

EIGHTY-EIGHT DRUMS: THE PIANO AS PERCUSSION INSTRUMENT IN JAZZ

by

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Abstract

Evidence of a link between piano and drumming performance practices in western music dates back to at least the mid-nineteenth century. The modern construction of the piano had yet to be fully standardized when percussive techniques were being applied to its keyboard. Since that time, pianists and drummers (especially those involved with the creation of groove-based music) have grown closer and closer, participating in what remains a richly symbiotic relationship. This study examines parallels between piano and drumming performance practices in jazz. In this context, drumming is acknowledged as an important inspiration guiding the expression of rhythm and percussive attack by non-drummers, pianists in particular.

Historical connections between pianism and drumming in jazz are addressed through an examination of those legacies that are widely believed to derive from West African drumming, European march and dance traditions, and various aspects of the so-called "Latin tinge" from the Caribbean and South America. Playing techniques are compared in part based on the premise

that similarities in musical output flow naturally from congruencies in instrumental architecture. Percussive action unites pianists and drummers, as do shared abilities to create rhythmic layers through the independent functioning of multiple limbs. A discussion of ensemble roles reveals conceptual links, especially with regard to time-keeping, "comping," and mutual approaches to the creation of groove and swing.

Transcriptions are employed to illustrate instances of widely adopted drumming-like gestures from the history of jazz with special attention paid to rhythmic counterpoint, complementation, and rudimental sticking patterns used by jazz pianists since the 1960's. Though a statistically small sample, interviews with ten professional jazz pianists support the essential findings of the study. Questions are raised throughout regarding the effectiveness of traditional jazz pedagogy in emphasizing the importance of drumming to non-drummer instrumental praxis.

In loving memory of my father

Arthur Van Seters
1934 - 2011

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Introduction

1.1 The Thesis

Understanding jazz piano requires an understanding of drumming. This statement may seem a little odd to some, or perhaps at best an exaggeration, given that the piano is traditionally associated more with harmony and melody than rhythm. However, I believe that drum set performance praxis acts as an important model informing the expression of rhythm and percussive attack by non-drummers in jazz, pianists in particular. Throughout the history of jazz, pianists and drummers have maintained important kinships, most notably through their close-knit and complementary roles in ensemble settings. On a fundamental level, both are contrapuntists similarly well disposed to the creation of complex rhythmic composites, especially within the context of genres that feature dance-oriented, groove-based timelines.¹ These parallels, and the obvious similarities in playing techniques shared by drummers and pianists, may begin to explain what led pianist Armando "Chick" Corea to refer to the piano as "eighty-eight drums."²

¹ The term "groove" will be used extensively throughout this study, always in relation to so-called "groove" music. In this context, the word was originally a reference to the indentations of phonograph records and to the continuous motion of a needle traveling along vinyl grooves. Groove can be used as a verb to describe how musicians use rhythmic patterning to create a feeling of movement and forward motion. It can also be used as a noun to describe a specific rhythmic pattern that, when repeated, creates a "groove."

² See Brislin (2006). Using similar language, Valerie Wilmer refers to Cecil Taylor as a musician who approaches the piano as if it were "eighty-eight tuned drums." See Wilmer (1977:51).

Of all drumming traditions, those originating from the "slave coast" of West and Central Africa are considered most important and foundational to jazz.³ As the rich cultural traditions of the sub-Sahara were brought to the Americas, a complex process of amalgamation occurred. The ideas, rituals, and customs of the enslaved developed in complex ways, notably as their contact with peoples from Europe and around the world increased. Throughout this process, drumming came to dominate much of the Africa-derived music flourishing in the "new" world.⁴ This was, and still is, particularly evident in the central and southern regions of the Americas where slaves were allowed to retain more of their African customs than in many parts of the United States, New Orleans being a notable exception. Not surprisingly, so-called "Latin" music retains many drum practices that have been identified as overwhelmingly African or easily traced to West African sources.⁵ Speaking of the importance of drums in Afro-Cuban music, Rebeca Mauleón writes:

[The] integration of the drum into popular culture is perhaps the most predominant factor in Afro-Cuban music - and all Afro-centric music [including jazz]...For the serious player or composer of Afro-Caribbean music, this fact is a given: ultimately, we must all be drummers.⁶

This belief in the centrality of drumming is widespread among performers of Afro-Caribbean music but less often discussed in the context of jazz. However, as this study will demonstrate, piano performance practices in jazz are no less indebted to drumming than their counterparts south of the U.S. border.

³ Schuller (1968), Brown (1976)

⁴ I use the term "Africa-derived" to describe musical and cultural practices of the Western hemisphere that have a connection to Africa. See Rahn (1996) and Brownell (2002) for similar usage of this term.

⁵ Taylor (1982:44)

⁶ Mauleón (1993:1)

To date, comparisons between the art of pianists and drummers have been poorly documented making developmental observations difficult. This dissertation will address one primary question:

Are there aspects of jazz piano performance practice and its antecedents that are related to drumming in some way?

A corollary question will unavoidably arise throughout the ensuing discourse: What, if any, performance practices of pianists in jazz can be shown definitively to *derive* in some way from drumming? This secondary question will regrettably receive less attention due to the difficulty (perhaps futility) in establishing proof of influence. Speculations of cause and effect will arise from time to time but they almost always meet with the classic "chicken and egg" problem. Drumming as a human activity clearly pre-dates the invention of keyboard instruments. However, keyboard instruments pre-date the invention of the modern drum set by several centuries.

Since the early nineteenth century, piano and drumming performance practices have developed side by side. Their interrelated transformations can be no more easily disentangled than those of any of the other instruments traditionally used in jazz. For instance, throughout this dissertation the guitar and banjo will be cited frequently for their important relationships with both the drums and the piano. I am reminded of a big band workshop given by New York saxophonist Bob Mintzer at Toronto's Humber College. Working with the brass and woodwind sections, Mintzer advised them to play like (and think of themselves as) drummers because, by his own reckoning, jazz music *is*

percussion music.⁷ Mintzer's opinion notwithstanding, anecdotal evidence seems to suggest that while the notion of jazz as a rhythm-first music is widespread, the idea of jazz as a "drumming-first" music is not nearly as prevalent.

1.2 Chapter synopsis

This dissertation discusses parallels between drumming and pianism in jazz primarily from three interrelated perspectives: historical, technical, and conceptual. Chapter 1 examines historical connections between various drumming traditions and the development of early piano performance practices in jazz. Chapter 2 compares similarities in instrumental technique between the piano and drums and establishes a case for regarding the piano as a percussion instrument. Chapter 3 explores the concepts of "swing" and "groove" as they are expressed by pianists and drummers in jazz and discusses overlapping ensemble roles and responsibilities. Chapter 4 illustrates rhythmic composites with a focus on similarities in the ways in which rhythmic counterpoint and complexity are created by pianists and drummers. At this juncture, techniques involving alternating hand and sticking patterns are also explored. Chapter 5 presents an assortment of insights collated from interviews with ten professional jazz pianists, all expressing their views about the general topic. In the 6th and concluding chapter, the central question of the thesis is addressed, including how the research previously presented moves toward a response. Two appendices offer a collection of musical examples from the recorded canon of jazz illustrating various similarities between piano and drumming performance practices. Appendix A correlates with chapter 3, appendix B with chapter 4.

⁷ Bob Mintzer masterclass, Humber College Department of Music, Toronto, Oct 15, 2010.

1.3 Methodology

After an extensive literature review found relatively little evidence of scholarly enquiry addressing the primary question, information was gathered relating more generally to performance practices in jazz, especially those of pianists and drummers. Numerous music journals and books were consulted as were a host of academic dissertations, magazine articles, and CD/LP liner notes. I studied audio recordings for evidence linking the worlds of piano and drums, and when appropriate, I transcribed specific passages of music for presentation. All transcriptions are by me unless otherwise noted. In cases where passages feature "drumming-like" alternating hand patterns, I made educated guesses as to which hand (right or left) was used to play which part. That some of these assumptions may be considered debatable is irrelevant to the central arguments being advanced, i.e. that the passages in question remain "drumming-like" regardless of which hand was used to play which part.

Early on in the research process, I made a conscious decision to emphasize some of the historical dimensions surrounding the primary question. There were two reasons for this: One relates to the key legacies bequeathed to jazz by West African and European sources, and the other to how every "era" of jazz seemed to present a new development in an ongoing symbiotic relationship between piano and drumming performance practices. Although I cite a great many musicians throughout this work, I regret that many of considerable note were inevitably left out. While I make reference to a wide time span of the history of jazz, I pay special attention to developments rooted in the 1960's in chapter 4 and to four pianists in particular who channeled drumming in significant ways through

their extraordinary artistic achievements: McCoy Tyner, Herbie Hancock, Chick Corea, and Keith Jarrett. All four were highly influential of post 1960's jazz piano and without their accomplishments it is hard to imagine the drumming-like practices so commonplace among today's jazz pianists would be so compelling.

1.4 The need for this study

Parallels between pianism and drumming have received relatively little attention in the literature on jazz, perhaps because the piano has long been grouped with harmonic and melodic instruments rather than percussion. In the western concert music tradition, it wasn't until the twentieth century that composers such as Béla Bartók and Igor Stravinsky turned to folk musics to write for the piano in overtly percussive ways.⁸ In a related development, it wasn't until the 1940's that jazz drummers (the most heralded of whom are Kenny Clarke and Max Roach) drew more overtly on West African drumming techniques to establish what we now consider to be modern jazz drumming practices. Interestingly, many percussive developments in the world of jazz piano seem to have been foreshadowed by developments in modern jazz drumming. This would seem to suggest that the current of influence runs stronger from drums to piano than the other way around. As one of the most important facets of this study, the physical performance techniques that have led many to regard piano and drums as mutual members of the "percussion" family of instruments are examined in chapter 2.

⁸ Listen to Bartók's Piano Sonata No. 1 or Stravinsky's "Danse Russe" from *Petrouchka*.

Much of the technical literature on jazz focuses either on improvised melodies or the harmonic/theoretical frameworks that underpin them. This literature consists mainly of form and pitch-centered syntactic analysis. Theories describing chord/scale relationships and melodic style, "bebop" syntax in particular, are plentiful.⁹ By contrast, there has been far less discussion about rhythm in jazz, especially as it applies to non-drummer instrumental practice. This gap in the literature includes many of what could be considered the percussive techniques used by pianists. The literature that does exist tends to describe in only very general terms a pianist's normative performance role within the rhythm section and usually only in the most mainstream of jazz styles.¹⁰

Biographies of individual pianists are relatively abundant but tend to include only superficial musical analysis, much of which emphasizes harmonic and melodic techniques over rhythmic ones.¹¹ The literature on jazz drumming is similarly scant, consisting mostly of popular magazine articles and how-to method books. Anthony Brown laments that "drumming, despite its central role - indeed, defining role in the stylistic development of jazz - has been given short shrift in terms of learned investigation."¹² Brown's championing advances the drum set as no less than the "trope" of jazz.¹³ By highlighting the importance of drumming in jazz, the current study will shed additional light on the expression of jazz rhythm by non-drummers, pianists specifically.

⁹ See Nettles/Graf (1997) and Owens (1974)

¹⁰ See for example, Gridley (2006)

¹¹ See Collier (1987), Carr (1991), Pettinger (1998), and Lees (2008)

¹² Brown (1997:24)

¹³ Ibid (1997:9)

1.5 The universality of drumming in jazz

Mauleón's earlier statement that "we must all be drummers" makes a bold assertion about the importance of drums not only to the music of Latin America, but also to jazz. For Mauleón, it is not sufficient to be knowledgeable about drumming practices, one must *be* a drummer. Whether she means that all instrumentalists must physically play the drums, or that their playing must be "drumming-like" in its execution, is perhaps a matter of interpretation. Certainly, within the context of mainstream jazz there have been numerous "serious" practitioners of the music who have had little ability to physically *play* the drums.¹⁴ However, it is widely believed that a certain level of awareness (or at least a minimal understanding) of drumming is essential to non-drummer instrumental practice in jazz. In fact, most professional jazz musicians would concur that to perform jazz at a high level requires more than merely a basic familiarity with drumming. An intimate cognizance is required not only of the drummer's normative role in ensemble settings, but also the advanced polyrhythmic elements so essential to their art.

A logical extension of the previous line of reasoning assumes that, in the context of jazz, drumming and rhythm are effectively inseparable.¹⁵ Even when drums are not playing (or audible, as on many early recordings), a rhythmic drive produced by other instrumentalists, if successful, can fairly said to be "drumming-like." Steve Savage uses

¹⁴ A minority of jazz's major figures are known to be accomplished at both drums and piano, among them: Philly Joe Jones, Joe Chambers, Victor Feldman, Chick Corea, Jack DeJohnette, and Keith Jarrett. Others are known to have, at one time or another, participated in ensembles using the piano as a secondary instrument. This latter group includes Kenny Clarke, Max Roach and Art Blakey.

¹⁵ Numerous non-drummer jazz musicians have commented that their ability to perform is enhanced when they make efforts to "imagine" or "hear" a drummer (or their "favourite" drummer) internally when they play.

the phrase "thinking like a drummer" to describe an orientation critical to the expression of rhythm within Africa-derived music.¹⁶ The notion that drummers tend to possess a greater command of rhythm than non-drummers is reflected in several comments made by interviewees in chapter 5. Bassist Ronan Guilfoyle articulates a commonly held impression:

Apart from drummers, most jazz musicians tend not to be concerned with any degree of rhythmic exploration once they have mastered the basic eighth-note and triplet phrasing common to all jazz musicians.¹⁷

I assert as one of the central propositions of this study that rhythmic acuity in jazz among non-drummers results from an intimate understanding of jazz rhythm that is acquired, at least in part, *via* an understanding of jazz drumming practices. Even a cursory evaluation of opinions expressed by professional jazz musicians reveals a general belief that experiences of any type with drumming inform their overall "sense" of rhythm in positive, if not crucial ways. Despite this fact, the teaching of melody and harmony still trumps rhythm and drumming in most educational institutions offering instruction in jazz studies.

In jazz, the physiological expression of rhythm (like dancing) is a whole body experience, and no instrumentalist in jazz engages the whole body more completely than the drummer. If rhythm and movement are the driving forces behind jazz, then drums are the *de facto* primary instrument for the expression of its most essential features. Gernot Blume muses about the importance of drumming to the work of pianist Keith Jarrett.

¹⁶ Savage (1989:18)

¹⁷ Guilfoyle (1999:10)

Playing drums and percussion instruments...allows Jarrett to free himself from the melodic and harmonic implications of the piano, emphasizing a non-pitched essence in music, returning to what he thinks of as a more basic foundation of music.¹⁸

For the jazz pianist, an inner-drummer may be most responsible for the production of the oft-cited "forward motion" so essential to jazz. This brings us back to connections with West Africa.¹⁹ West African musical practices are widely acknowledged to be significant to jazz, in part, because they bequeathed a general value for drumming, dancing, and a rhythm-centric musical aesthetic.²⁰

Drummer Chico Hamilton speaks about the significance of drumming in global terms:

The universal language of man isn't music. It's rhythm. That's the one thing that people all over the world understand. The drum. The beat... The person who sits behind the drum set gives us the foundation, the heartbeat of jazz.²¹

Like many other jazz performer/pedagogues, drummer Peter Erskine recommends both the learning of drums by non-drummers, and the study of piano by non-pianists.²² It is significant that he should single out these two instruments over jazz's iconic reed and brass instruments. As the following chapters will illustrate, both drums and piano occupy central positions in jazz.

¹⁸ Blume (2005:82)

¹⁹ Over-generalized references to "West Africa," or simply "Africa," pose many problems for the researcher in jazz. In this study, references to West Africa should be viewed in light of those retentions in jazz that are widely held to derive from specific cultural practices brought to the new world by slaves.

²⁰ See Monson (1996)

²¹ Korall (1990:5)

²² See Erskine (2005:37), Gallant (2006:47), and Blackley (2005:67)

Chapter I ~ Historical

1.1 The "J" word

Coined in the early years of the twentieth century, the word "jazz" (variously spelled jaz, jas, jass, or jasz) has always posed problems for musicians and scholars alike. Searching for an all-encompassing definition is to enter a musical, not to mention social, cultural, racial, and political minefield. The early commercialization of the term by those outside its musical practice led numerous musicians to discard the term in favour of other problematic designations such as "creative improvised music" or "African American music."²³ Common frustrations surround over-simplification, generalization, or outright misconception. Defining jazz is a contentious issue, one that many of its practitioners disagree on. However, the term has endured and like the country in which it was born, jazz is often characterized as a "melting pot."²⁴ Just as a nation of diverse peoples coalesced to form a new citizenry, jazz and its precursors developed from an amalgamation of the cultural traditions of America's early inhabitants. The "melting pot" analogy also finds expression in the blending of performance practices that have seen the percussive techniques employed by drummers adopted by other instrumentalists, pianists in particular.

²³ Duke Ellington disliked the term, Max Roach was equally opposed to it. See Porter (2002) and O'Meally, Edwards, and Griffin (2004).

²⁴ See Taylor in Lyons (1983:180)

Many histories of jazz have been written, most of which have attempted to trace the music's origins.²⁵ Unfortunately, oral traditions are often difficult to document accurately. Speculation abounds about what percentage of "jazz" came from West Africa versus Europe versus Latin America versus elsewhere and so forth. Needless to say, such discussions usually produce more questions than answers. Nevertheless, there is some general agreement about the lineage of certain traits in jazz. Of particular importance to this study are inquiries that have attempted to shed light on the origins of rhythm in early jazz. While the focus of this chapter is not so much on rhythm in jazz but rather on "percussiveness" in jazz (and more precisely on the ways in which various drumming practices seem to have found their way onto the piano keyboard), one cannot discuss drumming without also engaging ideas about rhythm.

1.2 Africa-derived

Written histories of jazz are replete with references to Africa, as are published interviews with countless of its musician practitioners. Evidence suggests that a belief in the existence of African retentions in jazz is widespread among jazz musicians. Song titles have been used with some frequency as a means for referencing the "mother continent." Eubie Blake's "Sounds of Africa," Fats Waller's "African Ripples," George Russell's "African Empires," and "Uhuru Africa" by Randy Weston are just a few examples. It is a testament to the fortitude and longevity of Africa-derived cultural practices that they survived in the United States through centuries of systematic attempts at their eradication.

²⁵ See Sargeant (1946), Stearns (1956), Shuller (1968), Tirro (1977), and more recently Porter (1993), Shipton (2007)

If a great many musicians have openly cited Africa for its historical connections with jazz, some have actively studied its musical traditions. Drummer Elvin Jones became enamored with several musical traditions of the Belgian Congo during the 1950's, later characterizing them as "tremendous sources of inspiration."²⁶ Art Blakey and Ed Blackwell both studied drumming in West Africa.²⁷ Pianist Randy Weston lived in North Africa from 1967 to 1973, where he founded a musicians collective called the African Rhythms Club. Playing jazz music for African audiences, he would declare to them, "this is your music after it crossed the Atlantic."²⁸ Weston is well known for his work combining jazz with African musical traditions, and also for his views about the latter's influence on the diaspora:

Wherever African people have settled, they have created a new music which is based on African rhythms. There is a great West African influence in Brazil, also very much in Cuba and in Puerto Rico. Gospel music, spirituals - they're all African.²⁹

Len Lyons characterizes Weston's affinity for African musical traditions thusly:

More than any other jazz pianist, Weston incorporates African elements into his playing in an obvious way. He shifts meters frequently - between 4/4, 3/4, and less common metric patterns. He also uses the bass register of the piano as a kind of tonal drum.³⁰

Of all jazz musicians, drummers owe perhaps the most to West Africa, not least because those forms of African music that are most influential to jazz are dominated by percussion instruments. With a strong concern for the temporal aspects of music, the jazz

²⁶ Khan (2002:115)

²⁷ Hartigan (1995:13)

²⁸ Lyons (1983:213)

²⁹ Art Taylor (1982:19)

³⁰ Lyons (1983:211)

drummer shares with the West African drummer not only a commitment to the establishment and maintenance of a steady pulse, but also to the creation of rich rhythmic tapestries, the spirit of which are always tied in some way to movement and dance. Paul Berliner outlines the centrality of drumming to jazz and relates it back to its historical roots in dance:

The importance of the drums within jazz groups reflects the general value attached to rhythm in African American musical tradition. Because of the early commercial position of jazz as accompaniment for dancing, the drummer's central function has been to maintain a strong, regular beat within the framework of conventional tempos and meters. The trap set's performance practices have remained integral to the stylistic evolution of jazz as the music moved from dance halls to nightclubs and concert halls where serious listening was the main attraction for audiences, and danceability no longer imposed its constraints upon performance. At the same time, the practices of contemporary drummers reflect the legacy of their early forerunners.³¹

While it is impossible to track with any precision the earliest links between West African drumming and early jazz piano practice, several key developments in the Americas of the nineteenth century provide some valuable clues.

Slaves in the United States developed a work-song tradition based on West African principles of rhythm and improvisation.³² They created call and response songs, the rhythms of which accompanied their daily tasks. These same slaves and their descendents adopted European musical instruments; and over time the piano (among other instruments) became a conduit for the drumming and singing traditions passed down from one generation to the next.

³¹ Berliner (1994:324)

³² See Southern (1997:161)

Portia K. Maultsby notes:

[Slaves] survived an oppressive existence by creating new expressive forms out of African traditions, and they brought relevance to European American customs [including piano performance] by reshaping them to conform to African aesthetic ideals...The music, dance, folklore, religion, language, and other expressive forms associated with the culture of slaves were transmitted orally to subsequent generations of American blacks.³³

The influence of West African drumming on music of the diaspora became a topic of increasing interest during the twentieth century. Early newspapers and journals suggested that black Americans' seemingly natural skill with rhythm was attributable to their African ancestry, a view that continues to ignite controversy.³⁴ Beginning in the 1930's and 1940's, extended histories of jazz began to be written, adding only slightly more depth to a largely unexplored field.³⁵ In 1952 Richard Waterman set an important standard for new research with his influential paper, "African Influence on Music of the Americas." A.M. Jones published the first in-depth analytical study of African music and rhythm in 1959.³⁶ Other works by Herskovits (1958) (1966), Merriam (1958), Chernoff (1979), Nketia (1981), and Maultsby (1990) all contributed to a branch of ethnomusicology concerned with the impact of African culture on the western world.

³³ Maultsby (1990:326)

³⁴ See Agawu (1995)

³⁵ See Goffin (1932), Hobson (1939), Panassie (1942), and Sargeant (1946)

³⁶ Jones, A.M. *Studies in African music, Vol. 1. and 2.* London: Oxford University Press, 1959.

1.3 Rhythm in jazz

A growing consensus emerged that rhythm in early jazz was derived in large part from West African sources mediated by influences from Europe and elsewhere. Just how these various influences combined has been the subject of ongoing discussion in jazz scholarship.³⁷ Many researchers in this area espouse a general theory that "additive" concepts of rhythm in West African music blended with European "divisive" concepts to form a basis for the distinctive rhythmic structure and syncopation found in jazz.³⁸ That the rhythm of jazz comes from West Africa while its melodic and harmonic components come from Europe is an oversimplification that persists to the present day. Even if there is some partial truth to this statement from a historical standpoint, jazz has so distanced itself from its antecedents as to have become an "original" art form, what Billy Taylor has called "America's classical music."³⁹ Several scholars caution against evaluating jazz as merely the sum of a handful of earlier musical precursors. Mantle Hood tempers the notion of African retentions in all forms of what he calls "Black American" music:

While African sociomusical concepts and behavioral patterns have been established as the foundation of Black American music, it is time that Black American music be examined in terms of its own unique identity.⁴⁰

Denis-Constant Martin is no less concerned about the over-emphasis of African heritage in Afro-American music:

...recent research suggests that investigations of the invention of Afro-American music should now focus more on innovation than on heritage. Putting the stress on heritage or filiation, irrespective of whether that heritage is traced from Europe or Africa, amounts to denying black people transplanted in the Americas the

³⁷ See Roberts (1972:preface)

³⁸ See Schuller (1968)

³⁹ Taylor (1986:21)

⁴⁰ Hood in Jackson (1985)

ability to cope with a new environment, to adapt to it-that is, to create a new but truly black culture and, consequently, to transform their new environment.⁴¹

Rhythm in jazz is clearly more than simply a hybrid of West African and European systems. Even though jazz is typically notated using the standard divisive concepts of western music, it is not always conceived of as such. Similarly, jazz's melodic and harmonic structures may have many precedents in European art, sacred, and secular music, but they are employed in unique ways by primarily improvising musicians using many non-European techniques of tone-production. Further, the cyclical timeline elements found in jazz may be distinctly West African in origin but their setting within European song-forms reveals an amalgamation so complete as to have left the past behind. Despite these qualifications, drumming remains an important practice linking jazz to West African musical traditions.

Rhythm in West African music can seem foreign to western ears not only because of its complexity, but also because of its distinctiveness. The European "divisive" concept of dividing music into standard units of time (measures) and highlighting these with regularly reoccurring accentuation patterns emphasizing beat one is largely absent from most African musics. A system based on "periodicity" provides a better setting for understanding what Simha Arom calls "temporal loops," or timelines, based on "the recurrence of similar events at similar intervals."⁴² A steady, underlying pulse acts as a reference for the measurement of musical time, as in standard western rhythm, but

⁴¹ Martin (1991:19)

⁴² Arom (1989:91)

"events" are grouped or "added" together (often asymmetrically in twos and threes) resulting in a system dubbed by western music theorists as "additive."⁴³

Rhythmic layering is a hallmark of West African drumming. As John Chernoff notes, "...in African music *there are always at least two rhythms going on.*"⁴⁴ Jones recorded instances of up to seven independent or "cross" rhythms occurring at the same time in his field studies.⁴⁵ Such is the complexity of the fabric created that, unlike traditional western music, the constituents are frequently represented on paper using different meters for each part. While this level of complexity is rarely approached in traditional jazz performance, the basic concept of layering is fundamental to the jazz musician's approach to rhythm.

Jones' research led Gunther Schuller to isolate the *gankogui* bell pattern (figure 1.1) of a Sovu dance of the Ewe people of Ghana as an important rhythmic cell used pervasively in jazz.⁴⁶ The 3+3+2 rhythmic cell (also know by several other names such as the *tresillo*, *dochmaic*, or half-*clave*) is one of the most prevalent in musics of the Americas.⁴⁷

Schuller notes its crystallization in James P. Johnson's "Charleston" of the 1920's, but this basic pattern and various derivations of it are omni-present in mainstream jazz.

⁴³ Schuller (1968:11), Jones (1959:17)

⁴⁴ Chernoff (1979:42)

⁴⁵ Jones Vol. 2 (1959:24)

⁴⁶ Schuller (1968:19-20)

⁴⁷ Reggae, soca, and calypso are a few examples. See Sargeant (1946:58-64) and Stearns (1956:142)



Figure 1.1 *gankogui* bell pattern

Some of the most interesting questions surrounding West African drumming retentions in jazz relate to differences in "approach" to music making between African and European cultures. Seemingly at odds are two distinct traditions, one predominantly oral/improvised and the other largely written/composed. Jazz exhibits a complex synthesis of these traditions. Regarding piano and drum parallels, the following are some of the most important characteristics of jazz that derive mainly from West African drumming antecedents:

1. The predominance of percussion instruments. Waterman (1952), Roberts (1972), and Chernoff (1979), among others, have noted the importance of percussion instruments in most West African musical traditions. In addition, a propensity to use harmonic and melodic instruments in percussive ways has been attributed to customs brought to the Americas by slaves.⁴⁸ This characteristic lies at the heart of the current discussion regarding the impact drumming has had on non-drummer instrumental praxis in jazz. The percussive dimensions of piano performance practice are often heightened in Africa-derived musics such as jazz.

⁴⁸ See Wilson (1974)

2. The establishment and maintenance of a metronomic, yet flexible, pulse or "beat."

West African drumming emphasizes movement and dance in part through its use of repetition as a fundamental organizing principle. Part of what makes jazz "swing" is the establishment of a steady pulse that elicits a desire on the part of listeners to tap their feet or snap their fingers, if not get up and dance. Drummers and pianists in jazz share similar aspirations for movement through the process of groove creation.

3. Layering of rhythms one upon another. Drummers and pianists in jazz create rhythmic composites that are comparable in some ways to those created by West African drum ensembles.

4. The transference of specific drum patterns to the piano (many of which came to jazz by way of the Caribbean and South America) that act as "rhythm cells" or timelines. The aforementioned *gankogui* pattern is one example.

1.4 Europe-derived

Western Europeans made up the largest group of immigrants to the United States during the sixteenth to nineteenth centuries. European concert music, as well as many of its popular and folk music traditions were practiced widely, not only by those of European extraction but also by African Americans. As noted earlier, European conventions of meter based on regular accentuation contributed to the development of jazz rhythm. Beyond this foundation, there have been numerous composers based in the European concert music tradition who, since the early years of the twentieth century, have

experimented with complex concepts of rhythmic organization. Many jazz musicians would have been aware of the work of innovative composers such as Luciano Berio, Karlheinz Stockhausen, Pierre Boulez, and Elliott Carter.

Instruments with European origins (including the piano) were widely available among African American communities. The drums and drumming practices of European brass bands were adopted by the United States military, which in turn led to the development of the funeral march "street beats" popular in the American south, especially New Orleans. "Second line" drumming derives definitively from the European rudimental tradition even if its *clave* accentuation patterns can be traced to West African drumming. The blues based "New Orleans" style of piano playing typified in the playing of Henry Roeland Byrd (aka Professor Longhair) is permeated with rhythms of Spanish origin.⁴⁹

Anglo-American hymns contributed to both spirituals and the blues while popular European dances such as jigs, polkas, waltzes, and quadrilles found their way into minstrel shows. The *habanera* rhythm (figure 1.2) is believed to have contributed to the development of the *tango* rhythm in Argentina and the *maxixi* in Brazil. The *habanera* originated in the French *contradanse* and Spanish *contradanza* (later shortened to *danza*).

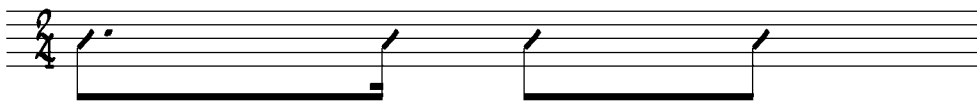


Figure 1.2 *habanera*

⁴⁹ See Stewart (2000:306)

Billy Taylor highlights a rhythmic figure prevalent in ragtime based on the *habanera* rhythm⁵⁰ (figure 1.3).

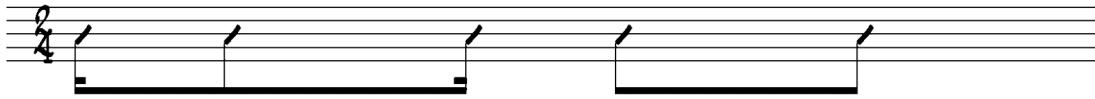


Figure 1.3 *habanera* derived pattern

In Joplin's "The Strenuous Life" from 1902 (figure 1.4) this pattern is found in numerous places.



Figure 1.4 Scott Joplin: "The Strenuous Life," (1902): m.m. 15-16, in *Classic Piano Rags: Complete Original Music for 81 Rags*, selected and with an Introduction by Rudi Blesh. New York: Dover Publications, Inc., 1973: 96-99.

One of the earliest known rags was Jesse Pickett's "The Dream." Unpublished and unrecorded, it allegedly employed a *habanera*-like bass.⁵¹ If so, it represents another pre-twentieth century example of the link between ragtime and European dance music. The introduction to Ben Harney's *Ragtime Instructor* from the 1890s states specifically that

⁵⁰ Taylor (1982:44)

⁵¹ Blesh/Janis (1966:191)

"ragtime (or negro dance time) originally takes its initiative steps from Spanish music, or rather from Mexico."⁵²

1.5 More than a tinge of Latin

Jazz was practiced throughout the United States during its early years, but the south emerged as a particularly fertile breeding ground for innovative developments. New Orleans became one of the key centres for jazz's expansion, a city described by Samuel A. Floyd, Jr. as "the wellspring of black music in the United States."⁵³ As a Mecca of multi-culturalism with easy access to both the Caribbean, the Atlantic, and to points further north via the Mississippi river, the crescent city's vibrant music scene epitomized worldliness and diversity. In addition to the ancestral drumming that took place in its famed Congo Square, several other of its imported musical traditions (many from Europe) blended readily to create a jazz *mélange*.

Of particular importance to the evolution of jazz rhythm is its incorporation of those musical traditions collectively and generically labeled as "Latin."⁵⁴ Creole jazz musicians such as pianist Jelly Roll Morton (born Ferdinand LaMothe) spoke of a "Spanish" or "Latin" tinge to describe musical influences from (the largely Spanish colonized) regions of the Caribbean and South America. These regions developed unique musical styles derived from West African and European ancestry. From early on, these styles cross-pollinated with North American developments to further influence the directions jazz

⁵² Roberts (1999:10)

⁵³ Floyd (1988: preface)

⁵⁴ See Morales (2003: introduction xi)

would take.⁵⁵ Morton's own "New Orleans Blues" (figure 1.5) and "The Crave" both use the *tresillo* rhythm in the left hand part, which is believed to have derived from the aforementioned *gankogui* rhythm, if not as well from a modification of the *habanera*.



Figure 1.5 Jelly Roll Morton: "New Orleans Blues," m.m. 4-5. Jelly Roll Morton recorded in the Library of Congress by Alan Lomax (1938), transcription by James Dapogni, in James Dapogni. *Ferdinand "Jelly Roll" Morton: The Collected Piano Music*. Washington D.C.: Smithsonian Institution Press, 1982: 41-46.

1.6 Ragtime

An early precursor of jazz (sometimes referred to simply as "syncopated music") developed in part out of brass marching band traditions of the American south and mid-west. It was an exuberant foot-tapping music punctuated by numerous off-beats that was soon adopted by pianists of the day and only later called "ragtime." Early innovators of the new style were Thomas Turpin, James Scott, and the "king" of ragtime, Scott Joplin. The ensuing ragtime piano craze (beginning in the 1890's) resulted from a synthesis of elements that included not only marches, but also drum and banjo based dance music, so-called "coon songs," and elements of the "blues."

⁵⁵ See Washburne (1997) for the universality of *clave* rhythms in jazz.

If steady snare drum beats provided the original inspiration for ragtime's "two step," its layered rhythms are widely believed to derive from West African drumming. The pianist's right hand accented off-beats against the left hand's emphasis on downbeats. The first "rag" ever published, Turpin's *Harlem Rag* (1897) gives an early example of this elaboration on the traditional march (figure 1.6).



Figure 1.6 Tom Turpin: "Harlem Rag," m.m. 1-2 (1897), in Blesh, ed. *Classic Piano Rags: Complete Original Music for 81 Rags*. (1973): 323-327.

Though founded in part on march music, ragtime's emphasis of off-beats represents a clear divergence from the military drummer's art. Rudi Blesh and Harriet Janis called it "a superb welding of African drum rhythms to our own harmony and melody..."⁵⁶ The Africa-derived syncopation aspect in ragtime is thought to have developed from several sources including an eighteenth century plantation slave dance known as the "cakewalk." The dance is named after the custom of awarding a cake to "the couple that did the proudest movement."⁵⁷ Drums and banjos (an instrument with African origins⁵⁸) were used as accompaniment for the cakewalk and eventually, the percussive finger picking techniques of banjoists were adopted by pianists.

⁵⁶ Blesh/Janis (1966:139)

⁵⁷ Ibid (1966:96)

⁵⁸ See Schreyer (2007:1-4)

1.7 Banjo imitation

The banjo represents an important link between drumming and piano performance practice. The banjo's predecessors were played as much for their percussive potential as for any harmonic or melodic ones.⁵⁹ As the modern instrument developed through the nineteenth century, the banjo retained all the elements of its percussive past, eventually endowing them in turn to pianists. John Edward Hasse notes:

[Scott] Joplin's mother reportedly played the banjo and so Joplin may have had early exposure to the banjo at home. His first published rag, *Original Rags* (1899), seems to reflect banjo influence both in the music itself and in the credit, which reads "*picked* by Scott Joplin, arranged by Charles N. Daniels" (emphasis added). Broken-chord banjo-type figurations also appear in Joplin's most famous work, *Maple Leaf Rag*. *The Cascades* is "respectfully dedicated to Kimball and Donovan, banjoists," and *The Entertainer* is dedicated to... "James Brown and his Mandolin Club." Clearly, Joplin was acquainted with banjo and mandolin musicians, and evidently was influenced by their music.⁶⁰

In 1881, Lafcadio Hearn wrote a letter to H. E. Krehbiel with a pertinent observation:

"Did you ever hear negroes play the piano by ear?...They use the piano exactly like a banjo."⁶¹ Pioneer rag pianist "Plunk" Henry earned his name from his first vocation as a banjoist. Blesh recounts:

The real old-timer of negro ragtime in Chicago was Plunk Henry, who was already well along in years at the time of the [Chicago] fair [of 1893]. He had been born in the 1850's and, as his name indicates, was one of the very early group in the Mississippi valley area who developed the rudiments of piano ragtime from banjo syncopation.⁶²

⁵⁹ See Wilson (1974)

⁶⁰ Hasse (1985:58)

⁶¹ Bisland (1906:1:232)

⁶² Blesh/Janis (1966:151-152)

Ben Harney also provides some insight into how the drum to banjo to piano transference took place:

Real ragtime on the piano, played in such a manner that it cannot be put in notes...is the contribution of the graduated negro bongo-player who cannot read music... On the banjo there is a short string that is not fretted and that consequently is played open with the thumb. It is frequently referred to as the thumb string. The colored performer, strumming in his own cajoling way, likes to throw in a note at random, and his thumb ranges over for this effect. When he takes up the piano, the desire for the same effect dominates him, being almost second nature, and he reaches for the open banjo-string note with his little finger. Meanwhile he is keeping mechanically perfect time with his left hand. The hurdle with the right-hand little finger throws the tune off its stride, resulting in syncopation. He is playing two different times at once.⁶³

This statement would seem to confirm a continuum between drumming, the banjo, and early jazz piano styles. It also presents us with an early (1897) observation about the deliberate layering of rhythms in ragtime. The playing techniques developed by nineteenth century African American drummers, banjoists, and pianists developed simultaneously, each exploiting the percussive potential of their respective instruments.

During the post civil war era, pianos became more accessible to African Americans, further facilitating a migration of instrumental banjo techniques to the piano. Even before the civil war, the transference of banjo music to the piano can be found in Louis Moreau Gottschalk's "Le Banjo" (1855). According to Richard Jackson, the finale of "Le Banjo" (figure 1.7) "sounds like a virtuoso banjo-picker on a particularly good day."

⁶³ Harney in Blesh/Janis (1966:226-227)



Figure 1.7 Louis Moreau Gottschalk: "Le Banjo," (1855), m.m. 9-12, in *Piano Music of Louis Moreau Gottschalk the Principle Works: 26 Complete Pieces from Original Editions*, selected and introduced by Richard Jackson, New York: Dover Publications, Inc., (1973): 26-38.

A native of New Orleans, Gottschalk was one of the first American born concert pianists and composers to receive international recognition. Many regard his syncopated works as having presaged ragtime and jazz by several decades. Gottschalk was also one of the first American composers trained in western concert music to overtly employ syncopation derived from African American drumming in his works for piano. *La Bamboula - Danse des Negres* (1847) was inspired by the music and dances in Congo Square that Gottschalk may have witnessed as a young man.⁶⁴ *Bamboula* is the name of a bamboo drum that was used by slaves during these weekly celebrations. Gottschalk's "Le Bananier, Chanson Negre" also features percussiveness, beginning with considerably more than what Richard Jackson understates as merely "a suggestion of drumming."⁶⁵

Both drums and banjo seem to have intrigued not only African American but also non-African American pianists of the mid-nineteenth century. W. K. Batchelder wrote

⁶⁴ See Doyle (1960:122). Gottschalk's boyhood home was only a few blocks from Congo Square. See also Jackson (1973:ix). Jackson contends that Gottschalk most certainly would have been able to hear the singing and drumming from his home.

⁶⁵ Jackson (1973:ix)

"Imitation of the Banjo" in 1854, making his own contribution to developments in pre-ragtime piano music.

Hans Nathan writes about the historical importance of banjo music to jazz:

...the principle of pitting highly irregular accentuations in the melody...against a precise metrical accompaniment...is anticipated by early banjo tunes and undoubtedly derives from them...the history of jazz has now been extended backward. It does not begin with ragtime, Negro spirituals, or the songs of the early popular theater, but with a few dozen banjo tunes which have the flavor of the plantation."⁶⁶

Brian Klitz notes the influence of other percussive gestures such as foot stomping and hand clapping on the development of early piano "rag music:"

...called "jig piano" by some, [ragtime] was merely the keyboard manifestation of an earlier music in which the percussive stomping and clapping that accompanied fiddlers and banjoists was taken over by the pianist's left hand, while the right hand performed the syncopated tunes of the banjos and fiddles. It was not until composers published these keyboard works and attached the word "ragtime" to them that they gained widespread public attention.⁶⁷

1.8 Rhythm cells

As noted earlier, Latin American musical influences are widely evident in ragtime and jazz. Repetitive rhythm "cells" specific to certain geographical regions developed largely out of transplanted West African drum patterns that were then freely adopted for use by drummers and non-drummers alike. Several ragtime pieces from the early twentieth century employ rhythm cells overtly. Louis Chauvin and Scott Joplin's "Helitrope

⁶⁶ Nathan (1962:209-213)

⁶⁷ Klitz (1989:56-57)

Bouquet" (figure 1.8) is one example, featuring the aforementioned *tresillo/gankogui* pattern in its bass line.



Figure 1.8 Scott Joplin and Louis Chauvin: "Helitrope Bouquet," (1907), m.m. 5-6 in Blesh, ed. *Classic Piano Rags: Complete Original Music for 81 Rags*. (1973): 157-160.

Gottschalk made liberal use of "Latin" rhythm cells in his compositions. He lived most of his life in the Caribbean region, spending extended periods in Cuba, Puerto Rico, and Martinique during the 1850's and 1860's. His "Souvenir de Porto Rico" also uses the aforementioned *tresillo/gankogui* rhythm. This ubiquitous rhythm also forms the first measure of the modern 3/2 *son* "clave," a pattern originally adapted from 6/8 groupings with African origins.⁶⁸ The "clave" is not only a rhythm cell, it derives its name from a percussion instrument, two wooden pegs that are struck together. Figure 1.9 shows the "three-two" or forward *son* clave. Other variations of the "standard" *clave* pattern also exist.⁶⁹



Figure 1.9 "Three-two" or "forward" *son* clave

⁶⁸ Mauleón (1993:50). See Hartigan (1995:11) for the relationship of the *son* clave and *bossa nova* rhythms to the *ngongo* bell time line of Kpanlogo.

⁶⁹ The "reverse" and "rhumba" *clave* patterns are two common variations.

Christopher Washburne has noted several instances of not only the *son clave*'s presence throughout the history of jazz, but also the *cinquillo* rhythm (figure 1.10), an inversion of the aforementioned *habanera* derived rhythm.⁷⁰



Figure 1.10 *cinquillo*

"Cotton Balls" by Chas Hunter utilizes the *cinquillo* rhythm extensively throughout its second theme (figure 1.11).

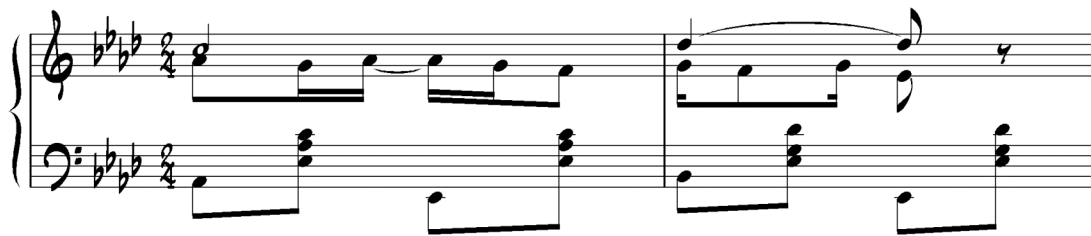


Figure 1.11 Charles Hunter: "Cotton Balls," (1901), m.m. 21-22 in Blesh, ed. *Classic Piano Rags: Complete Original Music for 81 Rags*. (1973): 28-31.

1.9 Latin jazz

In the 1920's and 1930's, jazz and "Latin" music grew closer and closer. The advent of radio and the wider distribution of phonograph records meant that music was disseminated more easily throughout the Americas. Musicians from Latin America were

⁷⁰ Washburne (1997)

also traveling to the United States in greater numbers. The Puerto Rican community in New York City expanded considerably after the Jones Act of 1917 granted U.S. citizenship to Puerto Ricans. Puerto Rican Juan Tizol worked in the Duke Ellington orchestra while Panamanian Luis Russell worked as musical director for Louis Armstrong. Cuban pianists Bebo Valdés and René Hernández also came to the U.S. and pioneered some of the earliest fusions of "Latin" rhythms with jazz in the late 1930's. Cuban singer Frank "Machito" Grillo founded a jazz oriented orchestra in 1940 under the musical direction of trumpeter Mario Bauza.

By the late 1940's this intermingling of musical traditions spawned a hybrid style, generically called "Latin jazz." Jazz historians frequently refer to trumpeter John Burkes "Dizzy" Gillespie's famous hiring of *congero* Chano Pozo to play in his big band of 1947 as a seminal moment in the development of the new hybrid style. This event and others contributed to a surge in the influence of so-called "Latin" music in jazz and a renewed interest in the two genres' common grounding in West African drumming.

Important changes were also taking place around this time in traditional Cuban music. The piano was incorporated into the "conjunto" ensemble in the 1940's and a modern interpretation of a genre of Cuban music known as *son* developed, its rhythmic underpinning governed by the aforementioned *son clave*. This style (later known as *rumba* in the United States) featured a repetitive piano vamp known as a *montuno*. The various rhythmic patterns from which piano *montunos* (sometimes called *guajeos*) are configured bears a strong resemblance to those played by the other percussion

instruments in Cuban music. Once established, these drumming-like vamps are played with great vitality and relatively little variation (figure 1.12). They constitute a key component of the rhythm matrix created by the traditional Latin percussion section. In this sense, the pianist's role is different in playing Cuban *son* than in playing mainstream jazz. By comparison to the essential role of the former, the latter's contribution could be considered veritably ornamental. Charlie Otwell underlines the pianist's importance in "Latin" music ensembles, "in Latin music, the piano player *is* the timekeeper [italics mine]."⁷¹



Figure 1.12 Alfredo Rodríguez: "Descarga De Hoy" (comp. Orlando Valle), 0:00 - 0:05, from *Jesús Alemañy's Cubanismo!* (1995), Hannibal. CD.

Montunos were originally performed on the *tres* (a Cuban guitar) before being adopted by pianists. Accordingly, *son* has been called "a marriage of the Spanish guitar with the African drum."⁷² Like all of the other instruments in the Cuban ensemble, the pianist's *montuno* fits with the *clave*. It also shares much in common with the timbale cascara part, not only in rhythmic composition but also density. A typical piano *montuno* contains nine repeated notes, the cascara part ten. Seven of the notes overlap rhythmically. Both parts are unified by an underlying *clave* rhythm (figure 1.13).

⁷¹ Boggs (1992:321)

⁷² Fernandez (2002:39)



Figure 1.13 piano *montuno* with timbale cascara part and underlying *clave*

Pianists such as Eddie Palmieri have successfully incorporated the Cuban *montuno* into jazz. Palmieri played in the percussion section of his Uncle's band, Chino y sus Almas Tropicales. Only later did he pursue the piano full time to work with the bands of Eddie Forester, Johnny Segui and Tito Rodrigu. In a 2002 interview Palmieri is quoted, "I am still something of a frustrated percussionist, so I take it out on the piano."⁷³ For his jazz-oriented performance of *El Sonido Nuevo* (1966), he is joined by a traditional Latin percussion section. During his solo, Palmieri plays a *montuno* figure in his left hand (figure 1.14) while improvising melodies in his right.



Figure 1.14 Eddie Palmieri: "El Sonido Nuevo," rec. 1966, (comp. Cal Tjader and Eddie Palmieri), 2:50 - 2:53, from *The Best of Latin Jazz* (1993), Verve. CD.

⁷³ Hennessey (2002:7)

Pianist Stanley Newcomb "Stan" Kenton was one of the first to explore the blending of Cuban rhythms with jazz. In 1947 his band appeared at a concert in New York's Town Hall alongside Machito's Afro-Cuban band. Soon after this event, his band adopted an Afro-Cuban piece composed by Pete Rugolo, appropriately entitled "Machito." His experimentation with a Cuban *montuno* can be heard on his later piece entitled "Viva Prado."⁷⁴ Other jazz pianists followed suit by including *montuno*-type patterns and gestures into their performances. George Shearing embraced the newly popularized "Latin piano" techniques and in so doing expanded his range of percussiveness at the piano. Andrew Hill, a pianist not strongly associated with Latin music, plays a *montuno* figure during his improvisation on "Pedro's Time" from saxophonist Joe Henderson's album, *Our Thing*.⁷⁵

1.10 Brazil

Further cross pollinations between jazz piano and the drum-centric musical traditions of Central and South America continued during the latter half of the twentieth century. In the early 1960's, the *bossa nova* was popularized by American jazz musicians such as Stan Getz, Charlie Byrd, and Herbie Mann, although jazz saxophonist Bud Shank and Brazilian guitarist Laurindo Almeida had been experimenting with blending elements of Brazilian music with jazz since the early 1950's. *Bossa nova* is derived from the Brazilian samba, the roots of which can be traced to African dances imported from Angola and the

⁷⁴ Stan Kenton: "Viva Prado" (comp. Shorty Rogers), rec. 1951, from *Summer of '51* (1987), Garland. CD.

⁷⁵ Andrew Hill: "Pedro's Time" (comp. Kenny Dorham), from *Our Thing* (1963), Blue Note. CD.

Congo. The rhythmic underpinning used in samba is widely believed to have originated in the *habanera* rhythm.⁷⁶

The so-called "Brazilian *clave* " (figure 1.15) is considered to be the foundation of *bossa nova*.⁷⁷ Drummers often play this figure overtly on the rim of the snare drum using a technique known as cross-sticking. Similar rhythmic cells, sometimes using the second measure as a foundation, are often played by an ensemble's guitarist or pianist. Such is the case with iconic *bossa nova* composer and pianist Antonio Carlos Jobim's playing on the introduction to "Tereza My Love" (1970), (figure 1.16).



Figure 1.15 "Brazilian" clave



Figure 1.16 Antonio Carlos Jobim: "Tereza My Love," 0:00 - 0:09, from *Stone Flower* (1970, 2002), Sony. CD.

⁷⁶ Béhague (1973:210)

⁷⁷ Guerrero (1974:253)

The close relationship between Brazilian music and jazz only intensified after the 1960's. Brazilians Egberto Gismonti, Hermeto Pascoal, Cesar Camargo, and Eliane Elias are a few of the more well-known pianists who have successfully transferred some of the percussive elements of traditional Brazilian music to jazz.

1.11 Other drumming traditions

If West African drumming traditions and their numerous manifestations in the new world are the most historically important to jazz, a broader perspective is needed to assess more recent trends in jazz's development. Globalization has seen the many drumming practices of the Americas travel back and forth across the Atlantic so many times that a good deal of the popular music coming out of Africa of late sounds, ironically, distinctly American.

Jazz has attracted musicians from around the world not only for the uniqueness of its American-born traditions but also for its openness to assimilate new sounds and ideas. The tabla traditions of Indian classical music were very influential on jazz oriented groups such as Oregon in the 1970's as well as those led by John McLaughlin, Don Ellis, and Dave Liebman. John Coltrane became enamored with Indian music as far back as the early 1960's. Numerous other groups and musicians have since found a great compatibility in blending jazz with Indian classical music, notably pianist Vijay Iyer and drummer Dan Weiss.⁷⁸ Pianist Anthony Davis has drawn inspiration from the percussion based Gamelan music of Java and Bali while Uri Caine has infused some of his piano

⁷⁸ See Panikker (2010). Also, listen to "Chakradar 1" from *Now Yes When* (2006, Tone of a Pitch records) by the Dan Weiss Trio. Weiss plays a tabla part while vocalizing the rhythm using mnemonic syllables. Pianist Jacob Sacks doubles the part in strict rhythmic unison.

compositions with percussive elements drawn from traditional Jewish folk music. One of the unifying forces behind so-called "world music" is drumming, mostly Africa-derived, but increasingly in all its international manifestations. Since its origins, jazz has absorbed and been absorbed by percussion based musics both local to the Americas and from around the globe.

In summary, the history of jazz piano (and indeed the entire jazz tradition) has been affected by a substantial legacy of drumming performance practices, especially those from West Africa and Europe. Several characteristics of West African drumming have been particularly influential both as primary forces and as secondary ones through the filter of drum-dominant musics from the Caribbean and South America. Percussive elements in jazz of European origin run deep as well. For example, rudimental drumming was foundational to early developments in ragtime and "New Orleans" styles while rhythm cells such as the *habanera* (widely influential in jazz) can be traced to French and Spanish dance traditions.

Chapter II ~ Technical

1.1 Classifying the piano

Keyboard instruments, including the piano, have not always been strongly associated with drums and drumming. The *Oxford Dictionary of Music* defines percussion instruments as those that are played by "shaking...or...striking either a membrane [membranophone]...or a plate or bar of wood, metal or other hard material [idiophone]"⁷⁹ and makes no mention of the piano. Often grouped with the string family of instruments, this classification is problematic because a piano's strings are not meant to be bowed or plucked, but rather struck (percussively) by hammers. Keyboard instruments thus are sometimes regarded as occupying a category of their own.⁸⁰

Perhaps the exclusion of the piano from the percussion family of instruments is a result of its European origin. While percussion instruments have enjoyed prominence in many non-European cultures, their popularity in western concert music is relatively recent, largely a phenomenon of the twentieth century. By contrast, the piano and its ancestors played an integral part in the development of the European art music tradition. Keyboard specialists composed a large proportion of the classical canon,⁸¹ a phenomenon so specific to Europe that the piano and its ancestors have been described as a "characteristic" of western music.⁸²

⁷⁹ Holland/Page "Percussion" *Oxford Music Online*

⁸⁰ Backus (1977:281)

⁸¹ Here and throughout this work, the term "classical" is used in one of its widely accepted senses as referring broadly to music of the western (European) art music tradition from approximately the sixteenth to late nineteenth century.

⁸² Meeùs "Keyboard" *Oxford Music Online*

For the most part, early keyboard instruments served the needs of liturgical music (with its attendant emphasis on melody and harmony) over music for secular dances (with its attendant emphasis on rhythm). Interestingly, the earliest European organ keys were ten or more centimeters wide and were played with an outstretched hand instead of fingers.⁸³ One can only speculate as to whether or not this motion may have been associated with any local hand drumming traditions that may have existed at the time. Nevertheless, ancestors of early keyboard instruments such as the cimbalom (played with mallets) may represent an early link between piano and percussion performance practices. The harpsichord is essentially a mechanical cimbalom. The more recent marimba/xylophone/vibraphone family of instruments (those developed for use in western music) also features keyboard architecture. The relationship of these and other so-called "keyboard percussion" instruments with the piano is often overlooked.

Up until the nineteenth century, much of the music written for and played on keyboard instruments was firmly rooted in western art music, much of which had yet to be influenced significantly by percussion-dominant musical traditions, local or foreign. Even the keyboard music of the Baroque through Romantic periods, which was not rhythmically uninteresting, emphasized flowing lyricism and harmonic counterpoint over and above what might be called "percussiveness" in today's parlance. In many ways, the music of the twentieth century represents a return to older traditions when rhythm's significance was greater.

⁸³ Ibid

Charles Camilleri has noted:

We know that music of the earliest times was rhythmically complex, and that rhythm slowly lost its dominance as harmony developed. The resources of tonal harmony finally reached their limit at the end of the nineteenth century, and rhythmic development surged forward again through such composers as Chopin, Debussy, Stravinsky, Bartók, Messiaen, and through jazz.⁸⁴

1.2 The piano as percussion instrument

Margaret Brink makes the argument for the piano's inclusion in the percussion family by examining instrumental sound in terms of a beginning, steady state, and end. Her dissertation entitled "The Piano as Percussion Instrument" (1990) explores the subject within the context of western concert music.

...the sound envelope in the piano, produced by a hammer hitting a string, reaches its fullness of tone very quickly after the initial attack. By contrast, the voice and wind or bowed instruments excite either an air column by airflow or a string through bow movement...they lack the ability to execute an incisive attack.⁸⁵

Thus, while the piano is associated with stringed instruments because of its construction, it remains distinct because of the percussive action of its hammers. Most significantly, wind and bowed instruments produce a continuous or steady tone while percussion instruments such as the piano produce a decaying one.⁸⁶ This understanding of the percussive potential of the piano was well understood by progressive composers based in the European art music tradition such as Charles Ives and Sergei Prokofiev.⁸⁷ African

⁸⁴ Camillari (1993:introduction)

⁸⁵ Brink (1990:7)

⁸⁶ Backus (1977:299)

⁸⁷ Listen to Ives' Piano Sonata No. 2 and Prokofiev's Toccata in D minor, Op. 11

Americans based in the folk and popular music traditions of the nineteenth century United States also viewed the piano quite naturally as a percussion instrument. Throughout their struggle for emancipation, slaves and their descendents retained many of the cultural traditions passed down from their ancestors. Among these traditions was rhythmically rich music grounded to a significant degree in drumming and improvisation.

1.3 Piano and drum set technique compared

Many parallels exist between the instrumental techniques employed by pianists and drummers. On the simplest of levels, both sit facing a "collection" of instrument surfaces that are "struck" by fingers, hands, sticks, brushes, mallets, etc. As instruments, both the piano and the drum set are freestanding. In colloquial parlance, one "mounts" them to play. While other instrumentalists may choose to sit while playing (pianists and drummers are normally always seated), there are a number of other physical and technical differences. Guitarists, bassists, and horn players *hold* their instruments, and their hands tend to stay in very close contact with strings, keys, and valves during performance. By contrast, a gap of space (resulting from striking motions) intermittently separates the pianist from the piano and the drummer from the drums. On average, the striking distance between hand/stick and the instrument is greater than other instruments as is the "territory" that must be traveled. The double bass is a large instrument requiring a broad range of arm movements but the piano and drums require even more.

1.4 Percussive attack

A percussive effect, or sound, is created when two surfaces meet with some degree of force and velocity, as in tapping, knocking, slapping, or jabbing. Just as the drummer uses sticks and/or brushes to strike drums and/or cymbals, the pianist at times uses a range of striking motions when depressing keys, which then trigger hammers that strike strings. One of the most animated and percussive of the so-called "avant-garde" jazz pianists, Cecil Taylor, has been known to apply a closed fist to the keyboard, or at times even his elbows.⁸⁸ The "extended" piano technique of tapping out a repeated rhythmic pattern on a single piano key while muting its associated string (a favourite device of Chick Corea, among others) can only be described as percussive imitation. Len Lyons credits Duke Ellington as an early progenitor of percussiveness at the piano in jazz:

...[Ellington's] sharp keyboard attack inaugurated a percussive strain in the jazz piano legacy that found expression later in the work of Thelonious Monk and Randy Weston. Although it does not share Duke's economy of notes, the work of McCoy Tyner and Cecil Taylor also descends from Ellington's percussive approach to the keyboard.⁸⁹

Rudolph Ortmann discusses traditional "Finger-Key Percussion" in his classic treatise from 1929, *The Physiological Mechanics of Piano Technique*. Percussiveness at the piano occurs anytime "the key is struck a blow by the descending finger, which has already attained a considerable velocity when it reaches the key-surface."⁹⁰

⁸⁸ Some of Taylor's "unorthodox" piano techniques (tone clusters in particular) can be traced to the innovations of pianist/composers such as Henry Cowell, Percy Grainger, and Leo Ornstein.

⁸⁹ Lyons (1983:28)

⁹⁰ Ortmann (1929:229)

Ortmann continues:

When a moving body meets a body at rest there is a mutual rebound, one from the other, the exact ratio depending upon the actual force and upon the masses of the two bodies. When the finger-tip strikes the key the latter is driven away for a brief part of its descent. Meanwhile the descent of the finger must in consequence be retarded, and for a moment the finger is not in actual contact with the key-surface. When the shock of the percussion has been overcome, the finger "catches up" again with the key and depresses it to the key-bed."⁹¹

Sanford Moeller talks about "bounce" in *The Art of Snare Drumming*.⁹² When a drummer's stick hits a drumhead or cymbal, it "bounces" back quite naturally. A similar "bounce back" can be achieved at the piano when playing staccato. The finger releases the piano key an instant after impact using the natural rebound that occurs when the two surfaces meet. This technique is critical for achieving a drumming-like rapid double stroke effect at the piano.

1.5 Tone production

Several of the interviewees from chapter 5 refer to tone production when talking about connections between pianism and drumming. The types and qualities of motion required to produce sound on the piano and the drum set appear to be related in many ways. Peter Erskine notes:

Trained pianists draw tone out of their instrument by letting their arms fall a little below the keyboard. This gravity and weight produces a fuller tone than if they were just playing from above the keys with wrists and fingers. My touch [on the drums] is akin to that technique...the execution can be lightly rendered, but the weight of the arm is contributing to the fullness of the tone. You're getting more resonance out of the instrument without having to dig in too deeply.⁹³

⁹¹ Ibid (1929:230)

⁹² Moeller (1950:19)

⁹³ Erskine (1998:5)

A wide variety of technical attacks are available and essential to the range of music produced by pianists in jazz, a great many of which are not specifically percussive in nature. Some pianists may even be described as more percussive than others. The concept of "touch" at the piano is one that is very personal from player to player. Every pianist has different sized and shaped hands, greatly influencing tone production. At times during his prolific career, pianist Bill Evans was noted for his use of a relatively soft (what some describe as "classical") touch. By contrast, Don Pullen usually employs a touch that could fairly be described as "hard" and "explosive." These types of generalizations are only helpful if one recognizes that there are numerous instances when Evans favoured more percussive sounds, especially from the 1950's,⁹⁴ and that Pullen has produced some very delicate balladry at the piano.⁹⁵ Regardless, some degree of percussiveness is necessary to abide by jazz's percussive aesthetic and as a means of producing a desired amount of forward rhythmic motion.

1.5 Independence

Drummers and pianists tend to be more ambidextrous than other instrumentalists due in part to the relative equivalency of tasks assigned to arms and hands. Each hand/stick performs the same *type* of movement to create sound. This often results in an equilibrium between parts and greatly influences musical results. Guitarists and bassists, by contrast, pick or pluck with one hand and fret with the other. "Independence" is a term frequently

⁹⁴ Listen to Evans playing on 'S Wonderful (comp. George and Ira Gershwin) with the Don Elliott Quartet from *The Best of Newport '57* (1957, Verve), or just about any time he played with "hard swinging" drummers such as Philly Joe Jones, Louis Hayes, or Dave Bailey.

⁹⁵ Listen to "God Has Smiled On Me" (traditional) from *Melodic Excursions* (1982), Timeless. CD.

used to describe the facility with which drummers (in particular) and pianists can control various independent yet complementary musical elements executed by individual limbs (or fingers). Chick Corea notes how learning to play the drums helped his "independence" at the piano:

For independence of hands...the most helpful exercises for me were accomplished by learning to play the drums. I learned so much about hand and foot independence from Philly Joe Jones, Max Roach, Roy Haynes, Pete La Roca, and Tony Williams...I recommend a familiarity with drums for any pianist.⁹⁶

Several prominent drummer pedagogues have suggested the term "independence" may be confusing because it could lead to the misunderstanding that the constituent parts are somehow unrelated. John Riley, among others, prefers the term "interdependence."

Independence is a misnomer because the last thing a drummer wants is his limbs to work independently. What you should work for is what I call interdependence, where each limb knows exactly what the others are doing and how they work together, not independently.⁹⁷

Drummer Gary Chester discusses certain sticking techniques in terms of "leading" with one hand or the other, suggesting either limb is capable of initiating a principal gesture while the other provides complementation.⁹⁸ Pianists often assign their hands primary and secondary roles as well, resulting in desirable foreground and background constituents.

⁹⁶ Corea in Doerschuk (1977:14)

⁹⁷ Riley (1994:17). See Moses (1984:36), Chapin (1948:1), and Brown (1976:473) for more discussions about "independence," a term that is used widely by jazz musicians, drummers in particular. In this study, the word "independence" is used interchangeably with "interdependence" as defined by Riley.

⁹⁸ Chester (1995:4)

Oscar Peterson notes:

Most players think of themselves as playing off the right hand because there's so much activity there. What's really happening is that the right hand is determined...by the left-hand formation. The left hand can add tonal validity, too, by augmenting with clusters what the right hand is playing. But it's the left hand that starts the line off and determines its basic movement...it's also true that the left hand punctuates the line.⁹⁹

Drummer Peter Magadini's *Musicians Guide to Polyrhythms* (1968) illustrates numerous two-voice cross-rhythms available for use by drummers and other instrumentalists. He points out that left and right hand parts may be freely interchanged not only by drummers, but pianists as well.

After the pianist feels sufficient confidence in his understanding of any rhythmic combination, he can use the right hand to lay a melodic line corresponding rhythmically to the counter rhythm. The left hand will then play the basic pulse in either chordal or single line accompaniment. The reverse of this procedure also presents intriguing possibilities for improvisation.¹⁰⁰

The engagement of more than two limbs is another commonality between pianists and drummers. The drummer uses his or her feet to operate pedals that engage the bass drum and high hat cymbals.¹⁰¹ The pianist uses his or her feet to control a piano's pedals and, at times, to tap the floor.¹⁰²

⁹⁹ Lyons (1983:138-139)

¹⁰⁰ Magadini (1968:3)

¹⁰¹ The "high hat" cymbal was perfected in the late 1920s. It features two horizontal cymbals brought together by a foot-operated pedal.

¹⁰² Toe tapping while playing is common among pianists in jazz. Pianist Jaki Byard believes that heel-tapping in particular facilitates the generation of forward motion. (Levine 1989:268)

1.6 Patterning

The previous observations help to support the notion that musical results ultimately flow from both an instrument's architecture, and the technique required to play it. John Bailey points out what may at first seem obvious, that "the activity of music making involves patterned movement in relationship to the active surface of a musical instrument."¹⁰³ This statement assumes more significance when comparing the musical outputs of like-constructed instruments. Bailey continues:

The physical characteristics of an instrument influence...the structure of the music played on it in such a way that those aspects of the music may be said to be generated from the instrument.¹⁰⁴

A logical extension of this argument suggests that instruments with similar physical characteristics (e.g. piano and drums) are predisposed to both similar musical outputs and roles. Or, as Baily adds, "[related instruments] may be constructed to suit particular motor patterns in order to fulfill certain musical requirements."¹⁰⁵ John Blacking has made similar observations regarding the ways in which music grows out of physical attributes:

...we find numerous examples of western classical music, where the musical form is much influenced by the properties of the instrument for which it was written.¹⁰⁶

Even though the general timbre of the piano is quite distinct from the tonal palette produced by the drum set, shared physical properties inevitably lead to similar

¹⁰³ Baily (1985:237)

¹⁰⁴ Ibid (1985:242)

¹⁰⁵ Ibid (1985:242)

¹⁰⁶ Blacking (1955:52)

performance practices. The difficulty many have had in recognizing the piano as a percussion instrument is very much tied to this contrast in tone colours. One exception to this perception is the extreme upper register of the piano, which produces a high-pitched ringing sound not unlike that of the bell region of a ride cymbal.

1.7 Movement

A shared heritage in musical traditions that feature body movement is also common to the pianist and drummer in jazz. Referring to the idea that music and dance are inseparable in many parts of Africa, Gerhard Kubik speaks of a traditional view that "African music is not sound alone."¹⁰⁷ Indeed, many African languages use the same word for music and dance. A similar unification of dance and music plays out in the patterned movements of all jazz musicians, drummers and pianists especially. On occasion, Thelonious Monk would quite literally get up and shuffle around his piano during a live performance.

Pianists Jimmy Yancey and Ray Bryant were both known for their abilities as tap dancers. The dance gestures in jazz are micro-embodiments of a music that often values spontaneously improvised physical movements over carefully planned execution. Brink echoes these sentiments regarding the historical role of percussion instruments (here including the piano) as associated with dance in which "the sound is made in response to, or to emphasize, bodily movement."¹⁰⁸

¹⁰⁷ Kubik (1979:227)

¹⁰⁸ Brink (1990:4)

1.8 "Classical" piano technique

Many volumes have been written about piano technique from the perspective of European classical music.¹⁰⁹ Perhaps not surprisingly, I was unable to find any that mention a relationship between percussiveness at the piano and drumming. This gives some credence to the suggestion that the drumming-like aspects of jazz piano performance derive mainly from its non-classical roots. Drums and percussion instruments certainly have a history in Europe, especially within its many folk music and military march traditions, but the most predominant elements of percussiveness that have impacted jazz piano are traceable to West African drumming.

The use of a percussive attack at the piano gained more currency among composers of the Romantic period as they experimented with a broader range of textures. Several Twentieth century composers of piano music further expanded the use of *marcato* effects. Referring to "modernism in pianoforte study," Percy Grainger called the piano "distinctly an instrument of percussion."¹¹⁰ Nevertheless, the idea of lyricism trumping percussiveness in order of importance is one that, to the present day, has remained central to the aesthetic values of a majority of classical pianists. Traditional classical piano technique (defined here as grounded in pre-twentieth century musical ideals) has developed with this general priority in mind.

¹⁰⁹ See Dubal (1995), Harrison (1953), Schultz (1949) Fielden (1927), and Matthey (1903)

¹¹⁰ Cooke (1917:365)

Concert pianist Leon Fleisher once expressed a viewpoint that seems to reflect this same orientation, "I think [for the classical pianist] there's a very strong analogy between the pianist's arm and a string player's arm."¹¹¹ Vladimir Horowitz compared the piano to the voice, "I want to make the piano not a percussion instrument, but a singing instrument. The piano has to sing as much as it can."¹¹² Interestingly, there are a number of jazz pianists trained in classical music (Keith Jarrett for example) who share this viewpoint while also acknowledging the percussive disposition of the piano. Jarrett is known for his vocalizations during performances. He notes, "[I've] always been on the piano's case for not having a voice that sang...[one that is] capable of sustaining a sound as a wind instrument does..."¹¹³

¹¹¹ Noyle (1987:97)

¹¹² Erskine (1998:43)

¹¹³ Shipton (2004:76-77)

Chapter III ~ Conceptual

1.1 Time-Keeping

"...our goal is to groove. As far as I'm concerned, that's the only goal."¹¹⁴

Jazz drummer Bob Moses

A large part of the responsibility assumed by drummers in Africa-derived idioms such as jazz lies in creative time-keeping. Drummer Charli Persip concurs with Moses that the drummer's main function should be to "propel" an ensemble in creative ways.¹¹⁵ Like their counterparts in other groove-oriented styles, jazz drummers fulfill the time-keeping role chiefly through the creation of repeated yet variable cycles of rhythmic events alternately described as ostinato vamps, grooves, or timelines. These timelines are always tied to movement, if not overtly to dance, and reflect a perpetual desire for the creation of forward motion.

The drummer's capacity to play multiple rhythms at once, combined with the largely percussive nature of the drum kit, lends itself well to the job of chief rhythmic engineer. Drummers not only "count and feel" a variety of subdivisions of the primary pulse,¹¹⁶ they often play many of them overtly on the drum set. Not surprisingly, drummers typically develop a very high level of what Ingrid Monson calls "good time."¹¹⁷ This acumen inspires a deep sense of rhythmic awareness among other instrumentalists,

¹¹⁴ Moses (1984:5)

¹¹⁵ Berliner (1994:314)

¹¹⁶ See Erskine (1998:9-11)

¹¹⁷ Monson (1996:27)

pianists included. A study of recordings by Art Blakey's Jazz Messengers led Keith Copeland to conclude "...however subtly, the drums actually controlled what was going on in the rest of the band."¹¹⁸ Even though more recent developments in jazz have seen some democratization of time-keeping roles, drummers still remain uniquely qualified to quarterback those elements that combine to create groove and swing. Pianist Horace Silver reflects on his experiences playing with Blakey:

[playing with Blakey] made me much stronger as a rhythm player, especially comping, backing up a soloist. There's another thing Art instilled in me as a player-and not by talking to me but by example! Art never lets up. I've seen him go days without sleep, come down with a bad cold, and no matter what, every time the man goes up on the bandstand, he puts fire to the music and there's no letting up. That rubbed off on me.¹¹⁹

Pianist Joanne Brackeen also played with Art Blakey's Jazz messengers in the late 1960's. She expressed a similar sentiment to Silver's, "I took so much energy from Art's playing at the drums...that energy remains with me."¹²⁰

The drummer's role as timekeeper remained strong during the post bebop era but in many cases was augmented by other band members to allow for greater interaction with soloists. Such was the case in saxophonist John Coltrane's quartet of the early 1960's featuring drummer Elvin Jones and pianist McCoy Tyner.

¹¹⁸ Berliner (1994:314)

¹¹⁹ Lyons (1983:125)

¹²⁰ Shipton (2004:9)

Frank Kofsky notes:

The fact that Jones, while in the Coltrane quartet, was at liberty to discharge a continuous stream of figures and kaleidoscopically shifting accent patterns at his own discretion is directly attributable to Tyner's assumption of a larger portion of the time-keeping tasks than had been the lot of the jazz pianist in the immediate past.¹²¹

Jones was known for his explorations of polyrhythmic materials, but no less emphatic about the importance of time-keeping to the drummer's responsibilities:

The role of the drummer is primarily to keep time. Whether you think you are or not, always in one way or another, either consciously or subconsciously - or unconsciously - the drummer is keeping time, or implied time. Regardless of how abstract it may seem, if it's analyzed to its fullest extent, it will be ultimately a very definite repetitious rhythm.¹²²

While bassists usually play an important (if not fundamental) collaborative role in the maintenance of time-keeping, drummers are unique in that their duties are, for the most part, *primarily* rhythmic. In the absence of a drummer, responsibility for the initiation and maintenance of groove may fall to one or more of the other ensemble members, usually the bassist. Hammond organ players represent a special case, routinely playing bass lines with their feet (on pedals) or with the left hand, while providing chordal accompaniment with the right. They often assume the roles of two musicians, and in the process a large proportion of the time-keeping responsibilities. Pianists accompanying singers or horn players in duo settings may find themselves tasked with supplying all the constituent parts of an entire ensemble, including the groove components normally assumed by drummers and bassists.

¹²¹ Kofsky (1977:12)

¹²² Wilmer (1977:157)

Pianist Kenny Barron makes liberal use of walking bass lines while accompanying Stan Getz during the saxophonist's last recorded concert in 1991, *People Time*.¹²³ Barron's infallible time-keeping spurs the saxophonist on with such buoyancy that the absence of bass and drums seems inconsequential. Perhaps his attunement to drummers is what led to his considerable skills in the realm of groove creation. He has noted:

The drummer has become a very, very important partner for me as my playing has evolved. At one point, I started really listening to the things the drummer would play, and I'd play the same things rhythmically.¹²⁴

Randy Weston has expressed similar accolades:

Drums have always been my favorite instrument, and I've always been very close to drummers. I think my style is quite influenced by drum rhythms.¹²⁵

Jazz pianists specialized in performing solo are perhaps even more indebted to drummers. From stride players such as Charles Luckeyeth "Luckey" Roberts to modernists such as John Taylor, numerous solo artists have applied drumming concepts to the piano keyboard. One of the ways they have done this is through the layering of motorized rhythms that rely on the emphasis, overt or implied, of some form of "backbeat." Accents placed on beats two and four in four/four meter are a typical example of backbeat emphasis in jazz. Drummers and pianists may not always articulate the backbeat literally but its presence must be felt to some degree in order to create a desire in listener/participants to clap on beats two and four, as a gospel choir seems to do unprompted and so effortlessly.¹²⁶

¹²³ *People Time* (1992), Verve. CD.

¹²⁴ Berliner (1994:355)

¹²⁵ Art Taylor (1982:19)

¹²⁶ Jay Rahn (1996:85) has cited offbeat or "pendular" clapping as yet another musical practice traceable to West Africa.

1.2 Anatomy of groove

Pianists and drummers share not only a common goal to create forward rhythmic motion but also comparable means of doing so. Given that “groove” normally results from the generation of a tapestry of complementary timelines, it becomes easier to understand one of the ways drummers and pianists create the aural equivalence of dance. They both share an ability to produce composites through the simultaneous generation of numerous overlapping parts. This proclivity allows them to create what might be called "self-supporting" grooves. In the 1930's, boogie-woogie pianists such as Jimmy Yancey, Pete Johnson, and Albert Ammons generated the same type of momentum through their hard driving bluesy solo performances as their drummer contemporaries did in ensemble settings. Figure 3.1 provides an example of a typical "boogie woogie" groove composite played by one of that style's masters, Meade "Lux" Lewis.



Figure 3.1 Meade "Lux" Lewis: "Six Wheel Chaser" (rec. 1940), 1:23 - 1:26, from *Meade "Lux" Lewis - The Classics Chronological Series* (1994), Classics. CD.

The bass part alone evokes a powerful sense of forward motion, which is further heightened by accented off-beat figures in the right hand. A subtle accent is also placed on beats two and four of the left hand, providing the requisite "backbeat" emphasis.

Keith Jarrett's improvised solo piano concerts of the mid 1970's often featured extended groove ostinatos, replete with blues and gospel influences. Part Ila of Jarrett's *Köln Concert* performance from 1975 is a veritable tour-de-force of what might be called modern "funky" piano, highly energetic and syncopated.¹²⁷ A similarly potent sense of groove is evident throughout one of his earlier recorded solo concerts. *Bremen* (1973) (figure 3.2), illustrates some of the same principals at work as in the earlier Lewis example: a hard driving bass line complimented by accented off-beat figures in the right hand.



Figure 3.2 Keith Jarrett: "Bremen Part I," 15:07 - 15:11, from *Solo Concerts Bremen/Lausanne* (1973), ECM. CD.

Since the 1950's, many jazz musicians have experimented with timelines commonly found in funk and rhythm & blues music. The backbeat is often accented on the snare drum in these styles and the overall groove matrix is usually more static than in mainstream jazz styles. For their performance of "Planet Rock," pianist Jason Moran plays in rhythmic unison with drummer Nasheet Waits. The lower piano parts line up exactly with the bass and snare drums in imitation of a typical funk groove. Their performance provides a literal example of funk drumming transferred to the piano (figure 3.3). Even Moran's choice of static pitches (B and F# in this case) to represent snare and

¹²⁷ *Köln Concert* (1975), ECM. CD.

bass drums parts is significant, further heightening the illusion of a static two-part drum groove orchestrated for piano.



Figure 3.3 Jason Moran and Nasheet Waits: "Planet Rock" (comp. A. Baker, J. Robie), 1:31-1:39, from *The Bandwagon* (2002), Blue Note. CD.

A typical groove pattern may contain anywhere from one to six or more fundamental rhythms played at once. Figure 3.4 shows a typical 12/8 "Afro-Cuban" drum groove made up of five distinct parts.¹²⁸ Also known as the "nanigo" or "bembe," drummer John Riley suggests that this rhythm may be the "grandfather" of the modern jazz ride cymbal pattern.¹²⁹ Its use in jazz has become ubiquitous since the 1950's. Figure 3.5 illustrates a rendering of the same groove, orchestrated for piano.

¹²⁸ This groove and others like it derive from the West African "standard" bell pattern. (see Kubik 2010)

¹²⁹ Riley (1994:59)



Figure 3.4 12/8 Afro-Cuban groove

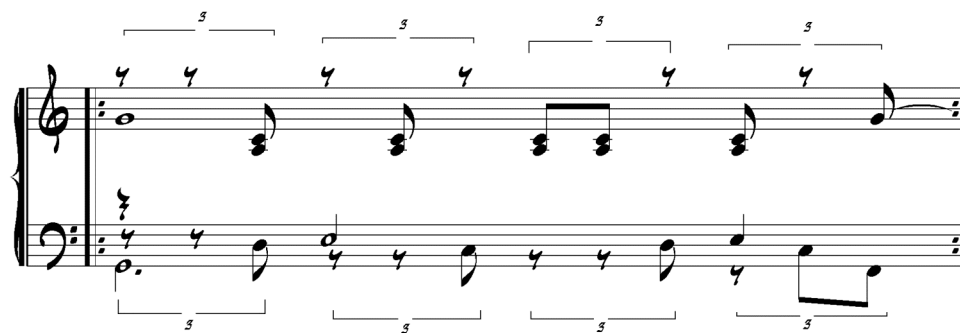


Figure 3.5 12/8 Afro-Cuban piano groove.

Once established, a groove sets up a "flow," one that bassist Cecil McBee suggests "frames and integrates the remaining musical elements" within the ensemble.¹³⁰ The concept of a perfectly "regular" temporal framework represents a key departure from the European art music tradition where elasticity is expected and desirable, especially at

¹³⁰ Monson (1996:28)

phrase endings. In jazz, rhythmic gestures normally must fall comfortably within a fixed "grid" unless a passage is to be played deliberately rubato. Billy Taylor notes:

One of the most distinguishing features of good jazz playing is that it is basically a form of creative expression against the limitation of a steady beat. This beat may actually be played, as in swing or the older forms of jazz, or merely suggested, as it often is in bebop. No matter how it is indicated, it must be felt to such an extent that it always retains its validity.¹³¹

While groove is often associated with keeping "steady time" it is important to note that in jazz (as with most musical genres) this still leaves room for some flexibility. It's generally assumed that only machines are capable of playing perfectly in time, as a metronome does, and that some micro-variations in rhythmic precision are normal (if not essential) to keeping the music from sounding stiff and unmusical.¹³² Nevertheless, time-keeping by definition implies a striving to provide a perfectly solid foundation upon which other elements are layered.

Ideally, grooves should be repetitious without being monotonous. They include enough reiteration to create a "flow" but also enough variation to maintain a listener's natural desire for contrast. Jazz drummers are experts at achieving this delicate balance, and their special skills in this area are what inspire the careful crafting of groove by other instrumentalists. The Cuban pianist's use of drumming-like *montunos* is an excellent

¹³¹ Taylor (1982:130)

¹³² See Gabrielsson (1985) and Keil (1987)

example of this marriage of drumming sensibilities with the keyboard, the adoption of open-ended harmonically static vamps by mainstream jazz pianists is another.¹³³

1.3 Modal vamps

By the late nineteen fifties, jazz musicians (Miles Davis and John Coltrane are most often cited) were looking for more open approaches to improvisation unconstrained by traditional song forms and complicated harmonic progressions. Pieces featuring extended sections based on a single chord or scale were adopted to "free up" both soloists and members of the rhythm section. For pianists, this narrowed the scope of harmonic options in some ways but broadened the rhythmic possibilities in others. The results saw pianists such as McCoy Tyner join forces as an equal partner with drummer Elvin Jones in the creation of rhythm-centric static harmony vamps. In this context rhythm, a traditional domain of drummers, increased in dominance over harmony, a traditional domain of pianists.

Experimentation with this approach gained traction among numerous jazz musicians throughout the later 1950's. "My Favorite Things," played by Coltrane's quartet in 1960, provides an excellent early (if already mature) example of this tilting of emphasis in favour of rhythm (ergo drumming) aesthetics.¹³⁴ Tyner plays the exact rhythmic pattern

¹³³ Billy Taylor suggests that jazz musicians' adoption of Afro-Cuban montunos inspired experiments with modal playing or as he put it, "[improvising] over one chord...without the Latin beat." (1982:198)

¹³⁴ Charles Mingus' "Pithecanthropus Erectus" from *Pithecanthropus Erectus* (1956, Atlantic) presents examples of modal playing interspersed with more traditional

illustrated in figure 3.6 well over two hundred times (more than seven minutes of this cell alone) during "My Favorite Things" with only minor harmonic variations. Even his improvised "solo" is mantra-like with very limited melodic extemporization.



Figure 3.6 McCoy Tyner: "My Favorite Things" (comp. Richard Rogers and Oscar Hammerstein), 1:02-1:04, from *My Favorite Things* (1961), Atlantic. CD.

The music of pianist Hampton Hawes presents another very interesting example of the kinds of transformations that were taking place in jazz at this time. Hawes established his reputation as a quintessential "bebopper," one of the most in-demand jazz pianists on the west coast from the late 1940's through the 1950's. An examination of his recorded output reveals a substantial gap in his discography between 1958 and 1964. Listening to Hawes' playing just a few years after his return to recording is in many ways like listening to another musician altogether. Far from the linear bebop approach of his earlier years, drumming-like modal vamps permeate his work, and his playing had become increasingly percussive in nature. Hawes had absorbed many of the substantial changes

performance techniques. Listen to pianist Mal Waldron's playing, especially during the 6/8 sections.

taking place in jazz during this critical period and adapted them for use within his own "new" style.¹³⁵

1.4 What is this swing?

It was one of jazz piano's greats who wrote "It Don't Mean a Thing (If It Ain't Got That Swing.)"¹³⁶ While the term "groove" is often applied generically to a wide spectrum of Africa-derived music, the rhythmic concept of "swing" is most often applied specifically to jazz. The Brazilian *bossa nova* may be said to "swing," but only in a more generalized and vague sense, as for instance music played with "an easy flowing but vigorous rhythm."¹³⁷ By contrast, an entire sub-genre of jazz goes by the name "swing," and the underlying rhythmic foundation for mainstream jazz is also called "swing." How swing is created has been the subject of considerable debate among jazz musicians since the term first gained currency in the 1930's. Certainly the establishment and maintenance of a steady pulse based on a triplet subdivision is key, but applying a system of accentuation favouring off-beats also plays a critical role.

A notable similarity between how drummers and pianists "swing" relates once again to their technical means for achieving this sometimes mystifying phenomenon. Drummers are able to render both the time-keeping aspects *and* the off-beat accentuation, just as pianists can. An example of this may be seen in the classic big-band "set-up" in which the drummer will accent beat one of an ensemble passage as a means to cue or "set-up" beat

¹³⁵ Listen to "The Look of Love," rec. 1970, (comp. Burt Bacharach and Hal David) from *High In The Sky* (1989), Fresh Sound. CD.

¹³⁶ Ellington/Mills (1931)

¹³⁷ "swing," *New Oxford American Dictionary*

two or the anticipation of beat two, played by the whole group. Drummer Mel Lewis' treatment of the "shout chorus" at the end of "A-That's Freedom" from 1967, played by the big band he co-led with trumpeter Thad Jones (brother of Elvin) provides several examples of this technique (figure 3.7).

The image displays a musical score for two staves. The top staff is labeled 'trumpets tutti' and the bottom staff is labeled 'drums'. Both staves are in 4/4 time. The trumpets part features a melodic line with accents (^) and slurs. The drums part includes a 'fills' section with an arrow pointing to the right, followed by a rhythmic pattern of eighth and sixteenth notes. The piano part at the bottom of the image shows a similar rhythmic pattern in the left hand and a melodic line in the right hand, with slurs and accents.

Figure 3.7 Thad Jones/Mel Lewis Orchestra: "A-That's Freedom," rec. 1967, (comp. Hank Jones), 5:28-5:43, from *The Complete Solid State Recordings of the Thad Jones/Mel Lewis Orchestra* (1994), Mosaic. CD.

Pianists frequently do the same thing in both solo and ensemble settings. The left hand will typically play the part of the drummer, the right the tutti part. Pianist Alan Broadbent does just this at the end of the first statement of the theme on his arrangement of Horace Silver's "Strollin'" (figure 3.8).



Figure 3.8 Alan Broadbent: "Strollin'" (comp. Horace Silver), 0:52-0:55, from *Live at Maybeck Recital Hall* (1991), Concord Jazz. CD.

Part of the drummer's "set-up" involves "filling-in" rests in the ensemble parts. These fills delineate the underlying pulse in creative ways and heighten the listener's expectation of up-coming cadences. Fills serve to keep a "flow" going and to ensure that accented "shots" fall perfectly within the metric framework (or grid). Non-drummers in jazz frequently use mental exercises of singing drum fills internally as a means of executing rhythmic figures with the same level of precision. Pianists may also overtly play drumming-like fills (such as during the "turn-around" measures of a cyclical standard song form) and in so doing, fulfill both harmonic and rhythmic functions. Chick Corea's handling of a "turn-around" on the standard tune "It Could Happen to You" provides an example of this technique (figure 3.9).



Figure 3.9 Chick Corea: "It Could Happen To You" (comp. Jimmy Van Heusen and Johnny Burke), 2:43-2:47, from *Expressions* (1994), GRP. CD.

In jazz, certain desired tensions result when rhythms are layered in complex and sometimes dissonant ways, a skill at which drummers and pianists are particularly adroit. Charles Keil (1987, 1995) has suggested that "participatory discrepancies" (or PD's) account for much of what makes the rhythmic aspects of groove music (including jazz) so compelling. The idea that "swing" may result in part from musicians playing slightly out of time (or phase) with one another has also been explored by Ellis (1991) and Prögler (1995) using computers to measure the precise timing of musical performances. For Keil, these slight variations are what give a performance life and emotional meaning. Geoffrey and James Collier point out how concepts such as "ahead of the beat," "behind the beat," and "on top of the beat" are constant topics of conversation, even argument, among jazz musicians.¹³⁸ Other notable swing "timing" and cognition studies include those by Rose (1989), Friberg/Sundström (1997, 2002), and Iyer (1998, 2002).

The participatory discrepancies theory highlights another similarity between the timing techniques employed by pianists and drummers in jazz. In this case the participants are at liberty to instigate discrepancies *within* their individual parts. The walking bass line pianist Lennie Tristano plays with his left hand on his solo piano rendition of "Deliberation" (figure 3.10) is the "time keeper" against which his right hand often plays considerably "behind the beat," or fractionally late, for effect. Drum solos often feature similar effects whereby one limb provides a metronomic pulse on top of which more abstract textures are layered.

¹³⁸ Collier and Collier (1996:118), see also Laverne (1993)



Figure 3.10 Lennie Tristano: "Deliberation," 0:06-0:11 from *The New Tristano* (1962), Atlantic. CD.

1.5 Ensemble roles

As noted earlier, various tasks are assigned to individual members within a traditional small jazz group. Robert Hodson describes these as “normative performance roles” and notes that these tasks symbolize “an aesthetic [within jazz] that values both the division of labor and the sharing of responsibilities.”¹³⁹ With the bebop "revolution" of the 1940's, a new relationship developed between pianists and drummers. No longer constrained by uniform dance beats, rhythmic sophistication and interplay increased. Bassists took on a greater proportion of the role of timekeeper, freeing up both drummers and pianists to express a wider range of rhythms. Bebop drummers began to interact more with soloists by playing non-regular complimentary rhythmic figures, often on the snare and bass drums, that helped give performances a conversational quality. This technique is known as "comping," a word that may have derived from the word "accompanying" and/or "complimenting."

Pianists in jazz typically "comp" through the improvised rhythmic placement of chords behind the soloist. Like the drummer, the temporal placement of the pianist's chords is

¹³⁹ Hodson (2000:44). See Hodson 2000 for more about ensemble roles in jazz.

non-regular. Figure 3.11 illustrates a few of the comping figures common to both drummer Shelly Manne and pianist Hank Jones (brother of Elvin and Thad) on "The Bird," recorded in 1947.



Figure 3.11 Hank Jones and Shelly Manne: "The Bird," rec. 1947, (comp. Charlie Parker), from *Bird: The Complete Charlie Parker on Verve* (1988), PolyGram. CD.

During the 47th and 48th measure of alto saxophonist Charlie Parker's solo on "The Bird," Manne and Jones overlap to play the *same* comping figure at the *same* time (figure 3.12).



Figure 3.12 "The Bird," comping figure played by both Manne and Jones at the same time behind alto saxophone solo, 3:12-3:14.

1.6 Call and response

Much has been made of the conversational aspects of jazz. Interaction has always been an important part of jazz, and has arguably become more pronounced over the course of the

music's history.¹⁴⁰ Since pianists and drummers are both tasked with playing non-regular "comping" figures, they often communicate with each other through call and response. At times a gesture played on one instrument will receive a response or "answer" from the other.

Towards the end of pianist Paul Bley's solo on Ornette Coleman's "When Will the Blues Leave" from 1962, drummer Pete La Roca echoes some of the same rhythmic figures played by the trio's leader. Bley plays a two measure rhythmic figure and repeats it three times with only minor variations. La Roca "responds" to the figure right away by crafting his own complementary version, also with only minor variations (figure 3.13). During such performances when a high degree of cooperation is achieved, certain musicians (in this case the drummer and pianist) can be said to be exhibiting exceptional communication, or what is colloquially referred to as a successful "hook-up."



Figure 3.13 Paul Bley and Pete La Roca: "When Will the Blues Leave," 3:07-3:15 (comp. Ornette Coleman), from *Footloose* (1962), Savoy. CD.

¹⁴⁰ See Berliner (1994), Monson (1996), Coolman (1997), Reinholdsson (1998), Dybo (1999), Hodson (2000), and Rinzier (1988).

Call and response is one form of hook-up but there are others, notably when musicians combine forces in ways that contribute to the creation of a groove that is greater than the sum of its parts. A number of cases of exceptional synergy between pianists and drummers in jazz are referred to by interviewees in chapter 5.

1.7 Synergy

With the democratization of ensemble roles came the liberation of drummers to participate as equal partners with pianists and bassists. As such, it was only natural that their musical conversations should become more substantial, so much so that some rhythm sections came to be celebrated *apart* from the soloists they accompanied. Certain rhythm sections that stayed together for lengthy periods of time developed a high level of integration. Notable early examples of especially complimentary pianist and drummer combinations include Edward Kennedy "Duke" Ellington and Sonny Greer, William "Count" Basie and "Papa" Joe Jones, and Theodore Shaw "Teddy" Wilson and Gene Krupa. The synergy of these pre-bop affiliations lay mainly in their like-minded approaches to the propagation of infectious dance rhythms.

When Thelonious Monk and Kenny Clarke began their historic association in the late nineteen thirties, their "bebop" experiments set the stage for a wide range of innovative piano and drum collaborations to follow. The angularity and deliberate abruptness of Monk's playing style represented a marked shift away from the fluid virtuosity typical of many swing and stride players. Whereas for the most part his contemporaries were

creating lyrical, flowing melodies, Monk's sudden jabs at the piano were closer in spirit to the off-beat "bombs" being dropped by drummers such as Clarke, Roach, and Manne.

Monk's fellow bebopper extraordinaire Bud Powell employed a hammer-like attack at break-neck tempos, especially during his very fertile period of 1949 to 1951 when Chick Corea has noted "he was really whacking the piano."¹⁴¹ The high level of energy Powell exhibited fit perfectly with the muscular and virtuosic approach of drummer Max Roach. Several of Powell's piano trio arrangements end with a series of heavily accented chords matched only in character (not to mention volume) by Roach's fortissimo accompaniment.¹⁴²

Pianist Ahmad Jamal found in drummer Vernal Fournier a true compatriot, both were great fans of economy. When the pianist would leave space in his improvisations, most drummers would be eager to fill the void but Fournier was exceptionally disciplined. Both men shared similar aesthetic values for simplicity, and when they did play in rhythmic unison, their synergy was definitive. At one point during Jamal's solo on "(Put Another Nickel In) Music, Music, Music" from 1958, the pianist plays a (presumably improvised) *tresillo*-based comping figure in his left hand. Fournier plays a complementary bass drum figure at the same time in perfect sync with Jamal's gesture. Interestingly, Fournier's figure contains fewer notes, suggesting that this was not a pre-planned musical event (figure 3.14).

¹⁴¹ Corea, CD liner notes to *The Ultimate Powell* (1998), Verve. CD.

¹⁴² Listen to, for example, the ending of Powell's interpretation of "Sweet Georgia Brown," rec. 1950, from *Jazz Giant* (2001), Verve. CD.



Figure 3.14 Ahmad Jamal and Vernal Fournier: "(Put Another Nickel In) Music, Music, Music," 1:49-1:52, (comp. Stephan Weiss and Bernie Baum), from *But Not For Me* (1958), Chess.CD.

Jamal's earlier group was modeled after Nat King Cole's drum-less trio featuring guitar and bass, as was pianist Oscar Peterson's. Like Jamal, Peterson also replaced his guitarist with a drummer in the late 1950's (namely Edward Thigpen), a move that fit with the growing importance of drumming in jazz. The Peterson/Thigpen combination with bassist Ray Brown had a reputation as one of the most "swinging" in jazz. Peterson exhibited not only exceptional pianistic virtuosity, but also a relentless penchant for the creation of forward motion.

Miles Davis expected, and received, hard-swinging results from his rhythm sections of the 1950's. Pianist Red Garland and drummer Philly Joe Jones, along with bassist Paul Chambers, were in high demand for the impeccable underpinning of groove they provided Davis and other soloists. Jones had equally exceptional rapports with pianists Sonny Clark, Wynton Kelly, and Bill Evans, to name a few. Other pianist/drummer combinations of note from this time period include Horace Silver/Art Blakey, Wynton Kelly/Jimmy Cobb, and Cedar Walton/Billy Higgins among numerous others. Perhaps the most celebrated combinations of the 1960's were McCoy Tyner/Elvin Jones and

Herbie Hancock/Tony Williams, due in no small part to the extended durations of their respective associations, the prolificacy of their recorded outputs, and the collective originality of their innovations. Len Lyons has noted how Jones and Tyner "anticipated each other's accents with near telepathic accuracy."¹⁴³ See Gander (2005:48) for a transcription of Jones and Tyner playing dotted quarter note figures "over the bar line" together on "Softly as in a Morning Sunrise."¹⁴⁴ See Coolman (1997:76) for a transcription of the musical dialogue between Williams and Hancock on "Agitation."¹⁴⁵

¹⁴³ Lyons (1989:314)

¹⁴⁴ "Softly As In A Morning Sunrise" (comp. Sigmund Romberg) from *Coltrane Live at the Village Vanguard - The Master Takes* (1961), Impulse. CD.

¹⁴⁵ "Agitation" (comp. Miles Davis), from *E.S.P.* (1965), Columbia/Legacy. CD.

Chapter IV ~ Evidence

1.1 Introduction

Having explored some of the historical, technical, and conceptual links between piano and drumming performance practices in jazz, this chapter will present further corroborating evidence in the form of transcribed examples from the recorded history of jazz. Special attention will be paid to the performances of four pianists whose seminal work since the 1960's has had an enormous impact on contemporary developments in jazz piano performance: McCoy Tyner, Herbie Hancock, Chick Corea, and Keith Jarrett. The main topics of discussion presented here concern rhythmic counterpoint and complexity, sticking patterns, and complementation.

1.2 Rhythmic counterpoint

More so than other instrumentalists in jazz, pianists and drummers share a capacity for creating rhythmic composites. The piano is ideally suited to emulate the common West African drumming practice of "playing at least two rhythms at the same time."¹⁴⁶ A drummer creates up to four musical strands with four limbs while a pianist creates two or more musical strands with two limbs and ten fingers. The following three-part drum pattern is generally recognized as quasi "ground zero" for mainstream "swing feel" jazz.¹⁴⁷

¹⁴⁶ Recall the Chernoff quote from chapter 1 (1979:42)

¹⁴⁷ See Savage (1989) for more on basic drum patterns in American groove music.

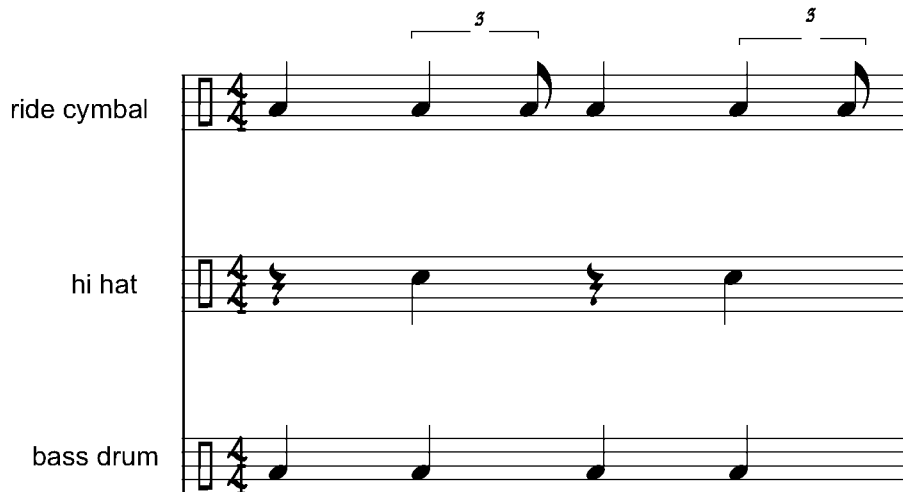


Figure 4.1 three-part drum pattern

Some variation of this basic pattern is usually used by drummers in mainstream jazz to establish a foundation for further extemporization. A technique known as "feathering" the bass drum was popularized by swing era drummers to reinforce the quarter note pulse underlying slow and medium tempos. Pianist Erroll Garner often used a similar technique as a means for establishing a "four to the bar" feeling with his left hand while improvising melodies with his right.

Parts of the basic drum pattern may be left out, notably the bass drum, and there are a great many variations that may be applied to the cymbal patterns, the ride especially. Nevertheless, some level of reference to the basic pattern is necessary to establish a jazz swing feeling. A fourth static voice may easily be added such as in figure 4.3. Drummer Jimmy Cobb is revered for the restraint he often demonstrated in employing a streamlined swing feel composite featuring a static rim shot placed on beat four.



Figure 4.2 four-part drum pattern

Teddy Wilson's 1941 rendition of "These Foolish Things" (figure 4.3), provides an example of two, three, and four part composites within an advanced, swing-based, solo "stride" piano style.



Figure 4.3 Teddy Wilson: "These Foolish Things," 0:17-0:28, rec. 1941, (comp. Jack Strachey, Harry Link, and Holt Marvell), from *The Complete Teddy Wilson Piano Solos 1934-1941* (1981), Columbia. CD.

The first measure features tenth structures in the left hand and a predominantly single line melody in the right. The left hand fulfills its standard role of timekeeper while the right hand extemporizes on the original melody using off-beat phrasing. A split in the tenor and bass parts occurs in measure two through the use of simultaneous legato and staccato articulation. The tenor part is also played at a louder dynamic level, creating a three part composite. On beats three and four of measure two, the alto and soprano voices also diverge, momentarily creating a four part composite. Measures three to five return to a three part composite with clearly independent tenor and bass parts.

In most styles, the drummer "keeps time" with at least one limb, while improvising non-regular rhythms with the others. Similarly, in some styles (as in the previous example) a pianist "keeps time" with one hand (usually the left) while elaborating motives with the other.¹⁴⁸ Each musician is capable of creating a self-sustaining ensemble sound composed of multiple coordinated yet independent parts.¹⁴⁹ Drummers, lacking comparable tools to create melody and harmony, must at the very least be regarded as stand-alone "percussion sections." Throughout the history of jazz, these similarities have led pianists and drummers to develop a mastery of solo performance that sets them apart from all but perhaps the most accomplished of guitarists.

¹⁴⁸ Pianist Brad Mehldau is exceptionally adept at sustaining an ostinato figure in his right hand while improvising melodies with his left. Listen to, for example, the end of his solo on "Nobody Else But Me" from *The Art of the Trio, Vol. 1* (1997), Warner Bros. Also listen to Phineas Newborn Jr. on "Way Out West" from *The Great Jazz Piano of Phineas Newborn Jr.* (1961), Contemporary.

¹⁴⁹ See chapter 2 for a discussion about the term "independence."

The piano was a popular instrument during jazz's formative years. Before the advent of phonograph records and radio, live performances provided the only means for audiences to experience music. A piano was a standard item in the middle class American home as well as in many hotel lobbies, restaurants, bars, and honky-tonks. Professional pianists were in high demand due in part to their affordability. The drumming tradition in jazz, while present since its early years, was slower to develop. There are at least three reasons for this:

1. Whereas the piano had developed to more or less its modern construction by the 1870's, the drum set developed considerably later. The bass drum pedal was only perfected in the first decade of the twentieth century and the high hat cymbal in the late 1920's. The modern complement of drums, cymbals, and hardware was only standardized in the 1940's.
2. Until the late 1930's, drummers were relegated to an almost exclusively supportive role within the ensembles they accompanied. This restricted the extent to which they could explore advanced cross rhythms. Jazz was a "popular" music, the audiences for which were generally unsupportive of gestures that might obscure an overtly stated pulse. When jazz made the transition from popular dance music to small audience "art" music, drummers were liberated to explore a fuller range of rhythmic possibilities at the drum set.

3. Primitive recording technology restricted drummers from equal participation in early jazz recordings. Drummers were frequently denied the use of a bass drum because recording devices were unable to accept its wide dynamic range. This restricted drummers from using multiple drums to create the rhythmic composites so common in jazz from the 1940's to the present. Furthermore, even those drums and percussion instruments drummers were allowed to use in studio were not well captured by microphones of the day. Unfortunately, the poor quality of audio recordings has rendered jazz historians with an incomplete picture of the history of jazz drumming. We are left to speculate about many of the specifics of how jazz drumming developed.

For these reasons, early jazz presents us with more interesting examples of composites from pianists than from drummers. Classic ragtime provides an excellent case of rhythmic polyphony derived in part from the drumming practices discussed in chapter 1. In Arthur Marshall's "Kinklets" (figure 4.4) from 1906, we see steady eighth notes played by the left hand (rhythm 1) providing a foundation for very typical figures emphasizing off-beats played by the right hand (rhythm 2).



Figure 4.4 Arthur Marshall: "Kinklets," (1906), m.m. 5-8 in Blesh, ed. *Classic Piano Rags: Complete Original Music for 81 Rags*. (1973): 206-209.

Jelly Roll Morton expanded the boundaries of classic ragtime by incorporating more sophisticated rhythms and harmony. Ed Morales even contends that the "Latin tinge" Morton so famously spoke about led directly to his composite creations.

The division of labor between left and right hand, to carry out rhythmic figures known in Cuban music as *tumbaos* (originally played on the drums and upright bass) with the left hand and percussive improvisation with the right, was an element of Latin music that Morton adapted for his own piano technique.¹⁵⁰

An excellent example of this adaptation of Latin rhythms to the solo piano format can be found in Morton's "Spanish Swat" (figure 4.5). The bass line uses the *tresillo* rhythm Morton was so fond of, and both hands use sustained notes in the middle ranges to create a sophisticated example of rhythmic counterpoint.



Figure 4.5 Jelly Roll Morton: "Spanish Swat," m.m. 17-18. Jelly Roll Morton recorded in the Library of Congress by Alan Lomax (1938), transcription by James Dapogni, in Dapogni. *Ferdinand "Jelly Roll" Morton: The Collected Piano Music*. (1982): 414-421.

1.3 Rhythmic complexity

Generally speaking, the complexity of rhythm in jazz has increased over the course of its history. Recent trends include a rise in popularity of "odd" and mixed meters, increased

¹⁵⁰ Morales (2003:introduction xviii-xix)

experimentation with techniques such as metric modulation, and a general shift in the direction of rhythmic abstraction.¹⁵¹ Some of these trends can be partially attributed to the influence drummers have had on the development of rhythm in jazz, especially since the 1940's.¹⁵² In reference to trends taking place in the late 1950's and early 1960's, Andrew Gander cites the playing of Elvin Jones as an example, "...Jones' drumming extended the inherent polyrhythmic potentialities of traditional jazz rhythm beyond established norms."¹⁵³

As pianists during the 1920's and 1930's incorporated more and more syncopation into their performances, "classic" ragtime developed into the more sophisticated "stride" style. Stride differs from ragtime in both the rhythms it employs, and tempo. While ragtime was generally performed at slower march tempos, stride is often played very fast and tends to feature a greater degree of improvisation. Stride also employs a wider *variety* of rhythms, is more harmonically adventurous, and the basic expression of eighth notes is often "swung." As well, stride seems to have derived in part from a tradition of religious dances and chants with African origins known as the "ring shout." Willie the Lion Smith recounts:

"Shouts *are* stride piano [*italics mine*] - when James P. and Fats and I would get a romp-down shout going, that was playing rocky, just like the Baptist people sing. You don't just play a chord to that [on the keyboard] - you got to move it..."¹⁵⁴

¹⁵¹ During my interview with Don Thompson, he related a story he had heard about the rhythm of a piece of music distributed by saxophonist Steve Coleman at a rehearsal. Allegedly, the time signature indicated by Coleman was "pi."

¹⁵² See Brown (1997)

¹⁵³ Gander (2005:14)

¹⁵⁴ Blesh/Janis (1966:188)

Thomas "Fats" Waller's "Handful of Keys" is a showpiece that helped set a new standard for stride piano in 1929. The finale of "Handful of Keys" (figure 4.6) gives a snap shot of some of the rhythmic innovations that were taking place at this time with its shifting "clave-like" patterns superimposed over driving left hand tenth and octave passages.



Figure 4.6 Thomas "Fats" Waller: "Handful of Keys," 2:32-2:36, rec. 1929, (featuring right hand "clave-like" patterns) from *Fats Waller 1927 - 1929: The Classics Chronological Series* (1993), Classics. CD.

The last five measures of "Handful of Keys" (figure 4.7) provide an example of some alternating "sticking" patterns that will be discussed in more detail later. Greater rhythmic sophistication is also achieved through displaced accented chords, creating uneven beat groupings.



Figure 4.7 Thomas "Fats" Waller: "Handful of Keys," 2:38-2:41, (featuring sticking patterns)

Art Tatum's 1933 interpretation of "Tea for Two" was similarly awe-inspiring for its overt displays of virtuosity. Tatum was based in the stride tradition but many of the harmonic and rhythmic devices he used were years ahead of his time. His music was clearly moving away from obvious dance rhythms towards a more abstract art. Figure 4.8 provides an example of triplets accented in groups of four, giving an impression of three half notes played against four quarter notes in the bass. This type of "three against four" layering has since become commonplace in jazz drumming.¹⁵⁵

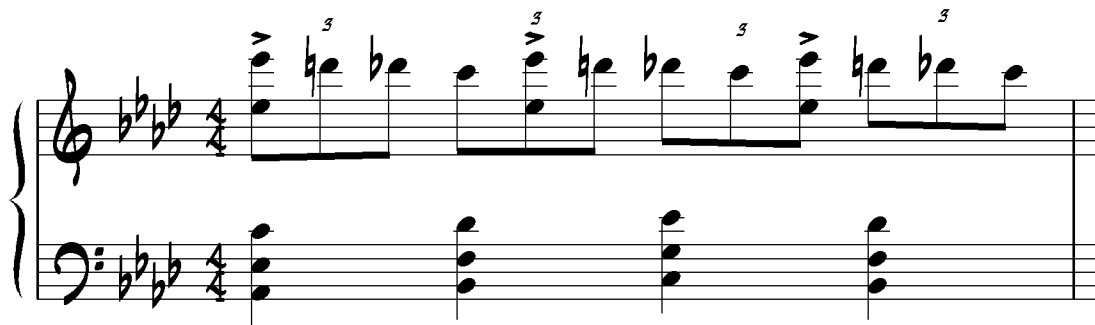


Figure 4.8 Art Tatum: "Tea for Two," 1:31-1:32, (comp. Vincent Youmans and Irving Caesar), (featuring "3 against 4" rhythm) from *Piano Starts Here* (1933), Columbia. CD.

Later on in the same performance (figure 4.9), Tatum sequences six groups of dotted quarter note figures in the bass, creating a cross rhythm with the underlying common time pulse that is a clear departure from earlier stride styles.



Figure 4.9 Art Tatum: "Tea for Two," 2:05-2:07, featuring sequence of dotted quarter note figures

¹⁵⁵ See Riley (1997:47)

Throughout the 1940's and 1950's, jazz musicians (drummers especially) experimented with new rhythmic concepts. Max Roach teamed up with the Boston Percussion Ensemble and Art Blakey with the Afro-Drum ensemble, moves that Billy Taylor observed as pivotal:

The idea of percussion-generated rhythms as central to the music, as opposed to melodic and harmonic ideas and devices supported and given added color by percussion instruments, was...closely examined during this period of jazz.¹⁵⁶

The theme from Thelonious Monk's "Evidence" (first recorded in 1948, see figure 4.10) presents an example of the "percussion-generated rhythms" Taylor refers to. The "melody" is hardly lyrical in the traditional sense, featuring a series of syncopated pitches based on obtuse intervallic leaps. On numerous recordings of this theme, the listener's attention is drawn as much towards the complementary fills played by the session's drummer as to the "melody."



Figure 4.10 Thelonious Monk: "Evidence," 0:00-0:10 from *Hackensack* (1963), Baur Music. CD.

In other moves towards more percussion based music, New Orleans jazz drummer Ed Blackwell participated in West African drum ensembles, adapting rhythms from the Kete

¹⁵⁶ Taylor (1982:167)

Takyiman Royal Court music to the ride cymbal, snare and tom drums.¹⁵⁷ Randy Weston recognized these efforts aimed at expanding the boundaries of jazz drumming:

I hear jazz drums as a collection of African drums, and I think drummers are working more and more on producing direct African sounds and rhythms.¹⁵⁸

Christopher Washburne notes how Max Roach turned to Latin percussionists for new inspirations.

By mimicking the interlocking parts of the conga drums, timbales, and bongo drums, [Roach] gained the independence of all four limbs, creating a technique that revolutionized jazz drum set playing.¹⁵⁹

With traditionalists maintaining older dance beats and modernists experimenting with increasingly complex rhythms, jazz was fracturing along new and old school lines.

Throughout the 1950's and 1960's, many pianists absorbed and applied the concepts that the more adventurous drummers were experimenting with. During this process, it was inevitable that pianists and drummers should grow closer together.

1.4 Sticking patterns

George Lawrence Stone first published his *Stick Control for the Snare Drummer* in 1935.

With its emphasis on two voice alternating sticking patterns for the snare drum, it provides an excellent resource for the hands of a pianist. Several of the pianists interviewed in chapter 5 noted their personal efforts with the deliberate transferring of exercises from similar drum books to the piano. Stone's selection of patterns includes

¹⁵⁷ Hartigan (1995:11)

¹⁵⁸ Lyons (1983:213)

¹⁵⁹ Washburne (1997:78)

many of the established "international drum rudiments" that form some of the basic building blocks of modern drumming. Figure 4.11 illustrates a few of the basic strokes.

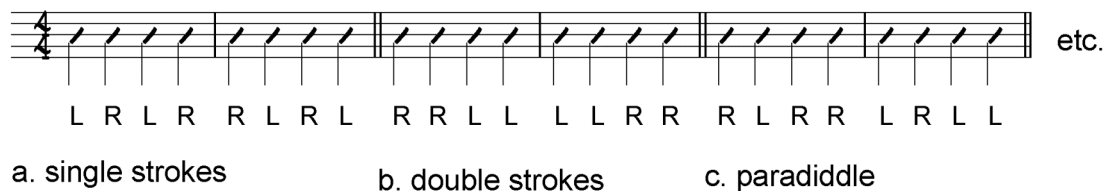


Figure 4.11 sticking patterns. L = left, R = right

The original 1947 version of Dizzy Gillespie and Chano Pozo's "Manteca" featured an opening bass riff played by Al McKibbon (figure 4.12).



Figure 4.12 Al McKibbon: "Manteca," 0:00-0:02, rec. 1947, (comp. John Birkes Gillespie and Luciano "Chano" Pozo Gonzales), bass riff from *The Chronological Dizzy Gillespie and His Orchestra 1947-1949* (2000), Classics. CD.

Figure 4.13 presents the same riff orchestrated for piano. In this case, the riff is broken up into single and double strokes, much the way a drummer might realize the same melody by dividing individual notes between right and left hands.



Figure 4.13 "Manteca" riff orchestrated for piano

These types of patterns are the bread and butter of rudimental drumming and continue to be an important component of the jazz drummer's (and more recently jazz pianist's) toolbox. Evidence of drumming-like alternating hand patterns applied to the piano pre-dates ragtime, notably in several works by Gottschalk.¹⁶⁰ Pre-1940's blues and boogie-woogie pianists also made significant use of drum rudiments.¹⁶¹ The overt use of sticking patterns by pianists in jazz seems to have increased dramatically since the 1960s, when many important transformations were taking place. Despite this fact, relatively little literature outlining the use of sticking-type patterns by pianists seems to exist. A short article in the February 2006 issue of *Keyboard* magazine by Tom Brislin gives some tips on transferring basic drum rudiments to the piano but deals only peripherally with their use in jazz.¹⁶² Steve Reich's "Phase Patterns" (1970) employs paradiddle strokes using a technique the composer describes as "drumming on the keyboard,"¹⁶³ but this example falls outside the jazz tradition. The following discussion includes some examples of

¹⁶⁰ Listen to Gottschalk's "Le Bananier," "Souvenir De Porto-Rico," or "Le Banjo"

¹⁶¹ *Piano Blues* (2003), a documentary film directed by Clint Eastwood, features some excellent visual footage of sticking patterns played by pianists Martha Davis, Dorothy Donogan, and Pete Jolly.

¹⁶² Brislin (2006) "Play like a pianist, think like a drummer."

¹⁶³ See Schwarz (1981/1982:230)

sticking patterns played by a few of the most important musicians associated with the application of drum rudiments to the piano in jazz.

1.5 McCoy Tyner

A large man with an equally large technique, McCoy Tyner (b. 1938) is widely celebrated for his muscular innovations to the art of jazz piano. Though he maintained a relatively traditional "hard bop"¹⁶⁴ style during the 1950's, Tyner's conception changed dramatically after joining forces with drummer Elvin Jones and bassist Steve Davis (replaced later by Jimmy Garrison) in 1960 under the leadership of saxophonist John Coltrane. As noted earlier, Tyner and Jones collaborated on the creation of highly percussive, extended modal vamps. Amidst their complex sequencing of polyrhythmic figures, Tyner would typically pound out a low fifth interval with his left hand to demarcate a sometimes-elusive downbeat. Tyner's use of percussiveness carried over to his approach to the piano as a solo instrument, as is evidenced on his 1973 recording, *Echoes of a Friend*.

Interestingly, Tyner's favouring of quartal harmony for mid-range comping had the effect of intensifying the percussive aspects of his overall approach. In contrast to the romanticism of common practice tertian harmony, his use of the more "austere" perfect fourth and fifth intervals carried over to his melodic improvisations in the form of *prestissimo* upper register pentatonics (see Rinzler 1983, 1999). The acoustic clarity of

¹⁶⁴ "Hard-bop" is a term loosely used to describe a sub-genre of bebop that gained popularity in the mid-1950's. Early proponents of the style include Horace Silver, Art Blakey, and the Clifford Brown-Max Roach Quintet.

perfect intervals were useful to Tyner in achieving a sonic blend with Jones, who often favoured a *fortissimo* dynamic. Fourth and fifth intervals are often described as sounding "hollow," similar to the overtones produced when striking a bell.

Sticking techniques were a natural fit with the mechanics of Tyner's digital artistry.

"Three Flowers" (figure 4.14) provides an example of his application of RRL eighth note triplets played "over the bar line" in groups of two beats against the underlying three-four meter. "Promise" (figure 4.15) illustrates a RLLR figure.

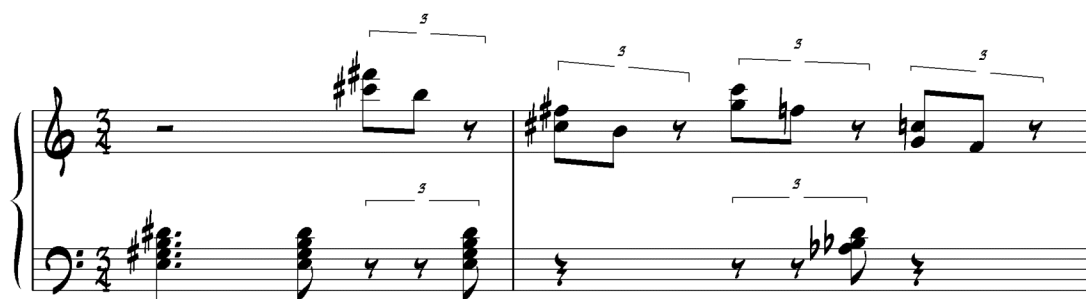


Figure 4.14 McCoy Tyner: "Three Flowers," 3:15-3:17, from *Today and Tomorrow* (1963), GRD. CD.



Figure 4.15 McCoy Tyner: "Promise," 5:18-5:21, from *Echoes of a Friend* (1972), Milestone. CD.

1.6 Herbie Hancock

Herbie Hancock (b. 1940) has received widespread critical acclaim not only as an outstanding soloist but also as a consummate accompanist whose work with the Miles Davis rhythm section of the mid-1960's broke new ground in rhythm section performance practices. As such, it is not surprising that many aspects of Hancock's playing style have been the object of research and analysis. Keith Waters recognized Hancock's playing from the Davis group as a "high point of metric sophistication and subtlety within the traditional jazz framework"¹⁶⁵ and examined the pianist's use of polyrhythms. Pianist Bill Dobbins also lauds Hancock's contributions from this same time period:

Working with the double bass player Ron Carter and the drummer Tony Williams, Hancock helped revolutionize traditional jazz concepts of the rhythm section and its relation to the soloists. He built on the earlier developments of such diverse groups as Bill Evans' trio and Ornette Coleman's quartet, and established a musical rapport with an extraordinary degree of freedom and interaction.¹⁶⁶

Offering some insight into elements of chromaticism found in many of the pianist's improvisations, David Morgan cites Hancock's use of a technique he calls "superimposition" whereby an improviser "plays a melody implying a chord, chord progression, or tonal center other than that being stated by the rhythm section [or in this case within the rhythm section]"¹⁶⁷ Superimposition, defined as such, presents another parallel with rhythmic layering. In addition to these articles, several of Hancock's solos have been published, notably a collection transcribed by Dobbins.¹⁶⁸ What has not been discussed in any detail are the "drumming-like" gestures that surfaced in Hancock's

¹⁶⁵ Waters (1996:19)

¹⁶⁶ Dobbins (1986:317)

¹⁶⁷ Morgan (2002:69)

¹⁶⁸ Dobbins (1992)

improvisations during his tenure with Davis and the possibility that these gestures were in part the result of influences coming from the drummers he collaborated with at the time, Williams in particular.¹⁶⁹

In the early 1960s, Hancock's style (like Tyner's) was very much an extension of his predecessors in the "hard bop" movement of the 1950's, players such as Horace Silver, Bobby Timmons, and Wynton Kelly. What set Hancock apart, even during this early stage, was his synthesis of a bluesy/soulful style of playing typical of the aforementioned players with that of harmonic sophisticates George Shearing, Lennie Tristano, and Bill Evans. "Nai Nai" (figure 4.16) illustrates a typical example of Hancock's improvisational style of that time, one that is grounded in the horn like melodicism of the bebop era. His improvisation is primarily eighth note based and reflects a mainstream approach to the navigation of tonal harmony.

Numerous transformations in Hancock's improvising style took place after his recording of "Nai Nai," among them the metric sophistication discussed by Waters and the superimposition discussed by Morgan. After joining Davis, Hancock's approach to improvisation developed in conjunction with the other members of the Davis rhythm section. Evidence of "drum like" gestures surfaced in his solos, a notable example being his improvisation on Wayne Shorter's "Footprints" from the 1966 Davis album *Miles Smiles*. That this transformation occurred is perhaps not surprising given Hancock's focus on rhythm at the time.

¹⁶⁹ Hancock credits Williams for teaching him a great deal about cross rhythms during their initial association of the early to mid-1960's (Lyons 1983:273)

Figure 4.16 shows the musical score for Herbie Hancock's "Nai Nai," composed by Donald Byrd. The score is written in G minor (three flats) and 4/4 time. It consists of eight staves of music. The chords are labeled above the staves: Gmi7, C7, Fma7, Eb7, A7, Dmi, Bb7, E7, Ama7, C7sus, E6sus4(b9), C7sus, D7, and Bb7. The melody is characterized by many triplets and slurs, indicating a complex, syncopated rhythm. The score is a transcription of the original recording, which is a jazz standard.

Figure 4.16 Herbie Hancock: "Nai Nai," 3:59-4:47, (comp. Donald Byrd), from *Free Form* (1961), Blue Note. CD.

In an interview in the September 1994 issue of *Jazz* magazine, Hancock cited the deliberate rhythmic displacement of accents as an important component of his improvisations of that period.¹⁷⁰ This preoccupation with rhythm may very well have stemmed from the close-knit nature of the Davis rhythm section during this time period. Hancock noted, "We were sort of walking a tightrope with the kind of experimentation we were doing in music, not total experimentation, but we used to call it 'controlled freedom'."¹⁷¹

Hancock's use of these "drum like" gestures continued to develop and even intensify after leaving Davis. "Triste" (figure 4.17) from a 1994 recording with saxophonist Joe Henderson, offers an example of gestures more akin to syncopated sticking patterns than to the melodicism typically associated with singers and horn players. Measures 1 and 2 of the excerpt mimic a typical single stroke interpretation of RLR LRL triplets such as presented in Stone's drum manual (1935:8). Measures 3 to 7 feature double stroke triplets divided into groups of fours, similar to the aforementioned Tatum example but in this instance split up between two hands. As drummer John Riley points out, this technique is used extensively by drummers Tony Williams and Bob Moses.¹⁷² Hancock's improvisations elsewhere on this recording also provide numerous other examples of sticking patterns.

¹⁷⁰ de Wilde (1994:19)

¹⁷¹ Berliner (1994:341)

¹⁷² Riley (1997:47)

The musical score for Herbie Hancock's "Triste" is presented in four systems. Each system consists of a grand staff (treble and bass clef) and a separate line for the piano part. The piano part is written in a simplified notation using 'R' for right hand and 'L' for left hand, with a diamond symbol indicating a specific rhythmic pattern.

System 1:

R L R L R L R L R L R L R L R L R L R L R L

System 2:

R R L L R R L L R R L L R R L L R R L L R R L L

System 3:

R R L L R R L L R R L L R R L L R R L L R R L L

System 4:

R R L L R R L L R R

Figure 4.17 Herbie Hancock: "Triste," 3:35-3:44, (comp. Antonio Carlos Jobim), from *Double Rainbow - The Music of Antonio Carlos Jobim* (1994), Verve. CD.

1.7 Chick Corea

Having actively played drums from a young age, the artistry of pianist Armando Anthony "Chick" Corea (b. 1941) presents an important window on piano/drum connections. Like Tyner and Hancock, Corea's early playing style reflects a melody-driven hard-bop style modeled in this case on the horn-like approach of one of his early mentors, Bud Powell. Corea soon turned to his background in drumming for more inspiration, "I made a lot of headway technically and musically with my piano playing when I realized that I could regard the piano as a terrific percussion instrument."¹⁷³

After residencies in the groups of Mongo Santamaria, Willie Bobo, and Blue Mitchell, Corea was asked to join the group of Miles Davis in 1968. By this time Corea had already begun to record under his own name and to establish himself as an important figure in the pantheon of jazz piano. "Fragments" from his classic album of 1968, *Now He Sings, Now He Sobs*, is a smorgasbord of percussive effects both inside the piano and out.¹⁷⁴ Corea and Hancock joined forces for a 1978 two piano concert tour, the recording of which provides a veritable compendium of drumming techniques applied to the piano.¹⁷⁵

Evidence of sticking patterns can be found in many of Corea's performances, for instance the LLR triplets used in his interpretation of "I Didn't Know What Time It Was" (figure

¹⁷³ Mark Sabattini, "Chick Corea" (Sept 7, 2004) from allaboutjazz.com (accessed Jan 21, 2011 from <http://www.allaboutjazz.com/php/article.php?id=14563>). Sabattini quotes from an undisclosed issue of *Music Teacher* magazine.

¹⁷⁴ *Now He Sings, Now He Sobs* (1968), Blue Note.

¹⁷⁵ *An Evening with Chick Corea and Herbie Hancock* (1978), Polydor.

4.18). As part of his performance of "Lush Life" (figure 4.9), he uses a RRL triplet figure.

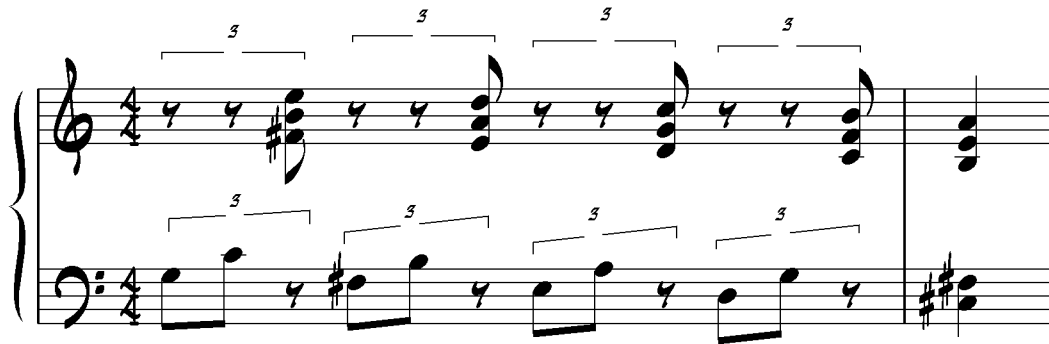


Figure 4.18 Chick Corea: "I Didn't Know What Time It Was," 0:40-0:42, (comp. Richard Rogers and Lorenz Hart), from *Expressions* (1994), GRP. CD.



Figure 4.19 Chick Corea: "Lush Life," 2:53-2:54, (comp. Billy Strayhorn), from *Expressions* (1994), GRP. CD.

1.8 Complementation

A technique known as "complementation" is widely used by drummers in jazz.¹⁷⁶ A typical expression of this practice finds a drummer playing a skeletal rhythm such as the standard ride cymbal pattern with one limb and "filling in" the rests or "negative space"

¹⁷⁶ See Brownell (2002:91)

with the other (see Blackley 2004:29). The result may in fact yield a succession of eighth note triplets but the aural experience is that of two rhythms, one fitting the other perfectly "like a glove" (figure 4.21).

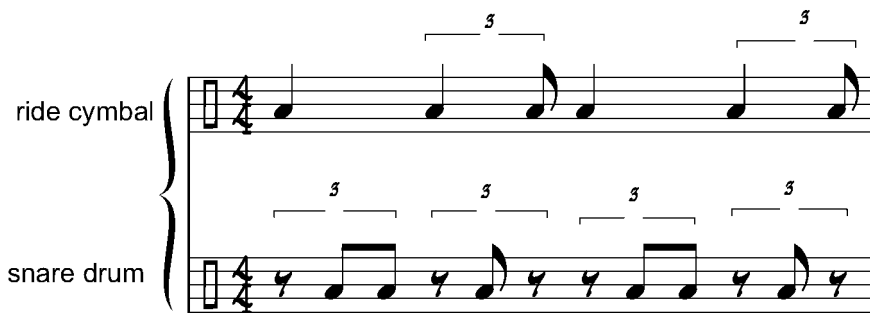


Figure 4.21 ride cymbal pattern with filled notes

This type of texture in which a cyclical timeline is complemented by filled notes can be heard in some of the alternating hand tapestries used by Keith Jarrett. Figure 4.22 is an excerpt of Jarrett's handling of an introduction for Jerome Kern's "The Song is You." He plays a *tresillo* type bass line and fills in most of the empty space with his right hand.



Figure 4.22 Keith Jarrett: "The Song is You," 0:20-0:24, (comp. Jerome Kern and Oscar Hammerstein II), from *Still Live* (1986), ECM. CD.

1.9 Keith Jarrett

Keith Jarrett (b. 1945) began his study of the piano at the very young age of three and by the age of seven was performing his own compositions in public. While still in his teens, he was playing gigs on piano and drums. His first major jazz engagement was with Art Blakey's Jazz Messengers, with whom he recorded the 1966 LP *Buttercorn Lady*.¹⁷⁷

Jarrett began his association with drummer Jack DeJohnette later that same year in what remains one of the longest and most fruitful pianist/drummer associations in jazz. From 1966 to 1969, both were members of saxophonist Charles Lloyd's group in which Jarrett occasionally played hand held percussion instruments in addition to the piano. His use of percussion instruments continued from that point on and is evident on numerous recordings throughout his career.¹⁷⁸

It is abundantly clear to me that through their use of the aforementioned rhythmic devices, all of the artists presented in this chapter channeled drumming in significant ways. While each developed his own unique voice at the piano, collectively they made extensive use of drumming-like rhythmic counterpoint and complexity, sticking patterns, and complementation.

¹⁷⁷ *Buttercorn Lady* (1966), EmArcy.

¹⁷⁸ Listen to *Spirits* (1986), ECM.

Chapter V ~ Interviews

1.1 Introduction

The following observations about piano/drumming parallels were gleaned from interviews with ten professional jazz pianists. All the interviewees are highly accomplished musicians who have made important creative contributions both in Canada and internationally. Beyond their extensive backgrounds in piano performance, each participant also has at least some experience playing drums and/or percussion. Most admitted that they had not previously given the central thesis question a great deal of formal consideration (i.e. are there aspects of jazz piano performance practice and its antecedents that are related to drumming in some way?). Nevertheless, seven out of ten referred to the piano at some point during our conversations as a "percussion" instrument and all agreed that significant connections exist between piano and drumming performance practices in jazz.

Interestingly, many of the interviewee's comments seemed to stem just as much from their experiences as teachers as performers. Remarks such as "I think my students would benefit from listening to drummers more carefully" or simply "everyone should play drums" revealed a general inclination towards pedagogy that emphasizes the study of rhythm and percussiveness, if not the physical practice of drumming. A general consensus emerged that all jazz musicians should strive for fluency in what interviewees referred to variously as the "language, dialect, and/or grammar" of jazz drumming.

The results of the interviews are broken down into two main parts. First, the musicians are given a brief introduction providing some context for their experience with drumming. Subsequently, summations of their responses to questions surrounding five main subject areas are grouped thematically. The main topics of discussion are:

1. Technique
2. Groove creation
3. Transference of specific drum patterns/composites to the keyboard
4. Notable examples of percussive/rhythmic pianists
5. Notable examples of pianist-drummer combinations in ensemble settings

1.2 The pianists

Steve Amirault started out as a "rock and roll" drummer before learning to play the piano at the relatively late age of twelve. As a child playing drums, he was told that he had a "good beat," a characterization many would concur has carried over to his artistry at the piano in adulthood. His interest in drums and drumming has remained strong throughout his career, so much so that for a time he even considered devoting himself full-time to the drum set. A noted composer, when writing new music he often walks around his home with a pair of drumsticks in his hands, beating out rhythms. While he does not officially play the drums professionally, he receives regular invitations to "sit in" on drums at informal jam sessions.

Pianist David Braid studied drums for four years during a particularly formative period of his training in jazz performance. Having grown up playing primarily classical music, he

believes that drumming provided him with an important means for accessing an area of rhythmic conception that was essentially absent from his early training. He was particularly interested in Jim Blackley's methodology, mentoring with the renowned drum teacher for a period of time. For his part, Braid cites drumming as a means of studying rhythm in isolation from harmony, rather than as a creative outlet. Accordingly, he thinks of the drums as "a tool to uncover a deeper fundamental of jazz music."

Bill Brennan played both piano and percussion from a young age, eventually choosing to study percussion full time at the post-secondary level. Since that time he has enjoyed a successful professional career divided approximately equally between piano and percussion performance, with composition as an important ancillary interest. As a pianist, he has performed and recorded in a wide variety of solo and ensemble settings encompassing modern and mainstream jazz, folk, and "world" music. His experiences as a freelance percussionist range from traditional orchestral work to extensive participation in contemporary music ensembles. Brennan notes he's "always enjoyed the variety" of the eclectic mix that characterizes his professional career.

Brian Dickinson plays the drums as a means for expanding his overall musicianship, keeping a drum kit set up in his home for practice. One of the few interviewees to mention a drums-to-piano influence, he notes how playing eighth note "lines" at the piano has impacted his abilities to play melodically at the drums, as in the context of a drum solo. He also draws a comparison between the independence required to play the drums and his experience playing the pipe organ (with its pedal board demands). Like several of

the other interviewees, he underlines how he has made special efforts over the course of his career to "always listen very carefully to drummers" and how this practice has resulted in a strong connection with drummers in performance.

Pianist Hilario Durán moved to Canada from Cuba in 1998. Like the overwhelming majority of musicians from his home country, Durán is very familiar with percussion instruments and their significance to groove-based music. He is emphatic when declaring that in order to play Afro-Cuban music, one must have a basic knowledge of the rhythmic patterns played on percussion instruments such as the *claves*, *congas*, *güiro*, and *timbales*, etc. His background in both Cuban music and mainstream jazz privileges him with a unique perspective on piano and drum parallels in jazz.

While Phil Dwyer is most well known as a saxophonist and pianist, he has also played the drums since the age of eleven. He modestly considers playing drums only a "hobby" but concedes that his contact with the instrument has informed the rest of his musical output in important ways. One senses that he derives immense pleasure from playing the drums. He states enthusiastically that he "enjoys nothing better than to sit down [at the drums] and play along with a really long Coltrane track," such as the iconic saxophonist's eighteen minute rendition of the title track from *Bye Bye Blackbird* (1962).¹⁷⁹ Hanging on the wall above his piano at home are pictures of jazz drummers Elvin Jones and Claude Ranger.

¹⁷⁹ *Bye Bye Blackbird* (1962), Pablo. CD.

Upon hearing a performance of pianist Dave Restivo, a drummer once declared to him insistently, "you play exclusively off the drums!" Restivo has studied drumming seriously, and plays drums on a regular basis, although not professionally. His affinity for drumming has led him to approach the piano as "an *active* member of the rhythm section," rather than as someone merely "floating on top of the groove," or superimposing musical information on the surface of what the bassist and drummer may be doing. Using a type of foot-soldier metaphor, Restivo notes how he strives to position himself "deep in the trenches" alongside his rhythm section comrades.

From a young age, Gordon Sheard's approach to the piano has been driven largely by rhythm. His contact with classical music during his formative years was minimal. His most important early experiences were with ragtime, stride, and boogie-woogie piano styles. In addition to his training as a pianist, he studied Indian drumming at the post-secondary level. He also has substantial experience playing funk and gospel music. Over the course of his career, he has developed a deep appreciation for, and commitment to, numerous styles of Brazilian popular music. His studio is full of percussion instruments, many of which he plays in the context of various percussion-based groups.

A master multi-instrumentalist, Don Thompson is equally at ease playing the piano as the double bass and vibraphone. He began playing drums in the early nineteen sixties, a pursuit that originally stemmed from personal interest and then grew to be a lifelong passion. He notes with vigor how he "thinks about drums all of the time," and can recall with great accuracy the "sound" of specific drummers. His sensitivity to the timbral

qualities of the drums allows him to hear drummer Roy Haynes' "sound" (as one example) in his head very clearly. Thompson claims to have internalized the identifying qualities of timbre specific to several other drummers as well. He describes the playing of Philly Joe Jones and Tony Williams as much in sonic as rhythmic terms.

Brad Turner's main instruments are trumpet and piano, but he also plays drums professionally on occasion. He officially started playing the drums in high school but inclinations towards drumming predate his teenage years. His mother maintains that drums were in fact his "first" instrument. Apparently as a little boy he used to set up ice cream buckets, "grab chopsticks," and play along with records. Like some of the other interviewees, he believes that playing the drums has affected his approach to playing the piano, not least because accompanying pianists from the drums has given him valuable insights into how the two instruments can effectively complement one another within a jazz setting.

1.3 Questions

Do you notice any connections between the technical aspects of playing the piano versus drums and/or percussion?

This question elicited a wide variety of responses from interviewees. At first, most conceded that they had not thought very much about specific connections, but upon further reflection, all had something to say about the topic. Four out of ten interviewees were quick to highlight independence of the limbs as an important connection. From a pedagogical perspective, Dickinson referred specifically to the practice, common to both

pianists and drummers, of isolating parts played by each limb in order to ultimately assemble all the parts into a unified whole. Restivo used the word "coordination" several times and noted how pianists and drummers are unique in terms of the "degree" of independent control over multiple limbs required in each case. He also referred to a certain "strength and flexibility" of the wrists that is integral to the playing of both instruments.

In a similar vein, Sheard used the word "looseness" when speaking of how relaxed the wrist should be when contacting a keyboard or drum to effectively draw out the "right" sound. He likened the motion of striking a hand held percussion instrument to a motion he might use at the piano. Both he and Durán also referred to commonalities between piano and conga technique. Drumheads are positioned at a ninety-degree angle to a *congero's* torso and at about the same height as a keyboard is to a pianist. Both instrumentalists use a combination of lateral and vertical motions with outstretched hands that are sometimes flat, sometimes curved. Not surprisingly, Durán referred to a general requirement for physical "strength" when talking about his approach to technique at the piano, specifically when he plays Afro-Cuban styles. He matter-of-factly described the piano as a full member of the percussion section.

The practice of foot tapping was mentioned by Amirault, whose prior training at the drums may have influenced his approach to piano performance in terms of the articulation of a strict pulse with one limb, in this case one or both feet. Dwyer singled out posture as a similarity, pointing out that both piano and drumming techniques demand

an upright stance. He credits the playing of drums with helping him to remember to keep his arms relaxed when playing other instruments. Braid cited a commonality in sound production between the piano and drums. He believes his experience striking drumheads and cymbals led him to develop a "fuller" tone at the piano. Through an association of the resonating properties of each instrument, he gained a heightened awareness of the relationship between hammer speed and its effect on the quality of tone production. For Braid, this type of thinking produces superior results to what he called the "traditional arm-weight metaphors." Brennan spoke specifically about the physical preparation of the arm leading to the striking motion on percussion instruments and related it to piano technique. In both cases, he suggested the quest to "find the right colour" in terms of sound creation originates to some degree in arm movement.

Do you notice any connections between how you approach the creation of groove, swing or forward motion at the piano versus drums and/or percussion?

Perhaps not surprisingly, all of the interviewees referred to "comping" when talking about groove creation as a practice common to both pianists and drummers. Six out of ten specifically mentioned how comping at the piano is comparable to, if not directly allied with, comping at the drums. Several, including Dickinson, commented that they listen very carefully to the placement of the drummer's snare drum accents for inspiration regarding the rhythmic placement of chords at the piano. The standard jazz ride cymbal pattern was singled out specifically by Turner, who mentioned always being conscious of how eighth note lines played by his right hand are synchronizing with a given drummer's "skip beat." Overall, the need for establishing and maintaining some form of "hook-up"

with the drummer during ensemble performances was either cited overtly, or at least implied, by all of the interviewees.

Amirault mused that for him, a natural disposition towards groove creation at the piano may in fact be tied to his earlier experiences as a drummer, "as a drummer you learn early on that people are relying on you for the beat." Brennan credits both his training as a percussionist and his interest in drum-dominant musics as important contributors to his awareness of rhythm at the piano. He freely admitted, "a lot of the phrasing I create at the piano is more informed by rhythm than by melody."

Dwyer admires drummers such as Steve Gadd for their frequent and highly disciplined use of restraint and simplicity. He credits them for having informed his own approach to groove creation at the piano. To achieve what Dwyer calls a "light lift" to the groove often requires a certain economy of notes at the piano. Braid pointed out particular ways in which drummers *articulate* rhythms idiomatic to jazz as having had a strong influence on his approach to creating groove at the piano. For example, he cited jazz drummer Jim Blackley's system of accentuation as an excellent guide for the creation of forward motion, not only for drummers but also for all instrumentalists in jazz.¹⁸⁰

¹⁸⁰ Blackley notes "Irrespective of the metronomic perfection of the time and rhythm, it is the subtlety of articulation which brings forth [jazz's] proper motion and poetic quality...if each note within that phrase is not nourished with its special degree of light and shade, then the phrase will not dance its special dance." (2004:13-14)
Pianist Toshiko Akiyoshi also mused about her early training, "drummers showed me the accents of [jazz] rhythmic style." (Lyons 1983:252)

Making little distinction between the piano and percussion, Durán noted how in Afro-Cuban music, ALL of the ensemble parts play fundamental roles in contributing to a consummately democratized groove. He referred to movement as a critical component of Afro-Cuban music and cited historical connections with pre-twentieth century dance styles such as the contradanza and danzón as well as flamenco music and the obvious influences of West African drumming. Sheard made similar observations about the history of many Brazilian styles and their fundamental connections with dance. He noted that in Brazil there are a wide variety of drum patterns common to both percussionists and pianists that embody groove through repeated cyclical timelines.

Adding emphasis to up-beats is a large part of what creates forward motion in Restivo's mind, something that he considers is a preoccupation common to both pianists and drummers. Speaking of roles within the rhythm section, he noted that most often the bass player can be considered the engine, or keeper, of the underlying pulse. The drummer may also be part of the engine but, like the pianist, is also contributing to the upbeats that are largely responsible for forward motion. In a particularly reflective moment, Restivo likened the bassist's walking bass line to a nucleus around which the drummer and pianist's upbeats are like "spinning electrons."

Are their specific rhythms, rhythmic techniques, or rhythmic composites that you play at the piano that you believe may derive from drumming in some way?

Six out of ten interviewees referred to drum rudiments when asked this question. Joking about his long time friend and colleague, Dwyer said he suffers from the "Thompson

affliction of knee drumming." Apparently when either musician sits down, he will often start tapping out rudimental rhythms. Braid's understanding of drum rudiments led to what he described as a "binary" approach to rhythmic improvisation. He spoke about combinations of right and left hand strokes as "the simplest method to create counterpoint."

Amirault, Brennan, and Restivo all talked about consciously applying drum rudiments such as paradiddles to the piano keyboard. Using related terminology, Dickinson spoke of "breaking up certain rhythms" between two hands as a practice associated with drumming. As a basis for layering rhythms, he suggested that a left hand ostinato figure played at the piano could be compared to the practice common to drummers of relegating one limb to the playing of a static rhythm. A pianist may improvise melodies with the right hand against a left hand ostinato pattern. Similarly, a drummer may improvise non-regular rhythms against a previously established static rhythm part.

Durán demonstrated the transference of drum rhythms to the piano quite literally when he sat down to play various Cuban *montunos*. Everything about his approach to the playing of these highly rhythmic, cyclical patterns epitomized percussive playing at the piano. Sheard was equally convincing when interpreting traditional Brazilian styles such as *Choro* and *Samba* at the piano. After playing a short excerpt of one rhythm at the piano, he would pick up a *tamborim* (a small tambourine-like instrument) and play the same rhythm, as if to underscore commonalities in rhythmic vocabulary. He notes how many Brazilian piano styles are highly informed by the "partido-alto" rhythm, which has its

origins in the Congo-Angola region of Africa. On a personal level, he talked at length about his experiences consciously applying percussion parts to the piano, especially drawing on drum-based Brazilian styles that historically are not normally associated with the piano.

Like Sheard, Braid has also spent time actively experimenting with the transference of drumming sourced rhythms to the piano. For a recent arrangement of Jerome Kern's "The Way You Look Tonight," Braid consciously applied the composite parts of a pre-existing drum groove to the whole range of the piano. The low end of the piano was assigned to the bass drum part, the snare drum to the mid-range, the cymbals to the higher range, and so on. Even the architecture for the improvised parts of the arrangement was based on a sequence of patterns first conceived for the drums.

Who are some jazz pianists you consider to be particular percussive or rhythmic?

Most interviewees recognized this as a two-part question, making an understandable distinction between the words "percussive" and "rhythmic." Percussiveness was most often associated with the physical aspects of technique in terms of a strong attack and a "hard" or "bright" sound. By contrast, the word "rhythmic" was used more often to describe pianists whose playing either was characterized by an exceptional amount of forward motion, or was deemed to be rhythmically "complex" or sophisticated, or all of these qualities. Some pianists were singled out as capable of being percussive or rhythmic or, depending on the context, both at the same time.

Not surprisingly, seven out of ten interviewees put McCoy Tyner at or near the top of the list of percussive pianists. Chick Corea and Herbie Hancock were cited by almost everyone, however more than a few put them in the cross-over camp of always being very rhythmic but only sometimes being very percussive. Thelonious Monk was cited by several for his quirky percussiveness while Oscar Peterson seemed to be mentioned most often in the "hard swinging" category. Keith Jarrett was singled out by more than half of those interviewed. In fact, several interviewees thought he was perhaps *the* most rhythmically advanced pianist in jazz they could think of, although his touch was never described as percussive. Three interviewees mentioned Brad Mehldau, making special mention of his advanced abilities with layering contrapuntal parts.

Durán was very quick to name Errol Garner as a percussive/rhythmic pianist whose use of syncopation, in his opinion, has parallels in Cuban music. Dwyer also named Garner as well as Teddy Wilson, Nat King Cole, and Ahmad Jamal for their respective approaches to rhythmic sophistication, and Horace Silver for his percussiveness. Among more current pianists, Dwyer mentioned Geoff Keezer and Renee Rosness for the clarity and precision that characterizes their respective approaches to the articulation of rhythm. Brennan singled out the solo work of John Taylor for the ingenious way the pianist alternates between placing an emphasis on rhythm versus melody. Brennan also mentioned Brazilian pianist Egberto Gismonti for his contributions that fall under the jazz umbrella. Cecil Taylor was at the top of Braid's list of percussive pianists, with Bobby Timmons being mentioned shortly after. By way of contrast, Braid cited Duke Ellington and Bud Powell as being more percussive than, for instance, Oscar Peterson or Art

Tatum. Wynton Kelly was cited by Brennan, who articulated a viewpoint few jazz pianists would dispute, "Kelly swings with the best of them."

Amirault cited Panamanian Danilo Perez as a good example of a percussive player among the Pan-American camp.¹⁸¹ He also related a story of witnessing Herbie Hancock play at the Blue Note jazz club in New York City once that made a deep impression upon him. He noted how at one point, Hancock seemed to be employing an almost purely rhythmic approach to the piano keyboard. With seemingly little regard for the melodic or harmonic implications of the notes being struck, a perfectly crafted drum solo was unfolding beneath Hancock's hands. Amirault characterized it as a form of brilliant "dog-paddling" at the keyboard. He also noted how this type of rhythm-first approach is evident on numerous of Hancock's recordings.¹⁸²

A contemporary of Hancock's, Cedar Walton was cited by Thompson as a percussive player who, at times, seems to push the piano to its physical limits. Both Thompson and Dickinson mentioned the late Canadian pianist/organist Doug Riley for the muscularity he brought to the keyboard: "Strong as an ox," mused Thompson. Dickinson also mentioned Kenny Kirkland, noting a stylistic lineage to Herbie Hancock. Sheard spoke about blues and gospel-oriented players Ray Bryant and Gene Harris. He also referenced numerous players from the stride school of playing such as Lucky Roberts, Fats Waller, and Willie "the Lion" Smith.

¹⁸¹ Perez referred to the piano as a percussion instrument during a workshop at Toronto's Royal Conservatory of Music on Feb 12, 2011. He also spoke about his early musical training, noting how he learned to play bongo rhythms before he could talk.

¹⁸² Listen to, for instance, *Inventions & Dimensions* (1963), Blue Note. CD.

Can you name some pianist/drummer combinations in jazz that have achieved what you would consider to be outstanding communication?

Many of the interviewees suggested it was difficult to single out specific rhythm sections given the rich history of ensemble playing in jazz. Nevertheless, certain consensuses emerged. As expected, Herbie Hancock/Tony Williams and McCoy Tyner/Elvin Jones topped the list, their celebrated associations in the fertile nineteen sixties having clearly captured the imaginations of almost every interviewee. Hancock was also lauded for his work with several other drummers including Mickey Roker on *Speak like a child*, Joe Chambers on *Etcetera*, and Elvin Jones on *Speak No Evil*.¹⁸³

Noted combinations from the 1950s often included drummer Philly Joe Jones who, in the mind of Dwyer, "sounded great with anyone." Jones was mentioned by several other interviewees for his work with pianists Red Garland, Bill Evans, and Wynton Kelly. Dwyer also mentioned Ahmad Jamal/Vernel Fournier and Wynton Kelly/Jimmie Cobb as obvious examples from the 1950s as well as the more recent collaborations of Kenny Barron/Ben Riley, a hook-up he described as "silky, [like] something you want to put on." Restivo noted under-recorded pianist Herbie Nichols' work with Max Roach from the 1950's. Turner cited the pairing of Thelonious Monk/Ben Riley, especially from *Live at the It Club*¹⁸⁴ while Restivo singled out Monk's playing with Art Blakey.

¹⁸³ *Speak Like a Child* (1968), Blue Note; *Etcetera* (1965), Blue Note; *Speak No Evil* (1964), Blue Note. CDs.

¹⁸⁴ *Live at the It Club* (1964), Columbia/Legacy. CD.

Chick Corea was cited numerous times: by Turner and Restivo for his pairing with Roy Haynes; Restivo, Brennan, and Sheard for his pairing with Steve Gadd; and Durán for his pairing with Brazilian drummer Airto Moreira. Keith Jarrett's long association with Jack DeJohnette was heralded by Dickinson, Brennan, and Turner while Braid and Thompson cited the pianist's collaborations with Paul Motian. Both Turner and Dickinson championed the under-recognized combination of Swedish pianist Bobo Stenson and Norwegian drummer Jon Christensen, two musicians whose collaborations are documented on the ECM record label going back to the early 1970s. Both Dickinson and Brennan noted the subtle rapport between John Taylor and Peter Erskine from the latter's trio recordings on the same label.

Restivo cited a recent recording by guitarist Kurt Rosenwinkle. Rosenwinkle's 2008 CD *The Remedy: Live at the Village Vanguard*¹⁸⁵ features what Restivo notes is an outstanding hook-up between pianist Aaron Goldberg and drummer Eric Harland. Restivo observes that "a lot of the momentum of the music is coming from that [piano/drums] specific relationship," further noting that some of Harland's best moments seem to occur during Goldberg's solos. Finally, Brennan mentioned pianist Marcus Roberts' association with drummer Jeff "Tain" Watts, especially on trumpeter Wynton Marsalis' recording *Live at Blues Alley*.¹⁸⁶

¹⁸⁵ *The Remedy: Live at the Village Vanguard* (2008), ArtistShare. CD.

¹⁸⁶ *Live at Blues Alley* (1988), Columbia. CD.

Chapter VI ~ Summary and Conclusions

1.1 Eighty-eight Drums

Compared with other instruments, the piano epitomizes the most complete equilibrium of melody, harmony, and rhythm within western music. This dissertation has emphasized the percussive aspects of the piano for the purpose of illustrating its connections with drumming. Another study could just as easily assert that the piano's potential for lyricism ties it strongly to singing, without taking anything away from the arguments presented here. As a result of their widespread use by "classical" composers, keyboard instruments (including the piano) have long been closely tied to major developments in western harmony. In light of this versatility, it is not surprising that the piano's exact "status" should be difficult to pin down.

The specific ways in which melody, harmony, and rhythm may be expressed through the piano are governed by a multitude of historical, social, and cultural factors. The original inventors, developers and primary "users" of the piano were concentrated in a European art music tradition that included relatively little in the way of drumming practices. This began to change in the mid-nineteenth century when certain composers, Gottschalk for example, borrowed significantly from West African drumming traditions, many of which were reborn under the umbrella of "Latin" music in New Orleans, the Caribbean, and South America. During the early years of the twentieth century, innovative composers such as Bartók, Stravinsky, Prokofiev, and Ives sought to expand on the traditional

preeminence of harmony by infusing their works, especially those for piano, with percussive elements sourced from drum-dominant musical traditions.

Slaves who were brought to the "new world" and their descendents maintained and adapted the drum-centric musical traditions of their ancestors, contributing directly to the creation of integrated music/dance traditions throughout the Americas. It is this last piece of the puzzle that has been most historically significant to the development of jazz. In the previous chapters, I have discussed specific parallels between drumming and pianism in jazz mainly from three interrelated perspectives: historical, technical, and conceptual.

1.2 Historical

Jazz is first and foremost a product of the African American experience. That jazz is embraced and practiced internationally should not obscure the origins of what Amiri Baraka (aka LeRoi Jones) regards as a distinct form of "Black Music."¹⁸⁷ We know that West African drumming traditions traveled to the Americas during centuries of slave trading. The impact of these traditions is still being felt in a number of ways, not the least of which is a "rhythm-first" approach to performance practices in jazz. The expression of rhythm in West African music is inextricably linked with drumming, as it is in jazz. To a significant extent, the jazz pianist must channel drumming to produce jazz rhythm.

¹⁸⁷ *Black Music*, Amiri Baraka (1967:13)

The transference of Africa-derived drumming practices to the piano began as early as the mid-nineteenth century in part through the banjo as an intermediary. Syncopated plucking techniques appear to have been adapted to the piano and expanded by early players of what was later to become known as ragtime. In addition to numerous African legacies, ragtime and the early styles of New Orleans jazz that followed were also strongly tied to European art and folk music traditions. To the present day, western concepts of "divisive" meter remain integral to jazz rhythm, although its timelines and rhythmic layering are generally recognized as Africa-derived.

The *habanera* rhythm originated in European dance music and played an important part in the development of styles such as the *tango*, contributing to the "Spanish Tinge" found in ragtime and jazz. Other notable legacies impacting jazz rhythm include Europe's marches, jigs, polkas, waltzes, and quadrilles. Military drumming in particular had a significant influence, not only on early brass bands and New Orleans jazz, but also on the rudimental snare drumming techniques employed extensively by jazz drummers to the present day.

Repetitive rhythm "cells" such as *clave* patterns permeate jazz and represent an important link not only with the drumming traditions of West Africa but also with those of the Caribbean and South America. The Cuban *son* and Brazilian *bossa nova* (as two examples) have impacted jazz in significant ways, not least through various timelines (such as *montunos*) adopted by pianists in jazz. Increasing globalization has also led to

the influence of various types of international drumming on an ever-expanding jazz tradition.

1.3 Technical

One of the defining aspects of percussion instruments is that they are played by shaking or striking. Drums are struck by sticks, brushes, mallets, or hands. Piano keys are struck by fingers, which trigger hammers, which in turn strike strings. Both drummers and pianists use percussive action to produce sound, partly through the rebound (or bounce) they elicit from their respective instruments. By contrast, wind and bowed instruments typically excite a column of air through airflow or bow movement.

Pianists and drummers also share a capacity for creating multiple "independent" layers. An equivalency of motions performed by arms and hands results in equilibrium between parts, greatly influencing musical results. The technique of "leading" with one limb or the other is also evident both in piano and drumming performance practices, as is the engagement of both hands *and* feet. In many ways, it is the similarities in the physical characteristics of each instrument that accounts for the congruities in patterned movements used to generate sound.

1.4 Conceptual

Not only are there numerous technical similarities linking pianists and drummers, the *intents* of their respective gestures are also strongly related. Pianists inherited from drummers a commitment to the creation of music inextricably tied to movement and

dance. Their overlapping technical *modus operandi* effectively play out in the form of dance gestures, always emphasizing the engagement of the entire body. Nowhere is this more evident than in their shared capacities for groove creation.

The drummer's normative role of timekeeper is often shared and/or assumed by pianists. Aspirations for forward motion are ever-present among both instrumentalists, enabled by their mutual capacities for the creation of multi-part rhythm matrixes. Both create variable cycles of rhythmic events known as ostinato vamps, grooves, or timelines that often rely on the emphasis, overt or implied, of some form of "backbeat." Drummer-inspired grooves are especially evident in duo and solo performances where the pianist must provide all the constituent parts normally supplied by drummers and bassists.

The expression of "swing" in jazz presents several more links between pianists and drummers. Drummers are able to render both the time-keeping aspects *and* the off-beat accentuation essential to swing, just as pianists can. Interestingly, numerous jazz pianists have turned to the accentuation schemes used by drummers for inspiration guiding their own approaches to melodic phrasing. Drummers also employ "set-ups" and "fills" much like a pianist might during the "turn-around" section of a standard song. The imposition, conscious or otherwise, of so-called "participatory discrepancies" within their own parts during performance is another commonality.

Pianists and drummers share important roles within the rhythm section, each supporting soloists with non-regular "comping" figures. They also communicate with each other through various forms of call and response, a practice that generally enhances what is

known as the "hook-up" between them. Over time, the synergies between pianists and drummers increased as their respective vocabularies intersected and overlapped in more and more pronounced ways.

1.5 Evidence

While the timbral qualities of the piano are quite distinct from those of the drum set, there is much in common between the two instruments regarding the direct application of rhythmic patterning. Pianists and drummers share an inherent capacity for the creation of rhythmic counterpoint. Drummers routinely use all four limbs, each playing a different part of the drum kit. Pianists almost always play at least two distinct parts, one with each hand. At times the fingers of a single hand may be tasked with playing independent parts. Often times, drummers and pianists will "keep time" with one limb, while playing contrasting materials with the other(s). Each musician is capable of generating self-supporting composites, making them especially well disposed to solo performance.

Ragtime features march-like bass figures set against syncopated melodies, just as early jazz drumming features a steady rhythm on wood blocks or bass drum set against elaboration on another part of the drum kit. The complexity of rhythm in jazz increased through the 1920's and 1930's as evidenced in the playing of stride pianists and their drummer counterparts. With the bebop revolution came an expansion in the rhythmic vocabulary used by drummers and pianists. Drummers especially blazed a trail of increasingly complex cross rhythms that were subsequently adopted by pianists.

The use of drumming-like rudimental sticking patterns by pianists increased significantly in the 1960's, notably in the playing of McCoy Tyner, Chick Corea, and Herbie Hancock, among others. Since that time, the use of alternating hand patterns among pianists has become commonplace. The use of rhythmic complementation at the piano, a drumming-like practice used by Keith Jarrett among others, also seems to have increased in application.

1.6 Jazz Pedagogy

If rhythm and drumming are effectively inseparable in jazz, then it seems logical that attendant teaching and learning strategies should reflect that orientation. However, as numerous jazz performers and pedagogues (including some of this study's interviewees) have noted, rhythm and drumming are frequently given insufficient emphasis in those settings where jazz is currently most often taught and learned - secondary schools, colleges, and universities. Despite commonly held beliefs that to play jazz one needs to "think like," "play like," or literally "be" drummers, the study of melody and harmony is still emphasized over and above rhythm and drum training. I believe that the evidence presented in this study adds weight to one of my earlier assertions, i.e. that rhythmic acuity in jazz among non-drummers results from an intimate understanding of jazz rhythm that is acquired, at least in part, *via* an understanding of jazz drumming practices. One suggestion for further research is an exploration of the reasons (musical, cultural, political, or otherwise) for the apparent lack of attention given to rhythm and drumming in many institutionalized jazz curriculums.

1.7 Coda

All of the preceding discussions lead me to conclude that, within the context of jazz, there are strong relationships between the performance practices of pianists and drummers. Jazz is fundamentally a rhythm-driven percussive music. Although this fact is widely accepted, the specific connections between the performance practices of jazz's most percussive practitioners, drummers, and those of other instrumentalists are often overlooked. While rhythm is discussed in general terms in the literature on jazz with some degree of frequency, its expression through drumming, and in drum-centric ways by other instruments, deserves more investigation. The research findings in the previous chapters seek to make a contribution to this largely unexplored territory.

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Appendix A

Musical examples

Groove creation, rhythmic layering. Correlates with chapter 3.



Richie Beirach: "On Green Dolphin Street," 0:00-0:10, (comp. Bronislaw Kaper and Ned Washington), from *Richie Beirach at Maybeck* (1992), Concord.



Jim McNeely: "Rain's Dance," 0:55-0:60, from *Rain's Dance* (1997), SteepleChase.

The musical score is written for piano in 4/4 time. It consists of five systems, each with a grand staff (treble and bass clef). The key signature is one flat (B-flat). The melody is primarily in the right hand, featuring eighth and quarter notes with various rests and ties. The left hand provides a harmonic accompaniment with chords and moving lines. The piece concludes with a final cadence in the fifth system.

Fred Hersch: "Surrey With the Fringe On Top," 1:47-1:57, (comp. Richard Rogers and Oscar Hammerstein II), from *Fred Hersch Plays Rogers and Hammerstein* (1996), Nonesuch.



Gonzalo Rubalcaba: "Prologo Comienzo," 0:27-0:35, from *Discovery* (1991), Blue Note.

Two systems of musical notation for piano. The first system consists of two staves (treble and bass clef) with a key signature of one flat and a 4/4 time signature. The second system also consists of two staves with the same key signature and time signature. The music features a mix of eighth and sixteenth notes, with some rests and dynamic markings. Above the first system, the ratios 5:3, 4:3, 5:3, and 4:3 are written. Above the second system, the ratios 4:3, 5:3, and 5:3 are written.

Phineas Newborn Jr.: "This Here," 2:17-2:22, rec. 1962, (comp. Bobby Timmons), from *The Great Jazz Piano of Phineas Newborn Jr.* (1963), Contemporary.

Appendix B

Musical examples

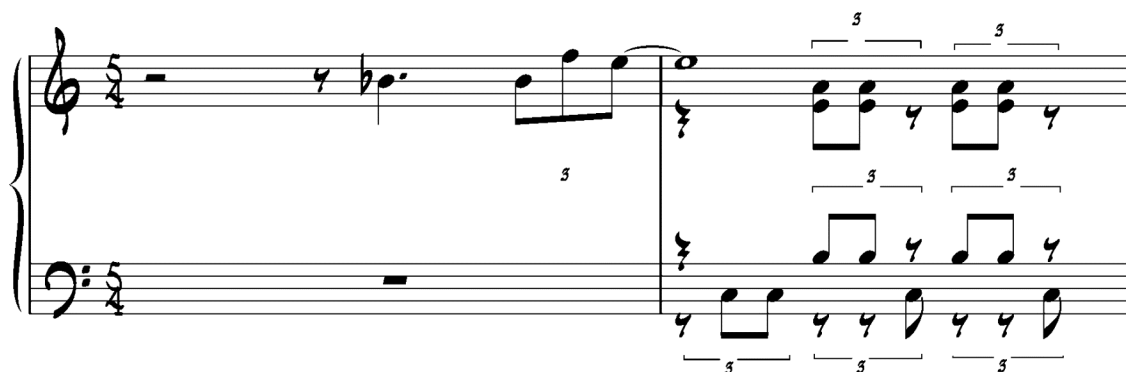
Sticking patterns, complementation. Correlates with chapter 4.



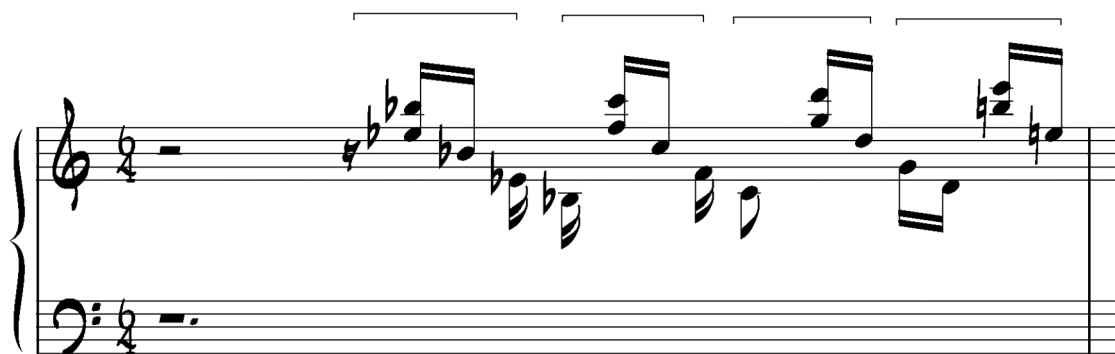
Ahmad Jamal: "I wish I knew," 2:37-2:41, (comp. Mack Gordon and Harry Warren), from *Ahmad's Blues* (1958), Chess.



John Taylor: "Clapperclowe," 0:13-0:21, from *You Never Know* (1992), ECM.



Brad Mehldau: "Anything Goes," 4:51-4:53, (comp. Cole Porter), from *Anything Goes* (2004) Warner Bros.



Danilo Perez: "Trocando em miúdos," 4:08-4:10, from *Til Then* (2003), Verve.



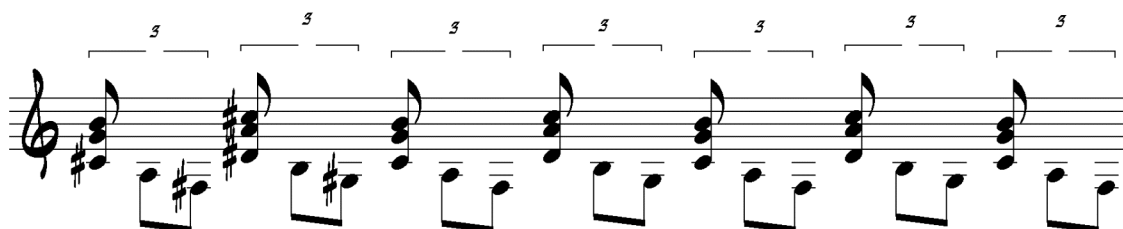
Larry Willis: "Eighty-One," 12:36-12:38, (comp. Ron Carter), from *Obatala* (1989), Enja.



Adam Benjamin: "Lonnie's Lament," 4:42-4:44, (comp. John Coltrane) from *Simple Song* (2009), Sunnyside.



Bill Carruthers: "Taking A Chance On Love," 1:19-1:20, (comp. Vernon Duke, John Latouche, and Ted Fetter), from *Duets with Bill Stewart* (1999), Birdology.



Geoff Keezer: "Stomping at the Savoy," 1:14-1:16, (comp. Edgar Sampson), from *Wildcrafted - Live at the Dakota* (2005), Maxjazz.