A Jazz Pianist’S Guide to Utilizing Basic Jazz Drumset Techniques to Gain Rhythmic Independence

Kom Wongsawat
University of Miami, komjazz@gmail.com

Follow this and additional works at: https://scholarlyrepository.miami.edu/oa_dissertations

Recommended Citation
https://scholarlyrepository.miami.edu/oa_dissertations/2008
A JAZZ PIANIST’S GUIDE TO UTILIZING BASIC JAZZ DRUMSET TECHNIQUES TO GAIN RHYTHMIC INDEPENDENCE

By
Kom Wongsawat

A DOCTORAL ESSAY

Submitted to the Faculty of the University of Miami in partial fulfillment of the requirements for the degree of Doctor of Musical Arts

Coral Gables, Florida
December 2017
UNIVERSITY OF MIAMI

A doctoral essay submitted in partial fulfillment of
the requirements for the degree of
Doctor of Musical Arts

A JAZZ PIANIST’S GUIDE TO UTILIZING BASIC JAZZ DRUMSET TECHNIQUES
TO GAIN RHYTHMIC INDEPENDENCE

Kom Wongsawat

Approved:

John Daversa, D.M.A.                                      Martin Bryce Bejerano, M.M.
Associate Professor of Music,                             Associate Professor of Jazz
Chair of Studio Music and Jazz                            Piano

Stephen P. Rucker, M.M.                                   Guillermo Prado, Ph.D.
Lecturer, Director of Drumset Studies                     Dean of the Graduate School

Svetoslav R. Stoyanov, M.M.
Associate Professor and Program Director,
Percussion
A Jazz Pianist’s Guide to Utilizing Basic Jazz Drumset Technique to Gain Rhythmic Independence

Abstract of a doctoral essay at the University of Miami.

Doctoral essay supervised by Associate Professor Martin Bryce Bejerano. No. of pages in text. (71)

Piano and drumset both play important roles in jazz music. The main similarities between these instruments are that they are both classified as percussion instruments. The purpose of this study is to investigate how typical technical approaches on the drumset can be used to help jazz pianists improve their overall rhythmic concept and understanding of complex rhythms, as well as their two hand coordination in order to facilitate their solo piano skills. This study explores several basic drums techniques, and how they can be applied to the piano to help jazz pianists gain and develop strong rhythmic independence. This approach can be very beneficial to jazz pianists who have problems with the rhythmic elements involved in solo piano performance. The various exercises in this paper can be implemented in a simple way, yet are structured in a way that creates endless possibilities for the jazz pianist to explore.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF FIGURES</td>
<td>v</td>
</tr>
<tr>
<td>CHAPTER 1 INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Statement of Purpose</td>
<td>4</td>
</tr>
<tr>
<td>Research Questions</td>
<td>5</td>
</tr>
<tr>
<td>CHAPTER 2 LITERATURE REVIEW</td>
<td>6</td>
</tr>
<tr>
<td>What are Beat and Rhythm?</td>
<td>6</td>
</tr>
<tr>
<td>Beat Perception</td>
<td>7</td>
</tr>
<tr>
<td>Pedagogical Sources</td>
<td>9</td>
</tr>
<tr>
<td>Ostinato and Splitting the Hands</td>
<td>11</td>
</tr>
<tr>
<td>CHAPTER 3 METHODOLOGY</td>
<td>13</td>
</tr>
<tr>
<td>Procedures for Answering the Research Questions</td>
<td>14</td>
</tr>
<tr>
<td>CHAPTER 4 RESULTS</td>
<td>16</td>
</tr>
<tr>
<td>What are some of the main rhythmic and coordination issues that jazz</td>
<td>16</td>
</tr>
<tr>
<td>pianists encounter when playing jazz solo piano?</td>
<td></td>
</tr>
<tr>
<td>CHAPTER 5</td>
<td></td>
</tr>
<tr>
<td>What do jazz drummers practice that could be beneficial in developing</td>
<td></td>
</tr>
<tr>
<td>rhythmic coordination, proficiency, and hand independence on the piano?</td>
<td>21</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Single Stroke</td>
<td>21</td>
</tr>
<tr>
<td>Rhythmic Alphabet</td>
<td>32</td>
</tr>
<tr>
<td>Contracting and Expanding Time within Form</td>
<td>41</td>
</tr>
<tr>
<td>Odd Grouping: Three, Five and Seven</td>
<td>49</td>
</tr>
<tr>
<td>Odd Grouping: Three</td>
<td>49</td>
</tr>
<tr>
<td>Odd Grouping: Five</td>
<td>52</td>
</tr>
<tr>
<td>Odd Grouping: Seven</td>
<td>53</td>
</tr>
</tbody>
</table>

**CHAPTER 6**

For established musicians that play both piano and drums, how does their music/playing demonstrate their rhythmic independence of the hands? ...58

**CHAPTER 7 DISCUSSION AND CONCLUSION** .................................................................65

Future Research Studies .................................................................66

Bibliography ......................................................................................................................67
LIST OF FIGURES

Figure 1. Simple Piano Solo of Footprints by Wayne Shorter ........................................ 17
Figure 2. Ostinato bass line in Bolivia by Cedar Walton ................................................ 18
Figure 3. Bossa nova bass line in Dindi by Jobim ............................................................ 18
Figure 4. Piano Montuno in Salsa .................................................................................... 19
Figure 5. Single Stroke Exercise Idea by Frank Briggs ...................................................... 22
Figure 6. Single Stroke Exercise Idea on the Piano ........................................................... 23
Figure 7. Assign Two Pitches to the RH .......................................................................... 24
Figure 8. Assign Triad Arpeggio to the RH ....................................................................... 24
Figure 9. Assign Maj 7 Arpeggio to the RH ..................................................................... 25
Figure 10. Alternating the Hands ...................................................................................... 25
Figure 11. Single Stroke Idea to Twelve-Bar Blues ........................................................... 26
Figure 12. Assign Four notes in the RH ............................................................................ 26
Figure 13. Single Stroke Idea to Twelve-Bar Blues, Alternate hands .............................. 27
Figure 14. Staying in One Rhythm for 4 Measures ............................................................ 28
Figure 15. Single Stroke Idea with Adding a Scalar Component ........................................ 29
Figure 16. Twelve-Bar Blues adding Arpeggios in the LH using Single Stroke Idea ......... 30
Figure 17. Single Stroke Idea with ..................................................................................... 31
Figure 18. Single Stroke Idea in a 3/4 composition ............................................................ 31
Figure 19. Single Stroke Idea on 5/4 composition ............................................................ 32
Figure 20. Binary Letters by Benny Greb ......................................................................... 33
Figure 21. Ternary Letters by Benny Greb ....................................................................... 34
Figure 22. Using the word "LOVE" from the Greb's System ................................................. 34
Figure 23. Create Simple Ostinato using Word "CAT" ........................................................... 35
Figure 24. Moving Pitches to F7 chord ........................................................................... 35
Figure 25. Single Stroke Idea with "CAT" Ostinato .......................................................... 35
Figure 26. Twelve-Bar Blues with "CAT" Ostinato ............................................................. 36
Figure 27. CAT Rhythm on RH in F Blues ........................................................................ 37
Figure 28. CAT Rhythm on Bolivia Ostinato .................................................................... 37
Figure 29. CAT Rhythm on Bossanova ............................................................................ 38
Figure 30. Twelve-Bar Blues with "CAT" Ostinato and Single Stroke Idea ..................... 38
Figure 31. "CATS" Blues in 5/4 ....................................................................................... 39
Figure 32. Shed by Aaron Goldberg .................................................................................. 39
Figure 33. SHED with Single Stroke Idea ........................................................................ 40
Figure 34. First, Second and Third Partial of the Quarter-Note Triplet......................... 41
Figure 35. Second Partial of Triplet in Blues form ............................................................. 42
Figure 36. Second Partial of the Triplet with Chord Comping. ........................................ 43
Figure 37. LH working as the Second Partial of the Triplet .............................................. 43
Figure 38. LH as Second Partial of the Triplet with RH Comping ................................... 44
Figure 39. Third Partial of Triplet in Blues form ............................................................... 44
Figure 40. Third Partial of the Triplet with Chord Comping ............................................ 45
Figure 41. LH working as Third Partial of the Triplet ....................................................... 45
Figure 42. LH as Third Partial of the Triplet with RH Comping ....................................... 46
Figure 43. Combination of First, Second and Third Partial of the Triplet in Blues form .................................................................................................................................. 46
Figure 44. Combination of First, Second and Third Partial of the Triplet in Blues
form with LH ................................................................. 47

Figure 45. Second and Third Partial of the Triplet in Footprints ......................... 48

Figure 46. Second and Third Partial of the Triplet in Bossanova ......................... 48

Figure 47. Odd Grouping: Three, Five and Seven in Sixteenth notes ............... 49

Figure 48. Odd Grouping: Three with Single Stroke Idea .................................... 50

Figure 49. Odd Grouping: Three with Single Stroke Idea in F7 ....................... 50

Figure 50. Odd Grouping: Three with Left Hand Ostinato in Twelve-Bar Blues .... 51

Figure 51. Odd Grouping: Five with Single Stroke Idea ...................................... 52

Figure 52. Odd Grouping: Five with Single Stroke Idea in F7 .......................... 52

Figure 53. Odd Grouping: Five Left Hand Ostinato in Twelve-Bar Blues .......... 53

Figure 54. Odd Grouping: Seven with Single Stroke Idea .................................. 54

Figure 55. Odd Grouping: Seven with Single Stroke Idea in F7 ....................... 54

Figure 56. Odd Grouping: Seven Left Hand Ostinato in Twelve-Bar Blues ....... 55

Figure 57. Odd Grouping: Three, Five and Seven Combined .......................... 56

Figure 58. Chick Corea using LLR Triplets ......................................................... 58

Figure 59. Chick Corea using Ostinato in LH with Different Rhythm on RH .... 59

Figure 60. Herbie Hancock using drum like gesture in Triste .......................... 59

Figure 61. Keith using both Hands to Keep a Steady Rhythm .......................... 61

Figure 62. Keith Maintaining the Rhythm in LH while Create More Melodic and
Harmonic Structure in the RH ............................................... 61

Figure 63. Keith using Ostinato in LH and Freely Play the Melody in the RH ...... 62

Figure 64. Gonzalo using RRL in His Solo ....................................................... 63
Figure 65. Gonzalo using Single Stroke Idea in His Solo ............................................ 63
Figure 66. Gonzalo using LLR in His Solo ................................................................. 64
CHAPTER 1

INTRODUCTION

The piano is a multipurpose instrument that plays an important role in jazz music.¹ Possessing a wide range of textures, timbres and dynamics, it can elicit a percussive sound.² The drumset is also one of the strong foundations of the jazz ensemble, providing the main rhythmic pulse and sense of time.³ The main similarities between these instruments are that they are both classified as percussion instruments, and they both require a special sense of physical coordination of the extremities - both hands for pianists, and both hands and feet for drummers. The purpose of this study is to investigate how typical technical approaches on the drumset can be used to help jazz pianists improve their overall rhythmic concept and understanding of complex rhythms, as well as their two-hand coordination in order to facilitate their solo piano playing.

Ostinato, is one of the most perplexing problems facing the jazz pianist in solo piano setting and will discussed at length in this paper.⁴ Ostinato is defined as is an accompaniment pattern, usually of one, two, or four bars, repeated continuously beneath pre-composed or improvised lines.⁵ Many established pianists incorporate ostinato into their solo piano playing. Jazz pianist Keith Jarrett utilized this technique in his album

¹ Scott DeVeaux and Gary Giddins, Jazz: Essential Listening (New York: W. W. Norton & Company, 2010).
³ DeVeaux and Giddins, Jazz.
⁵ “Ostinato,” Grove Music Online, n.d.
Köln Concert. In addition, jazz pianist Chick Corea created piano works that employ unusual time signatures over ostinato ideas such as found in his Children's Songs album. American jazz pianist, Brad Mehldau is able to perform with up to four voices which creates voice-leading opportunities, forward motion and rhythmic drive. Often times, ostinato playing requires the pianist to play different, and sometimes opposing rhythms in each hand. This requires the pianist to possess a strong sense of rhythmic independence between the hands, and a solid grasp of rhythmic concepts.

Musical rhythm is often thought to be the most important factor in music. Rhythm is everywhere in life; our bodies are full of rhythms, every mammal, reptile, and bird has a heart that beats rhythmically. As stated in Encyclopedia Britannica in Elements of Rhythm, “Rhythm is the one indispensable element of all music. Rhythm can exist without melody, as in the drumbeats of primitive music, but melody cannot exist without rhythm. In music that has both harmony and melody, the rhythmic structure cannot be separated from them.”

Piano has been classified as a percussion instrument because the way it is played and its mechanics are very much like a percussion instrument. Yet, the way piano is traditionally taught is more focused on the harmonic aspect, without much literature that discusses rhythmic issues that pianists encounter. For example, An Analysis of the Grip System- An Approach to Jazz Harmony by Jared T. Hall suggested that, “The piano has

---


7 Chick Corea, *Children's Songs. (20 Pieces for Keyboard)* (Mainz; Toronto: SCHOTT MUSIK INTL MAINZ, 2005).

been utilized as a teaching tool for jazz harmony, composition, arranging, and improvisation since the inception of jazz programs in academia."9 And the saxophonist Bob Mintzer states in his book, *Playing Jazz Piano*, “Acquiring piano skills can help an individual learn tunes more efficiently, explore additional melodic color for improvising, and develop a unique harmonic sound and style.”10 These ideas have been in jazz education for decades. As for jazz educators, jazz piano skills can be essential in demonstrating a musical idea, accompanying students, or teaching accompanying skills in an ensemble setting.11 Though there are several jazz piano books that discuss rhythm, including, for example, *An Approach to Comping Vol. 1&2* by Jeb Patton,12 which addresses issues with comping (“comping”, an abbreviation of accompanying, is a term to explain how a pianist, guitarist or other chordal instrument plays chords in rhythm to propel, or support the soloist),13 they do not go as in-depth as the drumset method books and resources that exist.

There are many jazz pianists who are looking to improve their rhythmic concept.14 Rhythmic elements of playing jazz music can often prove to be difficult for pianists to master. It is important for them to improve their rhythmic concept because it

---


11 Ron Miller, *Jazz piano and keyboard harmony: volume 1, accompaniment*. (Place of publication not identified: RonJam, 2002, n.d.).


13 Patton.

will improve their ability to play in asymmetric meter and hand independence, as well as other issues such as comping. This issue of hand independence is the first thing that most drumset students are required to learn, through the use of drum rudiments, which are the sticking patterns that aim to improve the coordination of the hands when playing together. This coordination of the hands is integral in addressing the general interdependence of the hands found in jazz solo piano setting, as well as elements of comping and playing odds meters.

**Statement of Purpose**

The purpose of this study is to enable and encourage jazz pianists to learn basic jazz drumset techniques in order to enhance their rhythm concept, coordination of the hands and develop a better rhythmic feel. This study explains how the methods that jazz drummers use to learn and practice rhythm can be applied successfully to the piano. Furthermore, this study serves as a pedagogical guide for jazz piano educators who are seeking an effective method to help their students develop a more sophisticated rhythmic concept and coordination of the hands playing solo piano.
Research Questions

The material contained in the study will be specifically informed by the following questions:

1. What are some of the main rhythmic and coordination issues that jazz pianists encounter when playing jazz solo piano?

2. What do jazz drummers practice that could be beneficial in developing rhythmic coordination, proficiency, and hand independence on the piano?

3. For established musicians that play both piano and drums, how does their music/playing demonstrate their rhythmic independence of the hands?
CHAPTER 2

LITERATURE REVIEW

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.

Chico Hamilton

What are Beat and Rhythm?

In any discussion about the importance of rhythm, the concepts of “beat” and “rhythm” must be addressed. In music, “beat” is the basic pulse underlying mensural music, that is, the temporal unit of a composition. The grouping of strong and weak beats into larger units constitutes meter. In popular use, beat can also refer to a variety of related concepts including tempo, meter, specific rhythms, and groove. The term “rhythm” can be characterized by a repeating sequence of stressed and unstressed beats (often called "strong" and "weak") that is divided into bars organized by time signature and tempo indications. As D. Patel mentioned in his book, Music and the Brain, “All periodic patterns are rhythmic, but not all rhythmic patterns are periodic.”

---


17 Aniruddh D. Patel, Music and the Brain (The Teaching Company, 2015).
Beat Perception

Humans hear the beat effortlessly and it does not require any conscious mental energy to perceive. Most children develop an ability to move and clap to a beat without any training. But the subconscious processing of perceiving the beat is mentally complex and sophisticated for the brain. Ethnomusicologists state that every culture has some form of music with a beat. This means that beat perception is a fundamental aspect of music cognition.\textsuperscript{18} According to Dr. Patel, there are six key features of human beat perception:

1. It’s predictive.

   Beat perception is about the prediction of the timing of events with a high degree of precision. Listeners often express their perception of the pulse by moving rhythmically in synchrony with the pulse, e.g., via head bobbing, foot tapping, or dancing. We can study this in the lab by asking people to tap along with a metronome. Most people tap very close in time with the metronome.

2. Highly tempo flexible.

   It means an ability to accurately predict the timing of beats with synchronization over a broad tempo range in humans. This broad tempo flexibility is a trademark of human beat perception.

3. Modality bias

\textsuperscript{18} Patel.
We seem to get a much stronger sense of a beat that we hear, compared to when we see a visual representation of that beat. People can synchronize to a visual metronome, but do not seem to predict the timing of beats as accurately as they do with an audio metronome. This seems to reflect something about the basic wiring of the human brain.

4. Constructive in nature

This means that a beat is a mental periodicity, constructed in the brain in response to a rhythmic pattern. For example, in a syncopated rhythmic pattern (a "placement of rhythmic stresses or accents where they wouldn't normally occur."), we can feel where the underlying beat is, even in the parts of the pattern that are rests. This is evidence that the beat is a mental construct.

5. Hierarchical

The perception of musical meter, or the higher-level organization of beats in time.

6. Beat perception engages motor regions of the brain.19

In a study published by Jessica Grahn and James Rowe in 2009, the putamen in the basal ganglia, the auditory cortex, and the motor planning regions of the cortex seemed to form a network of regions involved in beat perception.20

---

19 Patel.

Beat perception is thought to have multiple stages: when a rhythm is first heard, the beat must be detected. “Beat-finding” is followed by the creation of an internal representation of the beat, allowing the anticipation of future beats as the rhythm continues (“beat-continuation”).

All these studies help show how the processing of rhythm by the brain’s motor system can extend directly to muscles, providing a mechanism by which rhythm might influence movement. Recent neuroscientific study of the beat perception and neural processing related to musical rhythm have demonstrated the involvement of the brain’s cortical and subcortical motor system. Functional magnetic resonance imaging (fMRI), transcranial magnetic stimulation (TMS), and other methods have contributed to understanding how we move to the beat. These give us an understanding that rhythm is connect to movement. In jazz, the physiological expression of rhythm (such as dancing) is a whole body experience, and no instrumentalist in jazz engages the whole body more completely than the drummer.

Pedagogical Sources

Establishing pedagogical sources is necessary to illustrate the importance of jazz rhythm. Each source will serve a purpose in outlining the relevant points throughout the research. Drum method books will be utilized to address certain skill sets, including fundamental concepts of the hand synchronization, as taught by drum “rudiment” method.

---

21 Patel, Music and the Brain.

22 Grahn and Rowe, “Feeling the Beat.”

books. For example, *The Complete Modern Drum Set* by Frank Briggs\textsuperscript{24} and *The Language of Drumming* by Benny Greb\textsuperscript{25} are two sources which aim at developing hand coordination as well as understanding the space between the beats. *Syncopation for the Modern Drummer* by Ted Reed\textsuperscript{26} addresses basic rhythmic reading skills and explores many of the most common syncopated rhythms found in today’s music. In addition to exploring the importance of learning the fundamentals, *The Art of Bop Drumming* by John Riley\textsuperscript{27} and *Advanced Techniques for the Modern Drummer* by Jim Chapin\textsuperscript{28} are insightful in explaining the role of groove as well as how to successfully accompany an ensemble.

There are some jazz piano method books that make an attempt at addressing rhythmic issues facing jazz pianists. However, there are currently not many books that discuss this topic in-depth. *An Approach to Comping Vol. 1&2* by Jeb Patton\textsuperscript{29}, which addresses comping problems and practice tips, provides some useful information to investigate this topic. Much is addressed in this book including comping technique and the different characteristics of comping by the great jazz pianists. Furthermore, an insightful doctoral thesis written by pianist Thomas Andrew Van Seters is also being

\textsuperscript{28} Chapin, *Advanced Techniques for the Modern Drummer* (James F Chapin, 1948).
\textsuperscript{29} Patton, *An Approach to Comping*. 
This study gives a wide range of information about the connection between the piano and the drumset. Although there are many crossover elements in relation to investigating the fundamentals of learning jazz piano, the rhythmic elements are not addressed in depth.

**Ostinato and Splitting the Hands**

The New Grove Dictionary of Jazz, 2nd edition, defines “ostinato” as “an accompaniment pattern, usually of one, two, or four bars, repeated continuously beneath pre-composed or improvised lines.” Alternatively, the Harvard Dictionary of Music states that ostinato is “a reference model which imprints itself in the listener’s memory and secures the identity of the pattern throughout the variations.” Ostinatos are widely used in many styles of music, including jazz. They are especially effective in solo piano playing, as it gives the audience a harmonic and rhythmic framework where variation and improvising can occur on top (or below), creating something repeated for everyone to hold on behind the new, improvised music being improvised in the other voice. Keith Jarrett is known to utilize many ostinatos in his piano solo works, such as found in the album *Koln Concert*. Chick Corea also employs it in this piano solo work *Children’s*
Song,\textsuperscript{35} providing the forward motion accompaniment with the left hand while his right hand improvises freely. Pianist David Dower referred to his concept as “Splitting the Hands.”\textsuperscript{36} Playing more than two voices can provide the impression of an ensemble, or the occurrence of multiple parts.\textsuperscript{37} This concept has been used in classical music for decades.\textsuperscript{38} However, a jazz pianist mostly trained in ensemble performance skills may find it difficult to both improvise and simultaneously accompany themselves using the technique of ostinato.\textsuperscript{39}

\textsuperscript{35} Chick Corea, \textit{Solo Piano: Originals}, n.d.

\textsuperscript{36} Dower, “Self-Accompaniment and Improvisation in Solo Jazz Piano.”

\textsuperscript{37} Dower.

\textsuperscript{38} Schnapper, “Ostinato.”

\textsuperscript{39} Dower, “Self-Accompaniment and Improvisation in Solo Jazz Piano.”
CHAPTER 3

METHODOLOGY

The purpose of this study is to enable and encourage jazz pianists to learn basic jazz drumset techniques in order to enhance their rhythm concept, coordination of the hands and develop a better rhythmic feel. This study explains how the methods that jazz drummers use to learn and practice rhythm can be applied successfully to the piano. Furthermore, this study serves as a pedagogical guide for jazz piano educators who are seeking an effective method to help their students develop a more sophisticated rhythmic concept and coordination of the hands playing solo piano.

Research Questions

The material contained in the study will be specifically informed by the following questions:

1. What are some of the main rhythmic and coordination issues that jazz pianists encounter when playing jazz solo piano?

2. What do jazz drummers practice that could be beneficial in developing rhythmic coordination, proficiency, and hand independence on the piano?

3. For established musicians that play both piano and drums, how does their music/playing demonstrate their rhythmic independence of the hands?
Procedures for Answering the Research Questions

In order to understand the connection between piano and drums, it requires studying typical methods and practices of learning each instrument. However, the main focus of this paper will be on drumset practice methods and how they can be used by pianists. The main body work of this study begins at chapter 4, which addresses the first question of what jazz drummers practice that could be beneficial for pianists. This will address the fundamentals of understanding hand coordination by using basic drum rudiments.

Thus, question one requires understanding the fundamentals of learning the rhythmic and ostinato playing aspects of jazz piano. The influence of the development of rhythm in the history of jazz piano will be explored. Although there are many crossover elements in relation to the investigation of the fundamentals of learning jazz piano, the rhythmic element will specifically be addressed and defined as this study aims to highlight the significant point of the relationship between the two instruments and how it pertains to solo jazz piano playing. Thus, the harmony aspect will not be investigated. Text and methodologies will be investigated and defined, including, The Jazz Piano Book by Mark Levine40 and An Approach to Comping Vol. 1&2 by Jeb Patton.41 Some article interviews and books that investigate jazz pianists will be addressed as well, including Handful of Keys: conversations with thirty jazz pianists by Alyn Shipton42 and Ways of

41 Patton, An Approach to Comping.
42 Alyn Shipton, Handful of Keys: Conversations with 30 Jazz Pianists, 1 edition (Routledge, 2016).
the Hand by David Sudnow,\textsuperscript{43} which explores the rhythmic ideas of great jazz pianists and drummers, and offers logical and practical insights that address various rhythmic issues.

Question two requires consulting texts and methodologies on introductory drum techniques in order to understand how drummers practice this concept. Select method books that present exercises will be used as references. The popular drumset method books include \textit{The Complete Modern Drum Set} by Frank Briggs,\textsuperscript{44} \textit{Intro To Polyrhythms: Contracting and Expanding Time Within Form, Vol. 1} by Ari Hoenig,\textsuperscript{45} \textit{The Language of Drumming: A System for Musical Expression} by Benny Greb\textsuperscript{46} and many others. An analysis will be conducted to clearly understand, define and explain each method. A basic introductory methodology to drums and two-hand coordination will be explored and described.

Question three will be explored through a series of analysis with few artists that play or been effected by both instruments, in order to highlight which approaches on drumset might help address rhythmic issues of solo playing for jazz pianists. This section will provide an analysis of specific methods on some of their playing that utilize the rhythmic concepts discussed in this paper.


\textsuperscript{44} Briggs, \textit{Complete Modern Drum Set}.

\textsuperscript{45} Ari Hoenig, \textit{Mel Bay presents intro to polyrhythms: contracting and expanding time within form} (Pacific, MO: Mel Bay, 2009).

\textsuperscript{46} Striboll, \textit{Benny Greb The Language of Drumming}. 
CHAPTER 4

RESULTS

What are some of the main rhythmic and coordination issues that jazz pianists encounter when playing jazz solo piano?

“There are many elements pianists must master in playing ostinatos. The most common issue largely involves the independence and coordination of the hands.”47 Typically, the left hand will play a repetitive pattern, while the right hand creates an improvised line or rhythmic phrase. Assuming that the jazz solo style is swing, often the left hand will create a line which imitates what a bass player would play. Known as “walking bass” this style assumes the roles of two musicians, and in the process, a large proportion of the time-keeping responsibilities.48 Even a simple ostinato such as a "walking bass" line can limit the right hand of a pianist while creating improvised lines, which is a complex process for the brain. In the book It's about Music: The Art and Heart of Improvisation, author Jean-Michel Pilc suggested that working on the method of tapping the hands while talking/singing is very crucial and should be transparent. To be able to reach this stage he called “creative multitasking” the brain must learn to work on numerous things without effort or strain.49

Another hand independent issue most jazz pianists face playing solo piano is the internalization of each subdivision of the rhythm, in order to separate the feeling of each


hand’s rhythm in an effortless way. This involves countless processing power by the brain to be able to play, hear and execute different rhythms involved in each hand if the pianist cannot “feel” and internalize the subdivision of each rhythm. If the left hand is playing ostinato with a complex subdivision, adding an improvising right hand can make it very difficult to combine the two hands, and it almost impossible to do so freely.

In the solo piano setting, jazz pianists often imitate the role of the bass player in the left hand. While keeping a steady ostinato pattern in the left hand, the right hand should be able to develop left and right hand coordination for different rhythmic subdivisions, such as quarter notes, quarter note triplets, 8th notes, 8 note triplets and 16th notes. Figure 1 shows a simple solo piano arrangement of the composition Footprints by saxophonist Wayne Shorter.\(^\text{50}\)

**Figure 1. Simple Piano Solo of *Footprints* by Wayne Shorter**

---

Figure 1 can also be played with the left hand ostinato keeping the same rhythm, with the right hand improvising after playing the melody. This creates a different function for each hand and helps to develop the coordination of the hands.

Figure 2. Ostinato bass line in *Bolivia* by Cedar Walton

Figure 2 shows the bass line of the composition *Bolivia* by pianist Cedar Walton, which is played in the solo form in every chorus. The end of the first to second measures creates the feeling of forward motion. However, it also challenging when playing both hands together because the left hand does not always land on the down beat. This might create a problem if a pianist has never worked to improve their hand coordination before.

Figure 3. Bossa nova bass line in *Dindi* by Jobim

---

Figure 3 shows the four measures of the simple bossa nova bass line in the composition *Dindi*\(^{52}\) by Antonio Carlos Jobim. Improvising over this pattern can be challenging if the right hand wants to be able to play different rhythm such as quarter note triplets or 8th note triplets over the left hand bass line.

Latin music such as salsa developed in New York City and Puerto Rico during the 1960s and 1970s. This music was based on Cuban dance styles and incorporated Puerto Rican elements and influences from jazz and rock.\(^{53}\) Figure 4 shows basic piano montuno with the bass line. Notice its ‘anticipated bass’ pattern, which emphasizes off-beats rather than the downbeat.

![Figure 4. Piano Montuno in Salsa](image)

Figure 4 shows the rhythmic basis of the left-hand bass tumbao (in musical terms tumbao is the basic rhythm played on the bass in the music of Afro-Cuban, in Spanish

---


meaning to move or to walk in sensual way.)\textsuperscript{54} found in Cuban son-based music, such as son montuno, mambo, salsa, and Latin.\textsuperscript{55} Often the last note of the measure is held over the downbeat of the next measure, creating a feeling of forward motion. However, due to the lack of down beats in the left hand it is challenging to many jazz pianists to learn the ostinato bass tumbao.

What do jazz drummers practice that could be beneficial in developing rhythmic coordination, proficiency, and hand independence on the piano?

As they do not have scales or modes to practice as pitched instruments do, drummers utilize unique practice methods. One of the most popular methods involves the practicing of “rudiments” which are the sticking patterns that aim to improve the coordination of the hands when playing together. This creates a strong sense of time and rhythm in drummers. The basic rudiments are single stroke, double stroke and paradiddle. These rudiments create the coordination of both hands to working together.

**Single Stroke**

The single stroke roll is one of the most common drum rudiment, which involves evenly-spaced notes played with alternating sticking (right hand then left hand or left hand then right hand). The Single Stroke Exercise in Frank Briggs’s book can be an effective tool in confronting the basic subdivision of rhythm.
Analyzing Figure 5, the top notes are the subdivision that change in every measure, however the lower notes are still quarter notes. For the drummers this creates a

---

56 Briggs, *Complete Modern Drum Set.*
number of possibilities, such as alternating left and right hands or playing it from bottom
to top.

Applying this idea to the piano using both two-hands is an effective way of
improving hand coordination and independence.

**Figure 6. Single Stroke Exercise Idea on the Piano**

This idea in Figure 6 creates a simple ostinato in the left hand with the right hand
playing different subdivisions against it. The right hand can play any note as long as the
player keeps steady rhythm. One should start slow and each measure can be repeated
until it feels comfortable before proceeding to the next measure (or subdivision).
Starting by assigning simple pitches to the right hand’s rhythm, such as the major third shown in Figure 7.

Then assign an F-major triad to the right hand rhythm in Figure 8.
Figure 9. Assign Maj 7 Arpeggio to the RH

Figure 9 shows that the note of F-major 7 have been assigned to the right hand. In Figure 10, we see the same idea, with alternation of the hands.

Figure 10. Alternating the Hands

Next, it can be applied to the twelve-bar blues form as in Figure 10, by changing the bass notes to fit the blues chord progression.
Figure 11. Single Stroke Idea to Twelve-Bar Blues

In Figure 11, the right hand can change the subdivision as the player desires. Notice that the left hand repeats the root. Alternatively, the hands can be switched.

Figure 12. Assign Four notes in the RH
Figure 12 assigns a simple four notes motif in the right hand of the Blues. There can be many permutations, but the main point is to be familiar with each rhythm.

**Figure 13. Single Stroke Idea to Twelve-Bar Blues, Alternate hands**

![Figure 13 Image]

Figure 13 can be difficult as now the left hand is playing the different subdivisions against the right hand ostinato. If so, the player should begin the exercise at a slow tempo, and possibly stay within one subdivision for a few measures before changing to the next, as shown in Figure 14.
In Figure 14, the player gets used to each rhythm by staying longer for 4 measures. This gives the pianist a chance to internalize each rhythm longer, and strengthen the muscle memory of left hand, as repetition causes your brain to develop neural connections to assist repeating in the future. This learning process requires the assimilation and consolidation of information in neural tissue, because the more it experiences something, the stronger the memory/learning trace for that experience becomes.57

The next approach increases the harmonic complexity in the left hand bass ostinato by adding a scalar component, which creates a “walking bass” approach.

---

In Figure 15, the left hand is simulating a jazz bassist by using a walking bass line. This creates the forward motion and groove for the listener. Furthermore, by adding arpeggios or scales could be very effective, as in Figure 16.
Figure 16. Twelve-Bar Blues adding Arpeggios in the LH using Single Stroke Idea

Then from Figure 15, it can be switched to the right hand as in Figure 17.
The idea from a single stroke roll to a walking bass line on the piano can be applied to other time signatures as well, such as 3/4, 5/4, 7/4 etc.
Figure 19. Single Stroke Idea on 5/4 composition

The possibilities with this exercise are endless, and will create a strong sense of time, rhythm, groove and most importantly, a foundation of hand independence for jazz pianists.

Rhythmic Alphabet

The “Rhythmic Alphabet” is the practice idea from the DVD The Language of Drumming by Benny Greb. His idea consists of all of the possible 16th-note and triplet subdivisions within one beat. The first lesson involves clapping each “letter” of this alphabet while singing a quarter-note pulse.  

58 He draw a direct correlation between the basic understanding of rhythm and the way we learn to speak, starting with its smallest components: the individual “letters” of the rhythmic alphabet.  

59 He introduces his 24-character system and shows how to use the basic binary and ternary rhythms to develop timing, technique, dynamic control and speed.

---


59 Striboll, Benny Greb The Language of Drumming.
Figure 20. Binary Letters by Benny Greb
Benny’s system suggests that space and awareness of time are essential in rhythmic development. This perspective of rhythm can be beneficial in composing the different ostinato phases to practice. For example, using the word “LOVE” from the system as in Figure 22.
Figure 23. Create Simple Ostinato using Word "CAT"

Then can create an interesting simple harmony by moving pitches. For example, F7 (F, A, Eb and C) in Figure 19.

Figure 24. Moving Pitches to F7 chord

Figure 25. Single Stroke Idea with "CAT" Ostinato
Figure 20, shows the combination of the single stroke idea and the rhythmic alphabet. Again, it is possible to stay on just one rhythm for a few measures and start slowly. Then make it work in a twelve-bar blues.

Figure 26. Twelve-Bar Blues with "CAT" Ostinato
Figure 27. CAT Rhythm on RH in F Blues

Figure 28. CAT Rhythm on Bolivia Ostinato
Figure 29. CAT Rhythm on Bossanova

Figure 30. Twelve-Bar Blues with "CAT" Ostinato and Single Stroke Idea
Another possibility is to try this idea with an odd meter. For example, play the “cats” blues in 5/4.

Figure 31. "CATS" Blues in 5/4

This idea could be used in analyzing many odd meter compositions. For example, the composition Shed by pianist Aaron Goldberg from the album Home in Figure 24.

Figure 32. Shed by Aaron Goldberg

---

60 Aaron Goldberg, Shed, Audio CD, HOME (Sunny Side, n.d.).
In analysis of Figure 24, the ostinato line’s rhythm is consists of alphabet letters of I, C, C, A and A in the first measure, then alphabet letters of A, C, C, A and A in the second measure. This is the main ostinato of the composition. Figure 25 shows some possibilities:

**Figure 33. SHED with Single Stroke Idea**

![Figure 33. SHED with Single Stroke Idea](image)

The possibilities in Figure 25 can help pianists understand and focus on each rhythm independently. If the ostinato is made stronger, the right hand can have more freedom and expression without concern about the left hand.
Contracting and Expanding Time within Form

Ari Hoenig is largely considered one of the most advanced modern drummers today. He and jazz bassist Johannes Weidenmueller introduce a concept of polyrhythm which involves the simultaneous combination of contrasting rhythms in a musical composition, in order to contract and expand time within the form. Hoenig suggests implementing the method to gain more rhythmic flexibility. Most of what he introduces in his book is for drummers or bassists. However, same method can be applied to jazz piano as well.

Figure 34. First, Second and Third Partial of the Quarter-Note Triplet.

---

63 Hoenig, *Mel Bay presents intro to polyrhythms.*
Hoenig’s idea is more complicated when incorporating metric modulation and superimposed rhythm. To start more simply Figure 34 begins with the distinctions of each partial of the triplet. Hoenig’s idea also points out a way to approach music in different way. Playing the first partial of a triplet is a fairly common technique, yet he suggests playing the second partial might change our rhythmic perspective.

The second partial of the triplet can be practiced in a typical form such as the blues form, as shown in Figure 35.

**Figure 35. Second Partial of Triplet in Blues form**
Another possibility is to bring the left hand to work as second partial of the triplet as in Figure 37.
Then as the same idea, with right hand comping as in Figure 38.

**Figure 38. LH as Second Partial of the Triplet with RH Comping**

Now, the same idea using the third partial of the triplet as in Figure 39.

**Figure 39. Third Partial of Triplet in Blues form**
Figure 40. Third Partial of the Triplet with Chord Comping

Figure 41. LH working as Third Partial of the Triplet
Notice that the third partial of the triplet is started early to anticipate the changes of the blues form.

**Figure 42. LH as Third Partial of the Triplet with RH Comping**

Now, combine all of them in the blues form as in Figure 43.

**Figure 43. Combination of First, Second and Third Partial of the Triplet in Blues form**
Now, same idea but with the left hand as in Figure 44.

Figure 44. Combination of First, Second and Third Partial of the Triplet in Blues form with LH

All of these idea can be applied to ostinato as in Figure 45.
Figure 45. Second and Third Partial of the Triplet in *Footprints*  

![Musical notation]

Figure 46. Second and Third Partial of the Triplet in Bossanova  

![Musical notation]

---

64 Shorter, *Adam’s Apple*. 
Odd Grouping: Three, Five and Seven

Another interesting idea from Greb’s DVD is understanding the odd grouping of 16th notes, by accenting every three beats, two + three beats (five) and two + two + two + three beats (seven), as shown in Figure 47.

Figure 47. Odd Grouping: Three, Five and Seven in Sixteenth notes

Odd Grouping: Three

This grouping consists of accenting every third sixteenth in a 4/4 time signature.

This can be applied to the left hand ostinato with the single stroke idea.

---

65 Striboll, Benny Greb The Language of Drumming.

66 Striboll.
After one feels comfortable with the rhythm, the next step is to experiment with different pitches. For example, the F7 shown in Figure 49:
In Figure 50, notice that the left hand in the last two measures uses simple quarter notes. Because the previous cross-rhythms are complex and create a powerful tension for both performers and listeners, a change to simple quarter note could help release that tension.
Odd Grouping: Five

This exercise consists of accented sixteenth notes in every two + three (five) beats in a 4/4 time signature. This can be applied to the left hand ostinato with the single stroke idea.

Figure 51. Odd Grouping: Five with Single Stroke Idea

Figure 52. Odd Grouping: Five with Single Stroke Idea in F7
Odd Grouping: Seven

This version consists of accented sixteenth notes in every two + two + two + three (seven) beats in a 4/4 time signature. This can be applied to the left hand ostinato with single stroke roll idea.
Figure 54. Odd Grouping: Seven with Single Stroke Idea

Figure 55. Odd Grouping: Seven with Single Stroke Idea in F7
Finally, the odd groupings of three, five and seven can be combined together.
The idea of comparing drums and piano is not new, as they are many parallels that exist between them.\textsuperscript{67} However, focusing on the drummer’s perspective about how they practice and develop and transfer those ideas to the piano is another effective method, and it gives numerous ways for jazz pianists to practice effectively. This also opens some

\textsuperscript{67} Thomas Andrew Van Seters, “Eighty-Eight Drums.” 42.
possibilities for composing as well. As Wayne Shorter said, “Composition is just improvisation slowed down, and improvisation is just composition sped up.”\textsuperscript{68}

CHAPTER 6

For established musicians that play both piano and drums, how does their music/playing demonstrate their rhythmic independence of the hands?

There are several jazz musicians that are known for playing both instruments, such as Chick Corea, Herbie Hancock, Gonzalo Rubalcaba, Jorge Rossy, and Jack DeJohnette. All show the influence that they received from both instruments. Chick Corea learned to play drums when he was 8 and often mentions that he thinks of his fingers as drumsticks or mallets.\(^{69}\) Evidence of sticking patterns can be found in many of Corea's performances, as the thesis from Seters proposes that Corea often uses many LLR triplets and RRL triplets in his performance.\(^{70}\) In Figure 58, Corea is using the LLR approach in *I Didn't Know What Time It Was* (Lorenz Hart, Richard Rodgers).\(^{71}\)

Figure 58. Chick Corea using LLR Triplets


In Figure 59, Corea also demonstrates the use of ostinato over different subdivision as in *Lust Life* (Billy Strayhorn).\textsuperscript{72}

**Figure 59. Chick Corea using Ostinato in LH with Different Rhythm on RH**

Herbie Hancock may not be a proficient drummer, but his approach to piano improvisation often comes from drummer’s influences. By working with Tony Williams, largely considered one of the best jazz drummers ever, Hancock developed the sense of rhythmic and time feel that revolutionized traditional jazz concepts.\textsuperscript{73}

**Figure 60. Herbie Hancock using drum like gesture in Triste**\textsuperscript{74}

\textsuperscript{72} Corea.

\textsuperscript{73} Thomas Andrew Van Seters, “Eighty-Eight Drums.” 90.

As Figure 60 shows, a thesis from Seters investigate that Hancock mimics a typical single stroke interpretation of RLR LRL triplets in this performance that drummer and educator John Riley describes as a technique used extensively by drummers Tony Williams and Bob Moses.\textsuperscript{75} In his book \textit{Possibilities} Herbie recalls his first playing encounter with Williams: “I played the opening chord—and then Tony started playing some amazing rhythm I’d never heard before. I took my hands off the piano and turned around to look at him, my mouth just hanging open. I couldn’t believe what I was hearing from this little scrawny kid! I had no idea how he was conceiving such rhythms, and it took me a couple of choruses before I could actually collect myself and play anything.”\textsuperscript{76}

Keith Jarrett has performed on both piano and drums, as discussed with Ted Rosenthal in the Jan-Feb 1997 issue of Piano and Keyboard magazine.

\textit{TR}: How does playing the drums enter into that?

\textit{KJ}: Well exactly the way you would imagine. It actually was my first instrument, table tops.

\textit{TR}: Did you ever actually study drums?

\textit{KJ}: No.

\textit{TR}: But you were gigging a little bit as a teenager.

\textsuperscript{75} Thomas Andrew Van Seters, “Eighty-Eight Drums.” 93

\textsuperscript{76} Herbie author Hancock, \textit{Possibilities} (New York, New York: Viking, 2014).
KJ: Yeah, and not just as a teenager. Jack (Dejohnette) and I, whenever we had a chance we'd sit in and we'd go to the opposite instruments than we usually play. And I was also part of some drum workshops in Europe. 

One of Keith’s acclaimed recordings, The Koln Concert, consists of all solo piano improvisations performed at the Opera House in Cologne (German: Koln) on January 24, 1975. Jarrett demonstrates his ability to improvise complex combination between both hands as in Part IIa of the concert at 31:00 minute as shown in Figure 61.

**Figure 61. Keith using both Hands to Keep a Steady Rhythm**

Besides maintaining the rhythm in both hands, he has an ability to play more creative melody in the right hand as in Figure 62.

**Figure 62. Keith Maintaining the Rhythm in LH while Creating More Melodic and Harmonic Structure in the RH**

Moreover, in Part IIb from the concert, Keith utilizes the idea of ostinato in the left hand while using the right hand to keep steady rhythm and creatively play a melodic line in the right hand as in Figure 63.

**Figure 63. Keith using Ostinato in LH and Freely Play the Melody in the RH**

Gonzalo Rubalcaba is one of the most iconic figures to emerge from Afro-Cuban jazz in the 90s. As he mentions in his website, he always loved drumming and, early in his career, studied both piano and drums, though his formal musical training was entirely classical. Rubalcaba often used drum approaches in his improvisation in *Imagine* by John Lennon, as shown in Figure 64.

---


Figure 64. Gonzalo using RRL in His Solo

Figure 65. Gonzalo using Single Stroke Idea in His Solo
In Figure 65, Gonzalo uses both of his hands to make a rapid passage on the piano keys in *Prologo Comienzo.*\(^{80}\) He also uses LLR in his solo in the same composition as in Figure 66.

**Figure 66. Gonzalo using LLR in His Solo**

---

Rhythm and sound involve movement, and there are physical aspects that involve our body and brain while improvising jazz music. The idea of rhythmic learning should be seen as an important step in the development of jazz pianists, and learning drum techniques is an effective way of achieving this. Besides the benefits of improving their hand coordination and independence, it can help the pianist attain a better understanding of the function of the rhythm section. Jazz musicians that have problems with rhythm can utilize the jazz drumset techniques discussed in this paper in order to gain rhythmic coordination. This will improve their cognitive and psychomotor ability to recall a particular rhythm. Two main achievements resulted from this research. First, the connection between the ideas of using drum practice techniques to practice rhythmic technique on the piano are clearly defined to improve the pianists’ rhythmic independence. Furthermore, gradually progressing from simple to complex is an effective way of implementing this technique. Second, the possibility exists for this to translate to an important method in jazz curriculum for a jazz piano program in school, because of the focused and balanced approach to gaining more two-hand rhythmic skill and independence.

**Future Research Studies**

This research, in reviewing the possibility of rhythm from the drummer’s perspective and applying those ideas to the solo piano idiom, shows that there are similar ideas and connections between the two instruments that can significantly improve ones
playing. However, this concept could be explored by other pitch or single line
instruments, and thus could be potentially benefit to any jazz curriculum at any levels.
Though initially designed as a piano method, this idea can be revised to fit the needs of a
basic improvisation class, advanced improvisation class, or composition class. This study
can serve as a pedagogical jazz piano resource for music educators, jazz educators, and
jazz students to help them teach and learn how to internalize rhythmic concepts.

In conclusion, this paper provides some useful information about the possibility of
another way for pianists to understand and internalize rhythm by utilizing practice
techniques used by drummers, and applying them to solo piano. Due to the similarities on
both instruments, it can be inspiring for them to explore the world of drums and then
apply it to their own instrument. As jazz pianists grow by incorporating various methods
and ideas to improve themselves, they could use this approach as well to be a part of the
general development of jazz music, helping to create great music for the world in the
future.
Bibliography


Miller, Ron. *Jazz piano and keyboard harmony: volume 1, accompaniment*. Place of publication not identified: RonJam, 2002, n.d.


