COLLABORATIVE Crossover: identifying classical vocal collaborative piano practices in jazz vocal accompanying

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Classical vocal collaborative piano and jazz vocal accompaniment are well-established fields with long-standing performance traditions. Classical collaborative performance practices have been researched and codified, but jazz accompanying practices largely remain in the domain of aural tradition. Both classical and jazz accompaniment share associated practices, such as rubato, transposition, and attention to lyric diction and inflection, but there is little previous investigation into the idea that classical collaborative practices might apply to jazz accompanying. This research examines jazz piano accompanying practices in sung verses of standard tunes to demonstrate how accomplished jazz pianists intuitively use many of the same techniques as classical collaborative pianists to create balance with singers. Through application of expressive microtiming analysis to graphical displays of transcribed recorded performances, a strong correlation is established between the classical and jazz vocal accompanying traditions. Linking classical practices to jazz potentially creates a foundation for jazz accompanying pedagogy.
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>viii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF EXAMPLES</td>
<td>xi</td>
</tr>
<tr>
<td>CHAPTER 1 — INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Purpose</td>
<td>2</td>
</tr>
<tr>
<td>Overview of Methodology</td>
<td>3</td>
</tr>
<tr>
<td>Rationale and Significance</td>
<td>4</td>
</tr>
<tr>
<td>Role of the Researcher</td>
<td>5</td>
</tr>
<tr>
<td>Assumptions</td>
<td>6</td>
</tr>
<tr>
<td>Definitions of Key Terminology</td>
<td>7</td>
</tr>
<tr>
<td>Collaborator/Accompanist</td>
<td>7</td>
</tr>
<tr>
<td>Comping</td>
<td>7</td>
</tr>
<tr>
<td>Expressive Microtiming and Participatory Discrepancies</td>
<td>8</td>
</tr>
<tr>
<td>Jazz and Jazz Singer</td>
<td>9</td>
</tr>
<tr>
<td>Recitative and Lyric Recitative</td>
<td>9</td>
</tr>
<tr>
<td>Rubato</td>
<td>10</td>
</tr>
<tr>
<td>Terminology Pertaining to Method</td>
<td>12</td>
</tr>
</tbody>
</table>
CHAPTER 4 — METHODOLOGY ........................................................................................................................................59

Research Approach and Literature on Methodology ........................................................................................................60

Methods and Materials .........................................................................................................................................................66

Data Analysis Methods ..........................................................................................................................................................70

Limitations and Delimitations of Methodology ....................................................................................................................74

CHAPTER 5 — FINDINGS: ANALYSIS OF TRANSCRIPTIONS AND GRAPHICAL DISPLAYS ........................................................................................................................................................................................................80

Study 1: “Der greise Kopf” ....................................................................................................................................................90

Inflection: Measure Timings ................................................................................................................................................82

Diction: Shared Eighth Notes ..............................................................................................................................................87

Study 2: “My Man” ..............................................................................................................................................................90

“My Man”: Form and Structure ........................................................................................................................................91

Inflection: Flanagan and Drinkard .....................................................................................................................................93

Diction: Shared Eighth Note Instances ..................................................................................................................................97

Study 3: “Star Dust” .............................................................................................................................................................101

Inflection: Measure Timings ..............................................................................................................................................101

Diction: Vocal Onsets .........................................................................................................................................................107

Study 4: “Lush Life” ............................................................................................................................................................108

Inflection: Measure timings and variable phrasing ........................................................................................................114

Diction: Pianists’ Leads and Lags .......................................................................................................................................116
Summary ........................................................................................................................................... 117

CHAPTER 6 — DISCUSSION AND CONCLUSION ................................................................................. 119

Discussion and Assertions .................................................................................................................. 120

Methodology .................................................................................................................................... 124

Literature ......................................................................................................................................... 125

Recommendations and Suggestions ............................................................................................... 127

Epilogue ............................................................................................................................................ 129

BIBLIOGRAPHY ............................................................................................................................... 131
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4–1.</td>
<td>Recordings chosen as part of methodology</td>
<td>62</td>
</tr>
<tr>
<td>4–2.</td>
<td>Data created from data points in waveform and spectrographic displays</td>
<td>70</td>
</tr>
<tr>
<td>4–3.</td>
<td>A graph plotting each phrase (numbered on the x-axis) against time in seconds (y-axis)</td>
<td>71</td>
</tr>
<tr>
<td>5–1.</td>
<td>Timings for performances of “Der greise Kopf” by the duos Fischer-Dieskau/Moore and Pears/Britten, mm. 11-13</td>
<td>86</td>
</tr>
<tr>
<td>5–2.</td>
<td>Chart of subphrase and total verse timings for four verse performances of “Star Dust”</td>
<td>102</td>
</tr>
<tr>
<td>5–3.</td>
<td>Form and key centers in the verse to Strayhorn’s “Lush Life”</td>
<td>109</td>
</tr>
<tr>
<td>5–4.</td>
<td>Harmonic choices by five accompanying pianists on “Lush Life,” mm. 10-11</td>
<td>110</td>
</tr>
<tr>
<td>5–5.</td>
<td>Onset leads and lags by the five pianists in their recordings of “Lush Life”</td>
<td>117</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

4–1. Waveform display of the verse of “My Man,” performed by Fitzgerald/Flanagan..............67
4–2. Spectrogram of the verse of “My Man,” performed by Fitzgerald/Flanagan.................69
4–3. A graph plotting each phrase (numbered on the x-axis) against time in seconds (y-axis) ....72
5–1. Spectrogram of mm. 5-9 of “Der greise Kopf” by Fischer-Dieskau/Moore.......................82
5–2. Measure lengths in performance of “Der greise Kopf” by Fischer-Dieskau/Moore ..........83
5–3. Measure lengths in performance of “Der greise Kopf” by Pears/Britten..........................84
5–4. Comparison of performances by Fischer-Dieskau/Moore and Pears/Britten..................84
5–5. Moore’s lead (negative values) and lag (positive values) timings to Fischer-Dieskau’s vowels in their shared eighth notes in “Der greise Kopf”..............................87
5–6. Britten’s lead (negative values) and lag (positive values) timings to Pears’ vowels in shared eighth notes in “Der greise Kopf”.........................................................88
5–7. Form variations in “My Man” verses by Billie Holiday and Ella Fitzgerald ..................91
5–8. Graph of differentials of shared eighth notes by Holiday/Drinkard in “My Man”..........97
5–9. Tommy Flanagan’s Fitzgerald’s shared eighth notes “My Man”.................................99
5–10. Spectrogram of Fitzgerald/Flanagan performing mm. 5-6 of “My Man” .......................99
5–11. Comparison of measure lengths within four verse performances of “Star Dust”...........101
5–12. Leads and lags of vowel onsets on five important syllables from the four performances of “Star Dust”.................................................................................................107
5–13. Measure timings for five recordings of the verse to “Lush Life,” mm. 1-16 ..............114
5–14. Measure timings for the Strayhorn and Bey/Allen verse recordings of “Lush Life” .......115

5–15. Measurement of lead and lag for the first eight syllables of shared eighth note instances in five recordings of “Lush Life”.................................................................116
LIST OF EXAMPLES

4–1. “Der greise Kopf,” from Winterreise, D. 911, by Franz Schubert, mm. 5-14 .......................61
4–2. George Shearing’s accompaniment of Mel Tormé on “Star Dust,” mm. 5-6 .......................73
4–3. Mike Renzi’s accompaniment of Mel Tormé on “Star Dust,” mm. 3-4 ..............................73
5–1. “Der greise Kopf,” mm. 11-14, with performance indications for each duo ......................85
5–2. “Der greise Kopf” by Franz Schubert, mm. 5-8 ..................................................................89
5–3. Excerpt from the French sheet music for “My Man,” mm. 16-19 ......................................92
5–4. Excerpt from the American sheet music for “My Man,” mm. 16-19 ...................................92
5–5. Holiday’s inflected melody line from the verse to “My Man,” mm. 15-17 .......................92
5–6. Fitzgerald’s inflected melody line from the verse to “My Man,” mm. 13-18 ...................93
5–7. The first two measures of the verse from the American sheet music of “My Man” ..............93
5–8. “My Man,” mm. 5-6, performed by Fitzgerald and Flanagan .........................................94
5–9. “Ich wollt’ein Sträusslein binden,” mm. 41-45, composed by Richard Strauss ..................95
5–10. Flanagan’s accompaniment to Fitzgerald in mm. 13-15 of “My Man” ..............................95
5–11. “My Man,” mm. 5-6, performed by Billie Holiday and Carl Drinkard ............................96
5–12. Holiday and Drinkard performing the verse to “My Man,” mm. 8-10 ............................98
5–13. Verse performance of “Star Dust” by Jones and Walton. mm. 5-6 ..............................102
5–14. Ending of the verse of “Star Dust,” performed by Tormé and Shearing ..........................103
5–15. Mike Renzi and Mel Tormé performing the ending of the verse to “Star Dust”.............104
5–16. Gambarini and Jones in the final two bars of the verse to “Star Dust,” mm. 15-16........105
5–17. Accompaniments of Renzi and Jones on “Star Dust,” mm. 10-11..............................106
5–18. Geri Allen’s accompaniment of Andy Bey on “Lush Life,” mm. 11-12.....................110
5–19. Laurence Hobgood’s accompaniment to Kurt Elling in mm. 4-5 of “Lush Life”.........111
5–21. Bob James’ accompaniment to Kevin Mahogany in mm. 11-12 of “Lush Life”........112
5–23. Bey and Allen on “Lush Life,” mm. 17-18.................................................................113
5–24. Kevin Mahogany and Bob James on “Lush Life,” mm. 6-7.................................114
Accompaniment of jazz singers is a field offering many opportunities and rewards for the willing and interested jazz pianist. Pianists looking to collaborate with jazz vocalists find a pursuit that demands unique skills beyond those required of pianists in instrumental jazz groups. Many of these skills are familiar to classical vocal collaborators, pianists who use text knowledge to determine facets of musical character and rhythmic flow as well as expressive treatment of singers’ consonants and vowels. In this dissertation, I demonstrate how these aspects of classical vocal collaboration apply to jazz, and how awareness of classical collaborative techniques can help jazz pianists improve their rapport with singers, facilitating an artistic result.

I connect collaborative ensemble practices to the jazz accompanying tradition by analyzing recorded performances of eminent jazz pianists and singers. Specifically, I explore jazz piano accompanying practices in sung verses of standard tunes, demonstrating how accomplished jazz pianists intuitively use many of the same techniques as classical collaborative pianists to solve ensemble issues and therefore achieve convincing musical results.

While a small number of young keyboardists have a vocational attraction to musical collaboration, most pianists in both classical and jazz realms follow a soloist’s route during the skill-building phase of their careers. In jazz, this refers not to solo piano but to improvised soloing within an instrumental group. Young pianists in both fields develop critical technical skills to serve their soloistic aspirations, and enjoy a plethora of literature and pedagogical materials for guidance and inspiration. Early biases in favor of a soloist’s career create a negative mindset toward accompanying, which is often regarded as a purely subsidiary role.
For the majority of pianists who reach college and beyond, the solo career path becomes untenable, and many of them turn to accompanying work as an alternative (Rogers 1988). For jazz pianists, this specifically involves playing for singers, who traditionally find more overall demand in the marketplace than instrumentalists do, and therefore offer sidemen more work opportunities. However, young pianists generally lack the awareness of the special skill set required to excel at accompanying vocalists. For both jazz and classical pianists, a large adjustment is necessary, from the soloist’s mindset to that of a collaborator (partner) or in some cases a subordinate. Nonetheless, the rewards of partnership are great, and many pianists find a deep musical and personal fulfillment in collaboration (Solomon 1981).

Classical pianists can turn to the long pedagogical tradition embodied in the large body of work codifying performance practices of classical vocal accompaniment (Adler 1965; Spillman 1985; Katz 2009), but young jazz accompanists do not enjoy such resources. A single dissertation exists on jazz accompanying (White 2010), essentially a survey of important aspects of collaboration bolstered by interviews of eight known jazz accompanists. Trade books such as Rizzo (2002) and Greensill (2013) are accessible offerings primarily for the amateur pianist. There are also articles and interviews of notable jazz accompanists available as well. However, because there is no established pedagogical tradition for jazz accompanying, and no degree programs in higher education offered, knowledge is passed down primarily through oral transmission.

Purpose

This is a performance practice research project on the art of piano accompaniment of jazz voice. I identified aspects of classical collaboration used intuitively by great jazz pianists, to show that the principles of performance practice in classical art song can in fact be considered
part of jazz vocal accompaniment performance practice. I regard expressive microtiming as the key to the performance application of collaborative practices considered here. The application of expressive microtiming analysis to fully rubato (out-of-time) jazz verse performances may offer a unique contribution to current literature. It is my hope that this research will open a new interdisciplinary pathway of shared insights and materials between jazz and classical accompanists.

Overview of Methodology

I organized my findings into studies of songs and their recorded performances. The first study offers an analysis of two recordings of Schubert’s “Der greise Kopf,” from Winterreise, D. 911. The following three studies focus on the verses of three standard tunes, “My Man,” Star Dust,” and “Lush Life,” providing the contexts for analysis. For all four song studies, I chose performances based on availability of recordings and reputations of the performers.

In each verse study, I analyzed the pianists’ responses regarding two aspects of ensemble, diction and inflection. Diction is the enunciation of the text by the singer, and the vertical aspect of ensemble. In my research on diction, I measured how the jazz pianists respond to singers’ consonants and vowels, and whether the pianists treat the vowels as the “music” and avoided consonants, a classical collaborative practice (Sundberg & Bauer-Huppmann 2006).¹

Inflection is the shape of the sung text, the equivalent of rubato in instrumental music, and the horizontal aspect of achieving good ensemble (Katz 2009, 23-24). Singers create inflection through paraphrase of both melodic and textual elements, adding a quality of unpredictability to the performance. I compared different performances of each song to examine

¹ The International Phonetic Alphabet (IPA) is a standard diction tool for classical singers (see Adams 2008, xii-xv and Wall 1989) but not used by jazz singers; because of the jazz orientation of this study, I predominantly used standard phonetic symbols commonly used in English dictionaries in explanations of consonants and vowels.
the expressive potential of inflection, and to gauge the success of pianists’ individual performances and techniques.

I created waveform displays and spectrograms with the freeware program Sonic Visualiser. Working with frequency displays of recordings, I constructed timing data corresponding with the performers’ expressive microtiming. I used timing data for both singers and pianists to determine how successfully the pianists were inflecting with the singers and matching the singer’s vowel onsets.

**Rationale and Significance**

Rubato is a specialized musical skill that depends on “feel” rather than ability to keep metronomic time. Significant jazz research on rubato and jazz voice has addressed singers’ use of expressive microtiming (Huang and Huang 1995, Toft 2004), or has actually involved timing studies (Ashley 2002). These studies focused on expressive singing over a steady accompaniment, called by Hudson the “earlier” form of rubato (1994). The highly-inflected (rubato) nature of jazz vocal performance makes it an excellent candidate for microtiming research.

My research is indebted to the authors of all three articles. Huang and Huang connect the eighteenth-century performance practice of *tempo rubato* with the jazz singing style of Billie Holiday; I relate rubato practice of early nineteenth-century art song to twentieth-century jazz verse performances, one of which features Holiday in one of her signature songs, “My Man.” Toft links non-notational freedoms in late eighteenth- and early nineteenth-century recitative performance practice to popular and jazz singing styles of the late twentieth century; my research involves connecting recitative form and performance practice to that of modern jazz verse. Ashley analyzes expressive timing in five performances of two ballads to ascertain musicians’
expressive tendencies; I analyze expressive timing in two performances of one art song and nine performances of the verses of three ballads to explore whether jazz pianists use classical collaborative techniques to create ensemble with their singers.

My research departs from the above studies in one significant way. While the previous rubato research focused on performances with a steady accompaniment, my study involves performances in full-texture rubato, Hudson’s “later” rubato (1994). The singer’s vowels become ersatz beats, against which I time the pianist’s attacks, specifically in relation to the singer’s diction and inflection. While the “beat” in this context is certainly fluid, past research has suggested that even a steady accompanimental beat is often far from metronomic (Danielsen, 2010). I believe my study may pave the way for future exploration into expressive microtiming in non-metric, non-groove-based musics, including free jazz.

Role of the Researcher

At the time of conducting this study, I was a doctoral candidate in jazz performance at the University of North Texas, with my related field in collaborative piano. I began studying piano at age eight in 1969, and began accompanying myself and other singers in popular songs by age fourteen. My experience as a jazz accompanist began at age nineteen, and over the last thirty-four years, I have worked for singers in Phoenix, Dallas, San Francisco, New York, and Montana. I have had the pleasure of accompanying singers Eden Atwood, Dee Daniels, Jobelle, Sunny Wilkinson, Dianne Reeves, and the New York Voices.

I acknowledge that my experience, while appearing valuable to such a study as mine, biased my judgment in defining research parameters and in interpreting my findings. My subjectivity inherently affected my qualitative judgment of music studied here, but I hope that
the quantitative aspect of expressive microtiming study and analysis here in part circumvented personal subjectivity concerning findings and conclusions.

Assumptions

I began my research with several assumptions I consider valid. First, I believe that jazz is an equal to classical music as an art form, and that required skill sets for each may not be identical, but are equally rigorous. I do not assume this study definitively confirms this idea. I do believe that collaborative practices cross over into jazz, and that collaborative piano pedagogy may fill at least a partial need in the jazz accompanying literature, implying transferability of knowledge. In this case, I also believe that jazz pianists will use collaborative practices creatively in accordance with their field, ideally spawning new, jazz-specific practices.

My choice of methodology is also subject to certain assumptions. I analyzed examples of the fine art of jazz collaboration from transcriptions of recorded duo performances. Transcriptions of jazz in general and of rubato sections of jazz performances in particular have intrinsic rhythmic notational challenges. The inherent subjectivity in the act of listening informs the qualitative nature of written jazz transcription. In an effort to objectify certain timing parameters of my study, I analyzed graphic representations of transcribed excerpts to define quantitatively those parameters. This carries the assumption that mixing qualitative and quantitative methods strengthened the study overall, and that the two methods proved complementary.²

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² The assumption of the efficacy of a mixed-method paradigm is supported by Greene and Caracelli (2003), but their research is in the social and behavioral sciences, giving rise to another assumption for my study that their research findings will apply to music.
Definitions of Key Terminology

Collaborator/Accompanist

In an ongoing battle for respect, classical pianists have eschewed the terms “accompanying” and “accompanist” for the preferred “collaborative piano” and “collaborator.”

Samuel Sanders is said to have coined the term “collaborative pianist” (Lee 2009, 4), and Spillman first noted the “new nomenclature” in 1985 (2). For this study, “collaborative piano” and “classical accompanying” denotes the broad field of piano accompanying of instrumental and vocal classical music as defined by college-level programs in the U.S. I treat “collaboration,” “accompanying” and their derivatives as interchangeable, and will use the modifiers “classical” and “jazz” to specify genre.

Comping

Comping is a common term in the jazz vernacular derived from the word “accompany” but in practice denotes a specific activity within the accompanying spectrum. Comping refers to the improvisation of chord voicings in rhythm on piano (or guitar) in support of an instrumental solo or melody. Definitions of comping in pedagogy books support this focus (Aebersold 1993, McNeely 1993, Anderson 1994, Crook 1995, Snidero 1999 and 2000, and Davis 2012). Patton (2013) explains a difference in approach to instrumental and vocal music:

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3 In a fairly recent example of the lack of respect afforded collaborative pianists, an article on pianists lining up with vocalist’s vowel onsets cites the well-known singers by name, but completely ignores the pianists (Sundberg and Bauer-Huppman 2006).

4 Anderson (1993, 2) claims ‘comping’ is a derivation of ‘complement.’ Levine (1989) appears alone in the practice of spelling comping with an apostrophe (“‘comping”).

5 Piano chord voicings can take many forms and configurations. Standard practice beginning in the early to mid-1950s involves three- or four-note left hand chords voiced without the root and based on 3rds and 7ths; the right hand adds color and perhaps melodic elements while avoiding doubling the left hand. See Haele (1974, 1994), Levine (1989), McNeely (1993), Crook (1995), and Deutsch (2009).

6 That comping is an understood practice in jazz is evidenced by the lack of formal definition of the term in two publications: “Jazz” in The New Grove Dictionary of Jazz (Collier 2015); and the dissertation Perspectives on Teaching Jazz Piano ‘Comping’ in the College Music Program with Sample Instructional Units (Roothaan 1999).
Comping is a term to explain how a pianist, guitarist or other chordal instrument plays chords in rhythm to propel, or support the soloist. It is different than playing behind a vocalist in a rubato fashion (often called accompanying) in that there is a propulsive component to it that often reflects the short, percussive sound of the word, “comp” itself. The world of comping is not limited, however, to short, percussive rhythms; comping can be soft and airy, it can be distinguished and subtle, just as it can be vigorous and driving.  

While it is true one may comp for a vocalist who scat sings a solo, in this context the singer is imitating an instrumentalist (Robinson 2002, 840). For the purposes of this study, I use “comping” to denote instrumental playing, and “accompanying” for vocal contexts.

Expressive Microtiming and Participatory Discrepancies

“The power of music is in its participatory discrepancies,” according to Charles Keil. Keil described his term “participatory discrepancy” (PD) by its synonyms: “articulation,” “creative tensions,” “relaxed dynamisms,” “semiconscious or unconscious slightly out of synchnesses,” and most pertinent to this study, “inflection” (1987, 285). Matthew Butterfield (2006) considers “participatory discrepancies” to be synonymous with “expressive microtiming” and “microrhythmic variation,” all referring to a form of minute rhythmic displacement contributing to a feeling of pushing forward (forward movement) or pulling back (relaxing). PDs are individual asynchronies between musicians’ note onsets and a perceived beat, used by performers to create expressive nuance in performance. I study how singers and pianists use expressive microtiming as they navigate fully rubato tempos.

Both cases, comping refers to instrumental music. Oxford Music Online does not discriminate: neither “accompanying” nor “comping” enjoy discrete subject entries; “accompaniment” does appear, but as a short entry covering all types of musical accompaniment (Fuller 2015).

The New Grove Dictionary of Jazz (2002) defines the verb “comp” thus: “to provide a chordal accompaniment for a soloist; the word derives from ‘accompany’ (or perhaps ‘complement’). Pianists, in particular, are said to comp when they improvise a rhythmically varied but essentially non-melodic chordal backing” (Witmar, 499). The New Grove Dictionary of Jazz has no subject entry for “accompany,” “collaborate,” or any of their derivatives.

Pelligrinelli indicates that scat singing is one strategy “to deal with text in ways that lessen its significance as a marker of difference between vocal and instrumental realms.” Deemphasizing the text is a means to marginalization of the voice and reduce tension between vocal and instrumental spheres (2004, 201).
Jazz and Jazz Singer

Part of the job of accompanying is working with the psychology of singers. Marginalization of jazz singers is common within the ranks of jazz instrumentalists, many of whom consider their own work “high art” in contrast to singers’ mainstream or commercial ventures (Pelegrinelli 2004, 290). A single definition for “jazz singing” and “jazz singer” is elusive; singers themselves cannot agree what these terms ultimately mean. Digby Fairweather spoke for many when he said, “I don’t know what a jazz singer is, but then nobody has yet defined jazz” (Grimes 1983, 171, italics original). Mark Tucker’s definition of “jazz” from Grove Music Online includes “a style characterized by syncopation, melodic and harmonic elements derived from the blues, cyclical formal structures and a supple rhythmic approach to phrasing known as swing” (2015). Simply put, a “jazz singer” would be a vocal purveyor of that style. Defining “jazz” and “jazz singer” will continue as subjects for ongoing research.

Recitative and Lyric Recitative

Recitative developed initially as a part of monody, or accompanied solo song, at the turn of the seventeenth century. Monody placed value on declamatory delivery of text over simple accompaniment. Recitative monody developed into a lyric form, recitative arioso, to connect emotion with story in early opera. By the late seventeenth century, opera’s emotional content largely lay in the aria, with the recitative setting up the story with semi-spoken dialogue and simple accompaniment. Two varieties of recitative emerged: recitativo secco (“dry recitative”), with a speech-like melody, free rhythm, and simple accompaniment, usually on continuo; and recitative accompagnato (“accompanied recitative”), the more dramatic form with stricter

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9 Tucker also defined jazz as “a musical tradition rooted in performing conventions that were introduced and developed early in the 20th century by African Americans,” and “a set of attitudes and assumptions brought to music-making, chief among them the notion of performance as a fluid creative process involving improvisation” (2015).
rhythm and usually orchestral accompaniment (Monson and Westrup 2015). The recitative-aria dyad is precedent for the verse-chorus in popular music, with recitative and verse functioning similarly.

Lyric recitative is a loose and malleable practice found in European art song beginning in the early eighteenth century. In lyric recitative, a song becomes a microcosm of the larger opera context, where the story must be told in a matter of minutes. In that short timespan, moments of dry recitative can mix with aria-like lyricism; the piano part can range from simple chords to elaborate imitation of the vocal line.

Beyond the recitative/aria parallel with verse/chorus, dramatic qualities can be evinced from a musical context by the pianist varying accompanimental textures to match text delivery in lyric recitative. Compositional techniques regarding imitation, transitional material, and forward motion are used routinely by art song composers as dramatic gestures to enhance the singer’s expression of music and lyric. Pianists can use these techniques in the creative accompaniment of jazz singers. I believe the recordings I chose for this study reveal exactly that.

Rubato

Rubato is expressive timing applied to tempo (variations in timing between successive beats); rubato includes expressive asynchrony, expressive timing applied to “temporal onset of rhythmic events as well as the temporal alignment of the voices in a musical texture” (Yorgason 2009, 400). In his monumental study of rubato, Hudson delineates two kinds of rubato, designated as earlier and later in conjunction with their relative historical appearance. The earlier form (documented in Tosi 1723) found its origins in the Middle Ages and Renaissance, but emerged as a hallmark practice within the Baroque period, and especially associated with basso

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10 Yorgason outlines a third type of expressive timing, expressive articulation, involving “temporal onsets of rhythmic events” (1), from Desain & Honing (1991, 64).
continuo practice. Earlier rubato involves temporal variations of a melody over strict time in the accompaniment; this is the practice of “robbing time” in a melody line, which must be “paid back” or replaced to retain vertical alignment with the accompaniment. Later rubato also appeared in the Middle Ages, but became fashionable in the late eighteenth century and became a trademark of nineteenth-century romanticism. Busby described it as “time alternately accelerated and retarded for the purpose of enforcing the expression” (1801, from Hudson 2015).

The later form affects the entire structure of the music, denoting full-texture tempo movements that alternatively might be termed tempo ad libitum (Huang and Huang 1995, 195).

Philip (1992, 37-44) considers three categories of tempo rubato: the imposition of time values not notated in the score (Hudson’s earlier rubato); the use of calibrated tempo changes (accelerandi and ritardandi) throughout the entire texture (Hudson’s later rubato); and uneven execution of notation indicating vertical alignment (participatory discrepancies; see below). Dodson (2009, 58-61) labels these “time-span stretch,” “note-value transformation,” and “dislocation” respectively. In varying degrees, all these ideas of rubato exist in jazz and classical performance practice today.

This study focuses on Hudson’s later rubato practice in jazz verse settings and its complement in recitative-like sections of European art song. The ubiquity of rubato in classical and jazz performance practice indicates that music is more pliable and indeterminate than what most people, even musicians, think. The mechanical metronomic beat has its function but is only a guideline to the rhythmic nature of performed music (Katz 2009, 37). As Hudson elucidates (1994), the practice of uneven rhythm (and its concomitant problems with notation) has existed for centuries. Weir offers a clear view of the use of Hudson’s later rubato in jazz voice performance, tying verse and rubato together succinctly while explicating the accompanist’s role:
Rubato is very elastic by nature, with the accompanist speeding up and slowing down to mirror the singer’s speech-like style of singing [...]. When the verse of a jazz standard is sung rubato, it’s analogous to the recitative in an aria: a speech-like introduction which sets up the story line of the main body of the song. (2005, 35)

For the sake of simplicity, I use the term “rubato” to indicate flexible tempo in both melody and accompaniment. When necessary, I distinguish between Hudson’s earlier rubato and the later rubato characterized in verse material.

Terminology Pertaining to Method

My methodology involved loading wav and mp3 files of recorded performances into the freeware program Sonic Visualiser, which creates graphical displays of the spectrum (pl., spectra), or frequency content, of the sound file. Sonic Visualiser is a spectrum analyzer, also known as a spectrograph or spectrometer. Much of my analysis centered on spectrograms (also known as spectrographs or sonograms), two-dimensional displays plotting time (x-axis) against frequency (y-axis) with function of amplitude (layered brightness or color). Spectrograms facilitate the measurement and analysis of note-to-note timings, including asynchronies between musicians (vocalist and pianist). To avoid confusion, I used the terms spectrograph to represent the software program and spectrogram to represent the graphical display of the spectra.

The study of expressive microtiming is an aspect of spectromorphology, the study and explanation of sound shapes. Spectromorphology is a term coined by Denis Smalley encapsulating spectral (sound) and morphological (shape) aspects of the musical listening experience. The study of inflection, or how singers create shapes out of melody and lyric and how pianists respond to it, is inherently spectromorphological in scope.

Benadon (2003) defines two aspects of performance as calligraphic and spectrographic. Calligraphic pertains to performance features which standard music notation represents, including pitch, rhythm, and contour. “Zoomed-in” descriptions of the calligraphic domains
make up the spectrographic aspects, including timbre, microtemporal information, and expressive nuances. The overwhelming analytical focus in jazz theory and pedagogy has been on the calligraphic, though with continual technological advancements in analytical software (e.g., Sonic Visualiser), spectrographic (including microtiming) analysis finds increasingly more proponents. In my study, I used calligraphic resources (specifically, scores and notated transcriptions), but my methodological emphasis was on analysis of spectrographic information.

In spectrograms of duo performances, I took timing measurements of singers’ vowel onsets as well as pianists’ synchronized attacks. A vowel onset is the first appearance (the “front edge”) of a vowel sound produced in relation to the previous consonant or other vowel sound; spectrograms offer clear representations of consonants and vowels and allow for precise timing measurement. Pianists vertically align their content with that of singers; I used the term “shared instances” to denote aligned notes between the pianist and the singer. For purposes of clarity, I used a minimum eighth-note value for aligned notes; thus, I employed the term “shared eighth note instances” in my research.

Verse

The term “verse” in music has a long history dating back to early psalmody of the Middle Ages. For this study, “verse” refers to a section of a song that is generally through-composed, not repeated, and gives preliminary textual information to a story that is told in the chorus to follow (Owens, 2015). Most nineteenth-century popular song used a template of repeated verse-chorus, with the verse telling the story and the chorus echoing the verse in both music and text. In simpler songs, the chorus became a one- or two-line refrain (e.g., “Oh! Susanna,” and “My
Darling Clementine”). Songs increasingly appeared as part of larger stage shows by the turn of the twentieth century, and contemporary Tin Pan Alley songwriters reworked the formula to mirror the classical recitative-aria format, using the verse (often spoken as much as sung) as a set up for the main story told in the chorus. The chorus, possessing the principal melodic material, became the “tune” the public would remember, and by mid-century most verses were omitted from performance and songwriters largely stopped writing them. For the sake of this study, I used “song” and “tune” interchangeably.

Scope and Delimitations of the Study

The scope of my research covers a small corner of the fields of classical collaborative piano and jazz accompanying. As a study on performance practice, I had to exclude most conversation pertaining to social aspects of jazz, including issues of race and appropriation. Topics concerning solo jazz piano and instrumental jazz were not germane to my study. Performance practice issues pertaining to solo classical piano, instrumental collaboration, and chamber music were also beyond the scope of this study.

I chose four songs as vehicles for my analysis of collaborative performance practice crossover, one classical art song and three well-known songs in the jazz tradition. I chose Schubert’s art song “Der greise Kopf,” from Winterreise, D. 911, as an early example of lyric recitative, a vocal style coupling recitative’s speech-like rhythms with expressive lyrical elements. A single art song is far from representative of the vast song literature, but I believe that “Der greise Kopf” proved sufficient as a test study for illustrating collaborative techniques.

Like “verse,” the terms “chorus” and “refrain” have long histories that promote confusion. “Refrain” originally described a recurring text phrase in poetry, and in song, it can denote a recurrent section of text accompanied by the same or, at times, different music (Wilton 2015). When singing families and minstrels of the 1840s and 1850s began including the entire family or troupe in the refrain, it began to be known as a chorus (derived from the choral tradition) (Hamm 1983, 254-55). To the present day, refrain and chorus are synonymous, but in modern jazz parlance, chorus is the term used to indicate one cycle through the form of the main tune (in Tin Pan Alley songs, usually 32 bars), not including the verse or other introductory material, or any ending tag or coda.
For the three jazz-oriented songs, I limited my choices to tunes regularly performed with the verse. The three songs I chose covered three subgenres within the tradition of jazz singing: torch song (“My Man”), Tin Pan Alley standard (“Star Dust”), and jazz standard (“Lush Life”). Many songs with notable verses were therefore disregarded as part of this study. All instrumental versions of the three songs were eliminated from consideration. Because the study was also limited to recorded duo (piano and voice) performances of those verses, recordings of each work with accompaniments of orchestra or other instruments were excluded. I made one exception by studying Billy Strayhorn’s own version of “Lush Life,” with the composer singing, playing the piano, and accompanied by bass and drums.\textsuperscript{12}

For the same reason, the pianists (and singers) studied were limited to recordings available. For example, it was my desire to include Bill Miller, Frank Sinatra’s longtime accompanist, but Sinatra never recorded “My Man,” recorded “Star Dust” in an orchestrated version of only the verse, and attempted “Lush Life” but never made a complete take of the song.\textsuperscript{13} More often, the verse is omitted from recorded performances; an example is Ella Fitzgerald’s recording of “Star Dust” with Ellis Larkins.\textsuperscript{14}

Therefore, this study is not exhaustive regarding the pantheon of jazz pianists reputed for their skill as accompanists. Notable omissions from the study include Jimmy Jones, pianist for Sarah Vaughan, Helen Merrill, Anita O’Day, and many others, and who is widely regarded by his peers as one of the most accomplished accompanists; Ellis Larkins, known for his work with Ella Fitzgerald, Joe Williams, and Chris Connor; Paul Smith, best known for his work with Ella Fitzgerald; Gerald Wiggins, pianist for Lena Horne, Lou Rawls, and Jimmy Witherspoon; Jimmy

\textsuperscript{12} I include Strayhorn’s self-accompanied version with the primary justification that as the composer, Strayhorn had very specific ideas about the performance of “Lush Life,” which I will detail in Chapter 3.

\textsuperscript{13} Sinatra’s version of the verse to “Star Dust” appears on \textit{Sinatra and Strings} (1962/1998), Reprise CD 69702.

\textsuperscript{14} Ella Fitzgerald (1994), \textit{Pure Ella}, GRP CD 16362. The original pressing of “Star Dust” is part of Fitzgerald’s \textit{Song in a Mellow Mood} (1954, Decca LP DL 8069).
Rowles, a highly-regarded musician who spent years with Billie Holiday, Sarah Vaughan and Ella Fitzgerald; and Lou Levy, pianist for Peggy Lee, Ella Fitzgerald, Sarah Vaughan, June Christy and Anita O’Day. Two of the longest historical collaborations are regrettably omitted as well: Ralph Sharon with Tony Bennett, and Bill Miller with Frank Sinatra, relationships each lasting over fifty years.\(^{15}\)

The skills required of a collaborative pianist are many, prompting my limitation of this project’s scope to studying diction and inflection practices within the crucial area of ensemble creation. Diction and inflection are “two aspects of achieving perfect ensemble with the texted music” (Katz 2009, 22). Although collaborative practice encompasses a wide range of skills and concepts, I chose to limit the scope of the study to ensemble techniques.

Recordings used for analysis were chosen based on current availability, as CDs or digital downloads. Performers were chosen from the available pool for each of the three songs studied here: for “My Man,” the selection was limited; for “Star Dust” and Lush Life,” the selection was substantially larger, and notable recorded performances were necessarily omitted for the study.

I undoubtedly notated my transcription imperfectly, thus skewing my analysis. Hartman (1991, 71, 117) states, “The difficulty of notating jazz pitches is proverbial [. . .]. The point is simply that notation, as always in jazz, works within very obvious limits of accuracy.” Especially within the context of rubato without pulse, my notational choices often excluded several other possibilities. With all examples, I attempted to remain faithful to the sheet music setting of each particular tune in terms of melodic and harmonic structure, unless the performers made obvious detours from the original template.

\(^{15}\) Many, many more esteemed jazz accompanists are not mentioned in this study; my apologies to all concerned.
Summary

In this research, I connected the classical and jazz accompanying traditions through identification of classical collaborative ensemble techniques in verse recordings of eminent jazz accompanists. My intention was to create a bridge between the disciplines, establishing a precedent for the use of collaborative literature by jazz pianists as a resource for their own growth and learning. I will discuss the rich collaborative literature and the relative paucity of jazz accompanying resources in my literature review in Chapter 2.

The scope of this project demands certain background and historical information for a complete understanding of the research findings. I will give a brief recounting of the history of recitative, rubato, and accompanying performance practices in Chapter 3. I will also provide background information on the songs I have chosen as studies, which include the art song “Der greise Kopf,” and the three popular songs “My Man,” “Star Dust,” and “Lush Life.”

I will explain my methodology in Chapter 4, including a review of the literature pertaining to my methodology, a description of my methods and materials, and a discussion of general delimitations. My research findings will appear in Chapter 5, and I will offer conclusions and a summary of my research in Chapter 6.
CHAPTER 2
LITERATURE REVIEW

I sought to contribute to the current conversation on collaborative piano practices by connecting those practices to jazz vocal accompanying. Specifically, I examined jazz piano accompanying practices in sung verses of standard tunes to demonstrate how accomplished jazz pianists intuitively use many of the same techniques as classical collaborative pianists to solve ensemble issues. In connecting classical and jazz performance practices, I established structural and dramatic ties between the verse/chorus format in popular song and the recitative/aria dyad in opera. By analyzing rubato performances of jazz verses and lyric recitative, I determined that jazz pianists, like their classical counterparts, demonstrate their knowledge of the lyric by how they treat the singer’s diction and inflection.

The literature for jazz accompanying performance practice is sparse, and therefore this project fills both an academic and a pedagogical need. Young jazz pianists interested in accompanying singers have few sources to provide them guidance. Codified classical collaborative performance practices, when connected to their intuitive use by expert jazz pianists, supply the young jazz pianists with tools that might otherwise be overlooked or underappreciated. Conversely, classical pianists may gain confidence that their skills apply to jazz and popular styles, including the cabaret and theatre songs that are staples in the collaborative literature. Jazz singers might also use this information when they accompany themselves, or when they must guide an inexperienced pianist. These performance practices can provide a key to why collaborative efforts often do not achieve musical results, while providing clues to fixing problems. Of course, this subject opens the conversation to related topics, such as the differentiation between jazz and classical collaborative practices, how the singer is relating to
the pianist in treatments of the verse, and the nearly century-old argument of whether the potential of any crossover truly exists between jazz and classical music.

The literature for the Western art tradition of classical collaborative piano is substantial, though small in comparison to the vast literature available on piano performance. However, the collaborative piano literature dwarfs that of jazz accompaniment of voice. Jazz vocal literature is also small, but often addresses the pianist’s role, including situations in which the vocalist accompanies him/herself. The literature for the larger performance fields of classical and jazz piano have been covered extensively in various publications, and is beyond the scope of this project. This is also true regarding the large body of vocal literature (including opera and art song), though in all cases, I will draw from those sources that inform piano collaboration with voice.

The literature for this topic not only needs to cover performance practice for classical and jazz collaborative pianists, but also literature involving the topics of recitative, verse, rubato, popular music, Tin Pan Alley, and jazz piano comping. Recitative and verse represent core musical materials for the study due to their structural and conceptual relationship, so examining the large literature on recitative and the smaller body of writing on the verse is pertinent. Rubato style is intrinsic to recitative and verse performance, making it essential to examine the rubato performance practice literature, which spans centuries. The development of the verse is embedded in the history of American popular song and Tin Pan Alley, both of which enjoy a well-developed literature. Jazz piano comping (or “accompanying”) literature is inherently

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16 Verse has many definitions; in this study, I use Forte’s: “The term verse applies to a sung introductory part of a popular song, often sixteen bars in length. It is often rhythmically static, using syncopations sparsely if at all, and its lyric, which may be delivered in the manner of song-speech, prepares the lyric of the main part of the song, called the refrain” (1995, 36-37).
applicable to this project, but I will show that the preponderance of this literature is specifically geared toward instrumental accompaniment.

Much of my research involves analysis of expressive microtiming in recorded jazz duo performances of verses. Early research efforts strained against the lack of computer processing power and ambivalence from the disciplines of musicology and theory (Keil 1987). Technological advancements, including hardware (processing speeds and memory) and software (signal processing of music audio data) over the last three decades, have proven a boon to musicologists, resulting in numerous investigations into expressive timing. Jazz researchers are keen to explore microtiming and participatory discrepancies in jazz performance, resulting in a growing literature on groove and swing. This literature informed my study, which combines the elements of several areas of previous research but moves into a new area.

My choice of jazz vocal/piano recordings excerpts performed completely rubato (no metronomic time or stated pulse) provides unique material for expressive microtiming analysis. A proven thesis of connectivity between classical and jazz collaborative traditions offers an implicit transferability of knowledge. A comprehensive view of the diverse literature for this topic sets the background for my research.

Review of the Classical Collaborative Literature

The academic literature for collaborative piano (accompanying) is large. Current bibliographic sources generally prove to be incomplete or seriously outdated. Fuller’s *Oxford Music Online* article on “Accompaniment” contains only twelve entries, with 1980 as the latest reference date (2015). There is no entry in *Oxford Music Online* for “Collaborative Piano.” Seaton’s comprehensive bibliography for art song (1987) contains only five entries under the heading, “Accompanying and Coaching.” A dissertation by Fong (1997) comprises an annotated
A dissertation by Glennon (1998) is also an annotated bibliography, limited to accompanying in art song, chamber music and opera, and offering little beyond Fong. An annotated bibliography by McTyre (1998) covers resources dated 1970–1997 for singers, coaches and accompanists, but is largely duplicative of Fong.


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17 Fong states her complete bibliography, with 203 entries, is the first of its kind as of 1997 (vi).
19 The development of accompanying degree programs is addressed in Lipmann (1979), Daniel (1979), Rose (1981), and Mann-Polk (1984); the proliferation of classical collaborative piano degree programs offers sharp contrast to the area of jazz piano accompanying, a field without a single degree program.
A number of books on art song literature with insights for accompanists have appeared over the last few decades. Kimball (2006) surveys the song literature with consideration for all components of style, including parameters such as accompaniment and poetry/text. Elliot (2006) is an excellent reference on style and vocal performance practice, and includes an informative history on the practice of recitative and rubato. Emmons and Sonntag (1979) focuses on song repertoire and program building, and includes chapter dedicated to the accompanist.

Early pedagogical studies of accompanying are variable in quality. Lindo (1916) is basically a primer, covering standard areas of study (sight-reading, transposing, and instrumental accompanying). Bos & Pettis (1949) offers instructive information delivered through a series of anecdotes detailing Bos’ partnerships with various famous singers. Newton (1966) is an autobiography and is mostly anecdotal.

Gerald Moore’s contributions to the accompanying literature are foundational. The Unashamed Accompianist (1943) set the standard for general accompanying information; Singer and Accompianist: The Performance of Fifty Songs (1953) addresses song-specific knowledge, as do his guides to the song cycles of Schubert (1975) and Schumann (1981). Moore’s various articles (1955, 1960), along with interviews of Moore (Fellowes 1956; Demarest 1964; Kohlhaas 1979) and tributes to his legacy (Vignoles 1987; Crutchfield 1987) are valuable supplements to the literature.

Adler (1965) is an extensive study of accompanying with an emphasis on vocal coaching, including chapters on language and diction. There is little in terms of collaborative piano

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20 Lindo states his work is virtually “the first word on the subject” (v). Lindo covers areas of contemporary interest, including “The English Ballad,” “Playing for Music-Hall Artists,” and “Music to Recitations.”
21 Moore’s autobiography (1962), Farewell Recital (1978) and Furthermoore (1983) are enlightening and enjoyable reads but are primarily anecdotal.
performance practice, such as how a pianist can achieve vertical or horizontal ensemble.\textsuperscript{22} In contrast, Cranmer (1970) is a small volume that treats a number of traditional collaborative piano issues in a brief and systematic way.

Spillman (1985) addresses both instrumental and vocal accompanying through lessons on selected staples of the classical repertoire, creating a template for a semester course plan for intermediate-to-advanced collaborative piano students. Price (1991) is also designed as a college course manual, albeit for less-advanced students than Spillman.\textsuperscript{23}

Katz (2009) establishes the gold standard for reference books on collaborative piano.\textsuperscript{24} A culmination of collaborative study and practices, Katz covers instrumental accompanying but emphasizes vocal music, including lengthy discussions of diction and inflection. An accompanying website allows readers access to recordings by Katz of many of the score examples in the book. Katz presents a model of collaborative excellence, and provides a principal source for my study. A recent counterpart to Katz in strictly instrumental collaboration is Rhee (2012).

Review of the Jazz Piano Accompanying of Voice

Jazz piano accompanying of voice is not extensively researched on the academic level. There is one dissertation on accompanying jazz vocalists (White 2010), a survey of various aspects, styles and techniques of jazz accompanying based on information gleaned from eight interviews. White addresses subjects I will expand upon, including duo playing, the concept of \textit{rubato}, and the interface between classical and jazz collaboration.

\textsuperscript{22} Adler calls his work a “. . . book for which there is no precedent . . .” (3). The comment mirrors Lindo’s statement a half-century earlier (1916, v).
\textsuperscript{23} Price is a comprehensive work which served for years as a standard text for university accompanying programs (Baker 2006, 43).
\textsuperscript{24} Martin Katz is the Artur Schnabel Collegiate Professor of Collaborative Piano at the University of Michigan.
Previous dissertation topics under the larger umbrella of jazz piano include general jazz piano pedagogy (Herzig 1997), comping pedagogy (Roothaan 1999), bebop piano (Yoshizawa 1999), piano as a percussion instrument in jazz (Van Seters 2011), formative influences of jazz pianists (Lin 2011), and stride piano (Womack 2013). Numerous dissertations focus on performance aspects of individual jazz pianists, the compositions of jazz pianists, and piano compositions that involve elements of jazz.

Considering the content of the jazz piano literature, I argue that jazz piano pedagogy is not only improvisation oriented, but its focus is on instrumental music. This is apparent in the literature for jazz piano comping (accompanying), which applies almost exclusively to the piano accompaniment of instrumental improvised solos, as demonstrated by Levine (1989), Crook (1992, 1995), McNeely (1993), Aebersold/Galper (1993), Anderson (1993, 1994), Snidero (1999, 2000), Deutsch (2009), Davis (2012), and Patton (2013).

The most focused resources on the topic, including jazz performance practice of verse and rubato, are trade books by Rizzo (2002) and Greensill (2013). Rizzo is a primer on the basic creative skills required of a jazz accompanist, including writing lead sheets, handling different vocal styles, creating intros and endings, and making appropriate harmonic choices. A short chapter on tempo rubato addresses the role of the verse in song form, and offers young pianists a few ideas about navigating free tempos with a singer.

Mike Greensill, husband and long-time accompanist of cabaret singer Wesla Whitfield, offers the best pedagogical book on the market for budding jazz accompanists. Greensill addresses the challenging voice/piano duo context as well as rubato verse accompaniment, two central areas of study in the present study. In spite of some editing problems, Greensill is a recommended text for young pianists looking to learn jazz vocal accompaniment.
Interviews with prominent jazz pianists who specialize in vocal accompanying provide insights into performance practice. Excellent jazz interview sources include Taylor (1977), Lyons (1983), Enstice and Rubin (1992), Gourse (1993), and Crowther and Pinfold (1997). The Filius Jazz Archive at Hamilton College holds over 300 videotaped interviews of jazz musicians, including a number of prominent accompanists, at http://www.hamilton.edu/jazzarchive.

A number of articles on jazz accompanying by well-known musicians have appeared through the years, including Israels (1995), Bernotas (2000), Mossblad (2001), Hobgood (2004), Charlap (2005), and Davis (2005). Hofmann (2006) offers an online essay on accompanying a jazz vocalist. Primack and Dubin (1979) reveal insights by two of the great jazz accompanists, Tommy Flanagan and Hank Jones.

Jazz vocal sources are somewhat sparse. Topics include teaching vocal styles and repertoire (Buchholtz 2010), a comparison of classical and jazz voice teaching concepts (Silvera-Jensen 2005), and a relatively early exploration of jazz voice instructional materials (Cooper 1992). The subjects of vocal accompanying and duo playing are mentioned in several pedagogical texts on jazz singing, including Lebon (1999, 2006), Weir (2004) and Berkman (2009). A recent dissertation (Hollingsworth 2013) addresses voice/hand coordination with exercises for the jazz singer/pianist. Cultural and sociological aspects of jazz voice are explored in Pellegrinelli (2004). Books on jazz singers and singing include Grime (1983), Lees (1987), Friedwald (1992), and Crowther and Pinfold (1997), as well as numerous biographies.

Review of Research Literature on Expressive Microtiming

A principal component of my research methodology is analysis of expressive microtiming. Microtiming analysis enjoys an extensive literature (Ashley 2002). Expressively-
directed microtiming, a performer’s control over minute performance timing details, is the focus of studies that cross disciplines and musical genres.

Microtiming is associated with the practice of rubato, and much microtiming research centers on what Hudson (2004) calls “earlier rubato.” This practice involves a steady beat (provided by accompaniment instruments) over which singers or instrumentalists perform microtemporal nuances within their musical line for expressive effect. The steady accompanimental beat allows for a rhythmic benchmark for comparative analysis of a soloist’s microrhythmic variations. Notated scores also provide guidelines for analyzing a soloist’s nuances (or deviations). In spite of its relative rarity in contemporary classical performance, earlier rubato is a staple of jazz and popular music performance practice (Huang and Huang 1995).

Seashore’s landmark research on expression in performance (1938/67) began a long line of inquiry into the interconnectedness of expression and structure. Studies of performed small variations in performance parameters, which serve to highlight structure, include Clarke (1985a, 1988), Gabrielsson (1974, 1987), Palmer (1989), and Shaffer, Clarke and Todd (1985). Shaffer (1981) and Palmer (1988) studied changes in interonset intervals (or IOIs; the time from one event’s onset to the next) as related to phrase structure.

Repp (1988) claimed that timing deviations are integral to the structure of the music, and do not occur based on musicians’ intentions. Davies et al. (2013) refuted that assumption in their study of groove, drawing a distinction between “systematic” (intentional manipulation of timing) and “non-systematic” (timing deviations due to either motor noise in performance or time-keeping variability in the performers) microtiming. They found the systematic type inescapably
present in musical samples, and that performers’ musical expertise drove the execution of that microtiming.

In his study of various pianists performing Schumann’s “Träumerei,” Repp (1995) described four aspects of expressive timing: consistency, commonalities, execution of local details, and individual differences. Repp’s “local details,” the measurement and analysis of performers’ timing discrepancies of individual notes, represents a focal point for microtiming research. Bengtsson and Gabrielsson (1980, 1983) introduced analytical methods to measure and analyze subtle timing variations of performed individual notes. Dodson (2011) explored expressive asynchrony in a performance of Chopin’s B Minor Prelude by Vladimir de Pachmann, demonstrating how the pianist used asynchronies in a directed way within the work’s structure. Spzilberg (2011) explored the importance of interonset timing in creating a signature voice for classical pianists.

Rasch (1995) and Palmer (1996b) studied subtle onset discrepancies between melody and accompaniment in different ensemble contexts. They found that such intentional discrepancies served to foreground the melody. Asynchronies in performance of voices notated as simultaneous, with the melodic voice leading, was first documented in an analysis of Duo-Art (player piano) rolls (Vernon 1936), of wind, string, and recorder ensembles (Rasch 1979), and of acoustic and electric piano performance (Palmer 1989a, 1996b).

Palmer (1989a) studied classical pianists who claimed they accented melody notes to highlight them within a texture, but they were actually playing the melody notes earlier than other notes that vertically aligned with them in notation (termed “melody lead”). In an ensemble, an analogous situation occurs when the soloist does not synchronize with the rest of

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25 Collier and Collier cite Palmer to distinguish between “intentional” and “conscious,” meaning one can have the intention as part of a strategy, but in the execution phase actions may not be consciously directed (1996, 118-119).
the group (chord asynchrony), resulting in a solo line with a perceived distinctiveness from the ensemble. Bregman found that 30-50 ms of asynchrony (melody lead) results in a gain of intensity of approximately 30 dB in that voice. Bregman also pointed out that distinctly different temporal patterns between foreground and background in an ensemble will achieve the same effect (491-493).

Research connecting microtiming performance and meter represents an important area of the literature. Sloboda (1983) studied how performers emphasized meter through changes in intensity and variations in articulation. Hasty (1997) provided an analytical framework based on his theory of metric projection, positing that the onset of any sound contains “projective potential,” which is realized upon the onset of a new sound. Butterfield (2006) used Hasty’s research as a foundation for his own study of anacrusis in groove-based musics. Dodson’s study of Paderewski’s recordings of Chopin’s Mazurkas (2009) revealed expressive timing in phrases and entire sections linked to meter and structure. Yorgason (2009) found that periods of continuous asynchrony can lead to “metric drift,” resulting in a perceptual loss of awareness of notated barlines.

Microtiming in music performance is the subject of research literature in psychology, neuroscience, and physiology. Pressing (1987) studied cognitive design in the structure of improvised music, finding highly significant correlations between the microstructure, including microtimed delays and anticipations, and the overall organizational structure (macrostructure) of a given work. Iyer (2002) uses methodologies of neuroscience to explain human physical traits that lead to microtiming. London’s work on cognition and perception of meter and rhythm

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26 Decibel (dB) is a measure of intensity, not loudness, of sound, and is measured on a logarithmic scale. A 10 dB increase in intensity of a pure tone is equivalent to the doubling of perceived loudness, or one step up in standard dynamic measurement (e.g., from mezzo-forte to forte) (Greated 2015).

27 Bregman equates asynchrony with rubato (1994, 491-492).
(2004) led to his “Many Meters Hypothesis,” a theory postulating that “metric competence” is influenced by knowledge and experience of meters associated with styles and performers, but tempered by basic perceptual constraints (Bergeson 2006). Loehr and Palmer (2009) studied how auditoriy and kinematic information affected the ability of pianists to synchronize musical sequences with a strict, metronomic pulse. Witek et al. made a distinction between microtiming and syncopation (“a large-scale, composed form of rhythmic complexity”) in their study linking rhythm (groove) and body movement (2014).

Ethnomusicologist Charles Keil first coupled psychology, microtiming analysis, and jazz in his controversial article, “Motion and feeling through music” (1966). Keil introduced the phrase “engendered feeling” to discuss what happens in musical performance that goes beyond notation. His investigation into variations in time feel, especially between bass and drums in a jazz rhythm section, brought to printed form knowledge from the jazz oral tradition. Keil later described the minute rhythmic variations performers intentionally use as “participatory discrepancies” (PDs), but lacked the computer engineering resources to graph and measure them (1987, 279). Keil later clarified his view of participatory discrepancies:

(W)hat I have been calling participatory discrepancies in musical time-processes and tone-textures are both essentially micro-rhythmic phenomena: the slightly different initiations of sound waves in time rubbing against each other, and the slightly different sustained sound waves through time rubbing or ‘beating’ against each other. (1995, 12)

Working closely with Keil, Steven Feld devised the phrase “in synchrony but out of phase” to capture the essence of participatory discrepancies (PDs):

By ‘in synchrony’ I mean that the overall feeling is of togetherness, of consistently cohesive part coordination in sonic motion and participatory experience. Yet the parts are also ‘out of phase,’ that is, at distinctly different and shifting points of the same cycle

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28 Meyer’s (1956) concept of “embodied meaning,” a syntactical evaluation of music linking form and expression, was the inspiration for Keil’s counterargument (1966).
29 In his monumental study of jazz improvisation, Berliner explicates the important oral tradition in jazz through extensive interviews with fifty-two expert jazz musicians (1996).
of phrase structure at any moment, with each of the parts continually changing in degree of displacement from a hypothetical union.30 (1998, 82)

Keil provided other synonyms for PDs, including “articulation,” “inflection,” “creative tensions,” and “semiconscious or unconscious slightly out of syncnesses” (1987, 275). Others found their own characterizations for Keil’s PDs. Cooke used the term “infra-rhythmic variety” to describe the lilt in the music of Shetland fiddlers (1986, 100). Jairazbhoy used a system he called NUTs (nominal units of time) to measure timing discrepancies in Latif Ahmed Khan’s tabla playing.31 Yorgason (2009) uses the terms “dispersal” and “elongated downbeats” to describe unique aspects of PDs. Keil looked upon participatory discrepancies, and the relationships between them, as not only the Rosetta stone for the power of music, but as the key to life and the universe as well (1966, 337; 1987, 11).

Keil opened the door for research on expressive microtiming in jazz, and studies of individual instrumentalists and their timing discrepancies find good representation in jazz research. Kofsky (1977) studied rhythmic displacement and the superimposition of meters in the drumming of Elvin Jones. Reinholdsson (1987) studied a bass player pushing (playing ahead of) and laying back (playing behind) metronome clicks to show that individual players have conscious control of time feel, and that the tension created in purposely playing against the beat is the basis of swing feel. Ellis (1991) studied subdivision and asynchronization of three saxophonists performing swinging eighth-note melodic lines on a MIDI wind-controller, using a computer-generated walking bass line (four quarter notes to a bar) as a reference. He found all three saxophonists delayed their onsets relative to the quarter-note pulses of the bass.

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30 Feld’s description of PDs originated in his study of the Kaluli people of Papua New Guinea, their culture, and their music. “In synch but out of phase” was Feld’s description of the Kaluli sound known as dulugu ganalan, “lift-up-over sounding,” a vocal and instrumental style completely lacking in unison sounds.

Owens (1974) analyzed a Charlie Parker solo using a Melograph model C, a transcription device developed by ethnomusicologist Charles Seeger that produced graphic representations of pitch, timbre (loudness and density of sound), articulation, speed, and the onset and offset (attack and release) of notes (Pescatello 1992, 214). Owens described rhythmic discrepancies as “fluctuations,” noting in particular Parker’s use of extremely complex rhythms and his fluid treatments of barlines (Owens 172).

Schuller (1989) processed digitized recordings to create visual displays of envelope traces (waveform representations, plotting amplitude [vertically] against time [horizontally]) showing note onsets and offsets and temporal changes in amplitude. Schuller analyzed performances of bassists Ray Brown (swinging) and Richard Sarpola (not swinging) on the same tune, as well as trumpeters Louis Armstrong (swinging) and Bo Wioniker (not) on the same tune. In both cases, Schuller found the swinging example to demonstrate a continuous musical line from note to note, but observed the non-swinging versions to display individual notes as discrete events (855-59).

Another principal area of jazz research is microtiming within rhythm sections. Rose (1989) analyzed transcriptions of recordings of rhythm sections in three tempos and styles in 4/4 meter to ascertain “horizontal” (tone onsets, tone durations, phrase-length durations) and “vertical” (variations in tone onset times between instruments and against the musical beat or subdivision) aspects of microtiming. Rose found rhythm sections playing in a medium swing tempo tended to slightly shorten beats one and three and lengthen beats two and four, and the respective shortening and lengthening grew at a slower tempo. Because the slower tempo placed no technical burden on the musicians to play all four beats evenly, Rose proposed that the

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32 For a history of the development of the Melograph and its various iterations, see Pescatello (1992, 213-17).
performers’ microtiming was deliberate and suggested their use of asynchronies correlated with the classical music performance practice of lengthening notes to create emphasis.

Other important studies on the long-short ratio of swinging eighth notes (or swing ratio) include aforementioned studies by Ellis (1991) and Reinholdsson (1987), as well Collier and Wright’s study (1995) that found similar eighth note ratios in performances of classical musicians. Cholakis (1995) studied fifteen drummers’ eighth note stick patterns and found that swinging-eighth patterns tended to even out with tempo increases. Benadon (2006) created the Beat-Upbeat Ratio (BUR) as an important component of phrase structure and individual style; his study of five post-bop musicians revealed microrhythmic feels unique to each performer. Butterfield (2011) explored the variable BUR values jazz musicians use to create the propulsive drive known as swing. As an important extension to his study of anacrusis (2009), Butterfield stated that jazz musicians produce anacrusis on offbeats as an expressive device, subverting downbeat closure and thus generating forward motion.

Friberg and Sundström (2002) studied swing ratios and ensemble timing in relation to tempo, creating manual measurements on spectrograms. They found that swing ratios are largest at slow tempos and experience an approximately linear decrease with increasing tempo (337). Their spectrographic analysis of the swing ratios of soloists and drummers demonstrated much lower swing ratios for soloists, though not for drummers, at medium tempos. MacKenzie and Van Eerd (1990) and Repp (1994) also suggest proportional scaling, but Honing and De Has (2008) denied the presence of linearity of scaling of the swing ratio, claiming expert drummers maintain a high level of control, consciously adjusting their timing to the performance tempo.

Graphical displays, including spectrograms, appear frequently as aids to understanding data in microtiming research across genres. Bowen (1996) used computer models to create

Sundberg & Bauer-Huppmann (2006) used graphical displays to analyze microtiming in art song. They studied eight singers in three songs to determine whether the vowel constitutes the beginning of the sung tone. They found that accompanists routinely synchronize with vowel onsets, but there is great variation in lead and lag time around the onsets. Sundberg and Bauer-Huppmann studied songs in defined tempos, and based their research on the assumption that the sung vowel onset should be synchronized with the beat. Their research will be a model for my study of accompanying aspects of diction.

Three jazz rubato studies offered strong frameworks for my research. Huang and Huang (1995) studied how Billie Holiday used rubato as an expressive device, connecting eighteenth- and nineteenth-century practice with Holiday’s jazz performance. Ashley (2002) created graphical displays to elucidate attack displacements of notes in multiple jazz performances of single tunes. He formulated two studies using well-known ballads to research the use of rubato by several acclaimed jazz instrumentalists. Toft (2004) connected the expressive singing in late
eighteenth- and early nineteenth-century recitative to modern jazz and popular singing practices, with emphasis on non-notational aspects of performance practice. All three articles offer important insights into jazz rubato, but their research focused on Hudson’s “earlier” rubato, while my study will focus on performances in “later,” or full-texture rubato style.

Microtiming of groove and swing feel is a familiar subject area of jazz research, with bass and drums often the instruments in focus (Keil 1966). Keil’s initial study explored bassists and drummers with different time placement (e.g., ahead of the beat, or behind the beat) and how different bassist/drummer combinations affect the feeling of forward motion (“vital drive”) in the pulse. Alén (1995) used basic statistical techniques applied to PDs in his study of groove in *tumba francesa*. Prögler’s study (1995) on participatory discrepancies (which he terms “productive tension” [22]) in the jazz rhythm section focused on note onsets of bass players and drummers in a swinging, 4/4 meter, with the bass player primarily walking four quarter notes to a bar, and the drummer performing a combination of quarters and eighths. He found that rather than playing on the beat (i.e., with the metronomic pulse), the musicians played around the beat, by purposefully *not* placing quarters in the same place in relation to the beat every time. Prögler made precise measurements of PDs, using digitized recordings fed into a sound editing software program with the capacity to measure sound in milliseconds, resulting in precise quantitative descriptions of individual performances.

Benadon (2009b) took the ideas of localized participatory discrepancies and applied them to larger rhythmic flow within the metric grid. He introduced the concepts of “flux” transformation (localized distortions in the rhythmic template), “shift” transformation (overall tempo changes), and “anchor” (a metrically-grounding, on-the-beat point synchronizing soloist and accompaniment) to help decode non-metronomic rhythms in examples of 1920s jazz.
A field of research related to my study is expressive timing research on electronic reproduction and modeling of human time feel. Beginning with early writings by Mumford (1967), important contributions include Jaffe’s work on ensemble in computer music (1985), and trade articles by Stewart (1987), Nemvalts (1988), and Charbeneau (1989). Busse (2002) researched quantifiable measurements of jazz piano performance, calling his study the first to use MIDI-based “groove quantize” software procedures (444). Danielson (2010) is an excellent resource for recent research on digital reproduction of popular music grooves.

Literature on Ancillary Topics and Musical Material


I will focus on three popular songs whose verses are well known and continue to be regularly performed: “My Man” (“Mon Homme”), “Star Dust,” and “Lush Life.” These songs
and other standards are the focus of books by Friedwald (2002), an in-depth study of ten standards, and Gioia (2012), a broader study of over 250 jazz standards.


The many recordings of “Star Dust,” one of the most popular songs in the canon, include Hoagy Carmichael’s original recording (1927), and the top-ten hit recordings of Isham Jones (1931), Bing Crosby (1931), Tommy Dorsey (1936), Benny Goodman (1936), Tommy Dorsey with Frank Sinatra and the Pied Pipers (1941), and Artie Shaw (1941). I will focus on the duo recordings of Etta Jones and Cedar Walton (1977/2003); Mel Tormé with George Shearing (1983) and Mike Renzi (1992); and Roberta Gambarini with Hank Jones (2002). The history of “Star Dust” is told in Carmichael’s autobiographies (1946; with Longstreet 1965) and Sudhalter’s biography of Carmichael (2002).

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33 Mistinguett introduced “Mon Homme,” music by Maurice Yvain and lyrics by Jacques Charles and Albert Willemetz, to Parisian audiences in the revue Paris qui Jazz in 1920, but did not record it until 1938. Fanny Brice made it famous in the U.S. (with English lyrics by Channing Pollack) in The Ziegfeld Follies of 1921 (Bret 1990).

34 Crawford and Magee (1991) lists fifty-five recordings of “Star Dust” from 1927 to 1942 alone.
Billy Strayhorn’s “Lush Life” is a sophisticated jazz standard that connects with Tin Pan Alley’s tradition but not its lineage. The important vocal recordings of “Lush Life” I will study include Billy Strayhorn accompanying himself (1964/1992), Johnny Hartman with McCoy Tyner (1963/2008), Kevin Mahogany and Bob James (1998), Andy Bey and Geri Allen (2004), and Kurt Elling and Laurence Hobgood (2009). The story of the tune can be found in Hadju (1996); Akkerman (2012) provides a fascinating account of Hartman’s influential 1963 recording.

Jazz vocal accompanying performance practice suffers from inadequate literature, but when one links jazz with classical collaborative practice, the resources expand tremendously. Jazz and classical accompanying share many elements, including structure (form, as well as the link between recitative and verse), use of rubato, and the pianist’s treatment of the text, specifically a singer’s diction and inflection. I believe that codified classical collaborative performance practices connect to historical jazz accompanying practices, and therefore provide a template for teaching jazz piano vocal collaboration.

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35 “Lush Life” follows the traditional Tin Pan Alley form of verse-chorus, but the song is generally regarded as something more than popular music; Gioia states that “Lush Life” “was an art song, not a pop tune” (2012, 249).

36 Bernstein (1959, 178) calls the verse a “new kind of recitative.”
CHAPTER 3
HISTORICAL BACKGROUND AND PERFORMANCE PRACTICE

The goal of my research was to connect the classical collaborative tradition with jazz vocal accompanying through recordings of well-known and highly esteemed singers and pianists. I explored jazz piano accompanying practices in sung verses of standard tunes, to demonstrate how accomplished jazz pianists intuitively use many of the same techniques as classical collaborative pianists to achieve excellent ensemble with their singers.

My topic involves not only two genres of music, classical and jazz, but also seemingly disparate forms and styles. The connection between recitative in art song and verse in jazz begins with their conceptual roots, with both sharing the rubato style in performance practice. Vocal collaborative piano and jazz vocal accompaniment are specialized fields that have common ancestry and overlapping skill sets. In this chapter, I will provide an historical background for these subjects, as well as furnish preliminary information on the four songs I will use as research studies.

Recitative

The act of singing is intrinsic to mankind. References to singing as a vehicle for storytelling go back to the works of Homer (ca. 8th century B.C.E.). Singing has played numerous roles through history, including purveyance of oral history (tradition bearing), autoethnography, and expression of pure emotion (Reaney 1960).

Outside of the a cappella tradition, the history of singing in many genres is linked with that of keyboard accompaniment. Cristofori’s incipient designs for a pianoforte in 1698 developed into an instrument that stood in the center of domestic and professional music making by the third quarter of the eighteenth century (Ripin 1988, 1-3). A century later, the piano’s principal
technical innovations (including the cast iron plate and the damper pedal) led to an integration of melody and harmony in art song and an emphasis on textual expression (Gorrell 1993, 72–3).

Keyboard accompaniment of solo song began with late-sixteenth-century Italian monody, marked by stile recitativo, or recitative style. Traditionally, a cello, bass, or bassoon joined the keyboard (or another chord-playing instrument) to double the bass line (continuo); the keyboardist was responsible for creating harmonic figurations from figured bass. Recitative established a declamatory style of text delivery, with the vocalist riding the line between speech and song. Declamatory voice accompanied by keyboard and continuo is known as recitativo semplice (simple recitative) or its later term, secco (dry).37 This practice found its way into the proto-operas of Peri and Caccini and the first true operas by Monteverdi, establishing a foundational element for opera until well into the nineteenth century (Monson and Westrup 2015).38 By the eighteenth century, pairing recitative and da capo aria became standard practice, with the declamatory and dramatic recitative pushing the story (or scene) to its lyrical climax in the aria. Another type of recitative, recitativo accompagnato (accompanied recitative) developed during this time and employed the entire orchestra, enabling a lush texture while relinquishing the rhythmic flexibility of secco. As theatre composition trended toward continuous music in the nineteenth century, opera recitative gradually disappeared, but elements of secco would appear in European art song and popular song in the nineteenth century.

Kimball (2005, 5) states, “in song literature, recitative is not the same as the secco (dry)

37 Neumann (1993, 185) cites period theorists on several agreed points of secco practice, including use of prose declamation that lies in between speech and song; syllabic treatment of the text; rhythmic and metric freedom; and lack of allegiance to key centers. He also cites the practice regarding treatment of appoggiaturas relating to prosodic accents, and follows with an in-depth exposition on the subject (185-203).
38 Caccini was first to write on speech in music, in the introduction to Le nuove musiche (1601/2), using the term “sprezzatura di canto” (Monson and Westrup 2015).
recitative found in opera; usually the composer combines straightforward recitative line with some lyricism in the accompaniment so that the voice is supported by some melodic material.”

Two principal practices emerged in nineteenth-century song literature. Declamatory recitative, or *parlando*, retained the speech-like rhythms (“recitation,” a practice without emphasis on a smooth vocal line) of *secco* practice, with added lyricism in the piano part to support the voice (Spillman 1985, 272). In lyric recitative, “recitative-like” passages or melodic phrases with expanded contours and rhythmic organization established a more expressive style. In employing both declamatory and lyric recitative in art song, composers eschewed the recitative’s former introductory purpose and integrated recitative style into the fabric of the song. A song’s story was all-inclusive and told in a few minutes, contrasting with the elongated storylines in the larger opera/theatre context (Kimball, 5).

The use of recitative as a technique for telling a story musically found its way into American popular music beginning with nineteenth-century variety shows and vaudeville. The artistic intent of opera was missing, as was plot as a unifying thread. Musical vignettes mixed with dances and skits in non-sequitur fashion, creating a show designed purely for entertainment. Recitative style also found its way into operettas, marked by text in vernacular and *parlando* mixed with *arioso* singing (Adler 1965, 215).

Art song recitals in America at the turn of the twentieth century were a potpourri of artistic and popular offerings, and pianists had to not only read printed scores, but also improvise accompaniments on the spot. Frank LaForge, a pianist whose career spanned the first five decades of the twentieth century, was accompanist to famed singers Marcella Sembrich, Lily

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39 In opera literature, *parlante* refers to “declamatory vocal lines underscored by melodic orchestral music” (Zeiss 2012, 187).

40 *Arioso* is Italian for “melodious,” or “like an aria,” and when associated with recitative indicates a more lyrical singing style in contrast to speech-like delivery in *parlando* (Budden et al., 2007-15).
LaForge was versed in a number of styles and had a reputation for improvising accompaniments. Crutchfield describes an early recording of LaForge with Sembruch on the popular waltz “The Longest Day Is in June,” by G. Waring Stebbins:

. . . no single bar contains three equal beats, and the length of a bar varies from less than a second-and-a-half to almost five seconds . . . The piano part is liberally arpeggiated: This facet of nineteenth-century keyboard style was especially useful for accompaniment, since a highly varied tempo might sound abrupt and forced if each beat had to be sharply marked by a chord sounding all at once.42 (1987, 17)

This reflects an early-twentieth-century performance practice steeped in *tempo rubato*.

Rubato

Toft (2004) states that singers in as early as the late eighteenth and early nineteenth centuries considered their art re-creative rather than interpretive, and thus treated recitatives, arias and songs much more freely than modern singers. Toft writes that many of the performance practices of this period represent elements of expression for modern singers of jazz and popular music.43 Brown (1999) and Freitas (2002) cite gaps between notation and performance practice well into the nineteenth century. Brown (4) points out musicians’ “cult of urtext” of the latter half of the twentieth century as culpable for ignoring actual performance practices, even those captured in audio in the early twentieth century (Philip 1992).

Philip tells of a 1934 recording of a nearly seventy-year-old Harry Plunket Greene

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41 Ernestine Schumann-Heink and Rosa Ponselle were two early operatic stars who enjoyed a popular following in vaudeville (Marek 2007, 61).
42 Stebbins’ tune earned the following review: “. . . well-written and simple without being conventional . . . splendid for encore purposes. . .” (Reddick 1918).
43 Toft lists the following expressive elements linking the performance practices of modern singers and their earlier counterparts: ornamentation, tempo fluctuation, rhythmic displacement, highly articulated phrasing, gradations of legato and staccato, portamento, *messa di voce*, changes of register and tonal quality of the voice, and selectively introduced vibrato (371).
singing Schubert’s “Der Leiermann.” Philip writes how Greene achieved “startling clarity, because the conventions of the time allowed him to sing the notes and words in much the same rhythm as if he were speaking them. This would, in the twenty-first century, be thought cavalier” (2004, 138). Greene applied his sense of rubato, in this case the freedom to inflect the vocal line beyond the notation, to create a heightened level of expression (138).

Music is more pliable and indeterminate than what most people, even musicians, believe. The rhythmic nature of performed music reflects human expressions and imperfections, and adherence to a mechanical metronomic beat renders music robotic or lifeless (Katz 2009, 37). As Hudson states in his groundbreaking study of rubato (1994), the practice of uneven rhythm has existed for centuries. Solo singers in monody and early opera practiced rubato when delivering a vocal line with speech-like declamation; this free rhythmic treatment became associated with recitative.

Hudson delineates two main types of rubato, earlier and later. The earlier rubato involves a melody line performed with expressive alterations of certain note values, against an accompaniment in strict rhythm. The later style, a hallmark of nineteenth-century European art music, involves subtle and expressive tempo changes in the entire fabric of continuous music. Both styles occur frequently in vocal jazz. The earlier style is ubiquitous in song interpretation at virtually any tempo with an accompanist or rhythm section holding down strict time. The later style is found in free treatment of songs at a slow or ballad tempo, and, pertinent to this study, the traditional treatment of the verse.

Hudson notes the traditional historical pairing of flexible and stricter musical material (e.g., recitative and aria, prelude and fugue, and Adagio and Allegro), and many pairings

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44 “Der Leiermann,” the final song in the song cycle Winterreise, is an early example of lyric recitative.

45 Philip counts three types of rubato: the use of accelerando and rallentando; the use of agogic accents and tenuto; and “melodic” rubato, the equivalent of Hudson’s earlier rubato (1992, 38).
“crystallized during the late Baroque period and at the very same time when the word ‘rubato’ first appeared” (11-12). American popular music would develop its own twentieth-century model: the verse and chorus.

**Form Development in American Popular Music**

In the Revolutionary and Federal periods, American popular music consisted primarily of traditional tunes of European countries and songs of a patriotic or military nature (marches and fife songs). These were simple, strophic songs, usually with many verses with a one- or two-line refrain tagged on the end (Hamm 1983, 359). Americans satisfied their thirst for entertainment in the novelty genre, a grab bag of simple tunes based on disparate sources such as Irish and Scottish song, bel canto opera, and later African-American influences in minstrel songs (Hamm 1979, 99). “Popular” song was not distinct from “classical” song up to the mid-nineteenth century, and many German art songs (by Schubert, Mendelssohn, Schumann and the like) were published in America in English translation for consumption in parlors across the country (194). Nonetheless, American popular song began to establish distinct ground in the early nineteenth century (99).

Minstrel shows featuring white performers in blackface appeared in the 1820s and 1830s, with performers such as George Washington Dixon and Thomas Dartmouth “Daddy” Rice bringing great popularity to this indigenous theatrical form of entertainment. Minstrelsy capitalized on the exoticism of African American culture, homogenized by Irish and Anglo-American traits (Wilder 1972, 3).

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46 “Rubato” means robbed or stolen in Italian. The first appearance of the term “rubato” in connection with vocal music occurred in 1723 (Tosi); the phrase *tempo rubato* (stolen time) appeared in 1752 (Hudson 1994, 1-2).
47 From its beginnings, jazz has had a close relationship with popular music, the two genres entwined and in certain eras inseparable; each has been an influence on the other (Crowther and Pinfold 1997, 12).
49 Hamm notes that only in New England was there a reverence for the works of the great European Classical composers, an idea promoted by the New England Reformers, including Thomas Hastings, George Webb, and Lowell Mason (99).
Some early minstrel songs were a mélange of disconnected verses, such as Rice’s simple, strophic tune “Jump Jim Crow.” Others featured verses followed by refrain lines, as in Dixon’s “Zip Coon,” sung to the tune of what we know as “Turkey in the Straw” (Hamm 1983, 183-85). In minstrel troupes, the verse was reserved for a soloist, while the refrain was sung by the entire troupe, usually made up of four to six performers (Hamm 1979, 211).

Stephen Foster, considered the first professional American songwriter, began writing minstrel songs (also known as “Ethiopian” melodies) in 1845, and he arranged the refrains in three- and four-part harmony (210). The refrain became a chorus, distinct from the solo-sung verse, and the verse-chorus pattern became a nearly universal template for popular song, a pattern Hamm calls “uniquely American” (Hamm 1983, 248). Antebellum songs typically had 16-bar verses (four four-bar phrases) containing the main melodic material, followed by a four-bar chorus echoing the last four bars of the verse. The verse would tell the story (usually in two-to-four stanzas of text) and the chorus echoed the verse in both music and text. After the Civil War, the main melody might appear in either the verse or the chorus, and the two sections gradually became equal in length. Four decades later, the chorus would become the principal part of the song with the advent of Tin Pan Alley (361-62).

As minstrelsy gave way to the variety show and vaudeville in the 1880s, publishers congregated around New York City’s Union Square (East 14th Street), located conveniently near the vaudeville and burlesque houses (Scheurer 1989, 87). Those same publishers, led by the Jewish firm of M. Witmark & Sons in 1893, moved to a single block on West Twenty-Eighth Street between Fifth Avenue and Broadway, reflecting the ever-increasing demand for songs by

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50 Wilder cites the “peculiarly native quality” Foster engendered in his songs, noting Foster’s ability to synthesize “a new kind of white song from Negro musical roots” (1972, 4-5; italics original).
the nearby Broadway theatres (Melnick 1999, 16). Due to the cacophony of incessant song plugging, Monroe H. Rosenfeld dubbed this block “Tin Pan Alley,” and the name stuck, not only to the location, but also to what Scheurer calls “one of the most monolithic institutions in all of American culture” (87). The dominance of Tin Pan Alley in the music industry is illustrated in numbers: It is estimated that between 1900 and 1950 approximately 300,000 songs were deposited for copyright (Maher 1972, xxxv), creating the basis of what is known as the Great American Songbook.

As purveyors of songs primarily for theatre and revues, the publishers of Tin Pan Alley sought to standardize popular song in a form that could stand alone, yet work in the context of a larger theatrical plot (Mast 1987, 26). The first generation of Tin Pan Alley songwriters settled on the verse-chorus template, unwittingly following a 300-year-old model of solo song—the recitative-aria. Allan Forte explains that the verse

[D]erives from the operatic recitative that traditionally precedes an aria. Indeed, the modern verse shares some characteristics with that ancient form. First and foremost, it is intended as an introduction to the Refrain, or main part of the song, and therefore sets the mood in terms of tempo, dynamics, and style. (1995, 19)

Tunes had generally two to three verses, with each verse followed by a chorus (refrain). The verse often exhibited repeated rhythmic figures and with a limited vocal range, encouraging a mixed speech-song delivery (Forte 2001, 19). Departing from the minstrel tradition, the chorus

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51 American demand for sheet music grew exponentially during the first two decades of the twentieth century. The New York Times equated demand for shoes with demand for sheet music in 1910; peak demand occurred in 1917 with over two billion copies of sheet music sold in the United States (Yagoda 2015, 33).
52 Publishers would move en masse once more to the Brill Building, built in 1931 near Times Square, but the “Tin Pan Alley” designation referred to the 28th Street location (Knapp and Morris 2011, 88).
53 According to Edwards (2010), Tony Bennett claims to have coined the phrase, “Great American Songbook,” but Yagoda states its first usage is in the title of Carmen McRae’s 1971 album The Great American Songbook—Recorded Live at Don’ts’s (2015, 3).
54 Operetta was hugely influential on the development of American musical theatre from the late 1870s to World War I; the works of Gilbert and Sullivan, Johann Strauss Jr., and Franz Lehár provided a model for integrating book and score (Block 2011, 99).
55 The verse-chorus format became standard for Tin Pan Alley songs in the first decade of the twentieth century (Mast, 26).
became the “song,” encompassing the singable melody, the story, and the showcase for the solo singer.56

The next generation of Tin Pan Alley songwriters followed this basic template, but using only one or two through-composed verses (Kernfeld 2002, 82-83). By the 1920s, the verse became optional for several reasons. Early gramophone records (ca. 1925) had a time limit of nearly four minutes per side, and since the choruses of songs contained the most important music, verses were often considered expendable (Philip 2004, 35). Radio play also had time limitations, so live performances might exclude the verse. Moreover, in 1930s Hollywood, film did not require the dramatic and textual qualities of the verse so useful in live theatre, so songwriters often did not add them to their songs. But songwriters still wrote plenty of verses—according to Friedwald, 90% of the songs in the Great American Songbook have 16 mm. verses to complement their 32 mm. choruses (2002, 7).57

Verse in Jazz

The golden age of American popular song coincided with the development of jazz, itself considered a popular music, particularly in the 1930s.58 Jazz borrowed liberally from the offerings of Tin Pan Alley, and jazz musicians built a standard repertory on American popular

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56 “The songs typically possess a single narrator, who speaks from a single point of view [ . . .]. Rather than a dialogue amongst a heterogeneous group of equals, popular songs tend toward monologue or soliloquy” (Pelligrinelli 2004, 262).
57 Famed conductor and bandleader Paul Whiteman gave a brief history of the verse in 1926: “Previous to 1897 every song had to have six or seven verses and each verse had six or seven lines. Now there are two verses of a scant four lines each, and even at that, the second verse counts scarcely at all. The whole story must be told in the very first verse and chorus and usually there is very little to it anyway, the music being what matters (quoted in Yagoda 2015, 39).
58 There is dispute as to when the golden age of American popular song occurred: Furia (1990, 3) places it between World Wars I and II; Knapp and Morris put it post-WWII to the mid-1960s (2011, 87); and Gerald Bordman locates the era between 1924 and 1937, George Gershwin’s active years (Bordman 2001). The Great American Songbook primarily draws on songs between the early 1920s, when Berlin, Kern, Gershwin and Youmans were active, and the early 1950s, before rock ‘n’ roll changed the American musical landscape.
songs. These songs are called “standards” and professional jazz musicians are expected to know many of them (Witmar 2015).

In spite of the fact that songwriters wrote verses for most standard tunes, jazz instrumentalists routinely dispense with the verse and play only the song’s chorus, improvising on the chord progression of the chorus (David 1998, 39). Because increasingly fewer verses appear on record or are included in performance, and because few fake books provide verses to standard tunes, verses have become the arcana of the jazz instrumentalist’s repertoire.

Yet verses can be manna for singers. Like recitative, verses provide crucial introductory story elements that develop in the chorus. When singing the lyric, a vocalist may sense the story is incomplete with just the chorus. As David Craig puts it, “Without a verse, the chorus lacks coherent specificity” (1993, 17).

The parallels in performance between jazz verse/chorus and opera recitative/aria are numerous. The verse (recitative) is performed freely in full-texture rubato, in contrast to the in-tempo chorus (aria). Verse (recitative) performances often feature the vocalist and one accompanying instrument, to accommodate the flexible rubato rhythm (much like recitativo secco); verse performances can feature full orchestras in a more structured rhythm (like recitativo accompagnato). The verse (recitative) gives introductory information, and does not return once the chorus (aria) begins.

The verse in jazz represents one of the most difficult challenges an accompanist faces, due to the combination of rubato time feel and the distinct nature of the duo setting. When a pianist is part of a larger group accompanying a singer, such as a trio with bass and drums, s/he

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59 Jazz musicians differentiate between general standards (from Broadway musicals and Hollywood films), jazz standards (written by jazz musicians for jazz performance), and Dixieland standards (popular songs from the late nineteenth century and early twentieth century) (Witmar 2015). In New Orleans jazz and Dixieland, verse-and-refrain forms appear prominently, with usually a single verse performed once before or after the first chorus (Owens 2002, 825).
acts in a multifaceted role as supplier of harmonic content, rhythm section member, and intermediary between the rhythm section and the singer. Generally, when the entire group is backing a singer, the group supplies a pulse or distinct tempo. When the group reduces to a pianist/singer duo, the music becomes highly interactive, with an intimacy that is dependent on the pianist’s support of and integration with the singer. The rubato style, customarily found in verses, heightens the potential for interaction as well as mishap, all of which is conspicuous in the transparent sonic environment.

For a pianist to create a successful accompaniment, s/he must know the song’s melody, harmony, and lyric. In verses, often the lyric is all the pianist had to hold on to, as a singer may paraphrase the melody to an extent that it is unrecognizable, and it no longer fits the original chord changes. Text knowledge is the hallmark of a professional jazz accompanist.

The Art of Collaboration

The text or lyric is central to the art of collaboration, regardless of genre. The words distinguish the singer’s art from instrumental music, and a pianist’s unfamiliarity with the lyric leads to ignorance of not only ensemble considerations but expressive ones as well:

Song is a hybrid, and like any hybrid it owes its existence and its effectiveness to a successful amalgamation of the various elements that enter into it. In this sense, any satisfactory experiencing of song must involve the whole rather than a series of parts [. . .]. The functions of poetry and music in the song enterprise cannot in reality be fragmented clearly and cleanly. Overlaps and interactions are constantly at work: melody is often closely related to harmony and rhythm; musical meter and rhythm encroach upon one another and upon their poetic counterparts; poetry in both its denotative and connotative aspects is frequently intertwined with musical expression. Only on paper can they be segregated for purposes of discussion. (Ivey 1970, vii)

The ongoing debate on whether the words or the music is more important is moot: for the collaborator, the performance must reflect a marriage between the two. The jazz accompanist has one additional level of control, that of improvising the accompaniment and shaping it
simultaneously. Without knowledge of the lyric, the pianist has to guess rather than anticipate the singer’s inflections, likely resulting in lack of support for the singer, the line, and the story.

Success in collaboration involves acquisition of skills beyond repertory. The crucial ability to create good ensemble through attention to diction and inflection is the focus of this dissertation. Diction is the vertical alignment of the pianist with the singer, what Katz refers to as the “legal minimum for ensemble” (Katz 2009, 22). Text is the driver of the music, and alignment must occur on vowels, not the consonants that may precede them. English, the language of many art songs and the primary language of popular song, is highly inflected, and a singer may have difficulties with articulation or make expressive choices with consonants that result in the delay of a vowel sound. The pianist must be aware of problematic words and their syllables, allowing the singer extra time and align with the vowel onset (22-23).

In the quest of realizing excellence in ensemble with texted music, Katz ranks inflection above diction in terms of difficulty. Inflection is the creation of shape in music, but there is no textbook for creating shape, for inflecting. For singers, the variable nature of speech (and its syllabic content) informs that shape. “Rhythmic notation is limited, but our speech patterns know no such boundaries . . . A fine singer will serve both words and music; his pianist can do no less . . .” (Katz 23-29). For this study, the term “inflection” represents how performers push and pull a phrase in a rubato setting. This study focuses on how pianists respond to singers’ inflections, and whether those responses are identifiable as codified collaborative techniques.

Balance is a crucial aspect of collaboration for which the pianist alone is responsible (Moore 1944, 31). Voicing and pedaling both play roles, as do tone color and energy level (Spillman 1985, 8). However, any use of amplification alters or ultimately nullifies the pianist’s control of balance. Whether used in live performance, in the recording process, or both,
amplification obscures the intentions and execution of accompanying musicians by creating a sonic result that is as much the sound engineer’s interpretation as the musicians’ (Day 2000, 25). The concert hall remains the venue for purely acoustic performances, at least in classical music. Rare is the occasion when a jazz singer performs without a microphone, and for most jazz and pop singers, the microphone becomes part of their instrument (Summers and Swan 2005, 33). The ubiquity of amplification has led to the marginalization of balance skills for pianists.

Classical collaborative pianists have established skill areas that jazz accompanists share, while other skills are more specialized. Technical proficiency, sight reading, knowledge of style and interpretation, repertoire, and collaborative psychology all rank as important competency areas for all accompanists (Rose 1981; Rich 2002; Baker 2006). Expertise in transposition is an absolute necessity for jazz accompanists, but Katz regards it as “a footnote to the list” for classical collaborators (2009, 278). Language skills in at least English, French, German, and Italian are imperative for pianists collaborating in art song, while English proficiency is the only requirement for jazz accompanists. Clef reading, orchestral reductions, and reading of figured bass are all skills specific to classical collaboration. Improvisation and arranging skills, and the capacity to play all tempos, are crucial jazz accompanying skills (Greensill 2013), with the ability to solo “the last item on the list” (Halberstadt 2001, 275).

Accompanying a Jazz Singer

Pianists working with jazz singers need to build a large skill set to achieve a high level of musicianship and partnership. In spite of the many aspects of jazz accompanying that demand attention, there are general concepts that stand out, as the wise counsel from acclaimed accompanist Jimmy Rowles attests:

I’d say there are two rules. Anticipation of the singer is one of them. The other is subduing yourself. If you don’t subdue yourself, the listener is going to get confused.
because the piano part will be competing for the listener’s attention. That’s the worst thing that can happen. What you’re doing is weaving carpets for the singer to stand on, and maybe you do little things that fit into the open spots. Don’t play too much, don’t play too loud, and don’t play the melody. (Lyons 1983, 155)

Renowned pianist Tommy Flanagan accompanied Ella Fitzgerald for two-and-one-half years in the early 1960s and then from September 1968 to the summer of 1978, and he admitted he had to make adjustments harmonically and texturally to satisfy her (Primack and Dubin 1979, 22). He offers good advice to all jazz accompanists:

[Y]ou have to be a little more subtle and a little more straight [. . .]. Even though she can do things like an instrument with her voice, you know, her harmonic knowledge is not as great as a musician playing a horn. You can do almost anything with a horn player. So you have to be careful not to overplay. Of course, it’s not good taste anyway to overplay. I mean, to give a singer something that’s out of her context. That’s what you have to think about when you accompany. (Enstice and Rubin 1992, 165)

Every working relationship is different, and it is the pianist’s responsibility to make the singer comfortable. Each singer has his or her own set of needs and desires rhythmically, harmonically, texturally, and even on the level of filigree (or filler) from the pianist. Eminent pianist Hank Jones explained the way he approached working with two celebrated jazz vocalists, Ella Fitzgerald and Sarah Vaughan:

Different vocalists like different backgrounds. Ella likes the block chord approach. By contrast, Sarah Vaughan indicated a preference for a different kind of accompaniment. Jimmy Jones, who I think is probably the greatest accompanist in the world, used to play a very melodic, sort of one-finger line behind her. Of course he did lots of harmony too. His style was very reminiscent of Debussy and Ravel, and it was very effective. I don’t think Sarah would have liked the style I used to accompany Ella. Ella liked that style because she was a very rhythmic singer, in addition to being a good ballad singer. The rhythmic block-chord approach helped her. Sarah was more of a lyrical kind of singer. She liked the lyrical background. (Primack and Dubin 1979, 22)

Consideration for the singer is a principle shared by classical and jazz accompanists alike, because in both genres the singer is the musician who delivers the story to the listener. An accompanist’s raison d’être is to facilitate the story’s transmission, and a pianist’s love of the process goes a long way toward accompanying success (Taylor 1977, 144). “We are fourfold
custodians: We guard and maintain the composer’s wishes, the poet’s requirements as the composer saw them, our partners’ emotional and physical needs, and finally, of course, our own needs as well” (Katz 2009, 3). I believe this is true for all pianists collaborating with singers, whether on art songs or jazz standards.

Background on Songs

To finish this chapter, I will offer some background on the songs I have chosen as studies for my research. The sole European art song, “Der greise Kopf,” is part of Schubert’s song cycle Winterreise, D. 911, and is representative of early lyric recitative style. “My Man” is prominent in the torch song repertoire, and has an interesting if unfamiliar history, which I will recount here. “Star Dust” and “Lush Life” are famous songs that enjoy broad representation in print and recording, and I will offer a limited overview of their backgrounds.60

“Der greise Kopf”


60 “Star Dust” and “Lush Life” are the subjects of lengthy expositions in Friedwald (2002) and shorter studies in Gioia (2012). The history of “Star Dust” is recounted in Hoagy Carmichael’s two autobiographies (1946; with Longstreet 1965) and Sudhalter’s biography (2002). Hadju (1996) tells the story of “Lush Life” eloquently.
Based on twenty-four poems by Wilhelm Müller, Winterreise tells the wanderer’s bleak story of rejection, alienation, and isolation. Characterized as “a psychological study of a man in the last stages of despair” (Whitton 1984, 47), Winterreise recounts not only the protagonist’s external hardships, but also the travails of his inner life. Like in his song cycle Die schöne Müllerin (“The Miller’s Beautiful Daughter,” D. 795) from 1823, in Winterreise Schubert explores a variety of styles and structures as he communicates a wide range of moods and emotions suggested by Müller’s poetry (Winter et al., 2001).

Schubert set Winterreise in two sets of twelve songs each, and “Der greise Kopf” is the second song of the second set. “Der greise Kopf” is an early example of lyric recitative, an art song style that blends the speech-like rhythms and spare accompaniment of recitative with moments of aria-like lyricism shared by voice and piano. Schubert seamlessly weaves lyrical and speech-like phrases together to tell a story within the larger cycle. Schubert’s lyric recitative style is a model for jazz verse performance.

Winterreise is a staple of the German art song repertoire for the baritone voice, and the song cycle provides a challenge in performance for its length (approximately eighty minutes), depth, darkness, and intensity. Recordings are plentiful; at least 100 versions exist on CD and DVD (Clark 2013). I chose recordings of two well-known and highly regarded duos, Dietrich Fischer-Dieskau with Gerald Moore, and Peter Pears with Benjamin Britten.

“My Man”

“My Man” is considered the original and classic exemplar of the torch song genre (Moore 1989, 48). The song was composed by Maurice Yvain (titled “Mon Homme,” with lyrics by Alfred Willemetz and Jacques Charles) for famed French chanson singer Mistinguett (b. Jeanne Bourgeois) in her appearance in the 1920 show Paris qui jazz at the Casino de Paris (Bret 1990).
Fanny Brice made it her signature song (with English lyrics by Channing Pollock) in the Ziegfeld Follies of 1921, and was the first to record it in November of that year. Billie Holiday first recorded “My Man” with Teddy Wilson and His Orchestra on 1 November 1937, and after an eleven-year break, proceeded to record it at least seventeen times between 1948 and 1957, making it her second-most recorded song (Gibson 2008, 165). Ella Fitzgerald first recorded it on 31 March 1941, and subsequently recorded it three times, the last in a duo with Joe Pass in 1986. Judy Garland sang it at The Palace in New York in October 1957 but never recorded it (Clarke 2000, 295). Peggy Lee recorded a version of “My Man” in 12/8 meter on I Like Men! (1959), and Etta James recorded a similar version on Blue Gardenia (2001). Perhaps the best-known versions of the song are by Barbra Streisand (My Name Is Barbra, 1965, and as Fanny Brice in the 1968 film Funny Girl) and Diana Ross (as Billie Holiday in the 1972 film Lady Sings the Blues).

For “My Man,” I have chosen two recordings of significance: Billie Holiday’s 1954 live recording in Bern, Switzerland with Carl Drinkard on piano, and Ella Fitzgerald’s 1977 live recording in Montreux, Switzerland with Tommy Flanagan on piano. Holiday’s recording comes from her first European tour, at a time when “My Man” was a standard part of her repertoire. Drinkard joined Holiday in late summer 1949, and his first set with Holiday at the Club Bali in Washington, D.C. included “My Man” (Clarke 2000, 312). Drinkard would work

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with Holiday on and off until 1956; eventually Mal Waldron became Holiday’s accompanist for the remainder of her life (Chilton 1975, 151, 157).

Early recordings of “My Man” establish a tradition of broad flexibility for the torch song genre. Mistinguett was first to claim “My Man” as her signature song, but did not record it until 1938. The first recording of “My Man” by Fanny Brice in 1921 parallels Mistinguett’s 1938 rendition in its reflection of practices of the French chanson tradition, including free, speech-like inflection of the text, and the orchestra providing a regular pulse on beats one and three, conducted and executed in a fluid (or non-metronomic) manner to maintain good ensemble with the singer.66 While these recordings stay within the confines of Hudson’s “earlier rubato” due to the regular if unsteady pulse, later recordings by Brice eliminated the pulse in the verse and at times in the chorus, reflective of Hudson’s “later rubato” (Hudson 1994). A Brice recording from 1928 employs similar orchestration as in her 1921 version, but Brice treats the melody and text ad libitum, marked by accelerandi and ritardandi in virtually every phrase, and at times Brice eschews the melody for spoken text for dramatic effect.67 The orchestra never establishes a steady beat or pulse, and is completely subservient to Brice’s inflection of melody and text. It is interesting to note that in a live recording of “My Man” in the same year, Brice takes the entire tune at a fairly quick pace (140 bpm) with a steady beat, inflecting her line but only taking tempo shifts (ritardandi) at sectional endings.

The flexible precedents by Mistinguett and Brice inform later versions by Billie Holiday and Ella Fitzgerald. Holiday’s first recording (1937) draws on Brice’s 1921 conception, with the

66 Hewitt describes the French chanson as “a melding of music and poetry capable of expressing the most complex aspects of individual perception, sensibility and ideas which, at the same time, remains accessible to popular audiences” (2003, 281).
67 The first and only known issue of this recording is Fanny Brice, Ruth Etting, Libby Holman, and Helen Morgan, The Original Torch Singers, 1980, Los Angeles: Take Two Records TT 207 (LP).
singer freely inflecting over a steady beat in the orchestra. The 1937 recording reflects Brice’s first recording in Holiday’s inflected delivery over a steady beat in the orchestra. But like Brice, Holiday embraced a freer approach of the verse in 1948 (with just duo on the verse, with Bobby Tucker on piano), created a template for interpretation that would serve later recordings.

Fitzgerald recorded “My Man” four times, the first in 1941 (Fidelman 1994, 37) in a steady slow dance tempo (76 bpm), with her orchestra. Fitzgerald’s interpretation evolved much like Holiday’s, and her penultimate recording (1977/78) takes from Holiday’s second version the free treatment of the verse (Hudson’s second rubato) with piano followed by two choruses in strict ballad time with piano, bass, and drums. Fitzgerald’s final recording came in 1986 in a version with guitarist Joe Pass.

“Star Dust”

“Star Dust” is one of the most-recorded songs in history, boasting at least 1,300 recorded versions by 1999 (Hasse 1999, xi). Written in 1927 at the University of Indiana by Hoagy Carmichael, “Star Dust” displays Carmichael’s jazz background and especially the influence of his friend Bix Beiderbecke (Sudhalter 2002, 109-110). Carmichael’s friend Stu Gorrell named the tune “Star Dust” based on his impression that “it sounded like dust from stars drifting down through the summer sky” (Ewen 1966, 366). Originally an instrumental piano rag, “Star Dust” became popular upon its introduction at the Cotton Club in 1929 as a vocal tune featuring

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68 Holiday’s first “My Man” was recorded as Brunswick 8008, recorded on 01 November 1937, reissued in 2001 on The Complete Billie Holiday on Columbia 1933-1944, Columbia/Legacy CXK 85470. Only two of the recordings from 1948-1958 were studio sessions, while the rest were live performance recordings; three of the recording dates from 1948-1958 resulted in more than one release. From www.billieholiday.be.

69 Fitzgerald took over leadership of the Chick Webb Orchestra after his untimely death in 1939; she led the band for three years (Bowen 2010, 59).

70 On Easy Living, Pablo 2310-921.

71 There is dispute over the spelling of Carmichael’s famous tune. Sudhalter cites that the original registration of the tune as “Stardust” on 5 January 1928; upon reregistration by Mills Music on 29 January 1929, it became “Star Dust” (2002, 368-69, n. 17).
Mitchell Parish’s lyrics (Furia 1990, 245, 255). Wilder claims Carmichael added the verse to the song when Parish added the lyric, in order to adhere to Tin Pan Alley’s popular song format (1972, 375), but the verse appears on the first recording dated 31 October 1927 (Friedwald 2002, 6). Parish, who worked as a lyricist for Irving Mills, drew on earlier but unreleased and unrecorded lyric sets by Carmichael and Wally Wilson (Sudhalter 2002, 122-23).

Isham Jones’ instrumental hit “Star Dust” (16 May 1930) brought the tune to mass audiences on the radio, and it became known as the “Walter Winchell song” due to the famed radio newsman’s love of the song and penchant for plugging it on the air (Carmichael and Longstreet 1965, 128; Sudhalter 2002, 139). Bing Crosby’s 1931 hit was the first vocal recording of “Star Dust.” From there, “Star Dust” grew to become a popular music staple, “an evergreen among musicians and audiences, and an American icon” (Hasse, xi).

“Lush Life”

Billy Strayhorn’s masterpiece of sophistication and worldly disenchantment, “Lush Life” is *sui generis*, a jazz art song without peer. Strayhorn wrote the song as a young man, completing it in 1936 but revealing parts of it to friends three years earlier, when he was no more than eighteen years old. The song was a private indulgence for Strayhorn, only brought out for parties or special occasions, until Nat “King” Cole recorded it in 1949, followed by Harry James four years later. It quickly became a favorite for singers and instrumentalists alike, with John Coltrane making two seminal recordings, instrumentally in 1958 and with balladeer Johnny Hartman in 1963, the latter setting the standard by which future recordings would be judged. Akkerman goes so far to say that the Coltrane/Hartman recording conferred canonical status to “Lush Life”

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72 Unfounded rumors exist implying arranger Don Redman wrote the verse to “Star Dust” (Sudhalter 2002, 351, n. 33).
73 Akkerman (2012) offers a detailed account of the making of *John Coltrane and Johnny Hartman*, with revealing stories behind the recording of “Lush Life.”
(2012, 128). While the quality and the impact of the 1963 recording is undeniable, a number of remarkable and highly personal performances have appeared on recordings since, including those chosen for analysis in this study. Like a great European art song, “Lush Life” is both a fixed quantity in its recorded and notational history, and a cornucopia offering depths of unexplored riches.
CHAPTER 4

METHODODOLOGY

My purposes in this study were to identify aspects of classical collaboration that appear in
the work of renowned jazz accompanists since the middle of the twentieth century, and to show
that certain principles of performance practice in accompanying classical art song can in fact be
considered part of jazz vocal accompaniment performance practice. Szpilberg (2011, 32) argues
that “expressively directed microtiming enters crucially into the performances of highly
accomplished pianists,” and I regard microtiming as the key to the performance application of
collaborative practices considered here. The application of expressive microtiming analysis to
fully rubato (out-of-time) jazz verse performances may offer a unique contribution to the
literature.

There exists an acute lack of pedagogical materials designed to help young jazz pianists
learn to accompany jazz singers. Pianists tend to apply instrumental accompanying skills
(comping) to vocalists without regard for diction or inflection, inhibiting the singer’s ability to
tell a story of the lyric. Young pianists lack the awareness of the special skill set required to
excel at accompanying vocalists.

There is a large body of work codifying performance practices of classical vocal
accompaniment (Adler 1965; Spillman 1985; Katz 2009). In this study, I explored the
proposition that classical collaborative traditions and practices can apply to jazz vocal
accompaniment performance. I addressed the related question of whether seasoned jazz vocal
accompanists already use these techniques, however intuitively, to create good ensemble.
Analysis of expressive microtiming in jazz duo recordings helped answer both questions.
In this chapter, I explain my methodology and show how it fits into the musicology and jazz research traditions. I describe my research methods and materials, which include transcription of recorded performances and audio visualizations of those performances. I offer a brief synopsis of the study’s delimitations and limitations, both generally and specifically pertaining to my methods and methodology. I next consider the potential transferability of my findings, and I finish with a summary of the chapter and a preview of the study’s findings, covered in Chapter 5.

Research Approach and Literature on Methodology

This study looks to fill a void in the vocal accompaniment literature for jazz pianists. The existing dissertation (White 2010) and pedagogical literature (Rizzo 2002; Greensill 2013) offer good general advice but are largely descriptive in nature. In a non-laboratory environment, I combined qualitative and quantitative methods to achieve the most robust result.

I chose four songs as vehicles for my analysis of collaborative performance practice crossover. I organized the songs into four separate studies, and I analyzed each song and its recorded versions within individual studies. My analytical focus was the detection of ensemble practices relating to diction and inflection in each song’s recorded performances.

For the first study, I explored Schubert’s art song “Der greise Kopf,” from Winterreise, D. 911. “Der greise Kopf” (“The grey head”) is an early example of lyric recitative, a vocal style coupling recitative’s speech-like rhythms with expressive lyrical elements. The voice and piano share melodic themes in this style, but the keyboard part largely retains a sparse recitative style (Kimball 2005, 5).

Modern performance of lyric recitative preserves the highly inflected vocal practices of opera recitative, creating a flexible rhythmic foundation lacking metronomic pulses, described by
Hudson as later rubato (1994). Rubato, speech-like rhythms, expressive lyricism, and sparse but supportive keyboard accompaniment are qualities of lyric recitative I find in jazz verse performances. “Der greise Kopf” contains all the elements of lyric recitative, and served as a pertinent vehicle for my illustration of the classical ensemble practices of diction and inflection.

Example 4–1. “Der greise Kopf,” from Winterreise, D. 911, by Franz Schubert, mm. 5-14, an example of lyric recitative. The voice displays lyrical contours in mm. 5-8, accompanied by sustained piano chords in typical recitative style. In mm. 9-10, the piano echoes the previous phrase in the voice (mm. 7-8). The voice begins the next phrase in a speech-like manner (m. 11), but breaks into lyricism (m. 13), while the piano maintains a simple and imitative accompaniment (mm. 11-14).

I built upon the foundation of the first study to create studies based on the verses of three songs: “My Man,” “Star Dust,” and “Lush Life.” I chose these songs because traditional practice dictates inclusion of the verse in performance, and singers consider these verses integral parts of the songs, rather than dispensable introductions. My research shows that the ensemble
practices involving diction and inflection, as outlined in the initial Schubert art song study, appears in jazz pianists’ recorded performances of these three jazz verses.

For the four song studies, I applied two criteria to the pool of recordings for each song. First, the pianists had to be recognized as acclaimed musicians, specifically as vocal accompanists; high levels of acclaim and respect were also demanded of the vocalists, who typically have wider public profiles than their pianists. Second, the recordings had to be commercially available in CD or downloadable formats, indicating current commercial interest and viability.

For the three jazz verse studies, I applied two additional criteria to the available recordings. Each verse recording had to feature a vocal/piano duo, a common format for verse performance, and a necessary stipulation to create a parallel context with art song performance practice. Second, the recorded verse performance had to feature rubato style throughout, a typical performance practice for both jazz verse and lyric recitative in European art song. The verse as form and rubato as style create a specific context for studying collaborative techniques in jazz performances.

<table>
<thead>
<tr>
<th>Song</th>
<th>Pianist</th>
<th>Vocalist</th>
<th>Date</th>
<th>Recording</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Der greise Kopf&quot;</td>
<td>Gerald Moore</td>
<td>Dietrich Fischer-Dieskau</td>
<td>1955/2013</td>
<td>RRC 1400</td>
</tr>
<tr>
<td>&quot;Der greise Kopf&quot;</td>
<td>Peter Pears</td>
<td>Benjamin Britten</td>
<td>1965/2000</td>
<td>289 466 382-2</td>
</tr>
<tr>
<td>&quot;My Man&quot;</td>
<td>Carl Drinkard</td>
<td>Billie Holiday</td>
<td>1954/91</td>
<td>849-434-2</td>
</tr>
<tr>
<td>&quot;My Man&quot;</td>
<td>Tommy Flanagan</td>
<td>Ella Fitzgerald</td>
<td>1977/78</td>
<td>OJCCD-376-2</td>
</tr>
<tr>
<td>&quot;Star Dust&quot;</td>
<td>Cedar Walton</td>
<td>Etta Jones</td>
<td>1980/83</td>
<td>8696</td>
</tr>
<tr>
<td>&quot;Star Dust&quot;</td>
<td>George Shearing</td>
<td>Mel Tormé</td>
<td>1983</td>
<td>CCD7-2144-2</td>
</tr>
<tr>
<td>&quot;Star Dust&quot;</td>
<td>Mike Renzi</td>
<td>Mel Tormé</td>
<td>1996</td>
<td>CCD-4736</td>
</tr>
<tr>
<td>&quot;Star Dust&quot;</td>
<td>Hank Jones</td>
<td>Roberta Gambarini</td>
<td>2007</td>
<td>B0010622-02</td>
</tr>
<tr>
<td>&quot;Lush Life&quot;</td>
<td>Billy Strayhorn</td>
<td>Billy Strayhorn</td>
<td>1964</td>
<td>AK 52760</td>
</tr>
<tr>
<td>&quot;Lush Life&quot;</td>
<td>McCoy Tyner</td>
<td>Johnny Hartman</td>
<td>1963/2008</td>
<td>B0010966-02</td>
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<td>&quot;Lush Life&quot;</td>
<td>Geri Allen</td>
<td>Andy Bey</td>
<td>2004</td>
<td>SVY 17330</td>
</tr>
<tr>
<td>&quot;Lush Life&quot;</td>
<td>Bob James</td>
<td>Kevin Mahogany</td>
<td>1998</td>
<td>9 47025-2</td>
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<td>&quot;Lush Life&quot;</td>
<td>Laurence Hobgood</td>
<td>Kurt Elling</td>
<td>2009</td>
<td>CJA-31314-02</td>
</tr>
</tbody>
</table>
Table 4-1. Recordings chosen as part of methodology. Recordings with twin dates reflect the year of the original recording (first date) and the year of currently available release (second date).

Table 4-1 offers a display of the recordings I chose for this study. The duo (vocal/piano) setting creates a singular collaborative purpose for the jazz pianist, comparable to that of art song collaboration: to support the singer. When a standard piano trio (comprising of piano, bass, and drums) accompanies a singer, the pianist not only must support the singer, but also must act as a rhythmic and harmonic intermediary between the singer and the rhythm section. Orchestral arrangements of verses, generally performed in rubato style, often relegate the pianist (if present) to a lesser, embellishing role. I omitted a number of recordings for consideration for this study because of orchestral arrangements, most notably Nat “King” Cole’s inaugural and controversial release of “Lush Life.” I also disregarded a number of excellent vocal/guitar duo recordings that otherwise fit my criteria.

My one exception to this rule is the inclusion of Billy Strayhorn’s version of “Lush Life,” in which he accompanies himself on piano and is accompanied by bass and drums. The bass and drums are incidental to his performance, which has the hallmarks of a solo stint. Strayhorn had clear ideas about the performance of his tune, and I felt his recorded contribution as composer-cum-performer was valuable to this study.

Expressive microtiming, a performance practice found in a variety of musical styles and genres, correlates with personalization and individuation of musical expression. No two performers realize a notated score in exactly the same manner, and multiple performances and

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74 Hadju (1995, 100-11) recounts how Norman Granz persuaded Strayhorn to record “Lush Life” for the jazz anthology *The Jazz Scene* (which was ultimately released in 1949 without “Lush Life”); Nat Cole heard Strayhorn perform the song in the studio and proceeded to record it himself in a flamboyant orchestral arrangement by Pete Rugolo. Rugolo treated the song freely, even adding bars to the form, and Cole sang several of the lyrics incorrectly (including “your siren of song” for “your siren song” in the verse). Strayhorn considered “Lush Life” to be his “private project,” never intending to publish it. He felt Cole’s version was a complete misrepresentation of the song.
recordings of the same piece by the same performer often yield different results.\textsuperscript{75} The use of expressive microtiming links the performance traditions of classical recitative and jazz verse, and microtiming analysis offers an unambiguous method to ascertain whether expert jazz pianists treat singers’ diction and inflection in the same manner as art song accompanists.

The study of expressive microtiming is an aspect of spectromorphology, the study and explanation of sound shapes. Spectromorphology is a term coined by Denis Smalley encapsulating spectral (sound) and morphological (shape) aspects of the musical listening experience. Smalley’s development of Pierre Schaeffer’s original thinking on spectromorphology centers on electroacoustic music, involving electronic manipulation of sound or pre-recorded sounds on tape (Whittall 2015). Jazz is similar to electroacoustic music in that notation for both genres offers a poor illustration of the perceptual experience; nonetheless, some form of representation is necessary for analytical research purposes. Smalley (1995) presents the graphical display as a solution to notated visual representation, and there are precedents for its use in jazz and popular music research (Friberg & Sundström 2002; Danielson 2010; Abeßer et al. 2014).

Most microtiming literature focuses on performances engaged in Hudson’s “earlier rubato,” characterized by a temporally expressive melody line over an accompaniment holding a steady beat or rhythm (Donnington 1982; Hudson 1994; Repp 1998). This practice often ties to metrical, structural, and notational concerns (Clarke 1988; Palmer 1996b; Sloboda 1983), though current performance practice in classical music leans toward full texture \textit{accelerandi} and \textit{ritardandi} (Timmers & Ashley 2000, 132). Important vocal jazz studies confirm the presence

\textsuperscript{75} Szpilberg does show that a signature voice can emerge for solo artist pianists across numerous performances of the same work, but within a pianist’s specific musical choices there is creative variability on the micro (millisecond) level (75).
and significance of early rubato in jazz performance practice (Huang and Huang 1995; Ashley 2002; Toft 2004).

Hudson’s later rubato (1994), the performance context without regular tempo or pulse, also represents an inquiry into expressive microtiming (Repp 1996; Palmer 1996b). All eleven verse recordings I chose for this study feature later rubato style. A factor mitigating against research in this area is the lack of benchmarks, whether temporal or notational, as references for measuring participatory discrepancies. I have proposed that a singer’s inflected line serves as the benchmark for measuring timings in a pianist’s performance. While the pianist has various responsibilities in this situation (e.g., rubato treatment of a jazz verse), his/her paramount responsibility is to the singer, providing support and anticipating the singer’s presentation of the sung text. Microtiming analysis allowed me to investigate whether pianists exhibited collaborative ensemble practices vis-à-vis singers. Thus, I hoped to make a modest but unique contribution to the ongoing research in expressive microtiming, while acknowledging a pedagogical opportunity for budding jazz accompanists.

A large body of literature in jazz research involving participatory discrepancies, microtiming, and microrhythm is now in place, and a number of recent works exerted a strong bearing on my study. Benadon’s studies on eighth notes (2006) and notational challenges (2009a), and Butterfield’s work on anacrusis (2009) and swing ratios (2011) are foundational for jazz microtiming research, and provided me with a strong introduction to the field. Yorgason’s dissertation on expressive asynchrony (2009) includes an important discussion on asynchrony and rubato, pertinent to my study. Recent important musicological research impacting my study includes Dodson’s microtiming studies of pianists de Pachmann (2009) and Paderewski (2011). Ashley’s work on vocal jazz rubato (2002), as well as Huang and Huang’s earlier study of rubato
in performances of Billie Holiday (1995), stand as seminal research pieces that directly influenced my study.

A trait shared in many of the above articles is the use of graphical displays, a feature of my methodology. Certain codified functions in collaborative piano performances are detectable using graphical displays. I used visual, non-notational displays of classical and jazz performances to demonstrate that jazz pianists are using some of the same techniques used by their classical counterparts. Sonic graphical displays allow researchers to measure microtiming with accuracy and precision far beyond the capacity of the ear alone. Godøy and Jørgensen (2001), Leech-Wilkinson (2009), and Danielson (2010) offer excellent examples of displays, with clear explanations of their use in music research.

Methods and Materials

Jazz is a performance-oriented music replete with expressive microtiming, and thus is resistant to standard notation.\(^76\) In spite of the great advantages of graphical displays for rhythmic analysis, standard notation remains a necessary choice for harmonic and melodic analysis. I transcribed by ear the eleven verse performances (my analytical vehicles) into standard notation and created a legible version using Finale 2014 music notation software.\(^77\) At times, I supplemented graphical displays of excerpts with corresponding notated versions.

I used Sonic Visualiser (Release 2.4.1), an interactive sound analysis freeware program, to create graphical displays of classical and jazz samples for expressive microtiming analysis.\(^78\)

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\(^76\) Keil states that “no rhythm can be notated accurately—there is always a performance tradition which gives ‘life’ to the notes—but it has often been observed that the standard notation system is particularly ill-suited to the transcription of jazz (or African) rhythms” (1966, 349, n. 20; emphasis original). Bowen adds, “At best, a score is only a spatial representations of some of the elements of the temporal phenomenon we call music” (Bowen 1996, 111, emphasis original).

\(^77\) Finale 2014 is a product of MakeMusic, Inc., Eden Prairie, MN.

\(^78\) Sonic Visualiser, Copyright © 2005-2011 Chris Cannam and Queen Mary, University of London.
Musicologists created Sonic Visualiser for the express purpose of recorded music research, making it ideal as an analytical tool for my study (Leech-Wilkinson 2009). I digitally transferred recordings from CDs at a sample rate of 44.1 kHz, in 16-bit audio, in mono or stereo according to the format of the original recording, and then loaded the recordings into Sonic Visualiser.

Sonic Visualiser generates several types of graphical displays, two of which were useful for this study: waveforms and spectrograms. Waveform displays (also known as amplitude timelines, envelope traces, or oscillograms) graph time on the x-axis (horizontal) against loudness or amplitude on the y-axis (vertical). Note attacks, durations, and phrases are easily discernible, but waveform displays are basic visual representations and do not lend themselves to precise measurements.

![Image of Waveform Display](image)

Figure 4–1. Waveform display of the verse of “My Man,” performed by Ella Fitzgerald and Tommy Flanagan, from *Montreux ’77*, Fantasy/Pablo OJCCD-376-2, 0’00”–1’12”.

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79 44.1 kHz, 16-bit audio is the most common digital audio representation, found on most CDs.
Figure 4–1 illustrates the use of a waveform display to map verse phrases in the Fitzgerald/Flanagan recorded performance of “My Man.” Red or thick vertical lines mark time in ten-second intervals; blue or thin vertical lines indicate the beginning of each phrase, with the last (“Beginning of Chorus”) marking the end of the verse. Peaks in amplitude often accompany the beginnings of phrases, when the singer voices the initial phrase syllable.

Unlike waveforms, spectrograms reveal musical details and supply data that are useful for analysis. Spectrograph representations of various performances show the qualitative differences in the harmonic intensities (shades of color) and the distinctions between two performers’ note onsets. Onset differentials are individuated performance distinctions that are subject to precise measurement.

I measured all onset and offset timings on three separate occasions over a matter of weeks, and I used an average of the measurements. I employed this method to obtain the most accurate measurement possible with a minimum of errors (Ashley 2002). Readings of the same passages diverged no more than 5 ms, well below the range of human perception (see note 8). I exported data to a Microsoft Excel spreadsheet for analysis. I then graphed the data to create a clear visual display of expressive timing.

Because I used the inflected vocal line as the representative rhythmic benchmark to assess the pianist’s expressive microtiming, I needed precise measurements of voice and piano note onsets and offsets for effective comparative analysis. With exact timings, I calculated lead and lag time for pianists compared to their vocalists. I also compared performances of different pianists playing the same song. I measured timings of individual notes, phrases, and entire verses to examine the range of expressivity and the use of rubato. The resulting data enabled me to assess the pianists’ use of established collaborative practices concerning diction and inflection.

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80 Microsoft Excel 2010, © Microsoft Corporation, Inc., Redmond, WA.
Figure 4–2. Spectrogram of the verse of “My Man,” performed by Ella Fitzgerald and Tommy Flanagan, 0’00’–1’12”.

The spectrogram in figure 4–2 contains the same phrasing annotations as the waveform display in figure 4–1, but offers far more visual detail of the sonic environment. Visual distinctions separate the piano and vocal frequencies, with piano tones appearing as horizontal dashes corresponding with frequency levels (A), while the vocal line appears jagged and distinct from the piano (B). Fundamental frequencies for both piano and voice appear as the most prominent lines in the display, while difference tones and upperpartials, many of which are inaudible, appear below and above fundamental frequency lines (C).\(^8\) Spectral colors of increasing wavelength (from brightening green to yellow, orange, and red) correspond with increases in amplitude (D).\(^8\) Columnar blocks of mixed frequencies represent noise from various sources, including an audience’s applause and a vocalist’s breath (E). The dark green background indicates silence.

\(^8\) Difference, or combination, tones, result from the simultaneous onset of two pure tones; a lower tone equal to the difference of the two executed tones may be heard, depending on the intensity of the two executed tones.
\(^8\) In black and white, the amplitude intensity corresponds with the brightness of the image in the spectrogram.
While spectrograms provide a visual representation of all vocal and instrumental harmonic intensities, they come with the disadvantage of showing all environmental resonances and noises on the recording (Szpilberg 2011, 91). This can be especially vexing with live recordings (representing six of the eleven of recordings used in this study), as spikes in audience noise can obfuscate and even obliterate vocal or instrumental signals. I adjust the settings for the spectrographic displays in Sonic Visualiser to provide the clearest display possible.

Data Analysis Methods

With transcriptions and sonic visual displays as my two means of presenting data, I used two corresponding analytical methods. To the transcription excerpts in standard notation, I applied functional tonal harmonic and formal analysis of the common practice period. On the spectrograms, I located note and vowel onsets using both eye and ear as guides, and generated precise data points for expressive microtiming analysis. I created tables, charts, and graphs from this data to present musical information visually distinct from Western notation, and provide an aid to comprehension.

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000000000</td>
<td>Piano Introduction</td>
</tr>
<tr>
<td>13.552000000</td>
<td>Phrase 1</td>
</tr>
<tr>
<td>26.800000000</td>
<td>Phrase 2</td>
</tr>
<tr>
<td>37.632000000</td>
<td>Phrase 3</td>
</tr>
<tr>
<td>44.250000000</td>
<td>Phrase 4</td>
</tr>
<tr>
<td>56.200000000</td>
<td>Phrase 5</td>
</tr>
<tr>
<td>63.701500000</td>
<td>Beginning of Chorus</td>
</tr>
</tbody>
</table>

Table 4–2. Data created from manually-created data points in waveform and spectrographic displays, exported from Sonic Visualiser into a text file and from there exported to an Excel spreadsheet (© Microsoft Corp.) The left column contains raw data; labels for the data points appear in the right column.

83 “Good displays of data help to reveal knowledge relevant to understanding mechanism, process and dynamics, cause and effect” (Tufte, 1997).
The vertical phrase markings in both figures 4–1 and 4–2 generated timing data in Sonic Visualiser for export to a text file. I then transferred the exported data are ready for transfer to a spreadsheet. This data for phrase markings in the above figures appears in the spreadsheet in table 4–2. This data is useful on its own or with other data for comparative analysis, but a certain amount of processing must take place to implement the data. For example, to create a simple plot of phrase lengths on a graph, individual phrase lengths need calculation, via simple subtraction or through a basic Excel function. The data in table 4–3 shows the results:

<table>
<thead>
<tr>
<th>Phrase Onsets</th>
<th>Phrase Lengths</th>
<th>Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
<td>Beginning of Verse</td>
</tr>
<tr>
<td>13.55</td>
<td>13.55</td>
<td>Piano Introduction</td>
</tr>
<tr>
<td>26.80</td>
<td>13.25</td>
<td>Phrase 1</td>
</tr>
<tr>
<td>37.63</td>
<td>10.83</td>
<td>Phrase 2</td>
</tr>
<tr>
<td>44.25</td>
<td>6.62</td>
<td>Phrase 3</td>
</tr>
<tr>
<td>56.20</td>
<td>11.95</td>
<td>Phrase 4</td>
</tr>
<tr>
<td>63.70</td>
<td>7.50</td>
<td>Phrase 5</td>
</tr>
</tbody>
</table>

Table 4–3. Data from figures 4–1 and 4–2 showing phrase onsets, phrase lengths, and phrase labels. Timings are averaged to one hundredth of a second.\(^{84}\)

The data in table 4–3 appears in figure 4–3 below as a visual representation of phrase lengths (duration) in the verse performance of “My Man” by Ella Fitzgerald and Tommy Flanagan. The first and longest phrase, the piano introduction, is not part of the natural song.

\(^{84}\) Varying opinions exist concerning the human threshold of hearing two distinct sound onsets. Vernon (1936, cited Yorgason 2009, 395) considered a 10ms (milliseconds, or hundredths of a second) onset differential discernible by high-level musicians; Prögl (1995, 51, n. 11) considered gaps of 10 ms or more between onsets to be generally audible. Hirsh (1959, 761) demonstrated that listeners could discern distinct onsets 20ms apart 75% of the time (50% representing randomness). Conversely, Dodson (2011, 59) stated humans cannot perceive a 20ms distinction. Collier & Collier (2002) and Leech-Wilkinson (2009) claimed a separation of 30ms between onsets is the established human threshold. Handel demonstrated that gaps between two onsets below 40ms were heard as synchronous, and for three or more tones, the threshold raised 70ms (1989, cited Dixon 2001, 10). Far from being trivial, the perceptual threshold informs the viability of microtiming analysis; reducing microtiming data to the hundredth of a second maintains a level of precision and accuracy beyond even the lowest estimate of human perception. For my study, I used the 30ms threshold based on Collier & Collier and Leech-Wilkinson.
structure and therefore is excluded from a phrase-duration analysis. All five sung phrases are of varying durations, befitting a rubato performance. I use several methods to work with such data, including linking performances of the same tune for comparative analysis, and plotting perceived beat placements (with reference to notated examples) within phrases on the spectrogram. I use beat markers to measure intraphrase expressive microtiming.

![Figure 4-3](image-url)  
**Figure 4–3.** Data from table 4–3 showing phrase onsets, phrase lengths, and phrase labels. Timings are averaged to one hundredth of a second.

I based my perception of beats and barlines on sheet music for the songs, which in turn influenced my decisions for rhythmic notation in my transcriptions. Important melodic and textual markers present in sheet music also informed the performances. On certain recordings, the interplay between singer and pianist might imply a metric shift away from the notated example; in those cases, I transcribed the perceived shift, always with the caveat that alternative notational choices could be made. In spite of statements I make throughout this study about the

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85 The duration data of Flanagan’s piano introduction would be useful in other analytical contexts, such as in comparative studies of other piano introductions to the same tune.

86 I marked beats based on audio and visual feedback, a subjective process for which there is no established or precise method or mathematical model in the study of expressive timing (Dixon 2001, 22). I built my approach on the methods of Benadon (2006b, 2007, 2009b) and Butterfield (2006, 2010, 2011).
unreliability of notation, I consider the use of transcribed and notated examples in my study undeniably important, serving more than a supplemental role to graphical displays.

My analysis of notated transcriptions revealed similarities in form and function between classical recitative and jazz verse, drawing parallels between their respective performance practices. Harmonic analysis proved especially useful in comparing different jazz versions of the same work, enabling identification of individual pianist’s harmonic proclivities.


Example 4–3. Mike Renzi’s piano accompaniment to the first two measures of Mel Tormé’s vocal melody of “Star Dust,” from *An Evening with Mel Tormé: Live from the Disney Institute* (1996), Concord CCD-4736.
Examples 4–2 and 4–3 feature transcriptions of the first two measures of the verse of “Star Dust” from performances of two seasoned pianists known for their prowess as accompanists, George Shearing and Mike Renzi. They both accompanied vocalist Mel Tormé, whose vocal line (not shown) exhibits similar phrasing in both versions. Given the divergent approaches of Shearing (rich, quasi-impressionistic textures; offbeat rhythms; chromatic and quartal harmonies) and Renzi (simple voicings of harmony; filigree; space), one could ascertain that accompanying is a malleable art, and Tormé treated his pianists with flexibility. A number of notable features mark these two-measure excerpts, generating themes for analysis, such as how dissonances created by Shearing’s harmonies affect the sung melody; how a singer responds to thick (Shearing) or thin and transparent (Renzi) textures; how jazz accompanists can supply rests to perceptually emphasize part of a singer’s phrase (Renzi’s beats three and four of measure one); and conversely how accompanists can fill rests in a singer’s melody line to create movement and interest (Renzi’s beats three and four of measure two).

Notated transcriptions serve as an aid to harmonic and formal analysis, and provide a familiar visual representation of recorded music. Graphical displays such as spectrograms allow for detailed study of performers’ expressive nuances. Recent expressive microtiming research in jazz, including Benadon (2006, 2009a, 2009b) and Butterfield (2006, 2010, 2011), directly influenced the direction of my study. I used expressive microtiming analysis, coupled with harmonic and formal analysis of notation, to demonstrate the application of classical collaborative techniques by accomplished jazz vocal accompanists.

Limitations and Delimitations of Methodology

My study examines the crossover potential of classical ensemble practices to the jazz accompanying context, and my methodology was subject to the general delimitations I outlined
in Chapter 1. My collective contextual and boundary choices narrowing the scope of my study had a reductive effect on sample size. I endeavored to illustrate classical collaborative practices in jazz accompaniment performances in a small number of tunes (three), and a specific part of those tunes (verses only). Additionally, I limited the recordings to vocal/duo performances, and the number of recordings to eleven: two for “My Man,” four for “Star Dust,” and Five for “Lush Life.” In spite of these parameters, the three tunes are representative of the standard repertoire for jazz and popular singers, and the eleven recorded variants offer unique perspectives on the individual songs. These recordings offer ample opportunities for comparative performance analysis to show level of variability and individuation of expressive microtiming in performance. I address possible concerns with sample size in this chapter, as well as limitations regarding transcriptions, personal biases, and my lack of technological expertise.

I chose to restrict the study to rubato performances of verses, as the rubato treatment of jazz verses parallels the performance practice of rubato in classical recitative. Rubato, or rhythm free of tempo or pulse, creates a challenging context requiring a high skill level of performers. This informed my choice of recordings of acclaimed performers, both pianists and vocalists, whose expertise resulted in excellent ensemble. From these outstanding recordings, I isolated many examples of classical collaborative practices.

I cannot state a completely objective and bias-free stance in choosing specific recordings, particularly in the cases of “Star Dust” and “Lush Life,” for which there are a number of fine recorded versions by eminent artists. I may also have compromised objectivity, especially concerning the quantitative aspects of my study, by conducting my research and comparative analyses of recordings in a non-laboratory environment.

The choice to limit my study to ensemble practices, and those specific areas of diction
and inflection, also had a bearing on the methodology and findings. Collaborative piano is a vast and complex field of study, and the study of ensemble alone leaves the findings of this study incomplete. Nonetheless, the pianists’ attention to text, and the singer’s diction and inflection, are of paramount importance to the final musical result; a pianist cannot be a “partner” to a singer without that attentive focus. The major area of balance, as well as other collaborative issues, awaits further studies.

A major limitation of this study concerns the eleven transcriptions I did by ear. Transcriptions, the “visual documentation of sound-recording” (Seeger 1964, 277), are inherently problematic. In an ethnomusicology symposium on transcription and analysis in 1964, participants noted what are now universal observations regarding transcription (England et al., 1964; Stanyek et al., 2014). Most of those observations are pertinent to my study, but several directly apply as limiting concerns. The first, “total accuracy is impossible,” I must accept as a transcriber; in this study, the transcribed and notated rhythms of rubato performances represent my reasonably educated “best guesses,” and the results of another transcriber would surely yield different, though perhaps equally imperfect results. The notated examples defy complete alignment with the recorded performance, the subject of a second observation: “the sonic is recalcitrant to inscription.” Piano chord voicings on recordings pose great challenges for transcribers; in certain cases, I used spectrographic models to confirm pitches, following a third observation, “machines augment human perception.” Unfortunately, the results were inconclusive due to a fourth observation, “machines hear differently than humans”; software displays pitches (often harmonics) the ear simply cannot discern. Lastly, I mention two related observations, “the ear cannot capture all,” referring to the natural limitations of human hearing, and “transcription is a threshold function of human perception,” meaning what we cannot
perceive, we cannot transcribe (Stanyek et al., 2014). Human fallibility ties into the transcription process, and the necessity of transcriptions for this project carries the concomitant limitation of those transcriptions. I based my descriptions of musical content on my extensive experience as a vocal accompanist (thirty-four years), but nonetheless my experiential sphere has limitations that undoubtedly affected qualitative analysis and judgment.

It is difficult to discuss limitations of current software and general computing, given the trials and travails of researchers in earlier eras. Nearly three decades ago, Charles Keil’s desire to investigate participatory discrepancies elicited this statement: “I’m ready to call in the engineers and start exploring” (1987, 279). Software and hardware resulting from recent extraordinary technological advances allow the creation of sonic visual displays with a few keystrokes. While it seems somewhat disingenuous to claim that my study has limits due to technology, the trend of technological advancement will soon render current software and hardware obsolete. Future research on expressive microtiming undoubtedly will benefit from the greater precision and clarity afforded by advancing technology.

Sonic Visualiser is software designed for analysis of recordings, and thus serves as an excellent tool for my methodology. Sonic Visualiser is a powerful program, and I freely admit I limited my research by my lack of exhaustive knowledge of the program’s features and potentialities. Similarly, my quantitative research lacks rigor expected from expertise in statistical analysis, something I do not claim to have.

I did not engage pianists in interviews to corroborate my findings, which may constitute a weakness in the study. However, ample interview material exists, from trade journal and online

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87 These are just a few of the observations from a 1964 symposium on transcription (England et al.). Stanyek et al. recounts all observations from that symposium with new observations from fifty years later (2014).
articles to White’s dissertation (2010) based on interviews with eight jazz accompanists. I drew freely from this interview literature to supplement and support my views and research results.

Ultimately, the crux of this study is to demonstrate the transferability of classical collaborative performance practices to the jazz accompanying realm. “If a variety of performers uses these techniques, it is likely that similar but not necessarily identical contexts will reveal parallel results” (Patton 1990, from Bloomberg & Volpe 2012, 31). The vocal/piano duo in a rubato setting is a familiar context in many musical styles, and I argue that performance practices in one genre can successfully crossover into others. I believe common sense informs transferability here, as effectiveness is a key factor in usage. By demonstrating that revered pianists use these classical collaborative techniques to create beautiful accompaniments, I hope to convince young pianists that they, too, might use these techniques to achieve a similar result.

In this chapter, I described my methodology as part of a tradition mixing qualitative and quantitative research, and outlined the parameters of my study and the justifications thereof. I explained my analytical methods and their suitability to my topic, and looked to justify my research approach by citing appropriate methodological literature. I discussed my materials, including tools I used for generating and analyzing data. I supplemented my discussion of analytical methods with various examples of graphs, tables, and graphical displays. I reexamined limitations and delimitations discussed in Chapter 1, with emphasis on their influence upon my methodology.

My research work and findings follow in Chapter 5. I organized my findings into four studies based on four songs: “Der greise Kopf” (European art song), “My Man” (torch song), “Star Dust” (Tin Pan Alley song), and “Lush Life” (jazz standard). I chose recordings for each song based on specific criteria, and I analyzed transcription excerpts and graphical displays of
the recordings to ascertain whether the pianists used classical collaborative techniques to achieve excellent ensemble with their vocalists. Following my chapter on findings, I discussed my research results and offered my conclusions in Chapter 6.
CHAPTER 5

FINDINGS: ANALYSIS OF TRANSCRIPTIONS AND GRAPHICAL DISPLAYS

I sought to connect collaborative ensemble practices to the jazz accompanying tradition by analyzing recorded performances of eminent jazz pianists and their singers. I created transcriptions in standard Western notation of the recorded performances and applied functional tonal harmonic and formal analysis of the common practice period to ascertain harmonic and structural aspects of the performances. I used graphical displays of various types to obtain sound shape and microtiming data for analysis.

I organized my findings into studies of songs and their recorded performances. The first study offered an analysis of two recordings of Schubert’s “Der greise Kopf,” from Winterreise, D. 911. The following three studies focused on the verses of three standard tunes, “My Man,” Star Dust,” and “Lush Life,” providing the contexts for analysis. For all four song studies, I chose performances based on availability of recordings and reputations of the performers.

In each verse study, I analyzed the pianists’ treatment regarding two aspects of ensemble, diction and inflection. Diction is the enunciation of the text by the singer, and the vertical aspect of ensemble. In my research on diction, I specifically measured how the jazz pianists responded to singers’ consonants and vowels, and whether the pianists treated the vowels as the “music” and avoided consonants, a classical collaborative practice (Sundberg & Bauer-Huppmann 2006). Inflection is the shape of the sung text, the equivalent of rubato in instrumental music, and the horizontal aspect of achieving good ensemble (Katz 2009, 23-24). Singers create inflection through paraphrase of both melodic and textual elements, adding a quality of unpredictability to the performance. I compared different performances of each song to examine the expressive potential of inflection, and to gauge the success of pianists’ individual performances and
techniques.

I created waveform displays and spectrograms with the freeware program Sonic Visualiser. Working with frequency displays of recordings, I was able to create timing data corresponding with the performers’ expressive microtiming. I used timing data for both singers and pianists to determine how successful the pianists were inflecting with the singers and matching the singer’s vowel onsets.

Study 1: Schubert’s “Der greise Kopf”

To demonstrate a pianist’s lead and lag times vis-à-vis the singer, I analyzed two recorded performances of Schubert’s “Der greise Kopf,” from Winterreise, D. 911. The first recording was from 1962 by Dietrich Fischer-Dieskau and Gerald Moore, one of three of the duo’s recordings of Winterreise. The second was a 1963 recording by Peter Pears and Benjamin Britten. Both duos enjoyed long collaborative partnerships, producing recordings and live performances to the highest acclaim (Mann 2015; Headington 1993). Both duos were especially known for their interpretations of Schubert song cycles (Mann 2015; Blyth 2015).

“Der greise Kopf” (“The grey head”) is an example of an art song in the style of lyric recitative, featuring declamatory sections with minimal accompaniment interspersed with lyrical passages. Frequent sharing of melodic material between the voice and the piano unifies the song. The tempo, marked “etwas langsamer” (“somewhat slow”), is subject to free and expressive treatment befitting the doleful text. To demonstrate the rubato treatment in the two recordings, I loaded the sound files into Sonic Visualiser, created spectrograms, and inserted markers (using a “time instants layer”) at notated barlines. For this study, I considered the vowel as “the music”

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88 The 1962 recording was the second of the duo’s three Winterreise recordings; the others were recorded in 1955 and 1972.
89 The fourteenth of twenty-four songs in the cycle Winterreise (“A Winter’s Journey”), “Der greise Kopf” finds the wanderer (the cycle’s protagonist) awakening to frost in his hair, rejoicing in the belief he has aged overnight; when the frost melts, he bemoans his youth and his distance to the grave.

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(Sundberg & Bauer-Huppmann 2006; Katz 2009), and I therefore used the singer’s vowel onsets
to define barlines.

Figure 5–1. Spectrogram of recorded performance of “Der greise Kopf” by Fischer-Dieskau and
Moore, mm. 5-9. Vertical columns 1-5 mark vowel onsets on barlines The vocal line displays as
a jagged figure, with the fundamental vocal frequency (A) directly above the printed text; vocal
harmonics lie above the fundamental (B). Piano frequencies appear as horizontal lines (C).
Vertical columns of noise appear when a singer breathes (D). The onset of a single note serving
as an anacrusis to a piano interlude appears clearly (E). The horizontal panel on the bottom is a
waveform representation of the performance (F).

Inflection: Measure Timings

I deduced individual barlines in several ways. I used the notated score as the prime
reference. When Fisher-Dieskau was singing, I deemed his vowel of any syllable on beat one as
the downbeat and the beginning of the bar (Sundberg & Bauer-Huppmann 2006; Katz 2009).

When Moore played alone, I used the piano onsets on downbeats to establish barlines.

I exported the microtiming data produced by the barline markers, and then graphed
individual measure timings to the hundredth of a second to provide a visual representation of the
tempo variance from bar to bar:
Figure 5–2. Measure lengths in performance of “Der greise Kopf” by Dietrich Fischer-Dieskau and Gerald Moore.

The timings of individual measures in Figure 5–2 demonstrate the wide latitude Fischer-Dieskau and Moore take with the tempo in “Der greise Kopf.” Measures ranged in length from 2.63 seconds to over twice that, 6.42 seconds. This reflects the contemplative nature of the song, but it also demonstrates Fischer-Dieskau’s view of rhythm as an important expressive device, as Gerald Moore recounted:

His freedom and elasticity are not only influenced by the words he is singing but by the poignancy of feeling for the music itself [. . .]. I cannot think of one single song that Fischer-Dieskau sings where he would keep strict time throughout. (1962, 170)

For comparative analysis, I used the same procedure described above to ascertain measure lengths in the performance of “Der greise Kopf” by Peter Pears and Benjamin Britten.
Figure 5–3. Measure lengths in performance of “Der greise Kopf” by Peter Pears and Benjamin Britten.

Figure 5–4. A visual comparison of measure lengths in performances of “Der greise Kopf” by the duos Dietrich Fischer-Dieskau and Gerald Moore, and Peter Pears and Benjamin Britten.

The barline studies of duos Fischer-Dieskau/Moore and Pears/Britten reveal that both duos engage in a wide variation of bar length. Neither duo establishes a regular tempo, and while in both cases differences from bar to bar may fall well within the standard deviation (0.78ms),
wide swings within groups of measures occur throughout each example. A metronomic tempo would appear on the graph as a straight line, indicating each measure has the same timespan. Human error (unintentional) and musicality (intentional) would organically bring about small deviations in such a line in natural music making. The wide swings in these duo performances confirm the rubato style in this lyric recitative.

Measures 11–14 of “Der greise Kopf” illustrate how differently Fisher-Dieskau and Pears interpret the same phrase, and what Moore and Britten respectively do with their singers’ inflections.

Example 5–1. “Der greise Kopf,” mm. 11-14, with performance indications for each duo.

The figures underneath the score excerpt are timing data points indicating each pianist’s timed response (in milliseconds) to his singer’s vowel onsets. Negative values (-) resulted when the pianist led his singer (the piano onset was ahead of the vowel onset), and positive values (+) resulted when the pianist lagged behind his singer.
The text translation reads, “There I believed I was already an old man, and I rejoiced.” It reflects the brightest mood of the wanderer pining for death in this dark, lugubrious song. Pears sings this phrase much like an orator would speak it, in a forthright and energetic manner, emphasizing “Greis” (“old man”), “hab” (“have”), and “freu” of “[mich] gefreuet” (“made [me] happy”). Pears pushes forward (→) in m. 11, pulls back (←) in m. 12, and pushes again toward the end of the phrase in mm. 13-14. Britten presses forward with Pears in m. 11, and his slight lead (−17ms) on the downbeat of m. 12, falling on the rolled /r/ of “Greis,” helps emphasize that crucial word. Britten relaxes with Pears on beat two (“sein,” meaning “to be”), and as Pears takes even more time, Britten follows suit with a late downbeat arrival on “hab” (+287ms). Pears then drives to the end of the phrase, and Britten responds by synchronizing more closely with Pears’ vowels, effectively matching his rhythmic flow.

Fischer-Dieskau sings the phrase in a much more deliberate manner than Pears, as the timings (in seconds) in the display below indicate:

<table>
<thead>
<tr>
<th></th>
<th>m. 11</th>
<th>m. 12</th>
<th>m. 13</th>
<th>Entire Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fischer-Dieskau/Moore</td>
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<td>4.56</td>
<td>3.89</td>
<td>15.42</td>
</tr>
<tr>
<td>Pears/Britten</td>
<td>2.87</td>
<td>2.98</td>
<td>2.86</td>
<td>10.97</td>
</tr>
</tbody>
</table>

Table 5-1. Individual and overall timings for mm. 11-13 of performances of “Der greise Kopf” by the duos Fischer-Dieskau/Moore and Pears/Britten.

Fischer-Dieskau sings the first sub phrase in a hushed manner, as a storyteller might whisper a phrase to draw attention. He then delivers the second half of the phrase in a deliberate and defiant manner, at an anguished forte that acknowledges the fleeting nature of happiness in the text. Fischer-Dieskau does not move forward in m. 11, keeping steady and maintaining his composure, but he lingers on “Greis” like Pears, and Moore responds by lagging the vowel
onsets (+73ms) in m. 12. Fischer-Dieskau’s slight press into the end of the phrase prompts Moore to tighten his vertical alignment, just as Britten did with Pears.

Diction: Shared Eighth Notes

A pianist’s treatment of a singer’s diction, and a singer’s vowel onsets in particular, factors heavily in a duo’s success in creating ensemble. As shown above, diction influences the horizontal flow of a performance, but unlike the larger shapes encountered in inflection, diction focuses on the details.

To test Britten’s and Moore’s individual ability to align with vowel onsets, I noted in the score the instances when voice and piano share eighth note onsets, which are vertically aligned in the score. I took the twin sets of data and calculated the spread between the performers’ onsets.

Figure 5–5. Gerald Moore’s lead (negative values) and lag (positive values) timing to Dietrich Fischer-Dieskau’s vowels in their shared eighth notes in “Der greise Kopf.”
Of forty-four shared eighth note instances, Moore lagged thirty-five times (79.5%) and led only nine times (20.5%), with an average (mean) of all values of 60ms in lag. It is important to consider the threshold of human hearing of separate onsets, a number reasonably assumed to be 30ms (Collier & Collier 2002; Leech-Wilkinson 2009). According to that threshold, five of the nine negative (lead) values and twenty-seven of the thirty-five lag (positive) values are discernible. Moore’s intention is clear here: to place piano onsets as close to vowel onsets as possible (following the singer’s diction), and placing those onsets in a consistent manner to match the inflection of the singer.

Figure 5–6. Benjamin Britten’s lead (positive values) and lag (negative values) timing to Peter Pears’ vowels in their shared eighth notes in “Der greise Kopf.”

Britten had less success than Moore did in timing vowel onsets, leading nineteen times (43.2%), and lagging twenty-five times (56.8%). It is possible Britten is not paying attention to vowel onsets, considering his percentage of lags is virtually random (constituting a 50%
Britten’s average asynchrony with vowel onsets is 22ms, much smaller than Moore’s (at 60ms), and below the perceptual threshold of 30ms. It is also possible Britten preferred a tighter vertical ensemble with Pears, which would leave more room for error on the side of leading the vocalist.

Example 5-2. “Der greise Kopf” by Franz Schubert, mm. 5-8.

A close examination of the opening vocal phrase of “Der greise Kopf” reveals a divergence of concept between Moore and Britten. The phrase comprises of a lyrical vocal line over a traditional recitative keyboard accompaniment. Because the piano part has no execution difficulties per se, the phrase offers a clear example of the realized intention of the pianists.

While both give plenty of room for the double rolled /r/ (“Der Reif”) in m. 5, Moore leads the vowel onset in m. 6 by 97ms. Moore likely recognized that the preceding consonant, the German /w/ (IPA symbol [v]), had a sustaining quality allowing for the lead, thereby enabling Moore to give the perception of emphasis on the word “weißen” (“white”). In m. 7, both singers use a slight portamento into their /ü/ (sung an octave below the notated score), but form their vowel before they reach the pitch. Moore wisely waits patiently to play on the vowel (232 ms after the
onset), contributing a relaxed sense to a bit of word painting in the voice (the highest pitch of the phrase is on the word “übers” [“over”]). Britten has almost perfect vertical alignment with the vowel (only +17 ms), but not the pitch, causing a slight unwanted dissonance. Both navigate the difficult multi-consonant “str” (IPA symbols [ʃtř]), with Moore purposely avoiding it with over a quarter of a second of clearance. The dramatic setup to the leap into /ü/ begins with the breath both singers take after “Schein” in m. 6. Both pianists recognize the need to hold the dotted-half note for full value in the measure; in keeping the sound vibrating, the pianists connect the sub phrases and disguise the sound of the breath.

The two recordings of “Der greise Kopf” illustrate how interpretations can vary between performers, and how ensemble elements of diction and inflection inform those interpretations. The artful, languid performance by Fischer-Dieskau contrasts with the hotter, more overtly dramatic rendition by Pears. Pianists Moore and Britten are instrumental in the success of the performances, inflecting with the singers’ flexible phrasing in a rubato setting of lyric recitative. With Moore, and less convincingly with Britten, attention to vowel onsets and the quality of preceding consonants leads to excellent vertical ensemble. These traits will appear in the following studies of jazz verse recordings.

Study 2: “My Man”

“My Man” is the original torch song, and Fanny Brice’s sensational rendition in the Ziegfeld Follies of 1921 sparked a succession of Tin Pan Alley torch songs over the following several decades. However, “My Man” did not use the Tin Pan Alley template of a sixteen-bar verse plus a 32-bar chorus. Its twenty-bar verse and sixteen-bar chorus stand as an oddity in popular music, and singers further complicate form matters by treating the lyric and phrase structure as mutable. Recordings by Billie Holiday and Ella Fitzgerald illustrate this point, as
each singer personalizes both lyric and form. Pianists Carl Drinkard and Tommy Flanagan offer an array of collaborative techniques to ensure good ensemble in these recordings.

“My Man”: Form and Structure

Within the unusual larger form, the phrase lengths within the verse to “My Man” are unique, not adhering to the traditional four-bar pattern. The first period comprises of two four-bar phrases, but the second (a repetition of the first) is truncated at seven bars (four plus three), the third only four bars (two two-bar phrases), followed by a final, single bar acting as the anacrusis of the first chorus phrase. This structure, gleaned from both the French and American sheet music, is graphed as “Print” in Figure 5–7.

Both Ella Fitzgerald and Billie Holiday individualize the verse form in their recorded performances. While Fitzgerald tends to lengthen the form, Holiday achieves a contraction:

![Graph showing variance in number of measures per phrase between the notated score and performances by Billie Holiday and Ella Fitzgerald of the verse to “My Man.”](image)

Figure 5–7. Variance in the number of measures per phrase between the notated score and performances by Billie Holiday and Ella Fitzgerald of the verse to “My Man.”
One point of divergence involves the fifth and sixth phrases, which appear in the French and American sheet music in the following examples:

Example 5-3. Excerpt from the French sheet music for “My Man,” mm. 16-19.

Example 5-4. Excerpt from the American sheet music for “My Man,” mm. 16–19.

The phrase structure is the same in both versions, but the American version contains a syncopated line in place of the straight eighths in the French. Both Holiday and Fitzgerald sing an unsyncopated line within their rubato performances. Holiday truncates the first phrase, leaving out the lyric, “He isn’t good,” and then enhances the second phrase with dramatic pauses after each sub phrase:

Example 5-5. Holiday’s inflected melody line from the verse to “My Man,” mm. 15–17.

Drinkard punctuates Holiday’s pauses with sweeping arpeggios up the keyboard, gestures that match Holiday’s vaudevillian style but today may be considered passé.

Fitzgerald sings the first phrase intact, but extends the end of the phrase by two beats (mm. 13-14):

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Editions Salabert of Paris published the first version of “My Man” in 1920, titled “Mon Homme. Le Succès De Mistinguett et Harry Pilcer” Leo Feist published the American version in 1921, including a new lyric in English by Channing Pollock, under the title, “Mon homme: (My Man); Europe’s biggest dance hit.”
Example 5–6. Fitzgerald’s inflected melody line from the verse to “My Man,” mm. 13–18.

Fitzgerald moves the word “true” in the next phrase to the downbeat, creating an agogic accent. She amplifies that emphasis by choosing to augment the eighth notes in the original phrase to quarters for the words, “true, He beats me too,” the dramatic peak of the verse and perhaps the entire tune. Her line “What can I do?” extends the pattern of elongation, but her syncopated inflection allows the climactic power of the previous sub phrase to recede into a wistful hopelessness.

For both Holiday and Fitzgerald, the rubato setting allows them to control the phrasing without metrical concerns, opening the door for many expressive possibilities. Each singer’s dramatic approach presents a unique challenge to their pianist to create a flowing accompaniment that matches mood and inflection.

Inflection: Flanagan and Drinkard

Example 5–7. The first two measures of the verse from the American sheet music of “My Man.”

Fitzgerald’s deep personalization of the written melody challenges Flanagan to match her expression level:
Example 5–8. “My Man,” mm. 5–6, performed by Fitzgerald and Flanagan.

Fitzgerald’s departure from the sheet music is dramatic, as she employs speech-like rhythms similar to those used in traditional recitative. Fitzgerald treats both sub phrases as separate units, shortening them both, and declaiming the lines of text like fragments of speech.

Master accompanist Tommy Flanagan uses an array of collaborative tools to mirror Fitzgerald’s inflected line, concocting textures that are remarkable for both their harmonic simplicity and their forward motion. The restraint of his approach belies the depth of musical information he imparts. Flanagan clearly delineates the downbeat of measure 5, striking a new beginning for the sung verse to follow his prologue (mm. 1–4, not shown). He creates harmonic structure in his left hand, which doubles as rhythmic support for Fitzgerald, allowing her to sing in a freely expressive manner. Embedded in his left hand is a counterline that adds a sense of movement through otherwise earthbound chords. His right hand provides commentary in the form of a countermelody, using a two-note motive that imitates the principal tune, similar in conception to a Strauss art song:

In both examples, the tessitura of the right hand piano line lies above the vocal line, adding textural and contrapuntal interest without obscuring the voice and the text. Like Strauss, Flanagan uses the same motivic material elsewhere in his verse accompaniment to create conceptual continuity over the larger form.

Flanagan captures Fitzgerald’s somber reading by creating sparse backgrounds that allow Fitzgerald great expressive freedom.

Example 5–10. Flanagan’s accompaniment to Fitzgerald in mm. 13–15 of “My Man.”

In accompanying the contemplative phrase above (mm. 13-15), Flanagan chooses a recitative-like texture featuring open fifths in the bass with a simple, melodic right hand.
Flanagan echoes the melody in diminution at (A), and follows with a return of the two-note motive from the first phrase of the verse (B, C). His lack of pedal at the start of m. 13 enables his motive (A) to project cleanly; his pedaling of the two-note motives gives them a distant bell-like quality, adding charm and grace. The two instances of fifths in the left hand lag Fitzgerald by a wide margin (456ms and 402ms), matching the pensive lyric with the languorous phrase. Flanagan’s gentle, almost “hammerless” touch softens the note attacks to accentuate the mood.

In contrast to the sensuous and subtle nature of Fitzgerald and Flanagan’s rendition, Holiday’s performance of the verse is simpler and more direct, akin to a musical theatre concept.

Example 5–11. “My Man,” mm. 5–6, performed by Billie Holiday (voice) and Carl Drinkard (piano).

Holiday creates dramatic gestures through choppy phrasing and stop-and-go rhythms. Drinkard accentuates the broken phrasing with short, stabbed chords, followed by rests that create complete silences in the texture. These practices are part of the musical theatre tradition derived from opera recitative performance, but are unusual in a jazz context. Nonetheless, Drinkard’s approach is appropriate to Holiday’s inflected style, adding a brittle edginess linked with the lyrics.
Diction: Shared Eighth Note Instances

I graphed all instances in which Drinkard and Flanagan shared vertical eighth notes with their respective singers. The number of shared instances will vary from performance to performance in jazz, given the improvised nature of the music. This is in contrast to the fixed number of instances in any given European art song, as dictated by composition and notation. I detected the eighth note synchronies by ear and confirmed them visually with spectrograms of the performances. I then calculated the pianists’ lead and lag times of their attacks in relation to the vowel onsets.

Figure 5–8. Graph of differentials of shared eighth notes by Billie Holiday and Carl Drinkard in “My Man.”

Drinkard’s approach to Holiday’s theatrical inflections is to mirror them with articulated chords punctuated by full-texture rests. While this method would normally have the tendency to push a singer, Drinkard keeps the ensemble stable by respecting vowel onsets. In the thirty-five eighth notes he shared with Holiday, twenty-seven lagged her vowel onsets (77.2%), while eight led (23.8%), nearly matching Gerald Moore’s efficiency on “Der greise Kopf.” It is germane that four of the eight leads were underneath the perceptual threshold (30ms), while only three of the
twenty-seven lags were likely indiscernible; if these were discarded, Drinkard’s percentage of lags would be even higher.

Example 5–12. Holiday and Drinkard performing the verse to “My Man,” mm. 8–10, with Drinkard’s leads (−) and lags (+) of Holiday’s vowel onsets marked below.

Details of Drinkard’s onsets in example 5–12 demonstrate how he keeps the short chords from pushing Holiday by delaying his vowel synchronies (A, B, C). The chord with the largest lead (D) is on a double vowel (hero elided with out), allowing for a large margin of error in synchronization. Holiday implies a metrical push entering m. 10, and Drinkard responds with a slight lead on the downbeat (E).

The Flanagan/Fitzgerald verse recording has only twenty-three shared eighth note instances, twelve fewer than Holiday/Drinkard (figure 5-9). Flanagan moves around Fitzgerald’s inflections, at times anticipating her eighth notes (four of the twenty-three instances), but mostly delaying his entries (nineteen times). He lines up with vowel onsets 82.6% of the time, indicating his clear intention to avoid consonants and synchronize with vowels.
Figure 5–9. Tommy Flanagan’s lead (positive values) and lag (negative values) timing to Ella Fitzgerald’s vowels in their shared eighth notes in the verse performance of “My Man.”

Figure 5–10. Peak frequency spectrogram of Fitzgerald and Flanagan performing mm. 5–6 of the verse of “My Man.”

Figure 5–10 depicts a spectrogram of Fitzgerald and Flanagan’s first phrase together. This spectral view give a general view of the frequency content while showing details of their performance, and offers a visual display of the music for analysis as an alternative to a notated
score. Vowel onsets appear as front edges of short wavy (vocal) lines that repeat through the frequency spectrum (y-axis). Straight, horizontal lines in this spectrogram represent the stable frequencies of piano sounds; the defined edges of these lines give precise points of piano attacks and releases.

Several important aspects of the performance stand out, features that are aurally discernible but minute in detail. The letters A-E correspond to five left-hand chords played by Flanagan. The sinuous horizontal lines representing Fitzgerald’s vocal line are accompanied by corresponding lyrics. The breaks in the lines coincide with her consonant sounds. Flanagan adeptly avoids consonants throughout the phrase, and there are several instances worth noting. He avoids the hard /t/ of “lot” by delaying his chord by a fraction of a second (B). Similarly, at (D) he delays his attack to coincide with the long vowel /ī/ of “I’ve” rather than the short vowel /a/ of “that”; in doing so, he stresses the more important word and complements Fitzgerald’s motion. The single instance of Flanagan playing directly on the onset of a word is on the word “one” (C), striking the chord on a vowel (/o/), and skillfully avoiding consonant clusters on either side of the vowel (/r/ + /s/ before, and /n/ + /th/ after). Finally, Flanagan recognizes Fitzgerald’s desire to linger on the /ô/ of “got,” ensuring the avoidance of the hard /g/ while respecting Fitzgerald’s lengthening of the note.

Flanagan and Drinkard live in different stylistic worlds, but their individual approaches beautifully fit their respective singers, Fitzgerald and Holiday. Drinkard is able to capture the essence of Holiday’s stagecraft by accentuating her dramatic gestures and pauses. Flanagan has the tools to match Fitzgerald’s solemnity and anguish, creating an accompaniment that fits

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91 The plain spectrogram in Sonic Visualiser “displays the full frequency range up to half of the audio file's sampling rate, with the vertical Frequency Scale set Linear, with Colour Scale set to dBV, and using the default, fairly gentle green-yellow-red colour scheme.” From “Sonic Visualiser: A Brief Reference,” http://www.sonicvisualiser.org/doc/reference/2.1/en/index.html.

92 The word “one” phonetically begins with the glide /w/, considered a semi-vowel (Wall 1989, 196).
Fitzgerald’s expressive lines like a glove. Both pianists mirror Gerald Moore’s collaborative success by inflecting with their singers and paying close attention to diction.

Study 3: “Star Dust”

Hoagy Carmichael’s “Star Dust” is one of the most popular of all standard tunes from Tin Pan Alley, and is a staple of the song repertoire for singers and pianists alike. The song’s form adheres to the Tin Pan Alley template of a 16–measure verse made up of four 4–bar phrases, followed by a 32–bar chorus of four 8–bar sections (ABAC). Each pianist brought unique qualities to their accompaniments to effect good ensemble.

Inflection: Measure Timings

I timed individual measure lengths of each recorded verse to demonstrate the variability in rubato from performance to performance:

![Graph showing comparison of measure lengths](image)

Figure 5–11. Comparison chart of measure lengths within four verse performances of “Star Dust.”
The measure lengths correspond with personalized inflection by singer and pianist, as phrasing in a fully rubato context is subject to individual taste and discretion. Each eight-bar phrase divides into two four-bar sub phrases, and the last sub phrase is the longest in all four performances. The heavy deceleration in the last four bars of all four performances is extreme in both of Tormé’s renditions.

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</tr>
</tbody>
</table>

Table 5–2. Comparison chart of subphrase and total verse timings for the four verse performances of “Star Dust.”

The shortest verse performance belongs to Etta Jones and Cedar Walton, averaging approximately 65 seconds, the equivalent in metronomic time to approximately \( \dot{\}=59 \), a typical ballad tempo. The timings for Jones/Walton belie the liberties they take within those four-bar sub phrases, and Walton must take care not to throw Jones off as she inflects the melody.

Example 5-13. Etta Jones and Cedar Walton, mm. 5–6 from a recorded verse performance.

Walton keeps the movement of Jones’ sixteenths by adding a melodic eighth in response (A). His F# on beat four, harmonically displaced a beat early (B), adds rhythmic lift and gives
the temporary sensation of 3/4 meter. An inexperienced singer might be thrown by such a gesture, but Jones is unfazed, continuing her line without hesitation (C). Walton plays a b minor (VI) chord on the upbeat of beat one (D), creating an unusual emphasis point, indicating he might be unaligned with the singer. He keeps a simple eighth note flow moving, and when Jones sings a bluesy appoggiatura on the upbeat of beat two, Walton plays a complementary a# to create a VIIº/VI sonority (E). Restoration of vertical alignment occurs at (F). In this two-measure excerpt, inflection by singer and pianist is evident, and Walton’s knowledge of the lyrics, the melody, and his experience with the singer all inform his ability to take charge (A, B) and respond (E, F).

Shearing’s accompaniment of Tormé also exhibits the give and take of successful collaborative partnerships. Shearing maintains a delineated though flexible beat with quarters and eighths throughout, and Tormé inflects his line against Shearing’s tempo (as in Hudson’s early rubato, 1994). At times, though, Shearing clearly mirrors Tormé’s phrasing, as in the final measures of the verse:

Example 5–14. George Shearing and Mel Tormé performing the ending of the verse to “Star Dust.”
Tormé and Shearing extend the penultimate bar of the verse (m. 19) by a full beat, as portrayed by Shearing’s flexible but relatively steady beat. Shearing continues using eighth notes for movement and pulse, but unlike the beginning of the verse, when he kept the music light with bright harmonies and pushed the music forward with offbeat rhythms, Shearing stays on the beat here, consistently lagging vowel onsets. Tormé adds to the drawn-out quality of the phrase by singing it in minor (F locrian), and Shearing matches his line with the dark sonorities of Fsus7b9 and B/F. Shearing’s lag on the final verse note is notable, over half a second.

Example 5–15. Mike Renzi and Mel Tormé performing the ending of the verse to “Star Dust,” mm. 15–18.
Mel Tormé’s performance with Mike Renzi is the most languid, timed at 1’33”. Tormé’s relaxed inflections of the melody and lyric find a complement in Renzi’s penchant for orchestral piano playing. Tormé extends the verse’s fifteenth bar of the verse by a full measure (m. 16), vocally extemporizing in a quasi-melismatic way. Renzi follows Tormé’s inflections masterfully by articulating downbeats while playing on Tormé’s vowels (arrows indicate microtiming delays), creating support without obtrusion. To match Tormé’s inflections, Renzi had to know the text as Mitchell Parish wrote it, the lyric changes Tormé used in performance (in this phrase, “days” instead of “years”), and the specific way Tormé liked to inflect this particular phrase.

Renzi’s early downbeat on m. 15 is effective, as the arpeggiation of the chord mimics Tormé’s portamento, and gives Tormé cover for his falsetto high f’. Renzi waits longest on the final syllable of the verse, the downbeat of bar 17. Renzi’s thick, low-register chords as quarter notes give an apt and ponderous close to the verse, with light filigree finishing the last chord in m. 18 to set up the chorus.

In contrast to Renzi’s active approach, Hank Jones is the model of restraint and finish in his partnership with Roberta Gambarini:

Example 5–16. Gambarini and Jones in the ending of the verse to “Star Dust,” mm. 15–16.
He favors clarity in voicings and rhythms, two factors that aid in creating good ensemble with the vocalist (example 5–16). Jones plays many voicings with spread intervals (A), giving an openness to the sound and making the tonality easy to identify. Polychords (B) also lend a transparency to the sound. Jones uses rests tactically, avoiding clashes with the melody at (C) and (D). A simple triplet figure in the bass (E) leads to a B7#11 chord, a tri-tone substitution of F. This sets up the first chord of the verse, Bb (IV), clearly signaling the end of the verse and inviting the singer to begin the anacrusis of the chorus melody.

Two of the four pianists on “Star Dust” used word painting to help inflect with their singers:

Example 5–17. Accompaniments of Renzi and Jones on “Star Dust,” mm. 10–11.

Both Mike Renzi and Hank Jones respond to the lyric “wandered” and create similar descending figures. Jones’ figure is actually an imitation of the melody, while Renzi truly “wanders” with descending thirds on a tonic-defying whole-tone scale.
Diction: Vocal Onsets

The four recordings posed challenges for studying onsets, because in all four cases, the pianists took a large role in rhythmic pacing. While still marked by rubato (as the measure timings indicated), each performance featured the pianist generating a clear pulse in certain phrases. Nonetheless, great variations in vowel synchronization occur in the recordings.

The individuality of the four performances resulted in only five shared eighth note instances for comparative analysis. All five shared instances were on long notes (half and whole notes) on strong beats (one and three). The five words were important expressive points in the lyrics, so it was apropos for the pianists to emphasize them by interjecting notes or chords.

![Figure 5–12. Leads and lags of vowel onsets on five important syllables from the four performances of “Star Dust.”](image)

Of the twenty instances shared between the performers, twenty-four (70%) were lagging, an indication of vertical alignment with vowels. The average lag was considerable at 360ms,
implying a relaxed stance toward vertical alignment on the part of pianists. Even so, the results are inconclusive due to such a small sample.

The pianists on the “Star Dust” recordings each bring a different approach to accompanying. George Shearing brings his classical training and sensibility to his duo with Tormé; Mike Renzi, also with Tormé, is a more active accompanist akin to Carl Drinkard. Cedar Walton mixes simplicity with quirkiness, while Hank Jones plays the accompanist role with taste and restraint.

The measure timing study revealed dramatic differences in rubato and inflection between the four performances. Shearing and Walton controlled the pacing of their performances as much as their singers, while Renzi and Jones primarily played a responsive role. All four pianists found creative ways to match their singers’ inflections, including compositional choices. The flexibility with which the pianists treated their singers’ vowel onsets contributed to good overall shapes and phrasing, particularly in these full-texture rubato recordings.

Study 4: “Lush Life”

Billy Strayhorn’s “Lush Life” is one of the great jazz standards, and stands as a test of a balladeer’s art. “Lush Life” carries the European art song tradition of the text as the driver of the music, and knowledge of the lyric and the pacing of the singer’s melodic line is paramount for the pianist. The first recording of the tune, by Nat “King” Cole in 1949, followed by John Coltrane’s instrumental recording (1958), created an initial performance tradition. Coltrane’s 1963 recording with Johnny Hartman and pianist McCoy Tyner established the standard against which all other versions are measured, and imitative details of this recording appear in the Mahogany/James and Elling/Hobgood recordings. The template is a rubato verse

93 These details will be discussed in Chapter 6.
followed by a chorus in ballad tempo; treatment of the chorus is fairly standardized, but the verse holds many possibilities for individual expression, as demonstrated by the Bey/Allen recording.

Harmony and Form: Choices for Inflection

The form of “Lush Life” carries only the verse and a chorus from Tin Pan Alley; the similarities end there. Unlike the classic 16-bar verse comprised of two 8-bar phrases, Strayhorn’s verse is in three sections of seven, seven, and fourteen bars.

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<td>24-28</td>
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<tr>
<td>Keys</td>
<td>Db</td>
<td>Db</td>
<td>Fmi</td>
<td>Fmi – Db</td>
<td>Db</td>
</tr>
</tbody>
</table>

Table 5–3. Form and key centers in the verse to Strayhorn’s “Lush Life.”

Despite the unusual phrase groupings, “Lush Life” feels natural and uncontrived. The keys in the figure above mask the bold harmonic detours Strayhorn takes within phrases, yet those colorful diversions only hint at new key centers but rarely ever establish them. This harmonic flexibility gives fodder to the imagination, and pianists are especially prone to exploring harmonic substitutions.

A brief look at the pianists’ harmonic choices on the recordings reveals interesting levels of creativity, not to mention challenges for the singers (table 5–4). Strayhorn’s version is naturally the source for standard or “correct” changes, but it is likely that these performers were more familiar with Nat Cole’s or Coltrane’s early version. Nonetheless, Cole and Coltrane used Strayhorn’s changes, and Tyner and James do not stray far from the model.

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94 Strayhorn’s 1964 recording of his tune was never widely distributed, and only in recent years has it been readily available for listening.
Table 5–4. Harmonic choices by five accompanying pianists on “Lush Life,” mm. 10–11.

Hobgood begins on a second-inversion tonic, leading to a creative new bass line (Ab–Gb–F) entering m. 11. Allen departs furthest from the model by applying complex chord qualities and disparate chord sequences that obscure the tonic (m.10). Her bass line in m. 11 (Gb–E–D–C) generates oblique movement against a rising melody, formulating a complete and bracing reharmonization ending on a B7sus (borrowed from the mediant):

Example 5–18. Geri Allen’s accompaniment to Andy Bey in mm. 11–12 of “Lush Life.”

The oblique motion creates a sense of forward motion in its untethering from the melody.

Others create motion in the accompanimental role in different ways. Hobgood arpeggiates
standard harmonies in m. 4 (correlating to m.11, but in the first A section), adding a rocking
collection to an otherwise static passage:

Example 5–19. Laurence Hobgood’s accompaniment to Kurt Elling in mm. 4–5 of “Lush Life.”

Hobgood makes two choices in m. 5 to stop the motion created in m. 4. He employs a
Haydnesque surprise of silence on the downbeat of m. 5, leaving the singer dramatically
exposed. He follows on beat two with an unexpected and unarpeggiated Ebmi11 chord,
substituting the expected Vmi7 with a more pedestrian IIImi11 chord, which subdues the drama
in a gesture of repose.

Composers of art song use arpeggiation techniques to create emphasis and forward
motion.


In “Au bord de l’eau” (“At the water’s edge”), Fauré arpeggiates left hand broken
chords in mm. 12–14, serving to propel the rhythm forward and bring out the counterline on the top of the chords.\textsuperscript{95}

Bob James uses perhaps the most effective and vital of choices to create movement, the rhythmic moving line. James interposes triplets with each beat in the eleventh bar, and continues the triplet motion at the end of the sub phrase (m. 12) to keep movement going.

Example 5–21. Bob James’ accompaniment to Kevin Mahogany in mm. 11–12 of “Lush Life.”


\textsuperscript{95} Hand size is naturally a factor as well, as most pianists cannot reach tenths or elevenths.
The use of rhythmic diminution is also an effective compositional tool. In the preceding excerpt from “The Lament of Ian the Proud” by Charles Griffes (example 5–22), the addition of simple, repeated offbeat figures in the left hand in m. 3 has the effect of creating forward motion, anticipating the vocal entry. Griffes creates more motion in m. 7 with triplets, an instance of word painting of the movement of the wind.

Word painting like that found in the Griffes song appears in the accompaniments of several pianists on “Lush Life.” Geri Allen answers Andy Bey’s line, “to tempt me to madness,” with the extremely dissonant F#mi/F chord:

Example 5–23. Bey and Allen in mm. 17–18 of “Lush Life.”

Imitation is another technique favored by pianists in this study. Bob James imitates two different motives from the melody in example 5–24. James takes Mahogany’s inflection on “feel of life” at the beginning of m. 7 (A) and imitates it in the following measure an octave higher and twice as fast, like a mordent (B). He then seamlessly weaves two adjacent figures that imitate and foreshadow the chorus melody (C and D). Measure 7 is the end of the first phrase, and it often devolves into a static moment. James connects Mahogany’s first and second phrases, moving adroitly through the bar with imitative, familiar melodic figures that feel like they weave right out of Mahogany’s sung line.
Example 5–24. Kevin Mahogany and Bob James in mm. 6–7 of “Lush Life.”

Inflection: Measure timings and variable phrasing

Timings of measure lengths give an objective view of the degree of inflection/rubato in each duo’s recorded performance of “Lush Life”:

Figure 5–13. Measure timings for five recordings of mm. 1–16 of the verse to “Lush Life.”

As with “My Man” and “Star Dust,” the measure timings for the five “Lush Life” recordings (in figure 5-12) show a range of interpretive extremes. The Hartman/Tyner and
Strayhorn recordings show close correlation in measure lengths and general phrase shapes, but the others are much slower in comparison, at times (as in m. 7) up to nearly three times slower. The Strayhorn and Bey/Allen recordings represent the extremes.

Strayhorn’s performance is an anomaly in this study for two reasons: first, he accompanies himself on piano, and second, bass and drums in turn accompany him. Strayhorn bulldozes through his rendition with the aplomb of a soloist; the other instrumentalists are incidental to his performance. Strayhorn had specific ideas about performing “Lush Life,” and his live recording gives a view into the mind of the composer as performer. His performance comes off as less jazz than cabaret, replete with snappy phrasing and a speech-like quality that has a thrown-off, devil-may-care quality.

Figure 5–14. Measure timings for the Strayhorn and Bey/Allen recordings of the verse of “Lush Life.”

Contrast Strayhorn’s short measure lengths to those of Andy Bey and Geri Allen (figure 5-13). Many of the Bey/Allen measures (and therefore phrases) are at least twice the length of
Strayhorn’s, replacing the rapid Strayhorn execution with long, luxurious phrases. Allen complements Bey’s contemplative reading with lush, often dissonant harmonies that add an edge to the otherwise tranquil approach.

Diction: Pianists’ Leads and Lags

To test pianists’ synchrony with the singers’ vowels, I again used spectrograms to measure the pianists’ attacks in relation to singers’ vowel onsets. As on “Star Dust,” pianists on “Lush Life” were flexible with their improvised accompaniments, and therefore did not share the same pattern of vowel synchronization within vertical alignment.

![Figure 5–15. Measurement of lead and lag for the first eight syllables of shared eighth note instances in five recordings of “Lush Life.”](image)

Of the composite of 40 onsets, 35 are lags (87.5%) and only 5 are leads (12.5%), with an overall average asynchrony of +158ms. The Bey/Allen performance has six of the eight longest lags.
correlating with the highest average timing of 215ms. Allen’s large timing lags are consistent with the slow pacing of the Bey/Allen verse performance (timed at 2:18) and cannot be considered outliers. On the other hand, James’ large lead on “all” could be an outlier, particularly in light of his propensity to lag the singer’s vowel onsets. The percentage of lags of overall vowel-onset synchronizations ranges from 71.4% (Hobgood) to 90.5% (Allen), with the group averaging 81.5%, far beyond a random (50%) result.

<table>
<thead>
<tr>
<th></th>
<th>Total Onsets</th>
<th>Leads</th>
<th>% Leads</th>
<th>Lags</th>
<th>% Lags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strayhorn</td>
<td>37</td>
<td>6</td>
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<td>31</td>
<td>83.8%</td>
</tr>
<tr>
<td>Tyner</td>
<td>33</td>
<td>9</td>
<td>27.3%</td>
<td>24</td>
<td>72.7%</td>
</tr>
<tr>
<td>James</td>
<td>33</td>
<td>5</td>
<td>15.2%</td>
<td>28</td>
<td>84.8%</td>
</tr>
<tr>
<td>Allen</td>
<td>42</td>
<td>4</td>
<td>9.5%</td>
<td>38</td>
<td>90.5%</td>
</tr>
<tr>
<td>Hobgood</td>
<td>28</td>
<td>8</td>
<td>28.6%</td>
<td>20</td>
<td>71.4%</td>
</tr>
<tr>
<td><strong>All Recordings</strong></td>
<td><strong>173</strong></td>
<td><strong>32</strong></td>
<td><strong>18.5%</strong></td>
<td><strong>141</strong></td>
<td><strong>81.5%</strong></td>
</tr>
</tbody>
</table>

Table 5–5. Onset leads and lags by the five pianists in their recordings of “Lush Life.”

Summary

In a consolidated study, all the jazz pianists lagged vowel onsets by a high margin. Of 251 instances, 201 were lags, an 80.1% rate. This bettered the rate produced in the two classical recordings, which was 60 lags in 88 instances for 68.2%. Britten’s poor showing skewed the classical numbers; Gerald Moore, acknowledged as one of the top players in accompanying history, had a 79.5% lag rate, comparable to the jazz pianists.

The acclaimed singers on the recordings I studies all approached their rubato performances with personality, flexibility, and expression, and their pianists all fulfilled their task of accommodating and supporting their singers’ inflections. The pianists were able to create motion when necessary, either through use of smaller note values or tightening their synchronization with vowel onsets. When singers breathed, the pianists kept their sound profile
intact to maintain continuity from phrase to phrase or within phrases. Imitation was a favorite tool among the jazz pianists to match inflection and create unity in concept. These are all codified techniques in classical collaborative pedagogy, and jazz pianists use them liberally to create good ensemble.

Collaborative classical traditions and jazz accompanying practices provided the basis for this research. A brief study of classical art song performance, using two well-known recorded versions of Schubert’s “Der greise Kopf” as models, confirmed that collaborative ensemble techniques revolving around diction and inflection exist and are used by modern performers. Three studies of a variety of performances on the famous songs “My Man,” “Star Dust,” and “Lush Life” demonstrated that many of those classical collaborative performance practices find their way into the jazz arena. I will discuss the results and possible implications of my research in Chapter 6.
CHAPTER 6

DISCUSSION AND CONCLUSION

In this study, I sought to connect codified classical collaborative piano practices with jazz vocal accompanying performance practice. Analysis of recordings revealed that eminent jazz accompanists use codified collaborative practices to achieve good ensemble with their singers. By identifying these practices, I hope to open the excellent literature for classical collaborative piano to young jazz accompanists as a pedagogical resource.

My research focused on recordings of highly esteemed voice/piano duos, using well-known songs as vehicles for study. I first looked at the German Lied “Der greise Kopf” from Schubert’s Winterreise, D. 911, to demonstrate that codified collaborative techniques are actually part of European art song performance practice. I then tested recordings of well-regarded jazz accompanists to explore what jazz pianists do to create good ensemble. I chose recordings of the well-known standards “My Man,” “Star Dust,” and “Lush Life.” I specifically targeted the pianists’ skills to match their singers’ inflections, and to align with their singers’ vowel onsets. All of the recorded performances exhibited a full-texture rubato throughout (Hudson’s later rubato, 1994). Pianists had no steady beat or pulse to rely on, and therefore had to respond to their singers’ inflections to create ensemble.

In this final chapter, I discuss my research results and make assertions based on those findings. I will reflect on my methodology, and consider how my results relate to previous research in the field. My discussion on the implications of my work will follow, with suggestions for further research. I will close with a review of my findings and my personal reflections on the research process.
Discussion and Assertions

A unique aspect of my work is the study of inflection in fully rubato settings, in which the vocalist’s vowel onsets become the “beat” in the absence of a definitive underlying pulse (Hudson 1994). In European art song, lyric recitative carries a full-texture rubato performance tradition; in other art songs, fully rubato phrases are often marked ad libitum, a piacere, suivez, or colla voce. The standard tunes I studied were available in sheet music, giving me something of a template for discerning beats. Challenges with transcription and notation were many, and between knowing each tune’s form and listening to the singer’s inflections around that form, I made “best guess” estimates for beat timings. With “Der greise Kopf,” I had none of these problems, as the score dictated every note played on the recordings.

Yet the “Der greise Kopf” performances exhibited a wide range of expressive rubato, befitting the lyric recitative style. Such liberties with tempo and phrasing defy notation, even in art song. The timings of individual measures of the Schubert recordings showed as much variation in measure length as many of the jazz verse recordings. The Fischer-Dieskau/Moore recording had measures ranging in length from 2.63 seconds to 6.42 seconds; the Pears/Britten measures had a smaller range, from 2.61 to 4.89 seconds. Measure lengths from the jazz verse recordings varied widely: ranges included Strayhorn’s 1.38 to 4.71 seconds and Tormé/Renzi’s 3.31 to 14.43 seconds.

The jazz verse performances studied here often surpassed the span of timed rubato phrasing by the classical collaborators. While stretch rubato phrasing has taste and stylistic limits in most genres, jazz performers have more latitude with expressive timing than classical musicians do. One’s use of phrase inflection and rubato often create the perception of unique personality and individual temperament, qualities highly valued in jazz. There are nonetheless
style boundaries in jazz: Billie Holiday’s performance of “My Man,” a theatrical stop-and-go performance punctuated by pianist Carl Drinkard, crossed into a musical theatre sound and style. Yet there are aspects of Holiday’s phrasing that are foreign to the musical theatre tradition, and they in large part define her recording as jazz.

Inflection, or horizontal ensemble, implies movement together (singer and pianist) through breath, pacing, and language. A good accompanist must predict where a singer will go with his/her line, and then attempt to synchronize with the singer’s inflections (Katz 2009, 23). All of the esteemed jazz pianists I studied demonstrated their ability to create motion and forward movement with and for their singers. The improvisational element of jazz accompanying gives pianists great flexibility in tandem with great responsibility to generate and execute high-quality material on the spot. The pianists used smaller note values in phrases to “push” a phrase; this compositional technique appears in many European art songs. The jazz accompanists also deliberately varied their attacks on downbeats to pull the phrase back (with a late downbeat) or push it forward (early), a well-known collaborative piano technique.

Part of an accompanist’s role is to create smooth transitions between phrases, as well as within phrases when a singer must take a breath. The general rule in collaborative piano is to avoid breaking the texture when the singer breathes, keep the music moving forward, and disguise the singer’s breath. The jazz accompanists I studied followed this practice most of the time. The stark exception was Carl Drinkard, who consistently matched Holiday’s breaths with silences. This is a primary reason why their performance sounded less like jazz than theatre. Katz wrote, “Silence is unquestionably the most dramatic tool a performer possesses,” a tool that loses its power when overused (2009, 104). Laurence Hobgood demonstrated how a surprise silence can be musically invigorating in measure five of his accompaniment to “Lush Life.” Generally,
though, sustaining the piano sound and texture through a singer’s breaths is a musically important collaborative practice, one that glues phrases together and aids in creating horizontal ensemble.

Imitation is another tool several jazz pianists used to inflect with their singers. Imitation is compositional in nature, and must be crafted carefully to complement the singer and his/her inflected line. Particularly masterful was Tommy Flanagan’s use of imitation with Ella Fitzgerald in “My Man,” in which he took motives from the melody and wove interconnected strands of music that inflected perfectly with Fitzgerald’s deeply expressive singing. Flanagan’s performance embodies Martin Katz’s description of a duo’s musical partnership: “The voice describes something; the pianist amplifies and expands that information and experience” (2009, 39).

In the classical song literature, it is customary for pianists to align their note attacks with a vocalist’s vowel onsets, which represent the beginning of the rhythmic pulse. In my study, I found that jazz accompanists paid attention to the singers’ diction by synchronizing with the vowel, often in an effort to avoid the singer’s preceding consonant. Effective synchronization includes variations in lead and lag timings, as shown in both the classical and jazz recordings.

Pianists must have deep knowledge of the text or lyric to achieve excellent vertical ensemble. This linguistic fluency involves awareness of syllables and their constituent consonants and vowels. As the findings showed, pianists felt free to lead vowel onsets if the previous consonant was voiced (i.e., had pitch). Conversely, pianists avoided unvoiced consonants such as stop-plosives (e.g., /p/, /b/, /t/, /d/, and /k/), resulting in lagging responses to vowel onsets. Moore and Britten demonstrated this knowledge in their navigation of the first phrase of “Der greise Kopf”; Drinkard exhibited particular adeptness in “My Man.”
Such intricate maneuvering may come off as a superficial technical consideration, but high-level execution leads to subtle artistry in performance. This is the crux of expressive microtiming, and continuing research seeks to explore how musicians use microtiming for expressive purposes. Refined treatment of diction affects vertical and horizontal ensemble, informing musical details as well as general sound shapes.

One could argue the jazz pianists intended to synchronize with syllable onsets, whether vowel or consonant, and were simply late on a consistent basis with their synchronies. Given that the pianists chosen here are among the finest vocal accompanists in the history of jazz, and as such possess exceptionally fine motor skills, I would consider such an argument implausible. Certainly, I do not suggest that terminology such as “vowel onset” or “lags in synchrony” have ever been familiar to jazz accompanists. However, the data shows overwhelming support for the idea that jazz accompanists routinely avoid synchronizing their attacks with consonants.

I believe it is the avoidance of consonants rather than the synchronization with vowels that is foremost in the minds of jazz accompanists. Like their classical counterparts, jazz singers do not like feeling pushed, and that is the effect of pianists lining up with consonants. Katz writes that playing before the vowel sound gives the perception that the pianist is notably ahead of the singer (2009, 22). I would posit that perfect alignment of vowel onsets (+/−0ms) would have a similar effect, due to the inability of most humans to hear distinctions between onsets smaller than 30ms. My experience suggests that in rubato situations, singers want even more space, and lagging vowel onsets provides it. This explains some of the large lags (+300ms) found in several performances, particularly in the languid renditions of “Star Dust” by Mel Tormé and Mike Renzi, and “Lush Life” by Andy Bey and Geri Allen. Ultimately, the pianist’s act of vowel onset synchronization is not a perfectionist’s art.
My findings demonstrated that jazz pianists use classical collaborative techniques when they accompany jazz singers. Jazz accompanists employ inflection (including rubato, movement, transitions, and imitation) and diction (vowel onsets) strategies associated with classical collaboration. The great variety among the recordings gives proof that these techniques need not be formulaic. The creative use of collaborative practices can only augment the musicality and ensemble in jazz performance.

Methodology

I used a mixed methodological approach to analyze recorded music from several visual standpoints. Standard notation, spectrograms, and various graphs and charts played central roles in my methodology. Notated examples and visual displays combined to form an effective presentation of my data.

Using three tunes as studies and eleven jazz recordings as analytical vehicles, I believe I had a reasonable sample of music from which to draw conclusions. Two recordings of one art song provided only a snapshot of classical collaborative techniques; while Sundberg and Bauer-Huppmann researched diction practices (2006), inflection practices considered here would benefit from more investigation.

I was able to obtain precise onset data with the use of freeware program Sonic Visualiser, which proved indispensable for microtiming analysis. I found the process of identifying microtiming data from spectrograms extremely effective for ascertaining whether pianists were synchronizing with singers’ vowel onsets. Spectrograms clearly demarcate the margins of onset and offset for vowels, allowing for precise timing measurements. Less successful was the use of microtiming data to analyze inflection, which in this study involved full-texture rubato, forward motion, transitional material, and imitative phrasing. The treatment of transitions and the use of
imitative phrasing defied quantitative description. The presence and degree of rubato and motion were quantifiable, though they still seem geared toward qualitative description. Many of these inflective qualities rely on the marriage of word and music, a combination that as of yet does not reveal itself completely on graphical displays.

Other limitations formed a persistent presence during my research. Transcription and the fallibility of my ear, coupled with notational unreliability, seemed especially problematic considering the rubato nature of the recordings. Computer programs were mandatory for this research, and in spite of their power and speed were limited nonetheless, at times (but not always) due to operator error or ignorance.

I believe that grouping recordings in the studies of songs was the best and most efficacious way to organize my findings, but perhaps a superior organizational method exists. I considered creating two studies of diction and inflection, but I thought comparing and contrasting performances on different tunes (vehicles) might have created confusion. I also considered analyzing the complete performances of one tune, but I believed it would not offer a broad enough view of jazz accompanying.

Literature

My research involves a number of topics beyond the accompanying practices of diction and inflection, including expressive microtiming and rubato. While there is ample literature for all of these areas, several articles and publications established precedents for my research.

White’s dissertation (2010) was the first on jazz accompanying, presenting a survey of important aspects of collaboration bolstered by interviews with eight known jazz accompanists. My research involves the in-depth study of an important aspect of jazz accompanying, and as such is a natural follow-up to White.
Of the many and varied publications on collaborative piano, Katz (2009) is by far the most important to my research. Katz presents the clearest pedagogical book on classical vocal accompaniment in print, and I drew heavily from its pages. I used his characterization of diction and inflection to inform the focal point of my dissertation.

My diction studies corroborated what Sundberg and Bauer-Huppmann (2006) found in their vowel onset research. They found that accompanists routinely synchronize with vowel onsets, but there is great variation in lead and lag time around the onsets. I got similar results, but my study involved full-texture rubato settings; Sundberg and Bauer-Huppmann studied songs in defined tempos, and their research was based on the assumption that the sung vowel onset should be synchronized with the beat. There is no steady beat in rubato playing, but in traditional or standard repertoire, notated music is available for reference, making downbeats ascertainable. My study in part sought to confirm their results in a different, full-texture rubato context.

Two jazz rubato studies, Huang and Huang (1995) and Ashley (2002), also focused on Hudson’s earlier rubato (1994). Huang and Huang studied the rubato performance of Billie Holiday, one of the singers featured in my study. Ashley formulated two studies using well-known ballads, featuring rubato performances of several acclaimed jazz instrumentalists. My research is a natural outgrowth of these studies, and Ashley specifically provided a model for the organization of my research.

The study of expressive microtiming behind performance inflection practices has been the subject of a wide range of research, on specific topics such as asynchronies (Palmer 1996b), participatory discrepancies (Keil 1966, 1987, 1995; Butterfield 2006, 2010, 2011), and metrical shifts (Benadon 2009b; Yorgason 2009). My analytical work extends from Benadon’s pioneering work in jazz microrhythm (2006) and Butterfield’s continuing research, and I have adopted
methods from both, especially concerning data acquisition and analysis of that data. Like the rubato studies of Huang and Huang and Ashley, these microtiming studies all focus on deviations in music with a steady beat or pulse. I hope to add to the growing research in microtiming, with a new focus on music performed out of time.

Recommendations and Suggestions

I found the study of jazz performance in full-texture rubato style fascinating, and while microtiming studies will certainly (and should) continue in “earlier” rubato style performances, research into the later rubato style in jazz feels like uncharted territory. I advocate for research in both vocal and instrumental performance in this style; it would be interesting to find what microtiming research might reveal about free or avant-garde jazz performance.

I believe my research only begins to fill the pedagogical need for instruction of young jazz pianists aspiring to excel as accompanists. What my work offers is facilitation: the resources for learning collaborative piano are readily available, and my research shows that those resources can crossover and help a jazz pianist learn to accompany in his/her field. Nonetheless, my work is incomplete, as I have addressed in depth only the ensemble aspect of collaborative partnership. The major area of balance, as well as other collaborative issues, must await further studies.

Katz offers a number of collaborative ideas and techniques for jazz pianists for experimentation. His classification of breath, particularly the concept of “Permit and Preserve,” is especially applicable. “Permit and Preserve” concerns passages in art song where the pianist has material to play while the singer breathes, and Katz suggests a way to permit the breath while preserving the flow of the music. In contrast to common practice, where a pianist phrases with the singer, Katz proposes the pianist phrase earlier than the singer (abandoning vertical alignment for a brief moment, taking time at the end of the singer’s phrase), then move into
tempo with the intervening material while the singer breathes, organically escorting the singer into the next phrase (Katz 2009, 15-20). In jazz accompaniment, the pianist is naturally improvising any intervening material, but the “Permit and Preserve” concept is less about the material than timing. This approach promotes forward movement, a crucial element of music-making demonstrated by a number of pianists studied here. I believe this and other ideas in Katz are worth investigating.

Several of the esteemed pianists in this study approached accompanying with a compositional mindset. Tommy Flanagan demonstrated an extraordinarily artistic approach, compositionally weaving separate, complementary lines through the duo texture, a texture he created and chose for its clarity and transparency. It would behoove young jazz pianists to consider composition as an ancillary study to accompanying.

The scope of my study precluded any consideration of the introductions pianists created for the recorded performances. Preludes and postludes are often important components of art songs, and a study of the compositional aspects of preludes and postludes, and how that knowledge might apply to creating their jazz equivalents, might offer interesting results.

Another valuable study would be the lineage of jazz accompanists. In this study, I considered the accompaniments of two Detroit natives Hank Jones and Tommy Flanagan, both known for their touch and elegant style. Jones, Flanagan’s senior by a dozen years, seamlessly wove traditional styles of jazz piano (especially stride) with modern ones. Flanagan absorbed Jones’ grace at the keyboard, but rooted his style in bebop. Another possible lineage study might consider links between Carl Drinkard, McCoy Tyner, and Mike Renzi, pianists who as accompanists shared a penchant for orchestral pianism.
When studying only professional performers, and especially world-class players and singers as showcased in this work, one can easily learn what to do, but there is rarely a demonstration of what not to do. In further studies, I would consider using recordings of inexperienced players and their less successful performances, to point out the performers’ lack of awareness of collaborative principles, and to show how those very principles can help to achieve a better musical result.

Epilogue

The classical and jazz accompanying traditions are divergent, but there is one central skill shared by both: listening. All successful accompanists in any genre must learn to listen intensely, as listening is the core of collaborative music. Much of the knowledge codified in collaborative literature comes out of from personal listening experiences—especially for balance and ensemble—in rehearsal, in live performances (in various venues), during the recording process (studios), and with recordings.

Budding jazz accompanists still glean knowledge via oral transmission, learning the expectations of the accompanying job directly from singers. It is a challenging path, for in spite of general principles, each singer has unique requirements and repertoire. The classical collaborative principles I have demonstrated here clearly cross over into jazz; in fact, great jazz accompanists have used them for decades. I submit that my work here can expedite the path of learning for the young jazz player.

The research process has been intense, fascinating, and exhausting, yet engaging at every turn. My experience was marked by frequent intellectual flights of fancy, curbed by mental remonstrations to focus on the work or topic at hand. Focus in research leads to productivity, but in the process many trails are left behind, to be explored another day.
I consider this research a work of advocacy for several causes. The art music called jazz is the great, underappreciated American treasure, and I will always advocate for its deserved place as a staple in American life. Within jazz itself, I champion the continued practice of drawing knowledge from outside the tradition. Moreover, as a collaborative musician and a human being, I encourage and promote partnership, the cross-pollination of ideas, and the sharing of the joys of life and music.

I finish my research with great admiration for all the people who contributed to my great good fortune to embark on such a journey. I include all the scholars who began the conversation and those who have kept it going; the classical collaborative pianists through history who navigated difficult waters and are finally gaining the recognition they deserve; and the incomparable composers of the Great American Songbook, from Tin Pan Alley and beyond. I leave special mention for the performers, whose talents, skills, and musicianship elicit my profoundest respect.
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