minimal note alterations, using small melodic interval jumps and using seamless voice leading between chord changes, McCaslin has crafted a musically effective and cohesive melody and chord progression.

Compositional Insights

Two musical elements that have been discovered through the analysis of *Stadium Jazz* have been chosen to be incorporated into original compositions by the author. The first technique is McCaslin's **use of syncopated vamps**, with the combination of jarring syncopation and heavy rhythmic vamps being a foundational element of *Stadium Jazz*. The second musical element to explore is McCaslin's extensive **use of a single phrase to create a melody**, with the emotional impact and uplifting character of the melody in the C section of *Stadium Jazz* being both impressive and alluring. Hopefully, through the incorporation of

these techniques into original compositions by the author, possible uses of these techniques outside of their original contexts can be uncovered.

Chapter 4: Compositional Experiments

Two original compositions have been written to showcase the use of the musical devices and techniques indicated at the ends of chapter two and chapter three. The first composition is titled ***Chainsaws***, and is written for jazz sextet (i.e. piano, upright bass, drums, alto saxophone, tenor saxophone and trumpet) while the second is titled ***Head Bumps*** and is written for jazz quintet (consisting of Fender Rhodes, electric bass, drums, trumpet and tenor saxophone). The small group jazz format has been used for both compositions because of the flexibility it allows for improvisation and for changes to be easily made to the arrangement during rehearsal. It was also chosen due to the author's familiarity with the format and since both Herbie Hancock's and Donny McCaslin's group are, in essence, small group jazz ensembles. Note: The time codes (with this format 'minutes : seconds') refer to specific sections of the audio recordings for both *Chainsaws* and *Head Bumps* throughout this chapter. The recordings for both compositions can be found on the **Appendix C** audio CD.

Chainsaws

The composition *Chainsaws* takes influence from Herbie Hancock's extended use of vamps to create tension and from his use of production techniques and overdubs to enhance a final recording. Donny McCaslin's use of syncopation in vamps and use of a melodic shape to create a melody are further influences. As can be seen in **Appendix A** on page 104, *Chainsaws* has a simple AABB form with an introduction, head and solo section before ending with another rendition of the head. A recording of *Chainsaws* can be heard on **track 5 of Appendix C** on page 124.

The A Section & The Use of Vamps

The A section (0:00) is based around a syncopated one bar rhythmic pattern that repeats with the harmony changing every two bars (see **Figure 57** below).

Figure 57: Vamp for A section in *Chainsaws* by Reginald Ashman. Annotations in red are the intervals between the notes.

25 **M7**
Piano
Fmaj7(#11)

27 **m7**
mf
Gb7

29 **m6**
Eb7/G

31 **P5**
Abm
m7 8ve M9

Initially, the pattern is played by tenor saxophone and trumpet (0:00), before the rhythm section takes over shortly before the beginning of the second 'A' section (0:46).

Figure 58: Rhythm section parts for the A section vamp of Chainsaws by Reginald Ashman.

The musical score is divided into two systems. The first system covers measures 25 to 28, and the second system covers measures 29 to 32. Each system includes staves for Piano (Pno.), A. Bass, and Drums (Dr.).

- Measure 25:** Pno. starts with a piano (p) dynamic and a key signature of two flats (Bb, Eb). The bass line is a simple eighth-note pattern. The drums play a syncopated pattern with a snare on the second eighth note of the first beat.
- Measure 26:** Pno. continues with the same pattern. The bass line remains the same. The drums play the same syncopated pattern.
- Measure 27:** Pno. continues with the same pattern. The bass line remains the same. The drums play the same syncopated pattern.
- Measure 28:** Pno. continues with the same pattern. The bass line remains the same. The drums play the same syncopated pattern.
- Measure 29:** Pno. starts with a piano (p) dynamic and a key signature of two flats (Bb, Eb). The bass line is a simple eighth-note pattern. The drums play a syncopated pattern with a snare on the second eighth note of the first beat.
- Measure 30:** Pno. continues with the same pattern. The bass line remains the same. The drums play the same syncopated pattern.
- Measure 31:** Pno. continues with the same pattern. The bass line remains the same. The drums play the same syncopated pattern.
- Measure 32:** Pno. continues with the same pattern. The bass line remains the same. The drums play the same syncopated pattern.

As can be seen in **Figure 58** above, the bass and drums reinforce the syncopated rhythm, now played by the piano. The rhythm itself is designed to create tension for as long as it is repeated. It achieves this through the use of syncopation, with all the notes, except for the two quavers on beat one, being played on the second semiquaver of each beat. Beat one of each bar is the only time where a note is played on the beat, with every other note occurring on a semiquaver off-beat. This causes a cycle of tension and release to occur in each bar, with the syncopated semiquavers generating tension and the quaver on beat one of each bar providing a release. However, the release at the beginning of each bar is short-lived, with the majority of the notes of each bar still being syncopated, causing most of the bar to be spent generating tension rather than releasing it.

Another aspect that generates tension throughout the A section vamp is the harmony. With only two notes being played simultaneously, apart from the melody over the vamp, it is the character of the intervals rather than the underlying chords that is heard by a listener. By

looking at bars 25 through 32 of **Figure 57** on page 83, we see the two notes beginning a major 7th apart, gradually becoming closer (with the top and bottom note alternating between moving a semitone closer together), before growing in distance again at the end of bar 32, ending on a major 9th. Over the course of the eight-bar pattern we see the intervals become gradually more consonant, starting at the major 7th, eventually moving to a perfect 5th and then growing to a major 9th. Despite this trend of increasing consonance, the perfect 5th interval does not sound particularly consonant within the pattern. This is likely due to all the dissonant intervals surrounding the perfect 5th which cause its inherent consonance to be subdued. The pattern ends with the growing intervals of a minor 7th, octave and major 9th at the end of bar 32. This is the high point of tension for the pattern, caused by the rapidly growing intervals in contrast to the previous semitone motion. The tension is finally released when the pattern repeats, however the effect of the release is lessened by the dissonance of the major 7th interval at the start of the pattern. This perpetuates a sense of tension while the pattern is played.

Combined with the use of syncopation, the vamp for the A section generates a constant sense of tension, which grows the longer it is played. The tension is eventually released when the B section starts. As such, the A section of *Chainsaws* successfully demonstrates both Hancock's use of vamps in *Chameleon* and McCaslin's use of syncopation within vamps in *Stadium Jazz* in order to create tension within a section of a composition.

The B Section & Melodic Phrases

The B section of *Chainsaws* (1:19) is based around two melodic phrases that are varied and repeated throughout the section. The first phrase can be seen in **Figure 59** on page 86 with it and its variations consisting of four crotchets. The second crotchet of the phrase and its

Figure 59: The first core melodic phrase of the B section of *Chainsaws* by Reginald Ashman.

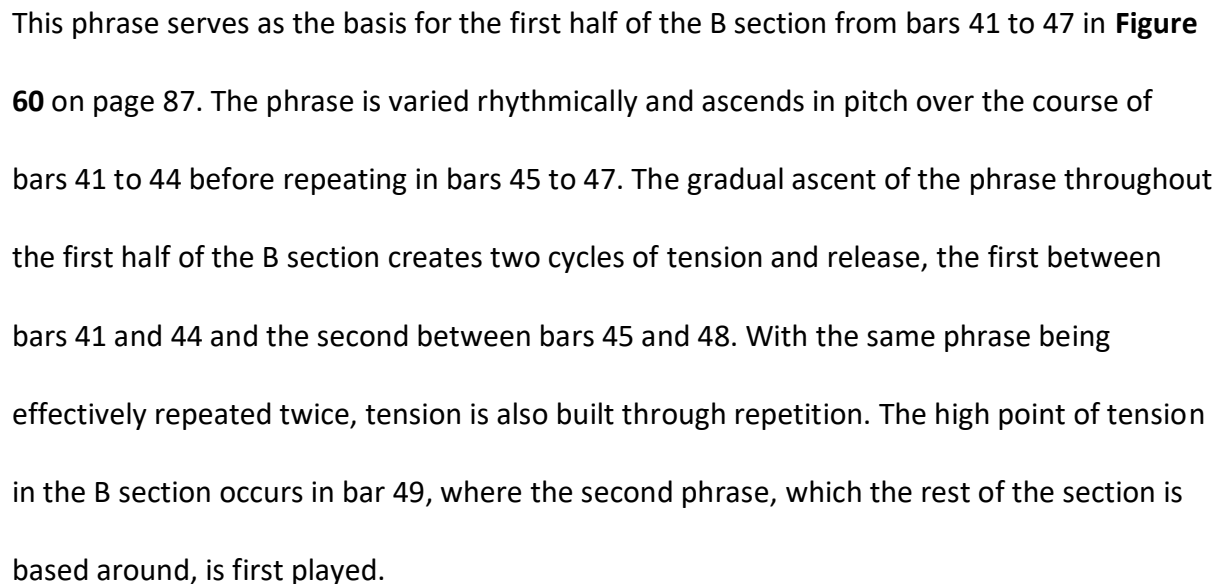


Figure 60: The B section of Chainsaws by Reginald Ashman. Red annotations are the intervals between the notes in the melody. Blue annotations are roman numeral analyses of the chords.

41 **IVm7** **I** **iim7** **IM7**
 Gbmaj7 Db(add2)/F Ebm7 Dbmaj7
 P4↓ ↑ M2↑ U P5↓ ↑ m2↑ U P4↓ ↑ M2↑ U P4↓ P5↑ P4↓

45 **IVm7** **I** **iim7** **IM7**
 Gbmaj7 Db(add2)/F Ebm7/Bb Dbmaj7/Ab
 M2↓ P4↓ ↑ M2↑ U P5↓ ↑ m2↑ U P4↓ ↑ M2↑ U P4↑ M2↓ m2↓

49 **IVm7** **bIII7** **iiim7** **VI7**
 Gbmaj7 F7(b9) Fm7 Bb7(b9)
 U M2↓ P4↓ ↑ M2↑ ↓ dim5↓ ↑ M2↑ 8ve↓ m3↑ M3↑ m2↓ dim5↓ ↑ m3↓

53 **II7** **bII7** **IM7** **bIV7**
 Eb7(sus) D7alt. Dbmaj7 G13
 M2↑ P4↓ M2↓ P4↑ M2↓ m2↓ P4↓ m3↑ m2↑

The second phrase which dominates the B section can be seen in **Figure 61** below.

Figure 61: The second melodic phrase which the B section is based off in Chainsaws by Reginald Ashman.

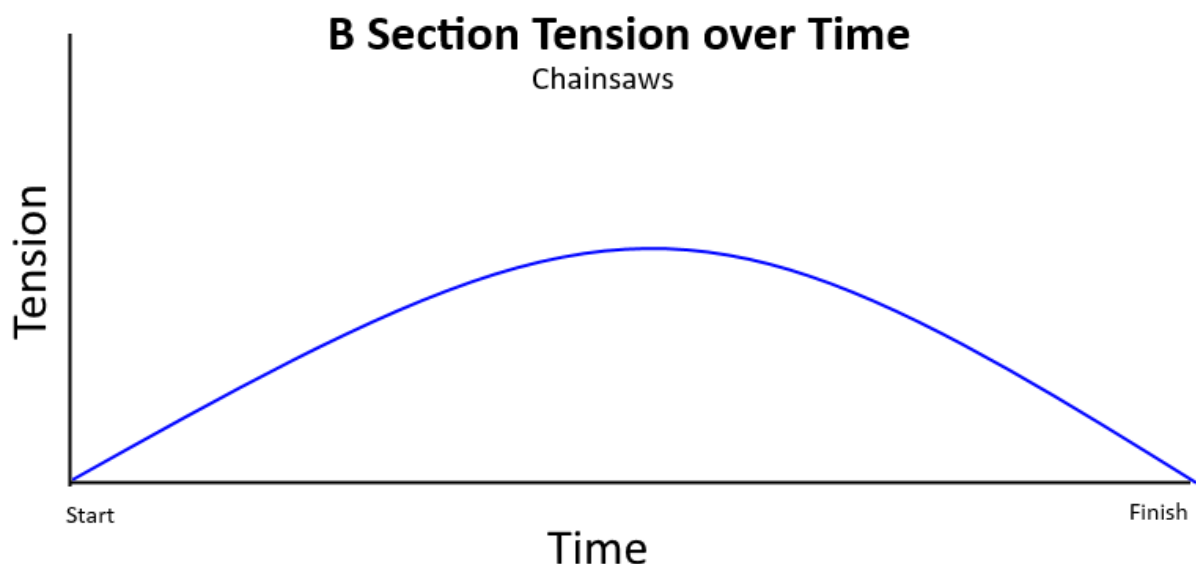
49 **M2↓ P4↓ ↑**

This second melodic phrase is based off four crotchet notes; with the second and third notes of the phrase always descending in pitch before the fourth note ascends in pitch. This

phrase can be seen in bars 49, 50, 53 and across bars 54 and 55 in **Figure 60** on page 87.

Upon closer inspection, this melodic phrase can be seen as a variation of the first core melodic phrase for the B section (**Figure 59** on page 86), with the intervals having been displaced forward by one crotchet compared to the first core melodic phrase. As opposed to the ascent in pitch of the first core melodic phrase in the first half of the B section, the second core phrase gradually descends in pitch through the second half of the section. The descent in pitch gradually releases the tension that has been built up from the ascending first core melodic phrase. When the B section is viewed as a whole, the first half of the section sees the tension rising gradually through the use of the first core melodic phrase until bar 49 where it switches to the second core melodic phrase. At this point the apex of tension has been reached. Then the gradually descending second core melodic phrase releases the tension until the section ends. This creates a roughly symmetrical arc in terms of the level of tension present throughout the B section (see **Figure 62** below).

Figure 62: Graph showing the approximate level of tension over time for the B section of Chainsaws by Reginald Ashman.



The repeated and varied use of these two melodic phrases within the B section has the effect of making melody more cohesive and singable, and thus is memorable to the listener.

When compared with the use of melodic phrases in the C Section of *Stadium Jazz* by Donny McCaslin, the melody of *Chainsaws*' B section fulfils the same role, with the effects of tension and release being quite similar between the two compositions. The main critique of the *Chainsaws*' B section melody is that it is somewhat derivative of the *Stadium Jazz* melody; using the same rough intervallic shape between notes (see **Figure 59** on page 86 and **Figure 53** on page 76)

Overdubs & Editing

Compared to the use of overdubs within Hancock's *Chameleon*, *Chainsaws* is very minimalistic. The only addition that was made to the finished recording was that of a 'string-like' synthesizer part. This occurs in the B section (1:19 & 7:44), where the synthesizer at times replaces and augments the piano part, and at the beginning of the trumpet solo (4:02), where the synthesizer completely replaces the piano (see **Appendix C** audio CD on page 124, listen to **track 5** for the version with overdubs and **track 6** for the unaltered version). The effect on the music from this addition of synthesizer is primarily timbral, creating a greater contrast to the sections that precede the synthesizer's entrance. The first occurrence of this is in the first B section of the head, which has the alto saxophone playing the melody with the rhythm section playing sparsely beneath. The switch from the energetic A section vamp to the sparse B section is a shift in dynamics, timbre and instrumentation, with the tenor saxophone and trumpet laying out. The synthesizer fulfils the same role as the piano for the B section, but importantly lacks the percussive attack that the piano has with the addition of more sustain; thus, accentuating the difference between the sections. The timbre change is a new texture for the listener and acts as a point of interest. The

synthesizer is used in a similar fashion in other portions of the recording (e.g. the beginning of the trumpet solo and in the last head).

Whilst it would have been possible to add more overdubbed elements to *Chainsaws* a decision was made to keep the additions minimal. This was mainly due to a side-effect of not informing the band that extra parts would be added after the fact. Because of this the band did not leave enough 'space' for additional parts to be added, and the addition of more instruments to the recording would have potentially obscured the other instruments. When overdubs were added to Hancock's music on the album *Sextant* (1973) care was taken by the musicians to leave space for the eventual overdubs. Saxophonist Bennie Maupin attests to this when asked about the addition of overdubbed synthesizers in Hancock's septet in an interview with Steven Pond.

"Pond: But how would you leave room for it [overdubbed synthesizers]?...

Maupin: We just listened and listened and listened to each other. I mean, you had to really listen... Because sometimes it would be so dense with sound, there would be no room for anything. All the space was full. But then we would just thin out all the textures. Thin out everything. I mean, we'd have our moment when it would just be out there, and then we would thin it way down. And at those times, I think that there would be opportunities for Pat [Gleeson] to create shapes and swoops and all kinds of little things that no one had ever heard, ever."

(Pond, 2010)

For this reason, the overdubs on the composition *Chainsaws* are quite minimal; however, they are still effective at enhancing the pre-existing performance.

Apart from overdubs, additional editing was involved to create the final recorded performance. During the live performance of *Chainsaws* the horn players missed their entries and so the A section of the piece was not performed as it should have been. Thankfully, the soundcheck before the live performance was recorded, and so the A section of *Chainsaws* from the soundcheck was able to be edited into the final recording. This results in a virtually seamless performance of the composition on the recording.

Head Bumps

The composition *Head Bumps* (see **Appendix B** on page 112 for the musical score) was originally intended to make use of both parallel harmony and overdubs; although it was ultimately decided to forgo overdubs on the final recording. The reasoning for not using overdubs was that any additions to the already recorded music would detract from, rather than enhance it. Essentially the recorded music was already in a complete state and there was nothing to be gained from adding additional parts in afterwards. *Head Bumps* follows an ABCD form with a solo section over the C and D sections. A recording of the composition can be heard on **track 7** of the **Appendix C audio CD** on page 124.

Parallel Harmony

The use of parallel harmony in *Head Bumps* occurs at the end of the D section (2:27), with the harmony moving from EbM7 to AbM7(#11) to FM7#11 and then to EM7 (see bars 52 to 55 in **Figure 63** below).

Figure 63: The C & D sections from the composition *Head Bumps* by Reginald Ashman. Annotations are roman numeral analyses with those in green relative to the key of G minor, those in blue relative to the key of Db Major, those in orange relative to Eb Major and those in pink relative to C Major.

G minor...

im
31 **C** Gm(add9) *mf*

ivm7 Cm7

IIIM7 Bbmaj7

II7 A7(#9)

bIIIM7 Abmaj7

im Gm(add2)

viim7 Fm11

VI7 Eb7(sus)/F

bIIIM7b5 Abmaj7(b5)

VI7 Eb7(sus)/F

VIM7 Ebmaj7(#11)

bVIIM7 Emaj7(#11)

vii-7b5 Fm7(b5)

III7 Bb11(b9)

Db Major...

IVM7 45 Gbmaj9

iiim7 Fm7

iim7 Ebm7

IM7 Dbmaj7

IVM7 49 Gbmaj9

iiim7 Fm7

iim7 Ebm7

To Coda Ebmaj7

IVM7 53 Abmaj7(#11)

IVM7 of C Major Fmaj7(#11)

bIIIM7 Emaj7

V of G minor D7alt.

These four chords are clearly not within the same key and so parallel harmony is the simplest way to explain them. These successive major 7th chords in different keys create chordal colour changes, emphasising differences between the characteristics of each respective tonality, creating a point of interest to the listener. The chordal colour changes may not be as dramatic as those used by Herbie Hancock in his second solo on *Chameleon* (Figure 14 on page 36), but they are still effective. These changes also serve the same function as a ‘turnaround’, a set of chord changes at the end of a section that lead the harmony back to the top of the form. Turnarounds are a common element found in many jazz songs, with one of the most common progressions being the I – vi^{m7} – ii^{m7} – V⁷ (E.g. the last bar of *East of the Sun* by Brooks Bowman, see Figure 64 below).

Figure 64: Last 8 bars of *East of the Sun* by Brooks Bowman (1934). Annotation in green is the roman numeral analysis of the turnaround.

29 Am⁷ F⁷ Bm⁷ Bbm⁷ Eb⁷

33 Am⁷ D⁷ I6/9 vim⁷ iim⁷ V⁷
G^{6/9} Em⁷ Am⁷ D⁷

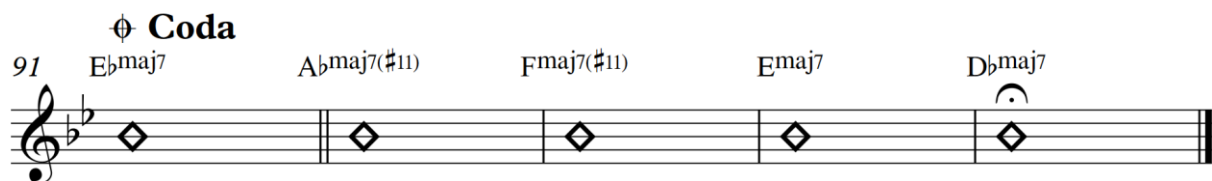
While a I – vi^{m7} – ii^{m7} – V⁷ turnaround stays in the one key, the parallel harmony turnaround in *Head Bumps* moves rapidly between different and contrasting tonalities, and thus provides a more harmonically interesting way to achieve the same result. However, when using parallel harmony, it is important to remember that it has a greater impact when used sparingly. Vincent Persichetti author of *Twentieth-Century Harmony* says as much when he states:

“Momentary parallel harmony is effective when used to accentuate a rise or fall in a melodic line or to slip into a fresh key area. But extended similar motion tires quickly even though complex chords are employed.” (Persichetti, 1961)

Therefore, the effect of parallel harmony in *Head Bumps* is maximised by keeping the technique’s appearance brief.

A variation of this chord progression can also be found in the coda of *Head Bumps* (7:25), where instead of playing a D7alt chord in the last bar to lead the harmony back to the top of the head, the harmony moves to a DbM7 chord, providing a final resolution for the song (see **Figure 65** below).

Figure 65: Coda section for *Head Bumps* by Reginald Ashman.



The demonstrations of the use of these techniques in these original compositions confirms their musical effect within a composition. The use of extended and syncopated vamps, melodic phrases, overdubs and parallel harmony demonstrated within the author’s original compositions *Chainsaws* and *Head Bumps* are but a few possible uses for these techniques. Through additional and repeated experimentation more possible uses are likely to be found.

Conclusion

To summarise the results of this study, analysing the works of ‘fusion’ artists can lead to significant insights into how the artists used different compositional and musical devices in their craft. The analysis on the jazz-funk fusion composition *Chameleon* by Herbie Hancock revealed the use of the clave, the minor pentatonic scale, extended vamps, parallel harmony, editing and overdubs, the musical effect of the choice of players and instrumentation; and how these elements, as well as various jazz and funk influences, helped shape the recorded version of the tune that is so well known today. The analysis of the electro-jazz composition *Stadium Jazz* by Donny McCaslin revealed the use of rhythmically syncopated vamps, recurring melodic phrases and the use of isolated harmonic intervals for their unique sonic characteristics. Importantly, seeing how each of these individual musical elements work together provides composers and musical practitioners with a greater perspective on how a composition functions and how it produces a musical effect greater than the sum of its parts. The chapter on the compositional experiments where the author utilised selected techniques from the analyses on *Chameleon* and *Stadium Jazz* in original compositions both confirms the musical effect that the techniques provide and acts as a demonstration of how these techniques can be utilised outside of their original contexts. Ultimately, the results of this study provide composers and musical practitioners with a greater insight into the musical techniques and devices used by the selected ‘fusion’ artists in their works. Hopefully this study will prove to be a useful resource in this underexplored area of creative activity.

Large Figures

Figure 66: Blue Bossa (1963). Original Jazz Composition by Kenny Dorham. Uses an AB binary form.

Blue Bossa

Kenny Dorham

A Cm Fm
 5 Dm7(b5) G7(#9) Cm
B Ebm7 Ab7 Dbmaj7
 13 Dm7(b5) G7(#9) Cm Dm7(b5) G7(#9)
 (1st X Only)

Figure 67: Take Me Home, Country Roads (1971). Popular song by John Denver, Bill Danoff & Taffy Nivert. Uses an AB binary form (or verse - chorus form) as the basis for the song.

Take Me Home, Country Roads

Words & Music by
John Denver
Bill Danoff
Taffy Nivert

A $\text{♩} = 88$

Al-most hea - ven, West Vir- gin - ia,

5 Blue Ridge Mount tains Shen-an - do - ah Ri - ver.

10 Life is old there, old - er than the trees.

14 Young-er than the moun - tains, blow-ing like a breeze. Coun-try roads,

B

18 take me home, to the place

22 I belong. West Vir - gin -

26 - ia, moun - tain ma - ma, take me home

30 coun - try roads.

Figure 68: Bolivia (1975). Original composition by pianist Cedar Walton. Features a vamp on a G7 chord for the entire A section.

Bolivia

Lead Sheet

♩ = 210 Swing & Latin

Cedar Walton

A G⁷ Swing

Bass on low part

5 1. 2. G⁷(b¹³)

B

11 E^bmaj⁷ E⁷ A⁷ Dmaj⁷ A^b7(b⁹)

Latin

15 Gmaj⁷ F[#]7([#]₅⁹) Bm⁷ Cmaj⁷([#]₁₁)

19 Bm⁷ Bm⁷/A A^bm⁷(b⁵) Gm⁷ C⁷

Swing

23 F⁶ B^b7(b⁹) B⁷(b⁹) B^bmaj⁷ A⁷([#]₉) Break

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Appendices

Appendix A: Score for Chainsaws. An original composition by Reginald Ashman.

Chainsaws

Regi Ashman

$\text{♩} = 127 \text{ Straight}$

Alto Saxophone

Tenor Saxophone *mp*

Trumpet in Bb *mp*

Piano

Acoustic Bass

Drum Set $\text{♩} = 127 \text{ Straight}$

5

A

Alto Sax. *mf*

Ten. Sax.

Tpt.

Pno.

A. Bass

Dr. **A**

10

Alto Sax.

Ten. Sax.

Tpt.

Pno.

A. Bass

Dr.

20

Alto Sax.

Ten. Sax.

Tpt.

Pno.

A. Bass

Dr.

The musical score is for the song "The Sound of Silence" by Simon & Garfunkel. It features a key signature change to B-flat major (two flats) and a section marked with a large 'B' and a repeat sign. The instruments and their parts are as follows:

- Alto Sax:** Plays a melodic line starting in measure 25, marked *mf* (mezzo-forte). It includes triplets and a long note in measure 28.
- Ten. Sax:** Plays a similar melodic line to the Alto Sax, also marked *mf*, with triplets and a long note in measure 28.
- Tpt. (Trumpet):** Plays a melodic line starting in measure 25, marked *mf*. It includes a long note in measure 28.
- Pno. (Piano):** Provides harmonic support with chords and arpeggios. Chords indicated include Fmaj7(#11), Gb7, and Eb7/G. The piano part is marked *mf*.
- A. Bass (Alto Bass):** Plays a rhythmic line with eighth notes, marked *mf*.
- Dr. (Drums):** Plays a rhythmic pattern with a key signature change to B-flat major (two flats) and a section marked 'B'.

[illegible]

45

Alto Sax.

Ten. Sax.

Tpt.

Pno.

A. Bass

Dr.

Chords: $G\flat\text{maj}7$ $D\flat(\text{add}2)/F$ $E\flat m7/B\flat$ $D\flat\text{maj}7/A\flat$ $G\flat\text{maj}7$ $F7(b9)$ $Fm7$ $B\flat7(b9)$

53

Alto Sax.

Ten. Sax.

Tpt.

Pno.

A. Bass

Dr.

D

mf cresc. poco a poco

mf cresc. poco a poco

mf cresc. poco a poco

mf cresc. poco a poco

mf cresc. poco a poco

D

mf cresc. poco a poco

60

Alto Sax.

Ten. Sax.

Tpt.

Pno.

A. Bass

Dr.

Chords: $D\flat\text{maj}7$ $G\flat\text{maj}7$ $D\flat(\text{add}2)/F$ $E\flat m7/B\flat$ $D\flat\text{maj}7/A\flat$

4 8

65

Alto Sax. *f*

Ten. Sax. *f*

Tpt. *f*

Pno. *f*

A. Bass *f*

Dr. *f*

12

dim. gradually

70

Alto Sax. *rit.* *rit. on D.S. Only* **Fine** *mp*

Ten. Sax. *mp*

Tpt. *mp*

Pno. *mp* *Tacet 1st X*

A. Bass *mp* *Tacet 1st X*

Dr. *mp*

78

Alto Sax. *mp*

Ten. Sax. *mp*

Tpt. *mp*

Pno. *mp*

A. Bass *mp*

Dr. *mp*

[illegible]

93 C7/E Fm

Alto Sax.

Ten. Sax.

F7/A Bbm

Tpt.

Pno.

Eb7/G Abm

A. Bass

Abm

Dr.

97 $D^{maj7}(\sharp 11)$ E^b7 C^7/E

Alto Sax. $G^{maj7}(\sharp 11)$ A^b7 F^7/A

Ten. Sax. $G^{maj7}(\sharp 11)$ A^b7 F^7/A

Tpt. $G^{maj7}(\sharp 11)$ A^b7 F^7/A

Pno. $F^{maj7}(\sharp 11)$ G^b7 E^b7/G

A. Bass $F^{maj7}(\sharp 11)$ G^b7 E^b7/G

Dr. 4

102 Fm E^b7 $B^b(add2)/D$

Alto Sax. B^bm A^bmaj7 $E^b(add2)/G$

Ten. Sax. B^bm A^bmaj7 $E^b(add2)/G$

Tpt. B^bm A^bmaj7 $E^b(add2)/G$

Pno. A^bm G^bmaj7 $D^b(add2)/F$

A. Bass A^bm G^bmaj7 $D^b(add2)/F$

Dr. G

107 Cm^7 B^bmaj7 E^bmaj7 $B^b(add2)/D$ Cm^7

Alto Sax. Fm^7 E^bmaj7 A^bmaj7 $E^b(add2)/G$ Fm^7

Ten. Sax. Fm^7 E^bmaj7 A^bmaj7 $E^b(add2)/G$ Fm^7

Tpt. Fm^7 E^bmaj7 A^bmaj7 $E^b(add2)/G$ Fm^7

Pno. E^bm^7 D^bmaj7 G^bmaj7 $D^b(add2)/F$ E^bm^7

A. Bass E^bm^7 D^bmaj7 G^bmaj7 $D^b(add2)/F$ E^bm^7

Dr. 4

8

112

Alto Sax. $B\flat$ maj7 $E\flat$ maj7 $E\flat^{\circ}7$ Dm^7

Ten. Sax. $E\flat$ maj7 $A\flat$ maj7 $A\flat^{\circ}7$ Gm^7

Tpt. $E\flat$ maj7 $A\flat$ maj7 $A\flat^{\circ}7$ Gm^7

Pno. $D\flat$ maj7 $G\flat$ maj7 $G\flat^{\circ}7$ Fm^7

A. Bass $D\flat$ maj7 $G\flat$ maj7 $G\flat^{\circ}7$ Fm^7

Dr. 8

Repeat for Solos then

D.S. al Fine

116

Alto Sax. $G^7(b9)$ $C^7(sus)$ $B^7(\frac{9}{5})$ $B\flat$ maj7 E^{13}

Ten. Sax. $C^7(b9)$ $F^7(sus)$ $E^7(\frac{9}{5})$ $E\flat$ maj7 A^{13}

Tpt. $C^7(b9)$ $F^7(sus)$ $E^7(\frac{9}{5})$ $E\flat$ maj7 A^{13}

Pno. $B\flat^7(b9)$ $E\flat^7(sus)$ $D^7(\frac{9}{5})$ $D\flat$ maj7 G^{13}

A. Bass $B\flat^7(b9)$ $E\flat^7(sus)$ $D^7(\frac{9}{5})$ $D\flat$ maj7 G^{13}

Dr. 12

Repeat for Solos then
D.S. al Fine

Appendix B: Musical score for Head Bumps. An original composition by Reginald Ashman

Head Bumps

Regi Ashman

♩ = 96

Trumpet in B♭

Tenor Saxophone

Electric Piano

Electric Bass

mp staccato *mf*

♩ = 96

Drum Set

3 **A**

Tpt.

Ten. Sax.

Embellish Chords

mf

E. Piano

mf

E. Bass

A

Light Cymbal work

Dr.

mp

Gm¹¹/C

A♭maj7/C

A♭maj7/C

A♭maj7/C

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6

Tpt.

Ten. Sax.

E. Piano

E. Bass

Dr.

$G\flat\text{maj}^9/C$ $E\text{m}^{11}/C$ $E7(b5)/C$ $F\text{m}^{11}/C$

$G\flat\text{maj}^9/C$ $E\text{m}^{11}/C$ $E7(b5)/C$ $F\text{m}^{11}/C$

4

4

10

Tpt.

Ten. Sax.

E. Piano

E. Bass

Dr.

$C\text{maj}^9$ $D^7\text{alt}/C$

$C\text{maj}^9$ $D^7\text{alt}/C$

8

8

f subito *mf*

3

B Am^{11}/D

12

Tpt. Am^{11}/D *mf*

Ten. Sax. Am^{11}/D *mf*

Horns Enter

E. Piano Gm^{11}/C *mf*

Horns Enter

E. Bass Gm^{11}/C

Dr. B Gm^{11}/C *mf*

Horns Enter Gm^{11}/C Increase intensity

14 $\text{Bb}^{\text{maj}7}/\text{D}$ $\text{Ab}^{\text{maj}9}/\text{D}$ $\text{F}^{\#m11}/\text{D}$ $\text{F}^{\#7(b5)}/\text{D}$

Tpt. $\text{Bb}^{\text{maj}7}/\text{D}$ $\text{Ab}^{\text{maj}9}/\text{D}$ $\text{F}^{\#m11}/\text{D}$ $\text{F}^{\#7(b5)}/\text{D}$

Ten. Sax. $\text{Bb}^{\text{maj}7}/\text{D}$ $\text{Ab}^{\text{maj}9}/\text{D}$ $\text{F}^{\#m11}/\text{D}$ $\text{F}^{\#7(b5)}/\text{D}$

E. Piano $\text{Ab}^{\text{maj}7}/\text{C}$ $\text{Gb}^{\text{maj}9}/\text{C}$ Em^{11}/C $\text{E}^{7(b5)}/\text{C}$

E. Bass $\text{Ab}^{\text{maj}7}/\text{C}$ $\text{Gb}^{\text{maj}9}/\text{C}$ Em^{11}/C $\text{E}^{7(b5)}/\text{C}$

Dr. B $\text{Ab}^{\text{maj}7}/\text{C}$ $\text{Gb}^{\text{maj}9}/\text{C}$ Em^{11}/C $\text{E}^{7(b5)}/\text{C}$

4

18

Tpt. Gm^{11}/D $Dmaj9$

Ten. Sax. Gm^{11}/D $Dmaj9$

E. Piano Fm^{11}/C $Cmaj9$

E. Bass Fm^{11}/C $Cmaj9$

Dr. 8

20

Tpt. $E7(\sharp 11)/D$ Am^{11}/D

Ten. Sax. $E7(\sharp 11)/D$ Am^{11}/D

E. Piano $D7(\sharp 11)/C$ Gm^{11}/C Gm^{11}/C

E. Bass $D7(\sharp 11)/C$ Gm^{11}/C

Dr. mp mf

More Intensity

22

Tpt. $B\flat\text{maj}7/D$ $A\flat\text{maj}9/D$

Ten. Sax. $B\flat\text{maj}7/D$ $A\flat\text{maj}9/D$

E. Piano $A\flat\text{maj}7/C$ $G\flat\text{maj}9/C$

E. Bass $A\flat\text{maj}7/C$ $G\flat\text{maj}9/C$

Dr. 4

25

Tpt. $F\sharp m^{11}/D$ $F\sharp 7(b5)/D$ Gm^{11}/D

Ten. Sax. $F\sharp m^{11}/D$ $F\sharp 7(b5)/D$ Gm^{11}/D

E. Piano Em^{11}/C $E7(b5)/C$ Fm^{11}/C

E. Bass Em^{11}/C $E7(b5)/C$ Fm^{11}/C

Dr. 4

28

Tpt. D^{maj9} $E7(\sharp 11)/D$

Ten. Sax. D^{maj9} $E7(\sharp 11)/D$

E. Piano C^{maj9} $D7(\sharp 11)/C$

E. Bass C^{maj9} $D7(\sharp 11)$

Dr. 8

30

Tpt. $Am(add9)$ ff mf

Ten. Sax. $Am(add9)$ ff mf Tacet 1st X

E. Piano $Gm(add9)$ ff mf HalfTime Feel $Gm(add9)$

E. Bass ff mf

Dr. Big Build... Choke! HalfTime Feel Brushes

ff mf

33 7

Tpt. Dm^7 $Cmaj^7$ $B^7(\sharp 9)$ $Bbmaj^7$

Ten. Sax. Dm^7 $Cmaj^7$ $B^7(\sharp 9)$ $Bbmaj^7$

E. Piano Cm^7 $Bbmaj^7$ $A^7(\sharp 9)$ $Abmaj^7$

E. Bass Cm^7 $Bbmaj^7$ $A^7(\sharp 9)$ $Abmaj^7$

Dr. 4

37 1. 2.

Tpt. $Am(add2)$ Gm^{11} $F^7(sus)/G$ $Bbmaj^7(b5)$ $F^7(sus)/G$ $Fmaj^7(\sharp 11)$ $cresc.$

Ten. Sax. $Am(add2)$ Gm^{11} $F^7(sus)/G$ $Bbmaj^7(b5)$ $F^7(sus)/G$ $Fmaj^7(\sharp 11)$ $cresc.$

E. Piano $Gm(add2)$ Fm^{11} $E^b7(sus)/F$ $Abmaj^7(b5)$ $E^b7(sus)/F$ $Ebmaj^7(\sharp 11)$ $cresc.$

E. Bass $Gm(add2)$ Fm^{11} $E^b7(sus)/F$ $Abmaj^7(b5)$ $E^b7(sus)/F$ $Ebmaj^7(\sharp 11)$ $cresc.$

Dr. 8 1. 2.

42 **D**

Tpt. $F\sharp maj7(\sharp_{11})$ $Gm7(b5)$ $C11(b9)$ $A\flat maj9$

Ten. Sax. $F\sharp maj7(\sharp_{11})$ $Gm7(b5)$ $C11(b9)$ $A\flat maj9$

E. Piano $E maj7(\sharp_{11})$ $Fm7(b5)$ $B\flat 11(b9)$ $G\flat maj9$

E. Bass $E maj7(\sharp_{11})$ $Fm7(b5)$ $B\flat 7(b9)$ $G\flat maj9$

Dr. **D**

46 $Gm7$ $Fm7$ $E\flat maj7$ $A\flat maj9$

Tpt. $Gm7$ $Fm7$ $E\flat maj7$ $A\flat maj9$

Ten. Sax. $Fm7$ $E\flat m7$ $D\flat maj7$ $G\flat maj9$

E. Piano $Fm7$ $E\flat m7$ $D\flat maj7$ $G\flat maj9$

E. Bass $Fm7$ $E\flat m7$ $D\flat maj7$ $G\flat maj9$

Dr. Similar groove **Fill**

50 **To Coda**

Tpt. Gm^7 Fm^7 $Fmaj^7$ $Bbmaj^7(\sharp 11)$

Ten. Sax. Gm^7 Fm^7 $Fmaj^7$ $Bbmaj^7(\sharp 11)$

E. Piano Fm^7 Ebm^7 $Ebmaj^7$ $Abmaj^7(\sharp 11)$

E. Bass Fm^7 Ebm^7 $Ebmaj^7$ $Abmaj^7(\sharp 11)$

Dr. **To Coda** Fill

54 $Gmaj^7(\sharp 11)$ $F\sharp maj^7$ $E^7alt.$ $Am(add9)$

Tpt. $Gmaj^7(\sharp 11)$ $F\sharp maj^7$ $E^7alt.$ $Am(add9)$

Ten. Sax. $Gmaj^7(\sharp 11)$ $F\sharp maj^7$ $E^7alt.$ $Am(add9)$

E. Piano $Fmaj^7(\sharp 11)$ $Emaj^7$ $D^7alt.$ $Gm(add9)$

E. Bass $Fmaj^7(\sharp 11)$ $Emaj^7$ $D^7alt.$ $Gm(add9)$

Dr. $Gm(add9)$

E Solos
Tpt & Tenor
1 Chorus Each

58

Tpt. Dm^7 C^{maj7} $B^7(\sharp 9)$ $B\flat^{maj7}$

Ten. Sax. Dm^7 C^{maj7} $B^7(\sharp 9)$ $B\flat^{maj7}$

E. Piano Cm^7 $B\flat^{maj7}$ $A^7(\sharp 9)$ $A\flat^{maj7}$

E. Bass Cm^7 $B\flat^{maj7}$ $A^7(\sharp 9)$ $A\flat^{maj7}$

Dr. Cm^7 $B\flat^{maj7}$ $A^7(\sharp 9)$ $A\flat^{maj7}$

63

Tpt. $Am(add2)$ Gm^{11} $F^7(sus)/G$ $B\flat^{maj7}(\flat 5)$ $Am(add9)$

Ten. Sax. $Am(add2)$ Gm^{11} $F^7(sus)/G$ $B\flat^{maj7}(\flat 5)$ $Am(add9)$

E. Piano $Gm(add2)$ Fm^{11} $E\flat^7(sus)/F$ $A\flat^{maj7}(\flat 5)$ $Gm(add9)$

E. Bass $Gm(add2)$ Fm^{11} $E\flat^7(sus)/F$ $A\flat^{maj7}(\flat 5)$ $Gm(add9)$

Dr. $Gm(add2)$ Fm^{11} $E\flat^7(sus)/F$ $A\flat^{maj7}(\flat 5)$ $Gm(add9)$

68

Tpt. Dm^7 C^{maj7} $B^7(\sharp 9)$ $B\flat^{maj7}$ $Am(add2)$

Ten. Sax. Dm^7 C^{maj7} $B^7(\sharp 9)$ $B\flat^{maj7}$ $Am(add2)$

E. Piano Cm^7 $B\flat^{maj7}$ $A^7(\sharp 9)$ $A\flat^{maj7}$ $Gm(add2)$

E. Bass Cm^7 $B\flat^{maj7}$ $A^7(\sharp 9)$ $A\flat^{maj7}$ $Gm(add2)$

Dr. Cm^7 $B\flat^{maj7}$ $A^7(\sharp 9)$ $A\flat^{maj7}$ $Gm(add2)$

73 Gm^{11} $F7(sus)/G$ $Fmaj7(\sharp 11)$ $F\sharp maj7(\sharp 5)$ $Gm7(b5)$

Tpt.

Ten. Sax.

E. Piano

E. Bass

Dr.

78 $C7(b9)$ $A\flat maj9$ $Gm7$ $Fm7$ $E\flat maj7$

Tpt.

Ten. Sax.

E. Piano

E. Bass

Dr.

83 $A\flat maj9$ $Gm7$ $Fm7$ $Fmaj7$ $B\flat maj7(\sharp 11)$

Tpt.

Ten. Sax.

E. Piano

E. Bass

Dr.

12

**After solos,
D.S. al Coda**

88 Gmaj7(#11) F#maj7 Emaj7 E7alt. ♢ Coda

Tpt.

Ten. Sax.

E. Piano

E. Bass

**After solos,
D.S. al Coda**

Fmaj7(#11) Emaj7 Dmaj7 D7alt. ♢ Coda
Fill

Dr.

92

Tpt.

Ten. Sax.

E. Piano

E. Bass

Dr.

Appendix C: Audio CD containing audio examples and audio of original compositions.

Tracks

1. Example A: Bass ostinato from the main vamp of *Chameleon* by Herbie Hancock, played by upright bass. Notation in Figure 4 on page 24.
2. Example B: Bassline from before the second solo of *Chameleon* by Herbie Hancock, played on upright bass. Notation in Figure 7 on page 25.
3. Example C: Bassline from the second solo of *Chameleon* by Herbie Hancock, played on upright bass. Notation in Figure 8 on page 26.
4. Example D: Same chord voicing played on piano, Fender Rhodes, Clavinet with auto-wah and synthesizer.
5. Original Composition *Chainsaws* (version with overdubs) by Reginald Ashman
6. Original Composition *Chainsaws* (original recording – no overdubs) by Reginald Ashman
7. Original Composition *Head Bumps* by Reginald Ashman

Online Link

<https://drive.google.com/drive/folders/1BRnwtqLPd6IENf9UBZklQy0hR1Had7yi?usp=sharing>

[g](#) (Accessible as of the 30th of October 2019)