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**In Your Own Sweet Way: A Study of Effective Habits of Practice
for Jazz Pianists with Application to All Musicians**

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ABSTRACT

With the intent of improving performance and creativity, the purpose of this research was to gain information about practice methods and techniques directed to develop a personal practice routine for the contemporary jazz pianist. This research is offered to provide jazz pianists (of all levels) with tools that allow them to develop individual practice routines that foster healthy and sustainable habits and advance artistry. The original information presented is based on the review of related literature published in the area of jazz performance; the experiences of respected jazz performers, students and pedagogues; and the synthesis of methods and approaches used in deliberate musical practice (classical and jazz styles), sports training, and selected other disciplines.

The investigation was categorized in three sections. First, devoted to the piano as an instrument, exploring its technical, mechanical, and acoustical characteristics. Second, focused on theory and music with application for jazz pianists, by selecting and organizing music topics in five categories –referred to in the present study as *The Five Elements* (i.e., Technique, Harmony, Language, Improvisation, and Repertoire). Third, investigation of different approaches to practice, both from the classical music tradition and the jazz methodology, in order to develop a personal practice routine for jazz pianists. This last section consists of the most essential contribution of the present research –a synthesis of published jazz methods, jazz performance practices and historical traditions, exemplary repertoire, and resources for the jazz pianist.

Findings from this research include researcher-designed practice routine templates (PRT) for jazz pianists of all levels, researcher-designed extensive repertoire lists for jazz pianists (including approximately 1000 songs for pianists across ability levels –beginner to professionals), and researcher-generated tools such as solo transcriptions, bibliographies and discographies. On the basis of this research, it may be concluded that jazz pianists (of all levels) benefit from purposeful practice with clear goals, honest self-evaluation, and focus –organized by thoughtful tools that map content, progress, and performance.

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CHAPTER 1: INTRODUCTION

Practice and performance are inextricably connected – they do not exist without each other. For jazz pianists this means that habits of practice must be approached as consistently and creatively as performance in order to develop essential skills and techniques, as well as foster an original artistic voice. The specific use of practice time, including the selection and emphasis of content, must be thoughtfully planned and managed to advance artistic success.

Jazz pianists need to identify profitable practice routines based on their individual artistic stage. A profitable practice routine is one that supports the execution of music fundamentals while also maintaining the priority of creativity and artistic innovation, combining all available resources within a creative environment. Using this deliberate and/or goal-centered approach to practice, the jazz pianist can effectively maintain interest and promote progress¹ (Jordan-Miller, 2010).

One of the primary practice-related challenges faced by jazz pianists is the selection of appropriate resources (*i.e.*, audio, video, method books, repertoire) to organize and use. Although jazz music is one century old, and the body of literature related to jazz music and jazz pedagogy seems light when compared to classical music and other art forms; there has been an increasing focus over the last half-century on jazz

¹ Rebekah Jordan-Miller, “Mental Skills Training for a Lower-Advanced to Advanced Pianist” (PhD diss., University of Oklahoma, 2010), 5.

² Victor J. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD

music as related to curriculum development, pedagogy, historical/cultural/social perspective, and performance. According to Lin (2011) most of the literature related to jazz music can be generally placed into two categories: ethnographic and musicological². The ethnographic literature includes biographies of jazz musicians and a focus on culture and social environments in association with the development of history during the Twentieth Century (Lyons, 1983; Collier, 1993; Berliner, 1994; Lopes, 1994; Burns, 2000; Javors, 2001; Ake, 2002; Prouty, 2002; Shipton, 2004). The musicological literature includes a focus on technique, improvisation, harmony, theory, chord/scale relationships, melodic development, styles, solo transcription, and so forth (Konowitz, 1969; Baker, 1971; Aitken, 1973; Dobbins, 1978; Bash, 1983; Coker, 1987; Zwick, 1987; Levine, 1989 and 1995; Gunderson, 1992; Yoshizawa, 1999; Nicholson, 2005; Silvera-Jensen, 2005; Small, 2006; Aebersold, 2000-2010).

Within the body of literature and available resources created to guide jazz pianists, Jordan-Miller (2010) asserts that very little material instructs pianists (and teachers) in practice methods that incorporate specific performance strategies, including those designed to develop psychological performance skills³. According to Witmer and Robbins⁴, instructional methods designed for jazz pianists (and teachers) were mainly based on the identification of essential patterns and chord-scale relationships as a starting

² Victor J. Lin, "Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists" (PhD diss., Columbia University, 2011), 13.

³ Rebekah Jordan-Miller, "Mental Skills Training for a Lower-Advanced to Advanced Pianist" (PhD diss., University of Oklahoma, 2010), 4.

⁴ Robert Witmer and James Robbins, "A Historical and Critical Survey of Recent Pedagogical Materials for the Teaching and Learning of Jazz", *Bulletin of the Council for Research in Music Education*, 96, no. 1 (1988): 30-41.

point for improvisation, with a tendency to concentrate on the easily objectified, a focus on momentary activity, and the isolation of musical components and elements instead of a complete artistic approach⁵.

Throughout the literature, the art of practice is often approached separately from performance⁶. Moreover, within this literature, very little research exists regarding the specific manner in which jazz musicians practice – either in their formative years or as professionals⁷. Information related to the actual practice habits of developing and professional jazz pianists, ability to manage time, set goals, engage in self-evaluation and/or develop confidence as an artist seems to be missing in most of the comprehensive methods and literature available to musicians.

Comprehensive jazz piano methods (and methods for other instruments, as well) are often structured according to concepts rather than with a general and complete approach to performance. This assumes that jazz pianists (in order to use these materials) have basic piano technique as well as ability to read music notation. Moreover, these methods require jazz pianists to organize and structure their own progress.

According to Jordan-Miller (2010) much of the research and writing on the topic of practice is focused on: 1. Practice strategies to facilitate learning, such as memorization techniques; 2. Practice strategies for overcoming technical challenges; and,

⁵ Robert Witmer and James Robbins, “A Historical and Critical Survey of Recent Pedagogical Materials for the Teaching and Learning of Jazz”, *Bulletin of the Council for Research in Music Education*, 96, no. 1 (1988): 7-29.

⁶ Rebekah Jordan-Miller, “Mental Skills Training for a Lower-Advanced to Advanced Pianist” (PhD diss., University of Oklahoma, 2010), ix.

⁷ Victor L. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD diss., Columbia University, 2011), 19.

3. Organizational methods used to manage practice time efficiently⁸. Accordingly, very little material exists to guide pianists and teachers in practice methods that incorporate specific performance strategies, including those designed to develop psychological performance skills. Jordan-Miller (2010) concludes that “to perform at an eminent level, mental skills training is equally as important as practice of the actual physical skills required in the performance”⁹ and continues: “Preparation for performance, whether in athletics or music, has tended to focus on physical readiness in areas such as fitness, dexterity, technique, etc. However, many researchers, coaches, and the athletes themselves, are pointing to mental preparedness as a key factor in athletic success”¹⁰.

Rushall¹¹ states that “Mental skills training is effective in improving an individual’s control of mental and emotional elements as well as coordination of physical movement”. Krane and Williams (2006) affirm that successful athletic performance implies several general psychological characteristics such as “high self-confidence and expectation of success, self-regulation of arousal (energized yet relaxed), feeling in control, total concentration, keen focus on the present task, viewing difficult situations as exciting and challenging, productively perfectionist (*i.e.*, have high standards, yet

⁸ Rebekah Jordan-Miller, “Mental Skills Training for a Lower-Advanced to Advanced Pianist” (PhD diss., University of Oklahoma, 2010).

⁹ *Ibid.*, 116.

¹⁰ *Ibid.*, 48.

¹¹ Brent S. Rushall, *Mental Skills Training for Sports: A Manual for Athletes, Coaches, and Sport Psychologists* (Spring Valley, CA: Sports Science Associates, 1992).

flexibility to learn from mistakes), positive attitude and thoughts about performance, strong determination and commitment”¹².

On the specific topic of practicing, Ericsson, Krampe, and Tesch-Römer (1993) conclude that “Eminent performance qualitatively surpasses what might be called expert performance”¹³, and continue, “To make an eminent achievement one must first achieve the level of an expert and then in addition surpass the achievements of already recognized eminent people and make innovative contributions to the domain”¹⁴. Students need to master existing knowledge and techniques in order to become an expert in a given field.

Jazz musicians are often subjects of books, articles, films, and so forth. Lin (2011) concludes that interviews, biographies, and autobiographies of jazz pianists (*e.g.*, Art Tatum, Bill Evans, George Shearing, Thelonious Monk, Marian McPartland, Bud Powell, Ahmad Jamal, Dave Brubeck, Teddy Wilson, Hampton Hawes, Oscar Peterson, Tommy Flanagan) “often contain numerous references to early learning environments, but rarely explore the topic beyond a surface treatment of their influence on the artist. In addition, these resources often focus primarily on the careers and opinions of the pianists with very little attention to their practice routines and/or methods of approaching the instrument and music.”¹⁵

¹² Vikki Krane and Jean M. Williams, “Psychological Characteristics of Peak Performance,” in *Applied Psychology: Personal growth to peak performance*, ed. Jean M. William, 5th ed. (New York, NY: McGraw-Hill, 2006): 221.

¹³ K. Anders Ericsson, Ralf Th. Krampe, and Clemens Tesch-Römer, “The Role of Deliberate Practice in the Acquisition of Expert Performance,” *Psychological Review* Vol. 100, no. 3 (1993): 373.

¹⁴ Ibid.

¹⁵ Victor L. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD diss., Columbia University, 2011), 65.

Fraser (1983) asserts that “only by examining jazz improvisation in the context of the culture which created it, can we learn much more about the music, its creators and about what jazz implies for human culture in general”¹⁶. Culture and environmental elements surrounding the music are essential (and inseparable) components of music making and artistic development¹⁷. Lin (2011) also concludes that “it is a mistake to think that jazz piano can be learned effectively when it is treated purely as a technical task the way that sequential methods of traditional piano pedagogy and typical jazz method books tend to do, instead of taking into account the larger culture and environment surrounding the music”¹⁸.

Herzig (1997) concludes that many jazz piano method books contain technical material that is virtually identical in nature (*e.g.*, chord voicings, harmonic concepts, melodic line generation). Lin (2011) continues, “This identical content [in jazz piano method books] emphasizes the idea that the material covered in written jazz piano method books needs less research than the *ways* in which that material can be most effectively learned, taught, or assimilated. Additionally, more focus is needed regarding the *environment* in which such learning can flourish”¹⁹. Vibraphonist Terence S. Gunderson²⁰ analyzed fifteen jazz piano methods in order to advance his own approach to practice for jazz vibraphone. Smalls (2006) defends the use of solo transcription to

¹⁶ Wilmot A. Fraser, “Jazzology: A Study of the Tradition in which Jazz Musicians Learn to Improvise” (PhD diss., University of Pennsylvania, 1983), 21.

¹⁷ Victor L. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD diss., Columbia University, 2011).

¹⁸ *Ibid.*, 18.

¹⁹ *Ibid.*, 17.

²⁰ Terence S. Gunderson, “A Pedagogical Approach to Solo Jazz Vibraphone Developed Through an Analysis of Common Performance Practice” (PhD diss., University of Northern Colorado, 1992).

assimilate the jazz language and vocabulary, and details a complete method for this process. He focuses on the creation of a personalized practice method designed to suit each student's tastes, preferences, and strengths, with emphasis on the selection of adequate content, and stating the importance of creating an individual approach to practicing jazz piano that is firmly based in jazz tradition. In the same direction, jazz scholar Mark Tucker writes in *The New Grove Dictionary of Jazz*: "While many professional jazz musicians regard transcription as an integral part of their own education, few have discussed the transcribing process in any detail"²¹. Small (2006) also adds that "In many cases, however, transcription is a self-taught skill"²².

Alperson (1988) defined jazz as "a complex musical practice, which encompasses specific elements of musical form, techniques, and idioms which are involved in a tradition intimately associated with particular social and political contexts"²³. He outlines five essential components of music education: "1. Language of the style; 2. Technical terms; 3. Patterns of phrasing and intonation; 4. Developing the tacit dimension (inner and physical hearing, conceptual and sonorous imagination); and 5. Group performance as a member of the community"²⁴. Alperson (1988) also concludes that musical education is mistaken because it has focused almost entirely in technical concepts rather than in

²¹ Mark Tucker, "Transcription", *In The New Grove Dictionary of Jazz*, ed. Barry Kernfield (New York, NY: St. Martin's Press, 1996), 1213-15.

²² Philip W. S. Small, "Creating Your Own Voice through Jazz Transcription: A Teaching Method for Jazz Students" (MM, California State University, 2006), 6.

²³ Philip Alperson, "Aristotle in Jazz: Philosophical Reflections on Jazz and Jazz Education", *Bulletin of the Council for Research in Music Education*, 95 (1988): 39.

²⁴ *Ibid.*

“human expression”. He states, “Ideally, jazz education should be education of the human being in general”²⁵.

The Need For The Study

Due to the lack of research that synthesizes existing resources, frames the art of jazz piano performance in context of practice routines, and outlines a specific approach, this research is offered to provide jazz pianists (of all levels) with information that allow them to develop individual practice routines that foster healthy and sustainable habits and advance artistry. The original information presented is based on the review of related literature published in the area of jazz performance and pedagogy; the experiences of respected jazz performers, students and pedagogues; and the synthesis of methods and approaches used in deliberate musical practice (classical and jazz styles).

Purpose

With the intent of improving performance and pedagogy, the purpose of this research is to gain information about practice methods and techniques directed to develop a personal practice routine for the contemporary jazz pianist.

Problems

The specific problems of this study are as follows:

1. To investigate standard practice methods used by jazz and classical musicians and identify key authors/exemplars;

²⁵ Philip Alperson, “Aristotle in Jazz: Philosophical Reflections on Jazz and Jazz Education”, *Bulletin of the Council for Research in Music Education*, 95 (1988): 39.

2. To outline content for a personal practice routine for jazz pianists and other musicians as creative as performances that combines the study of technique, harmony, language, improvisation, and repertoire;
3. To identify profitable practice habits for beginners, intermediate, advanced, and professional jazz pianists;
4. To offer guidelines to jazz pianists and other musicians for the development of a personal artistic perspective and voice.

CHAPTER 2: RELATED RESEARCH

Five studies were selected from the literature as related to the present research for inclusion in this chapter: Lin (2011), Herzig (1997), Small (2006), Goldman (2010) and Jordan-Miller (2010). Those studies were selected due to their focus on practice habits and resources used by professional jazz pianists and other musicians, including personal interviews with artists, reviews of jazz piano method books, psychological concepts and practices associated with learning sports and other arts. The following is a description of each related study with comparisons to the present research.

The Lin Study

Victor Juneway Lin submitted a dissertation to the Teachers College at Columbia University in 2011 entitled *Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists*²⁶. The purpose of Lin (2011) study is to examine the learning processes and environments that lead to successful development and growth in the area of jazz piano performance. Lin analyzes how selected jazz pianists of differing backgrounds and ages developed as musicians and how they practiced. He then offers a comparison of the experiences and habits of the selected jazz pianists. Lin (2011) states that “very little research has been made on the way that jazz musicians practice”²⁷ and that there is a need to “explore the actual ways that successful jazz pianists learned and

²⁶ Victor L. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD diss., Columbia University, 2011), 19.

²⁷ Ibid.

practiced as well as [obtain] descriptions of the environments that inspired, surrounded, and led to their formative habits and practices”²⁸.

The findings of the Lin (2011) study are obtained from a comparison of interviews conducted with five professional jazz pianists, classified by age and experience. Those pianists are: Kenny Barron (1943-) and Mulgrew Miller (1955-2013), both with an extensive amount of professional experience; Joe Gilman (1962-), with less experience than Barron and Miller but still very accomplished; and finally Taylor Eigsti (1984-) and Michael Hardin (1982-), both upcoming pianists with limited experience compared to the others.

Lin (2011) describes the background and habits of jazz pianists that lead to successful development as accomplished artists, focusing on the formative practice habits and the environments in which they learned. According to Lin (2011), the following five recurring themes emerged from the interviews: 1) the concept of self-teaching; 2) the idea of the self-motivated learner; 3) the integration of jazz music into the daily pattern of everyday social life; 4) a high degree of peer involvement; and 5) the presence of a musical community. Lin (2011) further asserts that all five pianists interviewed recognize the use of literature as a teaching tool, especially the younger pianists within the group, but emphasize the use of direct sources such as transcriptions from recordings and listening to musicians, as preferred ways of learning.

Lin (2011) concludes that most of the pianists interviewed said they were self-taught and learned a great deal from performing with others and through professional

²⁸ Victor L. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD diss., Columbia University, 2011), 19.

playing experiences. He reports that within the interviews many of the pianists spent more time discussing the role of the environment on their development as artists rather than describing specific habits of practicing the piano.

Lin (2011) asserts that the following four elements should be emphasized when designing jazz instruction: “1) playing by ear; 2) listening with others; 3) performing for others frequently; and 4) playing with others frequently.”²⁹ He states that learning jazz piano is a community-based social activity, which is rarely successfully learned in isolation. By contrast, a traditional classical pianist would typically be trained through a combination of private lessons, a series of practice sessions and public solo concerts.

Lin (2011) offers recommendations for further research including the study of formative experiences of jazz pianists beyond those interviewed in his research, as well as the formative experiences of other instrumentalists. In addition, he suggests that future researchers conduct studies to identify new and effective ways that jazz piano and other instruments are learned. Lin (2011) emphasizes the need to understand and document how jazz piano is taught, how this compares to the teaching and learning of classical piano, and how students describe the learning process from their perspective.

Comparison of the Lin Study to the Present Study

The Lin (2011) study provides first-hand information obtained from interviews conducted with five acclaimed pianists regarding their practice methods and habits—with the purpose of extracting possible pedagogical applications. Lin (2011) states the

²⁹ Victor L. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD diss., Columbia University, 2011), Abstract.

importance of gaining information from primary sources (*i.e.*, jazz pianists themselves) since jazz music is an art form that has historically been self-taught and learned in the oral tradition. While the emphasis of Lin's (2011) research is placed on the analysis of the practice habits of professional jazz pianists, the present study addresses research about tracking progress and artistic results of pedagogical methods when applied to students from different backgrounds and levels.

The Lin (2011) study consists of a pedagogical essay with a summary of practice techniques – without mention of specific musical examples, exercises, recordings or solos to be included in effective practice habits for musicians. On the other hand, the present research is designed to identify and classify a selection of reference materials for each musical element of study (*i.e.*, technique, harmony, language, improvisation, repertoire) to offer specific tools and resources for jazz pianists.

Lin (2011) emphasizes a need to compare learning methods for both jazz and classical piano; however, he offers few examples that illustrate the differences and similarities of both pedagogical systems. The present study addresses piano pedagogy from a global perspective, implementing elements from jazz and classical styles – among others – to offer jazz pianists a wide approach to music.

Overall, Lin (2011) offers well-organized information regarding how jazz pianists practice, including approach, historical analysis, and motivations/personal opinions. The present study complements the Lin study with practical material and aesthetic concepts that provide students with a foundation for the development of a personal artistic perspective and voice.

The Herzig Study

Monika Herzig submitted a dissertation to the graduate faculty of the School of Music at Indiana University in 1997 entitled *Elements of Jazz Piano Pedagogy: A Content Study*³⁰. The purpose of the Herzig (1997) study is to identify instructional components of jazz piano technique by analyzing and comparing published teaching methods and interviewing selected accomplished jazz pianists.

As part of her study, Herzig (1997) selected twelve jazz piano methods that address at least five of the following areas: theory, technique, melodic improvisation, harmonic accompaniment, rhythmic improvisation, style, and aural training. A list of those method books is included in table 1.

Herzig (1997) offers analysis of the contents of the twelve piano methods by counting the number of pages devoted to the following categories within each book: jazz theory, style, soloing, chordal accompaniment, technique, rhythm, common forms and aural training. As part of her findings, she reports that harmonic voicings and chord theory received the most emphasis within these publications³¹.

In addition, Herzig (1997) compares the opinions of selected acclaimed jazz pianists such as Oscar Peterson, Billy Childs, Benny Green, Marcus Roberts, Bill Dobbins, Richie Beirach, and Barry Harris, regarding how to develop language within jazz improvisation. "Interviews with experienced jazz pianists revealed elements of jazz piano pedagogy that can not be covered in method books, such as the imitation of models

³⁰ Monika Herzig, "Elements of Jazz Piano Pedagogy: A Content Analysis" (PhD diss., School of Music, Indiana, 1997).

³¹ Ibid., 9.

TABLE 1. Selected piano method books studied in Herzig (1997) research

Author	Title	Publication Information
Dobbins, Bill	<i>The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volumes 1-4</i>	New York, NY: Charles Colin Music, 1978, 1984, 1985 and 1989
Haerle, Dan	<i>Jazz Improvisation for Keyboard Players</i>	Van Nuys, CA: Alfred Music Publishing, 1978
Ignatzek, Klaus	<i>Die Jazzmethode für Klavier</i>	Mainz, Germany: Schott Music, 1995
Kahn, Marvin	<i>The Complete Guidelines to Improvisation for Piano, Volumes 1-3</i>	Milwaukee, WI: Hal Leonard Corp., 1983
Levine, Mark	<i>The Piano Book</i>	Petaluma, CA: Sher Music, 1989
Mann, Martan	<i>Jazz Improvisation for the Classical Pianist</i>	New York, NY: Amsco Publications, 1989
Mehegan, John F.	<i>Improvising Jazz Piano</i>	New York, NY: Amsco Publications, 1985
Mehegan, John F.	<i>Jazz Improvisation: Volumes 1-4</i>	New York, NY: Watson-Guptill, 1959, 1962, 1964 and 1965
Novello, John	<i>The Contemporary Keyboardist</i>	Toluca Lake, CA: Source Productions, 1990
Robur, Jean	<i>The Jazz Piano Method</i>	Milwaukee, WI: Hal Leonard Corp., 1991

or interaction with fellow musicians and even questions the value of the recent rise of jazz education”³². The selected jazz pianists also pointed out that “they rarely teach from method books and believe strongly in learning through listening and transcribing”³³.

Herzig (1997) states that “all interviewees mentioned rhythmic feel as an essential skill for jazz pianists, and some added voicings, chord theory, repertoire, phrasing, and aural training”³⁴. She notes that all interviewees had private training in classical piano for a minimum of five years.

Herzig (1997) states that “most of the teaching methods developed during the short history of jazz education concentrate on the soloist without addressing the special role of the rhythm section”³⁵. She recommends further research on the different roles of the pianist in this context.

Herzig (1997) concludes that “written methods generally cannot accommodate for aural, rhythmic, and interactive learning in jazz, which are essential elements of a successful jazz performance”³⁶, and questions the efficiency of exclusively using such method books with students. She recommends a combination of instructional materials with teacher input, aural examples, and method books to ensure effective learning.

Additionally, Herzig (1997) recommends that jazz piano teachers focus on the individuality of their student’s skills and performance abilities as they guide them to explore new directions. She affirms that “jazz education research and pedagogy have

³² Monika Herzig, “Elements of Jazz Piano Pedagogy: A Content Analysis” (PhD diss., School of Music, Indiana, 1997), 12-13.

³³ *Ibid.*, vi.

³⁴ *Ibid.*

³⁵ *Ibid.*, 12.

³⁶ *Ibid.*, 193.

enabled better preservation of the traditions and economic security for many jazz musicians³⁷

Comparison of the Herzig Study to the Present Study

Herzig (1997) provides a detailed analysis of several comprehensive jazz piano methods, focusing on the content and how these resources are perceived and used by professional jazz pianists. She states that her study is “mostly exploratory in nature, and further research in the area of jazz piano pedagogy is necessary to validate the findings in it”³⁸.

In addition, Herzig (1997) compares content within jazz piano method books with content found in general jazz improvisation methods. The present study, although primarily directed toward jazz pianists, addresses practice methods that can be applied to any instrument or style of music.

Herzig (1997) analyzes jazz piano methods where information is classified categorically, without offering specific examples of ways to organize this content into a practice routine that students can perform on a daily basis. The present study includes several practice routine samples and strategies templates, designed for jazz pianists ranging from beginners to advanced artists.

Herzig (1997) concludes that most of the comprehensive piano methods assume that the student has command of basic piano technique and ability to read music. Moreover, she asserts that these piano method books are organized by concepts rather

³⁷ Monika Herzig, “Elements of Jazz Piano Pedagogy: A Content Analysis” (PhD diss., School of Music, Indiana, 1997), 193.

³⁸ *Ibid.*, 185.

than as a series of individual lessons or specific practice routines. The present researcher offers conceptual content with specific exercises and routines.

The Small Study

In 2006, Philip Willard Stanley Small submitted a masters thesis to the Department of Music at California State University in Long Beach entitled *Creating Your Own Voice Through Jazz Transcription: A Teaching Method for Jazz Students*³⁹. The purpose of the Small (2006) study is to identify a method of teaching and learning jazz improvisation through the transcription and analysis of a jazz solo.

Small (2006) uses a single solo transcription as the basis of his research. This transcription is Red Garland's solo improvisation within Thelonious Monk's *Straight, No Chaser*, from the Miles Davis album *Milestones* (1958).

In the study, Small (2006) focuses on the creation of a personalized practice method designed to suit each student's tastes, preferences, and strengths, with emphasis on the selection of adequate content. He emphasizes the importance of creating an individual approach to practicing jazz piano that is firmly based in jazz tradition. Small (2006) posits that solo transcription will lead the student to improvise in an individual manner. "The method teaches the student to explore the process of musical growth through listening, emulation, and playing and creating original melodies"⁴⁰.

Small (2006) asserts that it is important to select solos to transcribe that are appropriate to the skills and ability level of the jazz pianists. He posits that to fully

³⁹ Philip W. S. Small, "Creating Your Own Voice through Jazz Transcription: A Teaching Method for Jazz Students" (MM, California State University, 2006).

⁴⁰ *Ibid.*, 2.

benefit from transcribing, students must have a strong background in music theory, performance, and ear training.

Small (2006) asserts that the main benefits of transcribing jazz solos for jazz pianists are to acquire the feel of the music through the act of imitation, and to understand the music theoretically (*i.e.*, through harmonic, melodic, and rhythmic analysis). He outlines how to play a transcription, how to troubleshoot difficult passages, and how to extract individual melodies and phrases for isolated practice and assimilation, transposing them to all keys and creating variations until they become part of the student's own language. Small (2006) offers the following nine steps in the process of transcription⁴¹, as shown in table 2.

TABLE 2. Nine-step process of transcription for jazz pianists

1. Amassing the correct materials
2. Choosing the solo
3. Listening to the solo
4. Writing out the solo
5. Playing the solo
6. Extracting melodies from the solo
7. Creating exercises from the solo
8. Composing original melodies based on ideas from the solo
9. Incorporating these ideas into improvisational performance

⁴¹ Philip W. S. Small, "Creating Your Own Voice through Jazz Transcription: A Teaching Method for Jazz Students" (MM, California State University, 2006), 8.

In his study Small (2006) concludes that acquiring a unique voice through the transcription of jazz solos is similar to learning a language through hearing and imitation. The imitation period occurs first and leads to the development of independent offerings. Small (2006) recommends that students take a longitudinal approach as they employ this method, spending several months on each solo until they assimilate its characteristics.

Comparison of the Small Study to the Present Study

Small (2006) asserts that several areas will improve substantially through the method of transcription for jazz pianists including ear training, music theory and analysis, sight-reading, notation, composition, and practicing skills. In the present study, solo transcription and analysis are key concepts developed throughout the research, with the goal of obtaining all musical information required to develop a personal jazz language (*i.e.*, either from recordings or live performances).

Small (2006) outlines nine steps in the process of transcription, placing the step of writing the solo before playing it. The present researcher recommends that students play a solo “by ear” until they can perform it as the original version, and notate it afterwards in order to analyze it and outline creative highlights. If, however, a solo is determined to be too difficult to learn in its entirety by ear, or if a student has a special interest in focusing on something like chord voicings, for example, the present researcher recommends that he notate the solo first or read it from a published transcription.

Small (2006) concentrates on one solo transcription as an example, and does not provide suggestions of other instrumentalists, recordings, or recommended solos to be

transcribed. The present researcher provides an annotated list of recommended solos to perform, transcribe, and study by artist and right period.

Following Small's (2006) recommendations for further research, the present researcher employs deep study and knowledge of the tradition of the art form as a primary source to develop a personal jazz language. In order to gather essential concepts used by contemporary jazz pianists, the present researcher selected twelve representative solo transcriptions from historically representative jazz pianists, and outlined the musical characteristics of each one, focusing on the use of original melody, chord/scale relationship, harmony, rhythm and solo structure.

The Goldman Study

In 2010, Jonathan I. Goldman submitted a dissertation to the Department of Music Research/Music Education, at McGill University in Montreal, Canada entitled *The Shape of Jazz Education to Come: How Jazz Musicians Develop A Unique Voice Within Academia*⁴². The purpose of the Goldman (2010) study is “to examine the ways in which exceptional jazz musicians are able to develop a unique voice within academia. Given the existing curricular offerings and pedagogy of the academy, there is a widely held perception that the majority of students graduating from post-secondary institutions tend to sound homogenized”⁴³.

Goldman (2010) interviewed ten prominent jazz musicians and analyzed how they developed a unique voice in relation to their jazz education environment. He presents a

⁴² Jonathan I. Goldman, “The Shape of Jazz Education to Come: How Jazz Musicians Develop a Unique Voice within Academia” (PhD diss., McGill University, Montreal, 2010),

⁴³ Ibid., 1.

thorough literature review that addresses issues related to formal education about jazz. Goldman (2010) supports the generally held perception that the majority of persons that complete formal music training at colleges tend to sound homogenized, but he also affirms that many of the successful jazz musicians interviewed with a “unique voice” state that they have learned it largely from formal jazz education. He continues to assert that college music curricula should be consistently and routinely reviewed. Goldman (2010) states that “the role of jazz institutions needs to be clearly defined with respect to developing a unique voice and as a precipitator of student homogenization”⁴⁴. He offers four main findings:

Results indicated that (a) the jazz discourse overstates the gravity of the call for change; (b) exceptional jazz musicians engage in additional learning experiences based on the jazz tradition; (c) a unique voice develops concurrently with learning about jazz music generally; [and] (d) institutions provide a viable option for learning about jazz and developing an individual style if students supplement their formal education with self-directed learning.⁴⁵

Goldman (2010) concludes that jazz students must assume responsibility for their own education. He asserts that the mission of music institutions, like institutions advancing other artistic disciplines, is to provide technical skills and general knowledge, providing students with a strong foundation so they can develop a unique voice on their own.

Goldman (2010) recommends that students engage in the private study of jazz performance and combine school resources with real world playing experience and interactions with other musicians. He mentions the value of playing in professional

⁴⁴ Jonathan I. Goldman, “The Shape of Jazz Education to Come: How Jazz Musicians Develop a Unique Voice within Academia” (PhD diss., McGill University, Montreal, 2010), 113.

⁴⁵ *Ibid.*, II.

bands, performing a variety of musical styles, and leading musical projects as experiences that advance the skills and abilities of jazz pianists. Goldman also recommends further study of jazz performance and education.

Comparison of the Goldman Study to the Present Study

Goldman (2010) states that “a better understanding of the concept, importance, and development of a unique voice is necessary for jazz education and jazz music generally”⁴⁶. Additionally, the present researcher also focuses on the development of a personal practice routine that will help jazz pianists and other musicians create their own voice and style.

Goldman (2010) asserts that there are two options to learn how to play jazz music: within the academic system and outside of it. The present researcher agrees with Goldman, and posits that future students of jazz will likely learn through formal instruction as there are fewer opportunities to go “on the road” with professional jazz ensembles than in previous decades. Moreover, the formal school setting provides a forum for the exchange of ideas and fosters creative interactions among jazz musicians.

The present study does not include the analysis of academic curricula and resources as found in the Goldman (2010) study. Instead, the present researcher focuses on the investigation of practice methods to be integrated within the academic system, providing specific practice routine examples for college curricula as well as for professional musicians.

⁴⁶ Jonathan I. Goldman, “The Shape of Jazz Education to Come: How Jazz Musicians Develop a Unique Voice within Academia” (PhD diss., McGill University, Montreal, 2010), 112.

The Jordan-Miller Study

In 2010, Rebekah Jordan-Miller submitted a dissertation to the Graduate College of the University of Oklahoma entitled *Mental Skills Training for a Lower-Advanced to Advanced Pianist*⁴⁷. The purpose of Jordan-Miller (2010) study is “to develop a mental skills training program designed to train pianists to practice using psychological performance skills to promote a stronger, more focused, and fulfilling performance experience”⁴⁸.

In this study, Jordan-Miller (2010) examines and discusses deliberate practice strategies (*i.e.*, a thoughtful, measured and methodical approach to practice) and the mental skills used in sports that directly facilitate eminent levels of performance. She applies those techniques to music practice for the lower-advanced to advanced pianist, with the goal of developing and maintaining psychological skills that will facilitate effective practice and optimal piano performance. Most of the literature reviewed by Jordan-Miller (2010) includes deliberate practice instruction and psychological skills acquisition within a variety of fields, with primary focus on the area of athletics.

Jordan-Miller (2010) develops a twelve-week program that includes a series of activities, worksheets, and questions that guide students to efficiently and effectively structure their practice time, increase their level of concentration and focus, and develop a consistent performance mentality that is systematically strengthened through practice. She divides the program into five sections: 1) Maintaining Concentration and Focus; 2)

⁴⁷ Rebekah Jordan-Miller, “Mental Skills Training for a Lower-Advanced to Advanced Pianist” (PhD diss., University of Oklahoma, 2010).

⁴⁸ *Ibid.*, 3.

Trust; 3) Confidence; 4) Automation and Expressiveness; and 5) Practicing to Perform. Following this information, Jordan-Miller offers a summary as a sixth section.

Jordan-Miller (2010) recommends the development of programs of study that integrate mental skills training with applied piano studies, and other instruments and styles as well. She proposes the systematic measurement of effectiveness and progress, with specific programs for the lower-advanced to the advanced pianist. In addition, she offers comments regarding the enforcement of this approach with intermediate level and child/beginning pianists. Jordan-Miller (2010) states that early instruction will produce a stronger, and more musically consistent and confident performer in later years.

Comparison of the Jordan-Miller Study to the Present Study

Jordan-Miller (2010) applies deliberate practice techniques taken from sports training methods, outlining the following three elements: 1) to identify specific goals; 2) to provide immediate feedback; and 3) to focus on technique and psychological performance skills. The present researcher also addresses habits that parallel sports training (*e.g.*, dedication, focus, self-evaluation, achieving goals), including the methodical measurement of improvement (*e.g.*, repertoire, language, technique ability, harmonic concepts, solo transcriptions) and fosters confidence and psychological self-control when preparing for performance.

Jordan-Miller (2010) investigates deliberate practice when applied to practice habits for classical pianists. Although the present study is focused on jazz music (specifically jazz pianists), there are many similarities between both disciplines that can be applied to any musician. Deliberate practice is used in the present study for the

practice of almost every music element, providing specific routines and assigning time ranges for individual areas of study and situations. Examples are provided, so they can be applied to regular practice time during college, for example, or to the preparation of a concert or a professional recording session.

CHAPTER 3: METHOD

Design and Procedures

This chapter is written to offer an overview of the methodology employed in the study. Specific design and procedures relate to the purpose of this research and are organized as outgrowths of the four research problems:

1. To investigate standard practice methods used by jazz and classical musicians;
2. To outline content for a personal practice routine for jazz pianists and other musicians as creative as performances that combines the study of technique, harmony, language, repertoire, and improvisation;
3. To identify profitable practice habits for beginners, intermediate, advanced, and professional jazz pianists; and
4. To offer guidelines to jazz pianists and other musicians for the development of a personal artistic perspective and voice.

The following is a description of how data were obtained and analyzed in this study.

Problem 1:

To investigate standard practice methods used by jazz and classical musicians and identify key authors/exemplars.

Several printed sources (both primary and secondary) were consulted to address problem 1 including books, dissertations and theses, and articles in periodicals. In addition data were obtained over the past two decades from interactions as a private piano

student with the following piano teachers: Stefan Karlsson, JoAnne Brackeen, Francesc Burrull, Ray Santisi, Dave Frank, Paul Schmeling, Iñaki Salvador and Stanislav Pochekin, as well as a review of their publications (if applicable). The researcher also informally explored the selection and implementation of practice methods and techniques (for a period of ten years) with jazz piano students at the Liceu Conservatory in Barcelona, Spain, where he serves as professor of jazz piano, ear training and improvisation.

Data were obtained from Berklee College of Music (Boston, MA), consulting the Stan Getz Library and Media Center, as well as from the following libraries: University of Nevada in Las Vegas (Las Vegas, NV), Boston Public Library (Boston, MA), Liceu Conservatory (Barcelona, Spain) and Universitat Autònoma de Barcelona (Barcelona, Spain). The researcher used library information and personal interactions/experiences to create a list of key authors/exemplars to be used as the basis of this study, as shown in table 3.

Problem 2:

To outline content for a personal practice routine for jazz pianists and other musicians as creative as performances that combines the study of technique, harmony, language, repertoire, and improvisation.

After analyzing and comparing the exemplary jazz methods from problem 1 of this study the researcher designed templates for each of the five elements (*i.e.*, technique, harmony, language, improvisation, and repertoire) outlining specific content for practice routines based on setting and difficulty level (see chapter 4 – *Part TwoI: Practice Routine*).

TABLE 3. Key authors/exemplars to be used as the basis of this study

Author	Book Title
Jamey Aebersold	<i>Play-A-Long Series, Volumes 1-133</i>
David Baker	<i>How to Play Bebop, Volumes 1-4</i>
Jerry Bergonzi	<i>Inside Improvisation Series, Volumes 1-7</i>
Jerry Coker	<i>Complete Method for Improvisation</i>
Hal Crook	<i>How to Improvise</i> <i>Ready, Aim Improvise!</i>
Bill Dobbins	<i>The Contemporary Jazz Pianist, Volumes 1-7</i>
Dave Frank	<i>The Joy of Improv, Volumes 1 and 2</i>
Dan Haerle	<i>Jazz Improvisation for Keyboard Players</i> <i>Jazz Piano Voicing Skills</i>
John F. Mehegan	<i>Jazz Improvisation, Volumes 1-4</i>

The researcher reviewed and compiled extensive lists of jazz repertoire in order to provide a step-by-step guide to build a consistent jazz repertoire for pianists (see appendix A). These lists, include approximately 1000 songs, and were grouped by the researcher according to the following criteria:

- Style
- Inclusion in jazz method books by other authors
- Inclusion in *Real Books*

- Inclusion in recordings
- Inclusion in repertoire lists for school ensembles/combos

They were compiled after consulting several *Real Books* and were selected as exemplary tunes within the jazz repertoire.

Problem 3:

To identify profitable practice habits for beginners, intermediate, advanced, and professional jazz pianists.

In order to develop original researcher-generated (consistent) practice routines that yield profitable practice habits, standard practice methods used by jazz and classical musicians from different backgrounds and styles were investigated. The researcher created a series of templates to organize and display information (see chapter 4 – Part Two: *Practice Routine*) to present a complete and innovative approach to the art of practicing.

The researcher identified specific content for practice routines sorted by difficulty level, with short- and long-term goals, concrete times, and primary foci identified for each session. This information was organized and compared in the following three main sections: 1.) The Instrument; 2.) The Music; and 3.) Practice Routine. As part this process, the researcher addressed how to play by ear, group performance and interaction, and daily technique routines. In addition, the researcher identified and compiled a list of key reference materials to supplement individual practice routines and advance profitable practice habits, and offered bibliography/discography at the end of individual sections of the study (as appropriate), and Appendices.

The researcher considered historically representative jazz solos from print and recordings to identify an original list of twelve exemplary solos by acclaimed jazz pianists (see appendix B.1.). Solo transcription and analysis were embedded in original practice routines to assimilate the tradition and jazz language directly from the music and the musicians.

Problem 4:

To offer guidelines to jazz pianists and other musicians for the development of a personal artistic perspective and voice.

The researcher approached problem 4 by writing original guidelines based on his personal and professional experience, popular culture (*e.g.*, music, film, television), published interviews with artists, and books on topics related to personal expression, creativity, psychology, philosophy, self-help, and music. Guidelines were organized to outline music within a context of everyday life—the human experience. This section of the study was intended as a compilation and synthesis of approaches to communication for artists – recognizing the roles of individuality and originality and applying these concepts into music making for jazz pianists.

CHAPTER 4: RESEARCH FINDINGS

Introduction

Jazz music is a complex and sophisticated art form that requires those who perform it to be global artists (*i.e.*, performers, composers, arrangers, orchestrators and improvisers). Jazz artists, including jazz pianists, require a deep understanding of music theory, improvisation, repertoire, and communication skills. There are many factors that contribute to the development of a jazz pianist including both innate abilities and environmental influences. Accordingly, many questions arise regarding the development of artistry for jazz pianists such as the following: How do jazz musicians (across the spectrum from beginner to professional) practice? How do they become successful? How do they acquire a foundation and command of music fundamentals while simultaneously developing a personal voice and style?

In many ways, the success of a jazz performer depends on the effectiveness of his practice habits. Following this introduction, this chapter is written in the style of a jazz piano method book to offer a synthesis of information to the reader and to practicing musicians, that includes a series of templates, repertoire lists, and practice routine frameworks. The qualitative findings obtained this study blend the researcher's original ideas with scholarly information and practical applications—founded in *best practices*, jazz music traditions, lessons and insights from scholars and artists, and pedagogical theory.

Information is organized and presented topically within three parts: 1. *The Instrument*; 2. *The Music*; and 3. *Practice Routine*. These parts contain information about the specific topics related to being an artist, a musician, and a jazz pianist. Part One briefly explains the history, mechanism, and acoustical characteristics of the piano, technique, tuning and references about other keyboard instruments as well. Part Two is devoted to music theory and the music elements, organizing all material provided in *The Five Elements* (Technique, Harmony, Language, Improvisation, and Repertoire) that articulate the structure of the practice routines in part four, which is the central theme of this research. Part Three describes different approaches and techniques to develop practice routines including the information provided in Parts One (*The Instrument*) and Two (*The Music*).

All three parts are connected, and together comprise the whole spectrum of successful jazz piano performance. Reference lists and charts are provided in the Appendices to complement the text.

This research is designed to provide jazz pianists and other musicians with tools to develop a profitable (personal) practice routine that combines the basic musical subjects (*The Five Elements*). Practice routines are offered via descriptions and research-designed templates according to level (*i.e.*, beginner, intermediate, advanced, and professional), setting (*e.g.*, school/college, home, studio) and specific goals (*i.e.*, performance, recording session, regular maintenance practice).

In order to develop a consistent (and profitable) routine, standard practice methods used by jazz and classical musicians from different backgrounds and styles were investigated, including solo transcription and analysis, how to play by ear, group

performance and interaction, and daily technique routines, with a combination of methods and approaches used in deliberate practice of traditional classical music pedagogy and sports training. A selection of key reference material such books, audio, video and software, is provided and analyzed, highlighting selected applications from each one. Solo transcription and analysis were employed to assimilate the tradition and jazz language directly from the music and the musicians, investigating twelve historically representative solos by great jazz pianists (See Appendix B.1. for a detailed list).

Finally, this research was designed to offer guidelines to jazz pianists and other musicians for the development of a personal artistic perspective and voice. In order to eliminate prejudices and artificial stylistic barriers and approaches to music, criticism and self-evaluation skills are key elements included within regular practice habits, also to be able to identify weaknesses and how to resolve them. The ultimate goal of a successful practice routine as explored in this research would be to integrate mind, body and the musical instrument into one entity.

The present chapter is divided in three parts:

1. The Instrument
2. The Music
3. Practice Routine

PART ONE: THE INSTRUMENT

1. Approaching the instrument

The instrument is the voice.

Every musician has a unique sound that reflects his music. This sound comes directly from an instrument or voice and makes the first impression on an audience. It is his artistic fingerprint—his distinctive approach to music making, which is evident throughout his performances.

Horn players and singers, for example, often spend significant time working on their sound and technique; and sometimes this is the most important aspect they practice. Piano players, on the other hand, mainly focus on music and technique, since the piano is ready-to-play, leaving the sound as “something given”.

A musical instrument should be approached as an extension of the mind and body, not as a separate tool⁴⁹. For instrumentalists, including pianists, the instrument is the physical vehicle that lets musical ideas be heard, like vocal cords for singers. This approach requires knowledge of how the instrument works mechanically and acoustically, as well as command of technique.

In music performance the embodied interaction with the music implies the corporeal attunement of the musician to the sonic event that results from the performance”...“It becomes an optimal embodied experience (*flow*) when the musician is completely immersed in the created musical reality (*presence*) and enjoys himself through the playfulness of the performance. Therefore direct

⁴⁹ Luc Nijs, Micheline Lesaffre, and Marc Leman, “The Musical Instrument as a Natural Extension of the Musician” in *Proceedings of the 5th Conference of Interdisciplinary Musicology* (Paris, France: LAM-Institut Jean Le Rond d'Alembert, 2009), 132-133.

perception of the musical environment, skill-based playing and flow experience can be conceived of as the basic components of embodied interaction and communication pattern”...”The resulting transparency of the musical instrument leads to a short-term intuitive apprehension of being one with the musical instrument⁵⁰.

Performers, including jazz pianists, who approach their instrument in this manner, are able to interact with other musicians and audiences without physical or technical limitations. A profound understanding of the instrument qualifies musicians to express with artistic freedom and creativity⁵¹.

2. The Piano: History, Mechanism and Acoustics

2.1. Brief History

The Piano Technicians Guild⁵² describes the piano as “the most popular instrument in existence since it was invented three centuries ago”, in the year 1698, by

⁵⁰ Luc Nijs, Micheline Lesaffre, and Marc Leman, “The Musical Instrument as a Natural Extension of the Musician” in *Proceedings of the 5th Conference of Interdisciplinary Musicology* (Paris, France: LAM-Institut Jean Le Rond d'Alembert, 2009), 132-133.

⁵¹ Jens Lindemann. “Interview: Your Instrument as an Extension of your Body” on *Artist House Music webpage* (November 2007).
<http://www.artisthousemusic.org/videos/your+instrument+as+an+extension+of+your+body>

⁵² *Piano Technicians Guild (PTG)*: organization of the Registered Piano Technician, is the world's premier source of expertise in piano service and technology, providing information for tuners, technicians, teachers, piano owners and pianists. Registered in Kansas City, KS, United States of America. Official web page: www.ptg.org

Bartolomeo Cristofori⁵³, as an evolution of its keyboard predecessor's *dulcimer*⁵⁴, *clavichord*⁵⁵ and *harpsichord*⁵⁶. According to Wendy Powers,

The first true piano was invented almost entirely by one man—Bartolomeo Cristofori (1655–1731) of Padua, who had been appointed in 1688 to the Florentine court of Grand Prince Ferdinando de' Medici to care for its harpsichords and eventually for its entire collection of musical instruments. A 1700 inventory of Medici instruments mentions an "arpicimbalo," (*i.e.*, an instrument resembling a harpsichord), "newly invented by Bartolomeo Cristofori" with hammers and dampers, two keyboards, and a range of four octaves, C–c". The poet and journalist Scipione Maffei, in his enthusiastic 1711 description, named Cristofori's instrument a "gravicembalo col piano, e forte" ("harpsichord with soft and loud"), the first time it was called by its eventual name, *pianoforte*. A contemporary inscription by a Florentine court musician, Federigo Meccoli, notes that the "arpi cimbalo del piano e' forte" was first made by Cristofori in 1700, giving us a precise birthdate for the piano"⁵⁷.

Cristofori was the first person to incorporate hammers to hit the strings, obtaining a new range of dynamics and a greater sound; as opposed to the harpsichord family of

⁵³ *Bartolomeo Cristofori* (1655 Padua -1732 Florence, Italy): "Italian maker of pianos and harpsichords, tuner and conservator of musical instruments at the Medici court. He is best known for the invention of the piano." [Michael O'Brien, "Cristofori, Bartolomeo", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), vi: 670.]

⁵⁴ *Dulcimer*: (also called hammered dulcimer) "a trapezoidal zither with metal strings that are struck with light hammers. Musical instrument with the strings stretched over a trapezoidal sounding board"... "The hammered type is named in the Bible, and probably originated in the Middle East about 900 A.D." Smithsonian's link: http://www.si.edu/Encyclopedia_SI/nmah/dulcimer.htm

⁵⁵ *Clavichord*: "a keyboard instrument, the expressive of those whose sound is produced by strings rather than by pipes"... "Invented in Europe in the early 14th century, and actively used from the late Medieval to the Classical era. Smaller than other keyboard instruments like the harpsichord or the later piano, it produces sound by striking brass or iron strings with small metal glades called tangents". [Anthony C. Baines/Arnold Myers, "Clavichord", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), vi: 4.]

⁵⁶ *Harpsichord*: "a stringed keyboard instrument. It is distinguished from the clavichord and the piano by the fact that its strings are plucked rather than struck, and characterized by an elongated wing shape like that of a grand piano"... "The earliest known reference dates from 1397. It is considered the processor of the piano". [Edwin M. Ripplin, "Harpsichord", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), xi: 4.]

⁵⁷ Wendy Powers, "The Piano: The Pianofortes of Bartolomeo Cristofori (1655–1731)" in *Heilbrunn Timeline of Art History* (New York, NY: The Metropolitan Museum of Art, 2000). http://www.metmuseum.org/toah/hd/cris/hd_cris.htm (accessed February 17, 2013)

instruments that produced the sound by plucking the strings and generated a relatively low volume of sound⁵⁸.

Since the invention of the piano, several changes have occurred leading to the instrument as it is known today. Musicologist Jayson Kerr Dobney asserts that,

The Viennese school of piano making produced one of the two distinct types of piano to develop in the eighteenth century. Like its counterpart, the English piano, the so-called Viennese piano began as a regional tradition and was first built by makers and players mostly in Austria and southern Germany. Through the enormous influence of Vienna, which was then the center of the musical world, these pianos would become known throughout Europe and used by most of the great composers of the classical music period... The basic form of the Viennese piano was invented in Augsburg by the organist and keyboard maker Johann Andreas Stein (1728–1792). His most significant work was the creation of a new kind of piano action (the mechanism used to activate the hammer to strike the string). He developed his piano action, called the *Prellmechanik*, perhaps as early as 1769 and continued to perfect it through the 1770s. Stein simplified the complicated action of Bartolomeo Cristofori by dispensing with the intermediate lever and placing the hammer in direct contact with the key. With this design, the hammerhead rested toward the player, reversed from that on a Cristofori piano. The hammer is mounted in a "kapsel" with a "beak" at the end. When the key is pressed, the "beak" is caught on the escapement, propelling the hammerhead up toward the string. When the hammer falls, the position of the "beak" allows it to return to its rest position and it again catches on the escapement. The fulcrum on Stein's design was now at the very rear of the key, which maximized the leverage the player could exert on the hammer, making for a quick response and a somewhat louder sound than was possible on earlier pianos. Stein's was the first successful action that differed significantly from the Cristofori invention. In addition to the action, Stein is credited with introducing knee-lever controls for the dampers, and also the redesign of the case with bracings better suited for the demands of a hammer action piano than the earlier harpsichord-style cases⁵⁹.

Piano technician and rebuilder Rhythm Earthsong continues,

⁵⁸ Edwin T. Jaynes, *The Physical Basis of Music – And its Implications for Musical Performance* (St. Louis, MO: Unpublished, 1991), 303. <http://bayes.wustl.edu/etj/music.html>

⁵⁹ Jayson Kerr Dobney, "The Piano: Viennese Instruments" in *Heilbrunn Timeline of Art History* (New York, NY: The Metropolitan Museum of Art, 2000). http://www.metmuseum.org/toah/hd/vien/hd_vien.htm (accessed February 17, 2013).

This repetition action was improved further by the great Parisian piano maker Sebastian Erard, who invented a “double escapement” around 1821 (Erard pianos are still made today!) Indeed, this ability to repeat any note more and more rapidly, with less and less raise of the key, became one of the most dominant quests in piano evolution, as great composers of the baroque, classical and romantic eras wrote more quick and lively passages and trills into their increasingly ornamental pieces. And although many would surmise that we have come as far as we can, and achieved maximum key-repeat velocity in the modern era of piano design, a visit to the Steinway factory in New York (a field trip I highly recommend!) will reveal that their action technicians still work on ways to improve this even further, introducing new experimental action designs every few years⁶⁰.

The piano has always been an important element of the cultural⁶¹ and aristocratic society through history⁶².

The piano became a symbol of the Romantic spirit of individualism and freedom: It could be played by one person; It had a dynamic range from a whisper to overpowering thunder to convey a wide range of feelings and emotions; It could be used at home, in a salon or on a concert stage for personal expression; and, *The Industrial Revolution*, with its factories, mechanical improvements and improved manufacturing processes, made pianos available and affordable to many people⁶³.

Piano industry has also been an indicator of economic behavior and wealth during the last two centuries, when its production became massive and international. Author and journalist Jeffrey A. Tucker discusses the piano industry in the United States from the nineteenth-century until now asserting,

What about the time before the car? Look at the years between 1870 and 1930. As surprising as this may sound today, the biggest-ticket item on every household budget besides the house itself was its piano. Everyone had to have one. Those

⁶⁰ Rhythm Earthsong, “The Evolution of the Piano Action”, *Earthsong Pianos Blog* (accessed August 12, 2013) <http://earthsongpiano.com/the-evolution-of-the-piano-action/>

⁶¹ Arthur Loesser, Edward Rothstein, and Jacques Barzun, *Men, Women, and Pianos. A comprehensive social history covering three centuries and several countries* (New York, NY: Dover Publications Inc., 2011).

⁶² James Parakilas, and E. Douglas Bomberger, *Piano Roles: A New History of the Piano* (New Haven, CT: Yale University Press, 2002).

⁶³ Nancy Bachus, and Daniel Glover, *The Romantic Piano: The Influence of Society, Style, and Musical Trends on the Great Piano Composers* (Van Nuys, CA: Alfred Music Publishing, 1995), 12.

who didn't have one aspired to have one. It was a prize, an essential part of life, and they sold by the millions and millions”...”That too was new. Americans before 1850 mostly imported their pianos. American manufacturing was nearly nonexistent. After 1850, that changed dramatically with the flowering of what would become a gigantic US piano industry. The Gilded Age saw a vast increase in its popularity. By 1890, Americans fed half the world market for pianos. Between 1890 and 1928, sales ranged from 172,000 to 364,000 per year. It was a case of relentless and astounding growth”...“They were used in classrooms everywhere in times when music education was considered to be the foundation of a good education. They were the concert instruments in homes before recorded music and iPods. They were essential for all entertainment. American buyers couldn't get enough, and private enterprise responded⁶⁴.

Improvements in manufacturing processes, and other individual details of the instrument continue to develop⁶⁵ (*i.e.*, length, harp, pedals, strings), “but very little of this basic action design has been changed, how similar the functional design is to that of a grand piano built in the 21st century”⁶⁶. Some of today’s finest piano builder companies include (in no particular order): *Steinway & Sons, Bösendorfer, Fazioli, Yamaha, Kawai, Bechstein, Baldwin, Petrof, Pleyel, Bluthner* and *Mason & Hamlin*.

Table 4 provides a recommended list of bibliography regarding piano history. These resources provide an overview of the development of the instrument, and illustrate design innovations and discussion of the role and use of the piano in professional and amateur settings. Moreover, the resources include beautiful illustrations and photographs of the piano throughout history as well as definitions of technical music vocabulary related to music, the piano, and performance.

⁶⁴ Jeffrey A. Tucker, “The End of the US Piano Industry”, *Mises Daily - Ludwig von Mises Institute* (Auburn, AL). <http://mises.org/daily/3253> (accessed May 12, 2012).

⁶⁵ Michito Ishiyama Wolcott, *Piano, the Instrument: An Annotated Bibliography* (Lanham, MD: Scarecrow Press, 2001).

⁶⁶ Rhythm Earthsong, “The Piano: An Amazing Feat of Engineering”, *Earthsong Pianos Blog* (accessed August 12, 2013) <http://earthsongpiano.com/the-piano-an-amazing-feat-of-engineering/>

TABLE 4. Selected bibliography on history of piano

- Closson, Ernest. *History of the Piano*. Translated by Delano Ames. London, United Kingdom: Paul Elek, 1947.
- Crombie, David. *Piano: A Photographic History of the World's Most Celebrated Instrument*. San Francisco, CA: Miller Freeman Books, 1995.
- Dubal, David. *The Art of the Piano: Its Performers, Literature and Recordings, Volume 1*. Pompton Plains, NJ: Amadeus Press, 2004.
- Ehrlich, Cyril. *The Piano: A History*. New York, NY: Oxford University Press, 1990.
- Good, Edwin. *Giraffes, Black Dragons, and Other Pianos: A Technological History from Cristofori to the Modern Concert Grand. 2nd Edition*. Palo Alto, CA: Stanford University Press, 2002.
- Hinson, Maurice. *The Pianist's Dictionary*. Bloomington, IN: Indiana University Press, 2009.
- Isacoff, Stuart. *Natural History of the Piano: The Instrument, The Music, the Musicians – From Mozart to Modern Jazz and Everything in Between*. New York, NY: Knopf Doubleday Publishing Group, 2011.
- Kirby, F. E. *Music for the Piano: A Short History*. Pompton Plains, NJ: Amadeus Press, 1995.
- Palmieri, Robert. *Piano: An Encyclopedia. 2nd Ed.* New York, NY: Routledge, 2003.
- Parakilas, James and E. Douglas Bomberger. *Piano Roles. A New History of the Piano*. New Haven, CT: Yale University Press, 2002.
- Rowland, David. *The Cambridge Companion to the Piano*. Cambridge, United Kingdom: Cambridge University Press, 1998.
- Williams, John-Paul. *Piano: An Inspirational Style Guide to the Piano and Its Place in History*. New York, NY: Watson-Guption Publishing Group, 2002.

2.2. Parts and Mechanism

Piano technician Jason LaWind states that,

Pianos are the most complex mechanical device found in any home, with a typical instrument containing over 10,000 parts. Unlike other keyboard instruments such as harpsichords and organs, pianos are truly expressive. The player is able to articulate every note, and the piano has become increasingly popular because of this capability. Throughout its 300 year existence the piano has had a history as varied as the eras through which it has lived, and while it continues to mutate and develop in parallel with evolving technological, artistic, and aesthetic demands, the piano remains quite unchallenged as the greatest of all musical instruments⁶⁷.

The mechanism of a piano is not visible unless it is opened and carefully disassembled (true of grand pianos and upright pianos). Most pianists do not often look inside the piano until the piano technician comes to tune or repair it. Christopher Smit declares that,

Many pianists seem to have no idea how the instrument functions - and several factors may contribute to this lack of knowledge. The action of the piano is almost completely hidden from the sight of the pianist - if the pianist can't even see the action, they probably do not spend much time thinking about how it works. The piano is also one of the most complicated musical instruments, which may contribute to why pianists do not understand how it works⁶⁸.

Having a complete understanding of the whole process of creating sound with the piano, from the oppression of the keys until the end of the vibration of the strings, significantly determines the overall quality of the sound⁶⁹. Acoustic characteristics like resonance, brilliance, and dynamics are modeled depending of the use of the pedal,

⁶⁷ Jason LaWind, expert piano technician at Mindful Music Piano Tuning (Windham, Massachusetts, USA). <http://www.mindfulmusic.org>

⁶⁸ Christopher Smit, "The Piano Deconstructed Project". <http://www.piano.christophersmit.com/> (accessed on July 25, 2013).

⁶⁹ Walter Gieseking, and Karl Leimer, *Piano Technique* (New York, NY: Dover Publications Inc., 1972).

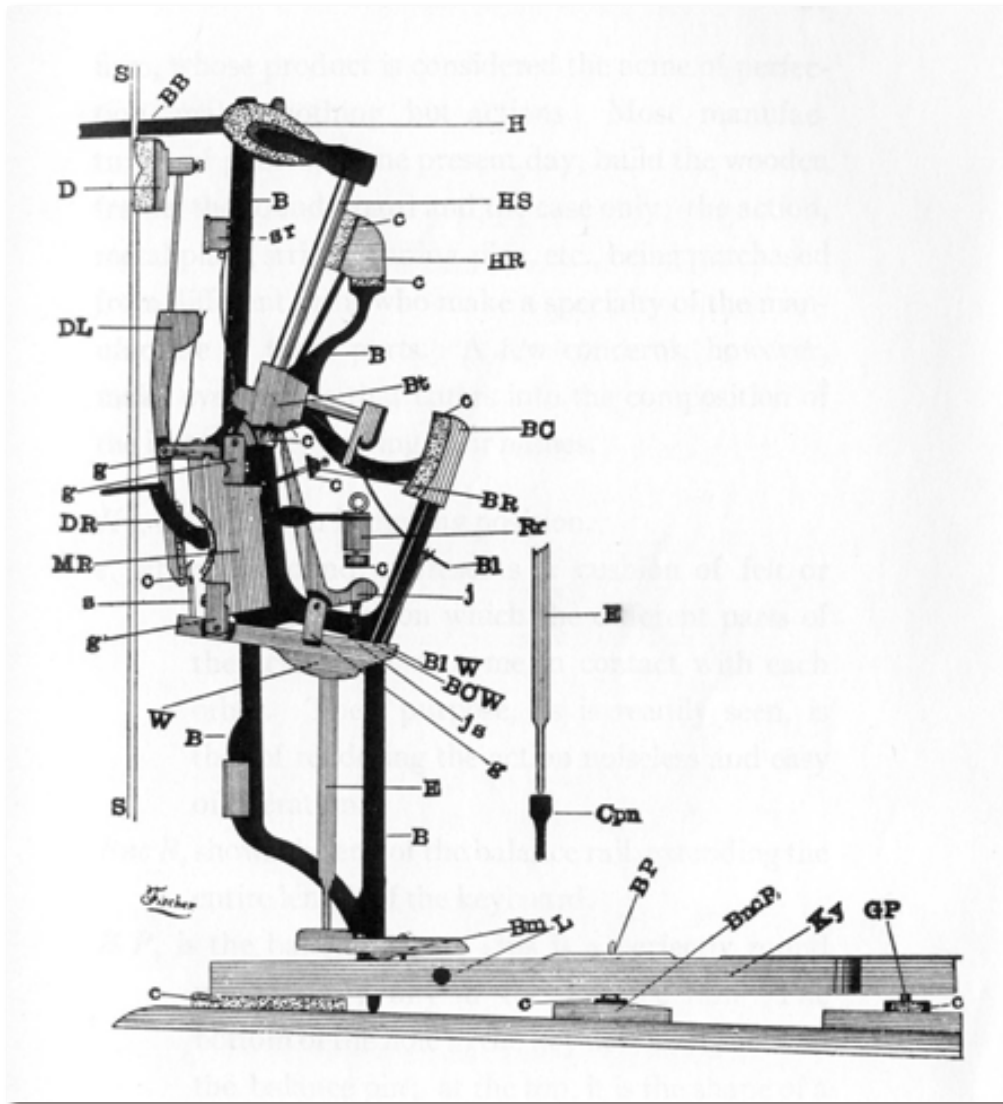
articulation, and touch⁷⁰. A complete jazz pianist should have a basic knowledge of piano parts and mechanism in order to master the technique of the instrument and to develop a personal sound quality. Observing the piano technician at work, and asking him questions about technical aspects and acoustics is a perfect way of learning how the piano works.

Pianist Kenny Werner⁷¹ recommends to press a chord or a single key and to hold it until the sound disappears (several seconds), listening carefully to all variations of the wave and resonance. He asserts that his exercise will provide the pianist with essential information about the music being performed, and a consciousness of the desired sound quality, to be reproduced later on in the instrument. The following illustration in figure 1 shows the different parts and mechanism of a standard upright piano.

⁷⁰ Heinrich Neuhaus, *The Art of Piano Playing*. Translated by K. A. Leivobith (New York, NY: Dover Publications Inc., 2013).

⁷¹ Kenny Werner, *Effortless Mastery* (New Albany, IN: Jamey Aebersold Jazz Inc., 1996).

FIGURE 1. Piano action diagram. Source: The Project Gutenberg EBook of Piano Tuning, by J. Cree Fischer (Public domain). <http://www.gutenberg.org/ebooks/17571>



In addition to the recommended bibliography provided on table 5, media resources are valuable tools to investigate the structure of the piano, location of individual parts, and playing mechanism. *The Piano Deconstructed*⁷² is a multimedia

⁷² Christopher Smit, "The Piano Deconstructed Project". <http://www.piano.christophersmit.com/> (accessed on July 28, 2013).

project developed by Christopher Smit as part of the fulfillment of a Master's degree in Music Technology at Indiana University. Smit provides interactive animations of the piano parts, with their names, function and location on the instrument as well as a complete glossary of terms with definitions.

TABLE 5. Selected bibliography on piano parts and mechanism

-
- Barron, James. *Piano: The Making of a Steinway Concert Grand*. New York, NY: Henry Holt and Company, 2006.
- Bielefeldt, Catherine C. and Alfred R. Weil. *The Wonders of the Piano: The Anatomy of the Instrument*. Melville, NY: Belwin-Mills Publishing Corp., 1984.
- Blue Book of Pianos: <http://www.bluebookofpianos.com> (accessed August 12th, 2013).
- Dolge, Alfred. *Pianos and Their Makers: A Comprehensive History of the Development of the Piano from the Monochord to the Concert Grand Player Piano, Volume 1*. New York, NY: Dover Publications Inc., 1911.
- Fine, Larry. *The Piano Book: Buying and Owning a New or Used Piano*. 4th ed. Boston, MA: Brookside Press, 2001.
- Palmieri, Robert. *Piano: An Encyclopedia*. 2nd Edition. New York, NY: Routledge, 2003.
- Ratcliffe, Ronald and Stuart Isacoff. *Steinway*. San Francisco, CA: Chronicle Books, 2002.
- Reblitz, Artur A. *Piano Servicing, Tuning, and Rebuilding: For the Professional, the Student, and the Hobbyist*. 2nd Edition. Lanham, MD: Vestal Press, 1997.
- Taylor, S. K. *The Musician's Piano Atlas*. Stockport, England: Omicron Publishing, 1981.
- White, William B. *Theory and Practice of Piano Construction*. New York, NY: Dover Publications Inc., 1975.
-

2.3. Tuning

Tuning an instrument is a fairly common task for most musicians: wind players, guitarists, string players, etc., but not for pianists. Accordingly, tuning a piano is complex and is typically executed by a specialist. This process, however, is an extraordinary learning experience for pianists to discover the acoustic world hidden within a piano (*i.e.*, tuning, harmonics, resonance, hammers).

The present researcher recommends that pianists of any level (and other instrumentalists, as well) explore piano tuning at some point. It can be completed on an old or inexpensive piano, but should occur with the supervision of a specialist. The first personal tuning experience of the present researcher lasted for three days and was not very successful. The learning and discovering that occurred in that session, however, deeply changed his quality of listening and perception related to the instrument. The present researcher's second attempt at piano tuning lasted for one whole day, with not much improvement from the first experience, and his third effort took only a few hours. As his familiarity of the process developed, the results improved. Following these experiences the present researcher explored tuning a piano using an electric piano as a reference to mirror the tuning curve, copying the tuning of individual notes. The results of this were the most successful as compared to previous experiences, although greater learning occurred during the first (long) sessions.

Once a pianist has had the experience of tuning a piano, his perspective of acoustics and the connection between hands, keyboard, hammers, and strings is better informed, adding a new awareness of sound quality. The manipulation of keys, strings, and dampers, tuning every key individually, one by one (some keys have up to three

strings), offers a perspective of the complexity of the piano acoustics. This process affects the approach of the pianist when performing the instrument, since he is conscious of all individual elements involved in the process of creating sound on the piano.

When intervals like fourths, fifths, or octaves are performed and compared through the different registers of the keyboard, they sound different depending on the range and tuning system employed. Generally, highest and lowest octaves are larger (more open) than the middle ones⁷³, configuring the tuning curve in a “u” form-like⁷⁴. This “imperfect” system of tuning is called *temperament*⁷⁵. If pure (perfect) tuning would be applied, it would not be possible to play the same chord in different registers; the tuning would not match. *The Well-Tempered Clavier*, by Johann Sebastian Bach⁷⁶, includes 24 preludes and fugues in every key (two series, in two books). This work was composed around 1722 during a time where musical polyphony was still very recent, just after the Renaissance period. A “tempered” tuning system was needed in order to play Bach’s counterpoint melodies, modulations, and polyphonic harmonies. Bach’s music

⁷³ Brian Capleton, *Theory and Practice of Piano Tuning: A Manual on the Art, Techniques and Theory* (Worcester, United Kingdom: Amarilli Books, 2007).

⁷⁴ Stuart Isacoff, *Temperament...The Idea that Solved Music's Greatest Riddle* (New York, NY: Alfred A. Knopf, 2001).

⁷⁵ *Temperaments*: “tunings of the scale in which some or all of the concords are made slightly impure in order that few or none will be left distastefully so” ...”Equal temperament, in which the octave is divided into 12 uniform semitones, is the standard Western temperament today except among specialists in early music”. [Mark Lindley, "Temperaments", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), xxv: 248.]

⁷⁶Johann Sebastian Bach. *The Well-Tempered Clavier. Books 1 & 2 (composed in 1722)*. Ed. by Ernst-Günter Heinemann (Book 1, 1997) and Yo Temita (Book 2, 2007). Munich, Germany: G. Henle Verlag, 1997, 2007.

made a significant impact in the development of music history⁷⁷, establishing him as one of the greatest composers, performers, and improvisers of all time.

Table 6 lists the frequencies of all 88 keys of the piano. Central “A” (above middle C) corresponds with “A4”, which frequency was standardized internationally to 440 Hz in 1955⁷⁸. Prior to the standardization, many countries and organizations followed the Austrian government's 1885 recommendation of 435 Hz⁷⁹.

Table 7 provides a selected bibliography on piano tuning and historic general tuning as well. These resources include tuning methods for amateur pianists as well as scientific information for technicians. The present researcher recommends, however, that the reader review these resources and gain personal experience observing piano technicians and practicing piano tuning themselves.

⁷⁷ Stuart Isacoff, *Natural History of the Piano: The Instrument, the Music, the Musicians – From Mozart to Modern Jazz and Everything in Between* (New York, NY: Knopf Doubleday Publishing Group, 2011).

⁷⁸ J. Murray Barbour, *Tuning and Temperament: A Historical Survey*, 2nd ed. (East Lansing, MI: Michigan State College Press, 1953).

⁷⁹ *Ibid.*

Table 6. Piano frequencies

Key	Octave	Note	Frequency	Key	Octave	Note	Frequency
1	0	A	27.500	46	4	F#/Gb	369.994
2	0	A#/Bb	29.135	47	4	G	391.995
3	0	B	30.868	48	4	G#/Ab	415.305
4	1	C	32.703	49	4	A	440.000
5	1	C#/Db	34.648	50	4	A#/Bb	466.164
6	1	D	36.708	51	4	B	493.883
7	1	D#/Eb	38.891	52	5	C	523.251
8	1	E	41.203	53	5	C#/Db	554.365
9	1	F	43.654	54	5	D	587.330
10	1	F#/Gb	46.249	55	5	D#/Eb	622.254
11	1	G	48.999	56	5	E	659.255
12	1	G#/Ab	51.913	57	5	F	698.456
13	1	A	55.000	58	5	F#/Gb	739.989
14	1	A#/Bb	58.270	59	5	G	783.991
15	1	B	61.735	60	5	G#/Ab	830.609
16	2	C	65.406	61	5	A	880.000
17	2	C#/Db	69.296	62	5	A#/Bb	932.328
18	2	D	73.416	63	5	B	987.767
19	2	D#/Eb	77.782	64	6	C	1046.502
20	2	E	82.407	65	6	C#/Db	1108.731
21	2	F	87.307	66	6	D	1174.659
22	2	F#/Gb	92.499	67	6	D#/Eb	1244.508
23	2	G	97.999	68	6	E	1318.510
24	2	G#/Ab	103.826	69	6	F	1396.913
25	2	A	110.000	70	6	F#/Gb	1479.978
26	2	A#/Bb	116.541	71	6	G	1567.982
27	2	B	123.471	72	6	G#/Ab	1661.219
28	3	C	130.813	73	6	A	1760.000
29	3	C#/Db	138.591	74	6	A#/Bb	1864.655
30	3	D	146.832	75	6	B	1975.533
31	3	D#/Eb	155.563	76	7	C	2093.005
32	3	E	164.814	77	7	C#/Db	2217.461
33	3	F	174.614	78	7	D	2349.318
34	3	F#/Gb	184.997	79	7	D#/Eb	2489.016
35	3	G	195.998	80	7	E	2637.020
36	3	G#/Ab	207.652	81	7	F	2793.826
37	3	A	220.000	82	7	F#/Gb	2959.955
38	3	A#/Bb	233.082	83	7	G	3135.963
39	3	B	246.942	84	7	G#/Ab	3322.438
40	4	C	261.626	85	7	A	3520.000
41	4	C#/Db	277.183	86	7	A#/Bb	3729.310
42	4	D	293.665	87	7	B	3951.066
43	4	D#/Eb	311.127	88	8	C	4186.009
44	4	E	329.628				
45	4	F	349.228				

Source: adapted from Loren Koehler, “Piano Craft – Frequencies”, in *Loren Koehler’s Website*. <https://sites.google.com/site/lorenkoehlerwebsite/piano-craft/frequencies>

TABLE 7. Selected bibliography on piano tuning

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- Isacoff, Stuart. *Temperament...The Idea that Solved Music's Greatest Riddle*. New York, NY: Alfred A. Knopf, 2001.
- Keislar, Douglas Fleming. "Psychoacoustic Factors in Musical Intonation: Beats, Interval Tuning, and Inharmonicity." Ph.D. dissertation, Stanford University, 1991.
- Rawlins, Robert and Nor Eddine Bahha. *Jazzology: The Encyclopedia of Jazz Theory for All Musicians*. Milwaukee, WI: Hal Leonard Corp., 2005.
- Stevens, Floyd A. *Complete Course in Professional Piano Tuning: Repair and Rebuilding*. Lanham, MD: Rowman & Littlefield Publishing Inc., 2001.

2.4. Always Sounding Good

It is common for pianists to perform on a different piano every time they are on stage. Some pianists are able to minimize the differences among instruments by always using the same brand and model (*i.e.*, they are sponsored artists). Beyond that, only a very few privileged artists travel with their own piano. One example of someone in this category is the highly acclaimed Russian pianist Sviatoslav Richter⁸⁰. He used to travel with his piano in a van driven by his technician. The two of them often drove from city to city, stopping sometimes unannounced in small towns or at music schools to perform by surprise⁸¹.

Since the piano is different on every stage in every setting, pianists need to know how to get the best out of an instrument, making it sound at its best, no matter if it is a brand new *Steinway Grand*⁸² or in extreme contrast, something old and unbalanced. In some cases there may be entire ranges of the keyboard that are out of tune. Jazz improvisers should be aware of it and use the areas with best sound quality, and with less

⁸⁰ *Sviatoslav Richter* (Ukraine 1915, Russia 1997): Russian pianist, considered one of the greatest pianists in history. "His repertoire was extensive, covering from Bach to Prokofiev and including many less frequently heard works, but shunning complete cycles with the exception of Bach's Well-Tempered Clavier"... "He avoided long-term recording contracts, but many of his live appearances were recorded and his discography is probably the largest of any pianist". [David Fanning, "Richter, Sviatoslav", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), xxi: 342.]

⁸¹ Bruno Monsaigon, *Sviatoslav Richter: Notebooks and Conversations*. Translated by Stewart Spencer (Princeton, NJ: Princeton University Press, 2002).

⁸² *Steinway & Sons*: "Is one of the leading piano manufacturer companies in the world"... "Steinway & Sons was founded in 1853 by German immigrant Henry Engelhard Steinway in a Manhattan loft on Varick Street. Over the next thirty years, Henry and his sons, C. F. Theodore, Charles, Henry Jr., William, and Albert, developed the modern piano. They built their pianos one at a time, applying skills that were handed down from master to apprentice, generation after generation. Each Steinway grand piano, for example, takes nearly a year to create"... "Steinway is dedicated to the ideal of making the finest pianos in the world. The result is instruments renowned for their unsurpassed quality. Pianos with such superior sound and responsive touch that they enchant the most demanding pianists. [Steinway & Sons, *Official Website*, www.steinway.com/about/]

use of sustain pedal (*i.e.*, arpeggios) if the tuning is not balanced⁸³. In some situations, it may even be necessary to change the key of the piece, as Beethoven did in the premiere of his Piano Concerto #1 in C⁸⁴. He was performing the piano part himself, and just before the concert he found out the piano was tuned half a step down, which required him to transpose a half step up and play in the key of C# to match the orchestra⁸⁵.

The size and mechanism of a piano may vary substantially from one instrument to another. Having a well-balanced piano will help the performer properly demonstrate his musical abilities⁸⁶. However, sometimes the mechanism will not be adjusted and balanced accurately, having, for instance, a particular range of the keyboard that is harder to play than another, or some keys with a different response for repetition. The sustain pedal mechanism may also vary from instrument to instrument, from a small path that requires only slight touch, to a long and deep path that requires a wide use of it.

Amplification may substantially influence the overall quality of a piano sound. A common approach to sound reinforcement/amplification is to place microphones in the center part of the harp where the left hand chords are usually played. With this approach, the audience may hear the chords louder than the melodic lines. Thus, it is important to set levels on stage (using monitors) that mirror the sound projected to an audience. Too much of any individual instrument skews the balance and (potentially) influence the mix.

⁸³ Anton Rubinstein, and Teresa Carreno, *The Art of Piano Pedaling* (New York, NY: Dover Publications Inc., 2003).

⁸⁴ Barry Cooper, *Beethoven* (New York, NY: Oxford University Press, 2008).

⁸⁵ Alexander W. Thayer, *Thayer's Life of Beethoven*. Edited by Elliot Forbes (Princeton, NJ: Princeton University Press, 1991), 173-174.

⁸⁶ Catherine C. Bielefeldt, and Alfred R. Weil, *The Wonders of the Piano: The Anatomy of the Instrument* (Melville, NY: Belwin-Mills Publishing Corp., 1984).

The piano sound also depends on the acoustics of the room and, in addition, may vary depending where the piano is placed within that setting. The same piano on a different stage or in a different room may sound totally different. This means it is important for a pianist to get comfortable with the instrument in the performance setting during the sound check so he is able to give full attention to the music and his communication with the audience during the performance.

Experienced pianists with technique, automatically adjust their playing to the characteristics of the instrument and the room⁸⁷. Accordingly, the purpose of technique is to allow the sound that is being created and imagined by the artist be executed on the specific instrument—in a particular moment⁸⁸.

Some musicians seem more instantly (physically) connected with their instruments than pianists. This is likely due to instrument size, how an instrument is held (or approached), how sound is produced, etc. Wind instruments literally require a musician's breath to produce the sound. Guitarists embrace their instruments in their arms while performing, and vocalists are their instruments. Accordingly, pianists must work differently from their musician colleagues to become familiar with each instrument they play, and view each piano as an extension of their mind and body. This connection (and familiarity with the individual instrument's sound and mechanism) contributes to the music making experience, and for some artists, requires time to establish.

⁸⁷ Heinrich Neuhaus, *The Art of Piano Playing*. Translated by K. A. Leivobith (New York, NY: Dover Publications Inc., 2013).

⁸⁸ *Ibid.*

2.5. Other Keyboard Instruments

Very often, contemporary jazz pianists perform on other keyboard instruments (beyond pianos), mainly electronic, that in some cases imitate the sound of a piano, and in other cases are totally different instruments. Most commonly, keyboards used in fusion and contemporary jazz⁸⁹ are electric pianos, *Rhodes*⁹⁰, *Hammond* organs⁹¹ and synthesizers (instruments that were conceived as different instruments than an acoustic piano)⁹². Keyboards may be also used as a controller to play a wide range of sounds from

⁸⁹ Patrick Bracken, "From Steinway to Synthesizer: A Short Story about Rock and Roll Keyboards", *Yahoo Voices Blog* (September 29, 2009), <http://voices.yahoo.com/from-steinway-synthesizer-short-history-rock-4519265.html> (accessed December 7, 2012).

⁹⁰ *Rhodes*: "Harold Rhodes was born on December 28th, 1910 in California. By the age of twenty, he had purchased a school from his piano teacher. Now called the Harold Rhodes School of Popular Piano, the school encouraged self-instruction on the instrument"... "During World War II, *Rhodes* was a member of the Army Corps where the first incarnation of his piano was created using aluminum pipes from military B-17 bomber wings. Originally the instrument was used by bed stricken soldiers for therapy and rehabilitation. The instrument ended up being a success and thousands were produced. *Rhodes* was awarded the Medal of Honor by the United States government for his invention"... "After WWII ended, *Rhodes* established the *Rhodes* Piano Corporation, and produced a thirty-eight key version which was premiered at the first NAMM (National Association of Music Merchants) show in 1946. During the 1950s, as *Rhodes* was reinventing his own electric piano, the Rudolph Wurlitzer Company began manufacturing their own electric piano"... "Unfortunately, the identity of the first major musician to record with the *Rhodes* is not certain, but one of the first jazz musicians to play the *Rhodes* was Joe Zawinul when he was in alto great Cannonball Adderley's band"... "From the 1960's many jazz pianists like Bill Evans, Herbie Hancock, Chick Corea, George Duke, Ahmad Jamal, Cedar Walton, Tommy Flanagan, among much others have recorded with *Rhodes* electric pianos". [Pauley, Jared (July 23, 2009). "A history of the fender *Rhodes* electric piano" (July 23, 2009), *Jazz.com*, <http://www.jazz.com/features-and-interviews/2009/7/23/history-fender-rhodes>]

⁹¹ *Hammond organ*: "An electronic organ, developed in 1935 by engineers Laurens Hammond and John Marshall Hanert"... "The first Hammond organs were first popularized by such musicians as Fats Waller and Jimmy Smith, and a distinctive Hammond style of "swinging" staccato playing (due to a lack of control over attack in the early models) soon became known". Hammond organs are very frequently used in jazz and rock styles. [Hugh Davies, "Hammond, organ", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), x: 738.]

⁹² Geary Yelton, *The Rock Synthesizer Manual: A Revised Guide for the Electronic Musician* (Woodstock, GA: Rock Tech Publications, 1986).

a computer sampler library or a MIDI⁹³ sound module, greatly expanding the possibilities of sound expression for pianists.

For a jazz pianist, it is common to play a variety of instruments to accommodate the style of the band (*i.e.*, Fusion, Electronic, World). Taking lessons on a *Hammond* organ, or spending time exploring different models of synthesizers will expand a pianist's range of artistic expression and allow him to experiment, imagine, and perform music in new ways.

Several great jazz pianists are also accomplished keyboardists⁹⁴. Table 8 includes selected examples of jazz pianists playing keyboards in representative albums, either as a leader or with other bands. These performers use a wide range of synthesizers and electronic devices.

TABLE 8. Selected discography of jazz pianists using electronic keyboards and synthesizers

Chick Corea

Return to Forever. 1972, ECM.

My Spanish Heart. 1976, Verve/Polydor.

Touchtone. 1982, Strecht Records.

The Elektrik Band. 1986, GRP/Universal.

Eye of the Beholder. 1988, GRP/Universal.

The Ultimate Adventure. 2006, Concord/Strecht Records.

⁹³ *MIDI*: “Musical Instrument Digital Interface. A hardware and software standard established in 1983 for the communication of musical data between devices such as synthesizers, drum machines, and computers”. [David Burnand, "MIDI", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), xvi: 639.]

⁹⁴ Ted Gioia, *The History of Jazz* (New York, NY: Oxford University Press, 2011).

George Duke (as leader)

The Aura Will Prevail. 1975, Universal.

Follow the Rainbow. 1979, Epic.

A Brazilian Love Affair. 1979, Legacy/Sony.

Illusions. 1995, Sony.

DreamWeaver. 2013, Heads Up Records

George Duke (as sideman)

Frank Zappa. *The Grand Wazoo*. 1973, Riko.

Frank Zappa. *Apostrophe*. 1974, Riko.

Billy Cobban. *Crosswinds*. 1974, Atlantic.

Miles Davis. *Tutu*. 1986, Warner Bros.

Miles Davis. *Amandla*. 1989, Warner Bros.

Russell Ferrante (with Yellowjackets)

Four Corners. 1987, MCA/Universal.

The Spin. 1989, GRP.

Run for Your Life. 1993, GRP.

Dreamland. 1995, Warner Bros.

Club Nocturne. 1998, Warner Bros.

Robert Glasper

Black Radio, Vol. 1. 2012, Blue Note.

Black Radio, Vol. 2. 2013, Virgin.

Jan Hammer (with The Mahavishnu Orchestra)

The Inner Mounting Flame. 1971, Columbia/Legacy.

Birds of Fire. 1973, Columbia/Legacy.

Herbie Hancock

Headhunters. 1973, Columbia.

Sextant. 1973, Columbia.

Flood. 1975, Sony.

Scott Kinsey (with Tribal Tech)

Illicit. 1992, Mesa.

Reality Check. 1994, Mesa/Atlantic.

Thick. 1999, Zebra Records.

Lyle Mays (as leader):

Lyle Mays. 1985, Warner Bros.

Street of Dreams. 1988, Warner Bros.

Solo Improvisations for Expanded Piano. 2000, Warner Bros.

Lyle Mays (with Pat Metheny)

Pat Metheny Group. 1978, ECM.

Offramp. 1981, ECM.

Travels. 1983, ECM.

Still Life (Talking). 1986, Geffen.

Letter From Home. 1989, Geffen.

Secret Story. 1992, Geffen.

The Way Up. 2005, Nonesuch.

Joe Zawinul (with Weather Report)

Weather Report. 1971, Legacy/Columbia.

Black Market. 1976, Legacy/Columbia.

Heavy Weather. 1977, Legacy/Columbia.

8:30. 1979, Legacy/Columbia.

Joe Zawinul Syndicate

My People. 1996, Tone Center.

World Tour. 1998, Zebra Records.

Brown Street. 2006, Heads Up Records.

Joe Zawinul (with Miles Davis)

In a Silent Way. 1969, Columbia.

Bitches Brew. 1970, Columbia.

Like Evil. 1971, Columbia.

3. Technique

3.1. Mental vs. Physical

3.1.1. General Balance

Technique on an instrument or voice requires a combination of both mental and physical elements. It is the tool that allows musicians to express musical ideas and emotions. Technique encompasses knowledge of the instrument, body, and mind—all three combined. Some musicians approach it in a more “unconscious” manner, depending on natural abilities, but in one way or another, body and mind need to be consistently trained in order to achieve artistic freedom. A natural interaction with the instrument is required to focus exclusively on the music, without having to worry about technique issues.

Observing experienced artists perform offers insights regarding the connection between the body and the instrument, and illustrates an effective use of physical movement, expenditure of energy, precision, and economy of movements (*i.e.*, move only as necessary). This can be compared with the effortless manner in which elite speed runners perform. They have an absolute control of every movement executed during the races in order to gain efficiency—better performance with less consumption of resources.

In many ways, technique is similar to health – as it is typically unnoticed until there is a problem. If health is in good condition, every-day activity can be developed in optimal circumstances. If health is weak, limitations will occur and some activities will not be able to be developed properly. Technique allows the musician to *tell a story* without physical or intellectual limitations. It is the essential foundation that provides the required resources for a successful musical performance. The more screwdrivers, hammers, and gear stored in the toolbox, the easier to fix the damage. An artist keeps

adding tools to his box for life continually learning how to fix new problems, or how to fix old problems in new ways.

The development of technique for pianists is an individual process that includes many areas of focus, use of time, and personal awareness/assessment. The following three categories of technique can be developed for pianists:

1. Physical: fingers, hands, arms, and whole body;
2. Mental: information stored in the brain and used to create ideas⁹⁵.
3. The process of connecting physical and mental: communicating the artist's ideas through the body to the instrument.

How does a jazz pianist know when he has good piano technique? One way to test technique development is to sing something and simultaneously play it (unison) on the piano. If melodies cannot be played, there is a need to improve technique. If, however, it can be played with the expression of limited musical ideas, there is a need to develop language.

The three categories of technique (*i.e.*, physical, mental, and the combination of physical and mental) must be practiced separately first, and then simultaneously. Physical technique alone is not really beneficial if it is not combined with real musical content, and its practice can be unpleasant if considered as a mere exercise. Mastering technique may represent a different feeling for every performer, since it demonstrates the connection between the artist and the instrument. The instrument, a piano in this case,

⁹⁵ Bill Gates, *Business @ The Speed of Thought: Using a Digital Nervous System* (New York, NY: Grand Central Publishing, 1999).

needs to be a natural extension of the artist's musical voice⁹⁶. Applying yoga concepts and relaxation exercises⁹⁷ (e.g., respiration, self-consciousness, control of movements, fast thinking vs. slow motion) when sitting at the piano will increase the perception and joy of performing and practicing music—allowing the artist to be conscious of a full artistic experience. A pianist's body must be relaxed and ready to execute the movements needed to play the instrument and express musical ideas. Accordingly, the practice of relaxation exercises may assist musicians to become more aware of his body, release stress and tension, and prepare for musical performance. One recommended relaxation exercise, taken from yoga⁹⁷, is to contract and relax individual parts of the body one area at a time starting from the feet and slowly moving up to the head. This process requires the person to isolate specific areas of the body to identify (and remove) muscle tension. Over time, the exercise results in a deeper awareness of the body and knowledge of personal high-tension areas. This exercise can be completed while lying on the floor or on a bed (perhaps before going to sleep), or while sitting in a chair or on the piano bench.

In addition to relaxation, a physical goal related to body awareness is for pianists to be conscious of every hand and finger movement while performing (e.g., *counterpoint melodies*) and when using the pedal simultaneously, as well. By thinking about each individual part of the body, it is easier not to worry about them when a performance is executed, without fostering anxiety or requiring extra effort.

⁹⁶ Luc Nijs, Micheline Lesaffre, and Marc Leman, "The Musical Instrument as a Natural Extension of the Musician" in *Proceedings of the 5th Conference of Interdisciplinary Musicology* (Paris, France: LAM-Institut Jean Le Rond d'Alembert, 2009).

⁹⁷ Mia Olson, *Musicians Yoga: A Guide To Practice Performance and Inspiration* (Boston, MA: Berklee Press, 2009).

Numerous jazz students (*e.g.*, first year college music students) who have no prior training in classical music often practice technique as something independent: scales, arpeggios, exercises, etc. By contrast, technique should be practiced within a musical context (*i.e.*, *classical piece, solo transcription, jazz standard song*), to apply a specific approach (physical, mental, combined) to solve a particular issue or advance the artistic expression.

3.1.2. Physical

The human body is a complex machine comprised of many individual sophisticated components, which combined together represent a powerful engineering device. For pianists, for example, the mind tells the body how to act, and the body executes these orders on the instrument. The three elements involved (physical, mental, and the combination physical and mental) in musical creation must be accurate and precisely connected, not to address essential information within the process. Physical weakness on the part of a pianist, for instance, will cause premature exhaustion, and poor technique will not execute the music ideas satisfactorily.

Engaging regularly in individual sports like jogging or in-group sports like soccer, basketball, football, or tennis will improve fitness, physical coordination, and injury prevention⁹⁸. This physical involvement engages the brain with more oxygen, advances productivity, and improves sleep⁹⁹. There are many parallels between sports training and playing a musical instrument including a dedicated amount of time required to practice;

⁹⁸ Marcia K. Anderson, *Foundations on Athletic Training: Sports Injury Management*, (Philadelphia, PA: Lippincott Williams & Wilkins, 2012).

⁹⁹ Eric Shamus, *Sports Injury Prevention and Rehabilitation* (Berkshire, United Kingdom: MacGraw-Hill Medical, 2001).

focus and commitment to the task; and the regularity of engagement needed to achieve progress. Short- and long-term goals, self-evaluation, and competitiveness are essential components of the skill development process that motivate both musicians and athletes. For musicians, their level of physical fitness influences their ability to perform (in public and in a practice session). If the performer is in good physical shape the conditions for a successful performance and practice session are higher than if his physical condition is poor.

Before any physical activity it is highly recommended to warm up the body to increase blood circulation and stretch muscles and tendons. Warming up is like adding oil to a machine's gear, so every part can move freely without resistance. This approach to physical activity will also help to prevent injuries and prepare the body and mind. Half an hour of jogging is a good way to start a day of practicing, because in addition to increased blood circulation, it activates muscles and endorphins¹⁰⁰.

Like in sports training, regular repetition of specific exercises is needed for pianists in order for muscles to engage, and for physical (muscle) memory to develop. This repetition results in the development of skills and abilities, and simultaneously engages the body and mind. Moreover, physical memory is reinforced when a pianist practices music especially when repeating a passage several times. As this practice unfolds the pianist finds his hands and fingers automate distances, fingerings, jumps, etc. For instance, when practicing a passage from a Classical composition, after repeating it

¹⁰⁰ Madeline Bruser, *The Art of Practicing* (New York, NY: Bell Tower, 1997).

for a few days, the hands become familiar with the music, the musician naturally memorizes movements in conjunction with the sound, and the exercise becomes natural.

3.1.3. Mental

In addition to warming up the body, a pianist should warm up his mind before practicing or performing¹⁰¹. Relaxation exercises and specific thoughts about the music that is going to be performed will focus the pianist, prepare him for performing, and facilitate a positive environment for the creation of music¹⁰². This is particularly important for jazz musicians as they spontaneously create music during a performance depending on the levels of tension and inspiration¹⁰³.

Mental technique is the ability to organize complex concepts into logical structures made of simple ideas¹⁰⁴. Every person is unique and accordingly has a different perspective, approach, and organization of concepts, –contributing to his personal image. Skills like speed of thought¹⁰⁵, perspective, real-time determination, connection capacity, ability to realize simultaneous activities, etc. are characteristics of many great musicians. Speed of thought can also be trained¹⁰⁶, by repetition and by learning and connecting topics, and also by having a regular and intense intellectual activity, like reading, or practicing mathematics and strategy games.

¹⁰¹ Lawrence Zbikowski, *Conceptualizing Music: Cognitive Structure, Theory and Analysis* (New York, NY: Oxford University Press, 2002).

¹⁰² John A. Sloboda, *The Musical Mind: The Cognitive Psychology of Music* (Oxford, United Kingdom: Clardon Press, 1985).

¹⁰³ Derek Bayley, *Improvisation: Its Nature and Practice in Music*. 2nd ed. (Cambridge, MA: Da Capo Press, 1993).

¹⁰⁴ F. Clifford Rose, *The Neurology of Music* (London, United Kingdom: Imperial College Press, 2010).

¹⁰⁵ Bill Gates, *Business @ The Speed of Thought: Using a Digital Nervous System* (New York, NY: Grand Central Publishing, 1999).

¹⁰⁶ Manfred Clynes, *Music Mind and Brain, The Neuropsychology of Music* (New York, NY: Prenum Press, 1982).

There are many ways to learn mental process to communicate musical ideas¹⁰⁷. One effective approach to train the mind is to try to learn concepts without external assistance or advice from a teacher. This personal trial-and-error approach results in independent discovery and ownership of information.

3.1.4. Connection Process

The process of transferring a musician's musical ideas to the piano requires a unique connection between the body and the instrument. With this experience, the instrument becomes part of the body as the pianist is able to think, create, and play his ideas to make the music¹⁰⁸. This is similar to how a computer functions effectively – without latency, or to how an athlete uses a bat, racket, or ball to realize his efforts during a game.

Pianists (and other musicians) develop connection skills (*i.e.*, the ability to transfer musical ideas from the brain to the instrument) in many ways. One approach to foster this development is to sing melodies (aloud and then through inner-hearing) while performing them on the instrument. Jazz pianist and pedagogue Dave Frank calls this the *Singing with the Solos* technique, which is included in his method book series *The Joy of Improv*¹⁰⁹. A connection is established between the body and the instrument by singing along with the music that is being performed on the piano (either music from music

¹⁰⁷ Frederick A. Seddon, *Modes of Communication during Jazz Improvisation* (London, United Kingdom: Cambridge University Press, 2005).

¹⁰⁸ Luc Nijs, Micheline Lesaffre, and Marc Leman, "The Musical Instrument as a Natural Extension of the Musician" in *Proceedings of the 5th Conference of Interdisciplinary Musicology* (Paris, France: LAM-Institut Jean Le Rond d'Alembert, 2009).

¹⁰⁹ Dave Frank and John Amaral, *Joy of Improv - Books One and Two* (Milwaukee, WI: Hal Leonard Corp., 1998).

notation or improvised music). In time this process becomes natural and effortless for the musician, like transcribing melodies in real time. Table 9 includes recommendations of selected examples of melodies from solo transcriptions offered to pianists to start singing-along.

By singing along with solo improvisations from master musicians, pianists are able to mechanize the connection process and assimilate the master's language, rhythm and articulation. In addition this experience allows the pianist to internalize the manner in which the melodies were created and executed.

Another essential connection between the musician and his instrument is that with rhythm. The pianist, for example, engages his body to produce the rhythmic elements on the instrument using both mind and touch. Rhythm is a physical element, and it needs to be played or sung, not just imagined or visualized¹¹⁰.

3.1.5. The Right Technique For You

There are as many types of technique that suit individual artists, because everyone has different needs, abilities, and challenges. Accordingly, technique develops differently among artists, and requires focus, awareness, and an individualized approach.

In order to develop strong technique, a pianist must be aware of his strengths and weaknesses. One effective exercise to increase this personal awareness is to make lists of these strengths and weaknesses as related to technique. The result will inform the pianist's perspective and approach, which is similar to how business companies

¹¹⁰ Vijay Iyer, "The Physical Experience of Rhythm", *NPR Music Interviews* (March 15, 2012), <http://www.npr.org/2012/03/16/148677841/vijay-iyer-the-physical-experience-of-rhythm> (accessed April 6, 2012).

TABLE 9. Selected melodies from solo improvisations as an introduction to sing-along

Louis Armstrong:

“Hotter Than That”. *Hot Fives and Hot Sevens*. 1927, Columbia

Lester Young:

“Lester Leaps In”. Count Basie and his Orchestra, featuring Lester Young. *Lester Leaps In*. 1939, Epic.

Charlie Christian:

“I Found A New Baby”. Charlie Christian. *Solo Flight*. 1939, Topaz.

Miles Davis:

“All of You”. Miles Davis. *Round About Midnight*. 1956, Columbia.

“Autumn Leaves”. Cannonball Adderley. *Somethin’ Else*. 1958, Blue Note.

Ella Fitzgerald:

“Take The “A” Train”, Ella Fitzgerald. *Ella Fitzgerald Sings the Duke Ellington Songbook*. 1957, Verve.

Chet Baker:

“Do It The Hard Way”, “It Could Happen To You”. Chet Baker. *It Could Happen To You*. 1958, Riverside.

Hank Mobley:

“If I Should Loose You”, Hank Mobley. *Soul Station*. 1960, Blue Note.

Tom Harrell:

”Comrade Conrad”. Bill Evans. *We Will Meet Again*. 1979, Warner Bros.

Pat Metheny:

“James”. Pat Metheny Group. *Offramp*. 1981, ECM.

“Last Train Home”. Pat Metheny Group. *Still Life (Talking)*. 1987, Geffen.

- Bass lines from bassists Ray Brown, Paul Chambers, Ron Carter, and Eddie Gomez.

- Drum solos* by Max Roach, Art Blakey, Philly Joe Jones, and Tony Williams.

* Drum solos should be sung rhythmically and articulated, with no melodic intonation

maximize profits by strategizing and focusing on targeted areas to improve productivity/effectiveness.

Within the process of technique development it is important for pianists to focus on the elements that need to be developed while also being conscious of the elements that are already achieved. This simultaneous forward thinking and reflection allows pianists to identify and address issues as well as advance skills. However, it is essential to note that for many musicians, the primary challenge in technique development is to recognize personal weaknesses¹¹¹.

As mentioned previously in this research, the three categories of technique (*i.e.*, physical, mental, and the combination of physical and mental) must be practiced separately first, and then simultaneously. Throughout this technique development process, pianists focus on individual areas of study and work progressively from the basic to the advanced.

Great artists do not focus on technique when they perform music. Moreover, they do not necessarily focus on harmony or language as they perform due to their experience and strong command of technique and vocabulary¹¹². As technique advances the pianist will develop into a great artist and require less focus on these aspects of playing. Ultimately this is the goal for a pianist—to be able to focus solely on the music and his artistic expression. This artistic freedom is a state of mind and a skill that requires individual hard work, dedication, and practice.

¹¹¹ Kenny Werner, *Effortless Mastery* (New Albany, IN: Jamey Aebersold Jazz Inc., 1996).

¹¹² Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

3.2. The Body

3.2.1. Body Position

Effective body position, conditioning, and use of movement are essential for high-level performers¹¹³. Elite runners seem to move effortlessly, with no extra movements or waste of energy in order to run as fast as possible. Watching them in slow motion demonstrates the highest level of preparation and control of the activity being performed. This easiness can also be observed with professional musicians during performances. Watching classical pianists Vladimir Horowitz¹¹⁴, Anton Rubinstein¹¹⁵ or Glenn Gould¹¹⁶,

¹¹³ Thomas C. Mark and Roberta Gary, and Thom Miles, *What Every Pianist Needs to Know About the Body* (Chicago, IL: GIA Publications, 2004).

¹¹⁴ *Vladimir Horowitz* (Kiev 1903, New York 1989): “American pianist of Ukrainian birth”...”He left Russia in 1925 to debut in Europe and in America in 1928, and developed a very successful international career”...”He was a unique pianist, not only because of an awesome technique. At its best his playing had infinitive degrees of color, and a sonority that could well have been unparalleled. Above all he had a kind of high-voltage charisma that, in his time, could be matched only by Toscanini, Callas and Pavarotti”. [Harold C. Schonberg, "Horowitz, Vladimir", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), xi: 739.]

¹¹⁵ *Arthur Rubinstein* (Lodz 1887, Geneva 1982): “American pianist of Polish birth”...”Bach, Mozart, Beethoven and principal 19th-century Romantics, played with a directness owing nothing to the Romantic rhythmic distortions still fashionable in Rubinstein’s youth, all enjoyed a place in his huge repertory”...”Chopin only gradually replaced Brahms as the composer arousing the pianist’s strongest and deepest artistic instincts; yet is above all as a Chopin interpreter that Rubinstein’s place among the greatest players of the 20th century is assured”. [Max Loppert, "Rubinstein, Artur" *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), xxi: 849.]

¹¹⁶ *Glenn Gould* (Toronto 1932, Toronto 1982): “Canadian pianist, cowriter and composer”...”His unorthodox program (Gibbons, Sweelinck, Bach, late Beethoven, Berg, Webern), distinctive style and platform mannerisms immediately marked him as an iconoclast. His first recording, of Bach’s *Goldberg Variations*, was released in 1956 to critical and popular acclaim”...”In 1964 Gould retired from public performance, citing moral and musical objections to the concert medium, and became a leading champion of the electronic media. Throughout his career he produced radio and television recitals and other programs for the CBC, including a series of innovative contrapuntal radio documentaries”...”Gould played little early-Romantic or Impressionist music, preferring the Baroque, Classical, late-Romantic and 20th-century Austro-German repertoires, along with more unusual fare (virginal music, transcriptions, Canadian music). His recordings include must of the keyboard music of Bach and Schoenberg, the composer most influential on his musical tastes, aesthetic ideas and “classical” approach to the piano”...”His idiosyncratic interpretations, published pronouncements and personal eccentricities made him a controversial figure, but he was widely admired for his virtuosity, probing intellect, command of musical architecture, rhythmic dynamism, precise finger work and extreme clarity or part-playing”. [Kevin Bazzana, "Gould, Glenn", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), x: 212.]

for example, shows a total mastery of the music being performed and the instrument. They perform with complete control and artistic freedom. Their hands seem to caress the keyboard, even when performing demanding works like a Chopin Etude¹¹⁷, for example. They perform with no signs of tension or stress (even during complex passages or fast tempos) and extend no unnecessary movements from their hands, arms, or full body.

Pianists need to find their (personal) comfortable position at the instrument. This position is based on physical size and preferred distance from the keyboard. Moreover the height of the piano bench contributes to the comfort level of the pianist and influences use of movement and approach to the instrument. Keeping the piano bench low requires the pianist to exert effort when pressing the keys, but it results in a consistent and strong sound. In this set up the body position does not need to move much during performance. Keeping the piano bench high may initially make playing seem easier for pianists, but with the forearms above the keyboard hands level, the touch is much lighter and superficial, which impacts the sound. Also, as the arms get higher there is less control of finger movements. The present researcher prefers to position the piano bench low as it gives him a higher connection with the keyboard, and lets his hands be in a lower position so the keys are pressed deeply, getting a richer sound. In addition, this position allows him to keep his back straight and shoulders down.

Proper body position also prevents injuries and allows the pianist to excel. This is also true for high-level performers across many disciplines (*e.g.*, athletes, dancers, other musicians). Due to the fact that pianists practice for extended periods of time, any

¹¹⁷ Frederic Chopin, *Etudes*. Edited by Ewald Zimmermann (Munich, Germany: G. Henle Verlag, 2007).

incorrect position or improperly executed (repeated) movements may cause injuries, tension, and/or fatigue.

The body language of a performer offers insights into his confidence, enjoyment, musicianship, and technique. For pianists, these often-unconscious movements are founded in performance experience, practice habits, and command of the instrument. Barbara and Allan Pease¹¹⁸ authored a book on this topic that discusses body language for persons in a variety of settings –and emphasize the idea that the body –with movement– shows a person thoughts and emotions. Confidence and determination, for example, are externalized by secure and precise body movements, communicating an effortless and natural behavior. In addition, the present researcher has found that he can often predict how well prepared a student is for his piano lesson based on the manner in which the student enters the studio and sits at the piano. Confident strides, tall posture, and determination when performing gestures and other body movements, while waiting for something to happen, illustrate readiness for the lesson and an openness for learning. On the contrary, hesitation in entry (or in assuming his place at the piano), slouched posture, and fast and nervous small movements while lowering eyes seem to illustrate a lack of preparation for the lesson.

In summary, body position greatly influences a pianist’s ability to play the instrument. The height of the piano bench; placement of the arms, hands, and fingers; level of relaxation; and overall use of movement (including the expenditure of energy) contribute to the music being performed. When these elements work harmoniously

¹¹⁸ Barbara and Allan Pease, *The Definitive Book of Body Language* (New York, NY: Bantam, 2006).

together the pianist is able to produce a sound that is natural and full. Madeline Bruser's *The Art of Practicing*¹¹⁹ offers numerous photos of correct body position when sitting by the piano, with examples of proper and non-proper common behaviors employed by musicians when practice and performing. The book *What Every Pianist Needs to Know About the Body*¹²⁰ also provides detailed information about gestures that pianists usually perform (*i.e.*, hands, fingers, feet), as explained in the following sections.

3.2.2. Hand Position

The placement and positioning of the hands is central for pianists when working all over the keyboard, and depending on hand precision the fingers will be well disposed for correct performance¹²¹. Once a comfortable and proper sitting position is established at the piano (*i.e.*, height, distance to the instrument), the hands should be naturally placed over the keyboard. Each hand should look like a cathedral vault holding half an apple inside. This position will allow the fingers to move naturally in every direction and will facilitate controlled movements.

A pianist's hands should be relaxed but precise¹²². Stated another way, effective hand movements for pianists require effortless and tension-free precision while moving across the keyboard. Every movement of the hands and fingers influences the sound produced. For example, when executing the thumb-pass under, both the hand and wrist should perform the movement smoothly, with no violent gestures. Any improper

¹¹⁹ Madeline Bruser, *The Art of Practicing* (New York, NY: Bell Tower, 1997).

¹²⁰ Thomas C. Mark and Roberta Gary, and Thom Miles, *What Every Pianist Needs to Know About the Body* (Chicago, IL: GIA Publications, 2004).

¹²¹ William S. Newman, *The Pianist's Problems: A Modern Approach to Efficient Practice and Musiciansly Performance. 4th Edition* (Cambridge, MA: Da Capo Press, 1986).

¹²² David Sudnow, *Ways of the Hand* (Cambridge, MA: MIT Press, 1993).

movement (*e.g.*, not relaxed, fluid, or precise) could lead to a lack of control and negatively impact the music.

3.2.3. Fingers Position

The pianist's fingers may be compared with piano hammers, since they are the last link in the whole process of executing a musical idea on the piano keyboard, preceded by hands and arms. Piano hammers have a fixed and solid wood mechanism that guarantees precise execution, but at the same time they have a soft felt at the end that provides warmth to the sound. If a piano is played so much that the felt becomes extremely tightly compacted from striking the strings, the piano may produce an unpleasant, harsh tone.

The pianist's fingers need to be very precise and reliable, being always ready to press the keys and move along the keyboard, and relaxed at the same time not to limit the quality of sound¹²³. Blind pianists, for example, often keep fingers close to the keys (literally with no distance separation) so they do not lose the position and are ready to perform any required performance situation.

The pianist's hands must be kept arched with fingers slightly curled at all times, so they move only as needed. This approach ensures that they do not tire and are ready to perform movements and press either white (close) and black (far) keys.

3.2.4. Feet Position

The strategic position of a pianist's feet while seated at the instrument allows him to reach and deploy the pedals as needed. Feet should be close to the pedals, either facing

¹²³ William S. Newman, *The Pianist's Problems: A Modern Approach to Efficient Practice and Musiciansly Performance*. 4th Edition (Cambridge, MA: Da Capo Press, 1986).

them or positioned slightly on both sides of the pedals to minimize the movement required of legs and feet. A pianist needs to develop the ability to control the depression of the pedal to obtain desired effects of sustained sound and sound dampening.

The pianist's feet should be able to touch floor completely. While playing the instrument, feet should provide more stability than the piano bench, so they should not wander too far in any direction, or be placed under the piano bench.

3.3. Sound and Touch

3.3.1. The Sound

Sound is a musician's art¹²⁴. It makes an impression on a listener, sets a tone, and distinctively identifies individual performers. Throughout jazz history there are many well-known pianists with unique and personal sounds including Thelonious Monk, Oscar Peterson, Bill Evans, Keith Jarrett, McCoy Tyner, and Brad Mehldau, to mention a few. Listeners are often able to identify these pianists by their sound only, just as some drummers identify their favorite colleagues by hearing a bit of their cymbal playing.

The ability to create a personal (and distinctive) sound requires a pianist to imagine his sound in his mind (especially when improvising) and then produce it with the instrument. It takes time to develop an original sound and skill to be able to consistently produce it – especially for pianists playing multiple instruments. Truly great pianists are able to perform with a personal sound regardless of the instrument and setting.

¹²⁴ Bruno Monsaigon, *Sviatoslav Richter: Notebooks and Conversations*. Translated by Stewart Spencer (Princeton, NJ: Princeton University Press, 2002).

3.3.2. Dynamics

The use of dynamics can dramatically change the music being performed—by all musicians¹²⁵. For pianists, dynamics are approached in a unique manner as they may vary even within the same hand when playing counterpoint melodies or chords. One approach to developing a range of dynamics for pianists is to play a chord with one hand, using different dynamics for the whole chord) and giving different volume to each sound of the chord (*i.e.*, guide note sounding slightly louder than color tones). Another exercise is to play a chord on the piano and hold it until the sound disappears¹²⁶. Some chord tones become predominant a few seconds after playing the chord.

A pianist's hand independence influences his ability to perform with dynamics. This control allows the pianist to express music with finesse, and execute some of the most subtle and/or dramatic nuances of a performance.

Oftentimes, it is noted that beginning jazz pianists do not focus as much attention on dynamics as classically trained pianists¹²⁷. One approach for all pianists to explore the effects of dynamics is to practice classical music such as the keyboard works of Johann Sebastian Bach¹²⁸. As these compositions were originally written for the harpsichord and organ as the piano did not exist as it does today, the music notation does not include many instructions for dynamics. Accordingly, pianists who perform these Bach

¹²⁵ Walter Gieseking, and Karl Leimer, *Piano Technique* (New York, NY: Dover Publications Inc., 1972).

¹²⁶ Kenny Werner, *Effortless Mastery* (New Albany, IN: Jamey Aebersold Jazz Inc., 1996).

¹²⁷ Martan Mann, *Jazz Improvisation for the Classical Pianist* (New York, NY: Amsco Publications, 1989).

¹²⁸ E. Bodky, *The Interpretation of Bach's Keyboard Works* (Cambridge, MA: Harvard University Press, 1960).

compositions on contemporary pianos (which have a great dynamic range) need to interpret and execute their own use of dynamics in this music.

Listening to recordings of master artists provides examples of effective piano technique, artistic interpretation, and use of dynamics. The present researcher recommends that a pianist listen to a variety of recordings as part of his artistic development including several recordings of the *Preludes and Fugues* from *The Well-Tempered Clavier*¹²⁹ by such distinctive pianists as Edwin Fischer¹³⁰, Sviatoslav Richter¹³¹, Glenn Gould¹³², András Schiff¹³³, Keith Jarrett¹³⁴, and a harpsichord's version also by Gustav Leonhardt¹³⁵.

3.3.3. Articulation

The manner in which a pianist articulates a note or phrase contributes to his musical expression and oftentimes depicts a particular style or artistic nuance. Like dynamics, there is a large range of articulation options for pianists to use in performance. These articulations require practice and study just like the other areas of artistic development for pianists. The more articulations they use, the more expressive their musical voice. Moreover, the combination of dynamics, touch, and articulation define

¹²⁹ Johann Sebastian Bach, *The Well-Tempered Clavier: 24 Preludes and Fugues* (1722).

¹³⁰ Edwin Fischer, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two*, Naxos Historical (CD), 1933-36.

¹³¹ Sviatoslav Richter, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two*, RCA Victor Europe (CD), 1972-3.

¹³² Glenn Gould, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two*, Sony Classical (CD), 1962-65 (Book One) and 1966-71 (Book Two).

¹³³ András Schiff, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two*, ECM Records (CD), 1986-7.

¹³⁴ Keith Jarrett, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two*, ECM Records (CD), 1990.

¹³⁵ Gustav Leonhardt, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two (harpsichord version)*, Deutsche Harmonia Mundi (CD), 1967.

and shape the sound and vary among players from *legato* and *pianissimo* over a ballad, to *staccato* and *forte* over a *Bebop* tune.

Pianists must be sensitive to articulation choices within musical performances. Depending on the music, or even a passage within the music, articulations are used for emphasis, contrast, style, and other effects. For example, when performing a transcription of a piece of music written for horn on the piano, the pianist must focus on *how* the notes are played to capture the essence of the original intent, not simply play the notes on the score.

The vocabulary of articulations (*e.g.*, short sounds, accents, bends, ghost notes) requires a pianist to read symbols and follow text markings in the music such as *tenuto*, *staccato*, *legato*, *marcato*, and *picado*. For many musicians, however, although musical articulation is written in the score, it is learned by ear (*i.e.*, by imitating a teacher or other musician).

3.3.4. Pedal

Piano pedals are used to sustain or dampen the sound¹³⁶. The sustain pedal has two principal purposes: allowing the sound to continue even after the keys are released, and changing the timbre of the sound, making it deeper, warmer, and more intense. When a key is depressed, the corresponding damper is raised off the strings simultaneously, allowing the strings to vibrate. When the key is released, the damper returns to its resting place against the strings and "damps" the vibrations, stopping the sound. Pedaling

¹³⁶ *Pedaling*: "The art of using the tone-modifying devices operated on the modern piano by pedals. In the earlier history of the instrument similar, and other, devices were operated by hand stops, knee levers or pedals"... "Pedaling has been acknowledged as an extremely important element of performance". [David Rowland], "Pedaling", *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (New York, NY: Oxford University Press, 2001), xix: 272.]

combines physical coordination with artistic choice¹³⁷, and should not be thought of as an on/off action. Rather, a pianist controls the pedals to shape the sound and offer a palate of choices that enhance the music. Moreover, composers do not always indicate a specific use of the pedal in their scores – leaving these decisions to the discretion of the pianist.

Ultimately, a piano pedal should not be noticed when used¹³⁸. It should contribute to the artistic expression but not be a focus for the listener. The use of the piano pedal varies among artists – depending on their ability level, command of the instrument/technique, and artistic taste. Contemporary jazz pianists like Keith Jarrett and Brad Mehldau very actively use the pedal while “old school” pianists like Bud Powell or Wynton Kelly do not use it as much.

One approach for pianists to explore the effects of piano pedal use is to practice classical music such as the keyboard works of Beethoven¹³⁹. Scholars seem to disagree regarding how to employ piano pedals in these pieces. Accordingly, pianists who perform Beethoven compositions such as a Beethoven’s *piano sonata*¹⁴⁰ need to interpret and execute their own use of pedals in this music.

¹³⁷ Joseph Janowitz, *Pianist’s Guide to Pedaling* (Bloomington, IN: Indiana University Press, 1992).

¹³⁸ Anton Rubinstein, and Teresa Carreno, *The Art of Piano Pedaling* (New York, NY: Dover Publications Inc., 2003).

¹³⁹ Glenn Stanley, *The Cambridge Companion to Beethoven* (Cambridge, MA: Cambridge University Press, 2000).

¹⁴⁰ Charles Rosen, *Beethoven's Piano Sonatas: A Short Companion* (New Haven, CT: Yale University Press, 2002).

3.4. Fingering¹⁴¹

3.4.1. Pre-defined Fingering

As mentioned previously in this document (see section 3.2.3.) a pianist's fingers must be positioned along the keyboard in a manner that allows him to precisely and accurately execute musical ideas. When the same piece is played repeatedly on the piano, a pianist normally uses the same fingerings each time. This is called "pre-defined" fingering¹⁴². Classical piano compositions are often performed using this technique¹⁴³.

Jon Verbalis offers suggestions regarding how to approach piano fingerings, especially for difficult sections of music or passages with multiple fingering possibilities¹⁴⁴. Accordingly, there are several published editions of piano works with annotations regarding interpretation and fingerings that provide valuable information and suggestions to pianists. Chopin Etudes, for example, have reference editions like the Ignacy Jan Paderewski edition¹⁴⁵, Alfred Cortot edition¹⁴⁶ and Edwald Zimmermann

¹⁴¹ *Fingering*: "Since the end of the 18th century, this has been standardized on something like modern principle. Before this period there was a good deal of passing of the 3 middle fingers over one another and comparatively little use of the thumb and little finger; this was partly due to the fall of the keys being much shallower than with modern instruments"..."Clementi firmly established the modern principles of fingering: his use of the thumb was the same as ours, except that he did not use it on the black keys, as is sometimes done today. These modern principles include the division of a scale into two groups of 3 and 4 notes respectively, with the thumb as the pivot between them, the playing of arpeggio passages on the bases of the octave, some adaptation of fingering to the hand of the individual player, the planning of a passage by working backwards from the point at which it is ultimately to arrive, and the division of such a passage into "physical groups" as units, each of these being considered as a chord." [James Freeman, "Fingering", *The Oxford Dictionary of Music*. Ed. Michael Kennedy and Joyce Bourne (New York, NY: Oxford University Press, 1999), 299.]

¹⁴² Jon Verbalis, *Natural Fingering: A Topographical Approach to Pianism* (New York, NY: Oxford University Press, 2012).

¹⁴³ Ibid.

¹⁴⁴ Ibid.

¹⁴⁵ Frederic Chopin, *The Complete Preludes and Etudes*, edited by Ignacy Jan Paderewski (New York, NY: Dover Publications Inc., 1980).

edition¹⁴⁷, among others. Beginners often use these editions as models of how to approach and/or perform a piece of music (including fingerings), and more experienced pianists unlikely use them as a reference.

Private piano teachers also help students identify fingerings in conjunction with the music being played and individual physical and technical abilities¹⁴⁸. This guidance establishes a foundation for the pianist and outlines justifications for fingering choices. After sufficient experience, the student alone will choose his fingerings as part of his personal technique.

3.4.2. *Natural Fingering*

Natural fingering is the ability to apply previously learned pre-defined fingering patterns to live situations, mainly in improvisation contexts¹⁴⁹. After playing notated music for a period of time, the brain and hands learn their own way along the keyboard, and fingering becomes a real-time skill¹⁵⁰. The following part of this chapter (Part Two: The Music - Section 1. Technique) provides a simple and logical technique for fingering scales and arpeggios, that uses “physical logic” to choose the right fingering for particular situations, without having to memorize particular combinations for every scale and key.

¹⁴⁶ Frederic Chopin, *Piano Etudes Op. 10 and Op. 25*, edited by Alfred Cortot (Milan, Italy: BMG Ricordi, 1986).

¹⁴⁷ Frederic Chopin, *Etudes*, edited by Ewald Zimmermann (Munich, Germany: G. Henle Verlag, 2007).

¹⁴⁸ Heinrich Neuhaus, *The Art of Piano Playing*. Translated by K. A. Leivobith (New York, NY: Dover Publications Inc., 2013).

¹⁴⁹ Jon Verbalis, *Natural Fingering: A Topographical Approach to Pianism* (New York, NY: Oxford University Press, 2012).

¹⁵⁰ Rami Bar-Niv, *The Art of Piano Fingering: Traditional, Advanced, and Innovative* (Scotts Valley, CA: Create Space Independent Publishing Platform, 2013).

This technique is designed for improvisation, where melodies are constructed in real time with almost no pre-determined music material.

Natural fingering is essential when playing improvised jazz piano to allow for a free flow of musical ideas to be expressed on the instrument¹⁵¹. This “real time connection” of idea to fingers to piano keys must occur without requiring additional thought or focus from the pianist. It is an immediate and fluent process that allows the music to be produced without technical restrictions or other distractions.

One approach to develop natural fingering for pianists is to repeat the same kinds of melodic patterns, classical literature, solo transcriptions, song melodies, etc. over and over until they become natural, and the hand can instantly choose the adequate fingering. It is common for a pianist’s left hand to take more time to be trained than his right hand. This is perhaps due to the fact that melodies are, for the most part, played with the right hand in the higher register of the piano. When playing unison melodies with both hands, the left hand mirrors the right hand. Although human hands are symmetrical, what may be an easy fingering for one hand may be extremely difficult for the other.

According to pianist Frank (1998), finger position and numbering is a physical act that requires repeated movement fixed in the brain and muscles¹⁵². Just as pianists remember musical concepts by repetition, they also remember finger movements and body positions in their muscles (and body) by repetition. This is called mechanization¹⁵³.

¹⁵¹ Dave Frank and John Amaral, *Joy of Improv - Books One and Two* (Milwaukee, WI: Hal Leonard Corp., 1998).

¹⁵² Ibid.

¹⁵³ Ibid.

When athletes practice a sport, like football for example, they do not need to think about how to run or how to move one foot after another; these actions are automatic.

Pianists also mechanize certain processes while they perform. It would be impossible to actually think about all of the simultaneous actions required to perform music on the piano. Accordingly, when a pianist has this feeling it means he is not yet ready to perform that particular piece of music, and he needs to continue working on technique.

The present researcher learned natural fingering and hand position by practicing Classical literature during his early stages of playing piano. Classical works contain most of the technical challenges and possible fingering combinations, with different alternatives to resolve them. A Mozart sonata¹⁵⁴, for example, contains numerous scales, arpeggios, and diatonic runs, which will benefit the pianist in the development of technical skills in a more natural way than practicing scales or arpeggios alone. In addition, this music often includes changing key signatures and variations of previously featured musical ideas, again requiring the pianist to accommodate technical devices to a particular section such as natural fingering or articulation and dynamics. Pianists who practice fingering and other techniques through repertoire seem to receive numerous benefits (*e.g.*, harmonic sense, articulation, phrasing) from the process over those who isolate technique and practice exercises alone. Accordingly, as a resource, the present researcher offers an extensive list of classical literature in the following part of this chapter (Part Two: *The Music* - Section 1. Technique), including works from different historical periods organized by difficulty level.

¹⁵⁴ Wolfgang Amadeus Mozart, *Piano Sonatas*. Ed. by Ernst Hertrich (Munich, Germany: G. Henle Verlag, 1992).

3.4.3. Hand Independence

Hand independence is the ability to have both hands performing different activities at the same time during performance, combining rhythms and melodies (*i.e.*, counterpoint), which may require a high degree of technique skills and musicality. Professional jazz pianists are able to use both hands with identical technical dexterity, playing melodies, chords and other combinations with either hand¹⁵⁵. In addition, jazz pianists often play walking bass lines with their left hand, and chords and improvised melodies with their right hand¹⁵⁶. Contemporary jazz pianists like Brad Mehldau¹⁵⁷ or Vijay Iyer¹⁵⁸, for example, often improvise melodic lines with both hands at the same time. In addition, Keith Jarrett plays complex inner counterpoints when he performs ballads¹⁵⁹, with harmonic delay resolutions, internal melodies, etc.

One approach to teaching a jazz pianist brain to simultaneously think in two or more melodies is to practice the keyboard works of Johann Sebastian Bach¹⁶⁰, who apart from being one of the greatest composers and keyboard players in history, was a great improviser as well. During the Baroque period, improvisation was appreciated and musicians were valued not only as performers or composers¹⁶¹, but also by their abilities

¹⁵⁵ Neil Olmstead, *Solo Jazz Piano: The Linear Approach* (Boston, MA: Berklee Press, 2003).

¹⁵⁶ Tete Montoliu, *The Music I Like to Play – Volumes 1-4*, Soul Note (CD), 1986-90.

¹⁵⁷ Brad Mehldau, “Martha, My Dear”, *Day is Done*, Nonesuch (CD), 2005.

¹⁵⁸ Vijay Iyer, *Accelerando*, Act Music (CD), 2012.

¹⁵⁹ Keith Jarrett, “Blame It on My Youth” and “Body and Soul”, *The Cure*, ECM (CD) 1990.

¹⁶⁰ David Schulenberg, *The Keyboard Music of Johann Sebastian Bach* (Boca Raton, FL: CRC Press, 2006).

¹⁶¹ George J. Buelow, *A History of Baroque Music* (Bloomington, IN: Indiana University Press, 2004).

to create variations of their works. Accordingly, Baroque style has many similitudes to jazz music¹⁶², which may explain why jazz artists often enjoy Bach’s music.

Bach’s music is “contrapuntal” where both hands have melodic relevance¹⁶³.

Within this music, pianists are required to perform different rhythms and melodies with both hands, alternating dynamics, and melodic levels. Table 10 includes selected keyboard works by Johann Sebastian Bach¹⁶⁴ that foster the development of hand independence (arranged by difficulty level). The jazz pianist may also consult published bibliographies of Bach’s music, for example, George Kochevitsky’s guide¹⁶⁵ and the *Cambridge Companion*, by John Butt¹⁶⁶.

3.5. Reading and Sight Reading

The ability to read piano literature and lead sheets are essential skills for jazz pianists, and positions them to perform in different musical situations across musical styles. Unless they only play original music, professional jazz pianists usually perform with others in a variety of situations (*e.g.*, accompanying for soloists, performing in recording studios, being part of ensembles).

Having strong music reading skills and being able to perform a wide range of musical styles is essential for professional pianists in today’s competitive music

¹⁶² Kai Ying Chen, “The Link between Baroque and Jazz” in *The Musical Link*, <http://themusicallink.blogspot.com> (accessed August 14, 2013).

¹⁶³ Robert L. Marshall, *The Music of Johann Sebastian Bach: The Sources, The Style, The Significance* (New York, NY: G. Schirmer Books, 1990).

¹⁶⁴ David Schulenberg, *The Keyboard Music of Johann Sebastian Bach* (Boca Raton, FL: CRC Press, 2006).

¹⁶⁵ George Kochevitsky, *Performing Bach’s Keyboard Music* (White Plains, NY: Pro/Am Music Resources, 1996).

¹⁶⁶ John Butt, *The Cambridge Companion to Bach* (Cambridge, MA: Cambridge University Press, 1997).

TABLE 10. Selected keyboard works by Johann Sebastian Bach that foster hand development

- 20 Pieces from the Album of Anna Magdalena
- Two-Part Inventions
- Three-Part Symphonies
- French Suites
- Six Partitas
- English Suites
- The Well-Tempered Clavier (Books I and II)

These compositions are listed according to difficulty, from easy (top) to difficult (bottom)

business. Reading skills also facilitate a faster preparation of new repertoire and saves rehearsal time. In addition, these skills for studio pianists, advance and support performance, where time and accuracy are indispensable elements.

Sight-reading is directly linked with practice of solo transcriptions¹⁶⁷. As both disciplines share vocabulary and music theory elements (*i.e.*, *swing eight notes, pick ups, triplets, double-time passages*), reading is often easier after having solo transcriptions. For example, the continued practice of solos from Charlie Parker's *Omnibook*¹⁶⁸ will benefit sight reading of the same kind of music material (*i.e.*, *bebop melodies, jazz standard songs*).

¹⁶⁷ Brian J. Kane, *Creative Jazz Sight Reading* (Cambridge, MA: Jazz Path Publisher, 2004).

¹⁶⁸ Charlie Parker, *Omnibook* (New York, NY: Atlantic Music Corp., 1978).

The process of reading, performing, and singing, develop the inner sense of ear training¹⁶⁹, since all of these three elements are intrinsically connected, and can be applied to music topics required for pianists to practice, like chord voicings, for example. Almost everything is connected in music. Music is an aural process, formed by several different elements that comprise one unique art form. Hence, the overall quality of the music will depend on the ability to master its independent elements.

Table 11 provides a list with selected recommend bibliography for sight-reading. The following is a classification of different formats of literature for reading practice:

1. Traditional Notation
2. Chord Changes
3. Real Book Notation & Rhythm Section Marks
4. Big Band Charts
5. Mixing of Traditional and Modern Notation

¹⁶⁹ Dave Frank and John Amaral, *Joy of Improv - Books One and Two* (Milwaukee, WI: Hal Leonard Corp., 1998).

TABLE 11. Selected bibliography for sight-reading practice.

- Aebersold, Jamey. *Jazz Play-A-Long Sets, Vols. 1-133*. New Albany, IN: Jamey Aebersold Jazz Inc., 2000-2010.
- Bach, Johann Sebastian. *Inventions and Sinfonias*. Ed. by Rudolf Steglich. Munich, Germany: G. Henle Verlag, 1978.
- Baker, David. *Bebop Jazz Solos*. New Albany, IN: Jamey Aebersold Jazz Inc., 1981.
- Bellson, Louie. *Modern Reading Text in 4/4 – For All Instruments*. Van Nuys, CA: Alfred Music Publishing, 1985.
- Berlin, Boris and Andrew Markow. *Four Star Sight Reading and Ear Tests (Daily Exercises for Piano Students). Books 1-10. Edited by Scott McBride Smith*. Toronto, Canada: The Frederick Harris Music Company, 2002.
- Coker, Jerry. *Patterns for Jazz*. Miami, FL: Studio Publications Recordings, 1970.
- Harris, Paul. *Improve Your Sight Reading! Piano. Vols. 1-8*. Van Nuys, CA: Alfred Music Publishing, 1998.
- Kane, Brian J. *Creative Jazz Sight Reading*. Cambridge, MA: Jazz Path Publisher, 2004.
- Parker, Charlie. *Omnibook*. New York, NY: Atlantic Music Corp., 1978.
- Phillips, Mark. *Sight-Read any Rhythm Instantly*. New York, NY: Cherry Lane Music, 2002.
- Sher, Chuck, and Larry Dunlap, eds. *The All-Jazz Real Book*. Petaluma, CA: Sher Music, 2001.
- Sher, Chuck, and Larry Dunlap, eds. *The Standards Real Book*. Petaluma, CA: Sher Music, 1991.
- Sher, Chuck, and Bob Bauer, eds. *The New Real Book Volumes 1, 2 & 3*. Petaluma, CA: Sher Music, 1991.
- Snidero, Jim. *Jazz Conception: 21 Solo Etudes for Jazz Phrasing, Interpretation and Improvisation. Piano Version*. Rottenburg, Germany: Advance Music, 1997.
- Stuart, Walter. *Walter Stuart's Encyclopedia of Modern Jazz*. New York, NY: Charles Colin, 1974.
- Zimmermann, Jim. *Sight Reading Rhythm: A Self-Teaching Course for All Musicians and All Instruments*. New York, NY: Carl Fischer Music, 2006.

4. Scales, Arpeggios, Exercises and Classical Literature

4.1. Scales and Arpeggios

The act of practicing scales and arpeggios is particularly essential for jazz pianists as it provides a foundational knowledge of the keyboard and a familiarity of key signatures, harmonic modes, time and feel, etc., which contribute to his ability to improvise—to spontaneously create music in real time. In addition, practicing scales and arpeggios increases physical dexterity and reinforces fingerings. Scales, arpeggios, and exercises are like nouns, verbs, and adjectives in language. Together they contribute to a vocabulary that allows a pianist to communicate with music.

Pianists develop aural, visual, and physical memory as they repeatedly perform scales, arpeggios, and exercises. Technique, harmony, phrasing and articulation are achieved as well. Moreover, overall musicality is enhanced when pianists explore these elements simultaneously as they, for example, perform master works by great composers of any style, from classical to jazz, folk or other musical styles.

The practice of scales, arpeggios, and exercises, has several benefits apart from technique. Examples of this type of benefit are increased harmonic perspective and an understanding of the relationship between key signatures and modes. In addition, practicing scales fosters the development of an inner pulse as pianists often perform scales with a metronome (exploring different tempos over time). This approach provides a steady external rhythmic prompt that supports the exploration of rhythms, styles, grooves, etc.

Pianists gain an understanding of the piano keyboard (*i.e.*, keys in groups of twelve, octaves) as they play scales and arpeggios. Although the use of complete scales is

unusual in jazz improvisation, the application of scales occurs as melodies are created within scales. In addition, the practice of classical literature is very helpful for improving a pianist's natural fingering skills within scales and arpeggios, among other technical applications. The music of Wolfgang Amadeus Mozart¹⁷⁰, for example, often includes melismatic scale passages, arpeggios in numerous inversions, and melodic combinations (e.g., piano sonatas, concertos, variations).

The practice of arpeggios enhances a pianist's knowledge and command of harmony. Arpeggios, by definition, are broken chords—chord tones played individually to spell each one in rhythm¹⁷¹. As pianists play arpeggios and listen to these sounds they develop the ability to, in jazz terminology, “hear the changes”¹⁷². Outlining the harmony when improvising it an integral skill for jazz musicians, which is also called playing in “horn style”¹⁷³. Horn style for pianists became popular during the *Bebop*¹⁷⁴ period. Instruments, like piano, guitar, and bass imitated the manner in which horn players improvised by employing arpeggios that clearly outlined the harmony as they created melodic phrases¹⁷⁵. This practice is also referred to as a vertical approach or harmonic approach, when improvising¹⁷⁶.

¹⁷⁰ William Cowdery, and Neal Zaslaw, *The Complete Mozart: A Guide to the Musical Works of Wolfgang Amadeus Mozart* (New York, NY: W.W. Norton & Company, 1991).

¹⁷¹ Dan Haerle, *The Jazz Language: A Theory Text for Jazz Composition and Improvisation* (Van Nuys, CA: Alfred Music Publishing, 1982).

¹⁷² Jerry Coker, Bob Knapp, and Larry Vincent. *Hearing the Changes* (Rottenburg, Germany: Advance Music, 1997).

¹⁷³ Dan Haerle, *Jazz Improvisation for Keyboard Players* (Van Nuys, CA: Alfred Music Publishing, 1978).

¹⁷⁴ Scott Yanow, *Bebop* (San Francisco, CA: Miller Freeman Books, 2000).

¹⁷⁵ David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

¹⁷⁶ *Ibid.*

4.2. Exercises

Musical exercises serve many purposes for a pianist including preparing his mind and body to play the instrument and advancing technique¹⁷⁷. These exercises often provide specific information to the pianist that allows him to develop skills, perform difficult passages of music, and advance as an artist. Just as he repeats simple actions in daily life such as breathing, walking, or eating, a pianist needs to engage in the repetition of musical exercises within a regular routine to internalize and assimilate basic music protocols-both mental and physical.

Unfortunately, musical exercises are not often viewed as opportunities for creativity and expression and accordingly are sometimes approached by the pianist as a chore¹⁷⁸. On the contrary, an exercise in music can be a vehicle for creative music making for pianists when approached creatively. Therefore, exercises need to sound good (musical) and emulate real music performance. One approach to keeping exercises fresh, musical, and creative is for jazz pianists to perform them as written and then vary them by transposing to different keys, playing in a variety of tempos and time signatures, or switching between hands.

In addition to published method books, pianists can create their own musical exercises to perform by selecting a melody from a solo improvisation, a phrase from a solo transcription, or a section of a jazz standard melody, to mention a few examples.

¹⁷⁷ Seymour Bernstein, *With Your Own Two Hands: Self-Discovery Through Music* (New York, NY: G. Schirmer, Inc., 1981).

¹⁷⁸ Jerry Bergonzi, *Inside Improvisation Series, Vol. 6: Developing a Jazz Language* (Rottenburg, Germany: Advance Music, 2003).

These exercises (taken from real music) are not artificial and are directly relevant and engaging to the pianist. Teachers and pedagogues often recommend practicing music in the same manner in which it will be performed¹⁷⁹. This requires a pianist to use musical examples to practice both creatively and musically.

Pianists often address specific technical problems like the use of the fourth finger, and its independence from the rest of the hand with musical exercises¹⁸⁰. For example, the C. L. Hanon method¹⁸¹ includes a series of piano exercises for both hands that target particular skills and challenges. Hanon asserts that by repeating exercises on a daily basis, a pianist's hands and fingers will achieve increased physical strength and dexterity¹⁸².

4.3. Classical Literature

The study of classical literature written specifically for the piano provides pianists with opportunities to develop technique, master counterpoint, explore the full range of the instrument, and gain knowledge of music history and musical styles¹⁸³. These compositions illustrate the development of the piano (and other keyboard instruments) over time, are examples of popular music of a particular time and place, and have stood the test of time as masterworks.

¹⁷⁹ Kenny Werner, *Effortless Mastery* (New Albany, IN: Jamey Aebersold Jazz Inc., 1996).

¹⁸⁰ Walter Gieseking and Karl Leimer, *Piano Technique* (New York, NY: Dover Publications Inc., 1972).

¹⁸¹ Charles Louis Hanon, *The Virtuoso Pianist in Sixty Exercises* (New York, NY: G Schirmer, Inc., 1986).

¹⁸² *Ibid.*

¹⁸³ The present researcher began his piano study with classical literature, which provide an essential foundation for his playing. When the present researcher began his musical instruction in the 1980's, classical music was the only music offered at Spanish conservatories. Jazz or other contemporary styles were not officially recognized in the Spanish education system until 2002. After graduating from the conservatory he continued his education in jazz music in the United States of America. Nowadays both jazz and classical music instruction are offered in most programs at universities and conservatories—around the world.

In their day, Classical composers and performers like Mozart and Chopin were the innovative artists and creators of music. In that light their contributions may be compared with today's jazz musicians, especially as many of the pianists performed their own compositions and were great improvisers (*e.g.*, Johann Sebastian Bach, Wolfgang Amadeus Mozart, Ludwig van Beethoven, Franz Liszt, Maurice Ravel, Sergei Rachmaninoff).

One of the purposes of this research is to combine elements from numerous musical styles in order to provide resources for today's global musician. These resources are intended to foster a foundation in classical music and piano technique, and combine this study with jazz improvisation and creativity. Applications of this approach will likely benefit pianists who choose to pursue careers as professional artists as well as those who play for personal growth and development. Being a professional jazz pianist requires a strong foundation, and a deep understanding and knowledge of musical styles and elements (both classical and jazz), is required to develop a personal language and ultimately to create a unique voice in music.

Practicing classical literature will provide the pianist with a background in harmony, rhythm, form, composition, and instrumentation. This experience advances his knowledge of music and development of fundamental skills that support music making across musical styles. Moreover, the practice of classical literature allows him to express another artist's voice as he is forming his own personal style. Table 12 includes a list of selected benefits for jazz pianists that may be obtained from practicing classical literature.

TABLE 12. Selected benefits for jazz pianists from practicing classical literature

- Overall musicality, familiarity with masterpieces of music
- Sound, dynamics, and articulation
- Hand and finger positions
- Fingering
- Scales, arpeggios, and exercises in a real musical context
- Knowledge of the keyboard and distances
- Form and organization of contents
- Harmony (see “Color Palette” in Part Two: The Music – Section 2.6.)
- Sight reading benefits
- Instrumentation and stylistic characteristics

See Part Two: *The Music* - Section 1.5. for recommendations about classical repertoire and levels.

To achieve successful results while practicing classical piano literature, the supervision and advice of a qualified teacher is needed, especially in the early stages of learning when the student has not yet developed a sense of self-criteria. In addition, observation and self-evaluation are essential concepts also when practicing technique, evaluating hand movements and sound quality throughout stages of learning.

Pianists should listen to a variety of recordings as part of their development as artists¹⁸⁴. This listening allows a pianist to compare multiple versions and performances,

¹⁸⁴ David Berkman, *The Jazz Musician's Guide to Creative Practicing* (Petaluma, CA: Sher Music, 2007).

become familiar with great artists representing numerous styles and historical periods, identify personal role models, study and analyze musical scores in conjunction with recordings, and hear a variety of interpretations and executions of masterworks, to mention a few examples. Also, pianists will likely derive pleasure from listening to this music, which may motivate them to practice¹⁸⁵.

In addition to recordings, there are many other resources available to pianists, which provide descriptions of the music, performers, composers, conductors, premieres, and so forth. Bibliography references¹⁸⁶ and listening guides like the *All Music Guide*¹⁸⁷, *Penguin Guide*¹⁸⁸, *Rough Guide*¹⁸⁹, *Gramophone Guide*¹⁹⁰, and *NPR Guide*¹⁹¹ provide essential supplemental information including reviews and other notes about recordings.

¹⁸⁵ David Berkman, *The Jazz Musician's Guide to Creative Practicing* (Petaluma, CA: Sher Music, 2007).

¹⁸⁶ David Dubal, *The Art of the Piano: Its Performers, Literature and Recordings, Volume 1* (Pompton Plains, NJ: Amadeus Press, 2004).

¹⁸⁷ Chriss Woodstra, Gerald Brennan, and Allen Schrott, *All Music Guide to Classical Music: The Definitive Guide to Classical Music* (Milwaukee, WI: Backbeat Books, 2005).

¹⁸⁸ Ivan March, Edward Greenfield, and Robert Layton, *The Penguin Guide to Recorded Classical Music 2010: The Key Classical Recordings on CD, DVD, and SACD*, (New York, NY: Penguin Books, 2009).

¹⁸⁹ Joe Staines, *The Rough Guide to Classical Music* (London, United Kingdom: Rough Guides, 2010).

¹⁹⁰ James Jolly, *The Gramophone Classical Music Guide 2012* (London, United Kingdom: Gramophone Publications, 2011).

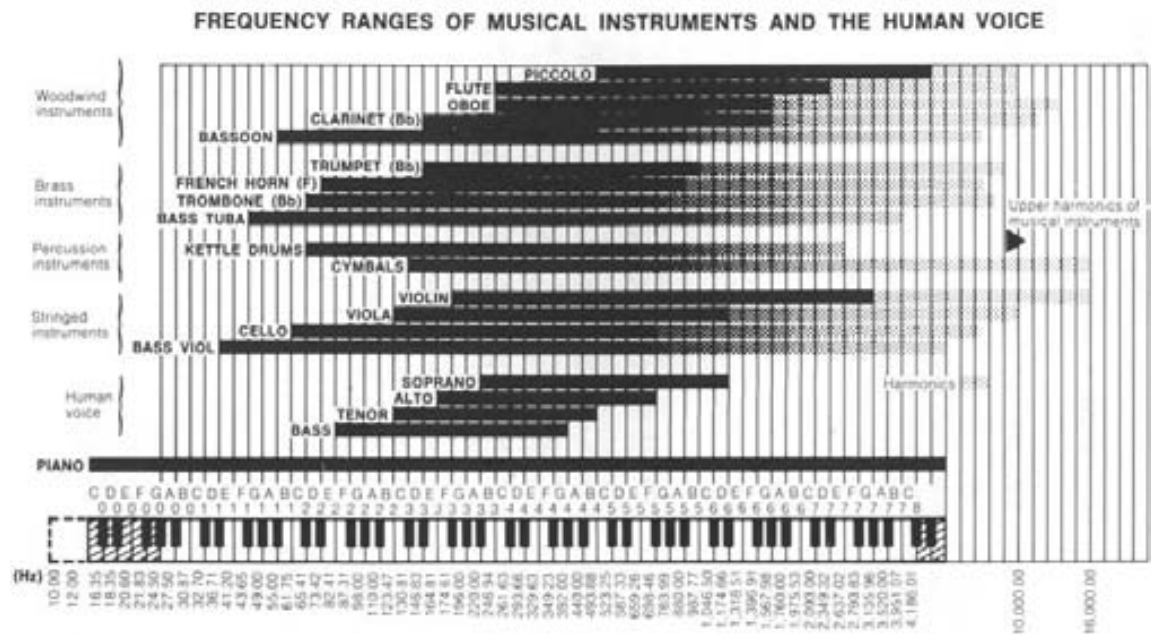
¹⁹¹ Ted Libbey, *The NPR Guide to Building a Classical Collection: Second Edition* (New York, NY: Workman Publishing Company, 1999).

5. Piano Techniques

5.1. Control Room

Due to its physical characteristics, the piano represents a global instrument. Most musical registers and instruments can be represented on the piano keyboard, which ranges from A0 (27,5 Hz) to C8 (4186 Hz) covering 7 complete octaves¹⁹², as shown in figure 2.

FIGURE 2. Piano keyboard range and frequencies with orchestral instruments correlation.
 Source: Eargle, John. *Handbook of Recording Engineering*. New York, NY: Springer, 2005. (Used with permission)
<http://www.aes.org/aeshc/docs/recording.technology.history/images4/figure2.html>



¹⁹² Brian Capleton, *Theory and Practice of Piano Tuning: A Manual on the Art, Techniques and Theory* (Worcester, United Kingdom: Amarilli Books, 2007).

Pianos are versatile instruments that allow jazz pianists to play melodies, harmonies, rhythms, bass lines, etc., simultaneously or individually¹⁹³, approaching the instrument in numerous ways depending on the setting, instrumentation, and musical style. Jazz pianists perform different roles within a group setting (*i.e.*, solo piano accompaniment for a soloist, being a soloist with rhythm section in a trio setting, and solo piano). Each of these settings requires a pianist to perform in a certain manner – providing harmonic support, leading the music as a soloist, or individually performing all aspects of the music.

The piano keyboard can be seen as the control room in a recording studio, or as the score of a symphonic work as seen by the conductor. Jazz pianists have the control of all musical elements in just one instrument. Most instrumentalists use the piano to learn harmony and ear training and to practice composition and arranging. Since piano keys are arranged by frequency, from low to high, it helps to make a visual representation of arrangements and orchestrations, more easily than on other harmonic instruments like the guitar. It is also a great tool for other instruments (*i.e.*, horns, strings, percussion/drums) and vocalists to practice harmony and ear training. Accordingly, *Harmonic Piano* or *Secondary Piano* courses are typically included in college-level jazz curricula for all instrumentalists.

Musical topics and contents covered in Part Two: The Music, should be practiced by jazz pianists with different piano techniques and instrumentation settings (*i.e.*, band,

¹⁹³ Josef Hofmann, *Piano Playing: With Piano Questions Answered* (New York, NY: Dover Publications, 1976).

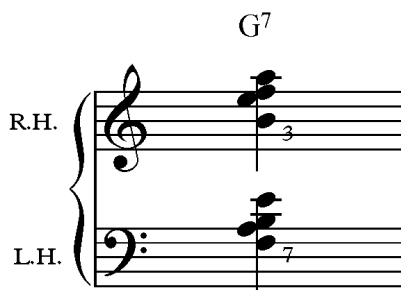
trio, duo, solo), as explained in the following sections. As an example, chord voicings should be practiced as left hand voicings (piano trio setting), spread voicings (solo piano and duo setting), and open voicings with both hands (band setting).

5.2. Band Setting

The piano is part of a jazz rhythm section, along with drums, bass, and (optional) guitar¹⁹⁴. A jazz rhythm section may contain more than one soloist, a horn section, and/or a vocalist. In this setting the role of the pianist is to provide harmonic and rhythmic support, playing chords with both hands.

When playing the same voicing but with a different inversion in each hand, usually combining the guide notes (3/7) as the lower voice of the voicing, they are called *complementary voicings*. See figure 3 for an example of G7 chord played in *Four Way Close* in complementary position with both hands, where the 3rd and 7th of the chord are placed as the lowest voice of each voicings.

FIGURE 3. Complementary position of chord voicing



¹⁹⁴ Shelly Berg, Lou Fischer, Fred Hamilton, and Steve Houghton, *Rhythm Section Workshop for Jazz Directors* (Van Nuys, CA: Alfred Music Publishing, 2006).

5.3. Trio

Jazz pianists frequently perform as soloists within a trio setting, along with bass and drums. This is a very popular instrumentation for jazz pianists, having the support of a rhythm section¹⁹⁵. This technique includes the right hand playing the melody and the left hand playing chords, although multiple variations can be applied, like sharing melodies with both hands, perform melodic counterpoints with the left hand, inserting chords within the melodic improvisations, etc. Contemporary jazz pianists combine these approaches as they interact with the other rhythm section players¹⁹⁶. Pioneer piano trios from the 1940's, 1950's¹⁹⁷ (*i.e.*, Oscar Peterson, Erroll Garner, Ahmad Jamal) used to have the bass and drums performing the role of comping for the piano. Most piano trios before the Bill Evans Trio¹⁹⁸ (*i.e.*, 1959) followed this approach¹⁹⁹. Bill Evans, however, altered the communication among the three members of his trio engaging his colleagues to communicate and exchange musical ideas similar to a classical chamber music approach.

5.4. Duo

A duo, in its basic form, is two instruments performing together. Accordingly, there are as many duo combinations as instruments. For a pianist, a duo typically requires

¹⁹⁵ Ted Gioia, *The History of Jazz* (New York, NY: Oxford University Press, 2011).

¹⁹⁶ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

¹⁹⁷ Billy Taylor, *Jazz Piano: A Jazz History* (Dubuque, LA: Wm. C. Brown, 1982).

¹⁹⁸ Peter Pettinger, *Bill Evans: How My Heart Sings* (New Haven, CT: Yale University Press, 1973).

¹⁹⁹ *Ibid.*

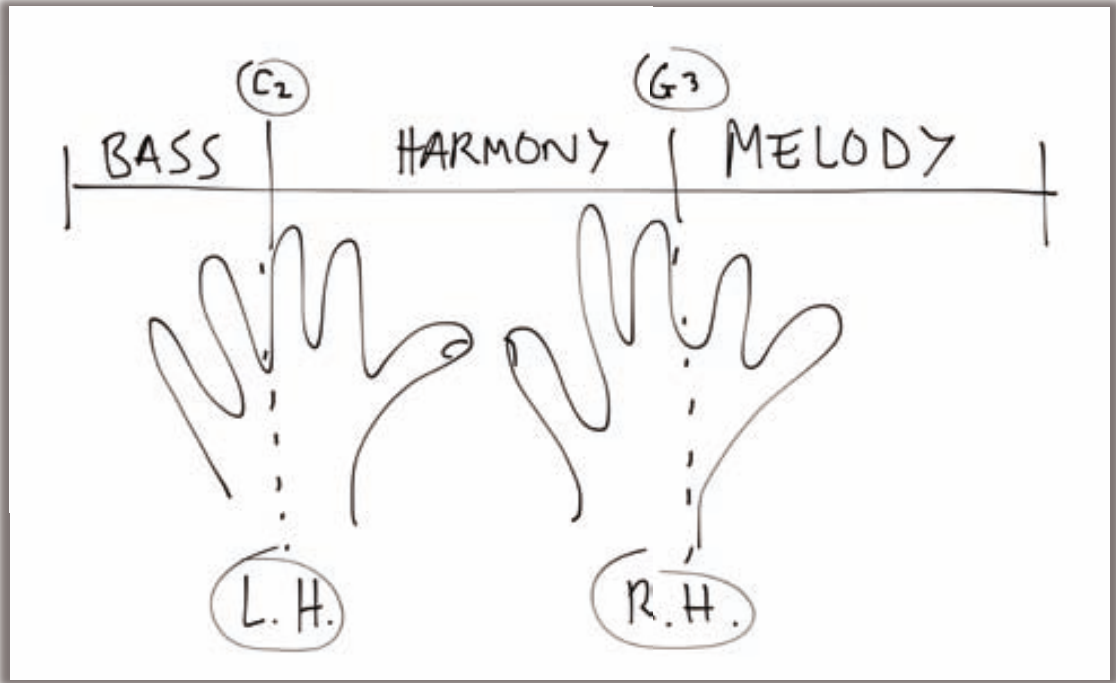
him to accompany for a soloist, like a vocalist or a horn player²⁰⁰. In addition, common duo combinations for pianists include two pianos, and piano/guitar. The pianist's typical role in a duo is to represent the whole rhythm section, providing harmonic, bass, and rhythmic support, as in a solo piano situation.

5.5. Solo Piano

Solo piano setting for jazz pianists, is one of the most exciting and demanding situations, because all music content (*i.e.*, melody, harmony, bass, rhythm) needs to be combined in just one instrument and performed by a single musician. This approach requires command of music theory, technique, language, and style. Figure 4 illustrates the assignation of roles for each hand when performing in a jazz solo piano setting: bass with left hand, melody and improvisation with right hand (*i.e.*, employing high and low end fingers, 3-5), and harmony shared with both hands (*i.e.*, using 1-3 fingers).

²⁰⁰ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

FIGURE 4. Illustration of both hands function when playing solo piano



PART TWO: THE MUSIC

Introduction: Organic Elements of Music

The act of listening to music creates an unconscious image of the sounds in the mind²⁰¹. The music makes an impression and is something on which the listener can reflect and recall at a later time. This is similar to meeting a person for the first time. Observations are made about the person, in the moment, that determine how he is perceived and remembered. To continue this analogy, the person's face and its expression (*i.e.*, eyes and smile) represent the *melody* in musical terms, as melody is the primary characteristic of a song or the main character of a composition. After the face, the person's body, attire, and movements are recalled, which correspond with the *harmony* and *form* of a song. Complements follow, adding extra information to the general recollection of the person. This corresponds with the additional elements of music like the *arrangement*, *counterpoint*, *re-harmonization*, etc. Finally, it is the person's personality, character, and heart that attracts others, like the *rhythm*, *groove*, or *time and feel* of a piece that drives the music and engages the listener.

Audience recollection of performance is similar to remembering features and characteristics of a person following the first meeting. "Regular" audience perception, however, differs from a jazz pianist's as the jazz pianist usually focuses on very specific

²⁰¹ John A. Sloboda, *The Musical Mind: The Cognitive Psychology of Music* (Oxford, United Kingdom: Clarendon Press, 1985).

topics like harmony or chord-scales, while a non-jazz pianist audience member focus on the general message and essence of the music (*i.e.*, rhythm and time feel).

A jazz pianist needs to be his own music producer, so he can see the “big picture” of the musical offering as well as focus on musical details. The individual musical elements (*i.e.*, technique, harmony, improvisation, language) combine and allow the jazz pianist to communicate with an audience to tell a story²⁰².

a) Rhythm

Rhythm is fundamental in music²⁰³. Oftentimes a musical composition or performance is effective (successful) if its rhythm is good. Other musical components such as melody and harmony enhance a musical selection, but seem to be secondary to the rhythm²⁰⁴. Rhythm in music and in nature is primary and organic and experienced by persons of all ages, cultures, geographic locations, etc. It is part of the human experience²⁰⁵.

Rhythm is embedded in music in several ways. It is part of harmony (*e.g.*, harmonic rhythm), form (*e.g.*, how different sections complement and contrast each other; how sections are organized and sequenced), and melody (*e.g.*, melodic rhythm). Rhythm establishes the pulse of music, which elicits a physical response in both the performer and listener, and creates an ongoing and consistent foundation for the composition. In addition, the ability to internalize rhythm in the form of an inner-pulse is

²⁰² Jason Martineu, *The Elements of Music: Melody, Rhythm and Harmony* (London, United Kingdom: Walker & Company, 2008).

²⁰³ Aaron Copland, *What to Listen for in Music* (New York, NY: Signet Classics, 2011).

²⁰⁴ Jerry Bergonzi, *Inside Improvisation Series, vol. 4: Melodic Rhythms*. (Rottenburg, Germany: Advance Music, 1998).

²⁰⁵ Reinhard Flatischler, *The Power of Rhythm: Taketina* (Mendocino, CA: LifeRhythm, 2011).

something that musicians develop over time²⁰⁶. This inner-pulse allows musicians to perform with others; maintain a steady tempo; execute complex rhythms with accuracy in time; stretch the boundaries of musical expression within the structure of meter/time signature, and so forth.²⁰⁷

Rhythm in music is physical²⁰⁸. It is actively executed on an instrument or with the voice just as a person dances or plays sports—not by simply thinking about rhythm, dance, or the game, but by moving beyond the intellectual process to include the act of doing. Moreover, performing rhythm (like dance or sports) requires practice. This practice takes many forms depending on the skill and ability level of the musician. Throughout, however, the use of a metronome is an essential tool to foster rhythmic awareness and range of performance. By practicing with a metronome, the musician’s sense of pulse becomes natural. Within practice sessions the musician strives to play along with the metronome, as if playing with a drummer. This approach allows the musician to focus on the music (and the specific rhythm elements, feel, and groove) without *following* the clicks of the metronome.

In addition to music, rhythm is embedded in nature²⁰⁹. DNA²¹⁰ structures have rhythm (like musical rhythms these structures contain groupings of binary and ternary

²⁰⁶ Hal Crook, *Ready, Aim, Improvise!* (Rottenburg, Germany: Advance Music, 1999).

²⁰⁷ Godfried T. Toussaint, *The Geometry of Musical Rhythm: What Makes a “Good” Rhythm Good?* (London, United Kingdom: Chapman and Hall/CRC, 2013).

²⁰⁸ Michael Lauren, *Understanding Rhythm* (Van Nuys, CA: Alfred Music Publishing, 1991).

²⁰⁹ Reinhard Flatischler, *The Power of Rhythm: Taketina* (Mendocino, CA: LifeRhythm, 2011).

²¹⁰ DNA: “abbreviation for deoxyribonucleic acid (= the chemical at the center of the cells of living things that controls the structure and purpose of each cell and carries genetic information during reproduction)”. [“DNA”, *Cambridge Dictionaries Online*. Cambridge, United Kingdom: Cambridge University Press. <http://dictionary.cambridge.org/>]

combinations); the Astros have a rhythmic cadence; the weather has rhythm, etc.

Accordingly, rhythm is an organic component that characterizes, drives, and organizes. It determines the essence of a musical performance or composition.

b) Melody

Melody is the distinctive musical line within a selection that is comprised of musical motives developed throughout the song. These musical ideas are often linked to the form of the piece (with different melodies for individual sections) or associated with lyrics, if applicable. Melody characteristics²¹¹ are similar to the human inflection of speech: melodic shape in form of arching phrases (*e.g.*, question and answer, rest between phrases, rhythmic variation).

The art of writing a melody requires both creativity and skill²¹². It is perhaps one of the most challenging aspects of composing or improvising music, as it demands original thought, command of the instrument or voice, and literacy. Accordingly, songwriters are among the highest paid musicians in the music industry²¹³.

Although the technical elements and characteristics of a melody can be described objectively, the success or failure of an individual melody is subjective. The musician creates a melody, which illustrates his personal voice and language. In turn, a listener responds to that melody based on his preferences, experience, etc.

²¹¹ Jason Martineu, *The Elements of Music: Melody, Rhythm and Harmony* (London, United Kingdom: Walker & Company, 2008).

²¹² Jack Perricone, *Melody in Songwriting: Tools and Techniques for Writing Hit Songs* (Boston, MA: Berklee Press, 2000).

²¹³ Jason Blume, *This Business of Songwriting* (New York, NY: Billboard Books, 2006).

Melody is a distinctive feature in a musician's personality and style. It can be an essential part of their sound – a signature. Selected examples of musicians who historically and routinely offer an original melodic approach include guitarist Pat Metheny, pianist Chick Corea, and saxophonist John Coltrane, just to mention a few. Their particular style can often be instantly recognized just by the way they perform melodies.

c) Harmony

In addition to rhythm, harmony is perhaps the most characteristic language contribution to jazz music²¹⁴, and probably the most recurrent topic in jazz method books, especially when directed to jazz pianists²¹⁵. Jazz harmony is an evolution of western classical music, combining stylistic elements from the Romantic period to present, with particular influences from the 20th century (*i.e.*, Impressionism, Modernism, Expressionism, Serialism, Atonalism, Minimalism)²¹⁶. Jazz pianists like Bill Evans²¹⁷ and Dave Brubeck²¹⁸, incorporated elements from classical harmony into their original compositions and improvisation language (*i.e.*, modal harmony, color tones), developing a more sophisticated concept than early styles of jazz²¹⁹. Jazz pianists regularly employ a

²¹⁴ Andy Jaffe, *Jazz Harmony* (Rottenburg, Germany: Advance Music, 1996).

²¹⁵ Monika Herzig, "Elements of Jazz Piano Pedagogy: A Content Analysis" (PhD diss., School of Music, Indiana, 1997).

²¹⁶ Vincent Persichetti, *Twentieth-Century Harmony: Creative Aspects and Practice* (New York, NY: W.W. Norton & Company, 1961).

²¹⁷ Peter Pettinger, *Bill Evans: How My Heart Sings* (New Haven, CT: Yale University Press, 1973).

²¹⁸ Fred Hall, *It's About Time: Dave Brubeck* (Fayetteville, AR: University of Arkansas Press, 1996).

²¹⁹ Gunter Schuller, *Early Jazz: Its Roots and Musical Development* (New York, NY: Oxford University Press, 1986).

mixture of harmonic devices like re-harmonization techniques, color tones, and varied chord voicings architecture when performing and writing²²⁰.

Harmony is especially relevant for jazz pianists, since one of the most important roles for pianists in jazz combos is to provide harmonic support. This research explores different approaches to harmony applied to jazz pianists (see Part Two – *The Music*, 2.6 Color Palette), however, these application may be developed by all instrumentalists. In jazz, language for improvisation could also be seen as a melodic representation of a harmonic concept²²¹.

d) Form

Music is organized in parts or sections that, like the chapters of a book, when put together create an overall work. The individual sections of a musical composition create its form²²². This structure influences how musicians perform the music and how audiences receive it. Moreover, the manner in which musical content is organized, not only pre-defined sections but the improvised sections as well, contributes to the success of the performance.

Form in music can be categorized in two groups: *Song Form* and *Arrangement Form*²²³. Song form includes the basic information of a song such as its melody and harmony grouped in sections generally labeled with capital letters (A, B, C, etc.).

²²⁰ Dan Haerle, *Jazz Piano Voicing Skills: A Method for Individual or Class Study* (New Albany, IN: Jamey Aebersold Jazz Inc., 1994).

²²¹ Dan Haerle, *The Jazz Language: A Theory Text for Jazz Composition and Improvisation* (Van Nuys, CA: Alfred Music Publishing, 1982).

²²² Wallace Berry, *Form in Music* (Upper Saddle River, NJ: Prentice-Hall, Inc., 1966).

²²³ Paris Rutherford, *Basics in Jazz Arranging* (Milwaukee, WI: Hal Leonard Corp., 2013).

Arrangement form is the term used to describe the combinations of the song material (e.g., form, time and feel, re-harmonization, instrumentation) to configure the whole composition. The arrangement may introduce new form structure elements such as interludes, introduction, coda, modulations, re-harmonized sections and new lyrics (if applicable).

Historically, the basic structure of musical form has three main sections: exposition, development, and recapitulation (re-exposition)²²⁴. These sections are seen in Classical *Sonata Form*²²⁵ as well as in jazz standards. In jazz music, the development section is the central (and longest) part of the song, where improvisation happens. During the *bebop* period, for example, jazz musicians focused mainly on the improvisational part (development) during performances, avoiding melodic sections (i.e., exposition, recapitulation) or being vaguely faithful to the original melody.

e) Style

Musical style is associated with culture and geographical location²²⁶, like North American *swing*, Afro-Cuban *salsa*, Brazilian *Bossa Nova* and *Samba*, European Western Classical music, Indian Classical music, Spanish *flamenco*, Asian styles, and world music. Different cultural roots all over the world have generated unique styles through history with individual approaches of the organic elements of music: rhythm, melody, harmony, form and style. Musical styles are greatly defined by their rhythmic

²²⁴ Leon Stein, *Structure and Style: The Study and Analysis of Musical Forms* (Van Nuys, CA: Alfred Music Publishing, 1979).

²²⁵ Charles Rosen, *Sonata Forms* (New York, NY: W.W. Norton & Company, 1988).

²²⁶ Robert P. Morgan, *Twentieth Century Music. A Story of Musical Styles in Modern Europe and America*. (New York, NY: W.W. Norton & Company, 1991).

components²²⁷, and although jazz music is based mostly in the swing feel, it includes and combines many of the musical styles mentioned above²²⁸ (see chapter 4 – Part Two: *The Music*, sections 5.4 and 5.5, and Appendix A.6.).

The development and advances in communications (*i.e.*, Internet, radio, television) during the 20th century have fostered a culture interexchange among styles, resulting in new mixtures and fusions of rhythms and forms. Nowadays, pure styles (100% authentic, without external influences from other styles) are difficult to find and perhaps only remain in isolated cultural areas (*e.g.*, Central Africa, South America Amazonas region, Inner Asia)²²⁹.

Jazz musicians openly approach music using as many sources of inspiration as possible, from pop rock to world music styles. Accordingly, any song or musical composition may be eligible to develop via jazz music and improvisation. Improvisation is an attitude in life and music, which embodies the jazz style²³⁰, regardless of its contents.

The Five Elements

In order to outline and organize a successful practice routine for jazz pianists, musical content has been categorized in five sections, referred as *The Five Elements* (see table 13), which will form the basic structure of the practice routine templates offered in this research. The present researcher used the framework of *The Five Elements* to provide

²²⁷ Grosvenor Cooper, and Leonard B. Meyer, *The Rhythmic Structure of Music* (Chicago, IL: University of Chicago Press, 1963).

²²⁸ Mark C. Gridley, *Jazz Styles* (Upper Saddle River, NJ: Pearson, 2011).

²²⁹ Michael Bakan, *World Music: Traditions and Transformations* (New York, NY: McGraw-Hill, 2011).

²³⁰ Robert O'Meally, *The Jazz Cadence of American Culture* (New York, NY: Columbia University Press, 1998).

description of content, level, emphasis, and approach to profitable practice habits/routines for the jazz pianist.

TABLE 13. *The Five Elements*

1. Technique
2. Harmony
3. Language
4. Improvisation
5. Repertoire

1. Technique

Technique is an essential component that supports and advances artistic expression. It is developed over time with consistent focus and dedication. The jazz pianist needs to identify effective ways to foster technique development and to apply them to the musical contents. Technique is a combination of several components (*e.g.*, mental, physical) that allow the jazz pianist to express his musical ideas and to communicate with other musicians and an audience.

1.1. How to Practice Scales, Arpeggios and Exercises

Musicians use scales, arpeggios, and exercises as tools to practice specific concepts (*e.g.*, patterns, licks, phrases, transposition, dynamics, articulation, pulse)²³¹ when they improvise. The scales, arpeggios, and exercises provide a foundation on which the musician applies his technique, control of the instrument, and artistry, at the same time he is developing language skills.

Musicians who improvise music need the ability to transpose a melody to other keys, change tempos, perform a range of dynamics, and apply appropriate articulations. These abilities are fostered through practice—especially practice that includes primary musical sources like sections of compositions, transcriptions of improvised solos, or fragments of song melodies. The use of this music results in a musically interesting exercise that is often less artificial and/or contrived than examples written as exercises.

²³¹ Hal Crook, *How to Improvise: An Approach to Practicing Improvisation* (Rottenburg, Germany: Advance Music, 1991).

The following exercises are recommended to jazz pianists to start practicing scales and arpeggios (see table 14).

TABLE 14. Preliminary exercises for scales and arpeggios

1. Use just one key, like C, to start with
2. Learn pre-defined fingering for scales and arpeggios
3. Memorize the pattern (do not read from music notation)
4. Perform with no tempo or metronome
5. Play with separate hands first and then with hands together
6. Observe hand position and finger movements
7. Try to play with an even sound that is not too loud or too soft
8. Perform with *legato* articulation

1.1.1. Keyboard Range

One of the goals when practicing scales, arpeggios, and exercises, is to explore the keyboard throughout its seven octaves' range, which will also develop coordination of body movements and visual perspective over the keyboard. Table 15 includes an outline of the present researcher's recommended four-step approach to playing the C Major Scale (with both hands) with a metronome marking of 60 beats per minute (bpm). Although this exercise employs the major scale, the same method may be applied to other scales and modes (see Appendix C for a complete list of scales). This approach engages the pianist to progress through the four steps consecutively, without stopping. Step one

(one octave, quarter notes) should be used to set the fingerings and establish a feel for how the scale/arpeggio will fit over the keyboard. This foundation of step one prepares the pianist to play the scale or arpeggio at faster tempos. By playing the scale/arpeggio in this four-step manner the pianist develops flexibility, dexterity, and technique, as well as fluidity and ability to play throughout the entire keyboard.

TABLE 15. Preliminary exercises for scales and arpeggios: Keyboard range

Step 1	Using just one octave, in quarter notes (mm = 60 bpm) (Left Hand starting in C2, Right Hand in C3)
Step 2	Two octaves, in eighth notes
Step 3	Three octaves, in triplets
Step 4	Four octaves, in sixteenth notes

1.1.2. Dynamics

Dynamics provide jazz pianists with a greater and more powerful sound, a range of expressive capabilities, and a richer texture. They are an essential element of sound's quality, and determine to a great extent the manner in which musicians interact when performing in a group situation.

While working on any topic, the jazz pianist (like all musicians) may apply a variety of dynamics restrictions. Throughout this practice, dynamics should be implemented within the musical language. See table 16 for dynamic combination exercises.

TABLE 16. Dynamics practice combinations

- Both hands *p*; or *mf*; or *f*
- One hand *p*, the other hand *f*, and the reverse
- *Crescendos* and *Diminuendos*, from *p–f–p*
- From *pp* to *ff*, the dynamic range should be opened as much as possible, with separate hands first, then together, and any combination.

1.1.3. Sound and Articulation

The piano is a precise, balanced, and even instrument different from other instruments like horns that produce sound with human breath. The set nature of the mechanism and tuning structures influences the sound that is produced. Accordingly, the pianist uses dynamics and articulations to “humanize” the instrument and make the music sing. This results in some words (notes) sounding louder than others, and music with imperfections and variations that make it sound real.

Table 17 includes five articulation types to be explored by pianists during practice sessions. The present researcher recommends that pianists practice one articulation type at a time, at first, followed by articulations in combinations. He further recommends that pianists specifically combine different articulations switching hands when playing melodic lines in order to reproduce some of the “imperfect and real” characteristics of instruments such as the voice or horns.

It is essential for jazz pianists to combine articulation with rhythmic feel. Jazz pianist Dave Frank describes this approach as *bouncing*²³². It is an approach to playing that imitates walking, with irregular steps and shapes that configure and “imperfect” (not rigid) rhythmic pattern.

TABLE 17. Articulation types

<i>Legato</i>	Notes played or sung smoothly and connected, holding one key until the next is played
<i>Tenuto</i>	Notes held full length (or longer, with slight <i>rubato</i>), or play the note slightly louder
<i>Staccato</i>	Signifies a note of shortened duration, disconnected notes, opposite to <i>legato</i>
<i>Marcato</i>	Indicates a note, chord, or passage to be played with strong accentuation, louder or more forcefully than surrounding music
<i>Sforzando</i>	Played with prominent stress or accent, with sudden, strong emphasis

1.1.4. Hand Independence

Hand independence develops over time as the pianist practices different rhythms and counterpoint melodies with each hand. The present researcher recommends that pianists play combinations of rhythms such as simultaneously performing eighth notes with one hand and triplets with the other; or one hand going up the keyboard while the other goes down the keyboard, etc. to foster hand independence.

²³² Dave Frank and John Amaral, *Joy of Improv - Books 1 and 2* (Milwaukee, WI: Hal Leonard Corp., 1998).

Dynamics and articulations may be also applied while practicing hand independence, as described in Chapter 4 – Part One: *The Instrument* (sections 3.3 and 3.4), and performing classical literature and other styles like Afro-Cuban music²³³, with many rhythmic combinations between hands²³⁴.

1.1.5. All Keys

The ability to play music in every key is essential and requires practice. Jazz pianists who practice two different keys a day, for instance, six days in a row, will cover all twelve keys in less than one week. This practice will allow the pianist to develop command of keys as well as provides a foundation for the ability to transpose. Accordingly, pianists should practice exercises in multiple keys on a regular basis.

By practicing in every key, the pianist has the opportunity to explore harmonic and melodic relationships throughout the instrument. Moreover, over time, this practice fosters the development of musicianship and an understanding of the structure and function of music.

The ability to transpose music is critical for professional jazz pianists as it is regularly employed in performance settings. This skill, however, is approached and developed in different ways depending on the musical context. In order to transpose music the pianist may, in some situations, think about harmonic grades and the melodic connection with the harmony. At other times the pianist may think of the original melody and transpose it up or down according to particular intervallic distance or transpose the

²³³ Carlos Campos, *Salsa, Further Adventures in Afro Cuban Music for Piano* (Lawndale, CA: A.D.G. Productions, 1998).

²³⁴ Rebeca Mauleón-Santana, *101 Montunos* (Petaluma, CA: Sher Music, 1999).

music by ear. The present researcher recommends that pianists explore and identify as many different ways of transposing as possible, leading to goal of being able to transpose completely by ear.

Initially, during the beginning stages of learning, the ability to transpose will likely take serious time and effort. Jazz pianists who regularly practice transposition, in a variety of keys, will develop this ability over time. In addition, as part of this practice, jazz pianists specifically need to transpose jazz standards into multiple keys. This process allows the pianist to develop a command of various keys, prepares him for professional performance settings, and reinforces repertoire.

During jazz piano practice sessions, the act of transposition may be applied to musical compositions as well as to improvisation, as improvisation is a fundamental component of jazz music. Jazz pianists improvise as they use the piano to express original musical ideas. Accordingly, jazz pianists require the ability to freely navigate across keys. Without this ability the key signature may act as a filter, limiting the pianist's choices and/or freedom to perform and express ideas. When a pianist knows a key very well he is able to perform any musical idea in that key as it would be performed in the key of C, for example.

1.1.6. Multitask practice: Working on many things at the same time

One of the key components of a successful practice routine for jazz pianists is to simultaneously practice several elements while working on a specific musical topic²³⁵.

²³⁵ Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

This approach of strategically addressing a specific element of the music as well as produce the music with accuracy, creativity, and control of the instrument, requires time to develop. Individual skills practiced separately first and then incorporated together advance practice efficiency and foster the development of musical perspective. Table 18 includes an example of several topics that jazz pianists practice at the same time when working on scales or arpeggios.

TABLE 18. Combining several topics together when practicing scales and arpeggios

1. Specific Scale or Arpeggio
2. Fingerings
3. All Keys
4. Metronome and Pulse
5. Sound
6. Dynamics
7. Articulation
8. Hand Independence
9. Cognitive, Physical, and Creative: connecting brain and hands
10. Singing along
11. Relaxation and Body Position

The approach of strategically addressing multiple aspects of musical performance and study at the same time may also be applied to musical topics such as solo

transcription or learning repertoire. Accordingly, a jazz pianist develops his own combinations of content/focus for practice sessions based on skill development, learning style, and experience. The present researcher recommends that the jazz pianist make his own lists and combinations of topics to study as well as engage in the experience of practicing them.

1.2. Scales

Harmony is represented melodically not only in the form of arpeggios but also with scales or melodic modes. Scales are central to melodic language, since they can be performed in many combinations (*i.e.*, ascending, descending, broken), either in full (all scale tones) or partial use.

Practicing scales will provide opportunities for the jazz pianist to foster technical dexterity and harmonic training, while developing ear training through aural recognition and singing along. Table 19 includes a reference list of twenty-five scales to include in technique practice routines (see also Appendix C for a detailed list of scales and modes with music notation and melodic analysis).

Jazz pianists need a general perspective of the relationship between scales (within their parent mode: Major, Melodic Minor, etc.) and other modes in order to combine them when improvising, and to become familiar with harmonic sound, fingering, and physical constitution²³⁶. This is also directly connected to improvisation, for example, when improvising over a modal vamp in a minor key, and switching between other minor

²³⁶ Dan Haerle, *Scales for Jazz Improvisation* (Van Nuys, CA: Alfred Music Publishing, 1983).

TABLE 19. Reference list of 25 selected scales

#	Group	Scale Name	Melodic analysis
1	Major Scale: 7 Diatonic Modes	I. Ionian (Major)	1, 2, 3, 4, 5, 6, 7
2		II. Dorian	1, 2, b3, 4, 5, 6, b7
3		III. Phrygian	1, b2, b3, 4, 5, b6, b7
4		IV. Lydian	1, 2, 3, #4, 5, 6, 7
5		V. Mixolydian	1, 2, 3, 4, 5, 6, b7
6		VI. Aeolian (Natural Minor)	1, 2, b3, 4, 5, b6, b7
7		VII. Locrian	1, b2, b3, 4, b5, b6, b7
8	Harmonic Scale	Harmonic Minor	1, 2, b3, 4, 5, b6, 7
9		Harmonic Major	1, 2, 3, 4, 5, b6, 7
10	Melodic Minor Modes	I. Melodic Minor	1, 2, b3, 4, 5, 6, 7
11		III. Lydian Augmented	1, 2, 3, #4, #5, 6, 7
12		IV. Lydian b7	1, 2, 3, #4, 5, 6, b7
13		V. Mixolydian b13	1, 2, 3, 4, 5, b6, 7
14		VI. Dorian Altered (Locrian 9)	1, 2, b3, 4, b5, b6, b7
15		VII. Altered (Super Locrian)	1, b2, b3, 3, #4 (b5), b6, b7
16			Diminish (1,1/2)
17	Symmetrical Scales	Symmetrical Dominant	1, b2, b3, 3, #4, 5, 6, b7
18		Whole Tone	1, 2, 3, #4, #5, b7
19		Chromatic	1, b2, 2, b3, 3, 4, #4, 5, #5, 6, b7, 7
20	Bebop Scales	<i>Bebop</i> Major	1, 2, 3, 4, 5, b6, 6, 7
21		<i>Bebop</i> Dominant	1, 2, 3, 4, 5, 6, b7, 7
22		<i>Bebop</i> Dorian	1, 2, b3, 3, 4, 5, 6, b7
23	Pentatonic Scales	Major Pentatonic	1, 2, 3, 5, 6
24		Minor Pentatonic	1, b3, 4, 5, b7
25		<i>Blues</i>	1, b3, 4, #4, 5, b7

modes (from original natural minor mode, to Dorian, Phrygian, Melodic Minor, Harmonic Minor, etc.).

The present researcher recommends that the jazz pianist practices scales in one key at first, memorizing fingerings and observing his hand position and finger movements. This approach allows the pianist to internalize the experience, gain command of the scale, and use this as the foundation for scales transposed to all other keys. Another creative way to include the practice of scales within the general practice routine is to establish the *Key of the day*: This method includes practicing everything within a practice session in just one key (*i.e.*, all scales and arpeggios, II-V and *turnarounds*, patterns, *blues*, *rhythm changes*, tunes).

The 3-4 Rule

The process of memorizing piano fingerings for scales may be simple or complex depending on the pianist and his approach. One common approach to learn the piano fingerings for all scales, for both hands; is called the *3-4 Rule*²³⁷. This Rule consists of placing the 4th finger in the groups of 3 black keys, and the 3rd finger in the group of 2 black keys, regardless if all black keys are used, as this approach only refers to the position of the hand along the piano keyboard. Figure 5 shows an example of natural fingering applying the *3-4 rule* starting with white key, where E Major (Ionian) and C Locrian scales share the same fingering. Figure 6 provides an example starting with black key (Db Major and Ab Mixolydian).

²³⁷ Jon Verbalis, *Natural Fingering: A Topographical Approach to Pianism* (New York, NY: Oxford University Press, 2012).

FIGURE 5. Natural fingering for scales with the 3-4 rule, starting with a white key

The image shows two musical staves for the right hand (R. H.) and left hand (L. H.). The first staff is for the E Major scale, and the second is for the C Locrian scale. The E Major scale is written in treble clef with a key signature of one sharp (F#). The C Locrian scale is written in bass clef with a key signature of one flat (Bb). Both scales are shown in ascending and descending directions. Fingerings are indicated by numbers 1-5 above or below the notes. The 3-4 rule is applied, meaning the third and fourth fingers are used for the first and second notes of each pair, respectively. The fifth finger is used for the final note of each scale.

FIGURE 6. Natural fingering for scales with the 3-4 rule, starting with a black key

The image shows two musical staves for the right hand (R. H.) and left hand (L. H.). The first staff is for the Db Major scale, and the second is for the Ab Mixolydian scale. The Db Major scale is written in treble clef with a key signature of two flats (Bb, Eb). The Ab Mixolydian scale is written in bass clef with a key signature of two flats (Bb, Eb). Both scales are shown in ascending and descending directions. Fingerings are indicated by numbers 1-5 above or below the notes. The 3-4 rule is applied, meaning the third and fourth fingers are used for the first and second notes of each pair, respectively. The fifth finger is used for the final note of each scale.

An additional guideline for jazz pianists working on scales is to not use the thumb or the fifth finger on black keys when playing scales. As the hand position moves inside in the keyboard over the high-end of the keys, they get heavier and harder to press, and more effort is needed to move the key's hammers. When possible, it is better to keep the hand a bit outside of the keyboard in order to properly control all movements. However, jazz pianists may occasionally use thumbs and fifth fingers over black keys when improvising or playing chromatic sequences (parallel displacements).

Jazz pianists should strive to discover the fingerings for every scale through a personal process of investigation²³⁸. This process may vary among pianists, but will likely result in an automatic memorization of scale fingerings and a deeper understanding of the physical characteristics of the hand and how it is used in relation to the piano keyboard. As part of this work, each jazz pianist should create a written fingering chart to reinforce his knowledge and generate a document for personal reference.

As human hands are symmetrical, pianists usually employ the same fingering in each hand when playing scales with both hands—but in a mirrored manner. In addition, pianists play most scales using the same fingerings; however these fingering patterns vary depending on the first note of each scale (*i.e.*, one repeated approach for scales that begins with a white key and a different repeated approach for scales that begins on a black key).

Pianists employ the *Ionian Position*²³⁹ to perform major scales that begin on a white key. This pattern is known as a “parent fingering” as it applies to most major scales. The *Ionian Position* fingering pattern is as follows: 1-3, 1-4 for Right Hand; and 4-1, 3-1 for Left Hand²⁴⁰.

²³⁸ Heinrich Neuhaus, *The Art of Piano Playing*. Translated by K. A. Leivobith (New York, NY: Dover Publications Inc., 2013).

²³⁹ *Ionian Position*: This fingering approach is a reference for all the other fingering positions for any white key Ionian scale (Major). The Ionian position is comprised of the following fingering pattern: Right Hand: 1-3, 1-4 / Left Hand: 4-1, 3-1. [Williard A. Palmer, and Morton Manus, *The Complete Book of Scales, Chords, Arpeggio and Cadences* (Van Nuys, CA: Alfred Music Publishing, 1994).]

²⁴⁰ Jon Verbalis, *Natural Fingering: A Topographical Approach to Pianism* (New York, NY: Oxford University Press, 2012).

When pianists perform scales that begin on a black key they start each with finger 2 and apply the *3-4 Rule*²⁴¹. Only one *thumb passing movement*²⁴² is made in every octave, and the fourth note of the scale usually acts as a pivot key. When the scale has its fourth grade altered (#11 or b5) the fingering changes to the *Lydian Position*²⁴³ (Right Hand: 1-4, 1-3; Left Hand: 3-1, 4-1). In addition, the fifth finger is used to end scales. Fingering exceptions usually appear in Lydian and Locrian scales due to the #4/b5 grade, and in Phrygian and Locrian scales due to the b2. (These exceptions apply to both hands.) Table 20 includes an overview of finger approaches for scales (by white key or black key starting position), keys, and fingerings.

Further, pianists generally use the *Ionian Position* fingering (starting with the corresponding note of the scale) when playing one of the seven diatonic modes of the Major scale (Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, and Locrian). For example, when playing “F# Aeolian” mode, an “A Ionian” fingering is used, but starting in the key of F#. All diatonic modes are related (relative modes) to the Ionian mode. Mastering the fingerings for all Major scales provides a framework for the pianist to understand other scales and advances his ability to improvise when working within

²⁴¹ Jon Verbalis, *Natural Fingering: A Topographical Approach to Pianism* (New York, NY: Oxford University Press, 2012).

²⁴² *Ibid.*

²⁴³ *Lydian Position*: This fingering approach is like the Ionian Position but inverted: Right Hand: 1-4, 1-3 / Left Hand: 3-1, 4-1. It is used most often in Lydian scales. [Williard A. Palmer, and Morton Manus, *The Complete Book of Scales, Chords, Arpeggio and Cadences*. (Van Nuys, CA: Alfred Music Publishing, 1994).]

TABLE 20. Fingering position assigned by keys

	Key	Fingering
White Key	C, D, E, G, A	Ionian Position
	B	Right Hand: Ionian Position / Left Hand: Lydian Position
	F	Right Hand: Lydian Position / Left Hand: Ionian Position
Black Key	Eb, Ab, Bb, Db, Gb	Right Hand: Start with finger 2 and apply "3-4 Rule"; and Left Hand: Start with finger 2, 3, or 4 and apply "3-4 Rule"

diatonic environments²⁴⁴. This allows the jazz pianist to use the diatonic Major scale for all chords.

Pianists perform Harmonic Minor, Melodic Minor, and Mixolydian b13 using the *Ionian Position*, but in Lydian augmented, Lydian b7, Dorian Altered and Super Locrian (Altered) employ different fingerings due to the #11/b5 grade. In these scales, the present researcher recommends the pianist to think the *3-4 Rule* and allow his hand to naturally adapt to the key. Moreover, he recommends that this approach may also be used for any other artificial or exotic scales²⁴⁵.

²⁴⁴ *Diatonic environments*: harmonic progression within the same key, with no modulation, that exclusively contains chords from the diatonic scale. [Bert Ligon, *Jazz Theory Resources: Volumes 1 & 2* (Milwaukee, WI: Hal Leonard Corp., 2001).]

²⁴⁵ Yusef A. Lateef, *Repository of Scales and Melodic Patterns* (Amherst, MA: Fana Publishing Company, 1981).

The practice and development of performing scales with specific fingering patterns trains the pianist's hands to navigate multiple keys and yields a natural approach to fingerings especially when performing melodies in real-time situations. Moreover, the use of the *3-4 Rule* aids the jazz pianist to perform scales without memorization, and provides him with a general perspective for all scales and a vocabulary on which to draw for improvisation.

1.3. Arpeggios

Pianists practice and perform arpeggios as they develop technique and language skills. At first, pianists practice arpeggios as *triads* (3-note arpeggio patterns), and later in *four-note chords* (four-note arpeggio patterns). They employ the same concept of developing a set of specific fingerings to perform arpeggios – as in scales. With arpeggios, however, a pianist follows a rule called *The Thumb Rule*, which consists of using the thumb on the first white key in the arpeggio. The following is an overview of *The Thumb Rule*:

Using his Right Hand, the pianist plays and holds (as a chord) a complete arpeggio including the octave at the end (*i.e.*, 1, 3, 5, 7, 1) and the thumb is placed on the first white key of the arpeggio. For example, in an Eb Maj7 arpeggio (see figure 7), the thumb is placed on G key. Using his Left Hand, the pianist employs the same process used with the Right Hand, only in this case the thumb is placed on the last white key of the arpeggio (D key).

FIGURE 7. Natural fingering for arpeggios using *The Thumb Rule*



It is essential that jazz pianists not use their thumb and fifth fingers over black keys²⁴⁶. Rather jazz pianists should reserve this use to occur only in arpeggios with no white keys, like Gb and Ebm7. When performing the thumb pass movement, in arpeggios, the jazz pianist should strive to play without abrupt or sudden movements of the wrist. With this movement, his hand should gradually open to play the subsequent notes of the arpeggio rather than move with a fixed shape imitating the actual arpeggio as the use of this fixed shape causes tension, tiredness and stress for the hand. Through a mental and visual approach, the jazz pianist is able to perform in all keys without focusing on individual notes. Table 21 includes a list of arpeggios organized by chord family, with melodic analysis.

Jazz pianists should practice arpeggios in every key and chord inversion, starting with the root, third, fifth and sixth or seventh, if applicable²⁴⁷. Fingering rules apply to the practice of arpeggios just as for inversions. The present researcher recommends that jazz pianists reorder the chord tones within an arpeggio and perform these patterns up and

²⁴⁶ Williard A. Palmer, and Morton Manus, *The Complete Book of Scales, Chords, Arpeggio and Cadences* (Van Nuys, CA: Alfred Music Publishing, 1994).

²⁴⁷ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

TABLE 21. List of Arpeggios by chord family

Category	Chord	Melodic Analysis
Triads	Major	1, 3, 5
	Minor	1, b3, 5
	Diminished	1, b3, b5
	Augmented	1, 3, #5
Four-note chords	Maj7	1, 3, 5, 7
	m7	1, b3, 5, b7
	7	1, 3, 5, b7
	m7 (b5)	1, b3, b5, b7
	°7	1, b3, b5, bb7
	Maj6	1, 3, 5, 6
	Maj7 (#5)	1, 3, #5, 7
	m6	1, b3, 5, 6
	m (Maj7)	1, b3, 5, 7
	7 (#5)	1, 3, #5, b7
	7 (#11)	1, 3, #11, b7
	7 sus4	1, 4, 5, b7

down the instrument in the same way that they would be used during improvisation.

This results in arpeggio variations, like the example shown in figure 8, based in the Em7 arpeggio. The Left Hand provides varied chord voicings.

FIGURE 8. Arpeggio variations over Em7, with left hand voicings



Fingering patterns for arpeggios, like scales, may be grouped in two main categories: those that start on a white key and those that start on a black key. Jazz pianists should practice individual arpeggios without trying to memorize different fingering combinations for each arpeggio family in order to internalize them as a physical pattern.

Although jazz pianists strive to develop the use of specific fingering patterns for specific situations (*i.e.*, scales, arpeggios), there are situations that require alternative approaches. For example, jazz pianists often use the same fingering moved in a block all together when playing parallel arpeggios up or down. Another observation regarding a standard use of fingerings is that “old school” or self-taught jazz pianists (*e.g.*, Erroll Garner, Bud Powell) sometimes employ less natural fingerings than classically jazz trained pianists (*e.g.*, Bill Evans, Keith Jarrett, Chick Corea) when playing solo transcriptions.

1.4. Exercises

Practicing piano exercises is like working out in a gym. Both require focus, dedication, and repetition; and both prepare the pianist for further activities. Piano exercises, like workouts, require a varied approach that inspires the pianist to engage and develop over time. They are creative components of a practice routine when approached

in that manner. Mechanical exercises, on the other hand, do not often motivate the pianist, may be boring, and may not yield the same type of positive results.

The present researcher recommends that pianists enhance practice exercises by transposing them to all keys, and changing tempos, dynamics, and articulations to create variations, etc. This approach parallels his recommendations for the practice of scales and arpeggios previously outlined in this research. Accordingly, a variety of piano “workouts” can be created from scales and arpeggios, like diatonic melodies from a given scale, or arpeggio variations up and down (diatonic and chromatic, by family, diatonic arpeggios, etc.).

Jazz pianists routinely isolate concepts and work on specific elements (*e.g.*, technique, expression, repertoire) within a single practice session. While this approach may work for some pianists, the present researcher recommends a more unified approach to practicing that combines and connects multiple concepts and elements into practice exercises and routines. For example, the same aspects practiced for technique and harmonic purposes may be included in improvisation work and practiced in the context of selected repertoire. Exercises that are comprised of musical fragments within a structure such as chord changes, a solo transcription, a musical style, etc. allow the jazz pianist to work on particular elements and master skills in a real-world manner. Table 22 includes selected examples of material that can be extracted from technique, harmony, language, improvisation, and repertoire and used to create practice exercises; and table 23 provides additional selected bibliography to practice exercises.

TABLE 22. Sources to create and develop exercises

1. Technique	Scales and arpeggios. Small fragments/excerpts from classical compositions
2. Harmony	Voicings, bass lines over harmonic progressions like “II, V, I”, <i>Blues</i> , and <i>Rhythm Changes</i>
3. Language	Jazz vocabulary, style, phrasing, and articulation
4. Improvisation	Licks, patterns and phrases extracted from a solo transcription
5. Repertoire	Song melodies, bass lines

TABLE 23. Selected bibliography to practice exercises

- Brahms, Johannes. *51 Exercises for the Piano*. Ed. by Camilla Cai. Munich, Germany: G. Henle Verlag, 2008.
- Fischer, Clare. *Harmonic Exercises for Piano*. Rottenburg, Germany: Advance Music, 1996.
- Frank, Dave and John Amaral. *Joy of Improv - Books 1 and 2*. Milwaukee, WI: Hal Leonard Corp., 1998.
- Hanon, Charles Louis. *The Virtuoso Pianist in Sixty Exercises*. New York: G Schirmer, Inc., 1986.

There are many published books and other materials that outline piano techniques and exercises. Just as the pianist may create individualized practice exercises from passages of a solo transcription or excerpts from a composition, he may adapt exercises from these publications by changing keys, modes, or time feel to achieve personal

performance goals. Approaching the content in these publications with the idea of using it beyond the original intended purpose requires creativity and vision.

1.5. Classical Literature

Classical piano literature is an essential component of the study of piano for all pianists. The study of this music fosters piano technique and provides a foundation on which to develop as an artist. For the purpose of this research, classical literature is defined as music from 1600 to the present. This literature includes masterworks by noted composers that have stood the test of time, as well as new works written in a contemporary classical style.

Classical literature shares musical elements that are inherent in other styles of music (*e.g.*, harmonic sense, phrasing, cadences), which allow the pianist to easily transfer and apply concepts and skills from this literature to non-classical performance. Elements such as scales, arpeggios, use of a metronome/pulse, relaxation and body position, and self-observation/evaluation may be developed through the study and performance of this music. The assimilation of classical vocabulary into non-classical settings may especially aid pianists to gain command of jazz vocabulary and ultimately develop a personal artistic voice.

In addition to practicing and performing classical literature, the present researcher recommends that pianists listen to recordings of acclaimed pianists performing masterworks in “live” and studio settings. These recordings will offer insights and provide a vehicle for comparisons across a wide spectrum of artists and compositions.

1.5.1. Selecting Repertoire for Level (Beginner, Intermediate, Advanced)

Pianists, including beginners, study literature that is appropriate to their skill and ability level. Accordingly, pianists (and their teachers) need to be knowledgeable of a wide range of piano repertoire and its level of difficulty. Table 24 includes examples of selected works from major composers and historical periods appropriate for beginning pianists. Table 25 includes examples of selected works from major composers and historical periods appropriate for intermediate level pianists, and table 26 includes examples of selected works from major composers and historical periods appropriate for advanced level pianists. Additional compositions with similar characteristics may be incorporated into these lists, which are intended as a reference guide.

TABLE 24. Classical repertoire – Level 1: Beginner

Études	
Bartók, Béla	<i>Mikrokosmos Vols. I, II, III, IV</i>
Bertini, Henri	<i>24 Etudes for Piano Op. 29</i>
Burgmüller, Friedrich	<i>Etudes Op. 100, 105 & 109</i>
Czerny, Carl	<i>50 Little Etudes; 125 Etudes Op. 261; Etudes Op. 849/1-12</i>
Gurlitt, Cornelius	<i>22 Small Pieces for Piano Op. 107</i>
Heller, Stephen	<i>25 Melodic Etudes</i>
Moszkowski, Moritz	<i>20 Petits Etudes Op. 91 (Vol. 1)</i>
Baroque (c. 1600 – c. 1750)	
Bach, Johann Sebastian	<i>Anna Magdalena Notebook; Little Preludes</i>
Handel, George Frideric	<i>Minuet; Sarabande; Sonatina G40;</i>
Purcell, Henry	<i>Old Dance Tune</i>
Rameau, Jean Philippe	<i>Second Allemande #3; First Sarabande #6; Tambourin #11</i>
Classicism (c. 1750 – c. 1830)	
Beethoven, Ludwig van	<i>11 Bagatelles Op. 119; Sonatinas</i>
Clementi, Muzio	<i>Sonatinas Op. 36/2-3</i>
Diabelli, Anton	<i>Sonatinas Op. 151/1-2-3</i>
Haydn, Joseph	<i>Minuet; German Dance Hob. IX/12; Allegretto in G, Hob. XII/10</i>

Romanticism (c. 1830 – c. 1900)

Brahms, Johannes	<i>Waltzes Op. 39</i>
Chopin, Frédéric	<i>Little Polonaises</i>
Grieg, Edvard	<i>Lyric Pieces Op. 12 & 17</i>
Mendelssohn, Felix	<i>Songs Without Words Op. 19</i>
Schubert, Franz	<i>Dances for Piano</i>
Schumann, Robert	<i>Album for the Youth Op. 68; 3 Sonatas for the Young Op. 118</i>
Sibelius, Jean	<i>Bagatelles Op. 34</i>

20th Century

Bartók, Béla	<i>14 Bagatelles Op. 6</i>
Debussy, Claude	<i>Children's Corner; Le petit Nègre; Feuille d'album</i>
Hindemith, Paul	<i>Kleine Klaviermusik</i>
Prokofieff, Sergei	<i>Music for Children Op. 65</i>
Turina, Joaquín	<i>Miniatures</i>
Villa-Lobos, Heitor	<i>Suite Infantil</i>

TABLE 25. Classical Repertoire – Level 2: Intermediate

Etudes	
Bartók, Béla	<i>Mikrokosmos Vols. V, VI</i>
Clementi, Muzio	<i>Gradus ad Parnassum Op. 44</i>
Cramer, Johann Baptist	<i>84 Etudes Op. 50</i>
Czerny, Carl	<i>Etudes Op. 849/13-30; The School of Velocity Op. 299; Etudes Op. 740</i>
Granados, Enric	<i>6 Estudios Expresivos DLR IV</i>
Hummel, Johann Nepomuk	<i>Etudes Op. 125</i>
Moszkowski, Moritz	<i>20 Petites Etudes Op. 91 (Vol. 2)</i>
Baroque (c. 1600 – c. 1750)	
Bach, Johann Sebastian	<i>Two and Three Part Inventions (Inventions and Sinfonias)</i>
Couperin, Francois	<i>Prelude #1; Prelude #3; Prelude #6</i>
Handel, George Frideric	<i>Minuet; Sarabanda; Sonatina G40; Fugues G27, 37, 83; Suite G1-4,30-33, 34-36 ; Sonatas G56,58-59</i>
Rameau, Jean Philippe	<i>The Pretending Fools; Allemande #1; The Enharmonic Change</i>
Scarlatti, Domenico	<i>Sonatas</i>
Classicism (c. 1750 – c. 1830)	
Beethoven, Ludwig van	<i>Für Elise; Sonatinas 1-6; Bagatelles Op. 119 & 126</i>
Clementi, Muzio	<i>Sonatinas Op. 36, 37 & 38</i>
Haydn, Joseph	<i>Sonatas Hob. XVI</i>
Mozart, Wolfgang Amadeus	<i>Fantasia K397; Rondo K485; Sontatas (K545, selected); Variations K179</i>

Romanticism (c. 1830 – c. 1900)

Brahms, Johannes	<i>Waltzes Op. 39;</i>
Chopin, Frédéric	<i>Preludes Op. 28; Waltzes; Mazurkas;</i>
Fauré, Gabriel	<i>Preludes Op. 103</i>
Grieg, Edvard	<i>Lyric Pieces Op. 38, 47, 54 & 57; Humoresque Op. 6;</i>
Liszt, Franz	<i>Consolations #1-4</i>
Mendelssohn, Felix	<i>Songs Without Words Op. 53, Op. 62, Op. 85</i>
Schubert, Franz	<i>Moment Musical</i>
Schumann, Robert	<i>Album for the Youth Op. 68; Pieces Op. 124, Op. 126</i>
Tchaikovsky, Pyotr Illych	<i>Pieces Op. 39</i>

20th Century

Albéniz, Isaac	<i>6 Hojas de Álbum; Spanish Suite</i>
Bartók, Béla	<i>Sonatina; 3 Rondó; 20 Romanian Christmas Carols;</i>
Debussy, Claude	<i>Danse Bohémienne; 2 Arabesques;</i>
Gershwin, George	<i>3 Preludes</i>
Granados, Enric	<i>Danzas Españolas</i>
Kabalevski, Dmitry	<i>24 Preludes Op. 38</i>
Khachaturian, Aram	<i>Sonatina</i>
Mompou, Frederic	<i>Preludes; Canciones y Danzas</i>
Poulenc, Francis	<i>Villageoises</i>
Prokofieff, Sergei	<i>Gavotte Op. 32 #3</i>
Satie, Eric	<i>3 Gymnopédies; 6 Gnosiennes; Sarabande #3</i>
Schoenberg, Arnold	<i>Piano Pieces Op. 19</i>
Shostakovich, Dmitri	<i>24 Preludes Op. 34</i>
Webern, Anton	<i>Kinderstück</i>

TABLE 26. Classical repertoire – Level 3: Advanced

Etudes	
Chopin, Frédéric	<i>Etudes Op. 10 & Op. 25</i>
Liszt, Franz	<i>Etude in 12 Exercises Op. 1; Gnomonreigen; Concert Etude; Etudes; Grand Etude 1-12;</i>
Mendelssohn, Felix	<i>Etude</i>
Prokofieff, Sergei	<i>Etudes</i>
Rachmaninoff, Sergei	<i>Études-Tableaux Op. 33 & 39</i>
Schumann, Robert	<i>Symphonic Etudes Op. 13; Etudes on Caprices by Paganini Op. 3 & 10</i>
Scriabin, Alexander	<i>Etudes Op. 8, 42 & 65</i>
Baroque (c. 1600 – c. 1750)	
Bach, Johann Sebastian	<i>The Well-Tempered Clavier (Books I and II); French Suites; English Suites; Partitas; Italian Concerto BWV 971; Goldberg Variations</i>
Couperin, Frederic	<i>Ordres #1-27</i>
Handel, George Frideric	<i>Suites G1-4,175-178; Fugues G17,27,37</i>
Rameau, Jean Philippe	<i>The Timid One</i>
Scarlatti, Domenico	<i>Sonatas</i>
Classicism (c. 1750 – c. 1830)	
Beethoven, Ludwig van	<i>Sonatas 1-32; Variations; Piano Concertos 1-5</i>
Clementi, Muzio	<i>Sonata Op. 40</i>
Haydn, Joseph	<i>Sonatas Hob. XVI (latest); Theme with Variations</i>
Mozart, Wolfgang Amadeus	<i>Sonatas; Variations; Piano Concertos</i>

Romanticism (c. 1830 – c. 1900)

Brahms, Johannes	<i>Intermezzos; Hungarian Dances; Waltzes Op. 39; Scherzo Op. 4 Pieces Op. 76; Intermezzos Op. 118-119; Sonatas; Paganini Var.</i>
Chopin, Frédéric	<i>Polonaises; Scherzos; Nocturnes; Ballades; Piano Concertos 1-2</i>
Grieg, Edvard	<i>Poetic Tone-Picture Op. 3; Norwegian Dance Op. 35; Piano C.</i>
Liszt, Franz	<i>Années de Pélerinage; Hungarian Rhapsody 1-19; Ballades 1-2; Liebestraum; Mephisto Waltz; Valse; Sonetto</i>
Mendelssohn, Felix	<i>Prelude & Fugue Op. 35; Variations; Sonatas Op. 105-106; Caprices; Piano Concertos 1-2</i>
Mussorgsky, Modest	<i>Pictures of an Exhibition;</i>
Schubert, Franz	<i>Sonatas; Impromptus Op. 90; Moments Musicaux Op. 94</i>
Schumann, Robert	<i>Arabesque; Forest Scenes; Papillons, Carnaval, Kreisleriana; Sonatas; Album Leaves; Caprices Op. 3 & 10; Piano Concerto</i>

20th Century

Albéniz, Isaac	<i>Iberia (Books 1-4)</i>
Debussy, Claude	<i>Suite Bergamasque; Images; Préludes</i>
Fauré, Gabriel	<i>Barcarolles; Nocturnes; Impromptus;</i>
Prokofieff, Sergei	<i>Visions Fugitives Op. 22; Toccata Op. 11; Sonatas 1-4</i>
Rachmaninoff, Sergei	<i>Preludes Op. 23&32; Piano Concertos; Moment Musical Op.16</i>
Ravel, Maurice	<i>La Valse; Pavane Pour une infante défunte; Ma mere l'oye Le Tombeau de Couperin; Sonatina; Jeux d'Eau</i>
Schoenberg, Arnold	<i>Five Piano Pieces Op. 11; Piano Pieces Op. 23</i>
Scriabin, Alexander	<i>Preludes; Sonatas; Mazurkas</i>
Stravinsky, Igor	<i>Piano Rag Music</i>
Weber, Carl Maria von	<i>Sonatas 1-4</i>

Practicing classical literature regularly will provide the jazz pianist with foundation in technique and background. Many of the musical elements are inherent to any style of music (*i.e.*, harmonic sense, phrasing, cadences), which means that assimilating the classical vocabulary throughout all stylistic periods will be helpful to understand jazz vocabulary as well, and ultimately to develop a personal artistic voice.

Apart from the supervision of a teacher, the present researcher recommends that the jazz pianist compare different performances and recordings from the great pianists, absorbing the essence and energy from each one. Like attending concerts this is an effective way to understand the spirit of the music itself. As mentioned in previous sections practicing scales, arpeggios and exercises, self-observance, relaxation, metronome and pulse, touch, sound and body position, are elements that may be developed throughout the study of classical repertoire and piano technique in general. Table 27 provides selected bibliography about technique, which also includes selected compositions from major composers (*i.e.*, Bach, Beethoven, Chopin).

TABLE 27. Selected bibliography - Technique

- Bach, Johann Sebastian. *The Well-Tempered Clavier. Books 1 and 2*. Ed. by Ernst-Günter Heinemann (Book 1, 1997) and Yo Temita (Book 2, 2007). Munich, Germany: G. Henle Verlag, 1997, 2007.
- Beethoven, Ludwig van. *Piano Sonates*. Ed. by Bertha Antonia Wallner. Munich, Germany: G. Henle Verlag, 2007.
- Bernstein, Seymour. *With Your Own Two Hands: Self-Discovery Through Music*. New York, NY: G. Schirmer, Inc., 1981.
- Chopin, Frédéric. *Etudes*. Ed. by Ewald Zimmermann. "Kritischer Bericht" (Critical Report). Munich, Germany: G. Henle Verlag, 1983.
- Hanon, Charles Louis. *The Virtuoso Pianist in Sixty Exercises*. New York, NY: G. Schirmer, Inc., 1986.
- Neuhaus, Heinrich. *The Art of Piano Playing*. Wolfeboro, NH: Longwood Academic, 1973.
- Pease, Barbara and Allan Pease. *The Definitive Book of Body Language*. New York, NY: Bantam, 2006.
- Slonimsky, Nicolas. *Thesaurus of Scales and Melodic Patterns*. New York, NY: Schirmer Books, 1975.

2. Harmony

2.1. Approaching Harmony

Harmony is fundamental for jazz pianists as well as other instrumentalists who play jazz music and improvise. Jazz musicians need to hear chord changes and know how to use them harmonically and melodically. It is beyond the purpose of this research to offer a detailed manual regarding harmony; there are already several publications available (see recommended specific bibliography at the end of this section on table 44).

One approach to learning chords is for jazz pianists to practice them separately at first, by chord family, until their sonority becomes familiar. After that, chords may be practiced within a harmonic context, analyzing its relationship and connection with other chords. Although harmony may be approached in multiple ways, there are essentially two ways to organize harmonic material: chords alone, and chords in a harmonic context. A description of these ideas is as follows:

1. *Chords*: Jazz pianists practice chords separately, with focus on building chord voicings using different textures and shapes (from basic sonorities to complex and free-chord structures).
2. *Chords in a harmonic context*: Jazz pianists need to know how to interpret chord changes and connect and/or re-harmonize them with a specific setting (*e.g.*, jazz, pop/rock, folk, classical) same type of harmonies may be interpreted in different ways.

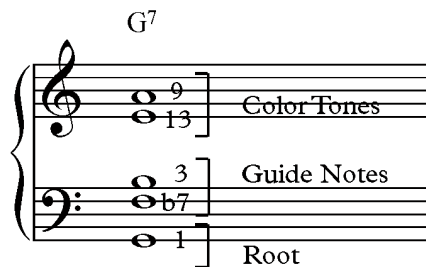
2.2. Chord Voicings

Chords are defined by 3 elements: Root; Guide Notes (GN); and Color Tones²⁴⁸. GN are the essential part of information of any chord for identifying its chord family, while Color Tones may be omitted or reinforced as desired, depending on the context.

- *Root*: the key center.
- *Guide Notes (GN)*: the third and seventh of any chord, define the chord family (*i.e.*, Major, Minor, Dominant).
- *Color Tones (tensions)*: the ninth, eleventh and thirteenth of any chord, they add flavor to the chord, without changing its essence (chord family).

Figure 9 includes an illustration of chord structure depicting the three elements of Root, Guide Notes, and Color Tones.

FIGURE 9. Chords structure



The term *voicings* refers to a specific selection and order of chord tones as played on the piano keyboard (played by the pianist with just one hand)²⁴⁹. (Note: This term also

²⁴⁸ Paul Schmeling, *Berklee Theory – Books 1 and 2* (Boston, MA: Berklee Press, 2011).

²⁴⁹ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

refers to arrangements for horn sections or large ensembles like big bands²⁵⁰). Jazz pianists regularly employ one-hand voicings with their left hand to accompany melodies and improvisations of the right hand. These voicings are known as *Left Hand Voicings* (LHV)²⁵¹.

Musicians organize chords in specific combinations that combine to create chord families. These combinations (chords) may be orchestrated in many ways on the piano and other harmonic instruments, as well as by ensembles. Moreover, there are multiple ways of playing one single chord. Oftentimes, pianists learn chords by memorizing a chord position and using it when comping for the melodies played with the Right Hand. This approach provides a starting point for pianists; however, once chord sonorities become familiar, the pianist has the opportunity to interpret them differently based on the particular musical moment. These interpretations may include chord inversions, the addition of color tones, or even substituting another chord in its place. Like melodic lines, chord voicings may also be improvised.

Table 28 includes a list of the commonly used LHV, offered in terms of difficulty from the easiest and most basic configuration (triads) to the complex and freely organized. (Note: LHV voicings will be explained separately, in detail, following the table). The present researcher recommends that jazz pianists practice these voicings individually first, playing them in every key and inversion until mastered. After practicing chord families and voicings separately, the jazz pianist will be able to easily

²⁵⁰ Bill Dobbins, *Jazz Arranging and Composing: A Linear Approach* (Rottenburg, Germany: Advance Music, 1986).

²⁵¹ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

identify them in “live” performances and recordings, and will be able to incorporate them into harmonic contexts, chord progressions, and actual songs.

TABLE 28. Left Hand voicings

1. Guide Notes (GN)
2. Triads
3. Four-note chords
4. Four Way Close (4WC)
5. Spread Voicings – Open
6. Three-Part Voicings in Fourths
7. Impressionistic Chords
8. Parallel Chords
9. Block Chords
10. Free Voicings

2.2.1. Guide Notes

Chord families are defined by their *Guide Notes (GN)*, the 3rd and 7th of any chord. Therefore, they are the minimum amount of information needed to classify chords. Table 29 lists chord families with their melodic analysis, highlighting the *Guide Notes*.

TABLE 29. Chord families (four-note chords) and Guide Notes

Chord family	Melodic analysis
Major	1, 3 , 5, 7
Minor	1, b3 , 5, b7
Dominant	1, 3 , 5, b7
Half Diminish	1, b3 , b5, b7
Diminish	1, b3 , b5, bb7
Augmented	1, 3 , #5, 7
7sus4	1, 4, 5, b7

According to Levine (1989)²⁵², one of the simplest ways to start playing chords is by playing just their guide notes. Jazz pianists like Wynton Kelly, Kenny Drew, and Bud Powell, from the 1950s, established this technique, which remains an effective way of playing chords used by many performers. Often, when these artists soloed they played very few chords in the left hand, mainly with just Guide Notes (*i.e.*, Wynton Kelly on *Freddie Freeloader*²⁵³, Kenny Drew on *Moment's Notice*²⁵⁴). Guide Note Chords are also effective when playing *blues* as they outline a basic “rooted” sound. Figure 10 exemplifies how to outline chords playing just its Root and Guide Notes.

²⁵² Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

²⁵³ Miles Davis, *Kind of Blue*, Columbia (CD), 1959.

²⁵⁴ John Coltrane, *Blue Train*, Blue Note (CD) 1957.

FIGURE 10. Chords: Root and Guide Notes only

The figure shows four chords: Cm7, F7, Bbmaj7, and Ebmaj7. Each chord is represented by two staves (treble and bass clef). The bass clef shows the root note with a '1' below it, indicating the root position. The treble clef shows the 3rd and 7th notes with their respective accidentals and numbers below them.

Chord	Root (Bass)	3rd (Treble)	7th (Treble)
Cm7	C	E♭	B♭
F7	F	A	C♭
Bbmaj7	B♭	D	F
Ebmaj7	E♭	G	B

2.2.2. Triads

Triads are chords that contain three sounds: root, third and fifth²⁵⁵. They are mainly used in pop and folk music, as their sonority is simple and basic. Jazz music typically employs chord voicings with at least four sounds, including the seventh of the chord and color tones. Triads, however, are commonly used in sophisticated harmonic contexts as *upper structure triads*²⁵⁶, either as chords or as arpeggios when improvising melodic lines. Exercise 1 gives an example on how to practice triads.

EXERCISE 1. Practicing triads

Practice triads within every family (*i.e.*, Major, Minor, Diminish, Augmented) in every key and inversion. Use first one hand and then both hands, separately and together, mixing inversions. Play triads also as arpeggios, in full mode or with broken lines.

²⁵⁵ Paul Schmeling, *Berklee Theory – Books 1 and 2* (Boston, MA: Berklee Press, 2011).

²⁵⁶ Suzanna Sifter, *Berklee Jazz Keyboard Harmony: Using Upper-Structure Triads* (Boston, MA: Berklee Press, 2011).

2.2.3. *Four-note chords*

Four-note chords add the seventh to the basic triad sound²⁵⁷. Like basic triads, four-note chords should be practiced in the same manner as outlined in exercise 1 to ensure an understanding of their basic sound quality and physical structure in all keys. See figure 11 for a description of chord families in four-note chord position with inversions.


Figure 12 exemplifies the use of four-note chord voicings over the basic *Blues* progression, in the key of C. Root and fifths are played with the Left Hand and chords with harmonic continuity with the Right Hand. This is also an effective exercise for beginning jazz pianists, as an introduction to the *Blues* sound.

²⁵⁷ Paul Schmeling, *Berklee Theory – Books 1 and 2* (Boston, MA: Berklee Press, 2011).

FIGURE 11. Chords: four-note chords, and inversions

1. Major: Maj7 (1,3,5,7)

Cmaj7 1st inv. 2nd inv. 3rd inv.



The diagram shows four measures of music on a single staff. The first measure contains the Cmaj7 chord (C4, E4, G4, Bb4). The second measure shows the first inversion (E4, G4, Bb4, C5). The third measure shows the second inversion (G4, Bb4, C5, E5). The fourth measure shows the third inversion (Bb4, C5, E5, G5).

2. Minor: m7 (1,b3,5,b7)

Cm7 1st inv. 2nd inv. 3rd inv.



The diagram shows four measures of music on a single staff. The first measure contains the Cm7 chord (C4, Eb4, G4, Bb4). The second measure shows the first inversion (Eb4, G4, Bb4, C5). The third measure shows the second inversion (G4, Bb4, C5, Eb5). The fourth measure shows the third inversion (Bb4, C5, Eb5, G5).

3. Dominant: 7 (1,3,5,b7)

C7 1st inv. 2nd inv. 3rd inv.



The diagram shows four measures of music on a single staff. The first measure contains the C7 chord (C4, E4, G4, Bb4). The second measure shows the first inversion (E4, G4, Bb4, C5). The third measure shows the second inversion (G4, Bb4, C5, E5). The fourth measure shows the third inversion (Bb4, C5, E5, G5).

4. Half-diminished: m7 (b5) (1,b3,5,b7)


Cm7(b5) 1st inv. 2nd inv. 3rd inv.



The diagram shows four measures of music on a single staff. The first measure contains the Cm7(b5) chord (C4, Eb4, Fb4, Bb4). The second measure shows the first inversion (Eb4, Fb4, Bb4, C5). The third measure shows the second inversion (Fb4, Bb4, C5, Eb5). The fourth measure shows the third inversion (Bb4, C5, Eb5, Fb5).

5. Diminished: °7 (1,b3,b5,bb7)

C°7 1st inv. 2nd inv. 3rd inv.



The diagram shows four measures of music on a single staff. The first measure contains the C°7 chord (C4, Eb4, Fb4, Gb4). The second measure shows the first inversion (Eb4, Fb4, Gb4, C5). The third measure shows the second inversion (Fb4, Gb4, C5, Eb5). The fourth measure shows the third inversion (Gb4, C5, Eb5, Fb5).

FIGURE 12. Chords: four-note chords over the basic *blues* progression, key of C.

Basic Blues

The musical score for 'Basic Blues' is presented in three systems, each in 4/4 time. The right-hand part features four-note chords, and the left-hand part features a simple bass line. The chord progressions are as follows:

- System 1: C7, F7, C7, C7
- System 2: F7, F7, C7, C7
- System 3: G7, F7, C7, G7

Figure 13 includes all diatonic chords within the key of C to be practiced in four-note chord position, using harmonic continuity, in all inversions. This can be practiced with separated hands or both hands together, incorporating time feel, (*e.g.*, switching between *Swing* feel and *Bossa Nova*). The present researcher also recommends that the jazz pianist this exercise melodically, using the same chord dispositions with arpeggios.

FIGURE 13. Chords: four-note chords over the cycle of diatonic fourths, in the key of C, all inversions with harmonic continuity

Cmaj7 Fmaj7 Bm7(b5) Em7 Am7 Dm7 G7 Cmaj7

A musical staff in 4/4 time showing eight measures of four-note chords. The chords are: Cmaj7 (C4, E4, G4, Bb4), Fmaj7 (F4, A4, C5, Eb5), Bm7(b5) (B3, D4, F4, Ab4), Em7 (E3, G3, Bb3, D4), Am7 (A2, C3, Eb3, E4), Dm7 (D2, F2, Ab2, A3), G7 (G2, B2, D3, F3), and Cmaj7 (C3, E3, G3, Bb3).

1st inv.

CMaj7 FMaj7 B-7(b5) E-7 A-7 D-7 G7 CMaj7

A musical staff in 4/4 time showing eight measures of first inversion four-note chords. The chords are: CMaj7 (E3, G3, Bb3, C4), FMaj7 (A3, C4, Eb4, F4), B-7(b5) (D3, F3, Ab3, Bb3), E-7 (G2, Bb2, D3, E3), A-7 (C2, Eb2, F2, G2), D-7 (F1, Ab1, Bb1, C2), G7 (B1, D2, F2, G2), and CMaj7 (E3, G3, Bb3, C4).

2nd inv.

Cmaj7 Fmaj7 Bm7(b5) Em7 Am7 Dm7 G7 Cmaj7s

A musical staff in 4/4 time showing eight measures of second inversion four-note chords. The chords are: Cmaj7 (C3, E3, G3, Bb3), Fmaj7 (F3, A3, C4, Eb4), Bm7(b5) (B2, D3, F3, Ab3), Em7 (E2, G2, Bb2, D3), Am7 (A2, C3, Eb3, E3), Dm7 (D2, F2, Ab2, A3), G7 (G2, B2, D3, F3), and Cmaj7s (C3, E3, G3, Bb3).

3rd inv.

Cmaj7 Fmaj7 Bm7(b5) Em7 Am7 Dm7 G7 Cmaj7

A musical staff in 4/4 time showing eight measures of third inversion four-note chords. The chords are: Cmaj7 (Bb3, C4, E3, G3), Fmaj7 (Eb4, F4, A3, C4), Bm7(b5) (Ab3, Bb3, D3, F3), Em7 (D3, E3, G2, Bb2), Am7 (Eb3, F3, A2, C3), Dm7 (A2, Bb2, D2, F2), G7 (F2, G2, B1, D2), and Cmaj7 (Bb3, C4, E3, G3).

2.2.4. Four Way Close (4WC) Voicings

Chords are comprised of basic triads or enhanced triads – with the jazz pianist often inserting his creative voice and interpretation to the combinations. Color tones, also

known as *tensions*, add complexity and sophistication to the flavor of chords without changing their chord family designation. Moreover, jazz harmony uses tensions as an implied sonority for chord voicings, which are added to the basic information of the chord (Guide Notes) to create a colorful and distinctive sound.

Jazz pianists play chords with just one hand (left) so their right hand is free to play melodies and improvisation. This requires a unique approach to chord voicings that are physically appropriate for one hand. Accordingly, *Four Way Close (4WC) voicing* is a chord comprised of four sounds within the interval of an octave²⁵⁸. Jazz pianists use these voicings when performing with a bass player, or when the bass line is played with the left hand so the root note it is not present in the chord.

The sound of 4WC voicings differs from a “regular” four-note chord because it does not incorporate the root sound. This is particularly evident in dominant chords, which have a more complex sonority. 4WC are the most commonly used voicings by advanced jazz pianists.

The basic rule to create 4WC voicings is to substitute the root sound for the 9th of the chord, in Major and Minor chords, and also the 5th for the 13th in Dominant chords²⁵⁹. Table 30 and figure 14 illustrate these substitutions. Inversions with the Guide Notes as the lowest sound of the voicing will sound more balanced and physically appropriate, especially in dominant chords.

²⁵⁸ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

²⁵⁹ Ibid.

TABLE 30. *Four Way Close (4WC)* voicings structure

- *Maj7*: from 1, 3, 5, 7 to 3, 5, 7, 9
- *m7*: from 1, b3, 5, b7 to b3, 5, b7, 9
- *7*: from 1, 3, 5, b7 to 3, 13, b7, 9

FIGURE 14. *Four Way Close (4WC)* chord voicings: *Maj7*, *m7* and *7* families, in 3/7 inversions.

2.2.5. *Spread and Open Voicings*

Chords played within a range of an octave are known as *close voicings*²⁶⁰. When the range is wider, even with triad chords, they are called *open voicings*²⁶¹. Open voicings have a brighter sound than closed voicings, and when performed with both hands may be used for comping and harmonization of melodies. When applied to solo piano instrumentation, they are called *spread voicings*²⁶². Spread voicings include the Root and *Guide Notes*, as well as the addition of Color Tones (and/or the melody) as possible. This approach to playing voicings (*i.e.*, spread voicings) is representative of the early *Bebop*

²⁶⁰ Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

²⁶¹ *Ibid.*

²⁶² *Ibid.*

style²⁶³. For example, pianist Bud Powell employs Left Hand voicings in his live performance of *All the Things You Are*²⁶⁴. Figure 15 illustrates an example of the *Spread voicings* architecture over Major, Minor and Dominant chords.

FIGURE 15. Chords: Open / *Spread* Voicings

The figure shows three chord voicings: C⁶, C^{m7}, and C⁷. The Right Hand (R.H.) part is on a treble clef staff, and the Left Hand (L.H.) part is on a bass clef staff. Fingerings are indicated by numbers 1-5.

Chord	R.H. Notes (Fingering)	L.H. Notes (Fingering)
C ⁶	C4 (3), E4 (6), G4 (9)	C4 (5), C1 (1)
C ^{m7}	C4 (3), Eb4 (b3), G4 (6), Bb4 (b7), C5 (9)	C4 (5), C1 (1)
C ⁷	C4 (3), E4 (6), G4 (9), Bb4 (b7), C5 (9)	C4 (5), C1 (1)

2.2.6. Three-Part Voicings in Fourths

Intervals of a fourth add a powerful and distinctive sound to harmonies. This sonority represents a more contemporary sound, introduced in the *Modal Era*²⁶⁵ in the 1960's²⁶⁶ following the revolutionary Miles Davis album, *Kind of Blue*²⁶⁷ in 1959 (featuring Bill Evans on piano). The modal sound was also a signature for pianists like McCoy Tyner and Chick Corea through their use of fourths in piano voicings.

Pentatonic scales are often associated with voicings in fourths. One example of the use of pentatonic scales by a jazz pianist is Chick Corea's solo improvisation over

²⁶³ Scott Yanow, *Bebop* (San Francisco, CA: Miller Freeman Books, 2000).

²⁶⁴ Bud Powell, *The Essen Jazz Festival Concert*, Black Lion (CD), 1960.

²⁶⁵ Bill Dobbins, *The Jazz Workshop Series, Vol. 1: Modal Jazz*. (Rottenburg, Germany: Advance Music, 1988).

²⁶⁶ Ted Gioia, *The History of Jazz* (New York, NY: Oxford University Press, 2011).

²⁶⁷ Miles Davis, *Kind of Blue*. Columbia (CD), 1959.

*Matrix*²⁶⁸ from 1969. Figure 16 illustrates the distinctive sonority voicings disposition for Left Hand voicings.

FIGURE 16. Chords: three-part voicings in fourths



2.2.7. Impressionistic Chords

Musicians typically conceive chord voicings in a vertical approach, defining the basic information about the chord, Guide Notes, etc. However, as taken from French *Impressionism*²⁶⁹ chords can be approached in a horizontal manner, initially considering the mode/scale instead of its Guide Notes. French composers Claude Debussy²⁷⁰ and Maurice Ravel²⁷¹, among others, developed this particular sonority in their compositions, for symphonic orchestra and piano, as well²⁷². Ravel orchestrated his own piano music (and that of other composers—*e.g.*, Modest Mussorgsky’s *Pictures at an Exhibition*) for orchestra. A comparison of piano and orchestral scores will illustrate the Impressionistic harmonies utilized in different instrumental contexts.

²⁶⁸ Chick Corea, *Now He Sings, No He Sobs*, Blue Note (CD), 1969.

²⁶⁹ Donald Jayz Grout, *A History of Western Music* (New York, NY: Norton, W.W. & Company Inc., 1960).

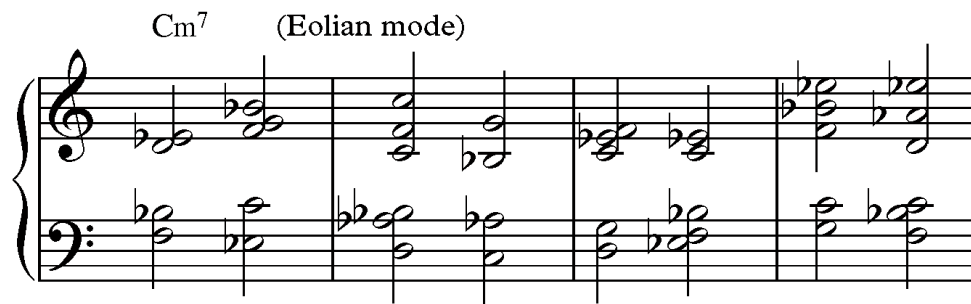
²⁷⁰ Victor Lederer, *Debussy: The Quiet Revolutionary* (Pompton Plains, NJ: Amadeus Press, 2007).

²⁷¹ Roger Nichols, *Ravel* (New Haven, CT: Yale University Press, 2011).

²⁷² Paul Roberts, *Reflections: The Piano Music of Maurice Ravel* (Milwaukee, WI: Amadeus, 2012).

Impressionistic music follows the same concept employed by impressionistic paintings, giving just an “impression” of the figure represented, with no hierarchy (no sound is more important than the other) and without specifically outlining its characteristics²⁷³. Voicings in impressionism sometimes employed a limited number of sounds (*i.e.*, two or three) from the scale (could be with no Guide Notes), creating a much different effect than traditional vertical chords, as shown in figure 17.

FIGURE 17. Chords: Impressionistic voicings – horizontal approach



Jazz pianists such as Duke Ellington, George Gershwin, Dave Brubeck, and Bill Evans, incorporated an impressionistic approach to jazz harmony in their music²⁷⁴. Accordingly, these artists pushed boundaries and created a new sound to American jazz²⁷⁵.

Contemporary jazz musicians²⁷⁶ regularly incorporate classical music concepts (including impressionism) in their music as the stylistic division lines across genres have

²⁷³ Robert E. Schmitz, *The Piano Works of Claude Debussy* (New York, NY: Dover Publications Inc., 1966).

²⁷⁴ Jack Reilly, *The Harmony of Bill Evans. Volume 1* (Milwaukee, WI: Hal Leonard Corp., 1994).

²⁷⁵ Ken Burns, and Ward, Geoffrey C. *History of Jazz* (New York, NY: Random House, 2000).

²⁷⁶ From 1970 to present.

become blurred over time. This primary characteristic defines jazz music as an art form that is all encompassing—combining a variety of music resources to develop a creative (and often spontaneous) musical expression.

2.2.8. *Parallel Voicings*

Parallel voicings were first incorporated to the jazz language by jazz pianists in the late 1950's and during the Modal Era in 1960's²⁷⁷, borrowing this device from Impressionistic and 20th century classical composers Claude Debussy, Maurice Ravel, Richard Strauss, and Arnold Schoenberg, among others²⁷⁸.

Jazz pianist Bill Evans began using parallel voicings in the Miles Davis album *Kind of Blue*, in the song *So What*²⁷⁹. Following the release of this album, this instrumental harmonic architecture was named *So What voicings* after the record²⁸⁰. *So What Voicing* is described by Levine (1989) as follows: “reading up from the bottom, it consists of the root, eleventh, seventh, third, and fifth of a minor seventh chord... much easier to play if seen it intervallically, as a series of three perfect fourths with a major third on top. Notice that the top note of the voicing is the fifth of the chord”²⁸¹. See figure 18 for an illustration of *So What voicings*.

²⁷⁷ Ted Gioia, *The History of Jazz* (New York, NY: Oxford University Press, 2011).

²⁷⁸ David Cope, *New Directions in Music* (Salem, WI: Waveland Press Incorporated, 2000).

²⁷⁹ Miles Davis, *Kind of Blue*, Columbia (CD), 1959.

²⁸⁰ *Ibid.*

²⁸¹ Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989), 97.

FIGURE 18. Chords: *So What* voicings



There are many different types of parallel voicings, which can be applied in the piano chord voicings and also be used by arrangers and orchestrators. Figure 19 includes an illustration of some of the most frequently used parallel voicings.

FIGURE 19. Chords: Parallel voicings

C ⁶	C ^{m7}	C ^{7(b9)}	C ^{7(b9)}	C ^{m7}	C ^{m6}
Perfect fifths (Major chord)	Perfect fifths (Minor chord)	Diminished (A)	Diminished (B)	"So What"	Parallel 4ths

2.2.9. Block Chords

Block Chords is "a style of playing, developed by Milt Buckner and George Shearing, with both hands 'locked' together, playing chords in parallel with the melody, usually in fairly close position. It is a technical procedure requiring much practice; the fundamental idea is to alternate between close diatonic chord voicings, and diminished

chords that link between them. The bass (lowest) line is the same as the melody, one octave lower. Tends to sound dated. Also called *locked hands*.”²⁸²

Jazz pianists such as Erroll Garner, Oscar Peterson, Red Garland, Phineas Newborn Jr., and Bill Evans, among others, further developed the block chord style as they created their own block chord sound (*i.e.*, Unison, Drop 2²⁸³, Red Garland Style, Free Combinations)²⁸⁴.

2.2.10. Free-Structure Voicings

Free-structure voicings, as the name implies, are voicings that include any combination of chord tones, using some of the voicing types previously described in this research, or another free organization of sounds²⁸⁵. The process of building free-structure voicings can be compared with orchestration, experimenting with new sonorities and non-traditional chord voicings. In addition, in specific situations, there is a melodic approach implied, creating secondary melodic lines as counterpoints and other effects.

2.3. Practicing Chords

There are many different ways of playing chords, from the simplest Guide Notes just played with the left hand to complex colorful voicings performed with both hands. The present researcher recommends that beginning jazz pianists first practice voicings in a fixed close position until the sound of every chord family with color tones becomes

²⁸² Darius Brotman, *The Jazz Piano Study Letter* (Arcata, CA: Self Published by the Author, 2000), Glossary of terms.

²⁸³ Mark Levine, *Jazz Piano Masterclass: The Drop 2 Book* (Petaluma, CA: Sher Music, 2006).

²⁸⁴ Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

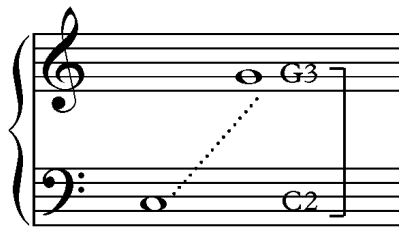
²⁸⁵ Mike Schoenmehl, *Modern Jazz Piano* (Mainz, Germany: Schott Music, 1992).

familiar and hands naturally perform the chord structure. After that, he recommends that both hands be incorporated to add more color tones and an expanded range.

Keyboard Range

The range between C2 and G3 on the piano keyboard is effective for playing Left Hand voicings²⁸⁶ (see figure 20). A lower range produces a dark obscure, and non-defined sound. On the other hand, a range higher than G3 produces a thin sound that is not sufficiently substantial. The present researcher recommends, as a guide, that this range be exceeded only when playing chords with both hands (open voicings).

FIGURE 20. Keyboard range for Left Hand voicings



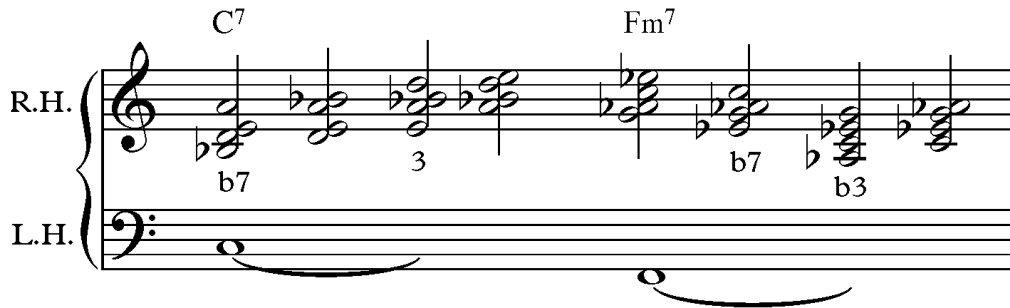
By Chord Families

A jazz pianist practices chord families not only to learn the chord voicings but also to learn and recognize their particular harmonic sound. When practicing 4WC voicings, the present researcher recommends that the jazz pianist choose the inversions first with the third or seventh as the lowest note of the voicing as they are more consistent. The bass (root) can be played with the Left Hand while the Right Hand plays the voicings. The jazz pianist can then switch, leaving the Left Hand to play the voicings

²⁸⁶ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

with no bass, using exactly the same dispositions that were played before with the right hand. At this point, no harmonic context is yet used – just chords alone. Figure 21 provides an example of how to practice 4WC voicings in all inversions.

FIGURE 21. 4WC voicings practiced individually by chord families. Right Hand plays the chord in all inversions while Left Hand holds the root of the chord



A useful approach to practice chord voicings by families is to practice them first without harmonic context, creating random orders of the 12 keys to practice chords alone, with no harmonic continuity, as shown in table 31. They may be applied to any chord family. The following tables 31, 32, 33, and 34, provide examples of key order (as suggestions). Each key can last 4 or 8 measures, and the table should be read from left to right starting with the top row and moving down like reading text or music notation.

TABLE 31. Random key order to practice chord families individually

A	E _b	G	F _#
E	A _b	C	D _b
B	F	B _b	D

Play-A-Long methods include music notation and audio tracks that allow the jazz pianist (and other musicians) to read-and-play, or listen-and-play. The Jamey Aebersold’s series,²⁸⁷ for example, specifically includes audio books dedicated to practice chord voicings with rhythm section accompaniment, combining different key orders, styles, and tempos. Tables 32 and 33 include chromatically ascending (table 32) and descending (table 33) orders, in all 12 keys, that are usually employed in Play-A-Long audio books.

TABLE 32. Ascending: chromatically up key order to practice chord families individually

C	Db	D	Eb
E	F	F#	G
Ab	A	Bb	B

Following the practice of chord voicings alone, the present researcher recommends that the jazz pianist incorporate time and style into his performance to become comfortable incorporating these elements into a harmonic and rhythmic context. Moreover, he recommends that styles also be combined, alternating between *Swing* feel to *Bossa Nova*, etc., and tempos vary including slow, medium, and up-tempo.

²⁸⁷ Jamey Aebersold, *Jazz Play-A-Long Sets, Vols. 1-133* (New Albany, IN: Jamey Aebersold Jazz Inc., 2000-2010).

TABLE 33. Descending: chromatically down key order to practice chord families

C	B	Bb	A
Ab	G	Gg	F
E	Eb	D	Db

The goal of practicing chords with random combinations of key order is to acquire dexterity on finding the appropriate keys quickly, in any key and inversion, with no harmonic sense. Following the ability to play chords by family, the jazz pianist should practice random combinations of chord families, as shown in table 34.

TABLE 34. Random key order to practice chords individually, combining chord families

Em7	Db7	Fm7	BbMaj7
Dm7	GMaj7	A7	Dbm7
C7	Ebm7	AbMaj7	Gb7
Bb7	BMaj7	G7	Gbm7
D7	Cm7	AMaj7	EMaj7
FMaj7	E7	GbMaj7	Ab7
Abm7	Eb7	Gm7	Bm7
EbMaj7	DMaj7	Am7	F7
B7	DbMaj7	CMaj7	Bbm7

When practicing chords with rhythm, the present researcher recommends that the jazz pianist perform swing and even eighth note time feels at varying tempos. In addition, as part of this exercise, individual chords may last from one- to four- or eight-measures with different inversions for every chord – introducing harmonic continuity when possible.

It is essential for the jazz pianist to also practice chord changes melodically, outlining arpeggios, and creating improvised melodies with the Right Hand while Left Hand plays chord voicings. The jazz pianist should spend as much time as needed until chord voicings are fully mastered and internalized, especially when practicing 4WC voicings, as they represent a new sonority and manner of playing chords with color tones incorporated.

2.4. Harmonic Progressions

Following the practice of chord voicings by families, the next step is for the jazz pianist to incorporate them within a harmonic context. Within this harmonic context, chord transitions need to be connected applying harmonic continuity between chord tones.

Harmony in music, like everything else in nature, moves by the tension-resolution law (*i.e.*, stable and unstable chords are mixed)²⁸⁸. Major and Minor chords are considered stable and Dominant, and Diminished chords are unstable, however, they tend to resolve on a stable chord. This classification is simplified, but can be applied to

²⁸⁸ Stephen Nachmanovitch, *Free Play – Improvisation in Life and Art* (New York, NY: Tarcher/Putnam Books, 1990).

sophisticated harmonic concepts as well, always motivated from the standpoint of required tension-resolution.

Table 35 includes a list of the common harmonic progressions employed in the jazz harmonic contexts (Note: Many jazz standard songs are built with these) progressions.

TABLE 35. Common harmonic progressions

1. II-V-I
2. *Turn Arounds*
3. Cycle of Diatonic Fourths
4. *Blues*
5. *Rhythm Changes*
6. Single-Chord Vamps

2.4.1. II-V-I Progression

The II-V-I chord progression is commonly used in western music (in both classical and popular styles)²⁸⁹. This progression exemplifies the basic harmonic movement: subdominant, dominant, and tonic, and combines the main three chord families: Minor (II-7, Subdominant), Dominant (V7) and Major (I, Tonic). Since many jazz standard songs are built with this progression, this repertoire provides a rich practice environment to work on all chord families while practicing a harmonic connection.

²⁸⁹ David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

Harmonic continuity is the process of connecting chords with minimal movement between voices by holding common tones and moving the others to the nearest chord tone in the following chord²⁹⁰. In addition to having a vertical/harmonic direction, all voicings within the chord move horizontally with melodic sense as well. Accordingly, a chord voicing may be conceived as a choir or string quartet, where every individual voice has a meaning within the ensemble but simultaneously keeps a unique melodic personality. Harmonic continuity may be flexible where the harmonic tension is not intense, but when a dominant chord resolves, harmonic continuity needs to be respected, following the natural law of tension/resolution²⁹¹. Unlike rules in classical harmony, in jazz, parallel movements of fourths or fifths are allowed. Therefore, the primary rule the jazz pianist follows when approaching jazz harmony is that sound is correct if it sounds good²⁹². Table 22 includes an example of harmonic continuity over the II-V-I progression.

When practicing chord voicings over the II-V-I progression, the pianist will foster memorization abilities not only from the characteristic sound of the chords but also from the physical movement of the voices. Chords may be altered by adding color tones (tensions), especially in the dominant family, and the basic progression may be altered as well, by re-harmonizing some of its chords, without changing the harmonic function of the basic chords.

²⁹⁰ Dan Haerle, *Jazz Piano Voicing Skills: A Method for Individual or Class Study* (New Albany, IN: Jamey Aebersold Jazz Inc., 1994).

²⁹¹ Mark Harrison, *Contemporary Jazz Piano: Hal Leonard Keyboard Style Series* (Milwaukee, WI: Hal Leonard Corp., 2010).

²⁹² Kenny Werner, *Effortless Mastery* (New Albany, IN: Jamey Aebersold Jazz Inc., 1996).

FIGURE 22. Harmonic continuity over the II-V-I progression

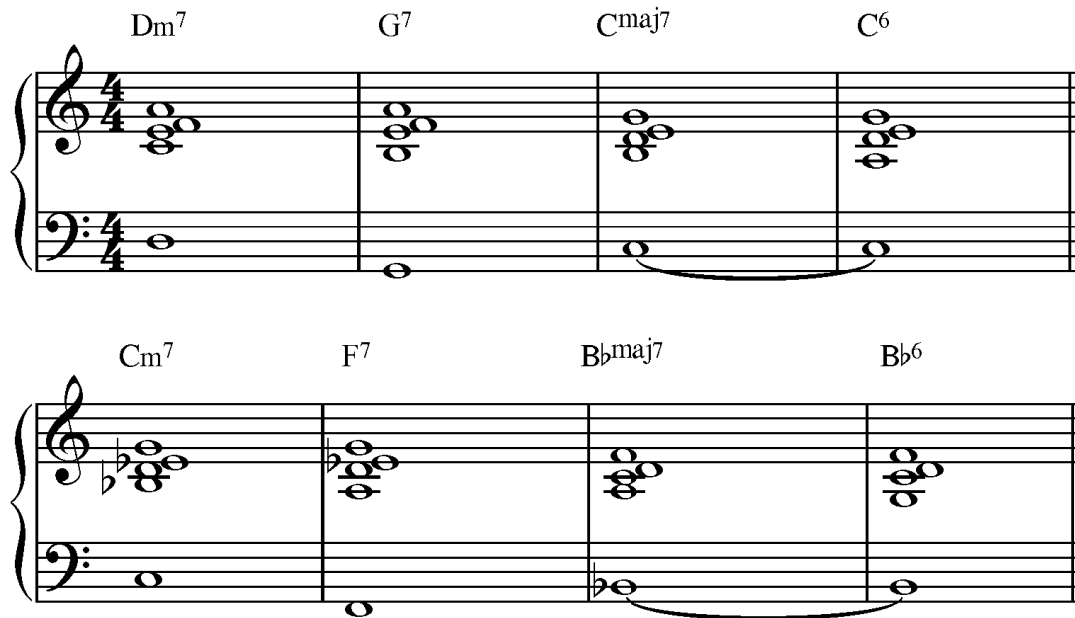


Table 36 (chord function table) and figure 23 (musical examples) illustrate 5 steps to practice V7 chord alteration, four in a Major key, and the last one in Minor key, changing also the IIm7 chord to IIm7(b5) –half diminished– and the IMaj7 to Im7.

TABLE 36. Steps for altering the V7 chord over the II-V-I progression

Step 1	IIm7	V7	IMaj7	I6
Step 2	IIm7	V7 (b13,b9)	IMaj7	I6
Step 3	IIm7	V7 (13,b9)	IMaj7	I6
Step 4	IIm7	V7 (b13,9)	IMaj7	I6
Step 5	IIm7(b5)	V7 (b13,b9)	Im7	Im6

FIGURE 23. II-V-I progression with alteration of the V7 chord colors

The figure displays five musical examples of a II-V-I progression in C major, each consisting of four measures. The bass line is a simple four-measure line: C4 (quarter), G3 (quarter), F3 (quarter), and C4 (quarter). The treble clef part shows the chord voicings for each measure.

- #1:** Dm⁷ (F, C, E^b, G), G⁷ (B, D, F, G), Cmaj⁷ (E, G, B, C), C⁶ (E, G, A, C).
- #2:** Dm⁷ (F, C, E^b, G), G⁷ (b13, b9) (B^b, D, F, G), Cmaj⁷ (E, G, B, C), C⁶ (E, G, A, C).
- #3:** Dm⁷ (F, C, E^b, G), G⁷ (13, b9) (B, D, F, G), Cmaj⁷ (E, G, B, C), C⁶ (E, G, A, C).
- #4:** Dm⁷ (F, C, E^b, G), G⁷ (b13, 9) (B^b, D, F, G), Cmaj⁷ (E, G, B, C), C⁶ (E, G, A, C).
- #5:** Dm⁷(b5) (F, C, E^b, G^b), G⁷ (b13, b9) (B^b, D, F, G), Cm⁷ (E^b, G, B^b, C), Cm⁶ (E^b, G, A^b, C).

Since the II-V-I progression appears in so many jazz standard songs, there are several books and methods devoted to practice harmony and improvisation over these three chord changes. Examples of these books include publications by authors such as Jamey Aebersold²⁹³, David Baker²⁹⁴, Jerry Coker²⁹⁵, and Hal Crook²⁹⁶. In addition, it is common practice for jazz pianists to practice specific improvisation concepts (*e.g.*, delay resolutions, *bebop* scales, blues licks) over the II-V-I progression, to be incorporated later into the actual performances of jazz standards.

In order to practice the II-V-I progression in every key and to incorporate the three main chord families (*i.e.*, “m7”, “7” and “Maj7”; following the II-V-I sequence order), the present researcher recommends that the jazz pianist practice with each key lasting four measures moving to the next key once all 12 keys are covered. (Note: Since the tonic chord lasts two measures, the sound of the major 6th²⁹⁷ may be incorporated in the Major chord (second tonic measure). Any order of keys may be used for this progression, switching among options like performing chromatically up or down, by ascending fourths or descending fifths, etc. Table 37 includes a common order for the II-V-I profession in all keys, and figure 24 provides the music example of chord voicings in 4WC with harmonic continuity, following the same key order.

²⁹³ Jamey Aebersold, *Jazz Play-A-Long Sets, Vol. 3: The II-V-I Progression* (New Albany, IN: Jamey Aebersold Jazz Inc., 2000).

²⁹⁴ David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

²⁹⁵ Jerry Coker, *Patterns for Jazz* (Miami, FL: Studio Publications Recordings, 1970).

²⁹⁶ Hal Crook, *Ready, Aim, Improvise!* (Rottenburg, Germany: Advance Music, 1999).

²⁹⁷ Major 6th and 7th on a Major chord have the same function and importance, and can be interchanged (*i.e.*, CMaj7 and C6).

TABLE 37. II-V-I harmonic progression, in all keys

Dm7	G7	CMaj7	C6
Cm7	F7	BbMaj7	Bb6
Bbm7	Eb7	AbMaj7	Ab6
Abm7	Db7	GbMaj7	Gb6
F#m7	B7	EMaj7	E6
Em7	A7	DMaj7	D6
*Ebm7	Ab7	DbMaj7	Db6
C#m7	F#7	BMaj7	B6
Bm7	E7	AMaj7	A6
Am7	D7	GMaj7	G6
Gm7	C7	FMaj7	F6
Fm7	Bb7	EbMaj7	Eb6

* At this point is needed to move half step up in order to go through all 12 keys.

FIGURE 24. II-V-I progression in all 12 keys with harmonic continuity

The figure displays six systems of musical notation, each representing a different key signature. Each system consists of a grand staff (treble and bass clefs) with a 4/4 time signature. The progression is II-V-I, with the final chord being a 6th chord. The systems are labeled #1 through #6 on the left. Chord labels are placed above the treble staff, and piano/forte markings are placed below the bass staff.

- System #1:** Dm⁷, G⁷, Cmaj⁷, C⁶. Treble staff has whole notes. Bass staff has piano markings in the first two measures and forte markings in the last two measures.
- System #2:** Cm⁷, F⁷, B^bmaj⁷, B^b⁶. Treble staff has whole notes. Bass staff has piano markings in the first two measures and forte markings in the last two measures.
- System #3:** B^bm⁷, E^b⁷, A^bmaj⁷, A^b⁶. Treble staff has whole notes. Bass staff has piano markings in the first two measures and forte markings in the last two measures.
- System #4:** A^bm⁷, D^b⁷, G^bmaj⁷, G^b⁶. Treble staff has whole notes. Bass staff has piano markings in the first two measures and forte markings in the last two measures.
- System #5:** F[#]m⁷, B⁷, Emaj⁷, E⁶. Treble staff has whole notes. Bass staff has piano markings in the first two measures and forte markings in the last two measures.
- System #6:** E^m⁷, A⁷, Dmaj⁷, D⁶. Treble staff has whole notes. Bass staff has piano markings in the first two measures and forte markings in the last two measures.

Ebm⁷ Ab⁷ Dbmaj⁷ Db⁶
 #7

C#m⁷ F#⁷ Bmaj⁷ B⁶
 #8

Bm⁷ E⁷ Amaj⁷ A⁶
 #9

Am⁷ D⁷ Gmaj⁷ G⁶
 #10

Gm⁷ C⁷ Fmaj⁷ F⁶
 #11

Fm⁷ Bb⁷ Ebmaj⁷ Eb⁶
 #12

When practicing chord voicings, both with Left Hand or Right Hand, within the chord range of the piano keyboard (C2 – G3), the jazz pianists needs to switch between the best voicing inversion to fit this range. Table 38 illustrates different approaches of piano techniques when practicing the II-V-I progression.

TABLE 38. Piano techniques over the II-V-I progression

Accompaniment - Duo Setting	Right Hand: Chords Left Hand: Bass (root)
Trio Setting	Right Hand: Melody / Improvisation Left Hand: Chords
Rhythm Section Setting	Complementary Voicings: Right Hand: Chords (3/7 position) Left Hand: Chords (7/3 position)
Solo Piano	Spread Voicings: Right Hand: Color Tones + Guide Note (3/7) Left Hand: Bass (root) + Guide Note (3/7)

2.4.2. Turn Arounds

A *Turn Around* in harmony is a slight variation of the II-V-I progression that encompasses a secondary dominant chord (V7/II) at the end of the harmonic phrase (fourth measure), where the “I6 chord” was placed, in order to create harmonic

movement and to connect with the “m7 chord” of the progression, so it starts over²⁹⁸. This harmonic progression is used frequently used as *endings* or *introduction* sections²⁹⁹, or a vehicles to create harmonic variations over a section where the harmony remains with no changes, just on the tonic chord, for example. Table 39 illustrates the *Turn Around* progression with commonly used harmonic variations.

TABLE 39. Basic *Turn Around* harmonic progression with variations (C Major key)

IIm7	V7	IMaj7	V7/II
Dm7	G7	CMaj7	A7alt.
Dm7	G7	Em7	A7alt.
Dm7	D#°7	Em7	A7alt.
Dm7	Db7	CMaj7	Eb7
Dm7	G7	Em7	Eb7
Dm7/G	G7	CMaj7/G	A7alt./G
Dm7	D#°7	Em7	A7alt.

²⁹⁸ Jamey Aebersold, *Jazz Play-A-Long Sets, Volume 19: Turnarounds, Cycles & II/V7's* (New Albany, IN: Jamey Aebersold Jazz, Inc. 1999).

²⁹⁹ John Valerio, *Intros, Endings and Turnarounds for Keyboard: Essential Phrases for Swing, Latin, Jazz Waltz, and Blues Styles* (Milwaukee, WI: Hal Leonard Corp., 2001).

2.4.3. Cycle of Diatonic Fourths

The *Cycle of Diatonic Fourths* is a harmonic progression that includes all diatonic chords from the Major scale³⁰⁰. This harmonic environment provides the jazz pianist with a structure in which to practice all chord voicings from a specific type, in all keys. The progression lasts for 8 measures starting with the IV chord and moves by ascending diatonic fourths intervals until arriving to the “I” chord (two measures). Tables 40 and 41 include the cycle of diatonic fourths progression in Major key (table 40) and Minor key (table 41) including chord functions.

TABLE 40. Harmonic cycle of diatonic fourths – Major key

IVMaj7	VIIIm7(b5)	IIIm7(b5)	VIIm7
IIm7	V7	IMaj7	*(V7/IV)

*The V7/IV secondary dominant chord may be introduced to fill out the extra measure at the end of the progression (measure 8) preparing the next chord.

TABLE 41. Harmonic cycle of diatonic fourths – Minor key

IVm7	bVII7	bIIIMaj7	bVIMaj7
IIm7(b5)	V7	Im7	*(V7/IV)

* Optional, to go back to the beginning.

³⁰⁰ Barry Nettles and Richard Graf, *The Chord Scales Theory and Jazz Harmony* (Rottenburg, Germany: Advance Music, 2002).

2.4.4. Blues

Jazz pianists (and other musicians) regularly perform the blues progression in both live performances and on recordings. The *blues* progression lasts 12 measures. Its primary characteristic is that it is originally conceived by dominant chords, so it is built with modal harmony. Only three chords are needed for the traditional basic *blues* progression: I7, IV7 and V7³⁰¹ (see figure 25 for an example).

FIGURE 25. Basic *blues* harmonic progression

Basic Blues (F)

The figure shows the Basic Blues (F) harmonic progression in 4/4 time, consisting of three staves of 4 measures each. The chords are indicated above the staves:

- Staff 1: F⁷ (measures 1-2), B^b7 (measures 3-4), F⁷ (measures 5-6), F⁷ (measures 7-8).
- Staff 2: B^b7 (measures 1-2), B^b7 (measures 3-4), F⁷ (measures 5-6), F⁷ (measures 7-8).
- Staff 3: C⁷ (measures 1-2), B^b7 (measures 3-4), F⁷ (measures 5-6), F⁷ (measures 7-8).

Many harmonic variations can be made over the basic *blues* progression. These variations often include different applications of harmony among historical periods. For example, the *Bebop* period introduced tonal harmony concepts with the incorporation of

³⁰¹ Mark C. Gridley, *Jazz Styles* (Upper Saddle River, NJ: Pearson, 2011).

II-V-I devices, obtaining a combination of the traditional sound of *blues* with a more sophisticated tonal harmonic approach³⁰², as shown in figure 26.

FIGURE 26. *Bebop blues* progression (key of F)

The musical notation for Figure 26 consists of three staves in 4/4 time, key of F major. The progression is as follows:

- Staff 1: Measure 1 (F7), Measure 2 (B^b7)
- Staff 2: Measure 3 (B^b7), Measure 4 (B^b7, F7, Am⁷(b5) D⁷(b9))
- Staff 3: Measure 5 (Gm⁷, C⁷), Measure 6 (F⁷, D⁷(b9), Gm⁷, C⁷)

Figure 27 includes a description of Left Hand voicings played in 4WC position over the *Bebop blues* in the key of F, with harmonic continuity and the adaptation of selected chords to the harmonic context. The present researcher recommends that the jazz pianist first learn one fixed position of chord voicings in one specific key, like in this example, and then transpose it to other keys and incorporate new chord voicing options.

³⁰² Mark C. Gridley, *Jazz Styles* (Upper Saddle River, NJ: Pearson, 2011).

FIGURE 27. *Blues* progression in F with 4WC voicings for the Left Hand

The musical score is written in bass clef with a key signature of one flat (F major) and a 4/4 time signature. It consists of three systems of two staves each. The first system contains measures 1-4 with chords F7, Bb7, F7, Cm7, and F7. The second system contains measures 5-8 with chords Bb7, B°7, F7/C, Am7(b5), and D7(b13). The third system contains measures 9-12 with chords Gm7, C7, F7, (D7(b13)), Gm7, and C7. The left hand part features a consistent rhythmic pattern of quarter notes.

Since the *blues* progression has many different harmonic possibilities, jazz pianists often obtain new ideas and devices for their artistic expression across many styles by listening to exemplary recordings of master artists including live recordings. *Blues* is performed differently from performer to performer. Rhythm section players, in particular, often adjust their approach to the *blues* to accommodate new musical contexts and soloists. For jazz pianists, the *blues* harmonic context provides a rich environment to demonstrate general music skills such as improvisation, harmony, rhythm, and form.

2.4.5. *Rhythm Changes*

The II-V-I and *turn around* progressions are used as primarily used as harmonic elements in most jazz standards³⁰³. In addition, there is a song form built almost entirely with this progression called *Rhythm Changes*³⁰⁴. The *Rhythm Changes* progression was originally created after George Gershwin's composition *I Got Rhythm*³⁰⁵, with a 32 measure AABA form comprised of the *Turn-Around* progression in the A sections and extended dominants over the B transitional section. Oftentimes jazz pianists perform the *Rhythm Changes* progression at an up-tempo manner in the key of Bb (see figure 28). Over time, the *Rhythm Changes* progression as well as the *Blues* progression has incorporated many harmonic variations. Moreover, jazz pianists often use the *Rhythm Changes* progression, like the *Blues* progression, as a vehicle for improvisation.

David Baker offers several effective examples of *Rhythm Changes* progressions in his book *How to Play Bebop*³⁰⁶. He also provides a variety of exercises outlining how to practice *Rhythm Changes* and *Bebop* language.

The *Rhythm Changes* progression provides the jazz pianist with a harmonic setting that supports the practice of harmony, improvisation, form, language, styles, time and feel, etc. Since its harmonic progression is diatonic and includes some of the essential harmonic movements in tonal harmony, it may be used in an exercise to learn a new key. Therefore, the present researcher recommends that the jazz pianist practice *Rhythm*

³⁰³ David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

³⁰⁴ Ibid.

³⁰⁵ Chuck Sher and Larry Dunlap, eds., "I Got Rhythm", *The Standards Real Book* (Petaluma, CA: Sher Music, 1991), 191.

³⁰⁶ David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

FIGURE 28. Bb *Rhythm Changes* harmonic progression

A

B^bMaj⁷ Gm⁷ Cm⁷ F⁷ B^bMaj⁷ Gm⁷ Cm⁷ F⁷

(G⁷) (G⁷)

B^bMaj⁷ B^b7 E^bMaj⁷ E^o7 Dm⁷ G⁷ Cm⁷ F⁷

(Fm⁷) (A^b7)

A'

B^bMaj⁷ Gm⁷ Cm⁷ F⁷ B^bMaj⁷ Gm⁷ Cm⁷ F⁷

(G⁷) (G⁷)

B^bMaj⁷ B^b7 E^bMaj⁷ E^o7 Cm⁷ F⁷ B^bMaj⁷

(Fm⁷) (A^b7)

B

D⁷ / G⁷ /

C⁷ / F⁷ /

A'

B^bMaj⁷ Gm⁷ Cm⁷ F⁷ B^bMaj⁷ Gm⁷ Cm⁷ F⁷

(G⁷) (G⁷)

B^bMaj⁷ B^b7 E^bMaj⁷ E^o7 Cm⁷ F⁷ B^bMaj⁷

(Fm⁷) (A^b7)

Changes in a particular key to warm up before performing a song in the same key.

Rhythm Changes were frequently used in jam sessions during the *Bebop* period to test the ability and skills of the musicians³⁰⁷.

2.4.6. Single-Chord Vamps

During the late 1960's the fusion of jazz with other musical styles like rock became popular³⁰⁸. In addition to combining musical styles in new ways, this period is marked by the incorporation of electronic instruments³⁰⁹.

American jazz musician, Miles Davis, was one of the pioneers and representatives of fusion of styles that occurred in the 1960s. His distinctive sound often includes a “jam” over just one chord – a vamp, conceived on a modal approach (*i.e.*, “Am” open vamp)³¹⁰. He creates harmonic tension by combining other musical elements instead of adding new chords, like exchanging modes and scales over the same key center, and switching sonorities with the incorporation of electronic instruments and sound effects. Table 42 provides a selected list of representative discography of this particular style.

2.5. Re-Harmonization Techniques

Figure 43 includes a list of re-harmonization techniques frequently used by jazz musicians, either as a tool for writing or arranging, or as a harmonic source for improvisation. Most of these techniques were introduced during the *Bebop* period

³⁰⁷ Scott Yanow, *Bebop* (San Francisco, CA: Miller Freeman Books, 2000).

³⁰⁸ Joachim E. Berendt, *The Story of Jazz: From New Orleans to Rock Jazz* (Upper Saddle River, NY: Prentice-Hall Inc., 1978).

³⁰⁹ *Ibid.*

³¹⁰ Mark C. Gridley, *Jazz Styles* (Upper Saddle River, NJ: Pearson, 2011).

TABLE 42. Selected discography – Modal Jazz / Single-Chord Vamps

- Miles Davis. *Kind of Blue*. Columbia, 1959.
- John Coltrane. *Olé Coltrane*. Atlantic, 1961.
- Wayne Shorter. *Infant Eyes*. Blue Note, 1964.
- Wayne Shorter. *Speak No Evil*. Blue Note, 1964.
- John Coltrane. *Crescent*. Impulse, 1964.
- Herbie Hancock. *Empyrean Isles*. Blue Note, 1964.
- Yusef Lateef. *Live at Pep's (Vols. 1 and 2)*. Impulse, 1964.
- Herbie Hancock. *Maiden Voyage*. Blue Note, 1965.
- John Coltrane. *A Love Supreme*. Impulse, 1965.
- Bobby Hutcherson. *Components*. Blue Note, 1965.
- Miles Davis. *Miles Smiles*. Columbia, 1967.
- Miles Davis. *In a Silent Way*. Columbia, 1969.
- McCoy Tyner. *Expansions*. Blue Note, 1969.
- Mahavishnu Orchestra. *The Inner Mounting Flame*. Columbia, 1971.
- Weather Report. *Black Market*. Columbia, 1976.
- Branford Marsalis. *Footsteps of Our Fathers*. Marsalis Music, 2002.

(1940's) and have been developed since then with new applications in different contexts³¹¹. As there are many published jazz harmony methods available to the reader, it

³¹¹ Mark Levine, *The Jazz Theory Book* (Petaluma, CA: Sher Music, 1995).

is not the purpose of this research to explain harmony topics in detail. Rather this information is offered as a reference. Table 43 however, provides a list of re-harmonization topics that will be explain in detail in the following section.

TABLE 43. Re-harmonization techniques

1. Secondary Dominants
2. Extended Dominants
3. Intercalated Relative II-7 Chord
4. Tritone Substitution
5. Chromatic II-V's
6. Dominant Gradation of Tension
7. 7sus4, 7, 7alt, Sub7
8. Non Functional Chords
9. Impressionistic Harmonies
10. Pedal Points
11. Hybrid Chords

2.6. Color Palette

As for painters, a harmonic color palette provides the jazz pianist with harmonic resources that can be applied at any moment during a live performance. Accordingly, the artist, in this case the jazz pianist, is able to select and combine all *colors* to create his desired effect in his music. The harmonic color palette is comprised of chord voicings,

harmonic contexts, and sonorities (see figure 29). Following practice over time, the jazz pianist is familiar with these elements and able to combine and adapt them into his musical expression.

Each jazz pianist has his own personal harmonic color palette that develops and expands progressively as his musicianship and experience advances. Moreover, as harmony is directly related to improvisation and language, a jazz pianist develops an individual harmonic concept that defines his approach and sound (particularly in improvisation). Figure 29 provides a list of harmonic resources for the sixth main chord families (Maj7, m7, 7, m7(b5), °7, 7sus4) represented as a *color palette* (Note: “So What” voicings may be used over any chord family; in the example, they are exemplified in a horizontal approach outlining the chromatic scale, without matching the above chord families).

The present researcher recommends that the jazz pianist explore harmonic concepts to identify new applications to add to his harmonic color palette. Further, he recommends that the jazz pianist practice harmonic concepts individually including a variety of chord voicings, playing throughout the range of the piano, listening to recordings and identifying harmonies, and singing the chord tones.

Exercise 2 is a researcher-designed approach to practicing ear training over chords. It is intended to illustrate a process for the jazz pianist to use throughout this work.

FIGURE 29. Chord voicings *color palette*

	Cmaj7	Cm7	C7	Cm7(b5)	C°7	C7(sus4)
Triad						
Cuatriad						
Guide Notes						
Root + G.N.						
FWC						
Fourths						
Open / Spread Drop 2						
Impressionistic						
Parallel						
"So What" Voicings						

EXERCISE 2. Practicing ear training over chords

Play any note on the piano. It can be analyzed as the root of a major 7th chord, for instance. Then sing the 3rd, then the 5th and then the 7th. Select another note and repeat. Next, select a different note, but instead of it being the root, make it the 7th, and sing the chord tones backwards (descending). Another option: play a minor 7th chord on the piano and sing it one pitch at a time, starting on the root.

Chords are comprised of components that outline the harmonic information in music, which serves specific functions (*i.e.*, establish, outline the chord family, and add sophistication to the chord, depending on the musical context. Together, these elements create the final sound of any chord and the overall music, like a perfume made of varied individual fragrances³¹². The study of harmony is central for the jazz pianist. See table 44 for a list of recommended bibliography about harmony.

³¹² The novel entitled *Perfume: Story of a Murderer* [Patrick Süskind, *Perfume: The Story of a Murderer* (New York, NY: Knopf Doubleday Publishing Group, 2001).] exemplifies the similitudes between identifying and creating a unique fragrance with musical chords and harmony in general. In this story, the author explores the sense of smell and its relationship with the emotional meaning that scents may carry. The main character, Jean-Baptiste Grenouille, is able to identify every component of a complex perfume and reproduce it (due to his natural abilities and training with a master teacher). Later he creates his own fragrances and becomes a famous perfumer as he offers personal combinations of traditional elements.

TABLE 44. Selected bibliography - Harmony

Dobbins, Bill. *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volumes 1-4*. New York, NY: Charles Colin Music, 1978-1989.

Haerle, Dan. *Jazz Piano Voicing Skills: A Method for Individual or Class Study*. New Albany, IN: Jamey Aebersold Jazz Inc., 1994.

Hyman, Dick. *All the Right Changes*. Katonah, NY: Ekay Music, 1989.

LaVerne, Andy. *Handbook of Chord Substitutions*. Van Nuys, CA: Alfred Publishing Company, 1987.

Levine, Mark. *Jazz Piano Masterclass: The Dorp 2 Book*. Petaluma, CA: Sher Music Co., 2006.

Levine, Mark. *The Jazz Theory Book*. Petaluma, CA: Sher Music, 1995.

Piston, Walter. *Harmony, Third edition*. New York, NY: W.W. Norton & Company, 1969.

Reilly, Jack. *The Harmony of Bill Evans. Volumes 1 and 2*. Milwaukee, WI: Hal Leonard Corp., 1994-2009.

Russell, George. *The Lydian Concept of Tonal Organization*. New York, NY: Russ-Hix, 1953.

Schoenberg, Arnold. *Theory of Harmony, translation based on third edition, 1922*. Los Angeles, CA: University of California Press, 1978.

Schmitz, E. Robert. *The Piano Works of Claude Debussy*. New York, NY: Dover Publications Inc., 1966.

3. Language

The jazz language, as any language, is learned aurally and through the study of grammar and vocabulary³¹³. In addition, jazz language is learned through a combination of listening, playing, and imitating master artists. Accordingly, the jazz pianist needs to critically listen to a variety of music (recordings and live performances), analyze a variety of music (recordings and live performances), and evaluate a variety of music (recordings and live performances). This approach positions the jazz pianist to engage directly with music as a primary source. Moreover, as the jazz pianist becomes deeply engaged with music, he is able to reap more benefits from interactions with teachers and fellow musicians and develop his language of jazz.

Through the study of representative solo improvisations by jazz pianist masters the jazz pianist is able to gain insights regarding artistic choices such as harmonic progressions, chord voicings, melodic development, and so forth. This study also provides the jazz pianist with information regarding each artist's point of view and manner of expressing jazz music/jazz language.

Table 45 includes a list of twelve selected solos by jazz piano masters that span a forty-year period in jazz music history (*i.e.*, 1957 to 1999). These solos were selected by the present researcher for the jazz pianist to use as a starting point for study and development, based on: historical importance, influence on jazz musicians and music,

³¹³ Dan Haerle, *The Jazz Language: A Theory Text for Jazz Composition and Improvisation* (Van Nuys, CA: Alfred Music Publishing, 1982).

and content³¹⁴. They are not ranked or offered as a “best of” listing; rather they are included to illustrate how solo improvisations can be integrated into a personal practice routine for jazz pianists and relate to jazz pedagogy. This list should be expanded as learning occurs and the jazz pianist gains musical maturity and experience.

TABLE 45. Twelve recommended jazz pianists solo improvisations

Year	Pianist	Song	Album*
1957	Kenny Drew	<i>Moment’s Notice</i>	John Coltrane: <i>Blue Train</i>
1957	Red Garland	<i>Bye, Bye, Blackbird</i>	Miles Davis: <i>‘Round Midnight</i>
1959	Wynton Kelly	<i>Freddie Freeloader</i>	Miles Davis: <i>Kind Of Blue</i>
1960	Bud Powell	<i>All The Things You Are</i>	<i>At Essen Jazz Festival</i>
1962	Oscar Peterson	<i>C Jam Blues</i>	<i>Night Train</i>
1967	McCoy Tyner	<i>Passion Dance</i>	<i>The Real McCoy</i>
1968	Chick Corea	<i>Matrix</i>	<i>Now He Sings, Now He Sobs</i>
1977	Bill Evans	<i>You Must Believe In Spring</i>	<i>You Must Believe In Spring</i>
1983	Keith Jarrett	<i>All The Things You Are</i>	<i>Standards Vol. 1</i>
1992	Kenny Barron	<i>Like Someone In Love</i>	Stan Getz: <i>People Time</i>
1997	Kenny Kirkland	<i>November 15th</i>	Kenny Garrett: <i>Songbook</i>
1999	Brad Mehldau	<i>All The Things You Are</i>	<i>The Art of The Trio Vol. 4</i>

* No album title name is provided when it is the name of the pianist

³¹⁴ Note from the present researcher: It was very difficult to select only twelve pianists, among all of the extraordinary jazz pianists in history—as it was also difficult to select only one solo improvisation from each artist. These selections are offered as examples for pedagogical purposes, without rankings, ratings, or any other evaluations.

Jazz pianists performed the selected solos outlined in table 45 with the accompaniment of rhythm section (trio setting) or within the context of a larger group (quartet, quintet or sextet), with the exception of the duo recording from Stan Getz and Kenny Barron. The setting and context of these solo offerings contribute to the musical expression as improvisation occurs via the interactions among musicians.

3.1. Singing with the Solos

Music does not need to be fully understood from the very beginning to be learned, or enjoyed as a listener³¹⁵. Like many activities that occur in the every day life that happen by instinct, so may jazz. It is an art form inextricably linked to human instinct. Although jazz may be quite sophisticated, it is often created instinctively, by ear, as artists perform sounds that sound good to them.

Jazz pianists are able to gain objective information about solo improvisations from jazz piano masters such as harmonic choice, voicings, form, etc., as well as subjective information such as phrasing, time and feel, and articulation. The latter information – the subjective – is perhaps the most central component of this exercise as it can only be partially represented in music notation when transcribing a solo. These subjective ideas in music are assimilated by natural repetition and imitation of the music. Frank (1998), coined the term “singing with the solos” (in his method series, *The Joy of Improv*³¹⁶) to describe this process. Frank (1998) suggests that jazz pianists sing the solos to know them fully. In his approach he does not ask the jazz pianist to transcribe the solos

³¹⁵ Aaron Copland, *What to Listen for in Music* (New York, NY: Penguin Books, 1999).

³¹⁶ Dave Frank and John Amaral. *Joy of Improv - Books One and Two* (Milwaukee, WI: Hal Leonard Corp., 1998).

or practice them on the instrument, at least in the early stage of learning. His recommendation is to initially approach the music naturally (*i.e.*, by imitation and singing), so when the jazz pianist is ready to improvise on the piano these elements will have been internalized and will flow naturally from his body.

3.2. Solo Transcription and Analysis

The act of solo transcription is essential for jazz pianists as they learn and assimilate the jazz language and develop a personal artistic voice³¹⁷. Through the process of imitating and studying solos, the jazz pianist gains insights and knowledge of key elements such as improvisation, jazz language, and style. Moreover, through transcription and analysis, concepts such as time feel, melodic and harmonic considerations, technique, ear training and stylistic elements are fostered and will be naturally incorporated when creating improvised melodies. According to Reeves (1995): “There is no substitute for listening to and playing with the great jazz artists in absorbing the jazz vocabulary”³¹⁸. He continues, “Developing your own inner voice by studying the works of past masters will help you find your own unique contribution to the art form”³¹⁹.

Further, Reeves (1995) offers the following four steps when practicing a solo transcription:

1. Learn the solo by ear through listening of a musical recording and *sing along* with it, imitating naturally all elements that configure the solo, including mistakes and imperfections, as they are as important as the other information

³¹⁷ Scott D. Reeves, *Creative Jazz Improvisation*. 2nd ed. (Upper Saddle River, NJ: Prentice-Hall, 1995).

³¹⁸ *Ibid.*,

³¹⁹ *Ibid.*, 6.

that appears in the music. Mistakes are a normal and repeated behavior in our lives, so it is important to learn how to incorporate them to the every day life, including music. Not much thinking is required at this point.

2. Once the solo is learned by heart and can be naturally sung with the recording, it needs to be *played with the instrument*, trying to perform it identically as the original recording. No writing needed yet.
3. When the solo can be performed on the instrument, now it should be *transcribed into a music notation*, including melodies, chord changes, and Left Hand chord voicings, if applicable. Strive to represent the music as clearly as possible, highlighting chorus number, recording time (*i.e.*, 3'42'') and form sections (interlude, coda, etc.), and with annotations of elements, such as re-harmonization.
4. Finally, the solo needs to be *analyzed* and the highlights to be outlined. A good idea is to outline the main characteristic of the solo (*i.e.*, modal use of pentatonic scales combined with left hand voicings in fourths) and other music topics within it³²⁰.

The present researcher recommends that the jazz pianist start to transcribe music by choosing simple melodies and songs (before complete solos), and to listen to audio recordings of these melodies/songs several times. As part of this process the jazz pianist should select solos that are relevant to his performing, private lessons, and/or school instruction. He should initially attempt to transcribe the solo without the instrument to

³²⁰ Scott D. Reeves, *Creative Jazz Improvisation*. 2nd ed. (Upper Saddle River, NJ: Prentice-Hall, 1995).

foster aural skills and analysis. The present researcher further recommends that the jazz pianist become familiar with the song on which the solo is developed in order to understand chord-scale relationships and form, and memorize the solo so he is able to start it from anywhere, not only from the beginning³²¹. Next the jazz pianist should practice the solo on the instrument by employing a variety of approaches (*e.g.*, over the original recording, with Play-A-Long tracks, using a metronome, unaccompanied, in performance). When the solo can be sung and played, the jazz pianist should write it down and analyze the lines and variations with respect to the original chord changes. Finally, the present researcher recommends that the jazz pianist select aspects of each transcribed solo to combine with his original ideas when soloing.

After studying several solos, the jazz pianist has learned essential characteristics of great performances by ear, as well as obtain a complete index of content, musicians, and recordings. The present researcher recommends that the jazz pianist create a notebook of the transcribed solos he studies (sorted by date and artist) to document musical concepts in each solo, and track his personal progress. Moreover, making a playlist of solos in an audio device allows the jazz pianist to organize the solos being practiced, listen to them (and compare them with other recordings) as well as create a “wait list” of solos to study in the future.

The process of fully studying a solo improvisation may take the jazz pianist several months. Once the solo is internalized, however, the jazz pianist is able to draw on

³²¹ The present researcher personally transcribes most of the solo improvisations that he uses for practice, although in some cases, published transcriptions may be helpful for clarification of left hand chord voicings or up-tempo passages.

its content and nuances – even years later³²². In addition, when a solo is re-practiced after a long time without doing so, new elements and characteristics are often discovered in light of the increased musicianship and maturity of the musician³²³.

In addition to the actual solo, there are several components of the music making experience that are observable and beneficial to the jazz pianist. For example, the jazz pianist should focus on the manner in which musicians interact with each other as they perform, the ability to accompany and support a soloist during improvisation, and to create new musical situations³²⁴.

The present researcher recommends that the jazz pianist imagine he is playing one of the other instruments in the band (*e.g.*, bass, drums) to consider roles and priorities (*e.g.*, time and feel, interaction, form) beyond playing a particular song, style, or type of chord.

3.3. Developing Jazz Piano Skills Through Solo Transcription

Jazz pianists study solo transcriptions to develop language and piano skills. Accordingly they are able to learn the most commonly employed jazz piano elements and concepts, directly from solo transcription. Table 45 presented 12 researcher-selected solo improvisations by iconic jazz pianists representing a historical sampling. All of these solos include most of the piano techniques addressed in this research (*e.g.*, chord voicings, melodic language, time feel, harmony, chord/scale relationship and piano techniques). Table 46 lists music topics associated with each of these 12 solos by

³²² Jerry Coker, *How to Practice Jazz* (New Albany, IN: Jamey Aebersold Jazz Inc., 1990).

³²³ *Ibid.*

³²⁴ Hal Crook, *How to Comp: A Study in Jazz Accompaniment* (Rottenburg, Germany: Advance Music, 1995).

category (i.e. *Left Hand Voicings, Melodic Language, Harmony*) and a list of piano techniques that may be reinforced/studied in conjunction with the selected solo improvisations. This list is offered as a reference for jazz pianists as topics to be practiced. The present researcher recommends that the jazz pianist first listen to the recordings to identify these techniques on his own and then compare his ideas with the information provided in table 46. Since the selection of solos includes varied pianists from different stylistic periods, from the classic 1957 Kenny Drew solo, to the contemporary 1999 offering from Brad Mehldau, the combination of them provides a wide approach of jazz piano techniques.

TABLE 46. Piano techniques extracted from the twelve researcher-selected representative solos

Music Element	Topic / Device	Artist:
Left Hand Voicings	Four Way Close	Keith Jarrett: <i>All The Things You Are</i> Kenny Kirkland: <i>November 15th</i>
	Spread – Solo Piano	Kenny Barron: <i>Like Someone in Love</i> Bud Powell: <i>All The Things You Are</i>
	Guide Notes Only	Wynton Kelly: <i>Freddie Freeloader</i> Kenny Drew: <i>Moment's Notice</i>
	Voicings in Fourths	Chick Corea: <i>Matrix</i> McCoy Tyner: <i>Passion Dance</i>
	Block Chords	Bill Evans: <i>You Must Believe In Spring</i> Red Garland: <i>Bye, Bye, Blackbird</i>

	Impressionistic Voicings	Oscar Peterson: <i>C Jam Blues</i> Bill Evans: <i>You Must Believe In Spring</i> Brad Mehldau: <i>All The Things You Are</i>
Melodic Language	<i>Blues</i>	Oscar Peterson: <i>C Jam Blues</i> Wynton Kelly: <i>Freddie Freeloader</i>
	<i>Horn Style</i>	Bud Powell: <i>All The Things You Are</i> Red Garland: <i>Bye, Bye, Blackbird</i> Kenny Drew: <i>Moment's Notice</i>
	Motif Development	Keith Jarrett: <i>All The Things You Are</i> Bill Evans: <i>You Must Believe In Spring</i>
	Linear Approach	Chick Corea: <i>Matrix</i> Brad Mehldau: <i>All The Things You Are</i>
	Pentatonics / Modal	McCoy Tyner: <i>Passion Dance</i> Chick Corea: <i>Matrix</i>
	Rhythm	Swing Feel / 8 th notes
Amalgams & Polyrhythms		Brad Mehldau: <i>All The Things You Are</i>
Harmony	Modal Exchange	Kenny Kirkland: <i>November 15th</i>
	Melodic Minor Modes	Kenny Kirkland: <i>November 15th</i>
	Counterpoint	Brad Mehldau: <i>All The Things You Are</i>

3.4. Rhythm Section Language

Jazz pianists, as part of a rhythm section, perform the roles of accompanist and soloist—depending on the musical expression at the time³²⁵. The jazz pianist within a rhythm section provides harmonic, melodic, and rhythmic support to the music. Accordingly, he should at different times, associate as a drummer or bass player³²⁶ and focus on the ability to keep the time, reinforce rhythms, outline the song form, support the soloist to develop and build a solo, and interact with the other musicians to create a unified sound.

Throughout jazz history there are many notable rhythm sections and rhythm section pianists (*e.g.*, Bobby Timmons, Tommy Flanagan, Bud Powell, Bill Evans, Herbie Hancock, Barry Harris, Thelonious Monk) that have advanced jazz music. Selected examples of these artists offered as researcher-selected examples for the jazz pianist to specifically study, are included in table 47.

Bassist Dave Weigert in his book *Jazz Workshop for Bass and Drums*³²⁷, provides a chronological list of selected influential rhythm section players (bassists and drummers) along with examples of jazz soloists and the albums on which they appear. This resource not only provides the jazz pianist with historical information, but also reveals insights regarding the shared musical functions performed by the (piano), bass, and drums within an ensemble. Weigert (1996) also provides information about practice routine methods

³²⁵ Bill Dobbins, *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volume One* (New York, NY: Charles Colin Music, 1978).

³²⁶ Steve Houghton, and Tom Warrington, *Essential Styles for the Drummer and Bassist* (Van Nuys, CA: Alfred Music Publishing, 1992).

³²⁷ Dave Weigert, *Jazz Workshop for Bass and Drums* (Rottenburg, Germany: Advance Music, 1996).

TABLE 47. Selected rhythm sections with pianists

- *Art Blakey and The Jazz Messengers*, featuring Horace Silver (piano), Doug Watkins (bass), and Art Blakey (drums)
- *Miles Davis First Quintet*, featuring Red Garland (piano), Paul Chambers (bass), and Philly Joe Jones (drums). Also featuring Wynton Kelly (piano) for soloists like Hank Mobley, John Coltrane, Dizzy Gillespie, Dexter Gordon or Jonny Griffin, among others
- *Miles Davis Second Quintet*, featuring Herbie Hancock (piano), Ron Carter (bass), and Tony Williams (drums)
- *John Coltrane Quartet*, featuring McCoy Tyner (piano), Jimmy Harrison (bass), and Elvin Jones (drums)

for jazz musicians. The present researcher recommends this resources to the jazz pianist.

In addition, the present researcher recommends that the jazz pianist specifically listen to and transcribe recordings of bassist Ray Brown, either as sideman (especially with the Oscar Peterson Trio) or as a leader. Throughout his career Brown performed with legendary pianists such as Ahmad Jamal, Gene Harris, Monty Alexander, Jimmy Rowles, Cedar Walton, George Shearing, Benny Green and Geoff Keezer, among others³²⁸. His time feel, approach to harmony, incorporation of re-harmonizations in real time (chromatic II-V's, tri-tone substitution, pedal points, etc.), rhythm section kicks, arrangements, walking bass lines, and counterpoint, to mention a few examples illustrate

³²⁸ Richard Cook and Brian Morton, *The Penguin Guide to Jazz Recordings*. 9th ed. (New York, NY: Penguin Books, 2008).

an expertise and artistry and make him an authentic source of musical knowledge and information³²⁹.

3.5. Recommended Solos to Transcribe

An extensive list of researcher-recommended solos from jazz musicians is offered in Appendix B.2., including specific discography information for each solo. Other sources for selected lists of solo transcriptions from jazz pianists (and other instrumentalists), include David Baker's *Bebop Jazz Solos*³³⁰ and *Jazz Solos by David Baker*³³¹, Dave Frank's *The Joy of Improv*³³², Mark Levine's *The Jazz Piano Book*³³³, Scott D. Reeves' *Creative Jazz Improvisation*³³⁴ and South Carolina University *Music School's Website*³³⁵. In addition, table 48 provides a selected list of bibliography for developing jazz language.

³²⁹ Ray Brown, *Ray Brown's Bass Method* (Milwaukee, WI: Hal Leonard Corp., 1999).

³³⁰ David Baker, *Bebop Jazz Solos* (New Albany, IN: Jamey Aebersold Jazz Inc., 1981).

³³¹ David Baker, *Jazz Solos by David Baker* (New Albany, IN: Jamey Aebersold Jazz Inc., 1979).

³³² Dave Frank and John Amaral. *Joy of Improv - Books One and Two* (Milwaukee, WI: Hal Leonard Corp., 1998).

³³³ Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

³³⁴ Scott D. Reeves, *Creative Jazz Improvisation*. 2nd ed. (Upper Saddle River, NJ: Prentice-Hall, 1995).

³³⁵ Bert Ligon, "Red Garland: 3-5-7-9 Outlines Arpeggios", *University of South Carolina – School of Music Website*: <http://in.music.sc.edu/ea/jazz/transcriptions/REDOutlines.htm> (accessed August 23, 2013).

TABLE 48. Selected bibliography - Jazz language

Baker, David. *How to Play Bebop, Vols. 1, 2 and 3*. Van Nuys, CA: Alfred Music Publishing, 1987.

Baker, David. *Jazz Solos by David Baker*. New Albany, IN: Jamey Aebersold Jazz Inc., 1979.

Haerle, Dan. *The Jazz Language: A Theory Text for Jazz Composition and Improvisation*. Van Nuys, CA: Alfred Music Publishing, 1982.

Parker, Charlie. *Omnibook*. New York, NY: Atlantic Music Corp., 1978.

Peterson, Oscar. *Jazz Exercises, Minuets, Etudes and Pieces for Piano*. Milwaukee, WI: Hal Leonard Corp., 2005.

Reeves, Scott D. *Creative Jazz Improvisation*. 2nd ed. Upper Saddle River, NJ: Prentice-Hall Inc., 1995.

Riker, Ramon. *Pentatonic Scales for Jazz Improvisation*. Van Nuys, CA: Alfred Music Publishing, 1983.

Snidero, Jim. *Jazz Conception: 21 Solo Etudes for Jazz Phrasing, Interpretation and Improvisation. Piano Version*. Rottenburg, Germany: Advance Music, 1997.

Steinel, Mike. *Building a Jazz Vocabulary: A Resource for Learning Jazz Improvisation*. Milwaukee, WI: Hal Leonard Corp., 1995.

Stuart, Walter. *Walter Stuart's Encyclopedia of Modern Jazz*. New York, NY: Charles Colin, 1974.

4. Improvisation

4.1. Approaching Improvisation

Acclaimed pedagogues and musicians such as Hal Crook or Bill Dobbins assert that the act of improvisation requires a combination of a deep understanding of the tradition of jazz performance and jazz language, and the development of the music elements that configure a musical performance³³⁶. In this research these ideas have been organized as *The Five Elements* and include Technique, Harmony, Language, Improvisation and Repertoire.

Reeves (1995) states that “learning to improvise is a two-step process: the preparatory work of assimilating the jazz vocabulary, and the actual act of improvisation”³³⁷. Further, Reeves (1995) posits, “listening to recordings by great artists is an indispensable part of learning to improvise”³³⁸.

Frank (1998) emphasizes the idea that a strong foundation, including ear training, technique, and theory, are necessary before the freedom to improvise can be truly realized. Improvisation unifies feeling, hearing, and playing as an expression of the musician’s heart, ears, and hands. It is the simultaneous action of the spirit, mind, and body, energized by inspiration, joy, and swing³³⁹.

³³⁶ Hal Crook, *Ready, Aim, Improvise!* (Rottenburg, Germany: Advance Music, 1999).

³³⁷ Scott D. Reeves, *Creative Jazz Improvisation*. 2nd ed. (Upper Saddle River, NJ: Prentice-Hall, 1995), 1.

³³⁸ *Ibid*, 5.

³³⁹ Dave Frank and John Amaral. *Joy of Improv - Books One and Two* (Milwaukee, WI: Hal Leonard Corp., 1998).

The act of improvisation is natural and occurs throughout everyday life as persons talk, move, respond, etc.³⁴⁰. Although theoretically possible, human actions and interactions do not happen in the same manner every time. Improvisation requires the adaptation and use of learned elements into a situation that occurs in a particular setting at a particular time³⁴¹.

Children improvise naturally—in music and throughout daily life³⁴². They respond to the world around them as they explore, create, and learn. As an outgrowth of their experiences they gain insights and knowledge that form the basis for future decisions. Traditional educational methods often assume (and expect) that children have a background in music (*e.g.*, technique, harmony) before they are able to improvise music. While others like Edwin Gordon³⁴³, Emile Jacques-Dalcroze³⁴⁴, and Zoltan Kodaly³⁴⁵ assert that music improvisation is as natural for children as free play. These scholars further assert that improvisation needs to be regularly included in the music education of children (including during the study of classical music)³⁴⁶.

Improvisation for musicians also blends natural abilities with experience and vocabulary. The jazz pianist is able to improvise music freely following the lengthy

³⁴⁰ Stephen Nachmanovitch, *Free Play – Improvisation in Life and Art* (New York, NY: Tarcher/Putnam Books, 1990).

³⁴¹ *Ibid.*

³⁴² *Ibid.*

³⁴³ Edwin E. Gordon, *Preparatory Audiation, Audiation, and Music Learning Theory* (Chicago, IL: GIA Publications, 2001).

³⁴⁴ Emile Jaques-Dalcroze, *The Eurhythmics of Jaques-Dalcroze* (Boston, MA: Small, Maynard & Company, 1918).

³⁴⁵ Zoltan Kodály, *Let Us Sing Correctly* (London, United Kingdom: Boosey & Hawkes, 1965).

³⁴⁶ Shinichi Suzuki, *Nurtured by Love: The Classic Approach to Talent Education* (Mattituck, NY: Amereon Ltd, 1999).

process of practicing, listening, studying, and developing technique and language. At this level, the jazz pianist has achieved mastery and control of the individual musical elements and is able to select and configure them in new ways to complete musical performance.

4.2. Characteristics of the Melodic Language

Each jazz solo is comprised of its own melodic language. These distinctive lines and phrases shape the musical expression and illustrate the ideas conceived by the musician³⁴⁷. Most melodies are composed with the following five elements: 1.) Scales; 2) Arpeggios; 3) *Guide Notes* (harmonic emphasis); 4) Passing Notes; and 5.) Phrases and Licks. These elements are part of melodic composition from a Mozart Sonata to Charlie Parker's improvisations. In addition, the *blues* scale is used to form the melodic language of jazz as an indispensable component of this music.

Several jazz piano solo transcriptions were identified to be included in this research (see table 45). As an illustration, the following is the present researcher's analysis and discussion of the melodic components of the jazz piano solo from pianist Kenny Drew, in the song *Moment's Notice*, from John Coltrane's album *Blue Train*³⁴⁸. (See the present researcher transcription of this in Appendix B.3.)

Drew performed this solo in a studio setting in 1957 as a sideman for John Coltrane's recording session for Blue Note records. Drew's improvisation in this solo is often referred to as "horn-style" because the melody performed in his right hand imitates

³⁴⁷ Mark C. Gridley, *Jazz Styles* (Upper Saddle River, NJ: Pearson, 2011).

³⁴⁸ John Coltrane, *Blue Train*, Blue Note (CD), 1957.

the style of horn players, outlining the chord changes³⁴⁹. This style of playing jazz was popular during the *Bebop* period in the 1940's and 1950's³⁵⁰.

In this solo, the harmony of the song is evident (most of the time) just by listening to Drew's right hand, with no need for left hand chords. Accordingly, this solo does not include many left hand voicings, and when employed, they mainly consist of guide notes only.

Drew's solo clearly outlines the five common elements of melodic language/composition (*i.e.*, scales, arpeggios, guide notes, passing tones, phases, and licks) and is an example of how to develop a solo improvisation in the jazz language. Each element matches the song's harmony and it is placed naturally as the solo evolves during the song form, with an appropriate time and feel. The following are examples to illustrate specific moments of the solo (see full solo transcription in Appendix B.3.) when the five melodic elements are employed: 1.) *Scales*: measures 6-7, 13, 35-36, etc.; 2.) *Arpeggios*: in the solo "break in" and measures 7, 11, 15, etc.; 3.) *Guide Notes*: used as target (important) notes for most chords, in measures 1, 2, 7, 8, 9, etc.; 4.) *Passing Notes*: chromatic notes connecting diatonic scales and arpeggios, in measures 9, 10, 11, etc.; 5.) *Phrases and licks* in measures 9, 11, 29, 30, etc.; and 6.) *Blues Scales* is clearly stated in the last 8 measures of the second chorus, as a statement to end the solo improvisation and to set up the last melody featuring the entire band. Exercise 3 includes a researcher-designed approach to practice aural recognition of these elements when listening solo transcriptions.

³⁴⁹ Ted Gioia, *The History of Jazz* (New York, NY: Oxford University Press, 2011).

³⁵⁰ *Ibid.*

EXERCISE 3. Identifying melodic elements from listening to solo transcriptions

Practice the recognition of the 6 melodic elements (5 plus the blues scale) in other solo improvisations just by listening, without transcribing the solo. As possible, begin to incorporate them to foster a personal solo improvisation.

A jazz pianist needs to consider several aspects of musical performance and expression while improvising. The following is a list of additional considerations that are exemplified in the Drew piano solo.

- Development of the solo improvisation over the form in order to build interest;
- Length of melodic phrases and motif development;
- Melodic motifs sources (Note: The first motif of the solo is taken from John Coltrane's first motif in this improvisation);
- Interaction with the rhythm section; and
- Ending the solo, in this case, preparing for the entry of the melody.

Improvised melodies are created and evaluated using a combination of objective elements and subjective criteria. Upon review of several melodies from different musical styles, including jazz, repeated components become evident. The present researcher recommends the study and analysis of the solo by Miles Davis on *All of You*, from his album *'Round About Midnight*³⁵¹ as an example of a solo that includes the following:

- Use of the original melody;
- Use of space and rests;

³⁵¹ Miles Davis, *'Round About Midnight*, Columbia (CD), 1957.

- Shape of melodies/arching phrases, similar to the intonation patterns of the human voice;
- Use of recognizable motives, developed in different ways;
- Rhythmic syncopation;
- Effective time and feel; and
- Harmonic sense, using guide notes to define the chord changes.

Further, the ending of a melody is an essential component of a successful performance. Accordingly the endings need to be considered, planned, and executed.

4.3. Improvisation Topics

Trombonist and jazz pedagogue Hal Crook has published several jazz improvisation methods including *How to Improvise: An Approach to Practicing Improvisation*³⁵² and *Ready, Aim Improvise!*³⁵³. His general approach consists of outlining musical topics such as pacing, phrase length, rhythmic density, guide tones, articulation, motif development, pentatonic scales, syncopation, double time, solo lengths, etc. for their individual practice. Crook's (1991/1999) method books include audio recordings of examples of every exercise presented, with Play-A-Long tracks (performed by Crook with a rhythm section accompaniment).

The present researcher recommends Crook's (1991/1999) approach for practicing improvisation concepts in combination with solo transcription and analysis. He also recommends the study of Crook's (1991/1999) writings regarding how to approach music

³⁵² Hal Crook, *How to Improvise: An Approach to Practicing Improvisation* (Rottenburg, Germany: Advance Music, 1991).

³⁵³ Hal Crook, *Ready, Aim, Improvise!* (Rottenburg, Germany: Advance Music, 1999).

in general and how to organize individual music topics within a complete practice routine.

On practicing specific topics, Reeves (1995) states that, “The goal of these techniques is to help you to not control the improvisation but open yourself up and let the music flow through you”³⁵⁴. Artistic freedom is gained when practicing music topics individually first, as a preliminary stage to build foundation.

4.3.1. Rhythm: Time Feel

Imitation by singing and playing is the key to internalizing the swing feel for jazz pianists³⁵⁵. Rhythm is fundamental in music; it is organic in its nature and determines the overall quality of a musical performance. Accordingly, the principal characteristics of jazz language are its rhythm and “swing feel”.

Trombonist and pedagogue Ed Byrne offers the following description of swing feel and how to practice it:

The swing era was a big-band arranger’s medium, requiring much sight-reading. It was commonly felt that if the musicians learned to interpret written eighths as eighth-note triplets, it would be less difficult to both notate and to sight read. Swing rhythm is the traditional regional rhythmic style of the continental United States. Although written in 4/4 meter as an expedience, swing rhythm is in reality in 12/8 meter, a compound duple meter containing four groups of three eighth notes occurring within each measure of 4/4 meter. The slower the tempo, the more marked this subdivision is felt. A prerequisite to creating swing feel is that every attack be placed metronomically within this 12/8 continuum. To practice playing swing feel, start by running choruses in which you improvise swing eighth-note lines with a metronome. Imagine a 12/8 continuum. Accent the first eighth note of each triplet subdivision, then shift your accents off the beat to the third eighth note in each triplet subdivision; then practice mixing accents. Learn to control these accents by improvising within the 12/8 rhythmic continuum while

³⁵⁴ Scott D. Reeves, *Creative Jazz Improvisation*. 2nd ed. (Upper Saddle River, NJ: Prentice-Hall, 1995), 8.

³⁵⁵ John F. Mehegan, *Jazz Improvisation, Volume 2: Jazz Rhythm and the Improvised Line* (New York, NY: Watson-Guption Publishing Group, 1962).

applying the basic targeting examples to the reduced melody of a standard tune”...”As the tempo gets faster, the swing eighths tend to flatten out and become even. The swing feel is really a long-short, long-short pattern; the first note is a quarter, while the second is an eighth in an eighth-note triplet. The faster the tempo, the less time there is to articulate this, and practitioners then tend to play closer to even eighths³⁵⁶.

Byrne also recommends the following about practicing *time placement*:

Time-placement is learned by listening to the masters, and they don't [sic] always play dead-center metronomic time. Instead, they often focus on locking into the drummer's ride cymbal, for example. Individual artists' rhythmic stylistic approaches vary greatly. Some Harlem black bands' horn players consistently play even eighth-note feel over a swing rhythm section style. On the other hand, Joe Henderson and Kenny Dorham would often use a swing feel over an even eighth-note rhythm section feel. All other variant approaches in between are done as well—often within a given phrase by a single player. There are also a variety of styles in which you lay back a bit, or play slightly on top of the time. However, in your practicing, start with dead center time and go from there. If you can do this consistently, you can then more easily learn to increase your placement control by placing lines ahead or behind the time at will. Placement consistency can be improved systematically in the woodshed in a relatively short time with a little metronome treatment in swing subdivision. Jazz rhythm shares an important characteristic with African rhythm: duple against or within triple meters. There are always several such dualities co-existing in any master jazz performance. It matters little how these rhythms are written, since that is arbitrary, inaccurate, and non-essential. In improvising lines, we place notes dependent upon which of these dualities we wish to be in at a given moment, which can change on a dime³⁵⁷.

According to saxophonist Jerry Bergonzi “All notes seem to sound good when the are played with good time”³⁵⁸. Bergonzi (1998) presents an approach to develop rhythm in his “Melodic Rhythms” Volume 4 from the *Inside Improvisation Series* that includes the practice of rhythms in a melodic manner. In addition, this approach includes exercises that engage the jazz pianist to perform the same rhythms with new/different pitches.

³⁵⁶ Ed Byrne, *Linear Jazz Improvisation Method Book 1* (Self-published: ByrneJazz, 2011).

³⁵⁷ Ibid.

³⁵⁸ Jerry Bergonzi, *Inside Improvisation Series, vol. 4: Melodic Rhythms* (Rottenburg, Germany: Advance Music, 1998), 8.

According to Crook (1991), “Music time feel is the most basic, fundamental element communicated by the soloist” ... “It should be relaxed, steady, and flowing” ... “The greatest technique, creativity, melodic accuracy, lyricism, sound, style, etc. matters very little if the music doesn’t [sic] feel good musically. The rhythmic time feel should be relaxed, steady and flowing”³⁵⁹. Every jazz pianist has a personal time feel, based on his natural qualities as well as his musical and cultural background. The imitation of a variety of music, performed in many styles and by many artists, provides the jazz pianist with a unique perspective and understanding of rhythm.

4.3.2. *Outlining the Harmony*

Bebop players outlined harmonic changes (*horn style*) with a melodic line, using the body of the chords (*i.e.*, arpeggios, guide notes) as main tones of the melodies³⁶⁰. Johann Sebastian Bach’s *Violin Partitas*³⁶¹ have the same approach to melody—*i.e.*, the harmony can be heard through the melodic lines, while keeping a strong melodic personality and musical character³⁶².

Effective improvisation requires the jazz pianist to hear the harmonic changes as he selects chord tones and scales to create melodies, which together form his original musical expression. The harmonic changes drive the improvisation and decision making.

³⁵⁹ Hal Crook, *How to Improvise: An Approach to Practicing Improvisation* (Rottenburg, Germany: Advance Music, 1991), 32.

³⁶⁰ Mark C. Gridley, *Jazz Styles* (Upper Saddle River, NJ: Pearson, 2011).

³⁶¹ Johann Sebastian Bach, *Sonatas and Partitas for Solo Violin (BWV 1001-1006)*, composed in 1720 and first published in 1802. [Robert L. Marshall, *The Music of Johann Sebastian Bach: The Sources, the Style, the Significance* (New York, NY: Schirmer Books, 1990).]

³⁶² Robert L. Marshall, *The Music of Johann Sebastian Bach: The Sources, The Style, The Significance* (New York, NY: Schirmer Books, 1990).

Accordingly, the jazz pianist focuses on harmony, chord-scales, etc. to obtain as many different sounds as possible from the same harmonies.

Guitarist Bert Ligon offers an approach to outline harmony through the analysis of the melodic style of pianist Red Garland, when using 3-5-7-9 arpeggios³⁶³. Red Garland regularly employs chord tones to create melodies, in a way of arpeggios, clearly outlining the harmony.

The authors of improvisation methods such as Jerry Coker³⁶⁴, John Mehegan³⁶⁵, and Dan Haerle³⁶⁶, often emphasize chord-scale relationships and the use of scales for developing jazz melodic lines, providing small melodic motifs or patterns to develop the sound of the scale through the chord changes. The following is a list of frequently used scales within these methods:

- Diatonic scales (Major and Melodic Minor modes mainly)
- *Bebop* scales (Major, Dominant)
- Diminished scales (1-1/2: Diminished, 1/2-1: Symmetrical dominant)
- Pentatonic scales (Major, Minor, *Blues*)³⁶⁷

4.3.3. *Melodic Development*

According to guitarist Pat Metheny, Sonny Rollins is one of the masters on motif development. “Since I really started listening to music, in the world of jazz, one of my main heroes has always been Sonny Rollins, who seems incapable of playing a phrase

³⁶³ Bert Ligon, “Red Garland: 3-5-7-9 Outlines Arpeggios”, *University of South Carolina – School of Music Website*: <http://in.music.sc.edu/ea/jazz/transcriptions/REDOutlines.htm> (accessed August 23, 2013).

³⁶⁴ Jerry Coker, *Complete Method for Improvisation* (Miami, FL: Warner Bros. Publications, 1980).

³⁶⁵ John Mehegan, *Improvising Jazz Piano* (New York, NY: Amsco Publications, 1985).

³⁶⁶ Dan Haerle, *Jazz Improvisation for Keyboard Players* (Van Nuys, CA: Alfred Music Publishing, 1978).

³⁶⁷ Dan Haerle, *Scales for Jazz Improvisation* (Van Nuys, CA: Alfred Music Publishing, 1983).

without coming up with two or three of the most logical and stimulating responses to his own melodic postulations every time out. Other great examples of musicians who have really developed this way of thinking that are inspiring might be Gary Burton, Wes Montgomery, Joe Henderson, Stan Getz, and many others³⁶⁸. This technique consists of taking one single melodic idea (*i.e.*, from the song's original melody, from other soloists, original motif) and to develop it through several measures and even chorus. An example of *motif development* can be heard in Sonny Rollins' album *Saxophone Colossus*³⁶⁹.

Another example of developing melodies through solo improvisation is pianist Keith Jarrett (see his improvisation on *Golden Earrings*³⁷⁰). Pianist Kenny Werner states that "Jarrett's playing represents new and innovative levels of harmonic, rhythmic and melodic development bundled with the vastest creativity imaginable"³⁷¹.

4.3.4. Phases, Patterns and Licks

Musicians learn from the musical offerings of other musicians. Accordingly, it is essential for the jazz pianist to imitate solo transcriptions of other jazz pianists performing solos. This process needs to be as creative as possible to assimilate musical performance and express the elements in the music. Specifically, the jazz pianist needs to extract phrases, patterns, and licks during the solo transcription process and work with them as regular components during practice sessions.

³⁶⁸ Pat Metheny, "Question & Answer", *Pat Metheny Interact – Official Website*: <http://interact.patmetheny.com/qa/questionView.cfm?queID=2451>

³⁶⁹ Sonny Rollins, *Saxophone Colossus*, Blue Note (CD), 1956.

³⁷⁰ Keith Jarrett, *The Cure*, ECM (CD), 1990.

³⁷¹ Kenny Werner, "Artist's Choice: Kenny Werner On Keith Jarrett", *Jazz Times Magazine* (August 28, 2001): <http://jazztimes.com/articles/28162-artist-s-choice-kenny-werner-on-keith-jarrett> (accessed August 14, 2013).

Every solo has elements that can be practiced separately until they are understood and mastered. These elements may be part of a phrase or a passage—with vast potential content provided to the jazz pianist from any given solo.

According to the present researcher, an effective way to practice arpeggios, for example, is to select small motifs from the solo being transcribed, and take them apart to work on fingering and transposition to other keys. Then, the jazz pianist is prepared to incorporate them when improvising.

There are many publications on the topics of patterns and licks, as a way of developing the jazz vocabulary. Some of the most popular methods include selected II-V-I phrases from great saxophonist Charlie Parker and other *Bebop* artists³⁷². Table 49 provides a researcher recommended bibliography about jazz patterns.

4.4. Contexts and Applications

4.4.1. Harmonic Progressions

Jazz pianists often practice harmonic progressions apart from a song. These progressions, however are often those routinely found in jazz standards. They are regularly practiced in every key, and at different tempos and styles in order to assimilate their harmonic and melodic characteristics for the same devices when performing actual songs. Table 50 lists common harmonic progressions used to practice improvisation.

³⁷² David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

TABLE 49. Selected bibliography - Jazz patterns

- Bergonzi, Jerry. *Inside Improvisation Series, vol. 2: Pentatonics*. Rottenburg, Germany: Advance Music, 1994.
- Campbell, Gary. *Expansions: A Method for Developing New Material for Improvisation*. 2nd ed. Milwaukee, WI: Houston Publishing, Inc/Hal Leonard Corp., 1998.
- Coker, Jerry. *Patterns for Jazz*. Miami, FL: Studio Publications Recordings, 1970.
- Haerle, Dan. *Scales for Jazz Improvisation*. Van Nuys, CA: Alfred Music Publishing, 1983.
- Parker, Charlie. *Omnibook*. New York, NY: Atlantic Music Corp., 1978.
- Riker, Ramon. *Pentatonic Scales for Jazz Improvisation*. Van Nuys, CA: Alfred Music Publishing, 1983.

TABLE 50. Common harmonic progressions to practice improvisation

1. II-V-I
2. *Turn Aounds*
3. Cycle of Diatonic Fourths
4. *Blues*
5. *Rhythm Changes*
6. Single-Chord Vamps

4.4.2. Repertoire

The repertoire of jazz standards provides the jazz pianist with necessary harmonic contexts on which to focus, study, and perform. This body of literature includes all basic

harmonic combinations and represents the essence of the jazz language along with improvisation and the swing feel. Most of the characteristics of the jazz language (*e.g.*, rhythm, melody, harmony, phrasing, articulation, song form) may be assimilated by practicing just jazz standards and performing them with other musicians³⁷³.

4.5. Communication and Narrative Techniques

Musical performance is comprised of two elements: 1.) Content, and 2.) Communication Process. Jazz pianists (and other musicians) often focus mainly on developing a sophisticated level of content, without giving much attention to the manner in which it is presented during performances. Accordingly, some *interesting musical stories* are not successful because the communication process was ineffective. This parallels the artistic expression and process afforded in the creation of movies. Movies, like music, are designed to tell stories and rely on the content of the message as well as the manner in which it is shared to achieve the outcome. Within the making of a movie, producers work with movie directors, actors, etc. to shape the artistic expression – making decisions, creating drama, and advancing the narration of the story.

The idea of creating an artistic narrative may be applied to a single chorus of a solo improvisation, to the whole song, or to a complete concert. Experienced musicians control the flow and progression of a concert, offering and organizing content to maintain the attention of the audience, and elicit emotional responses. Table 51 includes selected researcher-recommended bibliography for practicing jazz improvisation.

³⁷³ Paul F. Berliner, *Thinking in Jazz* (New Albany, IN: Jamey Aebersold Jazz Inc., 1991).

TABLE 51. Selected bibliography - Improvisation

- Aebersold, Jamey. *Jazz Play-A-Long Sets, Vols. 1-133*. New Albany, IN: Jamey Aebersold Jazz Inc., 2000-2010.
- Bayley, Derek. *Improvisation: Its Nature and Practice in Music*. 2nd ed. Cambridge, MA: G. Da Capo Press, 1993.
- Bergonzi, Jerry. *Inside Improvisation Series, Vols. 1-7*. Rottenburg, Germany: Advance Music, 1992-2006.
- Coker, Jerry. *Patterns for Jazz*. Miami, FL: Studio Publications Recordings, 1970.
- Crook, Hal. *How to Improvise: An Approach to Practicing Improvisation*. Rottenburg, Germany: Advance Music, 1991.
- Crook, Hal. *Ready, Aim, Improvise!* Rottenburg, Germany: Advance Music, 1999.
- Frank, Dave and John Amaral. *Joy of Improv - Books 1 and 2*. Milwaukee, WI: Hal Leonard Corp., 1998.
- Haerle, Dan. *Jazz Improvisation for Keyboard Players*. Van Nuys, CA: Alfred Music Publishing, 1978.
- Levine, Mark. *The Piano Book*. Petaluma, CA: Sher Music, 1989.
- Liebman, David. *A Chromatic Approach to Jazz Harmony and Melody*. Rottenburg, Germany: Advance Music, 1991.
- Mehegan, John F. *Improvising Jazz Piano*. New York, NY: Amsco Publications, 1985.
- Mehegan, John F. *Jazz Improvisation: Vols. 1-4 Contemporary Piano Styles*. New York, NY: Watson-Guption Publishing Group, 1959-1965.

5. Repertoire and Styles

5.1. Jazz Standards

Jazz pianists, and other jazz musicians, need a strong command of jazz standards—the repertoire of the art form. This knowledge allows them to perform in most professional situations and to interact with other jazz musicians. Moreover, it is particularly essential for rhythm section players as they frequently accompany other artists/soloists.

The collection of standard jazz repertoire includes hundreds of examples of melodies, harmony, form, etc. that specifically embody this music. Jazz pianists, and other jazz musicians, often refer to these works and their particular content as sources of inspiration for their own interpretations and improvisation. Even contemporary jazz musicians (*e.g.*, Brad Mehldau, Pat Metheny, Wayne Shorter) who usually perform original repertoire, have a deep knowledge of jazz standards, and strive to use solo improvisation transcription from jazz piano masters as sources of inspiration and creativity³⁷⁴.

According to Lin (2001) “learning jazz piano is also a community-based social activity”³⁷⁵, knowing many jazz standards facilitates the ability of jazz pianists (and other jazz musicians) to interact with other musicians. According to Tom Warrington³⁷⁶, one of the priorities of rhythm section players is to have a strong knowledge of repertoire. A

³⁷⁴ Ted Gioia, *The Imperfect Art: Reflections on Jazz and Modern Culture* (New York, NY: Oxford University Press, 1988).

³⁷⁵ Victor L. Lin, “Practice Makes Personal: A Study of the Formative Experiences of Jazz Pianists” (PhD diss., Columbia University, 2011), 293.

³⁷⁶ Tom Warrington, “Personal interview with the present researcher” (Las Vegas, NV, November 2001).

bass player, for example, is often considered for performance opportunities based on his knowledge of the standard repertoire and ability to play in any key with strong time and feel, and form control. His ability to improvise is often viewed as “a bonus”³⁷⁷. Jazz pianists are also soloists, and as such, require the ability to contribute to the rhythm section and take the lead.

Jazz pianists, and other jazz musicians, who have a strong command of jazz repertoire are able to draw on this music as they create their own melodies and compositions. This command of repertoire is equivalent to that of a professional writer, having read as much literature as possible from a variety of historical periods to inform his writing and creative expression.

5.2. Song Form

Traditionally, jazz standards are composed in AABA form, consisting of four 8-measure sections for a total of 32 measures³⁷⁸. The main melody usually appears in the section A, while the B section functions as a transition or *bridge*³⁷⁹.

Jazz pianists, and other jazz musicians, often learn (and memorize) repertoire in terms of form and harmony. Focus on these elements simplifies the amount of information to be memorized, as melodies are reduced to 8-measure sections (A section) with a transitional bridge (B section). The harmony in jazz standards (composed within the AABA form) is frequently repeated or included with some variation. For example, in *Rhythm Changes* songs the harmony is fixed (*i.e.*, *Turn Around* harmony in A sections

³⁷⁷ Tom Warrington, [Personal interview with the present researcher] (Las Vegas, NV, November 2001).

³⁷⁸ Mark Levine, *The Jazz Theory Book* (Petaluma, CA: Sher Music, 1995).

³⁷⁹ *Ibid.*

and extended dominants in the B section). Other jazz standards employ this harmony for the A sections and use a different harmony for the B section, or with small alterations of the II-V-I harmonic progression. Accordingly, the focus on form and harmony contribute to the jazz pianist's ability to learn and memorize music.

The body of jazz standards also includes compositions that stray from the traditional AABA form to include songs composed with the *12-bar blues progression* and a fixed harmony. In addition, other jazz standards are variations of the basic AABA form, changing or adding sections, but maintaining the 32-measure structure. Contemporary jazz songs, by contrast, employ sections of irregular lengths, and frequently introduce extra elements such as interludes and transitional measures that make the form more complex.

Table 52 includes a list of common song forms in the standard jazz repertoire with representative song examples for each form. This information is offered by the present researcher as a reference guide—not as a comprehensive list.

TABLE 52. Common song forms in the jazz repertoire with representative examples

Song Form	Song Examples
AABA (32 measures)	<i>Satin Doll</i> <i>There Is No Greater Love</i> <i>Body And Soul</i>
ABAC - (32 measures)	<i>I Thought About You</i> <i>Someday My Prince Will Come</i>
ABCD (32 measures)	<i>Bye, Bye, Blackbird</i> <i>Come Rain or Come Shine</i>
AABC (32 measures)	<i>Autumn Leaves</i> <i>The Song Is You</i>
AB (16 measures)	<i>Blue Bossa</i> <i>Giant Steps</i> <i>Tune Up</i>
ABA	<i>Stablemates</i> <i>Infant Eyes</i>
ABC	<i>Mercy, Mercy, Mercy</i> <i>Miyako</i>
AAB	<i>Night And Day</i> <i>Once I Loved</i>
<i>Blues</i> (12 Measures with fixed harmony)	<i>Straight, No Chaser</i> <i>Billie's Bounce</i> <i>Tenor Madness</i>
<i>Rhythm Changes</i> (AABA form with fixed harmony)	<i>Anthropology</i> <i>Dexterity</i> <i>Moose the Mooche</i>

5.3. Learning Songs

The ability to learn new music is perhaps one of the most difficult challenges for a beginning jazz pianist; however with practice this becomes easier over time. Many jazz standards share form and melodic structure. The present researcher recommends that songs should be learned from recordings and live performances (primary source) rather than from sheet music or songbooks. Although it may take more time and dedication at first, it will greatly benefit the jazz pianist as he develops general music skills (*e.g.*, ear training, vocabulary).

According to Reeves (1995) “In learning the jazz repertoire, it is extremely helpful to memorize the melodies and chords. A skilled musician is expected to know the standard repertoire intimately, and the act of reading music often interferes with the listening and intuitive process”³⁸⁰. To read music from books may be very helpful for certain situations (like studio recordings, last minute gigs with no rehearsal, and other new situations), but reading may limit vital music elements in the performance, (*i.e.*, time feel, phrasing, articulation), which can not be represented in music notation. Actual (written) music notation only offers a limited representation of the music. This is especially true in jazz. Jazz is an aural art form and must be learnt by an aural process like audiation³⁸¹ and personal expression.

The process of learning a song is complex and requires focus, dedicated practice, critical listening, and self-evaluation. It includes the study of form, melody, and

³⁸⁰ Scott D. Reeves, *Creative Jazz Improvisation*. 2nd ed. (Upper Saddle River, NJ: Prentice-Hall, 1995), 6.

³⁸¹ Edwin E. Gordon, *Preparatory Audiation, Audiation, and Music Learning Theory* (Chicago, IL: GIA Publications, 2001).

harmony³⁸² – in addition to developing musical elements such as the feeling of the song, introductions and endings, riffs, and real time re-harmonization, which together create the interpretation and the artistic expression.

The present researcher recommends that jazz pianists learn a new song by transcribing it directly from a reference recording of a master artist such as Miles Davis, Sonny Rollins, John Coltrane, or Art Blakey. This process fosters aural skills, time feel, and natural phrasing, and articulation.

During the process of formally learning a song, the jazz pianist is simultaneously, and often unconsciously, learning its rhythm and articulation. These elements (*i.e.*, rhythmic nuances and selection of stylistic articulations) shape the artistic expression, are personal for each musician, and result in a new interpretation of the song.

5.4. Styles

Several musical styles have been incorporated into jazz music since its beginning more than one century ago³⁸³. These styles represent a variety of cultures, historical periods, and innovations in instruments and technology. For example, the *blues* was brought to the United States from African slaves, swinging rhythms were incorporated from the big bands in the 1930's, love melodies were taken from Broadway musicals, and the *Bebop* music revolution introduced fast and complex songs, mainly instrumental into the jazz repertoire. In the 1960's Brazilian *Bossa Nova* rhythms became popular in high society circles, and the fusion of pop and rock music along with the incorporation of electronic instruments and technology created a new hybrid style. In 1970's and 1980's

³⁸² Mark Levine, *The Jazz Theory Book* (Petaluma, CA: Sher Music, 1995).

³⁸³ Mark C. Gridley, *Jazz Styles* (Upper Saddle River, NJ: Pearson, 2011).

the interaction of European classical music (chamber jazz) and folk music from different geographic locations contributed to a world music style, which also integrated rhythms from South America (Latin jazz), Africa, and Asia³⁸⁴.

As jazz developed, it transformed beyond blues and jazz standards from the American Songbook into a unique musical language and a universal way of understanding improvised music as a communication tool and spontaneous art form. Nowadays, the heart of jazz music is comprised of a mixture of roots, approaches, rhythms, and musicians, which makes it a vehicle for world cultural interexchange and communication³⁸⁵.

For pedagogical purposes jazz music is organized and categorized—and often grouped by style, time and feel, tempo, and language characteristics. The present researcher proposes 10 stylistic categories, within which most jazz songs may be included (see table 53). It is essential to note, however, that although jazz songs are composed in a particular style, the personalized nature of the art form may alter that original style (and even yield the “best known” version as something different from the original intent).

Jazz pianists, and other jazz musicians, strive to develop a personal (and balanced) repertoire of music they are able to perform. The list in table 53 is offered as a framework for jazz pianists to use as they select music from several style categories. In addition to style, this framework represents a variety of grooves, tempos, and implied articulations.

³⁸⁴ Michael Bakan, *World Music: Traditions and Transformations* (New York, NY: McGraw-Hill, 2011).

³⁸⁵ Ibid.

TABLE 53. Repertoire and styles

1. Jazz Standards
2. Jazz Originals (Bebop/Hard Bop/etc.)
3. Waltzes (3/4)
4. Blues
5. Rhythm Changes
6. Ballads
7. Bossa Nova / Brazilian
8. Contemporary*
9. Latin / Afro Cuban
10. Fusion (Pop/Rock/etc.)

**Contemporary*: songs from approximately 1970 to the present. For practice purposes, some songs from this category have also been included (marked with an asterisk) in other categories such *Jazz Originals*, *Waltzes (3/4)*, and *Ballads*.

5.5. Repertoire Lists

Professional jazz musicians need command of a large body of jazz repertoire—representing the full range of the art form. They often identify this music by selecting songs from songbooks, listening to recordings, attending concerts, taking recommendations from teachers or other artists, and/or consulting repertoire lists. Accordingly, the present researcher provides several researcher-designed repertoire lists (see Appendix A) within this study to sequentially approach toward the development of a

personal jazz repertoire based on professional demands (*i.e.*, jazz music performed in a variety of settings). He determined the content for these repertoire lists after consulting all available *Real Books*, repertoire lists by jazz college programs (*e.g.*, Berklee College of Music, Manhattan School of Music, California State University, University of South Carolina – School of Music, University of Oregon – School of Music and Dance), recommendations from authors (*e.g.*, Jamey Aebersold³⁸⁶, Hal Crook³⁸⁷, David Baker³⁸⁸, and Mark Levine³⁸⁹), and media and software resources (*e.g.*, iGigBook³⁹⁰, iRealB³⁹¹).

Within each research-designed repertoire list, songs are sorted alphabetically for quick search. Every level includes the songs from the previous level. A general list of all 1000 songs with classification by style is also provided as a main reference list for long-term goals. See Appendix A for all researcher-designed repertoire lists, categorized in the following 5 levels:

1. Level 1: 50 Songs
2. Level 2: 100 Songs
3. Level 3: 250 Songs
4. Level 4: 500 Songs
5. Level 5: 1000 Songs (Alphabetical)
6. Level 5: 1000 Songs (By Style)

³⁸⁶ Jamey Aebersold, *Jazz Play-A-Long Sets, Vols. 1-133* (New Albany, IN: Jamey Aebersold Jazz Inc., 2000-2010).

³⁸⁷ Hal Crook, *Ready, Aim, Improvise!* (Rottenburg, Germany: Advance Music, 1999).

³⁸⁸ David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

³⁸⁹ Mark Levine, *The Jazz Theory Book* (Petaluma, CA: Sher Music, 1995).

³⁹⁰ iGigBook, by Black and White LLC Software. <http://www.igigbook.com>

³⁹¹ iRealB, by Technimo LLC. <http://www.irealb.com>

In addition to serving as a reference guide for the selection of songs, jazz pianists often use repertoire lists to ensure that they deliberately practice and develop a complete and balanced repertoire. As they navigate these lists and make choices they are able to prioritize selections and establish personal short- and long-term performance goals. Moreover, jazz pianists who make lists of the music studied are able to visualize the amount of material covered, and use this information as a reference for identifying repertoire to perform.

TABLE 54. Selected bibliography - Jazz repertoire

- Aebersold, Jamey. *Jazz Play-A-Long Sets, Vols. 1-133*. New Albany, IN: Jamey Aebersold Jazz Inc., 2000-2010.
- Cook, Richard and Brian Morton. *The Penguin Guide to Jazz Recordings. 9th ed.* New York, NY: Penguin Books, 2008.
- Crook, Hal. *Ready, Aim, Improvise!* Rottenburg, Germany: Advance Music, 1999.
- Gioia, Ted. *Jazz Standards: A Guide to the Repertoire*. New York, NY: Oxford University Press, 2012.
- Levine, Mark. *The Jazz Theory Book*. Petaluma, CA: Sher Music, 1995.
- Sher, Chuck and Larry Dunlap, eds. *The All-Jazz Real Book*. Petaluma, CA: Sher Music, 2001.
- Sher, Chuck and Larry Dunlap, eds. *The Standards Real Book*. Petaluma, CA: Sher Music, 1991.
- Sher, Chuck and Bob Bauer, eds. *The New Real Book Volumes 1, 2 & 3*. Petaluma, CA: Sher Music, 1991.

PART THREE: PRACTICE ROUTINE

Introduction

This non-traditional section of the dissertation includes an original approach and way of thinking about practice routines for jazz pianists. The present researcher developed these ideas following an extensive review of the literature; study of a vast amount of jazz repertoire; private piano instruction from master teachers, pedagogues, and artists; advanced study of music theory and performance practice; listening to a wide variety of jazz music; and decades performing as a professional musician and teacher. Accordingly, the text in this section is less formal than other parts of the study—emulating a published jazz piano method book—to emphasize the present researcher’s original thoughts, opinions, and suggestions.

In Your Own Sweet Way

1. Your Own Practice Routine

Clark Terry’s words "Imitate, assimilate and innovate"³⁹² describe the three stages in the life of an artist. Every artist goes through this path in a different manner, spending more time in one stage than another, and going backward and forward among them. The

³⁹² Hal Crook, *How to Improvise: An Approach to Practicing Improvisation* (Rottenburg, Germany: Advance Music, 1991), dedication page.

learning process is a continuous journey of discovery (and rediscovery), which shape an artist. According to Reeves (1995), “There are several paths to the same goal and each student learns in a slightly different way”³⁹³.

Developing a successful (personal) approach to practice is one of the most important tasks in the life of a jazz pianist. Since there is not a standard (“one size fits all”) method for learning to communicate through music, every artist needs to discover the approach that best works for them. It must be noted, however, that there are certain aspects of music that are often approached and studied in a more universal manner including technique, harmony, and repertoire.

Jazz pianists, like all jazz musicians, need a strong foundation in the basic elements of music in order to develop the ability to improvise through the jazz language with total artistic freedom. Jazz, improvisation, and music in general, are a means of expression for the jazz pianist. Accordingly, the ultimate goal of any practice time for the jazz pianist is to master the technical and stylistic requirements of this music to the point that allows him to express ideas freely without limitations.

Throughout this section, main concepts of an ideal practice routine are discussed, with the goal of outlining personal practice routine templates that can be adapted across levels of musicianship (*i.e.*, from beginners to college students and professional jazz musicians). Properly organizing music material, prioritizing elements to study, and sequencing contents will aid the jazz pianist in eliminating anxiety or fear, and ultimately enjoy practice time as much as performance.

³⁹³ Scott D. Reeves, *Creative Jazz Improvisation*. 4th ed. (Upper Saddle River, NJ: Prentice-Hall, 2001), preface.

2. Getting Ready

2.1. Warming Up

Warming up before any physical or mental activity is necessary in order to get the most out of the experience without injury or limitation. Throughout daily life the jazz pianist engages in actions and activities that are regularly repeated (*e.g.*, sleeping, eating) and require proper execution. In addition, the jazz pianist often purposefully pursues physical activities that strengthen his body and prepare him to perform music.

There are many parallels between sports training and the practice of music. Both require preparation and focus of the body and mind, and the attitude/approach of working at 100% of personal capabilities. In addition, both require dedication, regular repetition, and perseverance on the part of the athlete or musician. This work begins during practice and transfers to performance during a concert or game. In addition, practice time should be as intense and creative as any live performance.

Table 55 includes a description of a typical sequence of a sports training session—a sequence that mirrors the practice of music. It is offered to provide a framework of approach (*i.e.*, the arc of engaging the body and mind, increasing involvement and difficulty, and cooling down/ending the session).

Ideally, the warm-up time for a jazz pianist's practice session includes strength exercises and aerobic activity. These elements can be executed in an hour, and fit with daily time dedicated to physical exercise. The timing of this exercise is personal and influences the productivity of the session. For some, the perfect time to exercise is first thing in the morning, while others find it more beneficial to exercise at the end of the day. Although there are benefits to each, the present researcher notes that exercise at the end

TABLE 55. Six-Step Sequence of a sports training session

Step 1: Stretching to prepare the body

Step 2: Individual strength exercises (*e.g.*, sit ups, weight lifting) to avoid injuries, foster blood circulation, and engage muscles in preparation for a specific workout

Step 3: Aerobic activity, such as running, for approximately 30 minutes

Step 4: Workout preparing specific parts of the body

Step 5: Main workout

Step 6: Stretch again before finishing the training / cool down

of the day provides a time for reflection (on music and the experiences of the day), and often results in physical exertion that tires the body and results in a better night's sleep.

Physical activity activates endorphins and stimulates the psychological predisposition for both music and sports practice³⁹⁴. This activity takes many forms such as running, walking a treadmill, or riding a bicycle. These individual sports experiences are ideal opportunities for the jazz pianist to listen to an album that is being studied or transcribed, or to discover a new record that is on his “wait list” of repertoire to learn. This combination of physical exercise and music provides the jazz pianist with time to think and consider the music apart from the instrument, which informs his perspective on the music and shapes his artistic choices.

³⁹⁴ Mark B. Andersen, *Doing Sport Psychology* (Champaign, IL: Human Kinetics, 2000).

According to Anna Magdalena Bach's *Little Notebook*³⁹⁵, Johann Sebastian Bach practiced his music as if the king was observing him. This approach illustrates his respect for his music and the office of being a musician. In addition, it shows the inseparable union between practice and performance.

Warming up for a practice session requires the jazz pianist to physically engage the specific parts of the body that are going to be used during the musical practice. For jazz pianists, their back, arms, hands, and fingers are the main body parts involved. This warm up includes a combination of subtle movements that stretch the body and sufficiently get the blood circulating. Musically, the present researcher recommends that jazz pianists begin practice sessions with simple scales and exercises performed throughout the range of the piano keyboard.

Preparation for a practice session also requires engagement of the mind. Musicians, like athletes, concentrate and develop focus in many different ways, especially just prior to a live performance or game. For musicians, in these moments some like to listen to music related to the performance, while other like to read or focus solely on topics that are unrelated to the performance. Further, other artists prefer not to speak or to perform yoga exercises³⁹⁶ in order to mentally prepare for the music making experience.

³⁹⁵ Anna Magdalena Bach, *The Little Chronicle of Anna Magdalena Bach* (Boston, MA: E. C. Schirmer, 1934). [Note: according to contemporary musicology, this reference may be a forgery.]

³⁹⁶ Yoga can be executed in front of the piano, through breathing and mental exercises to connect the mind, body, and the instrument. These exercises are designed to foster meditation, push personal boundaries, and develop strength.

All warm-up exercises mentally and physically prepare the musician (and athlete) for performance and should be developed in a personal manner and incorporated into the regular practice routine. Madeline Bruser (1997) supports these ideas in her book, *The Art of Practicing*³⁹⁷ where she explains specific strength exercises applied to the practice of music.

2.2. Practice Room

The location of the jazz pianist's practice session needs to be conducive for its purpose, just as a gym is suitable and appropriate for sports training, and a library is suitable and appropriate for reading and study. The practice room must be a place where all elements of the session can be completed in one area (*e.g.*, performing on the instrument, listening to audio recordings, working with a computer, accessing bibliography and discography, having a place to sit and think/reflect). Distractions such as a telephone, television, or Internet/social media will negatively impact a practice session and take time away from the task at hand. Therefore, the jazz pianist should strategically limit the use of these devices to happen during breaks or other specific times during the day.

Large spaces with proper ventilation and natural light create a comfortable environment that supports the pianist and accordingly, his practice session. Since the volume of music may at times be loud (due to the particular instrument(s) being played, number of musicians performing together, use of recorded Play-A-Long tracks, etc.), the practice room should be soundproofed to control sound within the area as well as prevent

³⁹⁷ Madeline Bruser, *The Art of Practicing* (New York, NY: Bell Tower, 1997).

sound from outside the room to “bleed” into the space. Moreover, soundproofing should be designed to yield appropriate acoustics that support musical performance and allow the musicians to hear themselves as well as the subtle nuances of the music.

The practice room should include a piano in good mechanical and acoustic condition—tuned and well positioned within the room. This positioning is best if direct visual contact can be made to open spaces like windows from the piano bench as mental tiredness seems to be reduced when looking toward this type of space (*e.g.*, the ocean, the forest).

In addition to the piano, a metronome is another key element of the practice room, as it is used in conjunction with just about all practice exercises. Eventually, as the jazz pianist gains experience and establishes a strong musical foundation, a metronome becomes one of the only required accessories needed for a productive practice session.

For organizational purposes, it is recommended that the jazz pianist store and categorize related material (*e.g.*, scores, books, recordings) to allow for his quick access and use. Ideally, these resources are located in one place such as a personal library or research room.

The jazz pianist needs to have the ability to record his thoughts, ideas, and musical expressions during a practice session. Accordingly, an audio recorder should be close by the piano ready to be used. This device does not need to be of professional quality, as it is only intended for self-analysis and to record musical ideas in an “audio notebook”. Headphones, an audio player, and an eBooks reader should also be available to support this activity.

Due to technological advancements and the Internet, it is possible for the jazz pianist to have most of the information he needs for practice and research in one place, like a computer, hard drive, or on the “cloud”. As this volume of available resources increases, the jazz pianist needs to be organized and properly index materials. He also needs to develop strong research skills to continuously identify new information and a keen ability to evaluate, synthesize, and select information/resources that will advance his musical training.

The setting of the practice session will influence the productivity and overall experience of the jazz pianist. The more conducive the room is for music practice, the more comfortable the jazz pianist will be there. Accordingly, this setting may motivate the jazz pianist to spend more time practicing, and as a result, better results may be achieved.

2.3. Focus

It is essential for the jazz pianist to be 100% focused during practice sessions to economize time and energy. The ability to focus may be improved in quality and length through practice, in addition to advancing music skills and knowledge. Children seem to have a natural ability to focus. For example, when they are playing games they become absorbed in the game, thinking exclusively about the activity in that precise moment. Adults, on the other hand, often demonstrate less “exclusive” focus due to the increasing amount of distractions and tasks that simultaneously need attention. For the jazz pianist, this means the ability to focus 100% on the practice and performance of music must be purposely developed (*i.e.*, he must focus on focusing).

During a musical performance, focus and intensity are transmitted from the jazz pianist to his audience, and then from the audience back to the jazz pianist. This is how

the communication process works. If there is not enough intensity in the performance, the audience will not focus and will not connect with the musician. Great musicians have a very strong sense of focus and intensity, and can make an audience focus on the music throughout an entire concert.

The development of the ability to focus should be fostered during practice sessions by altering the duration and content of a practice session. The jazz pianist should first start with shorter (but intense) sessions, and gradually increase the length of practice time (and intensity) as his skills increase. Practice activities without focus are not productive, and are not the most effective use of time. Often it is better for the jazz pianist to rest and return to practice at another time when he is ready and able to focus.

It is necessary to get the most out of every practice session—to be efficient. As life evolves, especially after college, work and family obligations often restrict the amount of time the jazz pianist has for practice. This means he needs to schedule practice sessions, and strategically use the time allotted for this purpose. After gaining a musical foundation, it is not necessary for the jazz pianist to spend all day practicing. Rather, elements like interaction with other artists and experiences afforded in every day life will contribute to the development of his musical abilities.

The jazz pianist's purposeful work on focus and intensity, as normal practice habits, may alter his attitude as well as his playing. Stated another way, focused study and practice, where the jazz pianist is able to perform intense exercises and music of increasing difficulty from one practice session to the next, contributes to his self-opinion, confidence, skill development, and enjoyment of practice time.

2.4. Session Goals

It is essential for the jazz pianist to clearly define his musical and personal goals in order to successfully achieve them. Hal Crook frequently repeats this concept throughout his books and states, “Plan your work and work your plan”³⁹⁸, as a fundamental part of the creative process.

The jazz pianist needs a reason to practice before starting any practice session. This means that goals must be determined with a specified amount of time allotted for each element to be practiced. Establishing clear goals and an honest self-analysis outlining both strong and weak points, will contribute to the development of a profitable practice routine. The present researcher asserts that a jazz pianist should not leave the practice session without achieving his practice goals for that particular session. Accordingly, as he applies this rule, his attitude and efficiency dramatically improve. It is like practicing for a gig happening that night. The jazz pianist must prepare and ensure that everything is ready for the performance. The intensity of the preparation is real as it is directed toward a specific goal. That should be the jazz pianist’s attitude and approach to any practice session. Attitude and approach are everything.

Thoughts like “I have to practice”, “I should be practicing more”, “I don’t know how to ...”, “I want to sound like...”, etc. are common from musicians of all levels. Jazz pianists, like all musicians, often question themselves and their abilities. This self-doubt and lack of confidence influences his playing and limits the development of talents.

³⁹⁸ Hal Crook, *How to Improvise: An Approach to Practicing Improvisation* (Rottenburg, Germany: Advance Music, 1991), 3.

Achieving specific goals (*i.e.*, auditions, exams, concerts, recordings) through regular practice and performances develops confidence and contributes to the development of an artistic personality.

With the help of a teacher or other advisor, the jazz pianist should establish the following three categories of goals related to his playing:

- Long-term goals: These are lifelong goals that lead the jazz pianist toward the accomplishment of personal dreams. Questions like, *What music skills would I like to have achieved when I am 30-years-old? What kind of work would I like to be doing in my forties? What kind of music would I like to play and write?* guide the articulation of long-term goals and shape the direction of his work and progress. With the creation of long-term goals, the jazz pianist should be idealistic as dreams only come true if dreamed.
- Medium-term goals: These are “one-semester” or “one-year” goals—goals to accomplish within a set timeframe. They include goals for academic cycles like years of undergraduate college study, and graduate studies, etc. In addition, medium-term goals include professional residencies, for example, staying in a different country for a period of months or a few years, or being on the road on an international tour. Therefore, medium-term goals are often practical and realistic to be realized within the set time frame.
- Short-term goals: These are goals that guide the jazz pianist’s work on a given day or during the present week. They include, for example, homework to complete for the next private lesson or preparing for an upcoming concert that will happen shortly. The jazz pianist should establish the specific content of daily

practice sessions, like he would prepare a checklist with short-term goals. This approach ensures that he will approach the practice session with practicality and purpose.

The present researcher asserts that it is important for the jazz pianist to work on the three categories of goals (*i.e.*, short-, medium-, and long-term) simultaneously. One common mistake jazz pianists, and other musicians often make is to wait until they are *completely ready* before they go out and play or record original music. This approach limits an artist. Rather, progress occurs faster, more efficiently, and realistically when ongoing goals are addressed simultaneously, and problems are being addressed in relation to real professional life. This is like the process of constructing an underground train in the middle of a city. The regular operation of car traffic on the surface level cannot be stopped entirely until the underground work is finished. Instead, adjustments have to be made in both areas to continue work and maintain normal life in the city.

The process of addressing several elements simultaneously also happens while practicing improvisation or a specific technique, as the jazz pianist maintains focus on long-term goals, and also responds to new opportunities (such as a gig) as they present. This occurs frequently in the life of a professional musician. Accordingly, the jazz pianist needs to address short- and medium-term goals linked to specific commitments and musical situations, without forgetting about long-term goals. Together these goals create what is sometimes referred to as a musician's "artistic vision"— his personal ideas and perceptions about music, which frame his personal artistic voice and style.

2.5. Attitude and Motivation

Attitude and motivation frame the jazz pianist's approach and contribute to the success of a practice session (and to his overall life). Sitting at the piano to practice scales up and down, repeating the same exercise over and over while thinking about something else is not productive. Rather, approaching the exercise with an anticipated outcome and a positive attitude will likely yield better results. Direct attention is needed when practicing, even for 15 minutes, in order for the jazz pianist to be able to accomplish a specific task.

Developing a productive attitude of always offering 100% of energy and interest will benefit the jazz pianist's learning process and increase his enjoyment. This "100% approach" is vital and should be applied to music and any other activity, like spending time with his family and friends, working, holidays, etc. Every task, even those that seem to be small and insignificant like doing errands, cooking, or watering plants should be performed with a sense of joy because they are part of his everyday life. Once the jazz pianist develops this habit, it will flow naturally from his everyday experiences and influence his music.

The jazz pianist's attitude and motivation drive his musical performance (and life). It is not possible to play good music without wanting to do so. And in turn, it is not possible to have fun when practicing, if practice time is not structured and approached with clear goals and joy.

Pianist *Chick Corea* is an acclaimed jazz artist, mentor, and teacher who engages with social media as a tool to interact with his audience and advance jazz music. In an

interview published on his website, Corea offered the following response to a question from a student:

Question: I would like to know more about how you manage practice time—specifically, how you know when it's time to stop practicing something and move on. Also, how do you make the mental switch from practice to playing? (Sam D.)

Answer: Thanks for your question—it's a good question. To learn how to prepare properly or practice properly, to make advances in one's technique, or knowledge at the instrument, or music in general, is a really important thing.

The main thing that I can see about practicing—and it's also true about playing—is that the very basis of practicing, and knowing "when" and "how" and all of that, stems from first having an intention to advance, an intention to improve. An intention to take a certain challenge, or a certain piece of music or a certain phrase, or any particular thing that you think of, and then you have an idea that you would like to improve it, and you also have an idea of how it probably would sound, when it sounded right. And this is another real important aspect—how you know when you've arrived, is that you have to trust your own judgment of what it should sound like. You can't just accept another's opinion about it. If a teacher is listening to you practice, and they say, "Oh yeah, that's right," when you play, you have to make sure you understand that that's someone else's opinion; it's not yours, unless you can also see that same thing. So it's all about one's own understanding of what his own goal, or target, or object of accomplishment, is. You have that in mind, and then you just go for that. You apply yourself calmly, and create the time, and you just keep doing it, until you've got it. That's the simple explanation of how to practice. I try to do that, and I get better at it, actually, as I get older, I learn more and more how to do that. And how to slow things down, sometimes, to the right speed, in order to understand every little part of it. You don't want to go too fast or too slow, but just at a tempo and pace that you can have success at, and really know that you're gaining on your goal.³⁹⁹

Motivation is personal and unique for each jazz pianist, and comes from many sources. This motivation may, for example, come from music or other art forms, or from life experiences and interactions with people. The role of motivation is significant in the career of a jazz pianist. The present researcher asserts that a balanced life will help to

³⁹⁹ Chick Corea's personal blog: <https://www.chickcorea.com/ask-chick/47-your-questions/478-how-do-you-manage-practice-time.html> (accessed, May 3 2013).

maintain a balanced musical career without bit up and downs, contributing to develop the musician's artistry.

Living a well-balanced life that includes health, work, family, friends, and leisure and intellectual activities like reading and traveling, is essential for a stable music career. Moreover, this lifestyle also allows the jazz pianist to be positioned for creativity and grow as an artist.

2.6. Regularity and Perseverance

As mentioned before, there are many parallels between the practice of music and sports training. A few examples of these similarities are seen as the musician and athlete set personal goals, develop skills and abilities over time, realize potential/talent, work with dedication, face and endure difficult practice sessions, and make sacrifices. Accordingly, fundamental components of training, like that needed in music or sports, include perseverance and regularity, repetition, and self-analysis. Exercise 4 includes a research-designed approach to building confidence, through practice and physical activity.

EXERCISE 4. Gaining confidence through regular practice and repetition

Go jogging everyday for a couple of weeks, running approximately 30 minutes each time. The very first days will be the most difficult because the body is not used to this particular activity, and personal confidence has not been developed yet. After a week of so, this will feel better and become easier. Once the routine has been repeated for an extended period of time, additional elements such as personal reflection and awareness start to grow as well.

Marathon runners often describe experiences related to their performance as athletes that mirror those of a jazz pianist (*e.g.*, practicing over time; good days/bad days of work; physical and mental fatigue; happiness and pride when goals are achieved). In addition (perhaps the most important similarity), these athletes enjoy the pure act of running itself and the implied training process required to accomplish new challenges. In order to run a complete marathon (42.195 km / 26.2 miles) the athlete must engage in strict training for an extended period of time and work with determination, dedication, and full effort.

Japanese writer Haruki Murakami, appreciates music (and even owned a jazz club at one time) and enjoys running. In 2009 Murakami published a book entitled, *What I Talk about When I Talk about Running*⁴⁰⁰, where he describes his relationship with running and training for long races (like his four-month preparation for the 2005 New York Marathon). Murakami offers ideas regarding how his thoughts expand, perspectives change, etc. while running. He describes the feeling of pain and fatigue during races, and also the enthusiasm and joy of training as an independent act from participating in races. Races are, for him, a motivation to develop a training program and to realize it.

Repetition and a detailed calendar of scheduled practice sessions stimulate progress and allow for the tracking of achievements. To continue the sports comparison, the physical and mental training required of athletes is intrinsically related to self-discovery and realization, and occur through repeated and deliberate practice. All of these

⁴⁰⁰ Haruki Murakami, *What I Talk about When I Talk about Running* (New York, NY: Knopf Doubleday Publishing Group, 2009).

elements apply to the work of a jazz pianist, or other musician—including the music practice routine and performance.

A jazz pianist needs confidence to develop and express his art. Confidence is personal and is fostered by experience and success. It is gained after achieving (large and small) goals—goals that result in concrete actions that illustrate and reinforce individual capabilities. One essential way for the jazz pianist to develop confidence is through repetition (*i.e.*, repeated practice).

The first time a young jazz pianist (or other musician) faces the performance of a complete concert he may lack confidence and question his ability to accomplish it. This is natural. Following the successful concert, however, (and after a series of successful concerts), his confidence is strengthened. Confidence needs time to develop and should progress steadily with no sudden ups or downs. The present researcher asserts that when confidence is developed in this manner it will not fail. It is like music skills—they are hard to accomplish, but once learned, they become natural.

3. Standard Routine

A standard routine is a pre-established routine for practice purposes, which serves as a template to develop different routines according to specific goals. It includes the basic elements and structure of a practice session, and should be modified as the contents and goals are updated. The development of a personal style through regular and deliberate practice is central for a jazz pianist, and must be fostered in a creative and artistic manner. Guidelines are offered within this writing, that frame practice routines for jazz pianists within the context of *The Five Elements* (*i.e.*, technique, harmony, language,

improvisation, and repertoire). These sections are intended as structure and should be individualized and adapted as the jazz pianist matures and develops as an artist and as a person.

3.1. Setting Practice Time

There is no “one size fits all” approach to identifying the amount of time a jazz pianist needs for daily practice as each musician has different aptitudes and talents. Time in the practice room playing the instrument is primary, but practice also occurs beyond the instrument as the pianist listens to recordings, reads books and scores, interacts with other artists, etc. These non-playing elements of practice are often as important as the time spent actually performing music as they reinforce ideas, offer inspiration and stimulate creativity, provide role models and examples, and so forth. Further, individual practice time varies depending on the circumstances and concrete activity being prepared. For instance, there are periods of time when a jazz pianist needs intense practice and focus (*e.g.*, when preparing for a recording session or a tour with new repertoire). There are other times the jazz pianist’s practice goals are related to maintenance or working on long-term topics.

The present researcher does not recommend that jazz pianist’s (who are fulltime music students) practice more than four or five hours a day. Although there will likely be times that require additional practice, no more time should be needed on a regular basis. Further, once the jazz pianist has graduated from music school (if applicable) or completed his formal training, work and family obligations will also require his attention. In this list, it is important that he develop an effective practice routine that does not last more than three hours. This duration of effective and well-planned practice, conducted

six days per week with one day to rest, will foster a strong foundation in music and performance (and correspond with time needed for other life tasks/roles).

Regularity is the key to training, especially when related to music where progress occurs over time. Like other arts and artisanal jobs, the skills required to be creative often take long periods of time to achieve new accomplishments (and yield new works), but once they are achieved, they exist forever.

It is essential to emphasize that time for resting is as important as time spent working for a jazz pianist. Sufficient rest in between practice sessions prepares the jazz pianist for his work, and positions him to assimilate concepts and acquire new skills. Moreover, a full day of rest (with no practice at all) within a schedule of ongoing practice sessions complements a profitable week of hard work and provides time for the jazz pianist to engage with others and experience life's activities.

The human mind is able to store and categorize information learned for application and use in the future—like a large database. This means a jazz pianist should strive to acquire as much information and gain as many experiences as possible to inform his music and foster a healthy mind.

The present researcher recommends that a jazz pianist, when studying music in a college or conservatory setting, spend as much time as possible practicing in conjunction with performing with other musicians (in rehearsals, studios, and concerts), participating in master-classes and clinics, and attending live concerts. The present researcher emphasizes that the energy obtained from a live performance by great artists cannot be substituted with anything else, provides valuable information, and provides perhaps what is most important, motivation and inspiration. The college or conservatory setting

contributes to the development of the jazz pianist, his network of colleagues, his habits of practice and performance, and ultimately his artistry.

For undergraduate music students, weekly practice time should be included and planned around their private lesson and other academic activities (*i.e.*, classes, rehearsals). Dave Weigert offers a weekly practice schedule in his book, *Jazz Workshop for Bass and Drums*⁴⁰¹, which includes time for rehearsing with bands, performing in sessions, resting, and conducting field research at record stores.

Another aspect for jazz pianist's to consider is the actual time of the practice session. It is essential to identify the time of practice that is *the best* time of the day for each musician to work on specific topics. For example, for some jazz pianists working on technique and harmony may require extra focus and freshness, and may be assigned during an early time in the day. For others, language and improvisation may require a different type of focus that is *better* to be practiced later in the day. The present researcher asserts that even if the jazz pianist carefully plans the contents to be practiced during the day, it is important to also leave time to just play the piano—as a spontaneous act, with no goals, played by ear.

According to Fred Hersch, performing one song for approximately thirty minutes is a great exercise of research and discovery⁴⁰². During this practice, different aspects of musical performance and expression explored individually throughout the day (as well as in previous sessions) will appear naturally if the jazz pianist follows his ears and emotions. In addition, for some jazz pianists this exercise may be most productive at

⁴⁰¹ Dave Weigert, *Jazz Workshop for Bass and Drums* (Rottenburg, Germany: Advance Music, 1996).

⁴⁰² Fred Hersch, [Personal interview with the present researcher] (Barcelona, Spain, November 8, 2012).

night when the jazz pianist feels tired, and relaxed. Depending on the jazz pianist, this may also be an appropriate time for writing ideas in a music journal or for composition. Exercise 5 includes a researcher-designed approach to improvisation that exemplifies an improvised performance session with no previous preparation or established goals.

EXERCISE 5. Improvised performance with no preparation or goals

First thing in the morning after waking up, sit down at the piano and play something improvised—not a song. Just play any melody or chord changes by ear and follow naturally to see what happens. This improvisation may last for a couple of minutes or for half an hour. Repeat this process for several days. At some point new ideas for composition may appear. On other days these improvisations will provide a focus for practice.

The planning of a weekly practice schedule should be completed in advance and adhered to like a mandatory appointment. The jazz pianist should respect his practice time, begin and end within the timeframe as planned, and dedicate individual sessions exclusively to his specific (predetermined) topics.

It is recommended that the jazz pianist anticipate times of increased stress during the year (*e.g.*, perhaps related to concerts, recordings, exams, writing, deadlines) so sufficient focus and energy can be dedicated to these tasks. In contrast, there will be periods of time that are less stressful or demanding when practice can be more relaxed. The jazz pianist

should, therefore, anticipate and plan a well-balanced practice calendar (for a full year) to allow him to manage his work.

3.2. Standard Template

As a basis for this study, the present researcher asserts that a standard practice routine for a jazz pianist include *The Five Elements*: technique, harmony, language, improvisation and repertoire. Moreover, the posits that these elements should be combined in a manner that allows them to be developed as one single entity—as developing a personal artistic voice depends on the assimilation of individual musical elements within an artistic and creative environment.

Table 56 includes a researcher-designed Practice Routine Template (PRT) developed for this study. (Note: This is a blank template. In subsequent pages, the researcher offers examples of completed templates for jazz pianists of varying skill and ability levels.) This template is also included in Appendix D (edited to fit on one page, so it can be easily reproduced).

The PRT is organized in five sections outlining topics to be practiced in each area. In addition, each section is divided into three parts that further narrow and direct the focus of study. The present researcher recommends that the jazz pianist manage his time and spend approximately twenty minutes on each of the three parts (to fill a one-hour practice session)—*i.e.*, Technique: 1) Scales, Arpeggios and Exercises; 2) Classical Literature; and 3) Sight Reading. His recommendation for the approximate time for each topic is twenty minutes. In addition, an area was provided (*i.e.*, Topic) at the top of the PRT for the jazz pianist to insert an individual area of focus for the entire practice session. Moreover, this topic relates to the jazz pianists long-and short-term goals.

TABLE 56. Practice routine general template

	Date:	Session Type:	Duration: 5 hours
	Section	Topic	Time
1	Technique	Scales, Arpeggios and Exercises Classical Literature Sight Reading	1 hour
2	Harmony	Voicings Blues / Rhythm Changes Topic	1 hour
3	Language	Singing the solos Solo Transcription Lick / Phrase	1 hour
4	Improvisation	Improvisation over Harmonic setting Topic Over Repertoire	1 hour
5	Repertoire	New song 1 New song 2 Piano techniques	1 hour

The present researcher developed the PRT with the idea that it would be adapted and used by jazz pianists across a variety of levels and stages of learning. The selected list of topics on the PRT includes skills and concepts that foster musical development—as a standard approach to practice session content. Individual topics on the PRT, however, should be adjusted, substituted, or combined with other topics within the same category/section to personalize it for a particular musician’s use.

The PRT outlines five 1-hour practice sessions. Like the contents, the jazz pianist should freely modify the duration of individual practice sessions, or the overall practice time for a given week in accordance with his time and practice plans. He should, however, strive to maintain the same proportion for time devoted to each section (*i.e.*, 20% for each). Within a section (*e.g.*, Language) some topics may need more attention than the others at some point (*i.e.*, Singing with the Solos), and time distributions should be adjusted accordingly. Table 57 provides a list of researcher-designed steps needed to design a personal practice routine.

Coordination of all topics

It is essential for the jazz pianist to coordinate individual elements within the practice session—using the practice routine template as a guide. For example, if a jazz pianist is studying a solo transcription, that act is automatically part of section 3. *Language*. If he then extracts individual phrases or a pattern like II-V-I from the solo and practices those fragments in multiple keys and with different harmonic settings, he is reinforcing section 4. *Improvisation*. Further, if he analyzes and practices specific chord voicing types from the solo, changing keys and inversions, he is addressing section 2. *Harmony*. Any of the previous elements can be practiced as section 1. *Technique* .

TABLE 57. Steps for the design of a personal practice routine

Step 1: Identify goals

Step 2: Select the musical topics on which to work according to the defined goals, and categorize them within *The Five Elements*, establishing appropriate topics for each section

Step 3: Schedule daily practice time during the week, assigning durations for individual sessions and topics

Step 4: Coordinate contents between template's sections (*e.g.*, same harmonic topics worked in the harmony section will be applied when practicing improvisation, and over the selected songs from the repertoire section).

Step 5: Update contents and topics as the process advances. The structure of the template remains the same, updating contents when goals are achieved.

Step 6: Reflect and evaluate progress within time allotted, routine, and status of goal achievement, and feedback of the time period routine and achievement of goals.

exercises, making variations of melodic passages, playing the implied scales and arpeggios, etc., and ultimately, all individual elements will be applied and reinforced within actual songs (5. *Repertoire*).

In music, the term improvisation not only applies to the creation of melodic lines, but also to the spontaneous expression of chord voicings, re-harmonization, rhythmic ideas, form variations, and other elements of music that comprise the musical act. This means the jazz pianist must develop intellectual and artistic foundations that allow him to imagine his expressions and make informed decisions that facilitate improvisation. It also

means that the content (specific music elements) are as important as the manner in which it is presented (improvisation).

3.3. Sample of Practice Routine

The following is offered as a sample implementation of the PRT in an effort to illustrate the “whole practicing process” in a real-world application. For this sample a time period of one year, divided into two separate semesters, was selected—to mirror a standard college format. Further, content and goals were identified for a first-year jazz piano student enrolled in a typical undergraduate (four-year college) jazz studies program. In particular, the following assumptions were made for this student: he is enrolled as a full-time student at the college; received music instruction in high school (in the form of private piano lessons); has some experience with jazz language and classical music; and is approximately 19-years-old (see tables 58 and 59 for the practice routine example).

3.3.1. Defining goals

During the first year in a college jazz studies program, for example, jazz pianists with different backgrounds and skills come together in classrooms, studios, and rehearsal settings. These backgrounds bring diversity to the experiences, but also may include significant gaps in learning and/or varying ability levels among students in this freshman class. Accordingly, one of the primary goals of college faculty in this type of setting is to standardize each student’s level of knowledge of the different musical elements (from the jazz language idiom). The foundation for this work is *The Five Elements* (i.e. Technique, Harmony, Language, Improvisation, and Repertoire). In addition, components such as the historical and aesthetic contexts of jazz music as well as general knowledge of music

TABLE 58. Example routine – First year of a College Jazz Program (1st semester)

	Date: Fall	Session Type: First Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	Major and Minor Scales. (10 min) Arpeggios Maj7 and m7. (10 min) Bach Prelude and Fugue (30 min) Reading: <i>Real Book</i> / Classic (10 min)	1 hour
2	Harmony	II-V-I Voicings: 4WC, Guide Notes (15 min) <i>Blues</i> in All Keys with Melody (30 min) Harmonic Continuity / V7 alt chords (15 min)	1 hour
3	Language	Singing with the Solos (15 min) Solo Transcription: (30 min) 1. Red Garland <i>Straight, No Chaser</i> 2. Chet Baker <i>It Could Happen to You</i> Lick / Phrase (15 min)	1 hour
4	Improvisation	Guide Notes and Chord Tones Phrasing, Time Feel, and Articulation Over Repertoire, II-V-I and <i>Blues</i>	1 hour
5	Repertoire	1. <i>Straight, No Chaser</i> 2. <i>It Could Happen To You</i> 3. <i>Body And Soul</i> 4. <i>How Insensitive</i> 5. <i>Someday My Prince Will Come</i> 6-10. Other similar songs	1 hour

TABLE 59. Example routine – First year of a College Jazz Program (2nd semester)

Date: Spring		Session Type: Second Semester (15 weeks)	Duration: 5 hours
Section	Topic		Time
1	Technique	Scales: All 7 diatonic Modes (10 min) Arpeggios: 7, m7(b5), °7, 7sus4 (10 min) Bach Prelude and Fugue (30 min) Reading: <i>Real Book / Classic</i> (10 min)	1 hour
2	Harmony	II-V-I / <i>Turn Arounds</i> : 4WC, Guide Notes, Three-part voicings in Fourths <i>Blues</i> in All Keys, with melody (continuation) <i>Bebop</i> Harmony: SubV7, IIm7 rel., Ext 7	1 hour
3	Language	Singing with the Solos (15 min) Solo Transcription: (30 min) 1. Bud Powell <i>All The Things You Are</i> 2. Miles Davis <i>All Of You</i> Lick / Phrase (15 min)	1 hour
4	Improvisation	Guide Notes and Chord Tones Phrasing, Time Feel, and Articulation Over Repertoire, II-V-I and <i>Blues</i>	1 hour
5	Repertoire	1. <i>Anthropology</i> 2. <i>All The Things You Are</i> 3. <i>All Of You</i> 4. <i>Wave</i> 5. Original Song 6. - 10. Other similar songs	1 hour

history need to be addressed during the first year of college. Active participation in master-classes and clinics, as well as participation in sessions and rehearsals with other college students are also beneficial to first-year college music students and facilitate their overall accomplishment of musical goals.

Following the first year of study, there are several general goals for music jazz pianists to achieve. Accordingly, the present researcher offers the following to provide examples of these goals as representatives.

- Establish a foundation in technique through the combination of classical literature and a variety of exercises related to the jazz language;
- Develop sight-reading skills employing several types of music notation (*e.g.*, traditional music notation, chord changes);
- Develop basic knowledge of jazz harmony and chord voicings;
- Transcribe and analyze jazz solos;
- Improvise music illustrating a swing eighth-note time feel and articulation, a variety of chord scale relationships, *blues* form, and jazz language;
- Build a basic jazz standard repertoire that includes approximately twenty songs representing all major stylistic categories (*e.g.*, swing (up-tempo and medium), ballad, Latin, and other contemporary styles);
- Develop music writing skills according to personal stylistic preferences; and
- Perform music in a variety of instrumental groups/settings (*e.g.*, solo piano, duo, trio, combos, large ensembles, other contemporary instrumentations).

3.3.2. Defining concrete topics

The following is offered to further illustrate an application of the PRT with the jazz pianist student following his first-year of college music instruction. Specific goals and content are categorized by *The Five Elements*: 1.) Technique; 2.) Harmony; 3.) Language; 4.) Improvisation, and 5.) Repertoire.

1. Technique:

- Classical Repertoire: One Prelude and Fugue per semester from *The Well-Tempered Clavier* by Johann Sebastian Bach
- Scales: Ionian Mode with all diatonic scales (7 modes), and Harmonic and Melodic Minor scales
- Arpeggios: The following six main families: Maj7, m7, 7, m7(b5), °7 and 7sus4
- Exercises from solo transcription and improvisation

2. Harmony:

- 4WC Chord Voicings
- II-V-I progression
- *Blues* progression, with melody

3. Language:

- At least two solo transcriptions per semester—one from a jazz pianist and one from another jazz instrumentalist (non-pianist). Additional solos from pianists Red Garland and Bud Powell; trumpeter Chet Baker; and saxophonist Hank Mobley should be practiced using the “Singing with the solos”⁴⁰³ approach.
- Practice of phrases and licks over a variety of harmonic progressions
- Chord-scale relationship, *Guide Notes*, and *horn style*

⁴⁰³ Dave Frank and John Amaral, *Joy of Improv - Books One and Two* (Milwaukee, WI: Hal Leonard Corp., 1998).

4. Improvisation:

- To develop the ability to improvise by ear according to a musical context
- Swing feel and rhythmic articulation
- Chord-scale relationship, *Guide Notes*, and *horn style*
- Improvise over jazz standard songs and *blues* form

5. Repertoire:

- Study and performance of twenty jazz standards (ten per semester), first selecting songs that are often played in jam sessions and private lessons (striving to learn and perform one new song per week).

3.3.3. Practice Routine Template

Tables 58 and 59 include sample (completed) PRTs for the two consecutive semesters (fall/spring) that comprise a jazz pianist's first year of college music instruction. These templates illustrate researcher-designed detailed goals including representative content and approximate durations/timings.

3.3.4. Concrete Topics and Methodology

1. Technique

The time assigned to each topic is provided as an example, however, the present researcher generally recommends a 50/50 ratio with of half of the practice time devoted to exercises and the other half devoted to a classical literature. While working on scales and arpeggios, two elements should be practiced as a priority: natural fingering and the sound of harmonies. In addition, the jazz pianist reinforces the particular scales and arpeggios by singing them as they are practiced.

Practicing a classical composition introduces the jazz pianist to elements of piano technique, such as sound, touch, dynamics, phrasing and musical expression. Further,

listening to (and comparing) recordings is recommended to provide the jazz pianist with role models, examples, and foster the development of an aural vocabulary of artists and repertoire. The present researcher recommends that the jazz pianist listen to several recordings of *The Well-Tempered Clavier* (Johann Sebastian Bach), for example, including versions by Edwin Fischer⁴⁰⁴, Sviatoslav Richter⁴⁰⁵, Glenn Gould⁴⁰⁶, András Schiff⁴⁰⁷, Keith Jarrett⁴⁰⁸, and a harpsichord version by Gustav Leonhardt⁴⁰⁹. Upon listening to these recordings, the jazz pianist will be able to compare performances, observe different approaches to the same composition and style, and draw personal conclusions. In addition, he will develop criteria on which to base and articulate personal musical preferences.

The present researcher recommends that the jazz pianist investigate the biographies and careers of the composers and artists—those whose music they are playing or those from recording comparisons. Accordingly, to further the Bach example, he recommends review of a monographic program produced by the United States

⁴⁰⁴ Edwin Fischer, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two, Recorded 1933-36*, Naxos Historical (CD).

⁴⁰⁵ Sviatoslav Richter, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two, Recorded 1972-3*, RCA Victor Europe (CD).

⁴⁰⁶ Glenn Gould, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two, Recorded 1962-65 (Book One) and 1966-71 (Book Two)*, Sony Classical (CD).

⁴⁰⁷ András Schiff, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two, Recorded 1986-7*, ECM Records (CD).

⁴⁰⁸ Keith Jarrett, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two, Recorded 1990*, ECM Records (CD).

⁴⁰⁹ Gustav Leonhardt, *Johann Sebastian Bach: The Well-Tempered Clavier – Books One and Two (harpsichord version, Recorded 1967)*, Deutsche Harmonia Mundi (CD).

National Public Radio (NPR) about the music of Johann Sebastian Bach and pianist András Schiff⁴¹⁰, where Schiff explains his approach to Bach's music.

2. *Harmony*

Some jazz pianists, (as first year college music students) may find harmony practice difficult if they have limited or no previous experience with chord voicings with color tones and no root. In addition, the practice of these concepts in every key, and switching inversions may seem abstract to them in the early stages of this work. Accordingly, this work, in the beginning, may require special attention and extra time. *4WC* voicings and *Guide Notes* are at the core of instruction during this first year, although an introduction to *three-part voicings* in fourths will also be included. The present researcher asserts that one key component of this harmonic work is to apply chord voicings practiced individually, over harmonic contexts like the II-V-I progression or the *blues* form. Transposing a *blues* tune into all keys, including melody, will require time and focus in the beginning, but the results allow the jazz pianist to connect several musical aspects into one jazz song. Further, the understanding of the harmonic movement and the role of different chord functions (I, IV, V) will be assimilated with the transposition of basic *blues* progressions to all keys.

3. *Language:*

For some jazz pianists, this is perhaps the most engaging area of practice. "Singing with the solos" and performing them allows the jazz pianist to closely study

⁴¹⁰ Andras Schiff, 'Well-Tempered' Guide To Bach. NPR, Program conducted by Fred Child. January 16th, 2013. <http://www.npr.org/blogs/deceptivecadence/2013/01/14/169356564/andras-schiffs-well-tempered-guide-to-bach>

specific artistic expressions (performed by exemplary artists), and transfer ideas into his own playing. The present researcher recommends that the jazz pianist (during the first semester of college instruction) study a solo by Red Garland over the *blues Straight, No Chaser*. (Note: This work reinforces harmonic concepts referenced above.) Throughout the study of this solo the jazz pianist will not only become familiar with Garland's style, but will also discover applications of chord voicings, and creative use of rhythm.

Garland's improvised melodies are a *treatise* on how to build lines based on the harmonic tones (1, 3, 5, 7, 9)—*in horn-style*.) The present researcher recommends that the jazz pianist study guitarist Bert Ligon's analysis of the Garland style and approach to outline 3-5-7-9 arpeggios⁴¹¹. In addition, the jazz pianist should focus on Garland's approach to left hand voicings. The manner in which he plays Left Hand 4WC voicings with constant syncopated rhythm, for example, has been influential in the evolution of jazz piano history, and set a distinctive example of how to play left hand voicings. This style is known as "Red Garland Left Hand Voicings"⁴¹².

Chet Baker's short solo improvisation (only 16 measures) over the song *It Could Happen to You* embodies Garland's style of creating melodies using chord tones but in a melodic manner. Further, this solo illustrates effective phrasing and articulation—a strong example for the jazz pianist.

The present researcher recommends that, during the second semester of college instruction, the jazz pianist study a published transcription of Bud Powell's solo

⁴¹¹ Bert Ligon, "Red Garland: Outlines 3-5-7-9 Arpeggios". University of South Carolina – School of Music. <http://in.music.sc.edu/ea/jazz/transcriptions/REDOutlines.htm>

⁴¹² Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

improvisation on *All The Things You Are*. This solo is recommended because of its complexity and melodic and harmonic density. Powell employs a unique approach for the left hand (in this solo and as a signature to his style) known as *Spread Voicings*⁴¹³. *Spread Voicings* include the root and Guide Notes combined with four-note voicings. Although this technique may also be employed for solo piano, this particular recording includes Powell performing in this manner within a quartet setting (including bass in the rhythm section). In addition, Powell employs the *horn style* technique (Note: The present researcher recommends that the jazz pianist study this solo from the written notation here and transcribe it later in his musical study—following further development of ear training, music theory, and performance.)

In addition, the present researcher recommends that the jazz pianist study the Miles Davis solo on *All of You* during his second semester of college instruction. This solo offers the jazz pianist with an example of a melodic approach to improvisation where the entire solo is constructed by mainly using just the major scale. Further, characteristics such as articulation, phrasing, use of space, and melodic development are exemplified in this performance.

4. Improvisation:

Improvisation combines all of the other four sections (*i.e.*, technique, harmony, language, and repertoire), requiring the jazz pianist to use language skills to improvise over harmonic progressions and songs. The continued practice of the Garland, Powell, Baker, and Davis solo transcriptions should occur throughout the jazz pianist's entire first

⁴¹³ Mark Levine, *The Piano Book* (Petaluma, CA: Sher Music, 1989).

year of college instruction. This study provides him with a thorough approach to creating improvised lines, combining opposite harmonic approaches (as seen in solos by Red Garland and Bud Powell) and melodic approaches (as seen in solos by Chet Baker⁴¹⁴ and Miles Davis), with varied ways of using rhythm and time feel. The present researcher recommends that the jazz pianist extract individual elements from the solos to be practiced separately, as for example: use of Guide Notes, arpeggios, *bebop* scales, chromatic approach, motif development, rhythmic time and feel, melodic construction, etc. Moreover, he also recommends that the jazz pianist identify and study selected licks and phrases from these solos.

Practicing improvisation over the *blues*, with particular focus on harmony and language is fundamental for the jazz pianist during his first year of college music instruction. Therefore, the present researcher asserts that *Blues* language and form are essential elements within the jazz language, and should be assimilated as soon as possible. The II-V-I harmonic progression also provides the jazz pianist with a framework and starting point toward the development of his improvisation language (and opportunity to apply ideas into actual songs as many include the II-V-I progression).

The present researcher recommends that the jazz pianist study the *horn style* approach as a methodological priority during his first year of college music instruction. *horn style* was selected as it defines the essence of *bebop* playing and the modern jazz language⁴¹⁵.

⁴¹⁴ Chet Baker's combines both horizontal and vertical approaches when improvising, using main chord tones for the lines, but in a very vocal and melodic way.

⁴¹⁵ David Baker, *How to Play Bebop, Vols. 1, 2 and 3* (Van Nuys, CA: Alfred Music Publishing, 1987).

The jazz pianist, during his first year of college music instruction, will begin to form his personal (artistic) voice and gain some command of jazz language. This development is founded in his experiences with improvisation—where he expresses original improvised lines, studies (and performs) solo transcriptions of others, and borrows elements and ideas from other artists.

5. Repertoire:

The jazz pianist is often motivated and inspired during the process of learning new songs as he is able to clearly see the relevance and application of this process to his professional life as an artist. It is essential for the *professional* jazz pianist to have a robust repertoire of music he is able to perform. This body of repertoire allows him to contribute to the music making (alone and with other musicians) and makes him more valuable to hire.

The present researcher recommends that the jazz pianist, during his first year of college music instruction, learn approximately one new song per week. Following this approach, at the end of the year, the jazz pianist will have somewhere between twenty and twenty songs in his repertoire. In addition, if he continues this approach throughout his four years of college music instruction, he will have a performance repertoire of approximately one hundred songs.

When a song is fully learned, the jazz pianist knows it *by heart*, including the melody and harmony. Moreover, when a song is fully learned, he is able to perform it in multiple keys and contrasting styles and tempos. The jazz pianist should practice and prepare to perform these songs in any instrumental setting— from solo piano to rhythm sections.

The present researcher recommends that the jazz pianist learn new songs directly from reference recordings, comparing versions between different artists, instruments, and styles. As the jazz pianist gains knowledge and experience, he should apply concepts such as chord voicings, re-harmonization techniques, form, treatment, etc. into his performance repertoire.

In addition, the jazz pianist should begin to write original compositions and insert them into his performance repertoire—initially incorporating one original during every gig, or one original in every set of music. This approach provides the jazz pianist with an opportunity to express his music and create a presence as a composer over time.

Summary

The content included in the one-year PRT sample (see tables 58 and 59) is considered by the present researcher to be a reference of *minimum* topics to be developed. As individual jazz pianists will progress through this work at different paces and with different outcomes, the present researcher offers this application as a guideline—not a rigid model.

During the second semester of college music instruction, the jazz pianist should continue the work started in the first semester, building his skills and knowledge as an artist—following a similar methodology. As his development unfolds, however, the jazz pianist may need to adjust the assigned times allotted to individual areas depending on personal progress and individual needs. Throughout the year, the jazz pianist should strive to perform songs from the jazz repertoire, be able to perform this music in real gigs, with other musicians, and in authentic live performance situations.

3.3.5. Scheduling Practice Time

The present researcher recommends five hours of daily piano practice for jazz pianists enrolled full-time in a college music program. Further, he recommends a distribution of dedicating 1-hour of piano practice for each area of study (*i.e.*, technique, harmony, language, improvisation, repertoire). Ideally, practice time should be organized into two large blocks (morning and afternoon/evening). The exact timing of practice sessions, however, is determined in conjunction with the jazz pianist's schedule of classes and rehearsals, etc. (Note: No more than three consecutive one-hour sessions (3 hours total) is recommended for a jazz pianist as focus and physical skills tend to decrease in sessions with longer durations. If possible, practice sessions should be spread out during the day—assigning the most appropriate time for each session *–i.e.*, technique in the morning, repertoire at night).

A typical hourly breakdown for weekly classes/rehearsals/lessons, practice time, and life for the jazz pianist during a college semester of full-time enrollment may be as follows: Assuming 15 hours of class meetings per week (Monday to Friday), with an average of 3 hours of class per weekday; add 5 hours of practice for a total of 8 hours of work per day, which leaves 8 hours free for general life activities, and another 8 hours for sleep. This approach to practice also includes one full day of rest—with no piano playing. Table 60 includes an overview of this weekly distribution of practice time.

The present researcher recommends that the jazz pianist perform music approximately 3 times per week (alone and with other musicians). These sessions are included as part of the weekly schedule, and if possible, should also include a gig during the weekend.

TABLE 60. Weekly distribution of practice time

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Lessons: 3 hours Practice: 5 hours					Practice: 5 hours	Rest: No practice
Session / Rehearsal		Session / Rehearsal		Session / Rehearsal	Gig	

In this sample, Sunday is assigned as the day to rest. The present researcher asserts that jazz pianist should use this time to mentally and physically assimilate new concepts and experience life. His brain needs time to store new information and index it, so it can be used quickly when needed. During this day of rest, the jazz pianist often gains inspiration from non-musical sources, such as spending time with friends and family, attending events, reading, etc. Every person balances a need to be alone with time spent with others. Thus, some jazz pianists require significant periods of solitude to think and to develop their artistic vision, while others prefer (and thrive from) the company of others.

As part of a healthy and balanced lifestyle, the present researcher recommends that the jazz pianist engage in physical activity and perform sport activities on a regular

basis (*e.g.*, three times a week). This physical activity will enhance mental and physical strength and coordination, and provide an opportunity for him to practice commitment, dedication, and independent skill development, for example, in a non-music setting.

3.3.6. Coordination of topics

In life many things happen at the same time, information is learned in many ways, especially when referring to music and arts, where there is no exact science to be applied to the process of learning and artistic creation. Accordingly, coordinated practice, where the jazz pianist combines information and skills from a variety of sources and viewpoints, and applies them into his music is mandatory for the successful achievement of goals. The PRT provides the jazz pianist with a tool where the music elements of practice (*i.e.*, specific content, skill, approach/duration) can be visualized on one page. This offers the jazz pianist with an “at-a-glance” snapshot of his weekly habits of practice, level of difficulty, areas of focus, repertoire, etc.

Individual concepts practiced by the jazz pianist (*e.g.*, technique, harmony, form) contribute to his musicianship and overall foundation as an artist. As these individual concepts depend on each other to create music, the jazz pianist should practice them in isolation only to fully understand them, and strive to combine and relate them together in a variety of music making experiences.

3.3.7. Updating contents

As the practice calendar advances, changes and updates may be needed in order to adjust the routine to the actual needs and interests of the jazz pianist. In addition, it is common for the jazz pianist to discover new ideas or topics during everyday life that may influence his music and/or habits of practice. These ideas often come from teachers or

colleagues; private lessons; or live performances. Incorporating new information into personal practice routines is appropriate, and if not yet studied, these ideas can be noted on a “wait list” to be practiced in the future.

There are many benefits of having a well-designed practice plan in place; however, the jazz pianist should be flexible in his work to accommodate modifications to the original plan if necessary. This fluid approach to learning within the structure and goals outlined in the PRT guide the jazz pianist in the development of his personal (artistic) voice. Stated another way, the art of practice is framed by an intended direction, but often modified during real life applications.

3.3.8. Feedback and review

Objective and regular self-review is central to the success of any artist. For the jazz pianist studying music in a college setting, this self-review occurs with ongoing feedback and informs his work and progress. Moreover, these evaluations are offered in many formats (*e.g.*, lessons, exams, auditions, papers) and come from a variety of perspectives (*e.g.*, private teacher, classroom teachers, ensemble directors). Beyond the college setting, in other professional situations, the jazz pianist alone must develop self-evaluation skills to identify areas on which to focus and advance.

The present researcher recommends that the jazz pianist make a list with two columns, one for strengths and one for weaknesses, and honestly reflect and document the current status of his progress, development, and work. This focus on both positive and negative is essential—allowing the jazz pianist to use strengths and enhance (or avoid) weaknesses. With progress and development, topics from the weaknesses column move to strengths.

4. Practice Routine Templates

The overall structure of the researcher-designed PRT is intended to remain constant regardless of the jazz pianist's level or stage of learning. *The Five Elements* (i.e., technique, harmony, language, improvisation, repertoire) are included in each routine, with specific topics outlined for individual levels and goals. The amount of time allotted to each element may be adapted according to individual needs and progress of the jazz pianist, but the proportion of length for each (approximately 20% of the time), should be maintained.

The use of the PRT fosters two key factors: 1.) To accomplish regularity of work; and 2.) To outline clear organization of content based on individual goals. Therefore, within this structure, the quality of the practice (and the success of the PRT as a tool) depends on the quality of this selected material and established goals. This means a jazz pianist needs to identify an appropriate plan, as a poorly designed (or incomplete) PRT will likely only yield weak results.

4.1. Routine #1: Four Years College Program

The development of a sequential curriculum with specified learning outcomes, goals, and content is an essential part of the education a jazz pianist receives within a four-year undergraduate program in college. Accordingly, tables 61 through 68 include researcher-designed samples of specific content for practice sessions, repertoire, and goals for jazz pianists in this setting. This general outline of a four-year college program is offered as a basic routine to be taken as a model—an initial structure. Contents are organized in a logical and progressive order that foster the jazz pianist's development within the four-year period. The collection of routines incorporates a variety of music

topics to be mastered by a (professional) jazz pianist including techniques that represent the full spectrum of jazz stylistic periods (*i.e.*, from jazz origins to contemporary jazz). In addition, the present researcher offers, as a guideline for the jazz pianist, estimates of the amount of time required to dedicate to any given topic during a practice session. (Note: Although this information is designed primarily for jazz pianists, it may be adapted to any other instrument since the practice routine structure and a majority of the topics are common to any jazz musician.)

Individual contents of the practice routines progress from specific to more generally-oriented as the jazz pianist acquires his basic musical foundation. At the same time, all concepts are retroactive, meaning they may be practiced and employed at any time of the training with different uses and applications. Solo transcription recommendations are listed chronologically, selecting (iconic solos) for the first years of study and more advanced and contemporary solos for the later years.

Year 1

TABLE 61. Routine #1 – Four year College Jazz Program – Year 1: 1st semester

	Year 1: September to January	Fall Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	Major and Minor Scales (10 min) Arpeggios Maj7 and m7 (10 min) Bach Prelude and Fugue (30 min) Reading: <i>Real Book</i> / Classic (10 min)	1 hour
2	Harmony	Voicings: 4WC, Guide Notes, <i>Spread</i> Voicings (15 min) Progressions: II-V-I, Cycle of diatonic Fourths <i>Blues</i> in All Keys with Melody (30 min) Harmonic Continuity / V7 alt chords (15 min)	1 hour
3	Language	Singing with the Solos (15 min) Solo Transcription: (30 min) 1. Red Garland: <i>Straight, No Chaser</i> 2. Chet Baker: <i>It Could Happen to You</i> Lick / Phrase (15 min)	1 hour
4	Improvisation	Guide Notes and Chord Tones Diatonic Scales and Arpeggios. <i>Blues</i> Passing Notes and Chromatic Approach Phrasing, Rhythms and Articulation Over Repertoire, II-V-I and <i>Blues</i>	1 hour
5	Repertoire	10 Jazz Standard Songs	1 hour

TABLE 62. Routine #1 – Four year College Jazz Program – Year 1: 2nd semester

	Year 1: February to June	Spring Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	Scales: 7 Diatonic Modes and Harmonic/Melodic Minor (10 min) Arpeggios: 7, m7(b5), °7, 7sus4 (10 min) Bach Prelude and Fugue (30 min) Reading: <i>Real Book</i> / Classic (10 min)	1 hour
2	Harmony	II-V-I & <i>Turn Arounds</i> : 4WC, Guide Notes, <i>Spread Voicings</i> <i>Blues</i> in All Keys, with Melody (continuation) <i>Bebop</i> Harmony: SubV7, IIm7 rel., Ext 7	1 hour
3	Language	Singing with the Solos (15 min) Solo Transcription: (30 min) 1. Bud Powell: <i>All The Things You Are</i> 2. Miles Davis: <i>All Of You</i> Lick / Phrase (15 min)	1 hour
4	Improvisation	Guide Notes and Chord Tones Diatonic Scales and Arpeggios. <i>Blues</i> Passing Notes and Chromatic Approach Phrasing, Time Feel, and Articulation Over Repertoire, II-V-I and <i>Blues</i>	1 hour
5	Repertoire	10 Jazz Standard Songs	1 hour

Year 2

TABLE 63. Routine #1 – Four year College Jazz Program – Year 2: 1st semester

	Year 2: September to January	Fall Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	Scales: Melodic Minor Modes Diatonic Arpeggios: Major and Minor modes Bach Prelude and Fugue Reading: <i>Real Book</i> / Classic	1 hour
2	Harmony	Voicings: 4WC (continuation) and Fourths <i>Rhythm Changes</i> in All Keys with Melody <i>Bebop</i> Re-harmonization Techniques	1 hour
3	Language	Singing with the Solos 2 Solo Transcriptions from: Red Garland, Wynton Kelly, Tommy Flanagan, Horace Silver, Bud Powell, Thelonious Monk, Oscar Peterson, Bill Evans, etc. Lick / Phrase	1 hour
4	Improvisation	<i>Bebop</i> and <i>Hard Bop</i> language Motif Development Modal Sound (Fourths) and Pentatonic Scales Modal Progressions, Contemporary Songs	1 hour
5	Repertoire	10 Jazz Standard Songs	1 hour

TABLE 64. Routine #1 – Four year College Jazz Program – Year 2: 2nd semester

	Year 2: February to June	Spring Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	Scales: Melodic Minor Modes, Pentatonic Diatonic Arpeggios (continuation) Bach Prelude and Fugue Reading: <i>Real Book</i> / Classic	1 hour
2	Harmony	Voicings in Fourths, Parallel Structures (So What) Rhythm Changes in All Keys (continuation) <i>Bebop</i> Re-harmonization Techniques	1 hour
3	Language	Singing with the Solos 2 Solo Transcriptions from: Red Garland, Wynton Kelly, Tommy Flanagan, Horace Silver, Bud Powell, Thelonious Monk, Oscar Peterson, Bill Evans, etc. Lick / Phrase	1 hour
4	Improvisation	<i>Bebop</i> and <i>Hard Bop</i> language Motif Development Modal Sound of Fourths and Pentatonic Scales Modal Progressions, Contemporary Songs	1 hour
5	Repertoire	10 Jazz Standard Songs	1 hour

Year 3

TABLE 65. Routine #1 – Four year College Jazz Program – Year 3: 1st semester

	Year 3: September to January	Fall Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	Scales: Symmetrical (1-½; ½-1), Whole Tone Arpeggios: Broken Workouts, Upper Structures Mozart / Beethoven / Chopin / Brahms Reading: <i>Real Book</i> / Classic	1 hour
2	Harmony	Free and Open Voicings Structures, Block Chords, Impressionistic, Coltrane Changes Jazz Standards in All Keys	1 hour
3	Language	Singing with the Solos 2 Solo Transcriptions from: Bill Evans, Chick Corea, Herbie Hancock, McCoy Tyner, Kenny Barron, Mulgrew Miller, Keith Jarrett, etc. Lick / Phrase	1 hour
4	Improvisation	<i>Hard Bop</i> Language and Contemporary Modal Sound of Fourths and Pentatonic Scales Melodic Counterpoint	1 hour
5	Repertoire	10 Jazz Standard Songs, with emphasis in Contemporary Compositions	1 hour

TABLE 66. Routine #1 – Four year College Jazz Program – Year 3: 2nd semester

	Year 3: February to June	Spring Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	Scales: Symmetrical (1-½; ½-1), Whole Tone Arpeggios: Broken Workouts, upper structures Mozart / Beethoven / Chopin / Brahms Reading: <i>Real Book</i> / Classic	1 hour
2	Harmony	Free and Open Voicings Structures, Block Chords, Impressionistic, Coltrane Changes Jazz Standards in All Keys	1 hour
3	Language	Singing with the Solos 2 Solo Transcriptions from: Bill Evans, Chick Corea, Herbie Hancock, McCoy Tyner, Kenny Barron, Mulgrew Miller, Keith Jarrett, etc. Lick / Phrase	1 hour
4	Improvisation	<i>Hard Bop</i> Language and Contemporary Modal Sound of Fourths and Pentatonic Scales Melodic Counterpoint	1 hour
5	Repertoire	10 Jazz Standard Songs, with emphasis in Contemporary Compositions	1 hour

Year 4

TABLE 67. Routine #1 – Four year College Jazz Program – Year 4: 1st semester

	Year 4: September to January	Fall Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	General Perspective of Scales and Arpeggios: Combination of Modes and Exercises Classical: Impressionism and 20 th century Reading: <i>Real Book / Classic</i>	1 hour
2	Harmony	Free Voicings Structures, Impressionistic Voicing “Color Palette” (overview) Re-harmonization Techniques Jazz Standards in All Keys	1 hour
3	Language	Singing with the Solos 2 Solo Transcriptions from: Chick Corea (<i>Now He Sings, Now He Sobs</i>), McCoy Tyner, Kenny Barron, Mulgrew Miller, Keith Jarrett, Brad Mehldau, etc. Lick / Phrase	1 hour
4	Improvisation	Combination of <i>bebop</i> Language with Contemporary Vocabulary Free Improvisation Techniques Melodic Counterpoint	1 hour
5	Repertoire	10 Jazz Standard Songs, with emphasis in Contemporary Compositions	1 hour

TABLE 68. Routine #1 – Four year College Jazz Program – Year 4: 2nd semester

	Year 4: February to June	Spring Semester (15 weeks)	Duration: 5 hours
	Section	Topic	Time
1	Technique	General Perspective of Scales and Arpeggios: Combination of Modes and Exercises Classical: Impressionism and 20 th century Reading: <i>Real Book</i> / Classic	1 hour
2	Harmony	Free Voicings Structures, Impressionistic Voicing “Color Palette” (overview) Re-harmonization Techniques Jazz Standards in All Keys	1 hour
3	Language	Singing with the Solos 2 Solo Transcriptions from: Chick Corea (<i>Now He Sings, Now He Sobs</i>), McCoy Tyner, Kenny Barron, Mulgrew Miller, Keith Jarrett, Brad Mehldau, etc. Lick / Phrase	1 hour
4	Improvisation	Combination of <i>bebop</i> Language with Contemporary Vocabulary Free Improvisation Techniques Melodic Counterpoint	1 hour
5	Repertoire	10 Jazz Standard Songs, with emphasis in Contemporary Compositions	1 hour

4.2. Routine #2: Concert / Recording Session

The jazz pianist's practice process for a scheduled event (*i.e.*, recording session, concert) or performance situation requires a different routine from the *usual* approach toward addressing long-term goals based on the PRT. Rather, this kind of practice routine should combine general preparation exercises with the specific repertoire that will be performed in the upcoming event.

Even if the jazz pianist is playing all original repertoire in the performance, the present researcher recommends that he practice general technique and language, as well as solo improvisations from other artists. This process ensures a balanced approach to his practice with opportunities for inspiration from other artists. Within this context, harmony and improvisation may be practiced directly over the original compositions.

Table 69 includes the present researcher's general recommendations for practice sessions (*i.e.*, without the identification of specific topics or solo transcriptions) when approaching an upcoming performance or recording session. Since the level and topics will be directly related to the level of the performer and the repertoire to be performed, the intention of this routine is to provide an overview of *how* to approach the preparation a performance.

When practicing for a performance, it is necessary to work not only on the repertoire and topics, but also on the overall flow of the concert. Accordingly, the present researcher asserts that a strategic design of the musical/expressive moments of the performance needs to be outlined—one that includes opportunities to showcase all performers and musical components. Another essential element to prepare is the entry/exit of individual sections such as introductions, solos, and endings. This work

TABLE 69. Routine #2: Concert / Recording session

	Month	Spring Semester (1 month)	Duration: 5 hours
	Section	Topic	Time
1	Technique	<p>Overview of Scales (Major/Melodic Modes) and Arpeggios (6 main families) as Warm-up Exercises before each Session</p> <p>One Selection from Classical Literature</p> <p>Reading: Related to Music to be Performed, Memorize Repertoire (if Possible)</p>	1 hour
2	Harmony	<p>Practice Repertoire to be Performed, with Different Combinations and Types of Chord Voicings from the “Color Palette”, (Combine Close and Open Voicings)</p> <p>Explore Possible Re-harmonization for Different Sections of the Music</p> <p>Transpose Repertoire to Other Keys, including Melodies</p>	1 hour
3	Language	<p>Singing with the Solos: Continue this Process while Working on the Original Repertoire. Use Solos from the Medium/Long-term Routine Practiced during Regular Practice Sessions</p> <p>Incorporate Phrases and Licks from Practiced Solos into the Original Repertoire (Creating Variations, Transposing to Other Keys, Combine with Other Motifs, etc.)</p>	1 hour
4	Improvisation	<p>Practice Improvisation Over the Featured Repertoire, including Variations of the Original Melody, Motif Development and other Improvisation Topics. Practice <i>Horn Style</i> Improvising with One Hand and Outlining the Harmony Changes</p>	1 hour
5	Repertoire	Featured Music for the Performance	1 hour

allows the jazz pianist to maximize the content of his improvised solo and engage his audience with a well-prepared performance.

During recording sessions, the jazz pianist should try to focus on the small details within songs. (Note: It is the present researcher's belief that the general artistic atmosphere of the studio and time feel of the performance will determine the quality of the recording.) Many elements can be prepared before the recording session, including improvised sections of the repertoire. Thus, the present researcher recommends that the jazz pianist keep a list with topics and resources to be featured in the music on his music stand as reminders of his plans for specific components of the performance.

Following the recording session, the tracks are mixed for balance and mastered to create an overall sound. Editing occurs to correct "hidden" mistakes or obvious inaccuracies in the performance. If too much editing is done, cutting and pasting sections, solos, etc., the result will sound unnatural and fake. Therefore, the present researcher recommends that the jazz pianist select the "takes" with good time feel and connection among the musicians, even if those tracks contain mistakes, rather than "takes" with no mistakes but with a non-powerful groove and atmosphere.

In order to be successful in the recording studio, the jazz pianist needs to plan and prepare both repertoire and the specific form structure for each song. Memorization is mandatory (as possible) to allow the jazz pianist to focus entirely on the music. This memorized approach, where the jazz pianist plays *by heart*, often yields a better execution of the music with intense interactions among musicians.

The present researcher, offers as an underpinning of this research the idea that the quality of the practice and preparation for a concert or recording session set the tone for

the performance. Therefore, the combination of selecting repertoire (and its order in the event), and preparing both technical and musical elements is essential and positions the jazz pianist for his best possible performance. In addition, the present researcher emphasizes that the jazz pianist focus on his well-balanced physical and mental state (at the piano, and not) during the days or weeks prior to the performance event.

4.3. Routine #3: Back in Shape after Holidays or Long Periods of Inactivity

For a variety of personal reasons (*e.g.*, holidays or other professional obligations), the jazz pianist will experience periods of time when practice does not occur, even for extended lengths of time. Returning to regular piano practice, like returning to sports training following a period of not engaging, may be both physical and mentally difficult. This experience requires the jazz pianist to have strong determination and clear goals. In addition, he should approach this work with understanding and an initial grace period that is free from self-judgment (or at least be gentle with his personal criticism), in order to restart practice and recover skills.

After extended periods of time without playing the piano, the jazz pianist loses physical strength, precision, dexterity, and focus. Some periods of inactivity, once in a while, however, can be productive and provide the jazz pianist with a new perspective regarding music and artistic expression, and a new approach to habits of practice. Oftentimes, when an activity has not been realized for a while, some aspects of it are reconsidered and seen differently, which is good for the mental health and creativity of an artist.

Depending on perspective, a jazz pianist's inactivity from practicing/playing the piano may be seen as a positive—something that contributes to favorable results when he

returns to the instrument. Accordingly, the present researcher recommends that the jazz pianist view these periods as an opportunity to develop musical foundations, receive inspiration, clear the mind, etc. The return to playing will require focus, the ability to reconnect different musical elements, and time to regain physical strength. Repetition and a well-designed practice routine are the keys to progress and the achievement of goals.

Table 70 includes a researcher-designed practice routine template designed for the jazz pianist to use following a period of inactivity (no practice). This template, like the others designed for this research is intended as a model with the intent that a jazz pianist with select content bases on his individual goals and needs.

4.4. Routine #4: Reduced Routine – Short Time Available

When limited time is available (due to work or other obligations), a concentrated practice routine should be designed, to allow the jazz pianist to be ready for opportunities as they arise, hone his skills as an artist, and experience the joy of making music. This situation is common for high-demanded performers, who are traveling or managing a very busy agenda. Moreover, this status is also common for teachers with lessons/classes and other academic obligations that occupy their time on a daily basis.

Regardless of setting and within limited (or expanded) timeframes, the jazz pianist should strive to achieve the most profitable use of his available practice time. The present researcher recommends that the jazz pianist optimize practice time with clear expectations and personal goals. Moreover, he emphasizes that the amount of time dedicated to practice should be determined by each jazz pianist and performed as needed—no more, no less.

TABLE 70. Routine #3: Back in shape after holidays or long periods of inactivity

	Date: September 2014	Four-month Period	Duration: 5 hours
	Section	Topic	Time
1	Technique	<p>Begin Session with a Long Warm-up, Gradually increase the Intensity and Duration of the Exercises. Carefully Observe Hand Movements and Body Position while Performing</p> <p>An Overview of Scales and Arpeggios is Appropriate, Practice <i>Hanon</i> Exercises to Engage Muscles</p> <p>Transpose Exercises to Other Keys and Modes (Dorian, Phrygian, Etc.)</p> <p>Two Classical Pieces: One From Johann Sebastian Bach and Another from the Romantic Period (<i>e.g.</i>, Sonata)</p> <p>Reading: <i>Real Book</i> / Classical Literature</p>	1 hour
2	Harmony	<p>4WC Chord Voicings Over the II-V-I Progression, Switch Inversions and Piano Techniques (Solo, Duo, and, Trio Settings).</p> <p>Play and Sing Chord Tone Lines (<i>i.e.</i>, 9-13-9, or 7-3-7-6)</p> <p><i>Blues and Rhythm Changes</i> in All keys.</p> <p>Transposition of Standard Songs to Other Keys, including Melodies</p>	1 hour
3	Language	<p>Singing with the Solos: Start with a New Solo for Inspiration (Along with Performing a Solo Transcription, this Section is the Most Beneficial within the Practice Routine to Regain Time Feel, Articulation, and Phrasing</p> <p>Perform a Solo Previously Practiced to Recall Performance Language and (Perhaps) Discover New Nuances</p>	1 hour

4	Improvisation	<p>Begin Improvising, with No Specific Goals, Over the Song Repertoire and the Harmonic Progressions (Listed Above)</p> <p>Focus only on Developing Melodies that Outline the Harmony with Good Time Feel</p> <p>After Approximately One Week, Begin Adding Improvisation Topics (<i>e.g.</i>, from Hal Crook’s <i>How to Improvise</i>, including Reading about His Approach)</p> <p>Practice Licks and Phrases in All Keys to Reinforce Ear Training Skills</p> <p>Practice Improvisation Over the Featured Repertoire, Including Variations of the Original Melody, Motif Development and Other Improvisation Topics. Practice <i>Horn-style</i> Improvising with One Hand and Outlining the Harmony Changes</p>	1 hour
5	Repertoire	<p>Create a List of New Songs from the Standard Repertoire Lists (Appendix A), include Songs from the “Wait List” as well as Others, if Appropriate</p> <p>Transcribe Songs from the Recordings, Carefully Listen to the Whole Album to Recognize the Main Stylistic and Musical Elements Featured by the Artists</p> <p>Read the Liner Notes and Complementary Information About the Musicians (<i>e.g.</i>, Biographies, Interviews and Articles from Magazines) to Add a Complete Sense and Environment to the Motivation for Practice. After Inactivity, This is of Key Importance and will Benefit All Other Sections and Individual Concepts.</p>	1 hour

When the jazz pianist has a strong musical background with established practice habits his ability to identify topics on which to focus and their durations is natural and efficient. The present researcher recommends that even the experienced jazz pianist remember to alternate content in order to maintain the ongoing practice of *The Five Elements* to achieve a well-balanced/global performance foundation. There will be periods of time when the jazz pianist will focus on one particular element (*e.g.*, harmony, or writing original compositions), however, for the majority of time, this well-balanced approach to practice will be effective and beneficial to the jazz pianist.

Since the level, conditions, and limitations of the jazz pianist will determine the specific content to include in the practice routine, the present researcher did not offer an example PRT for this case. Therefore, the jazz pianist should design his own PRT based on his situation, experience, and goals.

4.5. Routine #5: Classical Training Background

The pianist transitioning from a classical background/training to jazz will need to develop a new concept about his practice routines. Unlike the study of classical music, there is not much material on the jazz pianist's music stand as a majority of the practice of jazz occurs over concepts and through the development of aural skills. Even though the concept of music creation is the same between these musical styles, the approach is different. Consequently, the jazz pianist needs to start by thinking about music in a "complete way". This complete (whole) approach is similar to the work of a composer who understands and employs numerous elements involved in the process of a musical performance as he writes music.

It is not the present researcher's intent to diminish or look down on the preparation, level, and experiences of classically trained pianists. Great classical performers are highly accomplished musicians with deep knowledge and skills. Moreover, some of these artists are great improvisers as well. Throughout the history of music classical musicians have been appreciated as composers, performers and improvisers—all three components conceived as one.

During the twentieth century, traditional music conservatories focused on classical music and a western art music approach to education⁴¹⁶. Therefore, in this setting, contemporary styles of music, composition, and improvisation were either not addressed or addressed in a limited manner⁴¹⁷. This resulted in jazz emerging from outside of the academic environment, at clubs and in underground circles. As recently as fifty years ago, jazz music was accepted and recognized within the academic community⁴¹⁸, and since then its incorporation to cultural life has increased. Nowadays, especially within the music community, both classical and jazz styles are equally recognized, although the general public and industry still establish certain differences.

The present researcher has observed an increasing number of classical musicians with the desire to expand their musical foundation and develop skills to improvise, either in the jazz language or in other contemporary styles, such as world music. In addition to possessing a strong foundation in technique, these musicians often have a wide cultural

⁴¹⁶ Lois Choksy, *Teaching Music in the Twentieth Century* (Englewood Cliffs, NJ: Prentice-Hall, 1986).

⁴¹⁷ *Ibid.*

⁴¹⁸ At the Tanglewood Symposium (1967, Tanglewood, Massachusetts, USA), sponsored by the Music Educators National Conference (now the National Association for Music Education), jazz music was accepted within the American education curriculum.

background and general sense of musicality. However, some aspects, like rhythm and applied harmony, have not been developed, which often results in frustration when performing and interacting with other musicians without a music score to follow.

The (new) jazz pianist may assimilate the musical elements required in jazz through a well-planned method of practice. This approach includes emphasizing concepts such as language and time feel as priorities for developing an appropriate practice routine. Since technique and sight-reading do not represent any difficulties for classically trained pianists, they will not be included in the routine template. On the other hand, “Singing with the solos”, jazz harmony voicings, and improvisation, are among the initial priorities for this work. The present researcher recommends that the (new) jazz pianist spend as much time as possible improvising with a rhythm section accompaniment (bass and drums), using as little theory and harmonic material as possible, just one scale would be sufficient. This exercise can be performed over the *blues* form, which requires little theory foundation to start to improvise: I7, IV7 and V7 chords over a constant 12 bar progression, and the *blues* scale, that works over all chord changes. By playing by ear the (new) jazz pianist will experience immediate benefits and progress in the jazz style.

After teaching a jazz improvisation class for classical pianists (a mandatory course during the third year of the classical piano undergraduate degree⁴¹⁹) for approximately ten years, the present researcher observed classical pianists progressing very quickly and successfully in this setting. These students developed new musical skills

⁴¹⁹ Liceu Conservatory, Barcelona (Spain). Founded in 1837, offers undergraduate and graduate degrees in classical music, jazz, flamenco, composition and pedagogy, for all instruments. The jazz department was founded in the year 2003, by the author of the present research.

and abilities, and mostly experienced difficulty when improvising by ear and/or interacting without a pre-established plan about the music being performed.

The (new) jazz pianist will benefit from the supervision of a private teacher and classroom instruction, studying both theory and performance, as he transitions to the jazz idiom. He needs structure and guidance from his teachers in the form of specific exercises to practice, chord voicings, harmonic progressions, and a selected list of solo transcription and repertoire. Further, as the (new) jazz pianist gains experience, he will require less teacher supervision.

Table 71 includes a PRT outlining material for the (new) jazz pianist's first complete year of jazz study. As he develops, the PRT content will need to be updated with individualized content and time distributions. This content should include *The Five Elements* equally, in order to foster a well-balanced musical foundation. The present researcher recommends that the (new) jazz pianist practice five hours per day (six days per week). This is the same as his recommendation for a full-time jazz piano student; however, this may be adapted as needed. During this first stage of learning the jazz language, it is essential for the (new) jazz pianist to listen to live performances of jazz music and jazz recordings. In addition, spending time performing with other jazz musicians will perhaps be more beneficial than studying music theory or practicing the instrument alone.

TABLE 71. Routine #5: Classical pianists with classical background

	September to August	Fall / Spring Semesters (1 year)	Duration: 5 hours
	Section	Topic	Time
1	Technique	No Extra Work is Needed, Just Maintenance through the Practice of the Repertoire	1 hour
2	Harmony	4WC Chord Voicings in All Piano Techniques (Solo, Duo, Trio, and Settings), Switching Inversions and Close and <i>Spread</i> Voicings, Individually and Over The II-V-I Progression <i>Blues</i> Form in Different Keys (Up to 6 Keys), Using the Basic (I7, IV7, V7) and <i>Bebop</i> Harmonic Progressions	1 hour
3	Language	Singing with the Solos: Principally From Horn Players (<i>e.g.</i> , Lester Young, Chet Baker, Miles Davis, Sonny Rollins, Hank Mobley, guitarist: Charlie Christian) Also Include Solos from the Following Pianists: Wynton Kelly, Red Garland, Barry Harris and Oscar Peterson. Licks and Phrases	1 hour
4	Improvisation	Exercises Over the II-V7-I Progression, Principally Using Diatonic Scales and Guide Notes, and Incorporation of Licks and Patterns <i>Blues</i> Progression, Using the <i>Blues</i> Scales and Diatonic Scales and Arpeggios Time Feel and Phrase Articulation are the Main Topics	1 hour
5	Repertoire	10 Jazz Standard Songs of Varied Styles (<i>e.g.</i> , Swing, Ballad, Bossa Nova) Apply <i>Spread</i> Voicings and Melody to Outline the Sound of the Song Perform in a Variety of Keys, with Contrasting Tempos and Time Signatures	1 hour

5. All Keys and Metronome

The present researcher asserts that the use of a metronome and the ability to perform and navigate across all keys are the backbone of the practice routine, because they are used to create pulse, rhythm, and harmony. In the words of Plato: “Musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul”⁴²⁰.

By using a metronome on a regular basis, the jazz pianist will gradually and progressively develop his inner pulse—an internal beat that drives the music like the human heart drives the body. At first, the use of a metronome may be difficult for the jazz pianist, but as the foundation advances, it will become one of the most powerful tools he uses to develop musicianship.

Working in different keys and transposing songs to other harmonic contexts provides the jazz pianist with opportunities to explore and understand harmonic rhythm and functions. Moreover, this practice allows the jazz pianist to connect harmonic and rhythmic ideas with elements such as melody and form. The present researcher recommends that jazz pianists initially transpose to the nearest keys, like a half- or one-step up or down, and progress to keys of greater distances. The ability to play in any key is essential for a jazz pianist.

⁴²⁰ Plato, *The Republic*. Translated by G.M.A. Grube. Revised by C.D.C. Reeve. Second Edition. (Cambridge, MA: Hackett Publishing Co. Inc., 1992), Book III, 409-B.

6. Ear Training 24/7

Ear Training is central to the practice and performance of a jazz pianist, and is embedded throughout this research. The present researcher recommends that the jazz pianist develop ear training skills by singing along when practicing topics such as harmonic concepts or technique exercises in order to navigate and recognize sounds in different contexts. Transcription and real time dictation also develop the jazz pianist's ears, both during practice time and during live performances (recognizing the musical elements performed by other musicians).

The jazz pianist increases ear training skills in many settings such as when listening to a record in a relaxed situation, for example. Moreover, the jazz pianist's ability to hear chord changes or the bass line, and recognize the rhythm and style can be practiced apart from the instrument. This approach to practicing music—without an instrument fosters knowledge, application, evaluation, focus, and artistry.

The present researcher recommends that the jazz pianist consider all topics related to harmony, for example, as ear training exercises to be practiced with the instrument and without. These experiences shape the jazz pianist's perspective and inform his musical foundation. Moreover, as the jazz pianist advances, his ear training abilities improve and he is able to employ more musical elements, greater command of the instrument, and express his original artistic voice.

7. Reference List of Music Topics

As part of the configuration of a personal practice routine, the jazz pianist should create his own list of music topics, as an index of contents of all resources available.

These music topics should be included in the practice routine templates by category, and updated to accommodate specific goals and calendar. Table 72 includes an example of researcher-recommended musical topics organized by category (*i.e.*, general, technique, harmony, language, and improvisation), offered as a reference and guideline to the jazz pianist.

TABLE 72. Example list of reference music topics

GENERAL

- Metronome (Ballad: 60 bpm; Medium Swing: 120 bpm; Up-Tempo Swing: 240 bpm)
- All 12 keys
- Sound
- Articulation and Dynamics
- Natural Fingering
- Body and Hand Position
- Time Feel and Rhythm
- Focus
- Form: *Blues*, AABA
- Classical Literature

1. TECHNIQUE

Scales

- Major Scale 7 Diatonic Modes: Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, Locrian
- Harmonic Minor
- Melodic Minor Modes: Lydian Augmented, Lydian b7, Mixolydian b13, Dorian Altered (Locrian 9), Altered (Super Locrian).
- Symmetrical: Diminished (1-½) and Sym. Dominant (½, 1)
- Whole Tone
- Major and Minor Pentatonics
- *Blues*
- Chromatic

Arpeggios

- Maj7, m7, 7, m7(b5), °7, 7sus4
- Diatonic
- Broken

Exercises

- Hanon
- Two-hand Melodies
- Licks and Patterns

2. HARMONY

Voicings

- Triads
- Four-note Chords
- Guide Notes
- Four Way Close (4WC)
- Diatonic FWC voicings
- Three-part Voicings in Fourths
- Impressionistic
- Parallel Voicings (*So What*, etc.)
- Open Voicings and Spread Voicings
- Free Voicings

Progressions

- II-V-I
- *Turn Aounds*
- Cycle of Diatonic Fourths
- *Blues*
- *Rhythm Changes*
- Single-Chord Modal Vamp

3. LANGUAGE

- Solo Transcriptions
- Patterns and Licks
- Introductions, Codas, and Endings
- Rhythm Section Licks

4. IMPROVISATION

- Time Feel
- Use of Space
- Motif Development
- Melodic and Rhythmic Embellishment
- Guide-tones
- Articulation
- Syncopation
- Double Time
- Pentatonics, etc.

5. REPERTOIRE

- 5 Levels of Lists (up to 1000 songs)
- Original Compositions
- Styles and Piano Techniques

8. The Garden

In a way, practicing music is like growing flowers, sharing approaches like regular care and observation. Nature, when observed carefully, can provide a lot of information about how things work in life, and so in music. Also, a deeper self-knowledge and realization can be developed by applying the same rules that nature, animals, and plants follow. The following text is a reflection about the benefits of growing a garden with parallels to practicing music.

Have you ever had your own garden? I encourage you to build and maintain one. It will show you very important things about how nature works and also about you. To create and maintain a garden has a lot of similitudes with developing a successful practice routine, prevailing the value of constancy and perseverance.

Prepare first a nice set up, well located, with good land and space for the roots to grow. A strong foundation will allow good results and will survive to adverse external situations. Regular care and maintenance is needed, as well as watering. Clean up the “bad plants”, because they take the energy that the good plants need.

Same plants behave different every season, depending of external and environment conditions changes. Our inner perception about them also changes. Every small component in nature has a sophisticated environment itself, its own microsystem. Everything happens for a reason, natural laws, if changed, will not work. All four seasons are equally important for the proper growing of plants,

spring and summer when flowers grow and are beautiful, and also autumn and winter when they are at the end of their season, and need to sleep to be alive again in the next year. Nature functions by cyclic behavior, everything repeats after one year, and can regenerate if the conditions are favorable.

Nature is wise and old. Lots of things can be learned just by observing it.

And do not forget to smell the roses every morning.

Table 73 provides a selection of bibliography about practice, including non-music books. The present researcher asserts that additional related bibliography about meditation, philosophy and fiction will be very useful for the development of a personal approach to practice.

TABLE 73. Recommended bibliography related to practice, including non-music books

- Bruser, Madeline. *The Art of Practicing*. New York, NY: Bell Tower, 1997.
- Coker, Jerry. *How to Practice Jazz*. New Albany, IN: Jamey Aebersold Jazz Inc., 1990.
- Davis, Miles, and Quincy Troupe. *Miles: The Autobiography*. New York, NY: Simon and Schuster, 1989.
- Gallwey, W. Timothy. *The Inner Game of Tennis*. New York, NY: Random House Trade Paperbacks, 1997.
- Herrigel, Eugen. *Zen in the Art of Archery*. Translated by R. F. C. Hull and Daisetz T. Suzuki. New York, NY: Vintage Books, 1999.
- Honoré, Carl. *In Praise of Slowness: Challenging the Cult of Speed*. New York, NY: HarperOne, 2005.
- Kant, Immanuel. *Critique of Judgment*, trans. J. H. Bernard. New York, NY: Farrer, 1951.
- Lemov, Doug, and Erica Woolway, Katie Yezzi and Dan Heath. *Practice Perfect: 42 Rules for Getting Better at Getting Better*. San Francisco, CA: Jossey-Bass, 2012
- Liebman, David. *Self Portrait of a Jazz Artist: Musical Thoughts and Realities*. Rottenburg, Germany: Advance Music, 1988.
- Machiavelli, Niccolò. *The Prince*. New York, NY: The Harvard Classics, edited by Charles W. Eliot, 1909-14.
- Pettinger, Peter. *Bill Evans: How My Heart Sings*. New Haven, CT: Yale University Press, 1973.
- Sartre, Jean-Pau. *Existentialism and Human Emotions*. New York, NY: Citadel, 1985 [1957].
- Süskind, Patrick. *Perfume: The Story of a Murderer*. New York, NY: Knopf Doubleday Publishing Group, 2001.
- Taylor, Arthur. *Notes and Tones: Musician-to-Musician Interviews*. Cambridge, MA: Da Capo Press, 1993.
- Tzu, Sun. *The Art of War*. New York, NY: Oxford University Press, 1971.
- Werner, Kenny. *Effortless Mastery*. New Albany, IN: Jamey Aebersold Jazz Inc., 1996.

As a final offering the present researcher recommends ten selected books to the jazz pianist (see table 74) for his reading and study. This list included books selected for their methodology, specific information about the art of practice, the establishment of a musical foundation, and/or suggestions regarding the development of a personal artistic voice.

TABLE 74. Ten recommended selected books for the jazz pianist

- Bach, Johann Sebastian. *The Well-Tempered Clavier. Books 1 and 2*. Ed. by Ernst-Günter Heinemann (Book 1, 1997) and Yo Temita (Book 2, 2007). Munich, Germany: G. Henle Verlag, 1997, 2007.
- Crook, Hal. *How to Improvise: An Approach to Practicing Improvisation*. Rottenburg, Germany: Advance Music, 1991.
- Crook, Hal. *Ready, Aim, Improvise!* Rottenburg, Germany: Advance Music, 1999.
- Dobbins, Bill. *The Contemporary Jazz Pianist: A Comprehensive Approach to Keyboard Improvisation – Volumes 1-4*. New York, NY: Charles Colin Music, 1978-1989.
- Frank, Dave and John Amaral. *Joy of Improv - Books One and Two*. Milwaukee, WI: Hal Leonard Corp., 1998.
- Levine, Mark. *The Jazz Theory Book*. Petaluma, CA: Sher Music, 1995.
- Levine, Mark. *The Piano Book*. Petaluma, CA: Sher Music, 1989.
- Neuhaus, Heinrich. *The Art of Piano Playing*. Wolfeboro, NH: Longwood Academic, 1973.
- Reeves, Scott D. *Creative Jazz Improvisation*. 2nd ed. Upper Saddle River, NJ: Prentice-Hall Inc., 1995.
- Werner, Kenny. *Effortless Mastery*. New Albany, IN: Jamey Aebersold Jazz Inc., 1996.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

With the intent of improving performance and creativity, the purpose of this research was to gain information about practice methods and techniques directed to develop a personal practice routine for the contemporary jazz pianist. The investigation was categorized in three sections. First, devoted to the piano as an instrument, exploring its technical, mechanical, and acoustical characteristics. Second, focused on theory and music with application for jazz pianists, by selecting and organizing music topics in five categories –referred to in the present study as *The Five Elements* (*i.e.*, Technique, Harmony, Language, Improvisation, and Repertoire). Third, investigation of different approaches to practice, both from the classical music tradition and the jazz methodology, in order to develop a personal practice routine for jazz pianists. This last section consists of the most essential contribution of the present research –a synthesis of published jazz methods, jazz performance practices and historical traditions, exemplary repertoire, and resources for the jazz pianist.

The original information presented is based on the review of related literature published in the area of jazz performance; the experiences of respected jazz performers, students and pedagogues; and the synthesis of methods and approaches. An extensive investigation of *best pedagogical practices*, jazz traditions, and published resources, was undertaken in order to outline content for a personal practice routine for jazz pianists and

other musicians as creative as performances that combines the study of technique, harmony, language, improvisation, and repertoire. Individual music topics addressed in published jazz methods were selected and categorized by subject, and incorporated into the researcher-designed practice routine templates.

A comprehensive review of literature was undertaken in order to gain a better understanding of the issues related to the art of practicing for jazz pianists. Sources studied included music books, non-music books (*e.g.*, sports, psychology, fiction, philosophy), journal articles, magazine articles, dissertations, method books, websites, biographies, videos, and discography. The resulting bibliography covers a wide range of specialized subjects about jazz, piano, music, and practice. One of the purposes of the present research was to select a representative bibliography related to specific music, jazz, and practice topics to recommend to others.

Data obtained from personal musical experiences and pedagogical work with students were considered throughout the research process, which added a real-world application—intended to blur the lines between research and practice. Moreover, the approach related to music content and practice methods presented (in the researcher-designed practice routine templates) was applied and developed through direct work with students from all levels (primarily college level) for more than ten years. The present researcher's main intention was to provide a system for the jazz pianist to develop his own practice routines and approach to music, based on a vast knowledge of all resources available to date.

One of the purposes of the present research was to provide jazz pianists with selected recommended bibliography and discography to include in their practice routines.

Due to the abundance of resources available (*e.g.*, Internet, repertoire, discography), less experienced jazz pianists often have difficulty selecting the best material for practice purposes. Accordingly, comprehensive tables with selected bibliography about practice methods and music topics (*i.e.*, technique, harmony, language, improvisation, repertoire) and discography were offered as reference guides for jazz pianists.

This research may be read in a non-linear manner. Advanced jazz pianists and/or pedagogues may go directly to Part Three (*Practice Routine*), or to specific musical topics from Part Two (*The Music*). In addition, appendices provide extensive selected repertoire lists, a detailed solo transcription, an “at-a-glance” reference list of scales and discography, which may be also consulted independently.

Conclusions

On the basis of this research, it may be concluded that the jazz pianist needs a strong musical foundation, which is acquired through purposeful habits of practice and performance experience. This combination of habits of practice and performance allows the jazz pianist to develop a personal artistic voice and positions him for a successful career in music. Moreover, purposeful habits of practice and performance shape the jazz pianist’s artistic perspective, which should be developed to combine the individual music elements that comprise music creation.

The present researcher concludes that the jazz pianist obtains his best results when musical contents are properly organized and categorized in sections, for their implementation into specific practice routine templates to achieve individual goals. Accordingly, the following five steps are offered to articulate the primary underpinnings of this conclusion for the development of a personal practice routine:

- 1) Selection and organization of musical topics in five categories, referred to as *The Five Elements* in this study: Technique, Harmony, Language, Improvisation, and Repertoire.
- 2) Creation of a practice routine based on the researcher-designed practice routine template (PRT) (see Appendix D);
- 3) Incorporation of specific music topics into the PRT according to defined goals;
- 4) Execution of the routine during the time frame scheduled; and
- 5) Self-review, analysis, and feedback of results.

For best results, and a full development of the jazz pianist's talents and artistry, a well-planned and executed practice routine needs to be established, with clearly stated short- and long-term goals. A strict execution of the practice routine will enhance results, accomplishing scheduled goals and creating opportunities for personal expression and artistic growth.

Jazz artists, including jazz pianists, require a deep understanding of music theory, improvisation, repertoire, and communication skills. There are many factors that contribute to the development of a jazz pianist including both innate abilities and environmental influences. Therefore the jazz pianist must remember to listen to his heart and his music, as he learns from the world.

Different approaches to the same subject (*i.e.*, harmonic chord voicings, improvisation) are more beneficial and provide a richer vocabulary and music quality. Regular update of contents and approaches is needed in order to improve artistic level ("Keep the music fresh!").

Musical artistic freedom is achieved, when individual music elements (*i.e.* technique, harmony, language, improvisation, repertoire) are mastered. This results in no technical limitations for full artistic expression and communication.

The present researcher concludes that best results are gathered when information is obtained directly from primary sources (*i.e.*, music recordings, live performances, communication with other musicians) through an aural process (audiation). Further analysis and theory work will complement the learning process, and will help to develop practice methods.

Recommendations

The research process is designed to identify new findings based on the body of literature and experiences of others—and is one that, in turn, results in great learning and personal growth for the researcher. Based on this study, and the research process undertaken, the present researcher recommends further investigation as follows:

1. To purposely incorporate other contemporary styles of music to the study of habits of practice (*i.e.*, pop/rock, world, folk, flamenco) to lead the performer to acquire artistic and technical results and a global artistic conception.
2. To expand and annotate the recommended bibliography for each music topic, and to develop criteria related to a personal selection, and pedagogical tools for jazz education.
3. To develop methodology to foster classical piano technique for jazz pianists, in order to achieve a strong foundation in piano technique and to apply classical music concepts (*i.e.*, harmony, phrasing, form) to the jazz language.

4. To develop methodology that fosters ear training skills by singing along when practicing topics such as harmonic concepts or technique exercises in order to navigate and recognize sounds in different contexts, transcribing music, aural recognition and dictation.
5. To further study focus, attitude, and motivation skills needed for the practice of jazz music and performance.
6. To identify ways to integrate art forms like literature (fiction, non-fiction) and visual arts, into the practice routines for jazz pianists.
7. To develop a personal index and cataloging system that allows the jazz pianist to have easy access to all resources available (*i.e.*, books, audio, video, media).
8. A further exploration about practice methods and different approaches should be made to accommodate musical contents to personal abilities and interests of jazz pianists.
9. To investigate the role of an integrated foundation in cultural arts, history, philosophy, and literature, on the artistic personality of the jazz pianist, not only as a musician, but also as a global intellectual and artist.

One final recommendation from the author of this research is to be constant and perseverant during the life-long learning process of becoming a jazz pianist. Personal goals and dreams can be achieved through well-organized practice habits, hard work, and determination. Attitude defines life.

APPENDICES

Appendix A: Repertoire lists

Appendix A.1. Repertoire - Level 1: 50 Songs

1. All Blues
2. All Of Me
3. All The Things You Are
4. Alone Together
5. Anthropology
6. Au Privave
7. Autumn Leaves
8. Beautiful Love
9. Billie's Bounce
10. Black Orpheus
11. Blue Bossa
12. Confirmation
13. Days Of Wine And Roses
14. Equinox
15. Footprints
16. Girl From Ipanema, The
17. Green Dolphin Street, On
18. Have You Met Miss Jones
19. How High The Moon
20. How Insensitive
21. I Can't Get Started
22. I Got Rhythm
23. I Love You
24. In A Sentimental Mood
25. In Your Own Sweet Way
26. Invitation
27. It Could Happen To You
28. Just Friends
29. Lady Bird
30. Like Someone In Love
31. Lullaby Of Birdland
32. My Romance
33. Nardis
34. Night And Day
35. Now's The Time
36. Oleo
37. Scrapple From The Apple
38. Softly, As In A Morning Sunrise
39. Solar
40. Someday My Prince Will Come
41. So What
42. St. Thomas
43. Stella By Starlight
44. Straight, No Chaser
45. Take The "A" Train
46. Tenor Madness
47. There Is No Greater Love
48. There Will Never Be Another You
49. Well, You Needn't
50. What Is This Thing Called Love

Appendix A.2. Repertoire - Level 2: 100 Songs

1. All Blues
2. All Of Me
3. All Of You
4. All The Things You Are
5. Alone Together
6. Anthropology
7. Au Privave
8. Autumn Leaves
9. Beautiful Love
10. Billie's Bounce
11. Black Orpheus
12. Blue Bossa
13. Blue Monk
14. Blues For Alice
15. Body And Soul
16. Bye Bye Blackbird
17. C Jam Blues
18. Cherokee
19. Confirmation
20. Days Of Wine And Roses
21. Desafinado
22. Donna Lee
23. Equinox
24. Fly Me To The Moon
25. Footprints
26. Four
27. Freddie Freeloader
28. Giant Steps
29. Girl From Ipanema, The
30. Gone With The Wind
31. Good Bait
32. Green Dolphin Street, On
33. Have You Met Miss Jones
34. How Deep Is The Ocean
35. How High The Moon
36. How Insensitive
37. I Can't Get Started
38. I Got Rhythm
39. I Hear I Rhapsody
40. I Love You
41. I Thought About You
42. I'll Remember April
43. In A Sentimental Mood
44. In Your Own Sweet Way
45. Invitation
46. It Could Happen To You
47. Joy Spring
48. Just Friends
49. Lady Bird
50. Lazy Bird

51. Like Someone In Love
52. Lullaby Of Birdland
53. Mack The Knife
54. Misty
55. Moment's Notice
56. Moose The Mooche
57. Mr. P.C.
58. My Funny Valentine
59. My One And Only Love
60. My Romance
61. Nardis
62. Night And Day
63. Night In Tunisia, A
64. Now's The Time
65. Old Folks
66. Oleo
67. Ornithology
68. Out Of Nowhere
69. Peace
70. Pfrancing
71. Polka Dots And Moonbeams
72. Recordame
73. 'Round Midnight
74. Satin Doll
75. Scapple From The Apple
76. Shadow Of Your Smile, The
77. Softly, As In A Morning Sunrise
78. Solar
79. Someday My Prince Will Come
80. So What
81. St. Thomas
82. Star Eyes
83. Stella By Starlight
84. Stompin' At The Savoy
85. Straight, No Chaser
86. Summertime
87. Take Five
88. Take The "A" Train
89. Tenor Madness
90. There Is No Greater Love
91. There Will Never Be Another You
92. They Can't Take That Away From Me
93. Tune Up
94. Up Jumped Spring
95. Wave
96. Well, You Needn't
97. What Is This Thing Called Love
98. When I Fall In Love
99. Yesterdays
100. You Don't Know What Love Is

Appendix A.3. Repertoire - Level 3: 250 Songs

1. Airegin
2. Alice In Wonderland
3. All Blues
4. All Of Me
5. All Of You
6. All The Things You Are
7. Alone Together
8. Along Came Betty
9. Angel Eyes
10. Anthropology
11. As Time Goes By
12. Ask Me Now
13. Au Privave
14. Autumn In New York
15. Autumn Leaves
16. Bag's Groove
17. Beautiful Love
18. Bemsha Swing
19. Bessie's Blues
20. Bewitched
21. Billie's Bounce
22. Black Narcissus
23. Black Nile
24. Black Orpheus
25. Blame It On My Youth
26. Blue Bossa
27. Blue Moonblue In Green
28. Blue Monk
29. Blues For Alice
30. Bluesette
31. Body And Soul
32. Bouncin' With Bud
33. But Beautiful
34. But Not For Me
35. Bye Bye Blackbird
36. C Jam Blues
37. Caravan
38. Ceora
39. Child Is Born, A
40. Chega De Saudade
41. Chelsea Bridge
42. Cherokee
43. Come Fly With Me
44. Confirmation
45. Countdown
46. Cousin Mary
47. Daahoud
48. Darn That Dream
49. Days Of Wine And Roses, The
50. Desafinado

51. Dig
52. Django
53. Dolphin Dance
54. Don't Blame Me
55. Donna Lee
56. Doxy
57. Easy Living
58. Embraceable You
59. Epistrophy
60. Equinox
61. E.S.P.
62. Eternal Triangle
63. Evidence
64. Falling Grace
65. Falling In Love With Love
66. Fascinating Rhythm
67. Felicidade, A
68. Fly Me To The Moon
69. Foggy Day, A
70. Footprints
71. Four
72. Four Brothers
73. Freddie Freeloader
74. Gentle Rain, The
75. Georgia On My Mind
76. Giant Steps
77. Girl From Ipanema, The
78. God Bless The Child
79. Gone With The Wind
80. Good Bait
81. Green Dolphin Street, On
82. Groovin' High
83. Half Nelson
84. Have You Met Miss Jones
85. Here's That Rainy Day
86. Hi-Fly
87. How Deep Is The Ocean
88. How High The Moon
89. How Insensitive
90. How My Heart Sings
91. I Can't Get Started
92. I Could Write A Book
93. I Fall In Love Too Easily
94. I Got Rhythm
95. I Hear I Rhapsody
96. I Love You
97. I Mean You
98. I Remember Clifford
99. I Remember You
100. I Should Care

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| 101. I Thought About You | 126. Kicker, The |
| 102. If I Should Lose You | 127. Killer Joe |
| 103. If I Were A Bell | 128. Lady Bird |
| 104. If You Could See Me Now | 129. Laura |
| 105. I'll Remember April | 130. Lazy Bird |
| 106. I'm Getting Sentimental Over You | 131. Like Someone In Love |
| 107. I'm Old Fashioned | 132. Little Sunflower |
| 108. Impressions | 133. Love For Sale |
| 109. In A Mellow Tone | 134. Lover Man |
| 110. In A Sentimental Mood | 135. Lullaby Of Birdland |
| 111. In Your Own Sweet Way | 136. Lullaby Of The Leaves |
| 112. Indiana | 137. Lush Life |
| 113. Infant Eyes | 138. Mack The Knife |
| 114. Invitation | 139. Maiden Voyage |
| 115. Israel | 140. Memories Of Tomorrow |
| 116. It Could Happen To You | 141. Memories Of You |
| 117. It Never Entered My Mind | 142. Milestones (New) |
| 118. It's Only A Paper Moon | 143. Minority |
| 119. I've Got The World On A String | 144. Misty |
| 120. Jordu | 145. Moanin' |
| 121. Joshua | 146. Moment's Notice |
| 122. Joy Spring | 147. Monk's Mood |
| 123. Just Friends | 148. Moonglow |
| 124. Just One Of Those Things | 149. Moose The Mooche |
| 125. Just You, Just Me | 150. Mr. P.C. |

151. My Favorite Things
152. My Foolish Heart
153. My Funny Valentine
154. My One And Only Love
155. My Romance
156. Naima
157. Nardis
158. Nature Boy
159. Nica's Dream
160. Night And Day
161. Hight Has A Thousand Eyes, The
162. Night In Tunisia, A
163. Now's The Time
164. Old Folks
165. Oleo
166. Once I Loved
167. One Note Samba
168. Ornithology
169. Out Of Nowhere
170. Over The Rainbow
171. Peace
172. Peri's Scope
173. Pfrancing
174. Polka Dots & Moonbeams
175. Prelude To A Kiss
176. Recordame
177. Rhythm-A-Ning
178. 'Round Midnight
179. Ruby My Dear
180. Sail Away
181. Salt Peanuts
182. Sandu
183. Satin Doll
184. Scrapple From The Apple
185. Serpent's Tooth
186. Seven Steps To Heaven
187. Shadow Of Your Smile, The
188. Shaw 'Nuff
189. Since We Met
190. Skylark
191. Smile
192. Smoke Gets Into Your Eyes
193. Softly, As In A Morning Sunrise
194. Solar
195. Solitude
196. Someday My Prince Will Come
197. Someone To Watch Over Me
198. Sonnymoon For Two
199. Sophisticated Lady
200. So What

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| 201. Song Is You, The | 226. Things Ain't What They Used To Be |
| 202. Speak Low | 227. Time After Time |
| 203. Speak No Evil | 228. Time Remembered |
| 204. Spring Is Here | 229. Tune Up |
| 205. St. Thomas | 230. Turn Out The Stars |
| 206. Stablemates | 231. Up Jumped Spring |
| 207. Star Eyes | 232. Very Early |
| 208. Stardust | 233. Walkin' |
| 209. Stella By Starlight | 234. Waltz For Debby |
| 210. Stompin' At The Savoy | 235. Wave |
| 211. Straight, No Chaser | 236. Well, You Needn't |
| 212. Summertime | 237. What Is This Thing Called Love |
| 213. Sunny Side Of The Street, On The | 238. When I Fall In Love |
| 214. Sweet Georgia Brown | 239. When Lights Are Low |
| 215. Take Five | 240. When The Saints Go Marching On |
| 216. Take The "A" Train | 241. Whisper Not |
| 217. Tangerine | 242. Windows |
| 218. Tea For Two | 243. Woody'n You |
| 219. Tenderly | 244. Yesterdays |
| 220. Tenor Madness | 245. You And The Night And The Music |
| 221. The Theme | 246. You Don't Know What Love Is |
| 222. There Is No Greater Love | 247. You Must Believe In Spring |
| 223. There Will Never Be Another You | 248. You'd Be So Nice To Come Home To |
| 224. They Can't Take That Away From
Me | 249. Young At Heart |
| 225. This I Dig Of You | 250. Zingaro (Retrato Em Branco E Preto) |

Appendix A.4. Repertoire - Level 4: 500 Songs

1. 26-2
2. Afro Blue
3. Afternoon In Paris
4. Agua De Beber
5. Ah-Leu-Cha
6. Ain't Misbehavin'
7. Ain't No Sunshine
8. Airegin
9. Alice In Wonderland
10. All Blues
11. All God's Chillun
12. All My Tomorrows
13. All Of Me
14. All Of You
15. All Or Nothing At All
16. All The Things You Are
17. Alone Together
18. Along Came Betty
19. Always
20. Ana Maria
21. Angel Eyes
22. Anthropology
23. April In Paris
24. Armando's Rhumba
25. As Time Goes By
26. Ask Me Now
27. Au Privave
28. Autumn In New York
29. Autumn Leaves
30. Bag's Groove
31. Barbados
32. Basin Street Blues
33. Be My Love
34. Beatrice
35. Beautiful Love
36. Beauty And The Beast
37. Bebop
38. Begin The Beguine
39. Bemsha Swing
40. Bésame Mucho
41. Bessie's Blues
42. Bewitched, Bothered, And Bewildered
43. Billie's Bounce
44. Billy Boy
45. Black Coffee
46. Black Narcissus
47. Black Nile
48. Black Orpheus (Manha De Carnaval)
49. Blame It On My Youth
50. Bloombido

51. Blue Bossa
52. Blue Moon
53. Blue In Green
54. Blue Monk
55. Blue Train
56. Blues By Five
57. Blues For Alice
58. Blues In The Closet
59. Blues On The Corner
60. Bluesette
61. Body And Soul
62. Bohemia After Dark
63. Bolivia
64. Boplicity
65. Bouncin' With Bud
66. Boy Next Door, The
67. Brazil
68. But Beautiful
69. But Not For Me
70. Bye Bye Blackbird
71. C Jam Blues
72. Cantaloupe Island
73. Caravan
74. Celia
75. Central Park West
76. Ceora
77. Chamaleon
78. Chega De Saudade
79. Chelsea Bridge
80. Cherokee
81. Cheryl
82. Child Is Born, A
83. Clear Day, On A
84. Come Fly With Me
85. Come Rain Or Come Shine
86. Comrade Conrad
87. Con Alma
88. Conception
89. Confirmation
90. Corcovado
91. Cottontail
92. Countdown
93. Cousin Mary
94. Crescent
95. Cry Me A River
96. Crystal Silence
97. Daahoud
98. Dance Of The Infidels
99. Dancing In The Dark
100. Dancing On The Ceiling

101. Darn That Dream
102. Days Of Wine And Roses, The
103. Dear Old Stockholm
104. Dearly Beloved
105. Desafinado
106. Dexterity
107. Dig
108. Django
109. Dolphin Dance
110. Dolphin, The
111. Donna Lee
112. Don't Blame Me
113. Don't Get Around Much Anymore
114. Down By The Riverside
115. Doxy
116. Duke, The
117. East Of The Sun
118. Easy Living
119. Easy To Love
120. Embraceable You
121. Emily
122. Epistrophy
123. Equinox
124. E.S.P.
125. Estate
126. Eternal Triangle, The
127. Everything Happens To Me
128. Everything I Love
129. Evidence
130. Exactly Like You
131. Eye Of The Hurricane, The
132. Falling Grace
133. Falling In Love With Love
134. Fascinating Rhythm
135. Fascination
136. Fee-Fi-Fo-Fum
137. Feels So Good
138. Felicidade, A
139. Fever
140. Fine Romance, A
141. Five
142. Five Brothers
143. Flintstones, Meet The
144. Flower Is A Lovesome Thing, A
145. Fly Me To The Moon
146. Foggy Day, A
147. Footprints
148. For All We Know
149. For Once In My Life
150. Four

151. Four Brothers
152. Four By Five
153. Freddie Freeloader
154. Freedom Jazz Dance
155. From This Moment On
156. Funji Mama
157. Funkallero
158. Gentle Rain, The
159. Georgia On My Mind
160. Giant Steps
161. Girl From Ipanema, The
162. Gloria's Step
163. God Bless The Child
164. Golden Earring
165. Gone With The Wind
166. Good Bait
167. Goodbye Pork Pie Hat
168. Grand Central
169. Green Dolphin Street, On
170. Groovin' High
171. Half Nelson
172. Hallelujah
173. Hallucinations
174. Have You Met Miss Jones
175. Hello Dolly
176. Here's That Rainy Day
177. Hi-Fly
178. Honeysuckle Rose
179. How Deep Is The Ocean
180. How High The Moon
181. How Insensitive
182. How My Heart Sings
183. I Can't Get Started
184. I Could Write A Book
185. I Didn't Know What Time It Was
186. I Fall In Love Too Easily
187. I Got Rhythm
188. I Hear I Rhapsody
189. I Left My Heart In San Francisco
190. I Let A Song Go Out Of My Heart
191. I Love You
192. I Loves You Porgy
193. I Mean You
194. I Remember Clifford
195. I Remember You
196. I Should Care
197. I Thought About You
198. I Will Wait For You
199. I Wish I Knew
200. Idle Moments

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| 201. If I Should Lose You | 226. Israel |
| 202. If I Were A Bell | 227. It Could Happen To You |
| 203. If You Could See Me Now | 228. It Don't Mean A Thing |
| 204. If You Never Come To Me | 229. It Had To Be You |
| 205. I'll Be Seeing You | 230. It Never Entered My Mind |
| 206. I'll Remember April | 231. It's De-Lovely |
| 207. I'll Take Romance | 232. It's Easy To Remember |
| 208. I'm Getting Sentimental Over You | 233. It's Only A Paper Moon |
| 209. I'm In The Mood For Love | 234. I've Got The World On A String |
| 210. I'm Old Fashioned | 235. I've Got You Under My Skin |
| 211. Imagination | 236. James |
| 212. Impressions | 237. Jitterbug Waltz, The |
| 213. In A Mellow Tone | 238. Jordu |
| 214. In A Sentimental Mood | 239. Joshua |
| 215. In Love In Vain | 240. Joy Spring |
| 216. In My Solitude | 241. Juju |
| 217. In Walked Bud | 242. Just Friends |
| 218. In Your Own Sweet Way | 243. Just In Time |
| 219. Indiana | 244. Just One Of Those Things |
| 220. Infant Eyes | 245. Just Squeeze Me |
| 221. Inner Urge | 246. Just You, Just Me |
| 222. Invitation | 247. Katrina Ballerina |
| 223. Isfahan | 248. K.C. Blues |
| 224. Isn't It Romantic | 249. Kicker, The |
| 225. Isotope | 250. Killer Joe |

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| 251. Ladies In Mercedes | 276. Lullaby Of Birdland |
| 252. Lady Be Good | 277. Lullaby Of Broadway |
| 253. Lady Bird | 278. Lullaby Of The Leaves |
| 254. Lady Is A Tramp, The | 279. Lush Life |
| 255. Laird Baird | 280. Mack The Knife |
| 256. Lakes | 281. Maiden Voyage |
| 257. Lament | 282. Mambo Influenciado |
| 258. Last Night When We Were Young | 283. Mambo Inn |
| 259. Last Train Home | 284. Man I Love, The |
| 260. Laura | 285. Manisero, El |
| 261. Laurie | 286. Manteca |
| 262. Lazy Bird | 287. María Cervantes |
| 263. Lester Leaps In | 288. Más Que Nada |
| 264. Let's Fall In Love | 289. Masquerade Is Over, The |
| 265. Like Someone In Love | 290. Matrix |
| 266. Like Sonny | 291. Meaning Of The Blues, The |
| 267. Line For Lyons | 292. Meditation |
| 268. Little Sunflower | 293. Memories Of Tomorrow |
| 269. Locomotion | 294. Memories Of You |
| 270. Loop, The | 295. Mercy, Mercy, Mercy |
| 271. Love For Sale | 296. Miles Ahead |
| 272. Love Me Or Leave Me | 297. Milestones (New) |
| 273. Love Walked In | 298. Milestones (Old) |
| 274. Lover Man | 299. Minority |
| 275. Lucky Southern | 300. Misterioso |

301. Misty
302. Moanin'
303. Moment's Notice
304. Monk's Dream
305. Monk's Mood
306. Mood Indigo
307. Moon Alley
308. Moon And Sand
309. Moon River
310. Moondance
311. Moonglow
312. Moonlight In Vermont
313. Moose The Mooche
314. More I See You, The
315. Morning
316. Moten Swing
317. Mr. P.C.
318. My Favorite Things
319. My Foolish Heart
320. My Funny Valentine
321. My Heart Belongs To Daddy
322. My Heart Stood Still
323. My Ideal
324. My Little Suede Shoes
325. My Old Flame
326. My One And Only Love
327. My Romance
328. My Shining Hour
329. My Ship
330. Naima
331. Nancy With The Laughing Face
332. Nardis
333. Nature Boy
334. Nearness Of You, The
335. Nefertiti
336. Never Let Me Go
337. Nica's Dream
338. Night And Day
339. Night Has A Thousand Eyes, The
340. Night In Tunisia, A
341. Nightingale Sang In Berkeley Square, A
342. Now's The Time
343. Grande Amor
344. Off Minor
345. Old Folks
346. Old Devil Moon
347. Oleo
348. Once I Loved
349. One Note Samba
350. Ornithology

351. Oscar For Treadwell, An
352. Our Delight
353. Our Love Is Here To Stay
354. Out Of Nowhere
355. Over The Rainbow
356. Passion Dance
357. Passport
358. Peace
359. Peacocks, The
360. Peri's Scope
361. Pfrancing (No Blues)
362. Poinciana
363. Polka Dots And Moonbeams
364. Prelude To A Kiss
365. Prince Albert
366. Quiet Now
367. Recado Bossa Nova
368. Recordame (No Me Esqueca)
369. Reflections
370. Reflections In D
371. Relaxin' At Camarillo
372. Remember
373. Resolution
374. Rhythm-A-Ning
375. 'Round Midnight
376. Route 66
377. Ruby My Dear
378. 'S Wonderful
379. Salt Peanuts
380. Sail Away
381. Sandu
382. Satin Doll
383. Scrapple From The Apple
384. Segment
385. Serenity
386. Serpent's Tooth, The
387. Seven Steps To Heaven
388. Shadow Of Your Smile, The
389. Shaw 'Nuff
390. Sidewinder, The
391. Skylark
392. Since We Met
393. Sleepin' Bee, A
394. Smile
395. Smoke Gets Into Your Eyes
396. So In Love
397. So Tender
398. So What
399. Softly, As In A Morning Sunrise
400. Solar

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| 401. Solitude | 426. Summertime |
| 402. Some Other Time | 427. Sunny Side Of The Street, On The |
| 403. Someday My Prince Will Come | 428. Sweet And Lovely |
| 404. Someone To Watch Over Me | 429. Sweet Georgia Brown |
| 405. Sometime Ago | 430. Tadd's Delight |
| 406. Song For My Father | 431. Take Five |
| 407. Song Is You, The | 432. Take The "A" Train |
| 408. Sonnymoon For Two | 433. Take The Coltrane |
| 409. Sophisticated Lady | 434. Tangerine |
| 410. Sorcerer, The | 435. Tea For Two |
| 411. Spain | 436. Tell Me A Bedtime Story |
| 412. Speak Like A Child | 437. Tenderly |
| 413. Speak Low | 438. Tenor Madness |
| 414. Speak No Evil | 439. The Theme |
| 415. Spring Is Here | 440. There Is No Greater Love |
| 416. St. Thomas | 441. There Will Never Be Another You |
| 417. Stablemates | 442. These Foolish Things |
| 418. Star Eyes | 443. They Can't Take That Away From Me |
| 419. Stardust | 444. This I Dig Of You |
| 420. Stella By Starlight | 445. This Is For Albert |
| 421. Stolen Moments | 446. Things Ain't What They Used To Be |
| 422. Stompin' At The Savoy | 447. Time After Time |
| 423. Straight, No Chaser | 448. Time For Love, A |
| 424. Street Of Dreams | 449. Time Remembered |
| 425. Street Where You Live, On The | 450. Tricotism |

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| 451. Trinkle Tinkle | 475. What's New? |
| 452. Triste | 476. When I Fall In Love |
| 453. Tune Up | 477. When Lights Are Low |
| 454. Turn Out The Stars | 478. When Sunny Gets Blue |
| 455. Ugetsu (Fantasy In D) | 479. When The Saints Go Marching On |
| 456. Unforgettable | 480. When You Wish Upon A Star |
| 457. Un Poco Loco | 481. Whisper Not |
| 458. Up Jumped Spring | 482. Windows |
| 459. Upper Manhattan Medical Group | 483. Witchcraft |
| 460. Valse Hot | 484. With A Song In My Heart |
| 461. Valse Triste | 485. Without A Song |
| 462. Very Early | 486. Woody'n You |
| 463. Very Thought Of You, The | 487. Work Song |
| 464. Walkin' | 488. Yardbird Suite |
| 465. Waltz For Debby | 489. Yesterdays |
| 466. Watermelon Man | 490. You And The Night And The Music |
| 467. Wave | 491. You Are Too Beautiful |
| 468. Way You Look Tonight, The | 492. You Don't Know What Love Is |
| 469. We Will Meet Again | 493. You Make Me Feel So Young |
| 470. Well, You Needn't | 494. You Must Believe In Spring |
| 471. West Coast Blues | 495. You Took Advantage Of Me |
| 472. What A Wonderful World | 496. You'd Be So Nice To Come Home To |
| 473. What Are You Doing The Rest Of
Your Life? | 497. You're My Everything |
| 474. What Is This Thing Called Love | 498. Young And Foolish |
| | 499. Young At Heart |
| | 500. Zingaro (Retrato Em Branco E Preto) |

Appendix A.5. Repertoire - Level 5: 1000 Songs (Alphabetical)

1. 26-2
2. 52nd Street Theme
3. 500 Miles High
4. 502 Blues
5. Adam's Apple
6. Afro Blue
7. Afro Centric
8. After The Rain
9. After You
10. After You've Gone
11. Afternoon In Paris
12. Again
13. Agua De Beber
14. Ah-Leu-Cha
15. Ain't Misbehavin'
16. Ain't No Sunshine
17. Airegin
18. Aisha
19. Alfie
20. Alice In Wonderland
21. All Alone
22. All Blues
23. All God's Chillun
24. All My Tomorrows
25. All Of Me
26. All Of You
27. All Or Nothing At All
28. All The Things You Are
29. All The Way
30. All Through The Night
31. All Too Soon
32. Almost Like Being In Love
33. Alone Together
34. Alone Too Long
35. Along Came Betty
36. Always
37. Am I Blue?
38. Amor
39. Amor Em Paz
40. Ana Maria
41. Angel Eyes
42. Angoa
43. And The Angels Sing
44. Anthropology
45. Anything Goes
46. April In Paris
47. Are You Real?
48. Aren't You Glad You're You
49. Armando's Rhumba
50. As Time Goes By

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| 51. Ask Me Now | 76. Bebop |
| 52. At Long Last Love | 77. Begin The Beguine |
| 53. Atlantis | 78. Bemsha Swing |
| 54. Au Privave | 79. Bernie's Tune |
| 55. Autumn In New York | 80. Bésame Mucho |
| 56. Autumn Leaves | 81. Bess, You Is My Woman |
| 57. Autumn Nocturne | 82. Bessie's Blues |
| 58. Autumn Serenade | 83. Best Is Yet To Come, The |
| 59. Avalon | 84. Best Thing For You, The |
| 60. Azure | 85. Between The Devil And The Deep
Blue Sea |
| 61. B Minor Waltz | 86. Bewitched, Bothered, And Bewildered |
| 62. Ba-Lue Bolivar Ba-Lues-Are | 87. Beyond The Sea |
| 63. Backstage Sally | 88. Bidin' My Time |
| 64. Bag's Groove | 89. Bilongo |
| 65. Baltimore Oriole | 90. Billie's Bounce |
| 66. Barbados | 91. Billy Boy |
| 67. Barbara | 92. Birdlike |
| 68. Barracudas | 93. Birth Of The Blues, The |
| 69. Basin Street Blues | 94. Bittersweet |
| 70. Bass Blues | 95. Black Coffee |
| 71. Be My Love | 96. Black Narcissus |
| 72. Beatrice | 97. Black Nile |
| 73. Beautiful Friendship, A | 98. Black Orpheus (Manha De Carnaval) |
| 74. Beautiful Love | 99. Blame It On My Youth |
| 75. Beauty And The Beast | 100. Blessing, The |

101. Bloombido
102. Blue And Sentimental
103. Blue Bossa
104. Blue Daniel
105. Blue Moon
106. Blue Room, The
107. Blue Gardenia
108. Blue In Green
109. Blue Monk
110. Blue Skies
111. Blue Sphere
112. Blue Train
113. Blueberry Hill
114. Blues By Five
115. Blues Five Spot
116. Blues For Alice
117. Blues In The Closet
118. Blues In The Night
119. Blues March
120. Blues Minor
121. Blues On The Corner
122. Blues Walk, The
123. Blueseven
124. Bluesette
125. Body And Soul
126. Bohemia After Dark
127. Bolivia
128. Boplicity
129. Born To Be Blue
130. Bossa Antigua
131. Bouncin' With Bud
132. Boy Next Door, The
133. Brazil
134. Bright Mississippi
135. Bright Size Life
136. Brilliant Corners
137. Bud Powell
138. But Beautiful
139. But Not For Me
140. Butch And Butch
141. Butterfly
142. Buzzy
143. Bye Bye Blackbird
144. Bye Bye Blues
145. Bye-Ya
146. C Jam Blues
147. Call Me Irresponsible
148. Canteloupe Island
149. Can't We Be Friends
150. Captain Marvel

151. Caravan
152. Celia
153. Central Park West
154. Ceora
155. Chamaleon
156. Change Partners
157. Chasin' The Trane
158. Cheek To Cheek
159. Chega De Saudade
160. Chelsea Bridge
161. Cherokee
162. Cheryl
163. Chi Chi
164. Chicken, The
165. Child Is Born, A
166. Children Of The Night
167. Clear Day, On A
168. Close To You
169. Close Your Eyes
170. Come Fly With Me
171. Come Rain Or Come Shine
172. Come Sunday
173. Come With Me
174. Comrade Conrad
175. Con Alma
176. Conception
177. Confirmation
178. Constellation
179. Contemplation
180. Cool Blues
181. Cool One, The
182. Corcovado
183. Cottontail
184. Could It Be You
185. Countdown
186. Cousin Mary
187. Crazeology
188. Crazy Rhythm
189. Crescent
190. Crisis
191. Criss Cross
192. Cry Me A River
193. Crystal Silence
194. C.T.A.
195. Cyclic Episode
196. Daahoud
197. Dance Of The Infidels
198. Dancing In The Dark
199. Dancing On The Ceiling
200. Darn That Dream

201. Dat Dere
202. Day By Day
203. Day In, Day Out
204. Daydream
205. Days Of Wine And Roses, The
206. Dear Lord
207. Dear Old Stockholm
208. Dearly Beloved
209. Dedicated To You
210. Deep Purple
211. Del Sasser
212. Delilah
213. Delores Street
214. Deluge
215. Desafinado
216. Detour Ahead
217. Dewey Square
218. Dexterity
219. Diane
220. Dienda
221. Dig
222. Dinah
223. Dindi
224. Dizzy Atmosphere
225. Django
226. Do Nothing 'Til You Hear From Me
227. Do You Know What It Means?
228. Dolores
229. Dolphin Dance
230. Dolphin, The
231. Don Quixote
232. Donna Lee
233. Don't Blame Me
234. Don't Explain
235. Don't Get Around Much Anymore
236. Don't Go To Strangers
237. Don't Know Why
238. Don't Take Your Love From Me
239. Don't Worry About Me
240. Don't You Know I Care
241. Doodlin'
242. Down By The Riverside
243. Down In The Depths
244. Doxy
245. Dr. Jekyll
246. Dream A Little Dream Of Me
247. Dream Dancing
248. Dreamsville
249. Driftin'
250. Duke, The

251. East Of The Sun
252. Easy Living
253. Easy To Love
254. Eighty One
255. El Gaucho
256. Elm
257. Elora
258. Embraceable You
259. Emily
260. End Of A Love Affair, The
261. Epistrophy
262. Equinox
263. Eronel
264. Escapade
265. E.S.P.
266. Estate
267. Eternal Triangle, The
268. Every Time We Say Goodbye
269. Everything Happens To Me
270. Everything I Have Is Yours
271. Everything I Love
272. Everything I've Got Belongs To
You
273. Evidence
274. Exactly Like You
275. Eye Of The Hurricane, The
276. Fall
277. Fall With Me
278. Falling Grace
279. Falling In Love With Love
280. Fascinating Rhythm
281. Fascination
282. Favela
283. Fee-Fi-Fo-Fum
284. Feel Like Makin' Love
285. Feels So Good
286. Felicidade, A
287. Fever
288. Fiesta, La
289. Fifth House
290. Fine And Dandy
291. Fine And Mellow
292. Fine Romance, A
293. Firewater
294. Firm Roots
295. First Trip
296. Five
297. Five Brothers
298. Five Spot After Dark
299. Flamingo
300. Flintstones, Meet The

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| 301. Flower Is A Lovesome Thing, A | 326. Funkallero |
| 302. Fly Me To The Moon | 327. Gentle Rain, The |
| 303. Flying Home | 328. Georgia On My Mind |
| 304. Foggy Day, A | 329. Get Happy |
| 305. Folks Who Live On The Hill, The | 330. Get Out Of Town |
| 306. Footprints | 331. Getting Sentimental Over You |
| 307. For All We Know | 332. Getting To Know You |
| 308. For Heaven's Sake | 333. Ghost Of A Chance, A |
| 309. For Once In My Life | 334. Giant Steps |
| 310. For You, For Me, For Evermore | 335. Gingerbread Boy |
| 311. Forest Flower | 336. Girl From Ipanema, The |
| 312. Four | 337. Girl Talk |
| 313. Four Brothers | 338. Give Me The Simple Life |
| 314. Four By Five | 339. Glad To Be Unhappy |
| 315. Four In One | 340. Gloria's Step |
| 316. Four On Six | 341. God Bless The Child |
| 317. Freddie Freeloader | 342. Godchild |
| 318. Freedom Jazz Dance | 343. Golden Earrings |
| 319. Frenesí | 344. Gone Again |
| 320. Friday The Thirteenth | 345. Gone With The Wind |
| 321. From This Moment On | 346. Good Bait |
| 322. Fruit, The | 347. Good Life, The |
| 323. Full House | 348. Good Morning Heartache |
| 324. Funji Mama | 349. Goodbye |
| 325. Funk In Deep Freeze | 350. Goodbye Pork Pie Hat |

351. Grand Central
352. Green Chimneys
353. Green Dolphin Street, On
354. Gregory Is Here
355. Groovin' High
356. Hackensack
357. Half Nelson
358. Hallelujah
359. Hallucinations
360. Happy Times
361. Haunted Heart
362. Have You Met Miss Jones
363. He Was Too Good To Me
364. Heart And Soul
365. Heat Wave
366. Hello Dolly
367. Hello, Young Lovers
368. Here's That Rainy Day
369. Herzog
370. He's A Tramp
371. Hey There
372. Hi-Fly
373. Home Cookin'
374. Homestretch
375. Honeysuckle Rose
376. Hot House
377. House Of Jade
378. How About You
379. How Am I To Know?
380. How Could You Do A Thing Like
That To Me
381. How Deep Is The Ocean
382. How Do You Keep The Music
Playing?
383. How High The Moon
384. How Insensitive
385. How Little We Know
386. How Long Has This Been Going On?
387. How My Heart Sings
388. Humpty Dumpty
389. Hungaria
390. I Believe In You
391. I Can't Believe You're In Love
With Me
392. I Can't Get Started
393. I Can't Give You Anything But Love
394. I Concentrate On You
395. I Could Have Danced All Night
396. I Could Write A Book
397. I Cried For You
398. I Didn't Know About You
399. I Didn't Know What Time It Was
400. I Don't Know Enough About You

401. I Fall In Love Too Easily
402. I Get A Kick Out Of You
403. I Get Along Without You
404. I Got It Bad And That Ain't Good
405. I Got Rhythm
406. I Had The Craziest Dream
407. I Hadn't Anyone Till You
408. I Hear I Rhapsody
409. I Hear Music
410. I Know That You Know
411. I Left My Heart In San Francisco
412. I Let A Song Go Out Of My Heart
413. I Love Lucy
414. I Love Paris
415. I Love You
416. I Loves You Porgy
417. I May Be Wrong
418. I Mean You
419. I Only Have Eyes For You
420. I Remember Clifford
421. I Remember You
422. I Should Care
423. I Surrender Dear
424. I Thought About You
425. I Thought I'd Let You Know
426. I Used To Be Color Blind
427. I Waited For You
428. I Want To Be Happy
429. I Want To Talk About You
430. I Wanted To Say
431. I Was Doing All Right
432. I Will Be Here For You
433. I Will Wait For You
434. I Wish I Knew
435. I Wish I Were In Love Again
436. I Wish You Love
437. I Won't Dance
438. Idle Moments
439. If Ever I Would Leave You
440. If I Could Be With You
441. If I Didn't Care
442. If I Had You
443. If I Loved You
444. If I Should Lose You
445. If I Were A Bell
446. If There Is Someone Lovelier Than
 You
447. If This Is Isn't Love
448. If You Could See Me Now
449. If You Never Come To Me
450. I'll Be Around

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| 451. I'll Be Seeing You | 476. Indiana |
| 452. I'll Close My Eyes | 477. Indian Summer |
| 453. I'll Keep Loving You | 478. Infant Eyes |
| 454. I'll Remember April | 479. Inner Urge |
| 455. I'll See You In My Dreams | 480. Interplay |
| 456. I'll Take Romance | 481. Introspection |
| 457. I'll Wind | 482. Invitation |
| 458. I'm All Smiles | 483. Iris |
| 459. I'm Getting Sentimental Over You | 484. Irresistible You |
| 460. I'm Glad There Is You | 485. Isfahan |
| 461. I'm In The Mood For Love | 486. Isn't It Romantic |
| 462. I'm Old Fashioned | 487. Isotope |
| 463. I'm Sitting On Top Of The World | 488. Israel |
| 464. I'm Through With Love | 489. Is That So |
| 465. Imagination | 490. It Ain't Necessarily So |
| 466. Impressions | 491. It Could Happen To You |
| 467. In A Little Spanish Town | 492. It Don't Mean A Thing |
| 468. In A Mellow Tone | 493. It Had To Be You |
| 469. In A Sentimental Mood | 494. It Might As Well Be Spring |
| 470. In Case You Haven't Heard | 495. It Never Entered My Mind |
| 471. In Love In Vain | 496. It Only Happens When I Dance
With You |
| 472. In My Solitude | 497. It's A Lazy Afternoon |
| 473. In The Still Of The Night | 498. It's All Right With Me |
| 474. In Walked Bud | 499. It's De-Lovely |
| 475. In Your Own Sweet Way | 500. It's Easy To Remember |

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| 501. It's Impossible | 526. Just In Tune |
| 502. It's Only A Paper Moon | 527. Just One More Chance |
| 503. It's The Talk Of The Town | 528. Just One Of Those Things |
| 504. It's Too Late Now | 529. Just Squeeze Me |
| 505. It's You Or No One | 530. Just You, Just Me |
| 506. I've Found A New Baby | 531. Katrina Ballerina |
| 507. I've Got A Crush On You | 532. K.C. Blues |
| 508. I've Got Rhythm | 533. Keepin' Myself For You |
| 509. I've Got The World On A String | 534. Kicker, The |
| 510. I've Got You Under My Skin | 535. Kids Are Pretty People |
| 511. I've Heard That Song Before | 536. Killer Joe |
| 512. I've Never Been In Love Before | 537. Kim |
| 513. Jaco | 538. Ko Ko |
| 514. James | 539. Ladies In Mercedes |
| 515. Jeannine | 540. Lady Be Good |
| 516. Jeepers Creepers | 541. Lady Bird |
| 517. Jitterbug Waltz, The | 542. Lady Is A Tramp, The |
| 518. Joker, The | 543. Lady's In Love With You |
| 519. Jordu | 544. Laird Baird |
| 520. Joshua | 545. Lakes |
| 521. Joy Spring | 546. Lament |
| 522. Juju | 547. Last Night When We Were Young |
| 523. Just A Gigolo | 548. Last Train Home |
| 524. Just Friends | 549. Laura |
| 525. Just In Time | 550. Laurie |

551. Lazy Afternoon
552. Lazy Bird
553. Lazy River
554. Lazybones
555. Leila
556. Lennie's Pennies
557. Lester Leaps In
558. Let's Call This
559. Let's Cool One
560. Let's Fall In Love
561. Let's Get Away From It All
562. Let's Get Lost
563. Light Blue
564. Like A Lover
565. Like Someone In Love
566. Like Sonny
567. Limehouse Blues
568. Line For Lyons
569. Litha
570. Little Old Lady
571. Little One
572. Little Sunflower
573. Little Waltz
574. Liza
575. Locomotion
576. Lonely Dreams
577. Lonely Woman
578. Lonesome Road, The
579. Long Ago And Far Away
580. Lonnie's Lament
581. Look Of Love, The
582. Look To The Sky
583. Looking Up
584. Loop, The
585. Lost
586. Lotus Blossom
587. Love For Sale
588. Love Is A Many Splendored Thing
589. Love Is Just Around The Corner
590. Love Letters
591. Love Me Or Leave Me
592. Love Walked In
593. Lover
594. Lover, Come Back To Me
595. Lover Man
596. Lucky Southern
597. Lucky To Be Me
598. Lullaby In Rhythm
599. Lullaby Of Birdland
600. Lullaby Of Broadway

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| 601. Lullaby Of The Leaves | 626. Milano |
| 602. Lunny Tune | 627. Miles Ahead |
| 603. Lush Life | 628. Milestones (New) |
| 604. Mack The Knife | 629. Milestones (Old) |
| 605. Maiden Voyage | 630. Minority |
| 606. Make Believe | 631. Misterioso |
| 607. Mamacita | 632. Misty |
| 608. Mambo Influenciado | 633. Misty Night, On A |
| 609. Mambo Inn | 634. Miyako |
| 610. Man I Love, The | 635. Moanin' |
| 611. Manisero, El | 636. Mohawk |
| 612. Manteca | 637. Molten Glass |
| 613. María Cervantes | 638. Moment's Notice |
| 614. Más Que Nada | 639. Moments To Remember |
| 615. Masquerade Is Over, The | 640. Mona Lisa |
| 616. Matrix | 641. Monk's Dream |
| 617. Mayreh | 642. Monk's Mood |
| 618. Mean To Me | 643. Mood Indigo |
| 619. Meaning Of The Blues, The | 644. Moon Alley |
| 620. Meditation | 645. Moon And Sand |
| 621. Melancholia | 646. Moon River |
| 622. Memories Of Tomorrow | 647. Moonchild |
| 623. Memories Of You | 648. Moondance |
| 624. Mercy, Mercy, Mercy | 649. Moonglow |
| 625. Metamorphosis | 650. Moonlight Becomes You |

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| 651. Moonlight In Vermont | 675. My Shining Hour |
| 652. Moose The Mooche | 676. My Ship |
| 653. More I See You, The | 677. My Song |
| 654. More Than You Know | 678. Naima |
| 655. Morning | 679. Nancy (With The Laughing Face) |
| 656. Most Beautiful Girl In The World,
The | 680. Nardis |
| 657. Moten Swing | 681. Nature Boy |
| 658. Mr. Clean | 682. Nearness Of You, The |
| 659. Mr. Lucky | 683. Nefertiti |
| 660. Mr. P.C. | 684. Never Let Me Go |
| 661. My Favorite Things | 685. Never Will I Marry |
| 662. My Foolish Heart | 686. Nevertheless |
| 663. My Funny Valentine | 687. Nica's Dream |
| 664. My Heart Belongs To Daddy | 688. Nice Work If You Can Get It |
| 665. My Heart Stood Still | 689. Nice'n Easy |
| 666. My Ideal | 690. Night And Day |
| 667. My Little Suede Shoes | 691. Night Dreamer |
| 668. My Lucky Star | 692. Night Has A Thousand Eyes, The |
| 669. My Man's Gone Now | 693. Night In Tunisia, A |
| 670. My Melancholy Baby (Come To
Me) | 694. Nightingale Sang In Berkeley
Square, A |
| 671. My Old Flame | 695. Nobody Else But Me |
| 672. My One And Only Love | 696. Nostalgia In Times Square |
| 673. My Romance | 697. Not Like This |
| 674. My Secret Love | 698. Now's The Time |
| | 699. Nutty |
| | 700. Nutville |

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| 701. O Grande Amor | 726. Passion Flower |
| 702. Oblivion | 727. Parker's Mood |
| 703. Off Minor | 728. Passion Dance |
| 704. Oh, Lady Be Good | 729. Passport |
| 705. Old Folks | 730. Peace |
| 706. Old Devil Moon | 731. Peacocks, The |
| 707. Oleo | 732. Pennies From Heaven |
| 708. Once I Loved | 733. Pensativa |
| 709. Once In A While | 734. Perfidia |
| 710. One By One | 735. Perhaps |
| 711. One Finger Snap | 736. Peri's Scope |
| 712. One For Helen | 737. Pfrancing (No Blues) |
| 713. One For My Baby | 738. Pinocchio |
| 714. One Note Samba | 739. Please Don't Talk About Me When
I'm Gone |
| 715. Only Trust Your Heart | 740. Poinciana |
| 716. Opener, The | 741. Polka Dots And Moonbeams |
| 717. Ornithology | 742. Poor Butterfly |
| 718. Oscar For Treadwell, An | 743. Preacher, The |
| 719. Our Delight | 744. Prelude To A Kiss |
| 720. Our Love Is Here To Stay | 745. Prince Albert |
| 721. Out Of Nowhere | 746. P.S. I Love You |
| 722. Out Of This World | 747. Pyramid |
| 723. Over The Rainbow | 748. Quasimodo |
| 724. Pannonica | 749. Question And Answer |
| 725. Parisian Thoroughfare | 750. Quicksilver |

751. Quiet Now
752. Re: Person I Knew
753. Recado Bossa Nova
754. Recordame (No Me Esqueca)
755. Red Cross
756. Reflections
757. Reflections In D
758. Relaxin' At Camarillo
759. Remember
760. Resolution
761. Rhythm-A-Ning
762. Road Song
763. 'Round Midnight
764. Route 66
765. Rosewood
766. Ruby My Dear
767. 'S Wonderful
768. Sabiá
769. Sail Away
770. Salt Peanuts
771. Sandu
772. Satellite
773. Satin Doll
774. Say It (Over And Over Again)
775. Scapple From The Apple
776. Search For Peace
777. Secret Love
778. Segment
779. Señor Blues
780. September In The Rain
781. September Song
782. Serenity
783. Serpent's Tooth, The
784. Seven Come Eleven
785. Seven Steps To Heaven
786. Shadow Of Your Smile, The
787. Shall We Dance
788. Shaw 'Nuff
789. Shiny Stockings
790. Si Si
791. Sidewinder, The
792. Simple Matter Of Conviction, A
793. Since I Fell For You
794. Since We Met
795. Skylark
796. Sleepin' Bee, A
797. Smile
798. Smoke Gets Into Your Eyes
799. So In Love
800. So Tender

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| 801. So What | 826. Speak Like A Child |
| 802. Softly, As In A Morning Sunrise | 827. Speak Low |
| 803. Solar | 828. Speak No Evil |
| 804. Solitude | 829. Spring Is Here |
| 805. Some Other Blues | 830. St. Louis Blues |
| 806. Some Other Time | 831. St. Thomas |
| 807. Somebody Loves Me | 832. Stablemates |
| 808. Someday (You'll Be Sorry) | 833. Stairway To The Stars |
| 809. Someday My Prince Will Come | 834. Star Eyes |
| 810. Someone To Watch After Me | 835. Stardust |
| 811. Someone To Light Up My Life | 836. Stella By Starlight |
| 812. Something To Talk About | 837. Stolen Moments |
| 813. Sometime Ago | 838. Stompin' At The Savoy |
| 814. Sometimes I'm Happy | 839. Stormy Weather |
| 815. Song For My Father | 840. Straight, No Chaser |
| 816. Song Is You, The | 841. Street Of Dreams |
| 817. Sonny Moon For Two | 842. Street Where You Live, On The |
| 818. Soon | 843. Strike Up The Band |
| 819. Sophisticated Lady | 844. Strollin' |
| 820. Sorcerer, The | 845. Stuck On You |
| 821. S.O.S. | 846. Sugar |
| 822. Soul Eyes | 847. Summer Night |
| 823. Soul Man | 848. Summertime |
| 824. Soultrane | 849. Sunny |
| 825. Spain | 850. Sunny Side Of The Street, On The |

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| 851. Sweet And Lovely | 876. These Foolish Things |
| 852. Sweet Georgia Bright | 877. They Can't Take That Away From Me |
| 853. Sweet Georgia Brown | 878. They Say It's Wonderful |
| 854. Sweet Lorraine | 879. Things We Did Last Summer |
| 855. Tadd's Delight | 880. Think Of One |
| 856. Take Five | 881. Think On Me |
| 857. Take The "A" Train | 882. This Can't Be Love |
| 858. Take The Coltrane | 883. This Heart Of Mine |
| 859. Taking A Chance On Love | 884. This I Dig Of You |
| 860. Tangerine | 885. This Is For Albert |
| 861. Tea For Two | 886. This Is New |
| 862. Teach Me Tonight | 887. Things Ain't What They Used To
Be |
| 863. Tell Me A Bedtime Story | 888. Three Flowers |
| 864. Tempus Fugit | 889. Three Little Words |
| 865. Tenderly | 890. Three Views Of A Secret |
| 866. Tenor Madness | 891. Thrill Is Gone, The |
| 867. That Certain Feeling | 892. Time After Time |
| 868. That Old Black Magic | 893. Time For Love, A |
| 869. That Old Devil Moon | 894. Time On My Hands |
| 870. That Old Feeling | 895. Time Remembered |
| 871. That's All | 896. Time Was |
| 872. Thelonious | 897. Tokyo Blues |
| 873. The Theme | 898. Tricotism |
| 874. There Is No Greater Love | 899. Trinkle Tinkle |
| 875. There Will Never Be Another You | 900. Triste |

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| 901. Tristeza | 926. Waltz For Debby |
| 902. Tune Up | 927. Watch What Happens |
| 903. Turn Around | 928. Watermelon Man |
| 904. Turn Out The Stars | 929. Wave |
| 905. Turnaround | 930. Way You Look Tonight, The |
| 906. Twelve Tone Tune | 931. We Will Meet Again |
| 907. Two Bass Hit | 932. Weaver Of Dreams, (You Are A) |
| 908. Two For The Road | 933. We'll Be Together Again |
| 909. Ugetsu (Fantasy In D) | 934. Webb City |
| 910. Ugly Beauty | 935. Wee |
| 911. Una Más | 936. Well, You Needn't |
| 912. Undecided | 937. West Coast Blues |
| 913. Unforgettable | 938. What A Difference A Day Made |
| 914. Unit Seven | 939. What A Wonderful World |
| 915. Unrequited | 940. What Am I Here For? |
| 916. Un Poco Loco | 941. What Are You Doing The Rest Of
Your Life? |
| 917. Up Jumped Spring | 942. What Is This Thing Called Love |
| 918. Upper Manhattan Medical Group
(Ummg) | 943. What The World Needs Now |
| 919. Valse Hot | 944. What's New? |
| 920. Valse Triste | 945. When A Man Loves A Woman |
| 921. Very Early | 946. When I Fall In Love |
| 922. Very Thought Of You, The | 947. When Lights Are Low |
| 923. Vierd Blues | 948. When Sunny Gets Blue |
| 924. Voyage | 949. When The Saints Go Marching In |
| 925. Walkin' | 950. When The World Was Young |

951. When You Wish Upon A Star
952. When Your Lover Has Gone
953. When You're Smiling
954. Where Or When
955. Wherever You Are
956. While You're Young
957. Whisper Not
958. Who Cares?
959. Why Do I Love You?
960. Why Try To Change Me Now?
961. Wild Flower
962. Will You Still Be Mine?
963. Willow Weep For Me
964. Windows
965. Witch Hunt
966. Witchcraft
967. With A Song In My Heart
968. Without A Song
969. Woody'n You
970. Work Song
971. Wow
972. Y Todavía La Quiero
973. Yardbird Suite
974. Yes And No
975. Yesterdays
976. You Are There
977. You Are Too Beautiful
978. You Better Go Now
979. You Better Leave It Alone
980. You Do Something To Me
981. You Don't Know What Love Is
982. You Go To My Head
983. You Know I Care
984. You Make Me Feel So Young
985. You Must Believe In Spring
986. You Say You Care
987. You Stepped Out Of A Dream
988. You Taught My Heart To Sing
989. You Took Advantage Of Me
990. You Won't Forget Me
991. You'd Be So Nice To Come Home To
992. You'll Never Know
993. You're Driving Me Crazy
994. You're Everything
995. You're My Everything
996. You've Changed
997. Young And Foolish
998. Young At Heart
999. Yours Is My Heart Alone
1000. Zingaro (Retrato Em Branco E Preto)

Appendix A.6. Repertoire - Level 5: 1000 Songs (By Style)

1. Jazz Standards
2. Jazz Originals (Bebop/Hard Bop/etc.)
3. Waltzes (3/4)
4. Blues
5. Rhythm Changes
6. Ballads
7. Bossa Nova / Brazilian
8. Contemporary*
9. Latin / Afro Cuban
10. Fusion (Pop/Rock/etc.)

* *Contemporary*: songs from approximately 1970 to the present. For practice purposes, some songs from this category have also been included (marked with an asterisk) in other categories such as *Jazz Originals*, *Waltzes (3/4)*, and *Ballads*.

1. JAZZ STANDARDS

A Fine Romance	Best Is Yet To Come, The	Day By Day
A Foggy Day	Best Thing For You, The	Days Of Wine And Roses, The
After You	Between The Devil And The Deep Blue Sea	Dear Old Stockholm
Ain't Misbehavin'	Beautiful Friendship, A	Dearly Beloved
Alfie	Beyond The Sea	Delores
All Alone	Bidin' My Time	Diane
All God's Chillun	Billy Boy	Dinah
All Of Me	Birth Of The Blues, The	Do It The Hard Way
All Of You	Bitter-Sweet	Don't Get Around Much Anymore
All Or Nothing At All	Blue Moon	Down By The Riverside
All The Things You Are	Blue Room, The	Down In The Depths
All Through The Night	Blue Skies	Dream A Little Dream Of Me
All Too Soon	Blueberry Hill	Dream Dancing
Almost Like Being In Love	Blues In The Night	East Of The Sun
Alone Together	Boy Next Door, The	Easy Living
Alone Too Long	Bright Mississippi	Easy To Love
Always	But Not For Me	Eiderdown
Am I Blue?	Bye, Bye, Blackbird	Emily
And The Angels Sing	Bye, Bye, Blues	Every Time We Say Goodbye
Anything Goes	Call Me Irresponsible	Everything I Love
April In Paris	Can't We Be Friends	Everything I've Got Belongs To You
Aren't You Glad You're You	Caravan	Exactly Like You
Ask Me Now	Change Partners	Falling In Love With Love
At Long Last Love	Cheek To Cheek	Fascinating Rhythm
Autumn In New York	Clear Day, On A	Fee-Fi-Fo-Fum
Autumn Leaves	Close To You	Feel Like Makin' Love
Autumn Serenade	Close Your Eyes	Fever
Avalon	Come Fly With Me	Flower Is A Lovesome Thing, A
Baltimore Oriole	Come Rain Or Come Shine	Fly Little Bird, Fly
Basin Street Blues	Cotton Tail	Fly Me To The Moon
Beautiful Friendship, A	Could It Be You	Folks Who Live On The Hill, The
Beautiful Love	Crazy Rhythm	For Heaven's Sake
Begin The Beguine	Crisis	
Bernie's Tune	Dancing In The Dark	
	Dancing On The Ceiling	

For Once In My Life	How Long Has This Been Going On?	I Will Wait For You
For You, For Me, For Evermore	I Believe In You	I Wish I Knew
From This Moment On	I Can't Believe You Are In Love With Me	I Wish I Were In Love Again
Get Happy	I Can't Give You Anything But Love	I Wish You Love
Get Out Of Town	I Concentrate On You	I Won't Dance
Getting Sentimental Over You	I Could Write A Book	If
Getting To Know You	I Cried For You	If Ever I Would Leave You
Ghost Of A Chance, A	I Didn't Know About You	If I Could Be With You
Girl Talk	I Didn't Know What Time It Was	If I Didn't Care
Give Me The Simple Life	I Don't Know Enough About You	If I Had You
Glad To Be Unhappy	I Got It Bad And That Ain't Good	If I Loved You
Golden Earrings	I Had The Craziest Dream	If I Should Lose You
Gone Again	I Hadn't Anyone Till You	If I Were A Bell
Gone With The Wind	I Hear A Rhapsody	If There Is Someone Lovelier That You
Good Life, The	I Hear Music	If This Isn't Love
Green Dolphin Street, On	I Know That You Know	If You Could See Me Now
Haunted Heart	I Let A Song Go Out Of My Heart	If You Never Come To Me
Have You Met Miss Jones	I Love Lucy	I'll Be Around
He Was Too Good To Me	I Love Paris	I'll Close My Eyes
Heart And Soul	I Love You	I'll Keep Loving You
Heat Weave	I May Be Wrong	I'll Remember April
Hello Dolly	I Mean You	I'll See You In My Dreams
Hello, Young Lovers	I Only Have Eyes For You	I'll Wind
Here's That Rainy Day	I Remember You	I'm All Smiles
He's A Tramp	I Should Care	I'm Old Fashioned
Hey There	I Surrender Dear	I'm Glad There Is You
Home Cookin'	I Thought I'd Let You Know	I'm In The Mood For Love
Honeysuckle Rose	I Used To Be Color Blind	I'm Old Fashioned
How About You	I Want To Be Happy	I'm Sitting On Top Of The World
How Am I To Know?	I Want To Talk About You	I'm Through With Love
How Could You Do A Thing Like That To Me	I Was Doing All Right	In A Little Spanish Town
How Deep Is The Ocean		In A Mellow Tone
How High The Moon		In Case You Haven't Heard
How Little We Know		In Love In Vain

In The Still Of The Night	Just One More Chance	Lullaby Of Birdland
Indian Summer	Just One Of Those Things	Lullaby Of Broadway
Indiana	Just Squeeze Me	Lullaby Of The Leaves
Invitation	Just You, Just Me	Mack The Knife
Irresistible You	Keepin' Myself For You	Make Believe
Is That So	Kids Are Pretty People	Mean To Me
Isfahan	Lady Be Good	Misty
It Ain't Necessarily So	Lady Is A Tramp, The	Misty Night, On A
It Could Happen To You	Lady's In Love With You	Misterioso
It Don't Mean A Thing	Last Night When We Were Young	Meaning Of The Blues, The
It Had To Be You	Lazy Afternoon	Moments To Remember
It Might As Well Be Spring	Lazy River	Monk's Mood
It Only Happens When I Dance With You	Lazybones	Moondance
It's A Lazy Afternoon	Let's Fall In Love	Moonlight Becomes You
It's All Right With Me	Let's Get Away From It All	Moon River
It's De-Lovely	Let's Get Lost	More I See You, The
It's Easy To Remember	Like A Love	More Than You Know
It's Impossible	Like Someone In Love	Most Beautiful Girl In The World
It's Only A Paper Moon	Limehouse Blues	Moten Swing
It's The Talk Of The Town	Liza	Mr. Lucky
It's Too Late Now	Lonesome Road, The	My Favorite Things
It's You Or No One	Long Ago And Far Away	My Heart Belongs To Daddy
I've Found A New Baby	Look Of Love, The	My Heart Stood Still
I've Got A Crush On You	Look To The Sky	My Lucky Star
I've Got The World On A String	Lotus Blossom	My Melancholy Baby (Come To Me)
I've Got You Under My Skin	Love For Sale	My Romance
I've Heard That Song Before	Love Is A Many Splendored Thing	My Secret Love
I've Never Been In Love Before	Love Is Just Around The Corner	My Shinning Hour
Jeepers Creepers	Love Letters	Nature Boy
Joker, The	Love Me Or Leave Me	Never Will I Marry
Just A Gigolo	Love Walked In	Nevertheless
Just Friends	Lover, Come Back To Me	Nice Work If You Can Get It
Just In Time	Lucky To Be Me	Nice'n Easy
Just In Tune	Lullaby In Rhythm	Night And Day

Night Dreamer
Night Has A Thousand Eyes
Nobody Else But Me
Nutty
Oh, Lady Be Good
Old Devil Moon
On A Clear Day
On A Misty Night
On The Street Where You Live
On The Sunny Side Of The Street
Once In A While
One For My Baby
Only Trust Your Heart
Our Love Is Here To Stay
Out Of Nowhere
Passion Flower
Pennies From Heaven
Pent-Up House
Perdido
Please Don't Talk About Me When I'm Gone
P.S. I Love You
Route 66
'S Wonderful
Satin Doll
Search For Peace
Secret Love
September In The Rain
Serenity
Seven Come Eleven
Shall We Dance
Shiny Stockings
Since I Fell For You
Sleepin' Bee, A
Smile

Softly As In A Morning Sunrise
Smoke Gets Into Your Eyes
So In Love
Some Other Time
Somebody Loves Me
Someday (You'll Be Sorry)
Someday My Prince Will Come
Something To Talk About
Sometimes I'm Happy
Somewhere Over The Rainbow
Song Is You, The
Soon
Stella By Starlight
Stolen Moments
Stompin' At The Savoy
Stormy Weather
Speak Low
Street Where You Live, On The
Strike Up The Band
Summer Night
Sunny Side Of The Street, On The
Sweet And Lovely
Sweet Georgia Brown
Sweet Lorraine
Tadd's Delight
Take The "A" Train
Taking A Chance On Love
Tangerine
Tea For Two
Teach Me Tonight
That Certain Feeling
That Old Black Magic

That Old Devil Moon
That Old Feeling
The More I See You
The Night Has A Thousand Eyes
The Song Is You
There Is No Greater Love
There Will Never Be Another You
These Foolish Things
They Can't Take That Away From Me
They Say It's Wonderful
Things We Did Last Summer
Think On Me
This Can't Be Love
This Heart Of Mine
This Is New
Three Little Words
Time After Time
Time On My Hands
Ugly Beauty
Undecided
Unit Seven
Way You Look Tonight, The Weaver Of Dreams, You Are A
What A Wonderful World
What Am I Here For
What Are You Doing The Rest Of Your Life?
What Is This Thing Called Love
When Lights Are Low
When The Saints Go Marching In
When The World Was Young
When You Wish Upon A Star

When Your Lover Has Gone	A Night In Tunisia	Del Sasser
When You're Smiling	Afternoon In Paris	Delilah
Where Or When	Ah-Leu-Cha	Dewey Square
While You're Young	Airegin	Dig
Who Cares?	Along Came Betty	Dizzy Atmosphere
Why Do I Love You?	Are You Real?	Donna Lee
Will You Still Be Mine?	Ask Me Now	Doxy
Witchcraft	Ba-Lue Bolivar Ba-Lues-Are	Elora
With A Song In My Heart	Barbara	Epistrophy
Without A Song	Bebop	Eronel
Yes Or No	Bemsha Swing	Escapade
You And The Night And The Music	Birdlike	Evidence
You Are My Everything	Black Narcissus	Fee-Fi-Fo-Fum
You Better Go Now	Bloombido	Five Brothers
You Do Something To Me	Blue Sphere	Flying Home
You Make Me Feel So Young	Blues Five Spot	Forest Flower
You Must Believe In Spring	Bluessette	Four
You Say You Care	Bohemia After Dark	Four Brothers
You Stepped Out Of A Dream	Boplicity	Four By Five
You Taught My Heart To Sing	Bouncin' With Bud	Four In One
You Took Advantage Of Me	Brilliant Corners	Four On Six
You Won't Forget Me	Butch And Butch	Fruit, The
You'd Be So Nice To Come Home To	Bye-Ya	Giant Steps
You'll Never Know	Celia	Gingerbread Boy
You're Driving Me Crazy	Cherokee	Gloria's Step
You're My Everything	Cheryl	Godchild
Yours Is My Heart Alone	Conception	Good Bait
	Confirmation	Grand Central
	Cool One, The	Green Chimneys
	Countdown	Gregory Is Here
	Crescent	Groovin' High
	Crisis	Hackensack
	Cyclic Episode	Half Nelson
	Daahoud	Hallucinations
	Dance Of The Infidels	Happy Times
	Dat Dere	Herzog
2. JAZZ ORIGINALS		
(Bebop/Hardbop/Etc.)		
26-2		
52 nd Street Theme		

Hi-Fly	Moanin'	Señor Blues
Hot House	Moment's Notice	Serenity
I Mean You	Monk's Dream	Seven Steps To Heaven
Idle Moments	Monk's Mood	Sidewinder, The
If You Could See Me Now	Mr. Clean*	S.O.S.
In Walked Bud	My Little Suede Shoes	So What
In Your Own Sweet Way	Nardis	Solar
Introspection	Nica's Dream	Song For My Father
Israel	Nostalgia In Times Square	Soultrane
Jeanine	Nutti	Stablemates
Jordu	Oblivion	Star Eyes
Joshua	Off Minor	Stolen Moments
Joy Spring	One By One	Strollin'
Ju-Ju	One Finger Snap	Sugar
Katrina Ballerina	Ornithology	Sweet Georgia Bright
Killer Joe	Oscar For Treadwell, An	Tadd's Delight
Ko Ko	Our Delight	Take 5
Lady Bird	Pannonica	Tempus Fugit
Lament	Parisian Thoroughfare	Thelonious
Lazy Bird	Preacher, The	Think Of One
Leila	Prince Albert	This I Dig Of You
Lennie's Pennies	Pyramid	This Is For Albert
Let's Call This	Quasimodo	Tokyo Blues
Let's Cool One	Quicksilver	Time Remembered
Light Blue	Red Clay*	Turn Out The Stars
Like Sonny	Red Cross	Tricotism
Line For Lyons	Reflections	Trinkle Trinkle
Mayreh	Reflections In D	Tune Up
Metamorphosis	Remember	Turnaround
Milano	Resolution	Two Bass Hit
Miles Ahead	Road Song	Ugetsu (Fantasy In D)
Milestones (Old)	Ruby, My Dear	Una Más
Milestones (New)	Salt Peanuts	Unit Seven
Minority	Satellite	Up Jumped Spring
Mirror, Mirror*	Scapple From The Apple	Upper Manhattan Medical
Misterioso	Segment	Group (U.M.M.G.)

Valse Hot
Very Early
Waltz For Debby
We Will Meet Again
Wee
Well, You Needn't
Whisper Not
Woody'n You
Work Song
Wow
Yardbird Suite
You Must Believe In Spring

3. WALTZES (3/4)

502 Blues
A Child Is Born
Alice In Wonderland
B Minor Waltz
Black Narcissus
Blue Daniel
Bluessette
Elsa
Emily
Fascination
Floating
How My Heart Sings
I'll Take Romance
Jitterbug Waltz, The
Ju-Ju
Little Waltzlotus Blossom
Lover
Mirror, Mirror*
Moon River
Moonchild
My Favorite Things

Nature Boy
Someday My Prince Will
Come
Sometime Ago
Tenderly
Three Flowers
Time Was
Up Jumped Spring
Valse Hot
Very Early
Waltz For Debby*
Waltz New
We Will Meet Again
West Coast Blues
What A Difference A Day
Made
What The World Needs Now
What Was
Wild Flower*
Windows*
Young At Heart

4. BLUES

All Blues
Au Privave
Back Home Blues
Bag's Groove
Barbados
Bass Blues
Bessie's Blues
Billie's Bounce
Bloombido
Blue Monk
Blue Seven
Blue Train
Blues By Five

Blues For Alice
Blues In The Closet
Blues March
Blues Minor
Blues On The Corner
Blues Walk, The
Blueseven
Bluessette
Buzzy
C Jam Blues
Chasin' The Trane
Cheryl
Cool Blues
Cousin Mary
Dance Of The Infidels
Doodlin'
Dr. Jekyll
Equinox
Five Spot After Dark
Footprints
Freddie The Freeloader
Homestretch
Isotope
Israel
K.C. Blues
Kicker, The
Laird Baird
Limehouse Blues
Locomotion
Matrix
Misterioso
Mr. P. C.
Now's The Time
Parker's Mood
Perhaps
Pfrancing (No Blues)

Relaxin' At Camarillo
Route 66
Sandu
Si Si
Solar
Some Other Blues
Sonnymoon For Two
St. Louis Blues
Straight, No Chaser
Take The Coltrane
Tenor Madness
Things Ain't What They
Used To Be
Traneing In
Vierd Blues
Walkin'
West Coast Blues

5. RHYTHM CHANGES

An Oscar For Treadwell
Anthropology
Bird Song
Celerity
Constellation
Crazeology
C.T.A.
Dexterity
Eternal Triangle, The
Flintstones, Meet The
Fungi Mama
Good Bait
I Got Rhythm
Kim
Lester Leaps In
Luny Tune
Mohawk

Moose The Mooche
Oleo
Passport
Rhythm-A-Ning
Salt Peanuts
Serpent's Tooth, The
Shaw 'Nuff
The Theme
Wail
Webb City

6. BALLADS

A Child Is Born
After You've Gone
All The Way
Alfie
Angel Eyes
As Time Goes By
Autumn Nocturne
Be My Love
Bess, You Is My Woman
Bewitched, Bothered, And
Bewildered
Black Coffee
Blame It On My Youth
Blue And Sentimental
Blue Gardenia
Blue In Green
Blues In The Night
Body And Soul
Born To Be Blue
But Beautiful
Central Park West
Chelsea Bridge
Chi Chi
Coral

Cry Me A River
Darn That Dream
Dedicated To You
Deep Purple
Detour Ahead
Django
Do Nothing 'Til You Hear
From Me
Don't Blame Me
Don't Explain
Don't Go To Strangers
Don't Know Why
Don't Take Your Love From
Me
Don't Worry 'Bout Me
Don't You Know I Care
Easy Living
Embraceable You
End Of A Love Affair, The
Everything Happens To Me
Everything I Have Is Yours
Fall
Fall With Me
Fine And Dandy
Fine And Mellow
Flamingo
For All We Know
For Heaven's Sake
Georgia Of My Mind
God Bless The Child
Goodbye Porkpie Hat
Harlem Nocturne
Here's That Rainy Day
How Long Has This Been
Goin' On
I Can't Get Started
I Concentrate On You

I Fall In Love To Easily	My Man's Gone Now	Stairway To The Stars
I Left My Heart In San Francisco	My Old Flame	Stardust
I Loves You Porgy	My One And Only Love	Stormy Weather
I Remember Clifford	My Ship	Street Of Dreams
I Thought About You	Nature Boy	Summertime
I Waited For You	Naima	Tenderly
I Wish I Knew	Nancy (With The Laughing Face)	That's All
If You Could See Me Now	Nearness Of You, The	Thrill Is Gone, The
I'll Be Seeing You	Never Let Me Go	Time Remembered
I'm Getting Sentimental Over You	Nightingale Sang In Berkeley Square, A	Turn Out The Stars
Imagination	Not Like This	Two For The Road
In A Sentimental Mood	Old Folks	Unforgettable
In My Solitude	Over The Rainbow, Somewhere	Very Thought Of You, The
Isn't It Romantic	Peace	We'll Be Together Again
It Never Entered My Mind	Peacocks, The	What Am I Here For?
Lament Fall	Polka Dots And Moonbeams	What's New?
Laura	Poor Butterfly	When A Man Loves A Woman
Lonely Dreams	Prelude To A Kiss	When I Fall In Love
Lonely Woman	Quiet Now	When Lights Are Low
Lonnie's Lament	'Round Midnight	When Sunny Gets Blue
Lover Man	Say It (Over And Over Again)	Why Try To Change Me Now?
Lush Life	Search For Peace	Willow Weep For Me
Man I Love You, The	Secret Love	With A Song In My Heart
Masquerade Is Over	Seems Like Old Times	Yesterdays
Memories Of You	September Song	You Are There
Misty	Skylark	You Are Too Beautiful
Mona Lisa	Smoke Gets In Your Eyes	You Don't Know What Love Is
Mood Indigo	Solitude	You Know I Care
Moonglow	Some Other Time	You'll Never Know
Moonlight In Vermont	Someone To Watch Over Me	You've Changed
Moonlight Serenade	Sophisticated Lady	Young And Foolish
My Foolish Heart	Soul Eyes	Young At Heart
My Funny Valentine	Spring Is Here	
My Ideal		

7. BOSSA NOVA / BRAZILIAN

A Felicidade
Água De Beber
Amor Em Paz
Black Orpheus (Manha De
Carnaval)
Blue Bossa
Bossa Antigua
Brazil
Carnival
Chega De Saudade (No More
Blues)
Coral Keys
Corcovado (Quiet Night Of
Quiet Stars)
Creek
Desafinado
Dindi
Dolphin, The
Estate
Favela
Flor De Lis
Frevo
Gentle Rain, The
Girl From Ipanema, The
How Insensitive
If You Never Come To Me
(Inutil Paisagem)
Make Me A Memory
Más Que Nada
Meditation
Moon And Sand
O Grande Amor
Once I Loved
One Note Samba
Paulistana

Pensativa
Recado Bossa Nova
Recordame (No Me Esqueca)
Retrato Em Branco E Preto
(Zíngaro)
Sabiá
Sail Away*
Samba De Orfeu
So Nice (Samba De Verão)
Shadow Of Your Smile, The
Someone To Light Up My
Life
Song For My Father
Speak Like A Child*
Teach Me Tonight
Temptation
Triste
Tristeza
Watch What Happens
Wave
West Coast Blues
What Am I Here For
You're Everything

8. CONTEMPORARY

500 Miles High
A Simple Matter Of
Conviction
Adam's Apple
Afro-Centric
After The Rain
Aisha
Ana Maria
Atlantis
Backstage Sally
Beauty And The Beast

Black Nile
Blessing, The
Bolivia
Bright Size Life
Bud Powell
Butterfly
Captain Marvel
Children Of The Night
Comrade Conrad
Contemplation
Crystal Silence
Dear Lord
Delores Street
Deluge
Dienda
Dolores
Dolphin Dance
Duke, The
Eighty One
Elm
E.S.P.
Eye Of The Hurricane, The
Fall
Falling Grace
Fee-Fi-Fo-Fum
Fiesta, La
Fifth House
Firewater
Firm Roots
First Trip
Five
Forest Flower
Fortune Smiles
Freedom Jazz Dance
Friday The Thirteenth
Funkallero

Genesis
Grand Central
House Of Jade
Hummin'
Humpty Dumpty
Hungaria
I Wanted To Say
Impressions
Infant Eyes
Inner Urge
Interplay
Iris
Isfahan
Isotope
Jaco
James
Joshua
Lakes
Las Vegas Tango
Last Train Home
Laurie
Litha
Little One
Little Sunflower
Looking Up
Loop, The
Lost
Lucky Southern
Maiden Voyage
Memories Of Tomorrow
Miyako
Molten Glass
Moon Alley
My Song
Nefertiti
One Finger Snap

One For Helen
Opener, The
Passion Dance
Peri's Scope
Pinocchio
Question And Answer
Re: Person I Know
Since We Met
Shades Of Light
So Tender
So What
Sorcerer, The
Spain
Speak No Evil
Stormy Weather
Straight Life
Take Five
Tell Me A Bedtime Story
Three Views Of A Secret
Tones For Joan's Bones
Twelve Tone Tune
Unrequited
Voyage
We Will Meet Again
Witch Hunt
Yes And No

9. LATIN / AFRO CUBAN

Afro Blue
Amor
Angoa
Armando's Rumba
Bésame Mucho
Bilongo

Ceora
Con Alma
Criss Cross
Don Quixote
El Gaucho
Forest Flower
Frenesí
Guantanamera
Invitation
Ladies In Mercedes
Mamacita
Mambo Influenciado
Mambo Inn
Manisero, El
Manteca
María Cervantes
Morning
My Little Suede Shoes
Nica's Dream
Nutville
Out Of This World
Papa Lips
Perfidia
Poinciana
Rapture
St. Thomas
Song For My Father
Think On Me
Un Poco Loco
Y Todavía La Quiero

10. FUSION (Pop/Rock/Funk/Etc.)

Ain't No Sunshine*
Breakin' Away

Cantaloupe Island
Chamaleon*
Chicken, The*
Come With Me*
Eighty One
Feels So Good
Freedom Jazz Dance
Full House
Havona*
I Will Be Here For You*
Isn't She Lovely*
Killing Me Softly*
Mercy, Mercy, Mercy
Mr. Clean*
Red Clay*
Rosewood
Sidewinder
Stuck On You*
Soul Man
Street Life*
Sunny
That Girl*
This Masquerade*
You Are The Sunshine Of My Life*
You're Everything
You Are So Beautiful*
Watermelon Man

Appendix B: Solo transcription

Appendix B.1. Twelve Recommended Jazz Pianists Solo Improvisations

Year	Pianist	Song	Album*
1957	Kenny Drew	<i>Moment's Notice</i>	John Coltrane: <i>Blue Train</i>
1957	Red Garland	<i>Bye, Bye, Blackbird</i>	Miles Davis: <i>'Round Midnight</i>
1959	Wynton Kelly	<i>Freddie Freeloader</i>	Miles Davis: <i>Kind Of Blue</i>
1960	Bud Powell	<i>All The Things You Are</i>	<i>At Essen Jazz Festival</i>
1962	Oscar Peterson	<i>C Jam Blues</i>	<i>Night Train</i>
1967	McCoy Tyner	<i>Passion Dance</i>	<i>The Real McCoy</i>
1968	Chick Corea	<i>Matrix</i>	<i>Now He Sings, Now He Sobs</i>
1977	Bill Evans	<i>You Must Believe In Spring</i>	<i>You Must Believe In Spring</i>
1983	Keith Jarrett	<i>All The Things You Are</i>	<i>Standards Vol. 1</i>
1992	Kenny Barron	<i>Like Someone In Love</i>	Stan Getz: <i>People Time</i>
1997	Kenny Kirkland	<i>November 15th</i>	Kenny Garrett: <i>Songbook</i>
1999	Brad Mehldau	<i>All The Things You Are</i>	<i>The Art of The Trio Vol. 4</i>

* No album title name is provided when it is the name of the pianist

Appendix B.2. 100 Recommended Selected Jazz Solo Improvisations (All Instruments)

Year	Artist	Song
1927	Louis Armstrong	<i>Hotter Than That</i> ⁴²¹
1939	Lester Young	<i>Lester Leaps In</i> ⁴²²
1940	Charlie Christian	<i>I Found A New Baby</i> ⁴²³
1945	Charlie Parker	<i>Now's The Time; Billie's Bounce</i> ⁴²⁴
1945	Miles Davis	<i>Now's The Time; Billie's Bounce</i> ⁴²⁵
1949	Fats Navarro	<i>Bouncin' With Bud</i> ⁴²⁶
1949	Bud Powell	<i>Celia</i> ⁴²⁷
1949	Bud Powell	<i>Ornithology</i> ⁴²⁸
1954	Thelonious Monk	<i>Blue Monk</i> ⁴²⁹
1955	Clifford Brown	<i>Joy Spring</i> ⁴³⁰
1955	Erroll Garner	<i>How Could You Do A Thing Like That To Me</i> ⁴³¹
1955	Hank Mobley	<i>Soft Winds</i> ⁴³²
1956	Clifford Brown	<i>Donna Lee</i> ⁴³³
1956	Red Garland	<i>Oleo; I Could Write A Book</i> ⁴³⁴

⁴²¹ Louis Armstrong, *Hot Fives and Hot Sevens*, Columbia (CD), 1927.

⁴²² Count Basie and his Orchestra, featuring Lester Young, *Lester Leaps In*, Epic (CD), 1939.

⁴²³ Charlie Christian, *Solo Flight*, Topaz (CD), 1939.

⁴²⁴ Charlie Parker, *The Charlie Parker Story*, Savoy (CD), 1945.

⁴²⁵ Charlie Parker, *The Charlie Parker Story*, Savoy (CD), 1945.

⁴²⁶ Fats Navarro, *The Fabulous Fats Navarro*, Blue Note (CD), 1949.

⁴²⁷ Bud Powell, *Jazz Giant*, Verve (CD), 1949.

⁴²⁸ Bud Powell, *The Amazing Bud Powell, Volume 1*, Blue Note (CD), 1949.

⁴²⁹ Thelonious Monk, *Thelonious Monk Trio*, Prestige (CD), 1954.

⁴³⁰ Clifford Brown and Max Roach, *Clifford Brown and Max Roach*, Emarzy (CD), 1954.

⁴³¹ Erroll Garner, *Concert by the Sea*, Columbia (CD), 1955.

⁴³² Art Blakey and the Jazz Messengers, *At the Cafe Bohemia, Vol. 1*, Blue Note (CD), 1955.

⁴³³ Clifford Brown, *Clifford Brown*, Columbia (CD), 1956.

⁴³⁴ Miles Davis, *Relaxin'*, Prestige (CD), 1956.

1956	Sonny Rollins	<i>Tenor Madness</i> ⁴³⁵
1956	John Coltrane	<i>Tenor Madness</i> ⁴³⁶
1956	Sonny Rollins	<i>St. Thomas</i> ⁴³⁷
1956	Red Garland	<i>Tenor Madness</i> ⁴³⁸
1957	Miles Davis	<i>All Of You</i> ⁴³⁹
1957	Red Garland	<i>Bye, Bye, Blackbird</i> ⁴⁴⁰
1957	Sonny Clark	<i>Softly, As In A Morning Sunrise</i> ⁴⁴¹
1957	Kenny Drew	<i>Moment's Notice</i> ⁴⁴²
1957	Ella Fitzgerald	<i>Take The "A" Train</i> ⁴⁴³
1957	Stan Getz	<i>Three Little Words</i> ⁴⁴⁴
1957	Thelonious Monk	<i>Bemsha Swing</i> ⁴⁴⁵
1957	Sonny Rollins	<i>Eternal Triangle</i> ⁴⁴⁶
1957	Sonny Stitt	<i>Eternal Triangle</i> ⁴⁴⁷
1958	Chet Baker	<i>Do It The Hard Way; It Could Happen To You</i> ⁴⁴⁸
1958	Miles Davis	<i>Autumn Leaves</i> ⁴⁴⁹
1958	Paul Desmond	<i>Like Someone In Love</i> ⁴⁵⁰
1958	Red Garland	<i>Straight, No Chaser</i> ⁴⁵¹

⁴³⁵ Sonny Rollins, *Tenor Madness*, Blue Note (CD), 1956.

⁴³⁶ Sonny Rollins, *Tenor Madness*, Blue Note (CD), 1956.

⁴³⁷ Sonny Rollins, *Saxophone Colossus*, Blue Note (CD), 1956.

⁴³⁸ Sonny Rollins, *Tenor Madness*, Blue Note (CD), 1956.

⁴³⁹ Miles Davis, *'Round About Midnight*, Columbia (CD), 1957.

⁴⁴⁰ Miles Davis, *'Round About Midnight*, Columbia (CD), 1957.

⁴⁴¹ Sonny Clark, *Sonny Clark Trio*, Blue Note (CD), 1957.

⁴⁴² John Coltrane, *Blue Train*, Blue Note (CD), 1957.

⁴⁴³ Ella Fitzgerald, *Ella Fitzgerald Sings the Duke Ellington Songbook*, Verve (CD), 1957.

⁴⁴⁴ Stan Getz, *Stan Getz and The Oscar Peterson Trio*, Verve (CD), 1957.

⁴⁴⁵ Thelonious Monk, *Brilliant Corners*, Riverside (CD), 1957.

⁴⁴⁶ Sonny Stitt, Dizzy Gillespie and Sonny Rollins, *Sonny Side Up*, Verve (CD), 1957.

⁴⁴⁷ Sonny Stitt, Dizzy Gillespie and Sonny Rollins, *Sonny Side Up*, Verve (CD), 1957.

⁴⁴⁸ Chet Baker, *It Could Happen To You*, Riverside (CD), 1958.

⁴⁴⁹ Cannonball Adderley, *Somethin' Else*, Blue Note (CD), 1958.

⁴⁵⁰ Dave Brubeck, *Dave Brubeck Quartet in Europe*, Columbia (CD), 1958.

⁴⁵¹ Miles Davis, *Milestones*, Columbia (CD), 1958.

1959	Miles Davis	<i>So What; Freddie Freeloader Kind Of Blue</i> ⁴⁵²
1959	Wynton Kelly	<i>Freddie Freeloader</i> ⁴⁵³
1959	John Coltrane	<i>So What</i> ⁴⁵⁴
1959	John Coltrane	<i>Giant Steps; Cousin Mary</i> ⁴⁵⁵
1960	Barry Harris	<i>Moose The Mooche</i> ⁴⁵⁶
1960	Wynton Kelly	<i>Remember</i> ⁴⁵⁷
1960	Hank Mobley	<i>If I Should Loose You</i> ⁴⁵⁸
1960	Wes Montgomery	<i>Four On Six</i> ⁴⁵⁹
1960	Bud Powell	<i>All The Things You Are</i> ⁴⁶⁰
1961	Bill Evans	<i>Alice In Wonderland</i> ⁴⁶¹
1961	Bill Evans	<i>Beautiful Love</i> ⁴⁶²
1961	Bill Evans	<i>My Romance</i> ⁴⁶³
1961	Phineas Newborn, Jr.	<i>Oleo</i> ⁴⁶⁴
1961	Oscar Peterson	<i>Tricotism</i> ⁴⁶⁵
1962	Freddie Hubbard	<i>Bird Like</i> ⁴⁶⁶
1962	Oscar Peterson	<i>Night Train; C Jam Blues; Moten Swing</i> ⁴⁶⁷
1962	McCoy Tyner	<i>Blues For Gwen</i> ⁴⁶⁸

⁴⁵² Miles Davis, *Kind of Blue*, Columbia (CD), 1959.

⁴⁵³ Miles Davis, *Kind of Blue*, Columbia (CD), 1959.

⁴⁵⁴ Miles Davis, *Kind of Blue*, Columbia (CD), 1959.

⁴⁵⁵ John Coltrane, *Giant Steps*, Atlantic (CD), 1959.

⁴⁵⁶ Barry Harris, *At The Jazz Workshop*, Riverside (CD), 1960.

⁴⁵⁷ Hank Mobley, *Soul Station*, Blue Note (CD), 1960.

⁴⁵⁸ Hank Mobley, *Soul Station*, Blue Note (CD), 1960.

⁴⁵⁹ Wes Montgomery, *The Incredible Guitar of Wes Montgomery*, Riverside (CD), 1960.

⁴⁶⁰ Bud Powell, *The Essen Jazz Festival Concert*, Black Lion (CD), 1960.

⁴⁶¹ Bill Evans, *Sunday At The Village Vanguard*, Original Jazz Classics (CD), 1961.

⁴⁶² Bill Evans, *Explorations*, Original Jazz Classics (CD), 1961.

⁴⁶³ Bill Evans, *Waltz for Debbie*, Original Jazz Classics (CD), 1961.

⁴⁶⁴ Phineas Newborn, Jr., *A World of Piano*, Original Jazz Classics (CD), 1961.

⁴⁶⁵ Oscar Peterson, *The Sound of the Trio*, Verve (CD), 1961.

⁴⁶⁶ Freddie Hubbard, *Ready for Freddie*, Blue Note (CD), 1961.

⁴⁶⁷ Chick Corea, *Night Train*, Verve (CD), 1962.

⁴⁶⁸ McCoy Tyner, *Inception*, Impulse (CD), 1962.

1964	Miles Davis	<i>There Is No Greater Love</i> ⁴⁶⁹
1964	Herbie Hancock	<i>All Blues</i> ⁴⁷⁰
1964	Thelonious Monk	<i>Memories Of You</i> ⁴⁷¹
1964	Lee Morgan	<i>The Sidewinder</i> ⁴⁷²
1964	Oscar Peterson	<i>Mack The Knife</i> ⁴⁷³
1965	Herbie Hancock	<i>Dolphin Dance</i> ⁴⁷⁴
1967	Pat Martino	<i>Just Friends</i> ⁴⁷⁵
1967	Thelonious Monk	<i>Straight, No Chaser</i> ⁴⁷⁶
1967	McCoy Tyner	<i>Passion Dance</i> ⁴⁷⁷
1968	Chick Corea	<i>Matrix</i> ⁴⁷⁸
1968	Bill Evans	<i>A Time For Love</i> ⁴⁷⁹
1973	Herbie Hancock	<i>Chameleon</i> ⁴⁸⁰
1974	Bill Evans	<i>Turn Out The Stars</i> ⁴⁸¹
1977	Chet Baker	<i>The Best Thing For You</i> ⁴⁸²
1977	Kenny Barron	<i>The Best Thing For You</i> ⁴⁸³
1977	Tete Montoliu	<i>It Could Happen To You</i> ⁴⁸⁴
1977	Bill Evans	<i>You Must Believe In Spring</i> ⁴⁸⁵

⁴⁶⁹ Miles Davis, *The Complete Concert: 1964 - My Funny Valentine and Four & More*, Columbia (CD), 1964.

⁴⁷⁰ Miles Davis, *The Complete Concert: 1964 - My Funny Valentine and Four & More*, Columbia (CD), 1964.

⁴⁷¹ Thelonious Monk, *It's Monk Time*, Columbia (CD), 1964.

⁴⁷² Lee Morgan, *Sidewinder*, Blue Note (CD), 1964.

⁴⁷³ Oscar Peterson, *Oscar Peterson Trio + One (Featuring Clark Terry)*, Verve (CD), 1964.

⁴⁷⁴ Herbie Hancock, *Maiden Voyage*, Blue Note (CD), 1965.

⁴⁷⁵ Pat Martino, *El Hombre*, Prestige (CD), 1967.

⁴⁷⁶ Thelonious Monk, *Straight, No Chaser*, Columbia (CD), 1967.

⁴⁷⁷ McCoy Tyner, *The Real McCoy*, Blue Note (CD), 1967.

⁴⁷⁸ Chick Corea, *Now He Sings, Now He Sobs*, Blue Note (CD), 1968.

⁴⁷⁹ Bill Evans, *Alone*, Verve (CD), 1968.

⁴⁸⁰ Herbie Hancock, *Head Hunters*, Columbia (CD), 1973.

⁴⁸¹ Bill Evans, *Since We Met*, Original Jazz Classics (CD), 1974.

⁴⁸² Chet Baker, *The Best Thing For You*, A&M (CD), 1977.

⁴⁸³ Chet Baker, *The Best Thing For You*, A&M (CD), 1977.

⁴⁸⁴ Tete Montoliu, *Blues for Myself*, Ensayo (CD), 1977.

1978	Tommy Flanagan	<i>Good Bait; Bird Song</i> ⁴⁸⁶
1979	Tom Harrell	<i>Comrade Conrad</i> ⁴⁸⁷
1981	Kenny Barron	<i>Rhythm-A-Ning</i> ⁴⁸⁸
1983	Keith Jarrett	<i>All The Things You Are; In Love In Vain</i> ⁴⁸⁹
1984	Chick Corea	<i>I Hear A Rhapsody; The Loop</i> ⁴⁹⁰
1986	Kenny Barron	<i>Voyage</i> ⁴⁹¹
1986	Tete Montoliu	<i>Alone Together; Oleo; All Of You</i> ⁴⁹²
1987	Michael Brecker	<i>Nothing Personal</i> ⁴⁹³
1987	Keith Jarrett	<i>Stella By Starlight</i> ⁴⁹⁴
1987	Pat Metheny	<i>Last Train Home; Third Wind; Minuano</i> ⁴⁹⁵
1989	JoAnne Brackeen	<i>It Could Happen To You</i> ⁴⁹⁶
1989	Chick Corea	<i>Bessie's Blues; Someday My Prince Will Come</i> ⁴⁹⁷
1990	Stanley Cowell	<i>Softly, As In A Morning Sunrise; Stompin' At The Savoy</i> ⁴⁹⁸
1990	Keith Jarrett	<i>Bemsha Swing; Golden Earrings; Woody'n You</i> ⁴⁹⁹
1991	Kenny Barron	<i>Minority</i> ⁵⁰⁰
1992	Kenny Barron	<i>Like Someone In Love; Gone With The Wind</i> ⁵⁰¹
1993	Chick Corea	<i>Blues For Art</i> ⁵⁰²

⁴⁸⁵ Bill Evans, *You Must Believe in Spring*, Original Jazz Classics (CD), 1977.

⁴⁸⁶ Tommy Flanagan, *Something Borrow, Something Blue*, Original Jazz Classics (CD), 1978.

⁴⁸⁷ Bill Evans, *We Will Meet Again*, Warner Bros. (CD), 1979.

⁴⁸⁸ Kenny Barron. *At The Piano*, Xanadu (CD), 1981.

⁴⁸⁹ Keith Jarrett, *Standards, Vol. 1*, ECM (CD), 1983.

⁴⁹⁰ Chick Corea, *Trio Music Live in Europe*, ECM (CD), 1984.

⁴⁹¹ Kenny Barron, *What If*, Enja (CD), 1986.

⁴⁹² Tete Montoliu, *The Music I Like to Play, Vol. 1*, Soul Note (CD), 1986.

⁴⁹³ Michael Brecker, *Michael Brecker*, Impulse (CD), 1987.

⁴⁹⁴ Keith Jarrett, *Standards Live*, ECM (CD), 1987.

⁴⁹⁵ Pat Metheny Group, *Still Life (Talking)*, Geffen (CD), 1987.

⁴⁹⁶ JoAnne Brackeen, *Live at Maybeck Ricital Hall*, Concord (CD), 1989.

⁴⁹⁷ Chick Corea, *Akoustic Band*, GRP (CD), 1989.

⁴⁹⁸ Stanley Cowell, *Live at Maybeck Recital Hall, Vol. 5*, Concord (CD), 1990.

⁴⁹⁹ Keith Jarrett, *The Cure*, ECM (CD), 1990.

⁵⁰⁰ Kenny Barron. *The Moment*, Reservoir (CD), 1991.

⁵⁰¹ Stan Getz & Kenny Barron, *People Time*, Gitanes Jazz (CD), 1992.

1994	Kenny Werner	<i>Someday My Prince Will Come</i> ⁵⁰³
1994	Brad Mehldau	<i>Anthropology</i> ⁵⁰⁴
1995	Mulgrew Miller	<i>If I Should Loose You</i> ⁵⁰⁵
1996	Billy Childs	<i>Aaron's Song</i> ⁵⁰⁶
1997	Kenny Kirkland	<i>November 15th</i> ⁵⁰⁷
1998	Mulgrew Miller	<i>Promethean; On Green Dolphin Street</i> ⁵⁰⁸
1998	Kenny Barron	<i>You'd Be So Nice To Come Home To; So What</i> ⁵⁰⁹
1999	Kenny Kirkland	<i>Doctone</i> ⁵¹⁰
1999	Keith Jarrett	<i>By My Love</i> ⁵¹¹

⁵⁰² Chick Corea, *Expressions*, GRP (CD), 1993.

⁵⁰³ Kenny Werner, *Live at Maybeck Recital Hall, Vol. 34*, Concord (CD), 1994.

⁵⁰⁴ Mehldau & Rossy Trio, *When I Fall In Love*, Fresh Sound New Talent (CD), 1994.

⁵⁰⁵ Mulgrew Miller, *Getting to Know You*, Novus (CD), 1995.

⁵⁰⁶ Billy Childs, *The Child Within*, Shanachie Entertainment (CD), 1996.

⁵⁰⁷ Kenny Garrett, *Song Book*, Warner (CD), 1997.

⁵⁰⁸ Tony Williams Trio, *Young at Heart*, Columbia (CD), 1998.

⁵⁰⁹ Ron Carter Trio, *So What*, Blue Note (CD), 1998.

⁵¹⁰ Brandord Marsalis, *Requiem*, Sony (CD), 1999.

⁵¹¹ Keith Jarrett, *The Melody at Night with You*, ECM (CD), 1999.

Appendix B.3. Kenny Drew Solo Transcription on *Moment's Notice*

MOMENT'S NOTICE Trans.: *Frank Samboral*

Solo piano:

KENNY DREW
(J. COLTRANE: "BLUE TRANE" - 1957)

E-7 A7 F-7 Bb7 Eb Maj7 Ab-7 Db7

D-7 G7 Eb-7 Ab7 Db Maj7 D-7 G7

C-7 B7 Bb-7 Eb7 Ab Maj7 Ab-7 Db7

G-7 C7 Ab-7 Db7 Gb Maj7 F-7 Bb7

- 1 -

MOMENT'S NOTICE 2

The musical score consists of five systems of music, each with a melodic line and a corresponding guitar chord line. The key signature is one flat (Bb) and the time signature is 4/4. The notation includes various rhythmic values, accidentals, and articulation marks such as slurs and accents. The chord line uses standard guitar chord notation, including triads and dyads.

System 1:
 Melody: Quarter notes, eighth notes, quarter notes, quarter notes.
 Chords: E-7 A7 | F-7 Bb7 | Eb Maj7 | Ab-7 Db7

System 2:
 Melody: Quarter notes, eighth notes, quarter notes, quarter notes.
 Chords: D-7 G7 | Eb-7 Ab7 | Db Maj7 | D-7 G7

System 3:
 Melody: Quarter notes, eighth notes, quarter notes, quarter notes.
 Chords: C-7 B7 | Bb-7 Eb7 | Ab Maj7 | Ab-7 Db7

System 4:
 Melody: Quarter notes, eighth notes, quarter notes, quarter notes.
 Chords: G-7 C7 | F-7 Bb7 | Eb / Bb | F-7 | G-7

System 5:
 Melody: Quarter notes, eighth notes, quarter notes, quarter notes.
 Chords: F-7 | Eb F-7 | G-7 F-7 | Eb (Break) | -

MOMENT'S NOTICE 3

Handwritten musical notation for the first system, including a treble clef, a key signature of one sharp (F#), and a 4/4 time signature. The melody features a triplet of eighth notes in the first measure. The bass line contains chords: E-7, A7, F-7, Bb7, Eb Major, and Ab-7, D67. Fingerings and accents are indicated above the notes.

Handwritten musical notation for the second system. The melody continues with a triplet of eighth notes. The bass line contains chords: D-7, G7, Eb-7, Ab7, Db Major, and D-7, G7. Fingerings and accents are indicated above the notes.

Handwritten musical notation for the third system. The melody continues with a triplet of eighth notes. The bass line contains chords: G-7, B7, Bb-7, Eb7, Ab Major, and Ab-7, D67. Fingerings and accents are indicated above the notes.

Handwritten musical notation for the fourth system. The melody continues with a triplet of eighth notes. The bass line contains chords: G-7, G7, Ab-7, D67, Gb Major, and F-7, Bb7. Fingerings and accents are indicated above the notes.

Handwritten musical notation for the fifth system. The melody continues with a triplet of eighth notes. The bass line contains chords: E-7, A7, F-7, Bb7, Eb Major, and Ab-7, D67. Fingerings and accents are indicated above the notes.

- 3 -

MOMENT'S NOTICE 4

Handwritten musical score for 'Moment's Notice 4'. The score consists of four systems of music, each with a treble clef staff and a bass clef staff. The bass clef staff contains handwritten chord symbols. The first system has four measures with chords: D-7 G7, Eb-7 Ab7, Db Maj7, and D-7 G7. The second system has four measures with chords: G-7 B7, Bb-7 Eb7, Ab Maj7, and Ab-7 Db7. The third system has five measures with chords: G-7 C7, F-7 Bb7, Eb/Bb, F-7, and G-7. The fourth system has five measures with chords: F-7, Eb F-7, G-7 F-7, Eb, and a final measure with a double bar line and the word '(Break)' written above the staff.

- 4 -

Appendix B.4. Miles Davis Solo Transcription on *All Of You*

Trans: Itzaki Sandoval

ALL OF YOU / Miles Davis Solo

CD "ROUND ABOUT MIDNIGHT", COLUMBIA 1955-6

0'33"

Handwritten musical notation for Miles Davis's solo on "All of You". The score is written on a grand staff with a treble clef and a key signature of two flats (B-flat and E-flat). The time signature is 4/4. The notation includes various rhythmic patterns, including eighth and sixteenth notes, and rests. Chord symbols are written above the notes, including F-7, Bb7, EbMaj7, G-7, C7, Gb7, F-7, Bb7, EbMaj7, C7, F-7, G-7, C7, F-7, Bb7, EbMaj7, F-7b5, Bb7, F-7, Bb7, EbMaj7, C7, AbMaj7, A-7b5, D7, G-7, and C7. A "BREAK" symbol is present above the first staff. Measure numbers 1, 3, 9, 13, 17, 21, and 25 are indicated at the start of their respective staves.

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29 F-7 B^b7 E^b7 C7

TURN AROUND (16 bars)

F-7 B^b7 G-7 C7

F-7 B^b7 E^b7 C7

F-7 B^b7 E^b7 C7

13 F-7 B^b7 E^b7 END SOLO

Gibson's break

6:20" CODA (Turn Around)

F-7 B^b7 E^b7 C7

5 F-7 B^b7 G-7 C7

9 F-7 B^b7 E^b7 C7

13 F-7 B^b7 E^b7 E^b-6 FINE

CADENZA

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Appendix C: Reference Scale List

Ionian	
Dorian	
Phrygian	
Lydian	
Mixolydian	
Aeolian	
Locrian	
Harmonic minor	
Melodic minor	
Lydian Augmented	
Lydian b7	
Mixolydian b13	

Dorian Altered

1 2 b3 4 b5 b6 b7

Altered (Super Locrian)

1 b2 b3 3 b5 b6 b7

Symmetrical Diminished (1,1/2)

1 2 b3 4 b5 b6 6 7

Symmetrical Dominant (1,1/2,1)

1 b9 #9 3 #11 5 13 b7

Whole Tone

1 2 3 b5 b6 b7

Major Pentatonic

1 2 3 5 6

Minor Pentatonic

1 b3 4 5 b7

Blues

1 b3 4 #4 5 b7

Chromatic

1 #1 2 #2 3 4 #4 5 #5 6 b7 7

Appendix D: Practice Routine Template (PTR) – Blank Version

Date:		Session Type:	Duration:
Section	Topic		Time
1	Technique	Scales, Arpeggios & Exercises Classical Piece Sight Reading	
2	Harmony	Voicings Blues / Rhythm Changes Topic	
3	Language	Singing the solos Solo Transcription Lick / Phrase	
4	Improvisation	Improvisation over Harmonic setting Specific Topic Over Repertoire	
5	Repertoire	New song 1 New song 2 Piano techniques	

Appendix E: Selected Discography of Jazz Pianists by Period

Ragtime (1890's-1910's)

Eubie Blake

Blues and Rags 1917-1921 (Ragtime Compilation). 1917-21, Biograph.

The Wizard of Ragtime Piano. 1958, 20th Century.

The Marches I Played On The Old Ragtime Piano. 1959, LP RCA.

The 86 Years Of Eubie Blake. 1969, Columbia.

Live Concert. 1973, Eubie Black Music.

91 Years Young. 1975, RCA.

Wild About Eubie. 1976, Columbia.

Eubie Blake Song Hits. 1976, Eubie Black Music.

Marian McPartland's Piano Jazz with Guest. 1979, Jazz Alliance.

Scott Joplin

Music of Scott Joplin (Piano Rolls). 1915, Biograph.

1916 Classic Solos. 1916, Biograph.

Piano Rags by Scott Joplin. Elektra/Asylum, 1970.

Tom Turpin

(Compilation sets with his works)

Wally Rose. *Ragtime Classics*. 1958, Good Time Jazz.

Richard Zimmerman. *Roots of Ragtime*. 1994, Madacy.

Stride (1920's)

James P. Johnson

Harlem Stride Piano, 1921-1929. 1921-29. Hot'N'Sweet.

Snowy Morning Blues. 1930-44, MCA/GRP.

Rent Party Piano. 1944, Blue Note.

James P. Johnson Plays Fats Waller Favorites. 1950, Decca.

The Daddy of the Piano. 1950, Decca
Stomps, Rags and Blues. 1951, Blue Note.
Rent Party. 1954, Riverside Records.

Jelly Roll Morton

Jelly Roll Morton 1923-1924. 1923-4, Classics.
Piano Solos. 1923-26, Retrieval RTV.
The Complete Jelly Roll Morton 1926-1930 (5 CD Set). 1926-39, RCA Bluebird.

Willie “The Lion” Smith

Willie “The Lion” Smith 1925-1937. 1925-37, Classics.
Willie “The Lion” Smith and His Cubs. 1935-37, Timeless.
The Lion of the Piano. 1951, Commodore Records.
Grand Piano. 1953, No Label.
Compositions of James P. Johnson. 1953, No Label.
Harlem Memories. 1953, Dial.
Relaxin’ After Hours. 1954, Emarcy.
Lion Roars. 1957, DOT Records.
Accent on Piano. 1957, Urania.
Songs We Taught Your Mother. 1961, Prestige.
Echoes of Spring. 1965, Milan.
Pork and Beans. 1966, 1201 Music.
Duets. 1967, Sackville.
Music on My Mind. 1967, Saba Entertainment.
Memoirs of Willie “The Lion” Smith. 1968, Koch Jazz.
Live at Blues Alley. 1970. Chiaroscuro.
Willie “The Lion” and His Washington Cubs. 1971, Fat Cats Jazz.

Fats Waller

Low Down Papa. 1923-31, Biograph.
Piano Solos 1929-1941 (2 CD Set). 1927-41, RCA.
The Amazing Mr. Waller, Vol. 1. 1954, Riverside Records.
The Amazing Mr. Waller, Vol. 2. 1954, Riverside Records.

Boogie-Woogie (1920's)

Albert Ammons

Albert Ammons 1936-1939. 1936-39, Classics.

Meade "Lux" Lewis

Meade "Lux" Lewis 1927-1939. 1927-39, Classics.

Boogie-Woogie Interpretations. 1951, Atlantic.

Meade "Lux" Lewis. 1951, Mercury.

Yancey's Last Ride. 1954, Down Home Records.

Tidal Boogie. 1954, Tradition.

Cat House Piano. 1955, Verve/Poligram.

Out of the Roaring. 1956, Paramount Records.

The Blues Piano Artistry of Meade "Lux" Lewis. 1961, Original Blues Classics.

Boogie-Woogie House Party. 1961, Phillips.

Jimmy Yancey

In the Beginning. 1939, Solo Art.

Yancey's Getaway. 1939, Riverside.

Yancey Special. 1951, Atlantic.

Swing (1930's – Mid 1940's)

Count Basie

The Original American Decca Recordings. 1937-39, MCA.

Bassie Rhythm. 1936-39, Herp.

Count Basie at the Piano. 1950, Decca.

April in Paris. 1956, Verve.

Live at the Montreux Jazz Festival. 1977, Pablo.

Duke Ellington*⁵¹²

Piano Reflections. 1953, Capitol.

Money Jungle. 1962, Blue Note.

Duke Ellington & John Coltrane. 1962, Impulse!

Earl Hines

Earls Hines 1932-34. 1932-34, Classics.

Ear Hines Collection: Piano Solos 1928-1940. 1928-40, Collector's Classics.

Fatha. 1932-42, Topaz.

The New Earl Hines Trio. 1965, Columbia.

Blues in Thirds. 1965, Black Lion.

Earl Hines at Home. 1969, Delmark.

At the Party. 1970, Delmark.

Tour de Force. 1972, Black Lion.

Tour de Force Encore. 1972, Black Lion.

Earl Hines Plays Duke Ellington, Vol.1 & 2. 1972, New World Music.

Earl Hines & Jacky Byard: Duet! 1972, Verve.

Hines. 1974, Black & Blue.

Fatha. 1977, RealTime.

Earl Hines: In New Orleans. 1977, Chiarascuro.

Art Tatum*

The Complete Art Tatum Solo Masterpieces (7 CD Set). 1953-54, Pablo.

The Three Giants. 1954, Verve.

Makin' Whoopee. 1954, Verve.

Tatum-Carter-Bellson. 1954, Clef Records.

The Art Tatum-Roy Eldridge-Alvin Stoller Trio. 1955, Clef Records.

The Essential Art Tatum. 1956, Verve.

The Tatum Touch. 1956, Columbia.

⁵¹² * Pianists identified with an asterisk (*) are difficult to classify in a single style category and were listed according to (perhaps) their most dominant association.

Teddy Wilson

- Teddy Wilson 1937*. 1937, Classics.
- Moments Like This*. 1938-39, Herp.
- Teddy Wilson and His Piano*. 1950, Columbia.
- The Fabulous Teddy Wilson at the Piano*. 1956, Columbia.
- I Got Rhythm*. 1956, Universal.
- The Impeccable Mr. Wilson*. 1957, Verve Records.
- The Touch of Teddy Wilson*. 1957, Verve Records.
- And then they Wrote*. 1960, Columbia.
- Teddy Wilson*. 1964, Cameo.
- The Everlastin'*. 1967, Vernon Records.
- The Noble Art of Teddy Wilson*. 1969, Metronome.
- Stomping at the Savoy*. 1970, Black Lion.
- My Ideal*. 1971, Philips.
- Moonglow*. 1972, Black Lion.
- Teddy Wilson & Marian McParland - Elegant Piano*. 1972, Halcyon Records.
- Runnun' Wild*. 1973, Black Lion.
- Stride After Fats*. 1974, Black Lion.
- Blues for Thomas Waller*. 1974, Black Lion.
- Teddy Wilson in Tokio*. 1975, Sackville.
- Three Little Words*. 1976, Black & Blue.
- Teddy Wilson Trio. The Goodman Years*. 1980, Storyville.

Bebop (1940's – Mid 1950's)

Erroll Garner*

- The Erroll Garner Collection Volumes 4 & 5: Solo Time*. 1954, Emarcy.
- Concert by the Sea*. 1955, Columbia.
- Erroll Garner Plays Misty*. 1955, Verve.
- Soliloquy*. 1957, Sony Music.
- Paris Impressions*. 1958, Columbia.

Al Haig

Charlie Parker. *Swedish Schnapps*. 1949-51, Verve.

The Al Haig Trio Esoteric. 1954, Fresh Sound.

Al Haig Trio. 1954, Fresh Sound.

Al Haig Today! 1965 Fresh Sound.

Invitation. 1974, Spotlight.

Interplay. 1976, Sea Breeze.

Portrait of Bud Powell. 1977, Interplay Records.

Ornithology. 1977, Progressive.

Plays the Music of Jerome Kern. 1978, IMS.

I Remember Bebop. 1980, Columbia.

Elmo Hope

Introducing The Elmo Hope Trio. 1953, Blue Note.

Meditations. 1955, Original Jazz Classics.

Elmo Hope Trio. 1959, Original Jazz Classics.

John Lewis

Modern Jazz Quartet. *MJQ*. 1954-56, Original Jazz Classics.

The John Lewis Piano. 1958, Warner.

Modern Jazz Quartet. *Dedicated to Connie*. 1960, Atlantic.

Private Concert. 1991, Emarcy.

Bach Preludes and Fugues, Vol. 1-4. 1984-2000, Philips/Verve.

Goldberg Variations, Pt.1-2. 1998, Universal/Philips.

Evolution I-II. 1999-2001, Atlantic.

Thelonious Monk

Genius of Modern Music: Volume 1. 1947-48, Blue Note.

Genius of Modern Music: Volume 2. 1947-52, Blue Note.

Solo 1954. 1954, Vogue.

Thelonius Monk Trio. 1954, Fantasy/Prestige.

Brilliant Corners. 1957, Original Jazz Classics.

Thelonious Monk with John Coltrane. 1957, Original Jazz Classics.
At the Five Spot. 1958, Prestige/Concord.
Evidence. 1960, France's Concert.
April in Paris. 1961, Milestone Records.
Monk's Dream. 1962, Columbia.
Monk in Tokyo. 1963, Legacy.
It's Monk Time. 1964, Sony Music.
Live at the Jazz Workshop. 1964, Tristar Music.
Straight, No Chaser. 1967, Legacy.
Monk's Blues. 1968, Columbia.

Phineas Newborn Jr.

Phineas Rainbow. 1957, RCA.
Here is Phineas. 1958, Atlantic.
We Three. 1958, New Jazz.
Piano Portraits. 1959, Fresh Sounds.
I Love a Piano. 1960, Roulette Records.
A World of Piano! 1961, Original Jazz Classics.
New Newborn Touch. 1964, Original Jazz Classics.
Look Out: Phineas is Back. 1976, RCA.
C Jam Blues. 1986, King Japan.

Oscar Peterson*

Lester Young. *The President Plays*. 1952, Verve.
Plays the Cole Porter Song Book. 1959, Verve.
Plays Porgy & Bess. 1959, Verve.
Night Train. 1962, Verve.
We Get Requests. 1964, Verve.
Exclusively for my Friends. 1963-68, MPS.

Bud Powell

- Charlie Parker. The Charlie Parker Story.* 1945, Savoy.
The Amazing Bud Powell: Volume 1. 1949-51, Blue Note.
The Amazing Bud Powell: Volume 2. 1951-53, Blue Note.
The Amazing Bud Powell: Volume 3 - Bud! 1957, Blue Note.
Inner Fires. 1953, Discovery.
Swingin' with Bud. 1957, RCA.
Time Waits: The Amazing Bud Powell. 1958, Blue Note.
The Complete Essen Jazz Festival Concert [live]. 1960, Black Lion.
A Portrait of Thelonious. 1961, Columbia/Sony Music.
The Return of Bud Powell. 1964, Roulette Records.

George Wallington

- The George Wallington Trio.* 1949-51, Savoy.
Trios. 1954, RCA Vogue.
Live! At Cafe Bohemia. 1955, Prestige/OJC
Virtuoso. 1984, Interface.

Cool (Late 1940's – 1950's)

George Shearing

- The London Years.* 1939-43, Herp.
Midnight on Cloud 69. 1949-50, Savoy.
In the Night. 1958, Blue Note.
My Ship. 1974, Polydor.
Two for the Road. 1980, Concord.
On a Clear Day. 1980, Concord.

Lennie Tristano

- Lennie Tristano.* 1955, Rhino/Atlantic.
New York Improvisations. 1956, Doxy Records.
The New Tristano. 1962, Rhino.

Continuity. 1964, Jazz/Orchard.

Tristano. 1998, Collectables.

Concert in Copenhagen (1965). 2003, Orchard.

Hard Bop (1950's – Mid 1960's)

Kenny Drew

Introducing The Kenny Drew Trio. 1953, Blue Note.

Clifford Brown. *Best Coast Jazz*. 1954, Emarcy.

The Kenny Drew Trio. 1956, Original Jazz Classics.

Pal Joey. 1957, Original Jazz Classics.

John Coltrane. *Blue Train*. 1957, Blue Note.

Chet Baker. *It Could Happen to You*. 1958, Original Jazz Classics.

Dexter Gordon. *One Flight Up*. 1964, Blue Note.

Everything I Love. 1973, Steeplechase.

Tommy Flanagan

The Complete "Overseas". 1957, DIW.

John Coltrane. *Giant Steps*. 1959, Atlantic/Rhino.

Kenny Dorham. *Quiet Kenny*. 1959, Original Jazz Classics.

Something Borrowed, Something Blue. 1978, Original Jazz Classics.

Together (featuring Kenny Barron). 1978, Denon Records.

The Trio. 1983, Gambit.

Nights at the Vanguard. 1986, Uptown.

Red Garland

A Garland of Red. 1956, Original Jazz Classics.

Red Garland's Piano. 1957, Original Jazz Classics.

Groovy. 1957, Prestige.

Miles Davis. *Relaxin'*. 1956, Prestige.

Miles Davis. *'Round About Midnight*. 1957, Columbia.

Miles Davis. *Milestones*. 1958, Columbia.

Red Garland at the Prelude, Vol. 1. 1959, Universal.

Red Alone. 1960, Original Jazz Classics.

Barry Harris

At the Jazz Workshop. 1960, Original Jazz Classics.

Newer Than New. 1961, Original Jazz Classics.

Preminado. 1961, Original Jazz Classics.

Chasin' the Bird. 1962, Original Jazz Classics.

Bull's Eye. 1968, Original Jazz Classics.

Barry Harris Plays Tadd Dameron. 1975, Preveu.

Live in Tokyo, 1976, Xanadu Records.

Live at Maybeck Recital Hall Volume 12. 1990, Concord.

Confirmation (with Kenny Barron). 1991, Cadid.

Barry Harris in Spain. 1991, Nuba Records.

First Time Ever. 1996, Evidence.

Live in Rennes. 2010, Plus Loin.

Ahmad Jamal

Ahmad's Blues. 1958, Chess.

Ahmad Jamal at the Pershing: But Not for Me. 1958, Chess.

Poinciana. 1963, Chess.

Tranquility. 1968, Impulse!

Freeflight Impulse! 1971, GRP.

Jamalca. 1974, 20th Century.

Chicago Revisited. 1992, Telarc.

Live in Paris 1996. 2003, Birdology.

It's Magic. 2008, Dreyfus Jazz.

A Quiet Time. 2010, Dreyfus Jazz.

Hank Jones

Charlie Parker. *Now's the Time.* 1923-53, Verve.

Hank Jones Solo Piano. 1950, Mercury.

The Trio. 1955, Fresh Sound.
Cannonball Adderley. *Somethin' Else*. 1958, Blue Note.
Kenny Dorham. *Jazz Contrasts*. 1957, Original Jazz Classics.
Hank. 1976, All Art.
Tiptoe Tapdance. 1978, Galaxy.
The Oracle. 1989, EmArcy.
Lazy Afternoon. 1989, Concord.
Live at Maybeck Recital Hall, Vol. 6. 1991, Concord.
Upon Reflection. 1993, Verve.
Favors. 1997, Universal.
West of 5th. 2006, Chesky.

Wynton Kelly

Sonny Rollins. *Newk's Time*. 1957, Blue Note.
Kelly Blue. 1959, Original Jazz Classics.
John Coltrane. *Coltrane Jazz*. 1959, Atlantic.
Kelly at Midnight. 1960, Vee-Jay.
Someday my Prince will Come. 1961, Vee-Jay.
Hank Mobley. *Soul Station*. 1960, Blue Note.
Miles Davis. *Someday my Prince Will Come*. 1961, Columbia.
Hank Mobley. *Workout*. 1961, Blue Note.
Blues on Purpose. 1965, Xanadu.
Wynton Kelly and Wes Montgomery. *Smokin' at the Half Note*. 1965, Verve.

Les McCann

Much Les. 1968, Rhino/Atlantic.
Swiss Movement. 1969, Atlantic.

Horace Silver

The Horace Silver Trio (Vols. 1 & 2). 1952, Blue Note.
Art Blakey and The Jazz Messengers. *Live at Birdland (1&2)*. 1954, Blue Note.
Art Blakey and The Jazz Messengers. *Live at Cafe Bohemia (1&2)* 1955, Blue Note.

Blowin' The Blues Away. 1959, Blue Note.

Song for my Father. 1964, Blue Note.

Bobby Timmons

This Here is Bobby Timmons. 1960, Original Jazz Classics.

In Person. 1963, Original Jazz Classics.

Cedar Walton

Cedar Walton Plays Cedar Walton. 1967-69, Original Jazz Classics.

First Set. 1977, Steeplechase.

Second Set. 1977, Steeplechase.

Third Set. 1977, Steeplechase.

The Maestro. 1980, 32 Jazz.

The Trio, Vol 1-3. 1985, RED Distribution.

Cedar. 1985, Timeless.

Heart & Soul. 1991, Timeless.

Live at Maybeck Recital Hall Series, Vol. 25. 1992, Concord Jazz.

Roots. 1997, Astor Place.

Underground Memoirs. 2005, High Note.

Free Jazz (Late 1950's)

Cecil Taylor

Jazz Advance. 1956, Blue Note.

The World of Cecil Taylor. 1960, Candid.

Unit Structures. 1966, Blue Note.

Conquistador! 1966, Blue Note.

The Great Concert. 1969, Prestige.

Silent Tongues. 1974, 1201 Music.

Garden Part 1 & 2. 1981, Hat Art.

Impressionistic / Chamber Jazz (From late 1960's)

Paul Bley

- Introducing Paul Bley*. 1953, Original Jazz Classics.
- Paul Bley with Gary Peacock*. 1970, ECM.
- Ballads*, 1971. ECM.
- The Fabulous Paul Bley Quintet in 1958*. 1971, America.
- Open to Love*. 1972, ECM.
- Fragments*. 1986, ECM.
- The Paul Bley Quartet*. 1987, ECM.
- Solo Piano*. 1988, Steeplechase.
- In the Evenings Out There*. 1991, ECM.
- Time will Tell*. 1994, ECM.
- Not Two, not One*. 1999, ECM.
- Sankt Gerold*. 2000, ECM.
- Solo in Mondsee*. 2007, ECM.

Dave Brubeck

- Jazz at Oberlin*. 1953, Original Jazz Classics.
- Time Out*. 1959, Columbia.
- Once When I Was Very Young*. 1991, Musicmasters.

Chick Corea*

- Now He Sings, Now He Sobs*. 1968, Blue Note.
- Piano Improvisations Vols. 1 & 2*. 1971, ECM.
- Return to Forever*. 1972, ECM.
- My Spanish Heart*. 1976, Polydor.
- Three Quartets*. 1981, Stretch.
- Chick Corea: Children's Songs*. 1983, ECM.
- Trio Music, Live in Europe*. 1984, ECM.
- Akoustic Band*. 1989, GRP.
- Beneath the Mask (Elektric Band)*. 1991, GRP.

Alive. 1991, GRP.
Remembering Bud Powell. 1997, Universal.
Solo Piano: Standards. 2000, Stretch Records.
Solo Piano: Originals. 2000, Stretch Records.
Past, Present & Futures. 2001, Stretch Records/ Universal Music.
Duet. 2008, Stretch Records.
Hot House, 2012. Concord Jazz.

Bill Evans

New Jazz Conceptions. 1956, Riverside.
Everybody Digs Bill Evans. 1958, Riverside.
Portrait in Jazz. 1959, Original Jazz Classics.
Explorations. 1961, Original Jazz Classics.
Sunday at the Village Vanguard. 1961, Original Jazz Classics.
Walt for Debby. 1961, Original Jazz Classics.
Interplay. 1962, Riverside.
Conversations with Myself. 1963, Verve.
Bill Evans Alone. 1968, Polygram.
Montreux II. 1970, Sony Music.
Intuition. 1974, Original Jazz Classics.
The Tony Bennett / Bill Evans Album. 1975, Original Jazz Classics.
Alone (Again). 1975, Concord.
Crosscurrents. 1977, Original Jazz Classics.
New Conversations. 1978, Warner Bros.
We will Meet Again. 1979, Warner Bros.

Clare Fisher

America the Beautiful. 1967, Discovery.
Starbright. 1982, Discovery.
Lembrancas (Remembrances). 1989, Concord.

Herbie Hancock*

Miles Davis. *The Complete 1964 Concert*. 1964, Columbia.
Maiden Voyage. 1964, Blue Note.
Empyrean Isles. 1964, Blue Note.
Miles Davis. *E.S.P.* 1965, Columbia.
Miles Davis. *Miles Smiles*. 1967, Columbia.
Speak Like a Child. 1968, Blue Note.
Head Hunters. 1973, Columbia.
The Piano. 1980, Columbia/Sony Music.
Herbie Hancock Trio. 1982, Sony Music Distribution.
Quartet. 1982, Columbia.
The New Standard. 1996, Verve/Polygram.
Portrait of Bill Evans. 2004, JVC Compact Discs.
Possibilities. 2005, Hear Music/Hancock Records.
River: The Joni Letters. 2007, Verve.
The Imagine Project. 2010, Hancock Records.
Live in Lugano: Supertrio in Concert. 2010, Jazzdoor.

Keith Jarrett

Belonging. 1974, ECM.
The Koln Concert. 1975, ECM.
Standards, Vol. 1. 1983, ECM.
Standards, Vol. 2. 1985, ECM.
Still Live (2 CD Set). 1986, ECM.
Standards in Norway. 1989, ECM.
Bye, Bye, Blackbird. 1991, ECM.
Keith Jarrett at the Blue Note. 1995, ECM.
La Scala. 1997, ECM.
Tokyo '96. 1998, ECM.
The Melody at Night with You. 1999, ECM.
Whisper Not. 2000, ECM.

Radiance. 2005, ECM.

Jasmine. 2010, ECM.

Rio. 2011, ECM.

Somewhere. 20013, ECM.

Joachim Kuhn

Distance. 1984, CMP.

From Time to Time Free. 1988, CMP.

Dynamics. 1990, CMP Records.

Herbie Nichols

I Just Love Piano. 1952, Savoy.

The Third World. 1956, Blue Note.

Love, Gloom, Cash, Love. 1957, Bethlehem High Fidelity.

Martial Solal*

The Vogue Recordings Vol. 1: Trios and Quartet. 1953-56, Vogue.

The Vogue Recordings Vol. 2: Trios and Solos. 1954-56, Vogue.

The Vogue Recordings Vol. 3: Trio and Big Band. 1955-58, Vogue.

Bluesine. 1983, Soul Note.

McCoy Tyner*

John Coltrane. *My Favorite Things*. 1960, Atlantic.

Inception. 1962, Impulse!

Nights of Ballads & Blues. 1963, Impulse!

John Coltrane. *Live at Birdland*. 1963, Impulse!

John Coltrane. *A Love Supreme*. 1964, MCA.

Plays Ellington. 1965, Impulse.

The Real McCoy. 1967, Blue Note.

Sahara. 1972, Blue Note.

Echoes of a Friend. 1972, Original Jazz Classics.

Enlightenment. 1973, Milestone.

Supertrios. 1977, Milestone.

Passion Dance. 1978, Milestone.
Horizon. 1980, Milestone.
La Leyenda de la Hora. 1981, Columbia.
Revelations. 1988, Blue Note.
Blues Bossa. 1991, LRC.
McCoy Tyner Plays John Coltrane. 1997, Impulse!
Land Of Giants. 2003, Telarc.

Contemporary / Others

Monty Alexander

In Tokyo. 1979, Original Jazz Classics.
So What? 1980, Black & Blue.
Triple Treat, Vol. 1. 1981, Concord.
Triple Treat, Vols. 2 & 3. 1987, Concord.
Jamboree: Monty Alexander's Ivory and Steel. 1994, Concord.

Kenny Barron

Peruvian Blue. 1974, 32 Jazz.
Together (w/Tommy Flanagan). 1978, Denon Records.
Green Chimneys. 1983, Criss Cross Jazz Criss.
What If? 1986, Enja.
Live at Maybeck Recital Hall, Vol 10. 1990, Concord Jazz.
Invitation. 1990, Criss Cross.
Lemiura-Seascape. 1991, Candid.
Confirmation (w/Barry Harris). 1991, Candid.
Stan Getz and Kenny Barron. *People Time*. 1992, Gitanes Jazz.
Wanton Spirit. 1995, Verve.
Night and City. 1996, Verve.
New York Attitude. 1996, Uptown.
Canta Brasil. 2002, Sunnyside.

Super Standard-Super Trio. 2004, Venus Label.

The Traveller. 2008, Emarcy.

Kenny Barron & the Brazilian Knights. 2013, Sunnyside Communications.

Richie Beirach

Omerta. 1978, Storyville.

Elegy for Bill Evans. 1981, SLP.

Maybeck Recital Hall Series, Volume 19. 1992, Concord.

Trust. 1993, Evidence.

Snow Leopard. 1997, Evidence.

Romantic Rhapsody. 2003, Venus Jazz.

Quest for Freedom. 2010, Sunnyside.

JoAnne Brackeen

Six Ate. 1975, Candid Records.

Fi-Fi Goes to Heaven. 1986, Concord.

Live at Maybeck Recital Hall, Vol. 1. 1989, Concord.

Breath of Brazil. 1991, Concord.

Take a Chance. 1994, Concord.

Pink Elephant Magic. 1999, Arkadia Jazz.

Billy Childs

Portrait of a Player. 1993, Windham Hill.

The Child Within. 1996, Shanachie.

Lyric. 2005, Lunacy.

Stanley Cowell

A Night at the Vanguard. 1959, Verve Forecast.

Brilliant Circles. 1969, DA Music.

Equipoise. 1978, Fantasy.

Live at Cafe des Copains. 1985 Unison.

Live at Maybeck Recital Hall, Vol. 5. 1990, Concord.

It's Time. 2012, Steeplechase.

Abdullah Ibrahim*

Soweto. 1965, Rare Bid.
Good News from Africa. 1973, Enja.
African Marketplace. 1979, Enja.
Live at Montreaux '80. 1980, Enja.
African Dawn. 1982, Enja.
Ekaya. 1983, Ekapa Records.
Water from an Ancient Well. 1985, Tiptoe.
Cape Town Flowers. 1997, Tiptoe.

Kenny Kirkland

Miroslav Vitous. *First Meeting*. 1979, ECM, 1979.
Elvin Jones. *Earth Jones*. 1983, Palo Alto Jazz.
Branford Marsalis. *Renaissance*. 1987, Columbia.
Kenny Kirkland. 1991, Verve/GRP.
Thunder and Rainbows. 1993, Sunnyside.
Kenny Garrett. *Song Book*. 1997, Warner.
Branford Marsalis. *Requiem*. 1999, Sony.

Vijay Iyer

Historicity. 2009, Act Music.
Solo. 2010, Act Music.
Tirtha. 2011, Act Music.
Accelerando. 2012, Act Music.

Lyle Mays

Lyle Mays. 1985, Geffen.
Sweet Dreams. 1988, Geffen.
Fictionary. 1992, Geffen.
Solo Improvisations for Expanded Piano. 2000, Warner Bros.

Marian McPartland

Ambiance. 1970, Jazz Alliance.

At the Festival. 1979, Concord.

Marian McParland's Piano Jazz - Radio Program Series. 1978-2013, NPR.

Brad Mehldau

When I Fall in Love. 1994, Fresh Sound New Talent.

Introducing Brad Mehldau. 1995, Warner Bros.

The Art of The Trio. Vol. 1. 1995, Warner Bros.

The Art of The Trio. Vol. 2: Live at the Village Vanguard. 1997, Warner Bros.

Alone Together. 1997, Blue Note/EMI.

The Art of The Trio. Vol. 3: Songs. 1998, Warner Bros.

The Art of The Trio. Vol. 4: Back to the Vanguard. 1999, Warner Bros.

Brad Mehldau. 1999 Warner Jazz.

Elegiac Cycle. 1999, Warner Bros.

Places. 2000, Warner Bros.

Friendship. 2003, Act.

Live in Tokyo. 2004, Nonesuch.

Day is Done. 2005, Nonesuch.

Highway Rider. 2010, Nonesuch.

The Art of The Trio. Vol. 5: progression. 2011, Nonesuch.

Ode. 2012, Nonesuch.

Where Do You Start. 2013, Nonesuch.

Mulgrew Miller

Keys to the City. 1985, Landmark.

Wingspan. 1987, Landmark.

Casandra Wilson. *Blue Skies*. 1988, JMT.

Hand in Hand. 1993, Novus.

With Our Own Eyes. 1994, Novus.

Tony Williams Trio. *Young at Heart*. 1998, Sony.

Live at the Kennedy Center (Vols. 1 & 2). 2006-2007, Maxjazz.
Grew's Time. 2010, Space Time.

Tete Montoliu

A Tot Jazz, Vol. 1-2. 1965, Fresh Sound.
Body and Soul. 1971, Enja.
Tete! 1974, Video Arts.
Boleros. 1975, Ensayo.
Tête À Tete. 1977, Video Arts.
Lunch in L.A. 1979, Fantasy.
Catalonian Nights, Vols. 1-2. 1980, Steeplechase.
Face to Face. 1982, Steeplechase.
The Music I Like to Play (Vols. 1-4). 1986-1990, Soul Note.
Temas Brasileiros. 1996, Fresh Sound.

Danilo Pérez

Danilo Pérez. 1992, Novus.
The Journey. 1993, Novus.
Central Avenue. 1998, GRP.

Michel Petrucciani

Michael Petrucciani. 1981, Sunnyside.
100 Hearts. 1983, Blue Note.
Pianism. 1985, Blue Note.
Michael Plays Petrucciani. 1989, Blue Note.
Power of Three. 1986, Blue Note.
Marvellous. 1994, Dreyfus Records.
Au Theatre des Champs-Elysees. 1997, Dreyfus.
Solo Live. 1999, Dreyfus.
Trio in Tokio. 1999, Dreyfus.
Conversation. 2001, Dreyfus.
Michel Petrucciani and Niels-Henning Osterd Pedersen. 2009, Dreyfus.

Gonzalo Rubalcaba

Discovery, Live at Montreux. 1990, Blue Note.

The Blessing. 1991, Blue Note.

Images. 1992, Blue Note.

Imagine: Live in America. 1994, Blue Note.

Inner Voyage. 1999, Blue Note.

Supernova. 2001, Blue Note.

Solo. 2005, Blue Note.

Avatar. 2008, Angel Records.

Esbjörn Svensson (EST)

When Everyone Has Gone. 1996, Dragon.

Esbjörn Svensson Trio Plays Monk. RCA Victor.

From Gagarin Point of View. 1999, Sony Music.

Somewhere Else Before. 2001, Sony Music.

Seven Days of Falling. 2003, Sony Music.

Tuesday Wonderland. 2006, Emarcy

Leucocyte. 2008, Emarcy.

301. 2012, Act Music.

Josef Zawinul

The Beginning. 1969, Fresh Sound.

Miles Davis. *In a Silent Way.* 1969, Columbia.

Miles Davis. *Bitches Brew.* 1970, Columbia.

Miles Davis. *Like Evil.* 1971, Columbia.

Weather Report. *Weather Report.* 1971, Columbia.

Weather Report. *Black Market.* 1976, Columbia.

Weather Report. *Heavy Weather.* 1976, Columbia.

Zawinul Syndicate. *My People.* 1996, Tone Center.

Zawinul Syndicate. *World tour.* 1998, Zebra Records.

Zawinul Syndicate. *Brown Street.* 2006, Heads Up Records.

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FIGURE 2. Piano keyboard range and frequencies with orchestral instruments correlation.

Source: Eargle, John. *Handbook of Recording Engineering*. New York, NY: Springer, 2005.

<http://www.aes.org/aeshc/docs/recording.technology.history/images4/figure2.html>



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