

Metric Displacement of Tony Williams' Early Career

By

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## ABSTRACT

Jazz drummer Tony Williams' musical and technical abilities surpassed those of his contemporaries'; allowing him to push the boundaries of the music he played. This was especially true at fast tempi. Through transcription and analysis of Williams' phrasing, this study identifies the ways he obscured pulse, meter, and form. He used three major techniques to do so: accent variation, accentual shift, and metric superimposition. The examples within this study demonstrate both a regular formal structure as well as a clearly articulated macro-beat from the walking bass line. In using the aforementioned techniques, Williams created a variety of rhythmic displacement that occurs not only at metric levels, but formal as well. Williams was not the first drummer to use these techniques, but what is especially significant is his use of them at such fast tempi. The two songs represented throughout each come from the first year of Williams' professional recording career. While only seventeen at the time, his playing demonstrates a clear technical leap on the instrument over his contemporaries. These concepts of metric displacement became a hallmark of Williams' playing throughout his entire career, and helped to establish him as one of jazz drumming's most significant contributors.

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## NOTATION GUIDE

Small Tom      Medium Tom      Small Floor Tom      Medium Floor Tom      Large Floor Tom

Crash Cymbal      Ride Cymbal      Shoulder Crash (ride cymbal)      Hi-hat, closed with stick      Hi-hat, open with stick      Hi-hat, with foot      Hi-hat, splash with foot

Bass Drum      Snare Drum      Rim Shot (snare)      Rim Click (snare)      Ghosted Note      Buzzed Note

The transcriptions of Tony Williams, feature this notation system. Brief

definitions of several of his timbral effects follow:

-Shoulder Crash: Striking the bow of the ride cymbal with the shaft of the stick, creating a distinct timbre and dynamic accent.

-Hi-hat, closed with stick: Striking the hi-hat cymbals with the foot pedal fully depressed, creating a very dry sound with no sustain.

-Hi-hat, open with stick: Striking the hi-hat cymbals with the foot pedal released creating a sound similar to that of a crash cymbal but with a higher pitch and unique timbre. The cymbals not only resonate with the sound of the initial strike of the stick, but also vibrate against each other.

-Hi-hat, splash with foot: Using the foot to strike the two hi-hat cymbals together, but releasing the foot pedal immediately, allowing the cymbals to resonate.

-Rim Shot: Using one stick and one motion, striking the head of the drum with the tip of the stick while simultaneously striking the rim of the drum with the shaft of the stick, resulting in a unique timbre combining a metal and skin sound. Most commonly used as a dynamic accent.

-Rim Click: Created by placing the tip of the stick on the skin of the drum while striking the rim of the drum with the body of that stick, producing a metallic timbre; higher pitched than a rim shot.

-Ghosted Note: Notation denoting a very soft note, used to show subtleties of dynamic layers.

-Buzzed Note: A series of multiple bounces produced by slight pressure into the drumhead by the stick, creating a more sustained sound.

## INTRODUCTION

Drummer Tony Williams is one of the seminal figures in jazz. Having started his professional career in 1963 with an already strong understanding of the music's past, he pushed the stylistic boundaries on the drums both musically and technically. Many of his abilities surpassed those of his contemporaries, allowing Williams to shape the direction of the music he played in unique ways.

This work identifies several of the elements of Tony Williams' playing which are most important in understanding his contributions to drumming from his earliest recordings as a professional in 1963 and 1964. Of all aspects of his playing from this period, his up-tempo playing is often cited as especially unique from drummers in the tradition before him. Williams' ride cymbal facility and phrasing at these tempi is a large part of that concept. Through isolated study of Williams' ride cymbal phrasing and variations, one can get a nearly full picture of many of Williams' overall drumming concepts.

One of the major traits of the up-tempo style Williams cultivated early in his career was his regular obscuring of pulse, meter, and formal structure of the music. He did so using several surface-level techniques, each discernable through study of his ride

cymbal alone. These include his use of accent variation, accentual shift, and metric superimposition. This study identifies these techniques through transcription and analysis.

Recorded examples represented through transcription are taken from two pieces: “Vertigo” from Jackie McLean’s album *Vertigo*, recorded in February, 1963, and “So What” from Miles Davis’ album *Four and More* recorded in February, 1964. In this one year period, Tony Williams was recorded on six albums, with *Vertigo* and *Four and More* representing the first and last of them. The first examples under analysis come from “Vertigo,” while later ones, which represent a further rhythmic obscuring, come from “So What.” For continuity of analysis, each of these pieces, feature transcriptions taken only from solo sections of the pieces, each feature a consistent walking bass line throughout, and each are a 32-measure song form. While there is some minor tempo fluctuation in each example, the tempos of both are approximately 282 beats per minute.



## BIOGRAPHY

Tony Williams was born in Chicago, Illinois on December 12<sup>th</sup>, 1945 to Portuguese and African-American parents. His family soon relocated to Boston where he spent the rest of his youth. His father, Tillman Williams, was a postal worker and weekend musician, and Tony's first experience playing the drums was at age nine at one of his father's engagements. Less than a year later, he received his first drum set and began playing as much as he could, practicing as many as eight hours a day.

At age eleven, Tillman Williams asked a drummer who lived in their neighborhood if he would teach Tony. Alan Dawson was not interested in teaching at the time, but recalled doing a favor for his neighbor:

'He took me up to the attic where Tony, who was eleven but looked about nine, was seated behind the drums, . . . and this baby started to cook, playing beautiful time and fills. Believe it or not, this youngster had good time, good taste, and good feeling – everything but chops.'<sup>1</sup>

Dawson became Williams' mentor, and in doing so, created a new career as a teacher for himself, later becoming the first jazz drum professor at the Berklee College of Music in Boston.

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<sup>1</sup> Jack Chambers, *Milestones 2: The Music and Times of Miles Davis Since 1960* (New York: Beech Tree Books/William Morrow, 1985), 57.

As a teenager, Williams immersed himself in as much music as possible, listening to rock music with friends, and hearing live jazz in area night clubs.<sup>2</sup> During this period, he said that he was impacted greatly with the learning environment of Boston, home to numerous colleges, and the experimental art scenes that surrounded them. Williams learned how to study the drums like an academic discipline; listening to, copying, and analyzing many famous drummers' styles. Amongst these early drum idols were Max Roach, Art Blakey, Philly Joe Jones, Roy Haynes, Jimmy Cobb, and Louis Hayes.<sup>3</sup> In addition to jazz and rock, Williams was interested in other forms of music that surrounded Boston, listening to the music of composers like Bartok, Stockhausen, and Stravinsky. His affinity for experimental music and stretching the boundaries of music in general was later strengthened during his teenage years by performing in the New England Improvisational Ensemble at the New England Conservatory.<sup>4</sup>

As Williams' musical capabilities increased, he dropped out of high school and became the house drummer at the Boston night club, Connolly's, playing behind touring jazz musicians. It was there that saxophonist Jackie McLean performed with Williams, and invited him to join his band. At age seventeen, Williams, with a solid abckground in jazz drumming history, and a desire to push its possibilities, moved to New York and began his professional career.

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<sup>2</sup> William Banfield, *Musical Landscapes in Color: Conversations with Black Americans* (Lanham, MD: Scarecrow Press, 2003), 211.

<sup>3</sup> Ibid, 207.

<sup>4</sup> Ibid, 212.

## CHAPTER 1

### DEFINING THE ELEMENTS OF RHYTHM

As this work is a study of rhythmic elements, it is first necessary to define the terms used throughout. Many authors have written on the subject of rhythm and have similarly sought to define the elements that produce our sense of rhythmic structure. Unlike many of them, it is not the goal of this chapter to produce new or greater understanding of these elements. Rather, through an amalgamation of several studies and an understanding of jazz music, this chapter serves to produce the working definitions of rhythmic elements as used in the following analysis.

#### *Rhythm*

At its most simple, rhythm is the flow of movement over time. In accepting the fact that music contains two major organizing factors, pitch and rhythm, it is difficult to divorce any study of music from that of rhythm. Rhythm even organizes the pitches that form melody and its relationship to harmony. If one were to imagine the beginning of Beethoven's *Fifth Symphony*, as in Example 1, with a completely altered rhythm, as in Example 2, we may not recognize it as the same piece.

Example 1: Beethoven's *Fifth Symphony*



Example 2: Rhythmically Altered *Fifth Symphony*



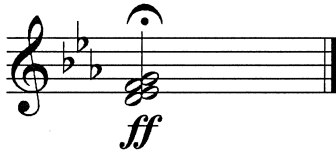
Accordingly, it is rhythm that gives music its greatest vitality, and it is often rhythm that delineates musical forms and styles from one another.

The largest factor in any study or definition of rhythm is the passage of time. A musical experience, listened or performed, is a chronology of events. Even the most singular of musical events, such as the performance of a single pitch, is dependant on time; there is the moment when we first hear the attack, and a later moment when its ceases to sound. In *The Rhythms of Tonal Music*, Lester states that it is this relationship to time that sets music apart from other art forms. In other art forms, we can have a synoptic view, seeing their entirety all at once, something impossible with music.<sup>5</sup> Using the example of Beethoven's *Fifth Symphony*, if the same notes sound simultaneously, as in Example 3, the result is unrecognizable from the original.

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<sup>5</sup> For more on this, see: Joel Lester, *The Rhythms of Tonal Music* (Carbondale: Southern Illinois University Press, 1986).

Example 3: Synoptic View of Beethoven's *Fifth Symphony*



Lester further relates this relationship of music, rhythm, and time with the following:

Musical form, from motives to phrasing to the largest subdivisions of a piece, is the division of a piece into segments following one another in time as they add up to the whole. The processes of growth and decline, antecedence and consequence, preparation and resolution, and motion toward and recession from climax, regardless of how they are described and in whatever terms, all depend on orderings of musical elements and relationships in time.<sup>6</sup>

This leaves no question as to the necessity of the element of time in the defining of rhythm.

Many authors have offered their own versions of a definition of rhythm, creating a rather large continuum from narrow to broad. For this work, rhythm will be defined as the organization and measurement of musical events over the passage of time.

While this definition works in many contexts, it is important to recognize that inherent within it and the term 'musical events,' exist a number of often equally complex elements of structure and grouping.

### *Beat*

Rhythmical beats can be thought of as the building blocks of metrical structure, and it is their combination and ordering that allows us to perceive a sense of meter and structure at both small and larger levels. Lerdahl and Jackendoff's *A Generative Theory*

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<sup>6</sup> Ibid, 1.

*of Tonal Music* asserts that beats are “the elements that make up a metrical pattern.”<sup>7</sup>

They are quick to clarify the common misconception that beats delineate periods of time. Beats themselves have no duration of time. Rather, they are microsecond points that give reference to both performers and listeners to help construct the patterning of music. To illustrate, beats are like the exact point of tactus in the baton of a conductor, and not a tactus along with the corresponding motion to the next point in that pattern, which they consider time-span. Thus, “time-spans have duration, then, and beats do not.”<sup>8</sup> In the view of Lerdahl and Jackendoff, beats are reference points for musical activity.

This study accepts the assertions of Lerdahl and Jackendoff with regard to beat and time-span. However, clarification and even simplification is desirable, especially in the context of jazz, as it is unlikely for a jazz musician to think about beat in such academic terms, especially when performing. A better concept for this rhythm-based study of Tony Williams is that of macro-beat and micro-beat. The macro-beat is the most basic division of the music, and the basis from which further divisions derive. In this study, macro-beat is the quarter note in 4/4 meter. Micro-beats, then, are divisions of the macro-beat. These can occur in various groupings, i.e. two, three, four micro-beats per macro-beat as generated by the meter of a piece, or by choice of an improviser.

Jazz musicians rely heavily on the concept of macro-beat with regard to playing metrically, or in subverting our sense of meter.<sup>9</sup> For example, the choice by a musician to play a three micro-beat grouping over a meter whose primary subdivision is the two micro-beat level has an obscuring effect. As mentioned in the introduction, the examples

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<sup>7</sup> Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge: MIT Press, 1983), 18.

<sup>8</sup> Ibid.

<sup>9</sup> A list of factors in regards to playing metrically must include harmonic rhythm and form as critical as well.

of Tony Williams here, each feature a walking bass line, where the bass articulates a continuous quarter note pattern or clear macro-beat

### *Accent*

Another critical aspect to the understanding of rhythm is accent. At its simplest, accent is the stress given one musical event in relation to those around it. With this broad definition, an accent can be a single note, a new harmony, or a rest. Lerdahl and Jackendoff enumerate three specific types of accent: phenomenal, structural, and metrical.<sup>10</sup> Phenomenal accents include those created by specific points of attack, local dynamic stress, changes in timbre, longer note values, and change in register. Structural accents are those “caused by melodic/harmonic points of gravity in a phrase or section.”<sup>11</sup> Finally, metrical accents are those created by the regular strong and weak ordering of beats in the metrical hierarchy.

Lester cites much of Lerdahl and Jackendoff’s work on the matter of accent, but creates his own categories and terminology for these music events. The result is more specific and narrow categories that are of greater use for this study of ride cymbal patterns. In addition to metrical accent, Lester posits that accents are of the following variety: durational, textural, contour, dynamic, and pattern beginning.<sup>12</sup>

One author who has studied the improvised rhythms of jazz musicians with regard to Lester’s delineations is Keith Waters. In his essay, “Blurring the Barline: Metric displacement in the Piano Solos of Herbie Hancock,” Waters constructs examples of each

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<sup>10</sup> Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge: MIT Press, 1983), 17-18.

<sup>11</sup> *Ibid*, 17.

<sup>12</sup> Essentially, all of chapter two of the following covers these distinctions: Joel Lester, *The Rhythms of Tonal Music* (Carbondale: Southern Illinois University Press, 1986).

of Lester's four categories of accent. Example 4 is a modified version of Water's accent categories. Above each of the samples is listed Lester's categorization, and below is the way Lerdahl and Jackendoff would label them. Metrical accent is omitted.

Example 4: Types of Accent, via Lester and Lerdahl/Jackendoff<sup>13</sup>

The image shows a musical staff with four measures of music. Above the staff, four categories of accents are labeled: 'Durational Accent', 'Contour Accent', 'Pattern beginning', and 'Dynamic Accent'. Below the staff, four corresponding labels are provided: 'Phenomenal', 'Structural', 'Phenomenal', and 'Phenomenal'. The first measure has a note with a greater-than sign (>) above it. The second measure has a note with a greater-than sign (>) above it. The third measure has a note with a greater-than sign (>) above it. The fourth measure has two notes, each with 'sfz' below it.

For this study, I have adapted a set of specific ride cymbal accent types which include metrical, durational, dynamic, and timbral. Example 5 provides examples for each as they appear in the analysis.

Example 5: Types of Accent Use in this Study

The image shows a drum set notation on a five-line staff. The time signature is 4/4. The notation consists of 'x' marks representing cymbal hits. The first measure has three 'x' marks, with the second one having a greater-than sign (>) above it. The second measure has four 'x' marks, with the second one having a greater-than sign (>) above it. The third measure has four 'x' marks, with the second one having a greater-than sign (>) above it. The fourth measure has four 'x' marks, with the second one having a greater-than sign (>) above it. The fifth measure has four 'x' marks, with the second one having a greater-than sign (>) above it. The sixth measure has four 'x' marks, with the second one having a greater-than sign (>) above it. The seventh measure has four 'x' marks, with the second one having a greater-than sign (>) above it. The eighth measure has four 'x' marks, with the second one having a greater-than sign (>) above it. Below the staff, three labels are provided: 'Durational Accent', 'Timbral Accents', and 'Dynamic Accent'.

Durational accent is the result of a longer note value after a shorter one or a series of shorter ones. This type of accent is unique in that it assumes steady tempo, something present in each of the examples of Tony Williams. Timbral accent is created through deviation from the standard technique and attack of the ride cymbal, or by using other implements as substitutes in time-keeping. Dynamic accent is created by a note's

<sup>13</sup> This example is adapted from: Keith Waters, "Blurring the Barline: Metric Displacement in the Piano Solos of Herbie Hancock," *Annual Review of Jazz Studies* 8 (1996): 21.



loudness compared to other notes around it. The three most common timbral accents are shown in Example 5. They include shoulder crashes, crash cymbals, and open hi-hat.<sup>14</sup> While the crash cymbal and hi-hat are different elements altogether than the ride cymbal, their use in Tony Williams' ride cymbal phrasing is still in the service of time-keeping, and are substitutes for the ride cymbal specifically for the purpose of timbral variation.

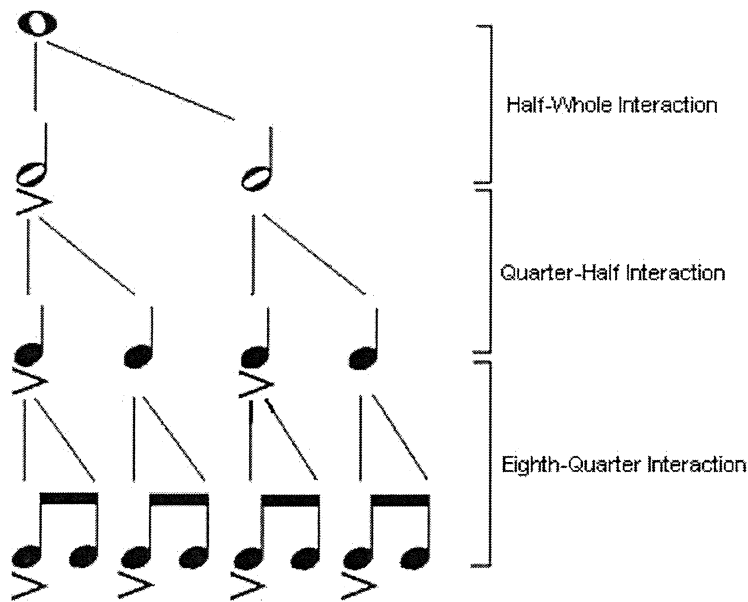
### *Meter, Metrical Hierarchy and Matrix*

In Western art music, it is generally accepted that successive beats form patterns of strong and weak emphasis. These metrical accents exist independent from those accent types previously discussed. It is the grouping of these strong and weak beats that begin to form the metrical hierarchy. From this, a sense of meter is created. As all of the musical examples under analysis in this study are in 4/4 meter, our discussion of meter and the metrical hierarchy will be limited to this regular grouping. At the quarter-note level in 4/4, beats 1 and 3 are strong in comparison to 2 and 4. This pattern of strong/weak can be applied to both higher and lower (sub and super metric) levels of rhythmic division, creating the hierarchy. A chart of this is represented in Example 6.

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<sup>14</sup> Refer back to the Notation Guide for specific descriptions of these unique timbres.

Example 6: 4/4 Meter Metric Hierarchy<sup>15</sup>



Some theorists have allowed for different possibilities of metric accents in 4/4. In his study, *The Time of Music*, Jonathan Kramer regards several others. Most notable for this study is the idea of weak/strong, which places emphasis on beats 2 and 4 at the metric level in 4/4 meter.<sup>16</sup> When talking to jazz musicians about this issue, several responded as feeling emphasis as such. This is perhaps strengthened by the facts that drummers commonly reinforce beats 2 and 4 with their hi-hat, and musicians snap their fingers on beats 2 and 4 when counting off a tune with a swing feel. This concept is in contrast with the Western model of metric hierarchy described above, as accents at higher and lower levels than the metric must include a shift as well. To further complicate the issue, many jazz musicians insist they consider all beats equal, creating a metric hierarchy that asserts no metric accent.

<sup>15</sup> This example is adapted from: Joel Lester, *The Rhythms of Tonal Music* (Carbondale: Southern Illinois University Press, 1986), 49.

<sup>16</sup> Kramer, Jonathan, *The Time of Music* (New York: Schirmer Books, 1988), Chapter 4.

Jazz music is not Western art music and does not follow the same rhythmic structure as Western art music. In fact, jazz's unique rhythmic language was one of the factors that has set it apart from its infancy. While the origins of harmony in jazz are closely related to that of Western music, the rhythmic structure is a synthesis of two significant and different musical practices. The first is Western harmonic rhythm, whereby the rate of harmonic change helps to inform our sense of meter, phrases, and form. The other is the rhythmic structure of West African music that influenced the creation of jazz.<sup>17</sup> Music from this rhythmic background does not assign strong/weak assessments in regards to beat.

From this synthesis, the rhythmic structure of jazz music is one of balance that allows the understanding and feeling of meter without the necessity of strong and weak beats. Here again, the value of the concept of macro and micro-beats can be seen. In discussing rhythm in these terms, we are able to break free of any notion of hierarchy. While the terms macro and micro themselves may allude to a sense of large and small, they are simply tools of organization, and do not assert any strong/weak delineation. With this understanding, a musical event occurring the micro-beat + of 2 for example, is assigned no less stress than one occurring on beat 1, given no other accentual force is also acting upon it.

Given the breakdown of metrical hierarchy in jazz, we should consider the multiple levels of rhythmic interaction as more a metrical matrix, allowing placement of macro and micro-beats within it, free of metrical stress. This lack of metric accent would be troubling for some studies of rhythm, potentially leaving the concept of meter

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<sup>17</sup> In jazz, some of these rhythmic constructs were diffused through Latin America and the Caribbean, but their origin remains African.

undefined. However, empirically all following examples are in 4/4 meter, clearly felt by the musicians and listeners alike. This allows meter to serve as a background level of organization that Williams is able to rhythmically reinforce, or to freely blur and obscure.

### *Form*

In accepting no metrical hierarchy, we must do the same at levels larger than a single measure. In Western metrical hierarchies, measures group together much in the same way as beats, forming strong and weak emphasis, creating larger sectional divisions within music and ultimately formal development. Extending this, sections within a given piece must also feature a level of metric stress. Considering these accents within a 32-measure, AABA song form where each section contains eight measures, the first A section and the B section would be stressed relative to the second and final A sections. However, accepting no metrical accent for this study, an assignment of formal stresses must be considered invalid too. However, sectional divisions, as above, raise points of interest of form in jazz.

At its most basic, the AABA song form, as utilized in jazz, is a vehicle for theme and variation based improvisations. When performed, musicians play the melody, and then improvise utilizing the same harmonic structure as the melody. The AABA form is maintained throughout a performance. Musicians often demonstrate their adherence to the form and each phrase within it, by placing emphasis in certain structural points. This is especially true of drummers who are taught to do this from an early point of training, and is referred to as marking the form.

Example 7 from “So What” demonstrates Tony Williams’ adherence to this sense of marking of the form.

Example 7: Miles Davis’ first solo chorus on “So What”<sup>18</sup>

Drum Set

<sup>18</sup> Miles Davis, “So What,” *Four and More*, Columbia CL 2453.

While several interesting phenomena exist in the excerpt, a quick look demonstrates both timbral and dynamic accents on the + of beat 4 tied to the following downbeat, at the end of each 8-measure phrase. Through syncopation, they serve as anticipation to the beginning of each new phrase within the chorus. Moreover, the material Williams plays leading to these points suggests a clear emphasis on marking the form. That all four phrases are treated similarly, reinforces the idea of rhythmic balance within the formal divisions of the music, asserting no sense of strong/weak at that level. It also suggests that Williams is interpreting the rhythmic structure similarly as the model created for this study.

All examples analyzed in this study have a 32-measure form. The form “So What” is AABA, and the form of “Vertigo” is ABAB. In both cases, the phrases and formal divisions are the same, and Williams’ commonly phrases within them. However, we will also see how he skews formal divisions, much as with meter on a smaller metric level.

## CHAPTER 2

### ACCENT VARIATION AND SHIFT

Williams creates rhythmic interest in his ride cymbal phrasing by varying the surface-level accent structure. Obscuring occurs when Williams' accents are in conflict with the underlying 4/4 meter, established and felt by the musicians as discussed in chapter one. As stated in the introduction, examples come from two performances, each at the end of Williams' first year of professional recordings. The examples from "Vertigo" are featured first, followed by those from "So What."

Often when studying rhythm in jazz music, eighth notes, as they are represented through notation on transcriptions, must be treated as uneven eighth notes, representing swung triplet phrasing. This phrasing can impact the durational analysis of the notes and specifically here, durational accent. However, at fast tempi, the eighth note phrasing of jazz "straightens out." Between 250 and 300 beats-per-measure, a drummer's ride pattern "flattens out," eliminating a triplet type of phrasing. This phenomenon is not isolated to drummers, and is relatively standard practice by each member of a jazz ensemble. This holds true for this study. At the tempo of each transcribed excerpt, approximately 282 beats per minute, Williams performs the eighth-note phrasing evenly.

This allows durational accents to be analyzed given even spacing, requiring no triplet-based reassessment.

One characteristic of Williams' ride cymbal phrasing is to create accent structures that are almost erratic, having the effect of pulling our attention away from our sense of 4/4 meter. Example 8 shows one such occurrence, taken from the second 16 measures of the second chorus of Jackie McLean's saxophone solo on "Vertigo".

Example 8: Second 16 Measures of Jackie McLean's 2<sup>nd</sup> Solo Chrous on "Vertigo"<sup>19</sup>

The image displays four staves of musical notation for a drum set, labeled "Drum Set" on the left. The notation is in 4/4 time and spans 16 measures. The first staff begins at measure 17. The notation uses 'x' marks on the staff lines to represent cymbal patterns. Above the notes, there are circled 'v' symbols indicating accents. The patterns are complex and irregular, with some notes beamed together and others separated by rests. The second staff continues the pattern, the third staff starts at measure 25, and the fourth staff continues the sequence.

The timbral accents Williams plays occur at least every two bars, and in several positions within the rhythmic matrix. Most frequently, they occur on the + of beat four. Example 7 in chapter one demonstrated a similar shifted focus from the downbeat of a given

<sup>19</sup> Jackie McLean, "Vertigo," *Vertigo*, Blue Note LT 1085.



measure to the eighth-note before it. In jazz music, accents in the metric matrix in this position are common and create only a very limited sense of displacement. However, in chapter one, the accents existed to mark structurally significant points. Here, they are randomly placed throughout and begin to pull our focus away on a larger scope. The other timbral accents serve a similar purpose, and disrupt the flow of Williams' overall ride cymbal phrasing. One might surmise that this was the desired intent on a song with the name "Vertigo."

Drummer and author, Bob Moses has written on the topic of accent structure, and specifically displaced resolutions. In his book, *Drum Wisdom*, he creates a theory he describes as the 8/8 concept. The basic principal is that in any given measure of 4/4 time, there are eight points of resolution when phrasing, "the four downbeats and the four upbeats."<sup>20</sup> Each of these resolution points has a drastically different feel. While some act to propel the music forward, others serve to almost halt momentum entirely. For Moses, beats 1 and 3 are considered "anchors," creating more of an ending than a going forward.<sup>21</sup> Beats 2 and 4 are where we snap our fingers and where the drummer closes the hi-hat cymbals. This is in conflict with the strong metric beats 1 and 3 from Western metrical hierarchy, and are therefore valuable points for resolution. The + of beat 1 and the + of beat 3 are perhaps the most unexpected resolution points, and resolving in these points has an almost jerking feeling, and can give a sense of unrest to a given phrase. The + of beat 2 and the + of beat 4 are perhaps the most valuable points of resolution. In examples of Williams thus far, usage of these points of resolution is apparent. They are

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<sup>20</sup> Bob Moses, *Drum Wisdom* (New York: Modern Drummer Publications Press, 1984), 10.

<sup>21</sup> *Ibid*, 12.

like a “leaning forward” as described by Moses, and help to propel the music.<sup>22</sup> The + of beat 4 is especially utilized in jazz phrasing, and is really just a syncopated substitution for the beginning of the subsequent measure, helping to create jazz’s unique rhythmic structure, and lack of any sense of hierarchy. Williams’ surface accent structure, especially over longer phrases, can be seen in the same way as this concept of resolution points.

A longer phrase featuring a regular and obscuring accent variation comes from Jackie McLean’s solo on “Vertigo,” in Example 9. Beginning on beat 4 of measure eight, Williams creates a reoccurring ostinato through durational accents. This is further demonstrated in example 10, which begins with a pick-up to measure 9, and shows the durational accents over a simplified quarter note structure.

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<sup>22</sup> Ibid, 13.

Example 9: First Sixteen Measures of Jackie McLean's Fist Solo Chorus on "Vertigo"<sup>23</sup>

Drum Set

The drum set notation is presented in four staves, each representing a four-measure segment. The first staff starts at measure 1, the second at measure 5, the third at measure 9, and the fourth at measure 13. The notation uses 'x' marks for cymbal hits and various note values (eighth notes, quarter notes, eighth rests) to represent the drum patterns. Some notes have accents (>) above them.

Example 10: Quarter-Note Simplification of Example 9

The simplification is shown in two staves. The first staff begins at measure 9 and the second at measure 13. Each staff contains a sequence of quarter notes, with an accent (>) above every other note, illustrating the underlying eight-beat ostinato pattern.

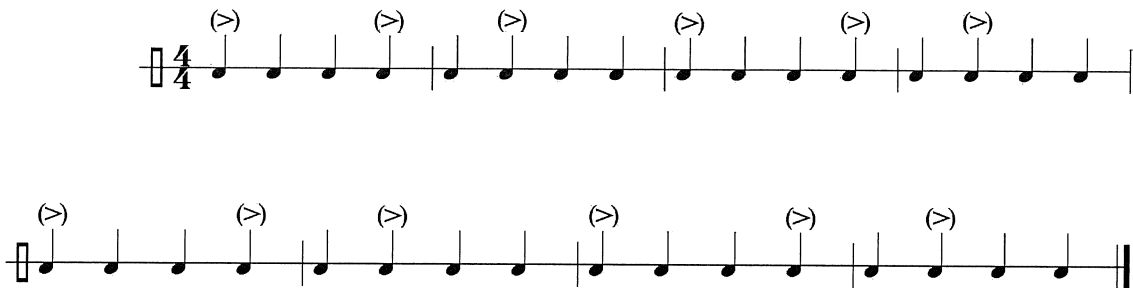
At the quarter-note macro-beat level, it is an eight beat ostinato. The phrase has rhythmic interest given the regularly occurring overlay of strong and weak created by the durational accents. Beginning on beat 4 of measure eight, the eight beats group into a

<sup>23</sup> Jackie McLean, "Vertigo," *Vertigo*, Blue Note LT 1085.

strong/weak/weak, strong/weak, strong/weak/weak pattern throughout the eight-measure section. More simply, it is a 3/2/3 grouping. Eight-beat groupings such as this can be found throughout music of the world, and several variations are common, including 3/3/2 and 2/3/3. This type of unequal division of the even number eight, adds a surface level tension of strong and weak over our balanced metrical matrix.

There is also interest created by the fact the phrase both begins and resolves on beat 4 of a given measure respectively. This gives the entire eight-measure phrase a metric shift from that of the tune itself. This phrase can be seen in a metrically normalized version in Example 14, with the phrase shifted to correspond with the eight-measure segment of the tune itself.

Example 11: Metrically Normalized Ostinato of Example 10



Williams' shift places the grouping structure of the phrase out of sync with the larger formal division of the tune. Thus, the phrase is disorienting in two ways, serving to obscure the given 4/4 meter through its accent grouping, as well as structurally.

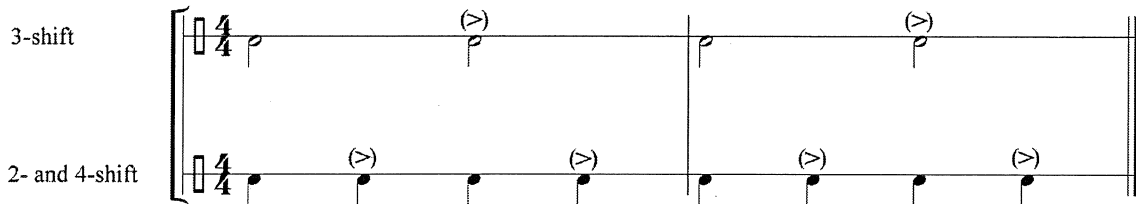
Williams demonstrates this again in McLean's second solo chorus of "Vertigo." In measures nine through twelve, He creates durational accents on beat 2 of each measure, shown in Example 12.

Example 12: Measures Nine through Twelve of Jackie McLean’s Second Solo Chorus on “Vertigo”<sup>24</sup>



This shift moves any accentual focus from the beginnings of those measures to beat 2 and a resolution point that is, as Moses describes, “where the swing resides.”<sup>25</sup> It also raises an interesting point about this type of metric shift in general. In his study of the rhythms of jazz improvisation, Waters asserts that two types of accentual shift are most dramatic in obscuring our sense of meter. He labels these “3-shift” and “2- and 4-shift.”<sup>26</sup> Each is shown in Example 13.

Example 13: 3-Shift and 2- and 4-Shift<sup>27</sup>



A 3-shift displaces the emphasis of a measure to beat 3, while a 2- and 4-shift displaces emphasis to beats 2 and 4.

<sup>24</sup> Jackie McLean, “Vertigo,” *Vertigo*, Blue Note LT 1085.

<sup>25</sup> Bob Moses, *Drum Wisdom* (New York: Modern Drummer Publications Press, 1984), 12.

<sup>26</sup> Keith Waters, “Blurring the Barline: Metric Displacement in the Piano Solos of Herbie Hancock,” *Annual Review of Jazz Studies* 8 (1996): 26-27.

<sup>27</sup> Adapted from: *Ibid*, 27.

Williams regularly utilizes these shifts, allowing him to create sustained metric focus at these points as in Example 12. This allows him to alternate his ride pattern in and out of our perceived 4/4 metric focus. It can also allow for metric ambiguity over extended durations. Example 14 features the first sixteen measures of Jackie McLean’s third solo chorus from “Vertigo.”

Example 14: The First Sixteen Measures of Jackie McLean’s Third Solo Chorus on “Vertigo”<sup>28</sup>

Beginning in measure seven, Williams plays seven consecutive bars featuring 2- and 4-shifts. As well as being reinforced with a recurring snare and bass drum accompaniment, these bars feature an inversion of the standard jazz ride pattern helping to increase the effect of displacement the 2- and 4-shifts create. Furthermore, the seven-measure phrase

<sup>28</sup> Jackie McLean, “Vertigo,” *Vertigo*, Blue Note LT 1085.

is out of phase with the eight-measure formal division. This can be described as playing over the phrase-line, further obscuring the formal structure.

A year after “Vertigo,” Williams was still incorporating these types of shift in his playing with Miles Davis. The following brief examples are each from pianist Herbie Hancock’s solo from “So What,” recorded live in February, 1964.

Example 15 demonstrates an extended 3-shift in the ride cymbal phrasing, again over a seven-measure duration.

Example 15: The First Eight Measures of Herbie Hancock’s Fourth Solo Chorus on “So What”<sup>29</sup>

The image shows two staves of musical notation for a drum set. The first staff is labeled "Drum Set" and is in 4/4 time. It contains eight measures of music. The notation consists of notes on a five-line staff, with accents (>) above the notes. The notes are placed on the first, second, and third lines of the staff. The second staff continues the sequence with similar notation, including a final note with an accent (>) and a fermata-like symbol above it.

Compared to the 2- and 4-shifts from Example 14, and incorporating Moses’ “anchor” designation for beats 1 and 3, this type of shift has a more halting effect than does the 2- and 4-shift.

The 2- and 4-shifts are also common in “So What” and can be seen in Example 16 from Hancock’s sixth solo chorus. The use of timbral accents creates even more emphasis.

<sup>29</sup> Miles Davis, “So What,” *Four and More*, Columbia CL 2453.

Example 16: The First Eight Measures of Herbie Hancock’s Sixth solo chorus on “So What”<sup>30</sup>

Williams’ left hand activity occurs on the snare drum in conjunction with these accents, giving them more weight, and they are augmented with open hi-hat. Several 3-shifts using durational accents can be seen at the end of the phrase.

A final demonstration of surface-level accent shift in “So What” comes from later in Hancock’s sixth chorus, Example 17.

Example 17: The First Eight Measures of Herbie Hancock’s Fourth Solo Chorus on “So What”<sup>31</sup>

Accent marks have been omitted in this example because the rests in Williams’ phrasing make clear the shift and its effect. Using the ride cymbal, the crash cymbal, and the hi-

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.



hat cymbals, as well as reinforcing with the snare drum, Williams plays a backbeat pattern throughout most of the eight-measure phrase. This event shifts the focus away from any type of metric downbeat. Interestingly, the three cymbals are used in a regular pattern of hi-hat, ride, and crash. The cymbal pattern creates a unique six-beat subphrase that also helps obscure the underlying 4/4 meter.

## CHAPTER 3

### METRIC SUPERIMPOSITION

The terms metric superimposition and polyrhythm are often used interchangeably. However, polyrhythm posits a greater number of possibilities than metric superimposition. In *An Analysis of Polyrhythm in Selected Improvised Jazz Solos*, Folia describes three types of polyrhythm.<sup>32</sup> The first is the existence of two or more rhythmic strings occurring simultaneously, with each asserting their own strong-weak groupings of beats. These groupings, then, must be in ratios that when divided produce non-whole numbers. The second type requires a metric shift, such that multiple strings exist in the same meter, however with their metric downbeats not aligning. The third requires at least one string to be of fluctuating tempo against some steady tempo.

Lerdahl and Jackendoff do not directly discuss polyrhythm in *A Generative Theory of Tonal Music*, but do describe the case of grouping structure being out of phase

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<sup>32</sup> Cynthia Folia, "An Analysis of Polyrhythm in Selected Improvised Jazz Solos," in *Concert Music, Rock, and Jazz Since 1945: Essays and Analytical Studies* eds. Elizabeth West Martin and Richard Hermann (Rochester, NY: University of Rochester Press, 1995), 105-106.

with metric structure, and not polyrhythm.<sup>33</sup> It is similar to Folio’s second type of polyrhythm.

This study will use the term metric superimposition in the analysis of Tony Williams. Metric superimposition infers one metric matrix overlaid upon another. As such, Folio’s description of the first type of polyrhythm is apt in defining metric superimposition as used in this chapter. In this work, metric superimposition will describe a new meter being suggested in the ride cymbal layer overlaid upon the existing 4/4 metric structure. The technique creates rhythmic tension and ambiguity of the given meter. Each of the examples in this chapter are from Herbie Hancock’s solo on “So What,” and they are organized from less to more obscuring.

Example 18 is a case of surface level superimposition that uses a lot of space, and comes from the bridge of Hancock’s first chorus.

Example 18: Bridge from Herbie Hancock’s First Solo Chorus on “So What”<sup>34</sup>

The image shows two staves of musical notation for a drum set. The top staff is labeled "Drum Set" and the bottom staff is unlabeled. Both staves are in 4/4 time. The notation consists of notes and rests with 'x' marks above them, indicating cymbal hits. Brackets above the notes group them into measures. The bottom staff has a greater-than sign (>) above the final note, indicating an accent.

This pattern is similar to that of Example 17 from chapter two, with both hands locked together, articulating only macro-beats, and with space provided (the last grouping

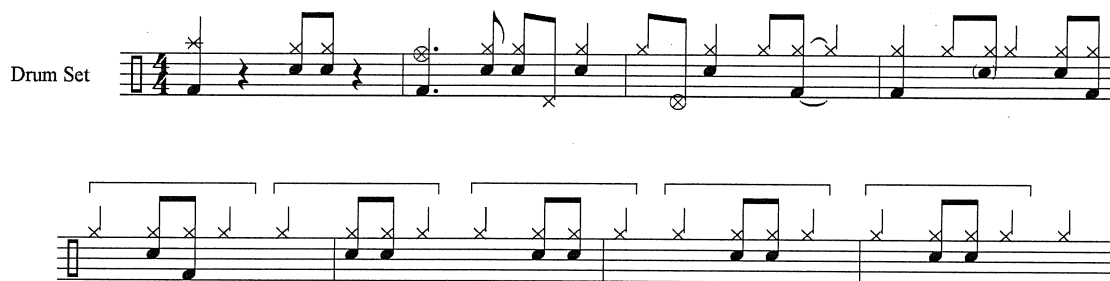
<sup>33</sup> This is described in detail in both chapters two and three of: Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge: MIT Press, 1983).

<sup>34</sup> Miles Davis, “So What,” *Four and More*, Columbia CL 2453.

utilizing hi-hats as substitute for the ride). It features an irregular grouping of two notes, a rest, another note, and a final rest. The pattern outlines a grouping of five macro-beats, superimposed upon the residing 4/4 meter. This superimposition is larger than the metrical 4/4, and seems to give an expansion to the phrase.

The majority of superimposition utilized by Williams is on a level smaller than the metric. Example 19 from the final A section of Hancock’s third chorus is one such instance.

Example 18: Final A Section from Herbie Hancock’s Fourth Solo Chorus on “So What”<sup>35</sup>



In the second half of this eight-measure phrase, Williams creates a 3/4 metric superimposition, with a ride pattern that includes a quarter-note, two eighths, and another quarter. This pattern is the standard ride pattern for 3/4 meter for jazz drummers and is one of William’s most used rhythmic devices from this time period. It creates a subtle, yet recognizable obscuring of the prevailing 4/4 meter.

Example 19 is another superimposition of 3/4, and comes from Hancock’s fifth chorus.

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<sup>35</sup> Ibid.

Example 19: Bridge from Herbie Hancock's Fifth Solo Chorus on "So What"<sup>36</sup>

The ride pattern is the same as in Example 18, but through the use of other elements of the drum set, most notably the hi-hat played with the foot, the pattern takes on a different feel. In each statement of the superimposition, each macro-beat of the 3/4 and each eight-note micro-beat are articulated.

A further demonstration of this comes from the final A section of Hancock's fourth chorus, Example 20.

Example 20: Final A Section from Herbie Hancock's Fourth Solo Chorus on "So What"<sup>37</sup>

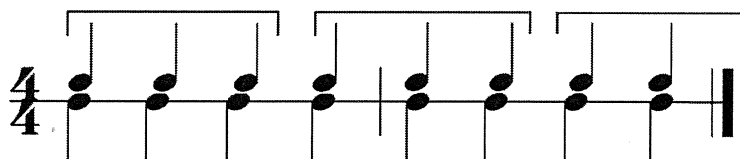
<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

The first grouping highlighted demonstrates 3/4 as before, however, each subsequent grouping features a slightly different phrasing. With a tie in place on the fourth micro-beat of each sub-group, there is a stretching of this phrase, as it does not articulate each macro-beat. The macro-beats in each previous example of 3/4 are the same macro-beats of the underlying 4/4 meter. In Example 20, the tied notes, which equal a dotted-quarter-note, allude to a 6/8 superimposition.

Waters asserts that there are two main types of superimposition. The first is what he calls “tactus-preserving” which maintains the same prevailing macro-beat level as the concurrent 4/4 meter it is imposed over.<sup>38</sup> This concept is shown with a quarter note model in Example 21.

Example 21: 3/4 meter over 4/4 meter as “tactus-preserving” superimposition<sup>39</sup>



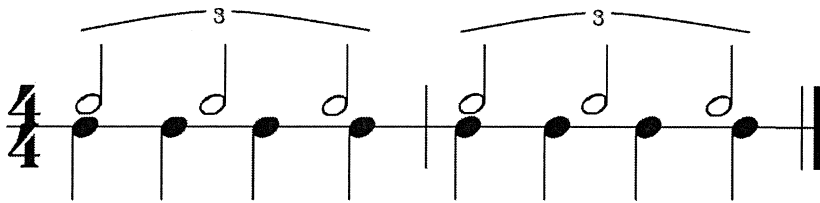
Waters juxtaposes tactus-preserving with what he calls “measure-preserving” superimposition.<sup>40</sup> In this type of superimposition, two pulse levels exist simultaneously, with the first macro-beat of each strain existing simultaneously, as shown in example 22.

<sup>38</sup> Keith Waters, “Blurring the Barline: Metric Displacement in the Piano Solos of Herbie Hancock,” *Annual Review of Jazz Studies* 8 (1996): 25.

<sup>39</sup> Adapted from: Ibid.

<sup>40</sup> Ibid.

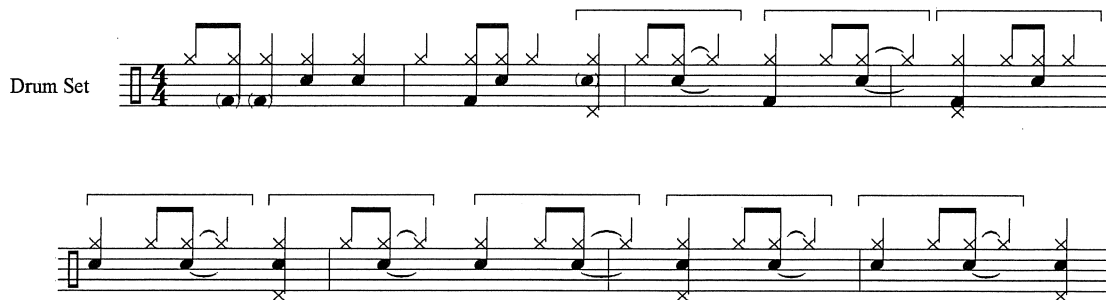
Example 22: 3 over 4 as “measure-preserving” superimposition<sup>41</sup>



Both of these designations of “tactus-preserving” and “measure-preserving” are useful tools in describing superimposition in general, but fall short of describing a third type that preserves neither the tactus or the measure. In describing Williams’ allusions to 6/8, a third type of superimposition must be defined.

One such example comes from the bridge of Hancock’s second chorus from “So What,” Example 23.

Example 23: Bridge from Herbie Hancock’s Second Solo Chorus on “So What”<sup>42</sup>



The groupings here suggest the same allusion to 6/8 as in Example 20. When the other instruments are taken into consideration with the ride cymbal, there is clearly an outline of a dotted-quarter-note rhythm with a combination of bass drum and snare in the first three groupings, and even more clearly with just snare drum in the last 5 groupings.

<sup>41</sup> Ibid.

<sup>42</sup> Miles Davis, “So What,” *Four and More*, Columbia CL 2453.

This type of superimposition is what I call “non-preserving-superimposition,” obscuring both the macro-beat level of organization, and the larger metric. It is also worth noting in Example 23, that Williams plays the hi-hat cymbal every six macro-beats, at the beginning of every-other grouping. While this does not help reinforce the 6/8 superimposition, it is interesting that here may be multiple levels of metric superimposition being conceived at any given moment.

A final example of Williams’ non-preserving-superimposition is shown in Example 24. It is the seventh and final chorus of Hancock’s solo on “So What.”



Example 24: Seventh Solo Chorus of Herbie Hancock's "So What"<sup>43</sup>

The image shows a musical score for a drum set in 4/4 time, labeled "Drum Set". The score consists of eight staves of music, each containing rhythmic notation with various note values and rests. The notation is organized into measures, with some measures grouped together by brackets and labeled with letters and numbers. The labels are: A1, A2, A3, A4, A5, A6, A7, B1, B2, B3, B4, B5, B6, B7, B8, C1, C2, C3, C4, D1, D2, D3, D4, D5, D6, and D7. The first staff starts at measure 1. The second staff starts at measure 5. The third staff starts at measure 9. The fourth staff starts at measure 13. The fifth staff starts at measure 17. The sixth staff starts at measure 21. The seventh staff starts at measure 25. The eighth staff starts at measure 29. The notation includes quarter notes, eighth notes, and rests, with some notes marked with an 'x' above them, indicating a specific drum sound. The overall pattern is a complex, syncopated rhythm that is characteristic of the "So What" solo chorus.

Beginning in measure three, Williams plays seven groupings of 3/4 meter, again alluding to 6/8, in the tactus-preserving model discussed above, and labeled here as A1-A7. It is the next set of groupings that is of most interest, and it is labeled B1-B8. This pattern clearly articulates a superimposed dotted-quarter-note pattern and a 6/8 grouping. Most noteworthy is the fact that Williams articulates only that same division with the ride

<sup>43</sup> Ibid.

cymbal, and nothing else. A new macro-beat is realized, and this is the best example of non-preserving-superimposition. This device is one Williams uses to create the greatest amount of obscuring and rhythmic tension. It is used here in the seventh and last chorus of Hancock's solo, which is also the last solo of the piece. In addition, it is the musical peak of this performance.

The entire chorus is shown as a demonstration of how Williams might use several of the techniques described throughout this study in rather rapid succession. The B groupings follow straight from the A groupings. In the bridge at measure seventeen, there is another tactus-preserving  $3/4$  superimposition, again utilizing space, marked C1 through C4. That is followed by a 2- and 4-shift with snare drum backbeats in measures twenty through twenty-three. Finally, another case of  $3/4$ , labeled D1 through D7, ends the last phrase and chorus.

## CONCLUSION

Through accent variation, accentual shift, and metric superimposition, drummer Tony Williams had a great impact on the rhythmic structure of the music he performed. The examples within this study demonstrate both a regular formal structure as well as a clearly articulated macro-beat from the walking bass line. In using the aforementioned techniques, Williams created a variety of rhythmic displacement that occurs not only at metric levels, but formal as well. Williams was not the first drummer to use these techniques, but what is especially significant is his use of them at such fast tempi. The two songs represented throughout each come from the first year of Williams' professional recording career. While only seventeen at the time, his playing demonstrates a clear technical leap on the instrument over his contemporaries. These concepts of metric displacement were to become a hallmark of Williams' playing throughout his entire career, and helped to establish him as one of jazz drumming's most significant contributors.

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