GERRY MULLIGAN, SOLOIST: TRANSCRIPTION AND ANALYSIS OF HIS SMALL-GROUP SOLOS ON "LINE FOR LYONS," "CURTAINS," AND "THE FLYING SCOTSMAN"

by

Leigh Pilzer

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DEDICATION

My dissertation is dedicated to the memory of Dr. Steven G. Strunk, without whom it would not have been possible.

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It takes a village. My deepest appreciation to:

The exceptional professors with whom I have been fortunate to study. Gifted educators and brilliant scholars all, generous with their time and knowledge, they have also been mentors and tremendous role models. Their ranks include Dr. Robert Gibson and Dr. Dora Hanninen at the University of Maryland, Dr. Andrew Weaver at The Catholic University of America, and Dr. Tom Owens and my dissertation chair Dr. Gregory Robinson at George Mason University.

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Special thanks to Franca Mulligan for her gracious permission to include lead sheets of Gerry Mulligan's compositions and my transcriptions of his improvised solos in this dissertation.

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LIST OF ABBREVIATIONS

Instruments

Alto saxophone ..... as
Bass ..... b
Conga ..... cga
Drums ..... d
Guitar ..... g
Harmonica ..... harm
Percussion ..... perc
Piano ..... p
Trombone ..... trb
Trumpet ..... trpt
Vibraphone ..... vib
Vocal vcl

Analytical terms

Alteration ..... alt
Development ..... dev
Fragment ..... frag
Imitative Sequence ..... imit
Inversion ..... inv
Motive ..... m
Pedal Point Sequence ..... pps
Retrograde ..... ret
Sequence ..... s
Truncation ..... trunc

ABSTRACT

GERRY MULLIGAN, SOLOIST: TRANSCRIPTION AND ANALYSIS OF HIS SMALL-GROUP SOLOS ON "LINE FOR LYONS," "CURTAINS," AND "THE FLYING SCOTSMAN"

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George Mason University, 2020

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Gerald Joseph "Gerry" Mulligan (1927–96) was a highly acclaimed jazz musician in the twentieth century. One of relatively few to adopt baritone saxophone as his or her main instrument he had a nearly fifty-year-long career performing, writing, and leading bands. During his lifetime he was the subject of articles in consumer publications, monographs, and discographies. Scholarship on Mulligan has focused on his compositions, arrangements, and band leadership between the years 1945–64. To date there has been no large-scale study of Mulligan's improvisation designed to identify techniques and elements he used throughout his career to create his personal and recognizable solo style. For this dissertation I have transcribed and analyzed Mulligan solos in order to show that he does not rely on a vocabulary of licks and patterns to be used over chord progressions in order to craft his solos, but instead uses strategies such as motivic manipulation and limited pitch collections to create a sonic palette for each solo. His concept of the sonic

palette for a solo on a tune remains consistent, and is evident on each solo on that tune. The body of the work focuses on Mulligan's use of repetition and sequence (at times in combination with other techniques such as augmentation, diminution, rhythmic alteration, inversion, and retrograde) on his composition "Line for Lyons" in twenty performances recorded between 1952 and 1993. The analyses and musical examples are presented chronologically, with complete transcriptions included in the appendix.

I have also transcribed solos on two additional Mulligan compositions: "Curtains" and "The Flying Scotsman." In the concluding section I briefly discuss aspects of Mulligan's approach to soloing over those chord progressions, as an indication of what further study of his improvisation might reveal.

This study will complement previous study of Mulligan's compositions and arranging style by providing information about his performance practice, thereby helping create a more complete understanding of his musicianship. It will augment existing analyses of jazz saxophone improvisation, which have focused primarily on alto and tenor saxophonists, and will add to existing scholarship on jazz improvisation in general. Finally, it will provide a useful pedagogical tool for educators working with students who are interested in learning more about Gerry Mulligan and his style of improvisation.

CHAPTER 1: INTRODUCTORY MATERIAL

Introduction

Gerald Joseph "Gerry" Mulligan (1927–96) was one of the most prominent and celebrated jazz baritone saxophonists of the twentieth century. He was voted "Best Baritone Saxophone" in *DownBeat* magazine's Critics Poll eighteen times between 1955 and 1995 and in the Readers Poll forty-three times between 1953 and 1996. He is most well-known for his roles as composer, arranger, and baritone saxophonist for the iconic recordings that were eventually released as the *Birth of the Cool* and as leader of the pianoless quartet that featured trumpet player Chet Baker. In the course of his career, however, he composed for and performed with numerous large and small ensembles including his own Concert Jazz Band. He also collaborated with artists as diverse as Astor Piazzolla, Dave Brubeck, and Judy Holliday; wrote film scores; and appeared as a featured performer with symphony orchestras. Mulligan has been the subject of an oral history, biographies, discographies, and numerous articles in commercial publications. Several dissertations have focused on his compositions and arranging practice. His work as an improvising saxophonist, however, has not been the subject of in-depth analysis.

In this study I have transcribed and analyzed selected improvised solos by Gerry Mulligan for the primary purpose of creating a more thorough understanding of his musicianship. A secondary purpose of the study is to add to the existing body of

analytical work on improvised jazz saxophone solos, which to date has focused primarily on alto and tenor saxophonists. It will also augment existing scholarship on jazz improvisation in general. Finally, it will provide a useful pedagogical tool for educators working with students who are interested in learning more about Gerry Mulligan and his style of improvisation.

Background

There have been relatively few notable jazz baritone saxophonists, particularly in comparison with the number of influential alto and tenor saxophonists.[1] In terms of those whose careers took place within the twentieth century the names heard most often in connection with jazz baritone saxophone are Park "Pepper" Adams, Harry Carney, and Gerry Mulligan.[2] Of the three, Mulligan's career was the most varied.

Carney's primary musical position was as a member of the Duke Ellington Orchestra, where he was featured as a soloist sparingly. Adams, like Mulligan, toured and recorded extensively as a soloist, leader of his own groups, and member of a larger

1. Ian Kendall refers to "the relative rarity of baritone soloists in jazz;" Niels Nielsen considers the baritone saxophone "the province of the few" and gives the statistic that in a twenty-nine year span only three baritone saxophonists were named "Best of" in their category in *DownBeat* magazine's Critics Poll (Pepper Adams, three times; Harry Carney, thirteen times; and Gerry Mulligan, thirteen times), while in the same period of time eight alto saxophonists and six tenor saxophonists were named winners in their respective categories. Ian Kendall, "Mulligan's Due," *Jazz Journal International*, February 1978, 30; Niels Nielsen, "Before Baritone Madness," *Jazz Journal International*, July 1982, 16.

2. In addition to the statistic noted above, between 1952 and 1999 the only baritone saxophonists to be named "Best of" in their category in the *DownBeat* Readers Poll were again Adams, Carney, and Mulligan. *DownBeat*, "The DownBeat Critics Poll Archive, The DownBeat Readers Poll Archive," accessed 8 April 2016, http://www.downbeat.com/default.asp?sect=cpollindex (page no longer available).

ensemble, Thad Jones/Mel Lewis Orchestra. Mulligan, however, was a solo artist who also led both small and large ensembles, composed and arranged for his own jazz ensembles and those of others, and composed film scores and works for symphony orchestra. Mulligan is the only baritone saxophonist to have been elected to the *DownBeat* Hall of Fame during his own lifetime.[3] His baritone saxophone is prominently featured in a permanent exhibit at the entrance to the Performing Arts Reading Room at the Library of Congress, where his works are held in collection.[4]

Mulligan's first professional engagements were as an arranger for bandleaders Tommy Tucker, Elliott Lawrence, and Gene Krupa. He had the opportunity to perform occasionally with the Lawrence and Krupa bands, although only on alto or tenor saxophone.[5] It was not until after he left Krupa's band in 1947 that he decided to concentrate on the baritone saxophone.[6]

Acclaim for Mulligan as a saxophonist came in 1952 when he booked a quartet featuring Chet Baker on trumpet, Bob Whitlock on bass, and Chico Hamilton on drums into the Haig, a Los Angeles nightclub. The original engagement was for Monday night,

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3. *DownBeat*, "DownBeat Hall of Fame," accessed 8 April 2016, http://www.downbeat.com/default.asp?sect=stories&subsect=story_detail&sid=1020 (page no longer available). Fellow baritone saxophonist Harry Carney was elected to the Hall of Fame but not until thirty-two years after his death.

4. "As a saxophonist, composer, arranger and band leader, Gerry Mulligan (1927–1996) is a jazz legend. The Library of Congress serves as the repository for the *Gerry Mulligan Collection*, which it obtained in the late 1990s." Library of Congress, "The Gerry Mulligan Collection," accessed 23 April 2016, http://memory.loc.gov/diglib/ihas/html/mulligan/mulligan-home.html.

5. Sanford Josephson, *Jeru's Journey: The Life and Music of Gerry Mulligan* (Milwaukee: Hal Leonard, 2015), 8–9.

6. Dom Cerulli, "Gerry Mulligan," *International Musician*, October 1960, 18; Josephson, *Jeru's Journey*, 10.

an "off" night for the club, but after the release of the quartet's first ten-inch record the group was given a full-time, six-night-a-week engagement.[7]

Following his success in the quartet with Baker, Mulligan formed a succession of small groups with members such as Bob Brookmeyer, Zoot Sims, and Art Farmer. He recorded with Paul Desmond, Thelonious Monk, Stan Getz, Ben Webster, and Johnny Hodges. A duet feature written by Duke Ellington for Mulligan and Carney was recorded live at Newport.

Mulligan enjoyed a brief secondary career in motion pictures. In the 1960s he played and held roles in several films including *Bells are Ringing* and *The Rat Race*.[8] These jobs not only garnered him additional attention and a wider fan base, they provided him the financial security to start his own big band.[9]

Mulligan died in 1996, active until the end, one of the most famous jazz musicians in the world. His significance to jazz baritone saxophone was summed up by Gary Smulyan, one of the current era's most prominent baritone saxophonists: "'It is impossible to play the baritone saxophone and not be influenced in one way, shape, or form by Gerry Mulligan. He was such a dominant force on the instrument.'"[10]

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7. Burt Korall, "Gerry Mulligan," *Nugget*, October 1961, 24.

8. Antoine Perier, Gérard Dugelay, and Kenneth Hallqvist, "Gerry Mulligan Discography: Gerry Mulligan Recordings, Concerts and Whereabouts," Library of Congress Gerry Mulligan Collection, accessed 15 April 2016, http://lcweb2.loc.gov/natlib/ihas/warehouse/mulligan/200003721/0001.pdf, 259.

9. Leonard Feather, "Gerry Mulligan—Before," *DownBeat*, May 1960, 22.

10. Josephson, 136.

Literature review

The existing body of work on Mulligan's music consists of dissertations focusing on his composition and arranging; dissertations, presentations, and articles that include a limited number of Mulligan solos, with limited or no analysis; and transcriptions available from commercial sources or personal websites. To date no one has performed in-depth analysis on a larger sample of Mulligan's improvisation.

Jon Karl Gudmundson, Joseph William Carucci, and Richard Samuel Fine have written dissertations on Gerry Mulligan. All three studies focus on his composing and arranging during specific eras. The first two include transcriptions of instrumental lines and improvised solos, with some broad description of improvisation techniques used, but none provides in-depth analysis of his solos.

Gudmundson's intent in "The Gerry Mulligan Quartet of 1952–53: A Study of the Arranging Style Through Selected Transcriptions" is to provide an analysis of the arrangements of Mulligan's quartet.[11] His dissertation includes transcriptions of the trumpet, baritone saxophone, and bass lines for six performances by the quartet. Commentary on each performance includes description of the style, tempo, and form of the arrangement. Descriptions of instrumental solos include general characteristics such as tessitura, use of vibrato, rhythmic patterns, preferred scales, modes, intervals, motives, and scale degrees.

11. Jon Karl Gudmundson, "The Gerry Mulligan Quartet of 1952–53: A Study of the Arranging Style Through Selected Transcriptions" (DA diss., University of Northern Colorado, 1999), iii.

Carucci's dissertation "The Contribution of Gerry Mulligan's Concert Jazz Band to the Jazz Tradition" focuses on the arrangements performed by Mulligan's Concert Jazz Band during the years 1960–64, with a goal of documenting "the historical impact of the CJB and the ways its philosophy, compositional techniques, and performance practice have influenced modern jazz musicians."[12] Carucci provides transcriptions of the arrangements by Mulligan, Johnny Mandel, and Bob Brookmeyer and analyzes "formal structures, harmonic vocabulary, instrumentation, treatment of soloists, and contrapuntal elements."[13] The transcriptions include all written instrumental lines and improvised solos along with transcriptions of Mulligan's solos on alternate recorded takes and performances. His comments on improvisation are general, describing devices such as use of blue notes, use of chromatic and bebop scales, and register.

Samuel Fine's purpose in "The Birth of Jeru: Gerry Mulligan's Early Composing/Arranging Career (1945–1953)" is "to study the history of Gerry Mulligan's composing/arranging career" in the period 1945–53.[14] The work is more historical than theoretical, although description and examples of Mulligan's writing are included. There are no transcribed or analyzed solos.

Charles Lester Quinn and Daniel Western have written dissertations that include transcriptions and some analysis of Mulligan solos, but not for the specific purpose of

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12. Joseph William Carucci, "The Contribution of Gerry Mulligan's Concert Jazz Band to the Jazz Tradition" (DMA diss., University of Kentucky, 2009), 4, accessed 3 April 2016, ProQuest Dissertations Publishing (3471522).

13. Carucci, "Mulligan's Concert Jazz Band," 4.

14. Richard Samuel Fine, "The Birth of Jeru: Gerry Mulligan's Early Composing/Arranging Career (1945–1953)" (PhD diss., University of Maryland, 2010), 5–6, accessed 3 April 2016, ProQuest Dissertations Publishing (3443444).

analyzing Mulligan's improvisational style.[15] Quinn, in "Chet Baker's Role in the 'Piano-less' Quartet of Gerry Mulligan," transcribes performances by the Gerry Mulligan Quartet, providing a formal analysis and the transcribed trumpet, baritone saxophone, and bass lines for eight recordings. He identifies the presence of elements such as passing tones, enclosure, arpeggiation, and scalar passages in both Mulligan's and Baker's improvised solos, but it is only in Baker's case that he explains how these elements and other factors such as timbre and register combine to create a characteristic improvisation style.

Daniel Western's dissertation "Progressive Transcriptions for the Novice Jazz Saxophonist: A Starting Point for Developing Improvisational Skills and Style," contains thirty transcriptions of jazz saxophone solos. Of the ten baritone saxophone transcriptions, one is of a solo by Gerry Mulligan.[16] Western's analysis of Mulligan's solo includes identification of scales, sequences, and concept of the harmonic progression, at time comparing Mulligan's approach to that of other improvisers. He also describes Mulligan's rhythmic feel, timbre, and vibrato.

While Western's analysis of Mulligan's improvisation is more in-depth than Quinn's, analysis of a single performance is not enough to develop a theory of a

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15. Charles Lester Quinn Jr., "Chet Baker's Role in the 'Piano-less' Quartet of Gerry Mulligan" (DMA diss., Louisiana State University, 1996), accessed 4 March 2016, ProQuest Dissertations Publishing (9706359); Daniel Western, "Progressive Transcriptions for the Novice Jazz Saxophonist: A Starting Point for Developing Improvisational Skills and Style" (DMA diss., University of Alabama, 2014), accessed 21 February 2018, ProQuest Dissertations Publishing (3620192).

16. The other baritone soloists are Harry Carney, Ronnie Cuber, Charlie Fowlkes, Lars Gullin, Leo Parker (two solos), Cecil Payne, Sonny Stitt, and Joe Temperley. Western, 116–174.

particular soloist's approach, nor is that his goal. Rather, Western's dissertation is designed to help the beginning improviser learn basic principles by "providing transcriptions and analyses of recorded improvised jazz solos chosen for their simplicity, both of required technical facility and music-theoretical knowledge."[17]

Joseph Carucci, in addition to the dissertation previously referenced, has presented "A Transcription and Analysis of Three Solos by Gerry Mulligan" as a lecture at the 2014 North American Saxophone Alliance Conference and as a poster session at the 2014 International Society for Music Education World Conference.[18] While this presentation does address Mulligan's improvisation it is only in the context of three performances with a large ensemble within a single year, with the purpose of examining how Mulligan establishes a connection between his solo and the arrangement.

David Larsen has presented "Understanding the Music of Gerry Mulligan" at the 2019 North American Saxophone Alliance Region 1 Conference and the 2020 Jazz Education Network Conference.[19] Like the dissertations by Carucci, Jon Gudmundson, and Samuel Fine, Larsen's area of interest is Mulligan's composition, and his presentation uses "personal manuscripts, published scores, and interviews with his former

17. Western, ii.

18. Joseph William Carucci, "A Transcription and Analysis of Three Solos by Gerry Mulligan," lecture presented at the North American Saxophone Alliance conference, University of Illinois, 22 March 2014; poster presented at the 31st International Society for Music Education World Conference on Music Education, Porto Alegre, Brazil, 23 July 2014.

19. David Larsen, "Understanding the Music of Gerry Mulligan," lecture presented at the North American Saxophone Alliance Region 1 Conference, Ellensburg, WA, 14 April 2019; 11th Annual Jazz Education Network Conference, New Orleans, LA, 8 January 2020.

band mates [to] help explain the techniques utilized by this influential composer."[20]

Transcriptions of Mulligan solos have been published in commercial settings by Eric Allen, Jon Gudmundson, and the Hal Leonard Corporation[21]. Allen's transcription of Mulligan's solo on "All the Things You Are" is featured in the "Woodshed" column in the March, 1999 issue of *DownBeat*. While Allen does address theoretical aspects of the solo such as voice leading and resultant middle-ground line, *DownBeat* transcription analyses are by editorial practice confined to 500–600 words, written in language and depth appropriate for a general audience.[22] Gudmundson's transcription of "Lullaby of the Leaves," derived from his 1999 dissertation, is published in the 2004 issue of *The Saxophone Symposium*, the journal of the North American Saxophone Alliance. The Hal Leonard publication *The Gerry Mulligan Collection* presents only the transcriptions; selection criteria and solo analysis are not included. *Gerry Mulligan Sketch-Orks* and *Gerry Mulligan Classics* feature transcriptions of melodies, not solos, as performed by Mulligan.[23]

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20. North American Saxophone Alliance, "Artists/Presentations, David Larsen," *Region 1 Conference: April 12–14, 2019,* accessed 12 January 2020, https://www.2019nasaregion1.com/david-larson.

21. Eric Allen, "Gerry Mulligan's Bari Sax Solo on 'All the Things You Are,'" *DownBeat*, March 1999, 62; Jon Karl Gudmundson, "The Gerry Mulligan Quartet's Lullaby of the Leaves: A Transcription and Analysis," *The Saxophone Symposium* 29 (January 2004): 39–61; Forrest Mankowski, transc., *The Gerry Mulligan Collection* (Milwaukee: Hal Leonard, 2005).

22. Ed Enright, e-mail message to Shawn Purcell, 24 May 2011, forwarded from Purcell to author, 2 May 2016.

23. *Sketch-Orks: Designed for Small Groups*, vols. 1 and 2 (New York: Criterion Music, 1957, 1964); *Gerry Mulligan Classics: 9 Jazz Favorites*, vol. 43 (Milwaukee: Hal Leonard, 2006).

Additional transcriptions of Mulligan solos are available on various websites including jazzbarisax.com, freejazzinstitute.org, and saxopedia.com. These transcriptions usually do not include any theoretical analysis, and authorship is often unattributed. They have not had any editorial oversight; the website jazzbarisax.com even advises the user that the transcriptions "have not been checked for accuracy and definitely may contain errors."[24]

State of Research on Mulligan and Jazz Improvisation

Scholarship on Mulligan has focused on his work as a composer and arranger. To date there has been no attempt to identify his tendencies as an improviser. Furthermore, with the exception of Daniel Western's transcription of a 1994 Mulligan solo, performances given within the last thirty years of Mulligan's career are not addressed.

Solo analysis as a means of understanding an improviser's approach has been in practice for some time. One of the earliest examples, Gunther Schuller's article "Sonny Rollins and the Challenge of Thematic Improvisation," dates to 1958.[25] Henry Martin writes that Schuller's article was "possibly the first piece of jazz writing to analyze a work in musical detail for the sole purpose of showing its structural depth and, by implication, the depth of fine jazz improvisation more generally."[26] Schuller's analysis is focused on his assertion that Rollins's improvisation on his composition "Blue 7" is

24. JazzBariSax.com, "Transcriptions," curated Andrew Hadro, accessed 26 February 2018, http://jazzbarisax.com/transcription/.

25. Gunther Schuller, "Sonny Rollins and the Challenge of Thematic Improvisation," *The Jazz Review* 1 (1958): 6–11, 21.

26. Henry Martin, "Jazz Theory: An Overview," *Annual Review of Jazz Studies* 8 (1996): 10.

thematically based on the melody.

Thomas Owens was one of the first to write a dissertation focusing on improvisation analysis. For his work "Charlie Parker: Techniques of Improvisation" Owens transcribed over 200 of the alto saxophonist's solos.[27] From these transcriptions Owens compiled a catalogue of Parker's most characteristic motivic devices. Owens also identified elements of Parker's style, such as typical rhythmic unit, use of swing feel, customary articulations and dynamics, phrase lengths, and type of vibrato used.

Additional dissertations on the improvisation style of jazz artists written since Owens's include Aaron Lington's "The Improvisational Vocabulary of Pepper Adams: A Comparison of Selected Motives to Harmony in Four Improvised Solos."[28] Lington's work is of particular relevance to my topic as it is written about the improvisation practice of a single baritone saxophonist. Lington's analysis is concise, clear, and convincing. He does not attempt to create an extensive catalogue of Pepper Adams's improvisational vocabulary, as Owens did for Charlie Parker. Instead, he chooses just three elements of Adams's style to discuss, explaining that they "may be heard consistently in his improvisations throughout his career and in many ways comprise the defining characteristics of his improvisational style."[29] Lington acknowledges that these

27. Thomas Owens, "Charlie Parker: Techniques of Improvisation," vols. 1 and 2, PhD diss. (University of California, Los Angeles, 1974), accessed 28 March 2016, ProQuest Dissertations Publishing (7501992).

28. Aaron Joseph Lington, "The Improvisational Vocabulary of Pepper Adams: A Comparison of the Relationship of Selected Motives to Harmony in Four Improvised Solos," DMA diss. (University of North Texas, 2005), accessed 4 March 2016, ProQuest Dissertations Publishing (3196161).

29. Lington, 7.

elements are not the sole province of Adams, saying that "although the utilization of these devices within the context of jazz improvisation may be recognized in the improvisations of other jazz musicians, it is Adams's persistent and compelling use of these devices, in congruence with the way in which he uses them, that distinguishes his improvisational style from others."[30] While Lington's statistical sample is smaller than Owens's, his analysis and examples are effective in giving a clear picture of the significance of the selected elements in creating Adams's easily-recognized improvisational style.

Many other dissertations incorporating solo transcriptions and analysis have been written within the last decade, including studies of clarinetists, trumpet players, trombonists, pianists, guitarists, and saxophonists.[31] In my research I have discovered only one—Lington's—that focuses on a baritone saxophonist and none, with the exception of Daniel Western's, that addresses Mulligan's improvisation practice. As mentioned previously, while earlier dissertations by Jon Gudmundson, Joseph Carucci, and Charles Quinn include transcriptions and some analysis of Mulligan solos, it is not for the purpose of examining Mulligan's approach to improvisation.

There is a need for a study that will provide a better understanding of characteristic aspects of Mulligan's improvisation: the recurring tendencies that make Mulligan's solos coherent and satisfying. In order to fill this gap in the existing work on Mulligan, I have transcribed and analyzed selected improvised solos to learn about

30. Lington, 7.
31. See References: Dissertations on Jazz Improvisation.

aspects of his approach, and to note whether those aspects remained constant throughout the course of his career or changed over time.

Thesis statement

Unlike many other improvisers Gerry Mulligan does not rely on a vocabulary of licks or patterns to utilize over chord progressions.[32] Instead, my study of his solos on "Line for Lyons," "Curtains," and "The Flying Scotsman" indicates that he seems to have a concept of what a solo on a particular tune should sound like and uses whatever techniques he needs to in order to realize that sound. For example, use of motives, and the development of the motives through the use of techniques such as repetition and sequence, are characteristics of Mulligan's solos on "Line for Lyons." Features of "Curtains" include extensive use of the major pentatonic in the first half of each sixteen-bar phrase and a pair of tetrachords in the second half of the third phrase. In "The Flying Scotsman" Mulligan frequently uses limited pitch collections—tri-, tetra-, penta-, and

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32. "In the jazz tradition and in jazz pedagogy, the aspiring improviser confronts many options for navigating . . . tonal plans. One of these is the tradition of using memorized licks. When used, these memorized figures can help to create a convincing solo in the style. Specifically, they provide concise modules by which to construct a melody within the given tonal framework." Austin Andrew Gross, "Bill Evans and the Craft of Improvisation," vol. 1 (PhD diss., Eastman School of Music, 2011), 4, accessed 31 January 2020, ProQuest Dissertations Publishing (3459556).

Licks are more individualized, melodic motives, sometimes associated with a particular player, while patterns are more universal, and often include a structural element not found in a lick. Jerry Coker describes the difference by explaining that "'Licks' are short motifs or melodies (sometimes even a quote from some other song) which are used and re-used by many players. They differ from the pattern in that they are not structured in a repetitive, digital, symmetrical, or mechanical manner. They instead resemble melodies, often having the free-flowing rhythms of a melody as well, rather than structured in, say, a steady stream of eighth-notes, as patterns usually are." Jerry Coker, *How To Practice Jazz* (New Albany, IN: Jamey Aebersold Jazz, 1990), 22.

hexachords—as the source for his motivic content. He also uses a conventional motive—a pattern of descending arpeggiated diatonic seventh chords used by many jazz musicians—in the bridge of his solos on "The Flying Scotsman."

I found these sounds in every version of the solos that I transcribed. I also found that the sounds are specific to each tune; they are not used indiscriminately over all tunes. While there is motivic manipulation in Mulligan's solos on "Curtains" and "The Flying Scotsman," it is not a defining characteristic of his solos on those tunes. "Curtains" and "The Flying Scotsman" both use limited pitch collections, but in "Curtains" it is restricted to the major pentatonic and two particular tetrachords. In "The Flying Scotsman" the pitch collections vary in number and configuration. That is, while Mulligan uses a minor pentatonic in "The Flying Scotsman," he also uses other five-note groupings, such as $\hat{1}$-$\flat\hat{3}$-$\hat{4}$-$\hat{5}$-$\hat{6}$, along with various three-, four-, and six-note groupings. The conventional motive used in "The Flying Scotsman" appears briefly in one version of "Curtains" but otherwise is not found in anything but "The Flying Scotsman."

Comparison of the characteristic elements of the solos to the composed melody, or "head" of each tune shows some connection between the improvised and composed content.[33] Sequence is a feature of the head of "Line for Lyons," applied to several motives in the A section and another in the bridge. The major pentatonic used in

33. The term head refers to the "the composed melody and changes of a tune." Mark Levine, *The Jazz Theory Book* (Petaluma, CA: Sher Music, 1995), xii. Both "Curtains" and "The Flying Scotsman" have a written introduction and ending, and "The Flying Scotsman" has several long interludes. For the purposes of this dissertation, any discussion of the heads of either piece applies only to the portion of the form that Mulligan uses as a basis for improvisation, as shown in Appendices B and C.

"Curtains" is not an element of the head, but the way he uses it parallels the construction of the piece, where material presented in the first four bars of each sixteen-bar phrase is sequenced almost verbatim in a different tonal center in the second four bars. One of the tetrachords Mulligan uses in the C9 phrase on "Curtains" (D-E♭-F-G) is derived from the pitches of the composed melody in that phrase. The other tetrachord, while not derived from the composed melody, is related to the first tetrachord by diatonic sequence (C-D-E♭-F). The composed melody of "The Flying Scotsman" is derived from a tetrachord in the A section and a major pentatonic in the bridge.

I do not mean to imply that Mulligan consciously introduces aspects of the head into his improvised solos. Rather, he brings the sound of those aspects, such as repetition and sequence in "Line for Lyons," parallel presentation of material in "Curtains," limited pitch collections in "The Flying Scotsman" into the solos. Those sounds form part of his conception not only of the head but of the solo as well. The sound concepts "belong," if you will, to that tune, and he will always include them in his solos.

In this dissertation I will show how he uses these devices in his solos and how they are related to the use of similar devices in the composition of the head. I will also show that he does not use the same devices on all tunes, that he associates certain sounds and techniques with particular tunes rather than having a set library of figures or "licks" that he applies to every tune on which he improvises.[34]

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34. Gary Potter defines licks as "a series of melodic formulas which can be plugged into appropriate spots in the chord progression." He explains that the appearance of the same figure in more than one solo is not unusual in jazz improvisation and that "jazz writers have long pointed out that most players reuse musical ideas from solo to solo, to one extent or another." Gary Potter, "Analyzing Improvised Jazz," *College Music*

I will use Mulligan's composed melody and improvised solos on "Line for Lyons" to show his use of repetition and sequence, at times in combination with one or more of the other elements listed above. Mulligan uses repetition and sequence in his compositions to create a coherent, unified work: one that a listener can understand, recognize, and remember. When he uses the same devices in the solos he is providing the listener with touchstones as the piece moves through the harmonic structure. I will show how Mulligan works with a motivic idea over the course of several beats, bars, or phrases, manipulating it to work with changes in harmony, rather than prioritizing delineating chord changes as they occur in a process known as "running changes."[35] In the first method, the idea comes first and harmonic consideration comes second. In the second method, the chord comes first and navigating it comes second.

Through the years the ways in which Mulligan works with motives become more complex and sophisticated. Repetition and sequence are not so exact and obvious. He embellishes, interpolates material, imitates rather than replicates. The connections between events are obscured. But they are still there, and the listener is able to follow the thread.

I will also briefly touch on the use of restricted pitch content (tri-, tetra-, penta- and hexachords), conventional sequence, and melodic reference in two other

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Symposium 32 (1992): 144–144, accessed 27 March 2016, http://www.jstor.org/stable/40374206.

35. Henry Martin and Keith Waters define running the changes as "improvising by maintaining mostly eighth-note lines that articulate the chord changes in a virtuoso manner." Henry Martin and Keith Waters, *Jazz: The First 100 Years*, 2nd ed. (Belmont (CA): Thompson Higher Education, 2006), 196.

compositions, “Curtains” and “The Flying Scotsman.” I will show that Mulligan’s approach to improvisation on each of the three tunes is distinct, even when he conceivably could have used a similar approach on more than one of them, and that his approach to each one remains consistent over time.

Document Structure

The study consists of three sections. The first section includes an introduction, background information on Mulligan, statements of the problem and research questions, explanations of methodology and analytical approach, and a thesis statement (description of argument).

The second section includes analyses of the head and nineteen improvised solos on Mulligan's composition "Line for Lyons," with musical examples and explanations. This section is divided into subsections, delineated by decade and presented chronologically.

In the final section I summarize Mulligan’s approach to two other songs in support of my argument that further analysis is necessary to form a complete understanding of all the ways Mulligan’s soloing demonstrates a compositional approach. The composed melodies of each tune and complete transcriptions of all the solos analyzed can be found in the Appendices.

Research methodology

For this study I transcribed, notated, and analyzed selected improvised solos as performed by Gerry Mulligan. The transcription process consists of listening to the recordings repeatedly on a computer or other electronic device so that the individual

notes may be determined. It was necessary at times to use software to slow the recording down in order to ascertain the notes in faster passages. I used baritone saxophone as a reference to ensure the accuracy of the pitches.

I notated the transcriptions in the key in which they would be played on baritone saxophone, rather than in concert pitch. This presents the solos in the context in which Mulligan would have conceived them. Standard notation practice for transcription is to use a single staff: the improvised solo line is shown in the staff and the accompanying chords are indicated by symbols shown above the staff. The chord symbols I used are those from Mulligan's manuscripts in the Library of Congress collection. When a solo started before the beginning of a chorus, as in a solo break, I gave those measures lower-case letters rather than numbers.

I attempted to notate notes and rhythms exactly as they were played. Due to the vagaries of recording and performance it is not always possible to determine exact notes, and figures may not be executed precisely in time. I used my knowledge of Mulligan's typical phrasing and note choices and my familiarity with idiomatic baritone saxophone gestures to inform my notation decisions in those situations.

Gary Potter describes several approaches to analyzing improvised jazz.[36] In one method, identified by Potter as an early and impractical strategy, every note played by the soloist is analyzed with regard to the underlying harmony. More recently, jazz theorists have borrowed analytical techniques such as Schenkerian and set class analysis from other genres. Another method is to create a catalog of a musician's typical motivic

36. Potter, 143–148.

figures or licks, "a series of melodic formulas which can be plugged into appropriate spots in the chord progression."[37] Potter explains that the reuse of specific ideas is a common practice for improvisers and opines that "formula identification and cataloguing is a fruitful analytical approach."[38]

While certain melodic ideas recur in Mulligan solos, he does not have a preferred set of licks which he reuses again and again over different sets of chord changes.[39] He does, however, have a set of techniques for motivic development that he regularly uses, including repetition, sequence, inversion, retrograde, imitation, use of limited pitch collections, and reference to the melody. For Mulligan, the device itself becomes a sort of lick.

Repetition and sequence (in combination with inversion, retrograde, augmentation, diminution, and imitation, among others) are primary motivic elements in the head of "Line for Lyons." "Curtains" and "The Flying Scotsman" both demonstrate the use of limited pitch collections (tri-, tetra-, penta- and hexachords). The results of the analysis will be shown in sections II and III.

37. See note 34.

38. Potter, 144.

39. By contrast, Thomas Owens, in his dissertation on Charlie Parker, identifies about one hundred characteristic motives that function as "the building blocks of his improvised melodies." Owens, viii. Owens catalogues the motives (and their variations), showing their use in Parker's solos in volume 2 of his dissertation.

Limitations

My primary resource for ascertaining the existence and availability of recordings, along with information on recording dates, personnel, and locations was the discography by Antoine Perier, Gérard Dugelay, and Kenneth Hallqvist available from the Library of Congress website.[40]

I restricted my selection to solos Mulligan performed in small groups, rather than big bands. In big band arrangements the writing is as important as the improvisation, and solo space tends to be more limited than in small groups. In addition, solos in big bands are often accompanied by instrumental backgrounds that can affect the soloist's freedom by adding harmonic or rhythmic elements.

The solos transcribed were played both in studio and live recordings. Mulligan felt that the settings served different purposes. He said that he programmed his studio recordings to hold the listener's attention so that they might be played "over and over again," becoming deeper to the listener each time.[41] He felt that live performances were

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40. The discographies by Arne Astrup, Raymond Horricks, and Jerome Klinkowitz, limited to the items in print at the time of each book's publication, cannot be considered complete as Mulligan continued to record until 1995. Josephson includes a selected discography with no selection criteria identified and for a complete discography refers the reader to the official Gerry Mulligan website, which in turn directs the user to the Library of Congress site for the document compiled by Perier, Dugelay, and Hallqvist. Arne Astrup, *The Gerry Mulligan Discography* (Soeborg, Denmark: Bidstrup Discographical Publishing, 1989); Raymond Horricks, *Gerry Mulligan's Ark* (London: Apollo, 1986); Jerome Klinkowitz, *Listen—Gerry Mulligan: An Aural Narrative in Jazz* (New York: Schirmer Books, 1991); Josephson, 2015; Perier, Dugelay, and Hallqvist, 2016.

41. Gerry Mulligan, "Gerry Mulligan: Autobiography Excerpts," Library of Congress Gerry Mulligan Collection, 39, accessed 2 February 2018, http://lcweb4.loc.gov/natlib/ihas/service/mulligan/100010952/0001.pdf.

best experienced in the moment. In particular, he mentioned that if a musician should choose to improvise over more choruses in a live performance the audience will be caught up in the energy and will appreciate it in that context, whereas the same longer solo heard in a recorded version could be, in his words, "a bore."[42] Mulligan did, however, appreciate the point of view of others—producer Norman Granz, for instance—that there was merit in documenting a performance in the moment, as a true representation of the event, even if his goal as a bandleader was to present the most succinct, effective version of his music.

Mulligan's reservations regarding recordings of live performances notwithstanding, both settings are relevant in terms of representing an improviser's characteristic approach. Each will bring different elements to the fore. A studio recording may present a clearer picture of the essential elements of a performer's style. Time constraints on the length of a track and the need to be concise might lead a player to rely, consciously or unconsciously, on the devices that are most familiar and comfortable. The freedom and longer duration of a live solo can lead a performer to take more chances and risks, and show aspects of his or her playing that might not be revealed in the more controlled environment of the studio. I felt that a combination of solos performed in both settings, therefore, would be useful in examining the more cautious, typical elements of Mulligan's approach along with the more adventurous aspects.

I wanted to include performances of the same piece performed in different decades to aid in determining whether Mulligan's approach to a particular progression

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42. Mulligan, "Gerry Mulligan: Autobiography Excerpts," 39.

changed over time or remained constant. I extracted titles and recording dates from the discography and found that the only piece to satisfy that requirement was Mulligan's composition "Line for Lyons." I was able to acquire twenty versions of "Lyons." When possible I used physical resources such as compact discs and digital versatile discs but I also used audio and video accessed at YouTube, Vimeo, and other websites.

I also wanted to evaluate selections that differed from "Line for Lyons" in terms of style, harmonic structure, and date of composition to see whether and how Mulligan's approached changed to accommodate those differences. I chose "Curtains" and "The Flying Scotsman," and was able to find four performances of the former and five of the latter.

There are many elements that can be taken into consideration when analyzing jazz solos, including use of patterns, scales, rhythmic content, register, articulation, tone, and vibrato, to name a few. Mulligan's tone and use of register and vibrato could be the subjects of an entire dissertation on their own. For this study, however, I have chosen to focus on Mulligan's use of compositional devices in his solos.[43] Mulligan's earliest professional success was as a writer, and he was an active composer throughout his career. I believe that his improvisational process was informed by his compositional concept. When relevant, aspects such as register, rhythm, and articulation will be mentioned, but my primary topic in this section is Mulligan's use of repetition, sequence, and development.

43. Techniques such as motivic manipulation through repetition, sequence, retrograde, and inversion; use of limited pitch collections.

For the purpose of simplicity, items such as grace notes have been eliminated from the examples, and "ghosted" notes have been not been notated as such. The chord symbols used are those from the parts in Mulligan's tour book, accessed at the Library of Congress.[44] Thus alterations such as the flatted fifth on a minor seventh chord or the flatted ninth on a dominant chord are not noted, even if such alterations are implied by the melody or by Mulligan's note choices during his solos.

Implications for theory or practice

This study will aid scholars by adding information about Mulligan's improvisational practice to the existing biographies and studies of his compositions and arranging style. This additional insight helps form a more complete view of Mulligan's musicianship. The document will also provide pedagogical tools to educators and students studying Gerry Mulligan, jazz improvisation, and the style of the "Cool School." Finally, the study will serve to augment the existing analytical work on jazz saxophone improvisation which to date has generally focused on the work of alto and tenor saxophonists, and on jazz improvisation in general.

44. Gerry Mulligan, "Curtains," "The Flying Scotsman," and "Line for Lyons," piano parts from the Gerry Mulligan Quartet road book, Gerry Mulligan Collection, box 114, Library of Congress.

CHAPTER 2: MOTIVIC MANIPULATION IN "LINE FOR LYONS"

I began my study of Mulligan's improvisation by searching for a single selection he recorded at least once in each decade of his career. I not only wanted to learn more about his approach to improvisation, but to get an overview of Mulligan's approach to a single work over the course of a number of years to see whether it changed over time or remained constant. I also wanted to restrict my selection to solos performed in small groups rather than big bands, as there are fewer formal and harmonic constraints on the soloist in the ad hoc small group format than in typical big band arrangements. By examining the discography available from the Library of Congress website I determined that Mulligan's composition "Line for Lyons" satisfied these requirements.

"Line for Lyons," named for disc jockey Jimmy Lyons, was first recorded by the Gerry Mulligan Quartet on 2 September 1952.[45] It is a thirty-two bar composition in AABA form in the key of G major (concert pitch) with functional harmony.[46]

I searched for as many versions of "Line for Lyons" as I could find, looking for commercially released records and compact discs (both new and used), digital audio files

45. See Fine, 239, regarding Jimmy Lyons; Perier, Dugelay, and Hallqvist, 60, for information about the recording location and date.

46. Examples and transcriptions are notated as transposed for baritone saxophone, in E major. For three performances with alto saxophonist Paul Desmond the selection was played in B♭ concert. See Appendix A.2, solos dated 1957, 1969, and 1972. Those examples and transcriptions are notated as transposed for baritone saxophone, in G major.

available for purchase or streaming via online music services, and audio or video uploaded to websites such as YouTube and Vimeo. My search netted twenty results, with at least two versions per decade, as shown in Table 1 below.

Table 1. Number of versions of "Line for Lyons" transcribed for each decade

	1950s	1960s	1970s	1980s	1990s
Number of versions	6	2	6	3	3

I transcribed the solos as accurately as possible with regard to pitch, rhythm, nuance, and articulation. At time when a specific pitch was not discernible or Mulligan's lines did not synchronize exactly with the beat it was necessary to make an educated guess or to indicate the issue by use of an "x" or "?" notehead (signifying a probable, but not definite pitch) or the description "late" or "early."

After transcribing the solos I began evaluating them for use of characteristics I identified as typical of jazz improvisation in general, specific to Mulligan, or both. The list included licks, motivic manipulation (e.g., repetition and sequencing), voice leading, register, articulations, pedal point, enclosure, hemiola, pentatonics, blue notes, and quotes.[47]

47. Including a recognizable bit of the melody of another tune into an improvised solo, a process known as "quoting," is a common practice in jazz improvisation. Daniel Western explains that quoting "increase[s] the soloist's musical vocabulary" and that it "links the soloist with a rich tradition that has been cultivated by the jazz masters."

I found that motivic manipulation was a major component in the construction of Mulligan's solos, appearing in each of the nineteen versions I transcribed. He frequently uses repetition and sequence, combined with embellishment, alteration, and development to manipulate motives. The reiteration of motivic content creates unity within a solo, while the alteration of motivic content creates variety, forward motion, tension, and release.

Motivic manipulation is a characteristic of the composed melody of "Line for Lyons" as well as the solos. Sequence, both imitative and exact, is present in both the A section and the bridge. The head also includes rhythmic repetition. The use of similar devices in the head and the solos creates a deep connection between them, and indicates that Mulligan is more concerned with creating unity and coherence than in employing a previously-memorized set of licks and patterns.

Western, 13. Steven Meier describes the use of quotes as "a form of musical wit," used "sometimes simply to get attention from the audience, but also to joke with fellow musicians." Meier, 55. Quotes can also be self-referential, as when an artist interjects some of the melody of the tune s/he is improvising on into the solo.

Terminology

I use the term motive to refer to a melodic idea. William Caplin defines motives as "the very smallest units of formal organization."[48] James Mathes elaborates, describing a motive as "a short melodic idea characterized by rhythm, contour; and interval succession."[49] In Mulligan's solos motives are generally short, lasting anywhere from two beats to two measures.

Repetition, abbreviated in the examples as "r," indicates an exact repetition of melodic and rhythmic content. In Western art music, according to Caplin, repetition must take place over a single harmony to be categorized as exact, and may still be considered exact even if the figure is embellished.[50] Because many jazz compositions use shifting foreground harmony (even if the chords reduce to a single harmony at the background level), I am considering only melodic content—starting pitches, intervals, and rhythms—in my classification of exact repetition.

Sequence, shown with the designation "s," refers to a repetition of a motive starting on a different pitch. Caplin defines sequence as the shifting of both melody and harmony but, for the reasons given above, I am taking only melodic sequence into consideration.[51] In jazz, sequence is often exact (chromatic), wherein all interval content remains the same as in the original motive, but it may also be diatonic, or chordal, with

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48. William E. Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven* (Oxford: Oxford University Press, 1998), 37.

49. James Mathes, *The Analysis of Musical Form* (Upper Saddle River, NJ: Pearson Prentice Hall, 2007), 38.

50. Caplin, 39.

51. Caplin, 39.

the intervallic relationships within the motive changing to accommodate the key or chord of the moment.

If the basic melodic form is retained from one iteration to the next but there is a change in rhythmic content, including diminution or augmentation, the repetition or sequence is defined as having alteration and will be indicated by "r/alt" or "s/alt." Mathes specifies that diminution and augmentation refer to a uniform change in the note values (all notes are halved or doubled, for example), but in jazz the ad hoc, individualistic approach to phrase statements means that changes in note value in the service of compressing or expanding an idea are not necessarily constant.[52] The use of syncopation in jazz also leads to non-uniform changes in note value.

Alteration may also consist of embellishment in the form of added notes such as passing, neighbor, or grace notes. The elimination of notes, especially the removal of notes at the end of a motive, is considered fragmentation and marked "r/frag" or "s/frag."

I use the term development, with the abbreviation "r/dev" or "s/dev," to refer to a situation in which a repetition or sequence begins as expected but does not end the same way the previous statement did. Most often the motive becomes spun out, with new, continuing material added to transition into new a formal, harmonic, or melodic area.

At times Mulligan plays figures that are in some way related to previous content, although not strictly repetition or sequence: a repeated characteristic rhythm with a changing contour, for example. I consider this imitative repetition or sequence, and identify those instances as "r/imit" or "s/imit." Mathes categorizes imitative repetition or

52. Mathes, 39.

sequence as strict or free/modified, saying, "*Strict* imitation refers to retention of the intervallic quantity and rhythm throughout, while *free* or *modified* [italics in the original] imitation will show some variance in interval succession, rhythm, or contour."[53] My use of the term imitative refers to free or modified imitation.

One of Mulligan's favorite uses of imitative repetition or sequence is what I call pedal point sequence. In this situation one note remains constant while a line above or below moves, usually in a linear manner. The pedal note may be the top or bottom note of the motive, and may occur anywhere within the motive, but it is often the first note. The effect is a moving line over or under a static pedal.[54] Pedal point sequence is indicated by the marking "pps."

At times one iteration or element of a repetition or sequence will overlap another. In that situation the descriptor "elided" is added to the identification. The material common to both sequences may be an entire motive, part of a motive, or a single note. An embedded sequence is a smaller sequential element used within a larger context.

Finally, I include instances of retrograde ordering ("ret") and inversion ("inv") as forms of repetition or sequence as both situations require action upon an existing motive. In retrograde ordering the pitches of a motive are repeated in the opposite order.[55] In

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53. Mathes, 371.

54. The voice leading frequently present in Mulligan's pedal point sequences suggests that Schenkerian analysis of his solos could prove helpful in revealing small- and large-scale structural aspects. See Appendix A.3, Figure 74, Figure 78, Figure 79, Figure 84, and Figure 88. See also Appendix D for graph showing Mulligan's large-scale voice leading over a chorus of "Laura."

55. Robert D. Morris, *Class Notes for Atonal Music Theory* (Hanover, NH: Frog Peak Music, 1991), 6; John Rahn, *Basic Atonal Theory* (New York: Longman, 1980), 134; Joseph N. Straus, *Introduction to Post-Tonal Theory*, 3rd ed. (Upper Saddle River,

inversion each interval of a motive is repeated, but in the opposite direction.[56] An ascending major third becomes, for example, a descending major third, and so forth. In Mulligan's solos both retrograded and inverted motives may be transposed as well.

The following examples will show use of these devices in his original tunes and in his solos based on those tunes. By including the use of sequence in the tunes themselves I show that Mulligan's improvisation is frequently based on a principle of unity, coherence, and development, rather than on a system of memorized patterns and licks.

NJ: Pearson Prentice Hall, 2005), 184.

56. Morris, 7; Rahn, 45; Straus, 184–45.

“Line for Lyons”: The Head

The motives used in Mulligan’s composed melody and improvised solos on “Line for Lyons” may be described, for the most part, as characteristic rather than conventional, as per Caplin: “A characteristic melody uniquely defines a theme as an individual, one different from other themes. A conventional melody, on the contrary, is interchangeable from piece to piece.”[57] The motives are fairly brief, tending to last from two to six beats.

The first sequence of the head, beginning in the second half of m. 2, appears quite straightforward. A descending three-note line spanning a third is followed a rhythmically repetitive figure, imitative in its descending contour but spanning only a second.

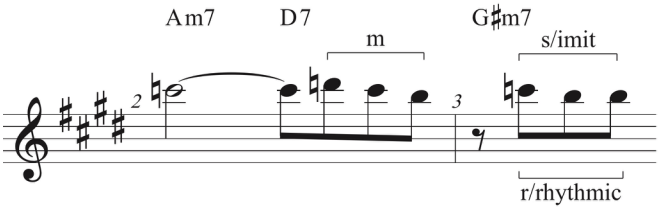

Figure 1a. “Line for Lyons” head, mm. 2–3

57. Caplin, 37. Characteristic motives are comparable to licks, which are more likely to be specific to an individual, and conventional motives are more like patterns, widely used by many players. See note 32.

The next event is a sequence of the descending third, altered by the addition of a chromatic passing tone.

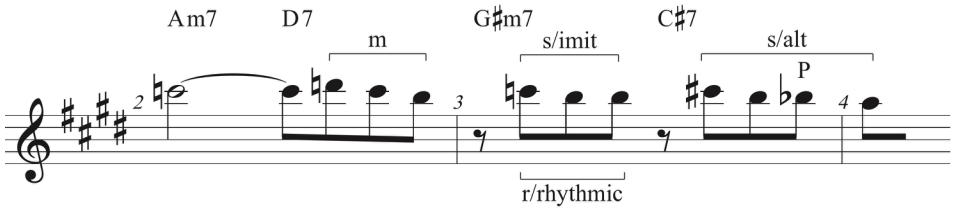

Figure 1b. “Line for Lyons” head, mm. 2–4 (beat 1)

In m. 4 Mulligan alters the rhythmic pattern. Instead of following the motive with a rest he continues the line with a sequence of the imitative figure from m. 3 (labeled m2 in). He sustains the last note in m. 4, signaling a move into new material.

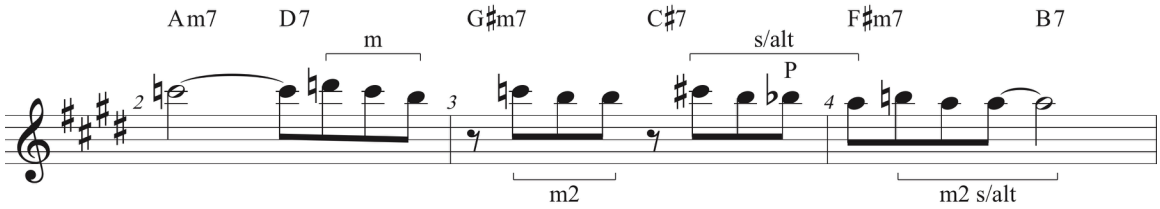

Figure 1c. “Line for Lyons” head, mm. 2–4 (full measure)

The three-note figures are given emphasis by their parallel placements on the upbeats of 3 and 1 and by the use of space following the first two figures. On closer examination, however, it becomes evident that the pairs of three-note figures combine to constitute a large motive.

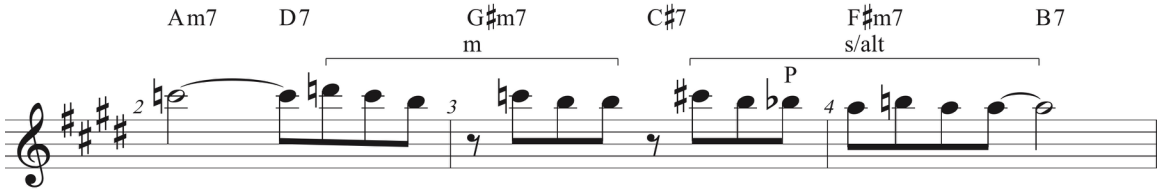

Figure 2. “Line for Lyons” head, mm. 2–4 alternate analysis

The next instance of sequence occurs in mm. 5–6. The sequence is diatonic, with the exact interval content changing to accommodate the harmony. The sequence is developed and extended, ending on $\hat{5}$ to allow for a return to the composed melody for the second A section. At the end of the second A section (mm. 14–15) the leap to $\hat{5}$ is omitted and the line resolves on $\hat{1}$.

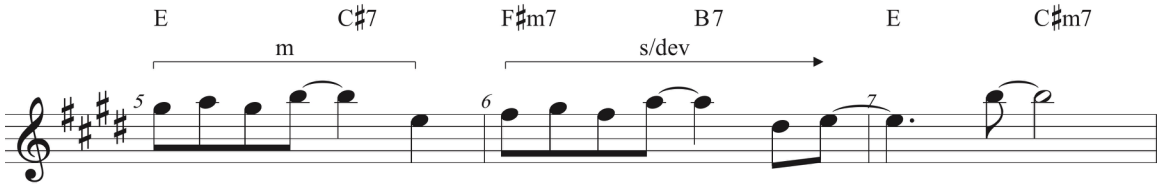

Figure 3a. “Line for Lyons” head, mm. 5–7 (first A section)

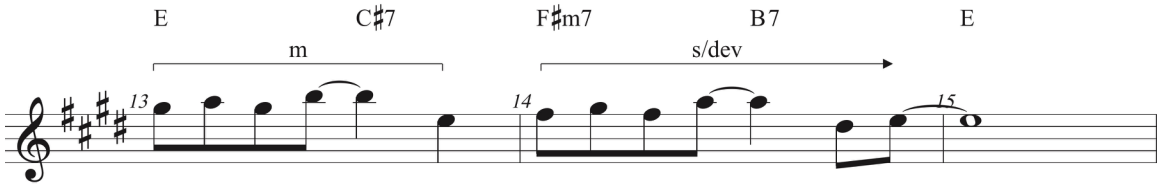

Figure 3b. “Line for Lyons” head, mm. 13–15 (second A section)

A phrase-level view of the A section reveals additional motivic connections. Measure 4 turns out to be the opening motive of a passage of rhythmic repetition lasting three bars, and the first three notes of m. 4 are sequenced in mm. 5 and 6. Again, what initially appears to be a fairly simple eight-bar phrase divided in half by different motivic elements is in fact a complex passage of hidden, overlapping sequences, forming a tight-knit whole.

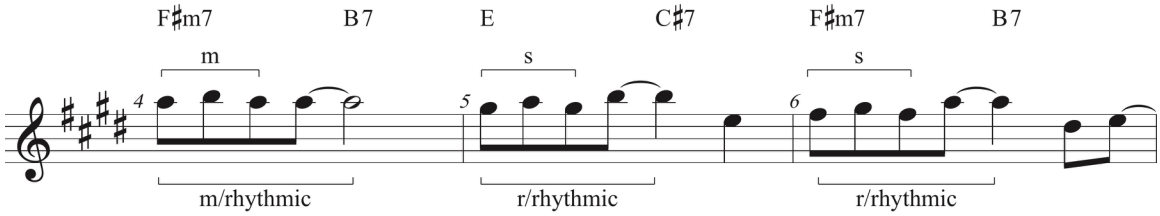

Figure 4. “Line for Lyons” head, mm. 4–6

The final instance of sequence in “Line for Lyons” occurs in mm. 18–23. In this case the composed melody and the harmony both sequence down in stepwise motion. On the third iteration of the sequence a development figure in m. 23 moves the melody and harmony toward a return to the A section.

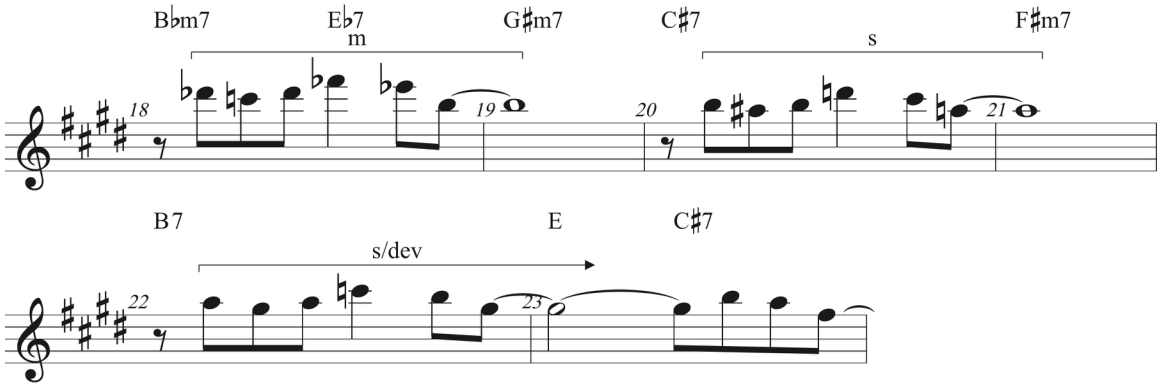

Figure 5. “Line for Lyons” head, mm. 18–23

Solos from the 1950s

14 September 1952, San Francisco. Mulligan, Chet Baker (trpt), Carson Smith (b), Chico Hamilton (d)

Mulligan's use of repetition and sequence in his solos on "Line for Lyons" is evident even from his earliest small-group recordings of his famed pianoless quartet with Chet Baker. The quartet began playing at The Haig in the spring of 1952 and issued its first recordings in August of that year.[58] In September Mulligan recorded "Line for Lyons" for the first time. The solo is brief, just one pickup measure and half of a chorus (sixteen measures), but sequenced content makes up almost half the solo: seven of the seventeen measures contain sequenced content.

The opening of the solo includes four iterations of a three-note stepwise motive occurring over a pickup bar and the first three measures ("m"). Mulligan appears to begin a fifth sequence at the end of m. 4 but quickly moves away from the motive. The four instances of sequence vary in their rhythmic content and placement, creating variety and interest while continuing to utilize a single idea.

The pickup into m. 9, while temporally distant from the opening, is related to the opening motive. The rhythm and contour mimics that of the pickup in m. a, although displaced to the upbeat of 3 and starting on a different note. The repetition of this figure at the beginning of the second phrase parallels the construction of the composed melody, wherein the second phrase begins by repeating the material from the first phrase, and is evidence that motivic content is a significant structural element of Mulligan's improvised

58. Perier, Dugelay, and Hallqvist, 49–50.

solos. Mulligan states a new motive ("m2") in m. 9, sequencing in m. 10 and continuing into development in m. 11.

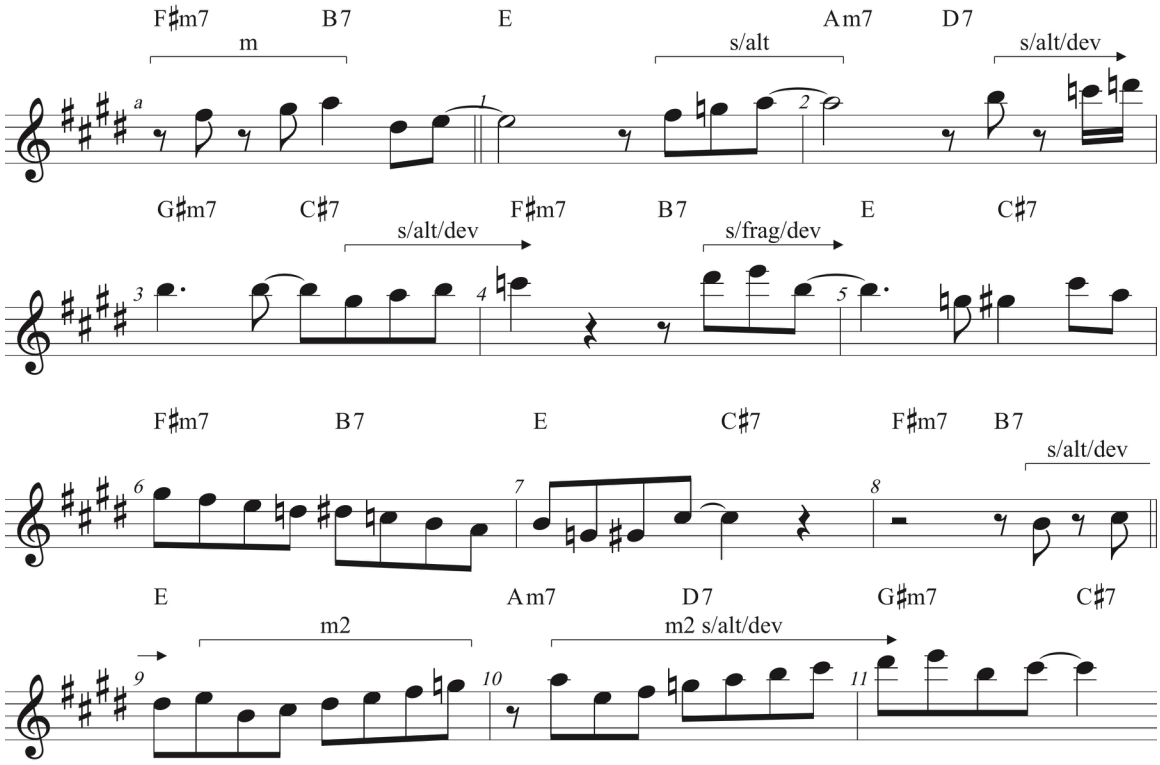

Figure 6. "Line for Lyons," 1952, mm. a–11

The motivic manipulation in this solo is fairly simple and straightforward. Even with the rhythmic alterations in mm. a–2 the sequencing is quite obvious, much like the sequences in mm. 5–6 and 18–23 of the head, demonstrating a consistency of approach.

1 June 1954, Paris. Mulligan, Bob Brookmeyer (trb), Red Mitchell (b), Frank Isola (d)

The next recording of "Line for Lyons" took place in June 1954 at the Salle Pleyel in France. By this time the Mulligan-Baker partnership had dissolved and valve trombonist Bob Brookmeyer had joined the quartet in Baker's stead.

In this solo Mulligan begins with a repeated figure that moves into development with a rhythmically imitative sequenced element ("m"). The repeated figure is displaced, coming on the first beat of m. 2 rather than the third, allowing Mulligan to add development on the third and fourth beats and place the rhythmic element from m. 1 on the same beats in m. 3. Note that Mulligan does not alter the figure in m. 2 to accommodate the change in harmony, keeping the D♯ and, more significantly, the C♯ in place over Am7, yet it is not jarring to hear. The line is strong enough and the point of resolution in m. 3 satisfying enough to override any momentary clash. This passage supports the theory that motivic manipulation is a primary force in Mulligan's solos, rather than change-running.

The next occurrence of repetition occurs in mm. 9–10. In this instance Mulligan does alter the figure ("m2") in accord with the harmony. He also develops the figure beyond its initial three-beat presentation by altering the rhythm and continuing into the next measure.[59]

59. See Appendix A.3, Figure 64, for another example of repetition with alteration in this solo.

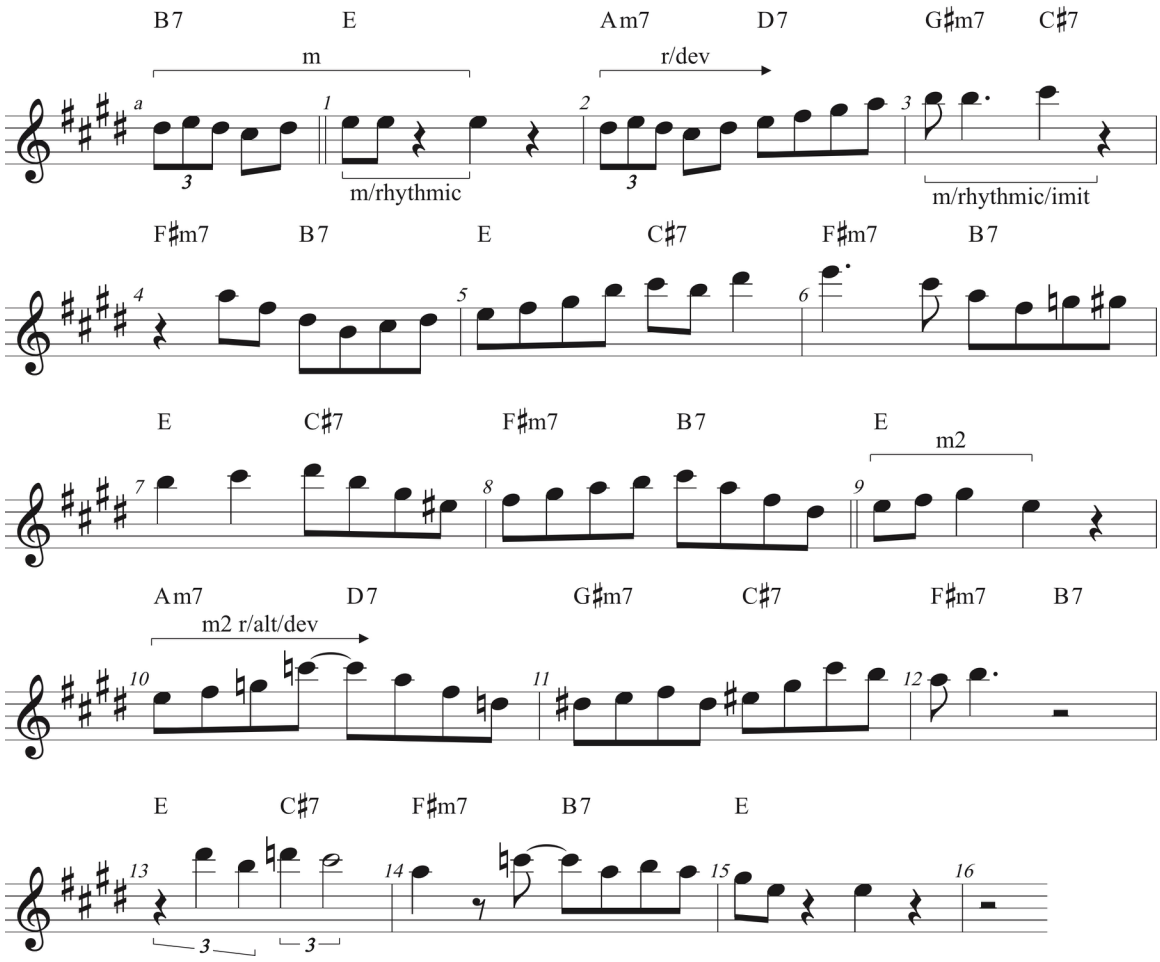

Figure 7. “Line for Lyons,” 1954, mm. a–16

At the end of the bridge in the first chorus Mulligan plays a sequence of descending arpeggios preceded by chromatic lower neighbor (“m”). Descending triads or seventh chords, with or without the neighbor tone at the beginning, are typical jazz vocabulary, used by many improvisers over the years. They fall under the category of conventional sequence, rather than characteristic, as defined by Caplin, or pattern, rather

than lick, as defined by Coker.[60] The three-beat figure is played three times, resulting in hemiola and making the passage more personal and characteristic.[61] Mulligan does not continue the sequence in m. 24 but he does use the lower chromatic neighbor to lead in to the rest of m. 24, so there is a slight connection to the preceding sequence.

At the beginning of the last A section of the first chorus Mulligan begins as he did at the two previous A sections, with a repeated figure ("m2"). Unlike mm. 9–10, where the G♯ diatonic third in m. 9 had to be lowered to G♮ in m. 10 to work with Am7, in mm. 25–26 Mulligan uses G♮ throughout, the flatted third in m. 25 becoming a chord tone in m. 26. He does, however, change the C♮ in m. 26 to C♯ in m. 27, to match the harmony in that bar. Mulligan alludes to the figure again at the opening of the second chorus, sequencing it up a third and inverting the contour in the second half of m. 33.

60. Caplin, 37; Coker, *How to Practice Jazz*, 22.
61. See Appendix A.3, Figure 65, for the implied meter of mm. 22–24.

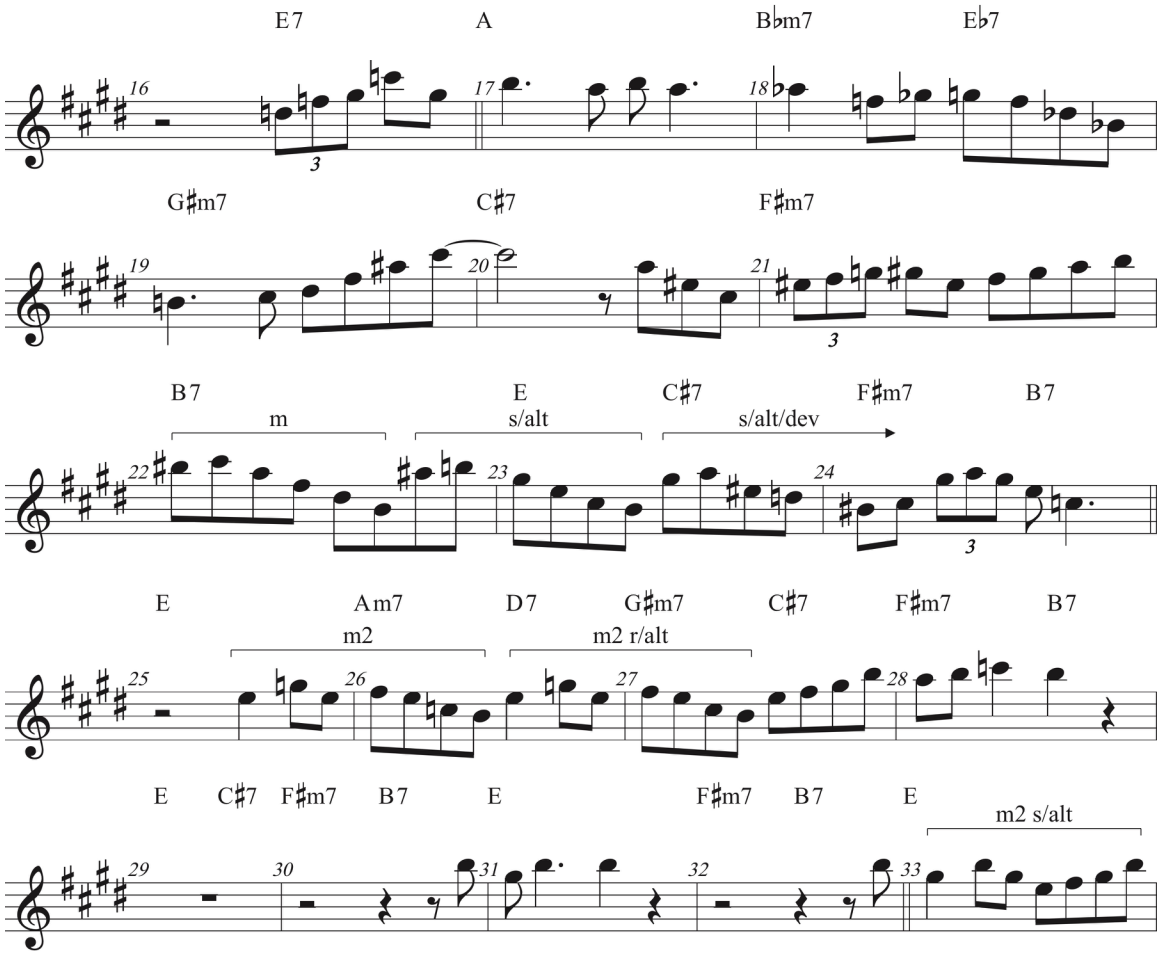

Figure 8. “Line for Lyons,” 1954, mm. 16–33

Mulligan uses diminution in mm. 44–46. A motive stated as a half note (over the bar line) and two quarters is repeated as eighth notes with one more note appended to the motive. It is played again in eighth notes in m. 47, with additional notes carrying the line into the next measure.

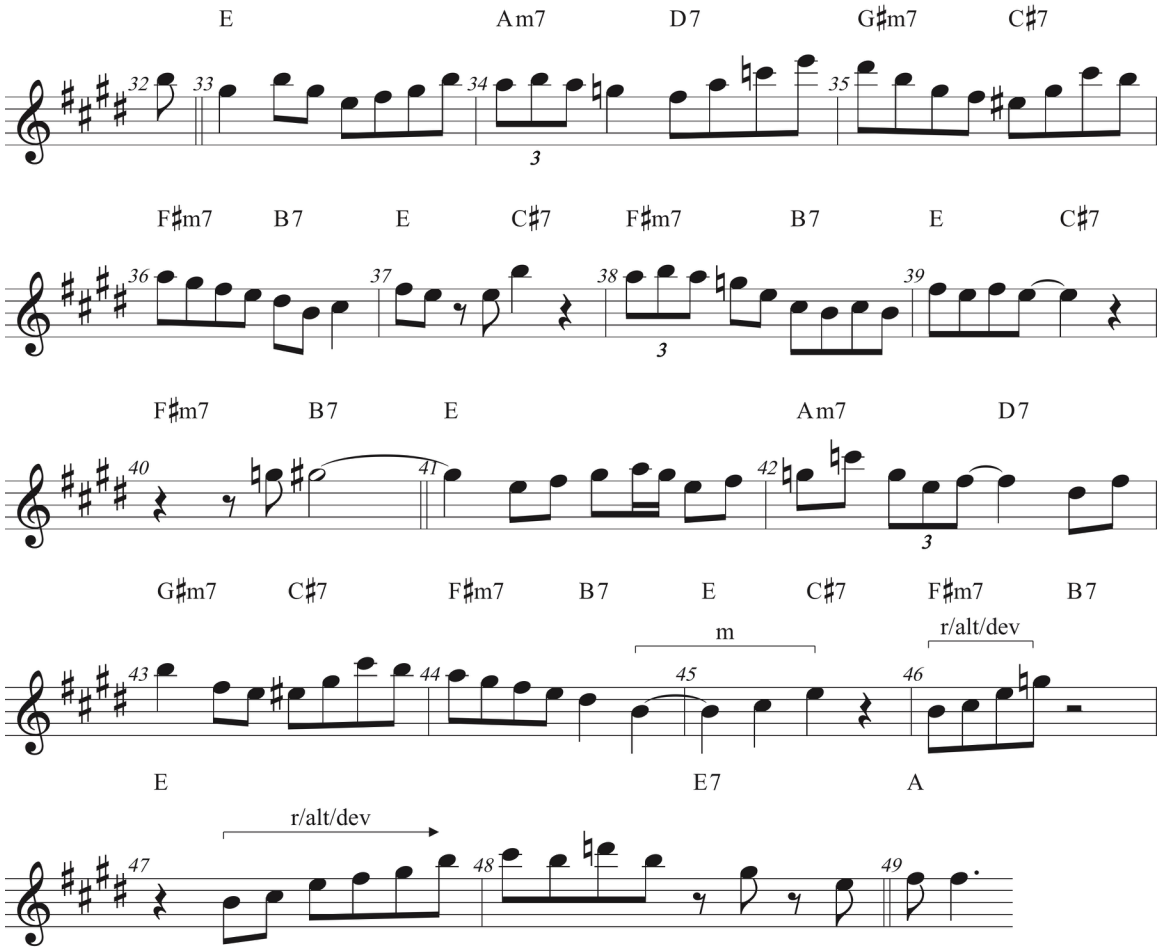

Figure 9. “Line for Lyons,” 1954, mm. 32–49

The next event in the second chorus is a passage using rhythmic repetition and a brief instance of embedded sequence. The rhythmic motive (m/rhythmic) is first stated in mm. 48–49, with a pattern of four eighth notes followed by two off-beat eighths, leading to an eighth and a dotted quarter in the next measure. Mulligan repeats the rhythm three times, the third time altering the second bar of the figure so it ends on the third beat in m. 53. Although m. 53 does not contain the same rhythm as mm. 49 and 51, it is related to

them in that the measure emphasizes a single note (embellished with neighbor tones in m. 51). The embedded sequence is found in mm. 50 and 52, which both contain a pattern of three steps followed by a third (enharmonic in the case of m. 52) in the four eighth notes on beats 1 and 2 ("m"). The embedding of a sequenced element and the use of rhythmic repetition in figures with dissimilar contour are both devices used in the original composed melody of "Line for Lyons." While the motives used here are not the same as those used in the head, the concepts remain the same, showing Mulligan's consistency of approach.

The final sequence in this solo takes place in mm. 61–64. A descending leap on the first beat of each measure preceded by a pickup note characterizes this motive ("m2"). The sequence is imitative rather than exact, in that the interval is not the same each time, but the distinctive placement on the first beat followed by a rest in combination with rhythmic repetition creates a clear connection between these bars.

Measure 62 includes an additional sequential element. The third at the beginning of the measure is repeated in inversion on the third beat. Although the contour and placement are different, the rhythmic content of this inverted motive indicates that it is part of the sequence rather than added or developmental material.

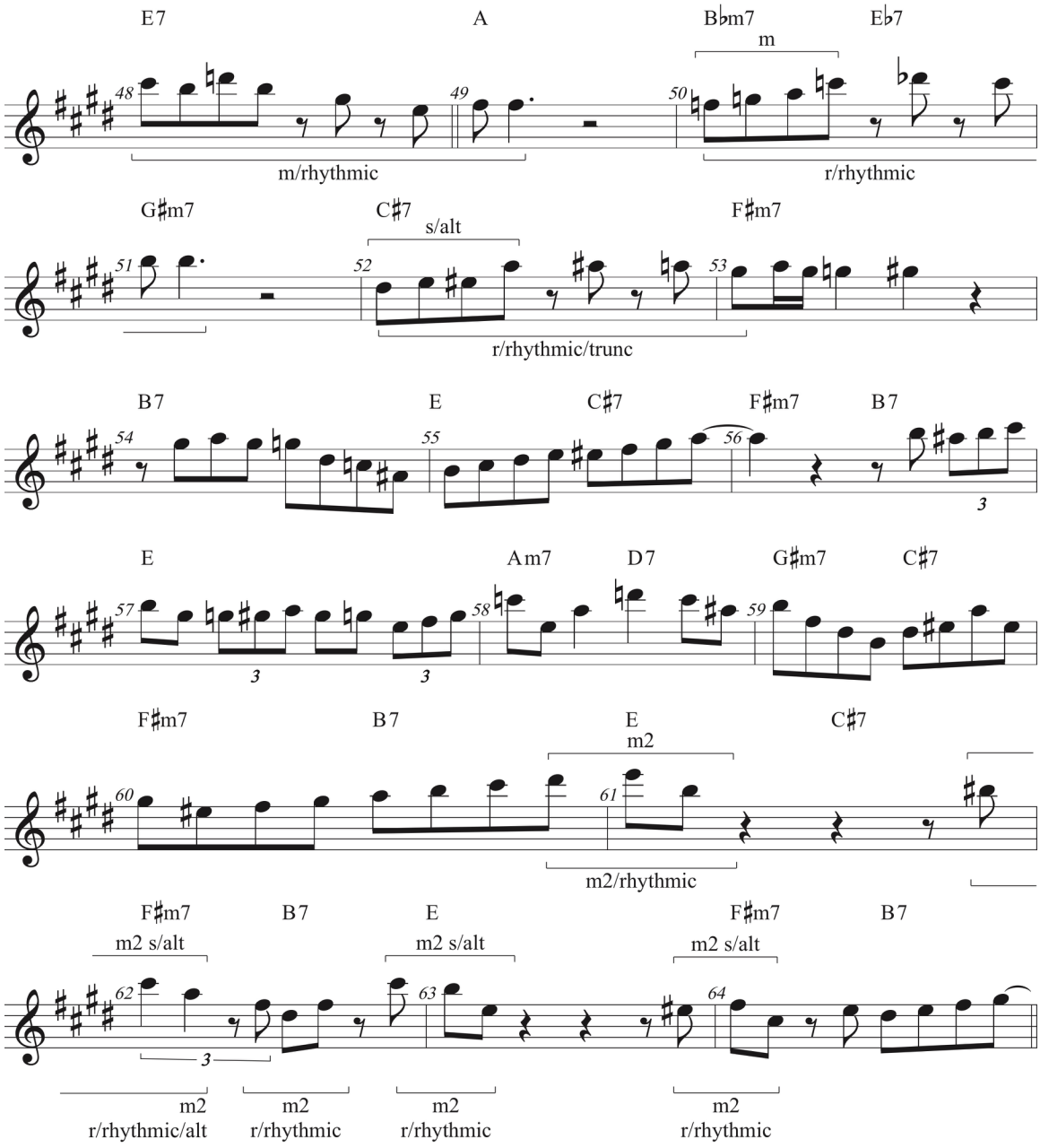

Figure 10. “Line for Lyons,” 1954, mm. 48–64

7 April 1956, Amsterdam. Mulligan, Bob Brookmeyer (trb), Bill Crow (b), Dave Bailey (d)

This solo contains the first instance of pedal point sequence, where Mulligan combines a moving line with a static note above or below the line. The pedal is B4, and the solo begins with a two-bar pickup starting with a figure that moves from B4 to C♯5 in an eighth-quarter rhythm ("m"). The two-note figure is repeated, and in the second pickup measure the figure is expanded, with a change in rhythm and a leap up to E5 and back from C♯5, extending the duration to two and a half beats ("m2").

In m. 1 the C♯5-E third is expanded to a C♯5-G♯ fifth.[62] The rhythmic repetition is exact, although the figure is displaced, starting on the upbeat of 4 instead of the upbeat of 1, as in the previous measure. At the end of m. 1 Mulligan sequences the fifth down a half step, replacing C♯5 and G♯5 with C5 and G5 in anticipation of Am7 in m. 2. The rhythmic content remains the same, although once again the figure is displaced in such a way that it becomes clear Mulligan is creating hemiola in mm. 1–2.[63]

In a process that will become more frequent over time, Mulligan delays the presentation of the next instance of the pedal point sequence by interpolating new, unrelated material in m. 2. In m. 3 the pedal point figure reappears, with a change in rhythm that refers to the initial m1 figure, with a B4 eighth note leading to a C♯5 quarter note, moving from there to a quarter note D♯5. The pedal point sequence ends in m. 4

62. I have chosen to term the expanded figure an instance of imitative repetition. The rhythmic repetition is exact and the melodic content differs by only one note, and in both instances those notes are related by way of being the root and third of the tonic chord.

63. See Appendix A.3, Figure 66, for the implied meter of mm. b–6.

with a return to the imitative repetition of the m2 motive, this time with the first note augmented to a quarter and the leap increased to a sixth.

The final element of the pedal point sequence, starting on beat 4 of m. 3, elides into a new sequential pattern ("m3"). It is sequenced up a step in m. 4 with a slight change in rhythm, and that figure is then sequenced up another step in m. 5. As in m. b–2 Mulligan shifts the placement to create hemiola.[64]

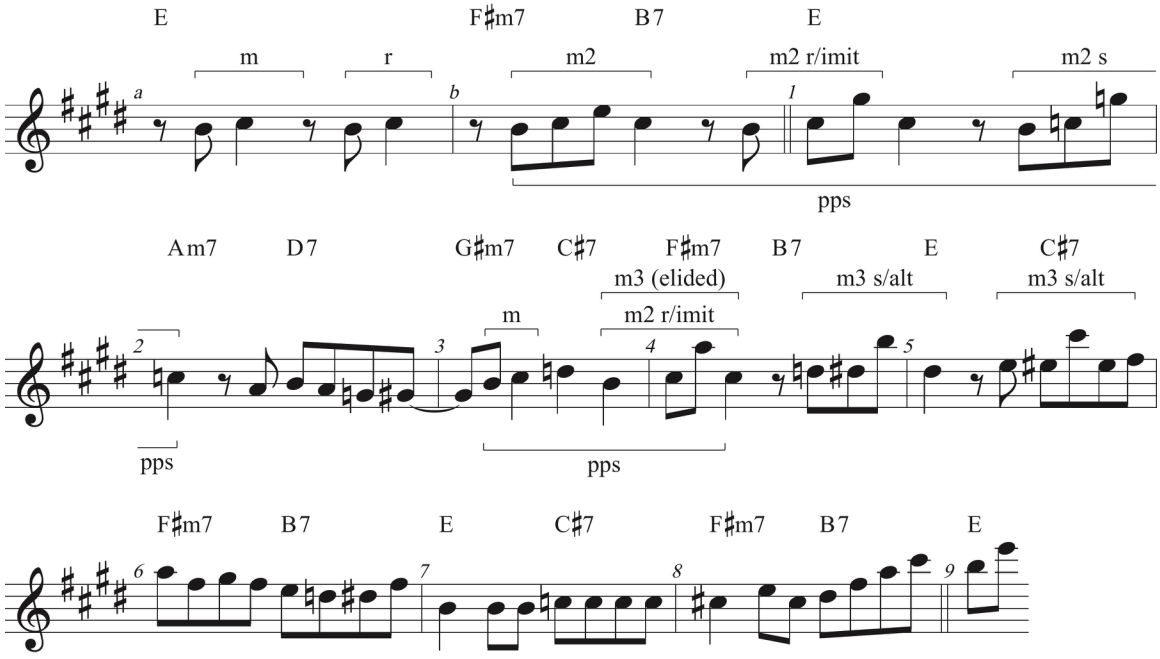

Figure 11. "Line for Lyons," 4/1956, mm. a–9

64. See note 63.

This passage demonstrates more sophistication and long-range thinking than shown in the two earlier solos. In those solos the repetition and sequence show less alteration and development, they tend to occur immediately, and the passages do not last as long. Here a simple idea—the two note B4-C♯5 figure—is repeated and developed melodically and rhythmically over the course of six measures, and that development in turn becomes the basis for more sequence. Mulligan uses little repetition or sequence for the rest of the first chorus.[65]

In the first phrase of the second chorus a series of descending three-note sequences ("m") leads to another pedal point sequence. The pedal is E5 and the moving line above rises from B5 to C♯6. Repetition is used to connect the pedal motive. An ascending scale motive ("m2") in m. 38 is interrupted, reappearing in m. 40 and continuing up to E6 in m. 41, bookending the pedal point with octave displacement.

Conventional material ("m3") similar to that seen in 1954, mm. 22–23, is sequenced in mm. 42–43, followed by sequence of a more characteristic motive ("m4") in mm. 45–46. Although the motive in mm. 45–46 is small, just two eighth notes, the consistent placement on the fourth beat of the measure in combination with the motive being surrounded by silence makes it stand out as a significant element.

65. See Appendix A.3, Figure 67, for repetition at the end of the first chorus.

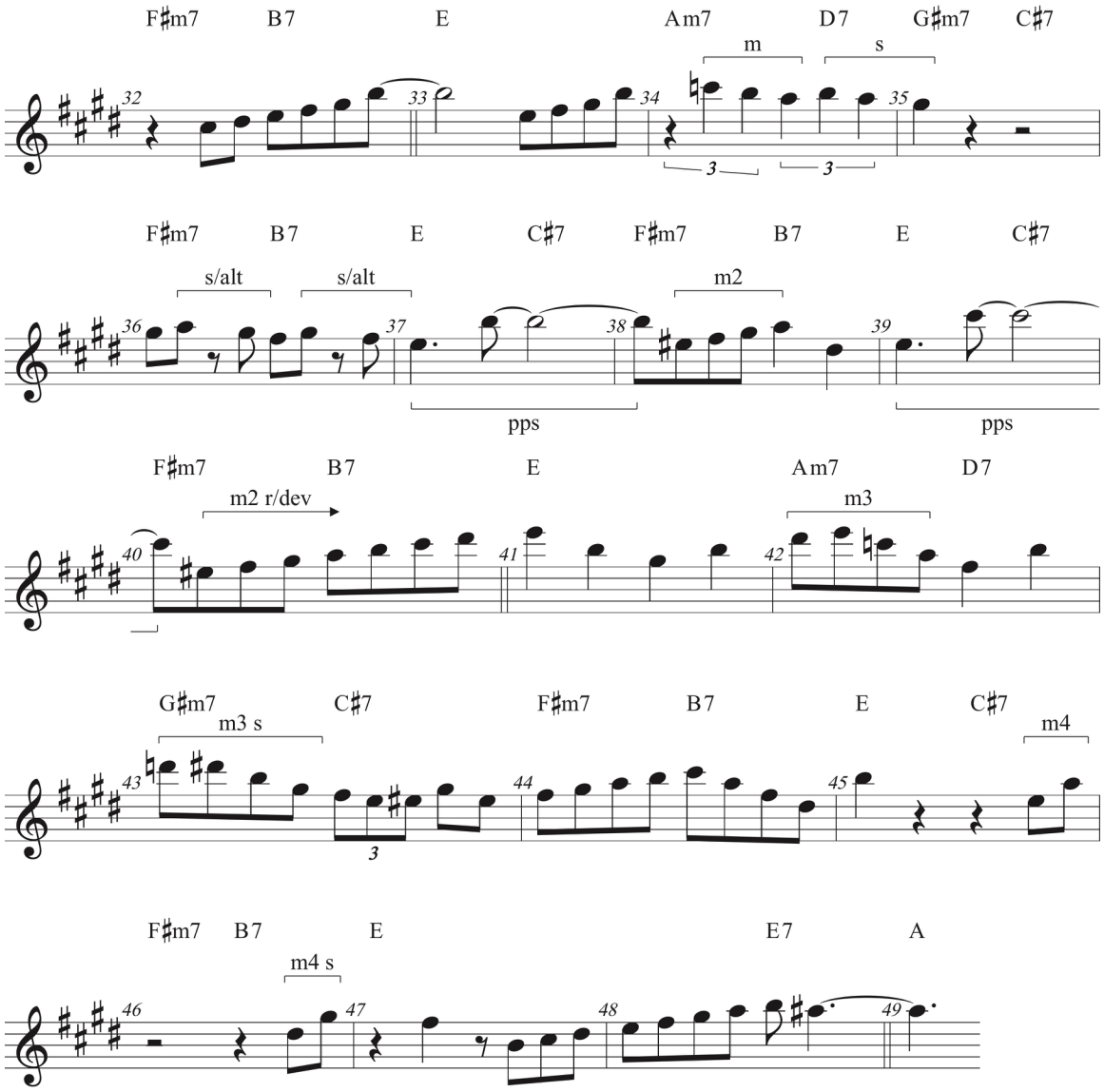

Figure 12. “Line for Lyons,” 4/1956, mm. 32–49

So far Mulligan’s use of repetition and sequence has been fairly brief, usually lasting no more than three or four measures or three or four iterations. On the bridge of the second chorus of this solo he works with a half step motive for almost the entire eight-bar phrase (“m”). He begins in m. 48 with B5 on beat 3, descending to A♯5 on the

next eighth note. The dyad is repeated in the next measure.[66] At the end of m. 49 Mulligan sequences the motive up a half step and inverts it, resulting in a B5-C6 pair. He then repeats the sequence and inversion pattern, resulting in a descending D♭6-C6 motive in m. 50. Going into m. 51 Mulligan once again sequences and inverts, for a C♯6-D6 pair that is then repeated with rhythmic augmentation from eighth notes to quarter note triplets. The pattern of sequence-inverted sequence continues from mm. 52 through the first beat of m. 55, with a change from chromatic sequence to diatonic in m. 53. The pattern is broken in m. 55–56, when the inversion aspect is eliminated and Mulligan repeats an A5-G♯5 pair three times, the last in diminution, before moving on to new material.

One eighth note remains unaccounted for: the upbeat of 3 in m. 54. It is not a member of any half step dyad. It is, however, a sequence of the five note figure in m. 52, an embedded sequence-within-a-sequence. There is one further element of sequence in this passage: the five-note figure in m. 52 ("m2") is sequenced in m. 54, for an embedded sequence ("m2 s").

The chromatic element in this passage can be traced back to the bridge of the original composition, which features half step neighbor tones in the second, fourth, and sixth measures. The note pairs mm. 50 and 54, fact, are the same as those in the

66. A♯, the enharmonic flatted ninth, seems an unusual choice for Mulligan to sustain over the harmony of A major. As he continues to move back and forth between A♯ and B, however, it becomes clear that the role of A♯ in this context is the leading tone to B.

corresponding measures—18 and 22—of the melody. The melody is also referenced in the ascending scale in m. 48.

Near the end of the solo Mulligan returns to the ascending fourth motive ("m3") he used at the end of the second A section in mm. 45-46. The ascending fourths may in turn be considered related to the ascending intervals used in mm. 1–5 and mm. 37 and 39. He concludes the solo with a change-running sequence of a four-note figure ("m4") outlining the base triads of C♯7 and B7.

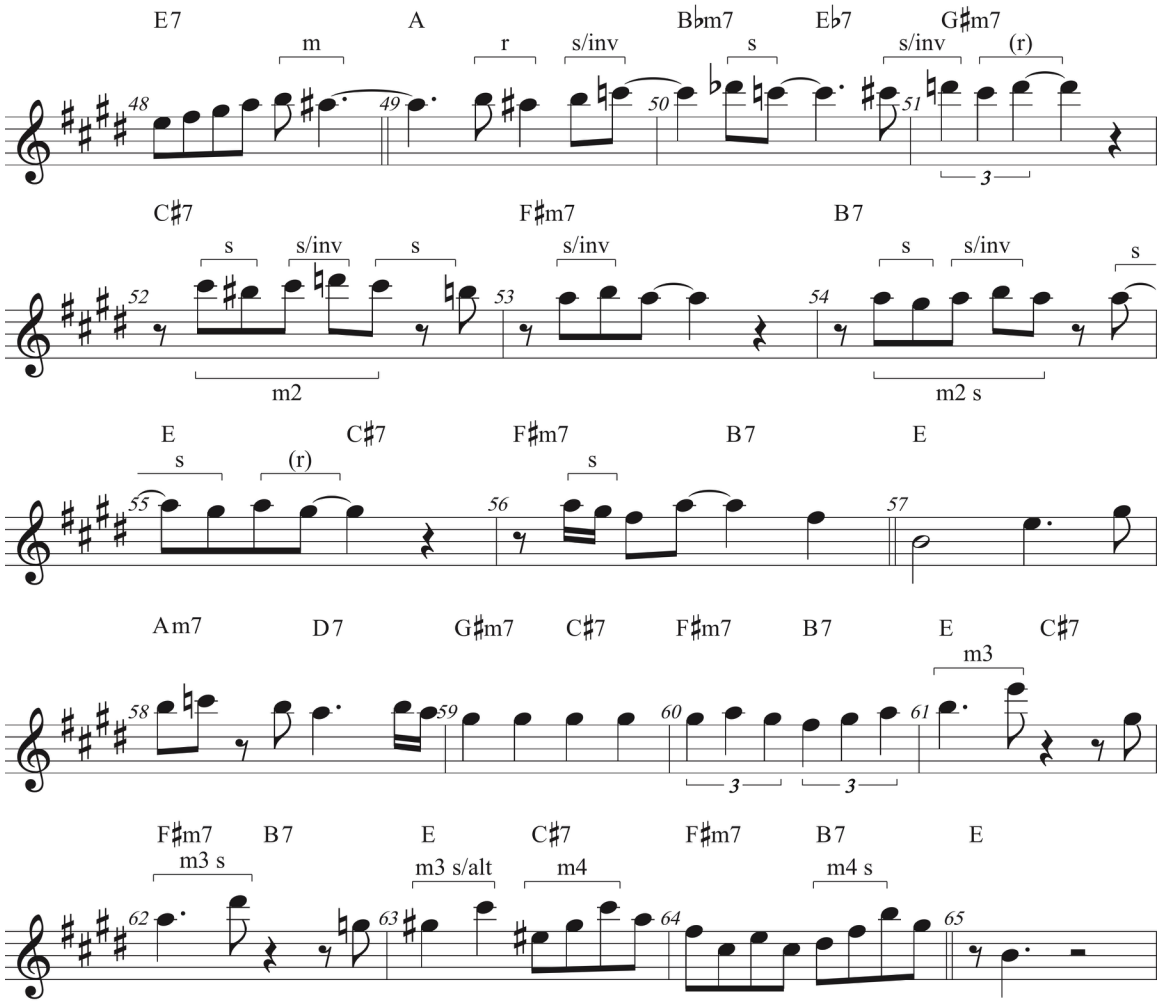

Figure 13. “Line for Lyons,” 4/1956, mm. 48–65

Mulligan’s use of repetition, sequence, and development in this solo is far more complex than in his earlier solos. The events are less unadorned and obvious. Yet careful examination reveals the sometimes hidden connections between them, and shows that Mulligan has not abandoned his earlier techniques of repetition, sequence and development, but expanded on them. The result is a subtly tight-knit solo with a cool flowing feel that belies the sophistication of its construction.

August 1956, New York. Mulligan, Bob Brookmeyer (trb), Bill Crow (b), Dave Bailey (d)

Mulligan's solo from a 1956 television appearance begins with a sequence devoid of embellishment or any rhythmic alteration, taking place over two pickup bars and the first measure of the chorus ("m"). In the third iteration of the motive the last note is changed to break the sequence and allow for movement into another figure. In its simplicity and clarity this passage recalls the sequences of the composed melody of "Line for Lyons," mm. 5–6 and 18–23.

Mulligan introduces alternating sequence in mm. 5–6. The first motivic element ("m2") spans a descending sixth. First heard in beats 1–2 of m. 5 as the outer notes of a second inversion G♯ minor triad, it is repeated in m. 6 without the intervening note. The second figure ("m3") is a descending three-note chromatic on beats 3–4 of m. 5. The chromatic is repeated in retrograde with rhythmic alteration on beats 3–4 of m. 6. This is Mulligan's first use of retrograde, and is yet another step in the ongoing trend of increasing complexity in Mulligan's motivic manipulation.

Motives m2 and m3 are connected by elision. In m. 5 D♯5 is the last note of m2 and the first note of m3, and in m. 6 C♯5 functions in the same way. This is not Mulligan's first use of elided sequence (see mm. 4–5 of the April 1956 solo) but is the first example of elided sequences pivoting on a single note.

The last note of m. 6 elides, in turn, into the first note of an ascending first inversion B major triad ("m4") that is sequenced in the second half of m. 7. Although the arpeggio includes an eighth note tied over from the previous measure, the placement of

the quarter note on beat 2 creates the sense of an anapestic foot. This distinctive rhythmic figure is significant in the next passage examined.

Measures 11 and 13 each contain sequenced motives. In m. 11 the motive ("m5") is an ascending triad on beats 1–2, sequenced in inversion on beats 3–4. In m. 13 the motif ("m6") is a three-note descending scale on beats 1–2, sequenced on beats 3–4. Although these two motives are quite different in contour they feature exact rhythmic repetition of the anapest first heard in m. 7, creating a sense of connection between elements separated temporally and disparate in nature. This is not unlike mm. 4–6 of the head, wherein a rhythmic component of one motive becomes a significant characteristic of the following motive.

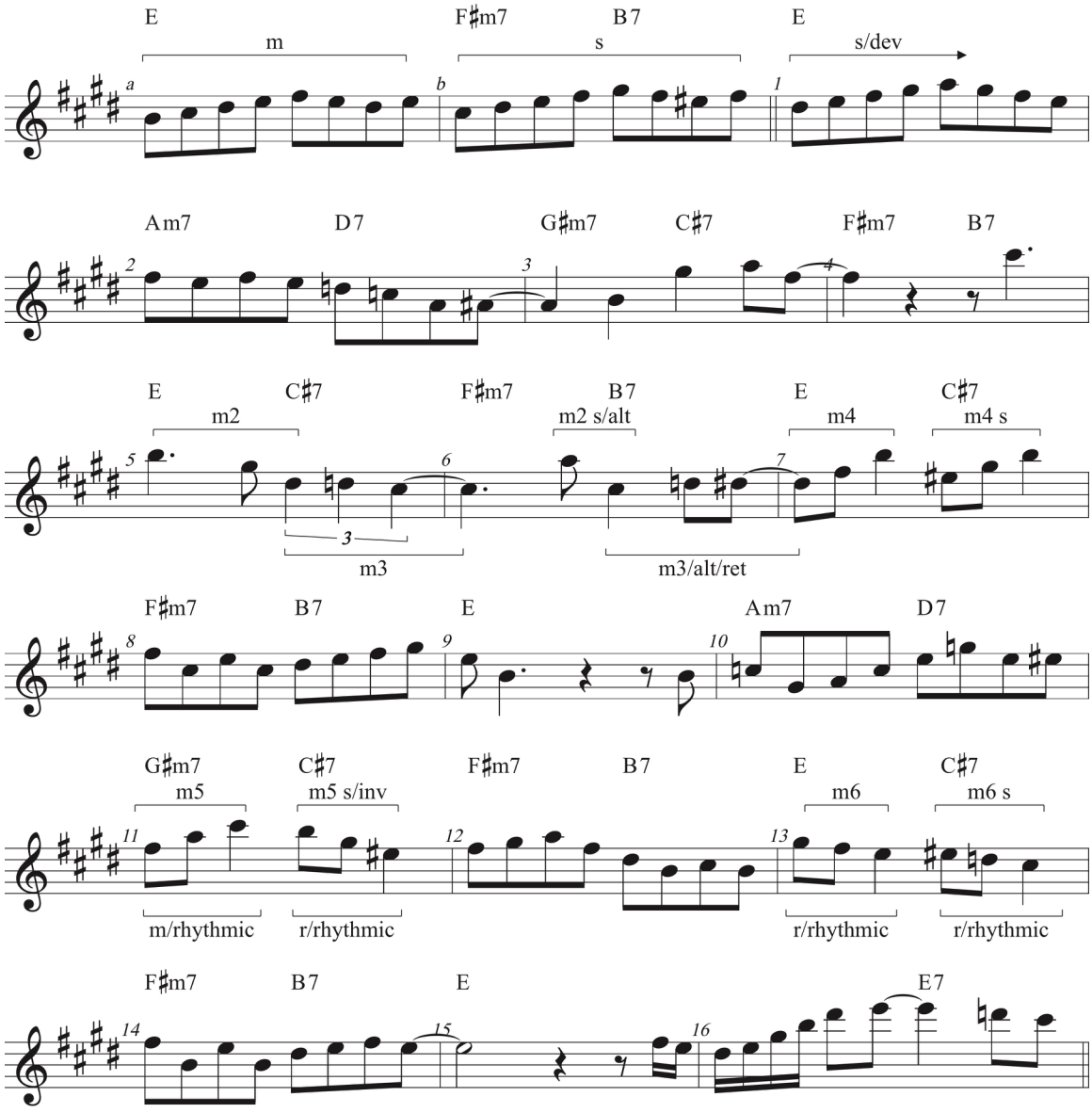

Figure 14. “Line for Lyons,” 8/1956, mm. a–16

Exact repetition of both rhythm and content is a feature of mm. 19–20. Mulligan plays a four-note figure in m. 19 (“m”). In the next measure he repeats the last two notes of the figure, syncopated, then repeats the figure. He then sequences the two measures

down a step. He appears to be starting a third sequence in m. 23 with the complete upper neighbor but quickly moves into new material. Much like mm. 2–4 of the melody, which can be seen both as two six-note motives or four three-note motives, this passage can be viewed two ways: either as a two-bar motive sequenced once (m), or as a four-note figure repeated once, then sequenced and again repeated ("m2").

The one-chorus solo ends with motive ("m3") sequenced in mm. 30–32. The passage has characteristics in common with that which opens the solo. Both passages feature simple sequence absent any manipulation such as rhythmic alteration, elision, or use of retrograde. The motivic element in both passages begins with a rising figure that reverses direction on the fifth note. But where in mm. a–1 the second half of the figure places upper and lower neighbor notes around a single pitch, in mm. 30–32 the second half of the motive descends. The motive at the beginning of the solo is sequenced upwards, building into the chorus, while the one at the end is sequenced down, bringing the chorus to a close. Mulligan uses figures with similar qualities in opposing ways, creating an effective bookend to bring the narrative arc of the solo to a close.

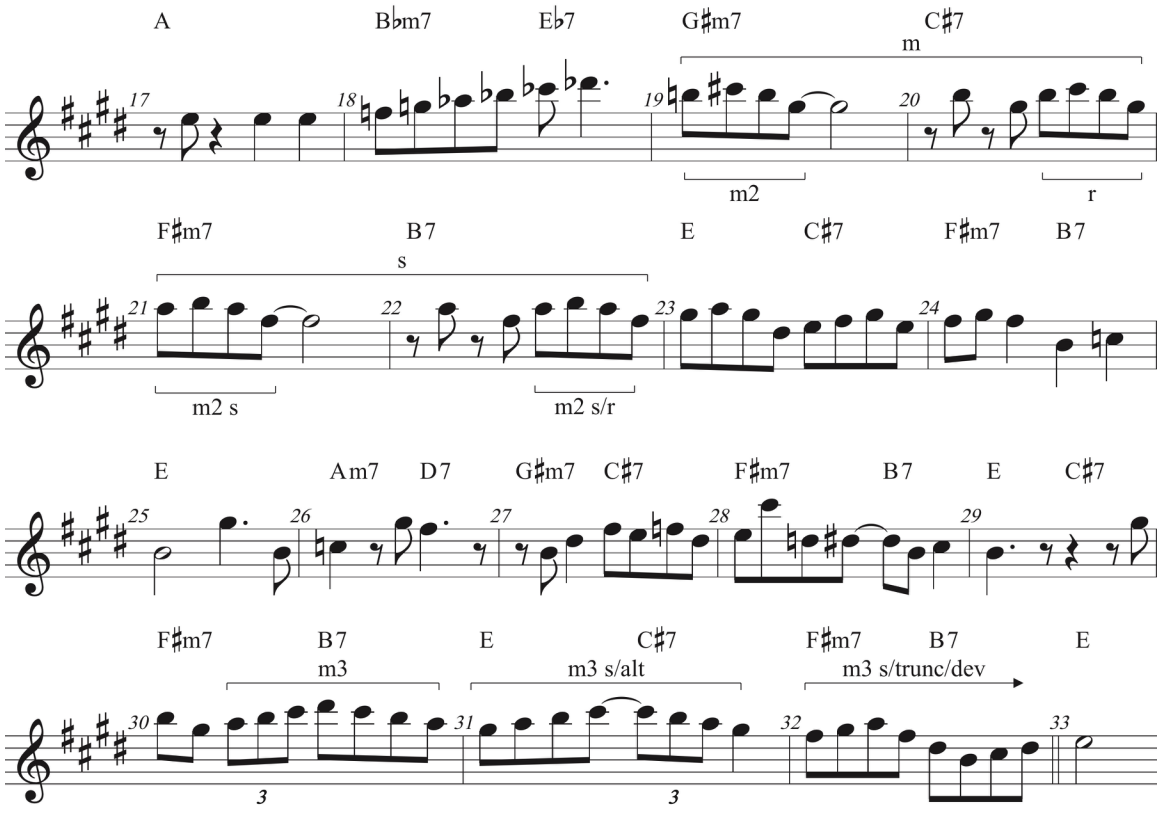

Figure 15. “Line for Lyons,” 8/1956, mm. 17–33

27 August 1957, New York. Mulligan, Paul Desmond (as), Joe Benjamin (b), Dave Bailey (d)

Mulligan retains the pianoless quartet format for this version of “Line for Lyons,” but with a change in instrumentation. Rather than a trumpet or trombone the other horn in the ensemble is alto saxophone, played by Paul Desmond. Another difference between this version and the versions previously discussed is the key. Mulligan generally played “Lyons” in G major (concert pitch) but this performance is in B♭ major (concert pitch). The only occasions on which this change of key was found in the performances

transcribed for this dissertation were when Mulligan paired with Desmond.[67]

Although the repetition and sequencing in the opening of this solo can be analyzed several ways, I believe it is best viewed as repetition and expansion of an initial F♯5-G5 motive ("m"), in much the same way the B4-C♯5 in the April 1956 solo functions both as its own element and as part of a larger motive. Mulligan begins with those two notes, then repeats them, adding an E5 pickup and continuing the line to A5. The next repetition omits the E5 pickup but extends the line to B5. A two-note G5-A5 pair interrupts the repetition, sequencing the initial dyad. The fourth and last expansion of the opening figure begins on the upbeat of 2 in m. 1, and this time Mulligan carries the line up to D6.

The next significant motive ("m2") in this version begins in m. 2 with a descending figure that spans a major seventh, D6-E♭5. Another enharmonic major seventh is outlined between the upbeat of 4 in m. 2 and beat 3 in m. 3. The bottom note of that interval becomes the first note of an elided inverted sequence, and intervening material delays the appearance of the final version of the motive, an ascending minor seventh, until the first beat of m. 5. This figure stands out for its use of wider intervals. Up to this point the solos analyzed have exhibited more circumscribed intervals.[68]

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67. The other two performances with Desmond took place in 1969 and 1972. See Appendix A.2.

68. The use of wider intervals seems to be related to the difference in the key. In two of the three solos in B♭ concert (1957 and 1969) Mulligan plays leaps of a seventh, and in the third (1972) he outlines a seventh with an intervening note in between.

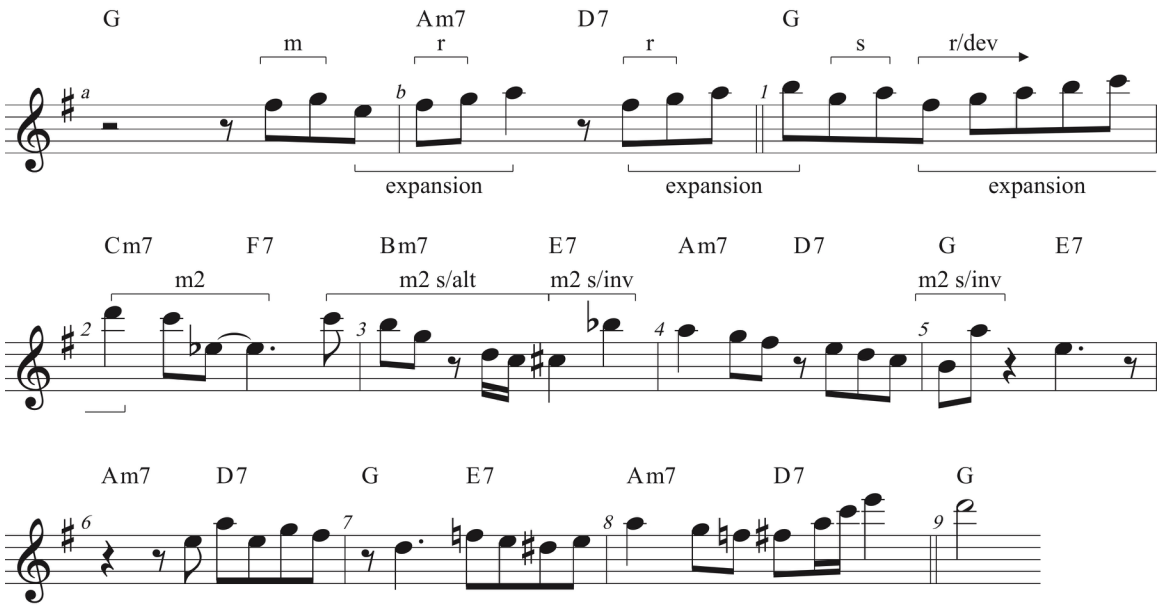

Figure 16. “Line for Lyons,” 1957, mm. a–9

The final use of sequence in this chorus begins in m. 18. The motive includes an ascending eighth-note line followed by a rest and a change in direction to a single note of longer duration. There is slight alteration to the motive each time in size of the interval between the last eighth note and the longer note, and, in m. 22, a deviation from strict stepwise motion on the last eighth note. Additionally, the temporal interval between each statement of the motive is shorter each time, giving the line momentum to the return of tonic in m. 23. Although the sequence is imitative rather than exact, the consistent placement of the figure within the measure, the rhythmic repetition, and the imitative contour makes it clear that these motives are related.

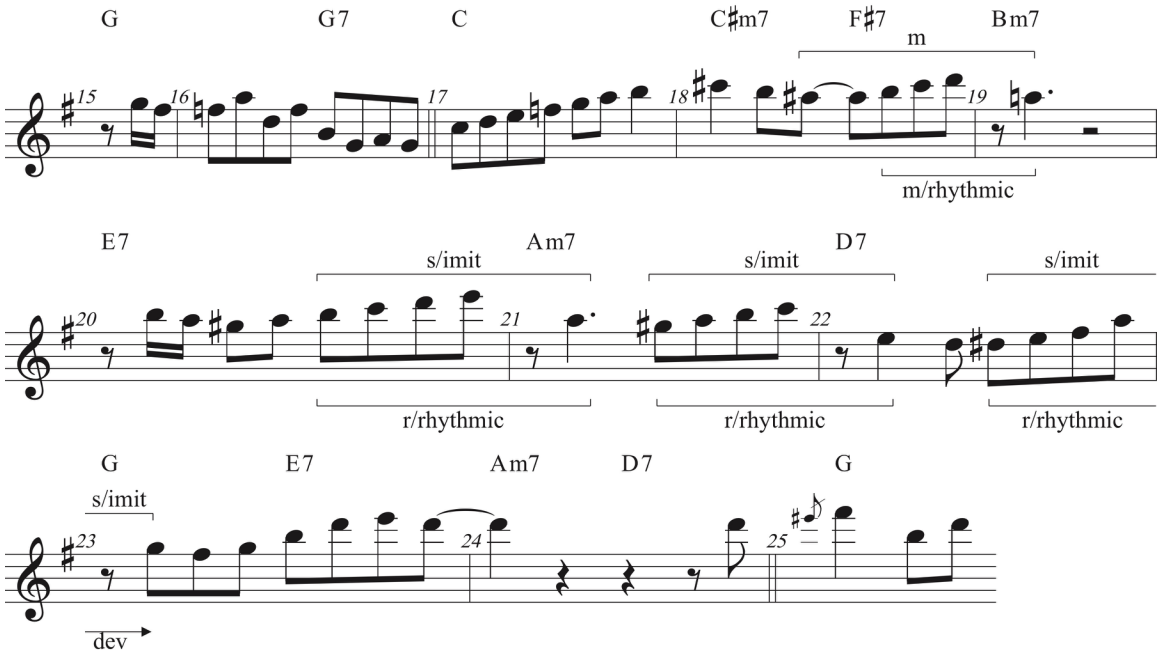

Figure 17. “Line for Lyons,” 1957, mm. 15–25

6 July 1958, Newport. Mulligan, Art Farmer (trpt), Bill Crow (b), Dave Bailey (d)

Many of the motives from Mulligan’s solo from the 1958 Newport Jazz Festival can be classified as conventional. Through performance practice including distinctive articulation and register, however, Mulligan makes the conventional figures more characteristic.

The opening motive is a five-note symmetric chromatic figure (“m”). In contour, register, interval content, and its sinuous nature it is similar to his treatment of the bridge on the April 1956 performance. In both cases Mulligan takes a small figure—a half step—and weaves it into a larger motivic element, rather in the way he uses the whole step pairs in mm. a–4, 1956 and mm. a–2, 1957 as a motivic basis. In turn, all of these passages have a connection to mm. 2–4 of the head, in which pairs of small (three-note)

elements are combined, functioning both as motivic elements on their own and as part of larger motives. Mulligan plays the five-note motive three times, adding intervening material the third time, facilitating transfer of the motive to a lower register.

In contrast to the linear opening figure, the rest of the sequenced motives in this one-chorus solo are arpeggiated. The first of these ("m2") appears in m. 8. Mulligan arpeggiates up from G♯5 to F♯6 and back down again in m. 9. The motive is sequenced down one step in m. 10. The element that makes this motive more characteristic is Mulligan's use of a short articulation on the downward arpeggiation. A short note at the start or in the midst of a moving line is not typical jazz articulation, and its inclusion here makes the conventional motive more personal. The extreme high register also makes this motive stand out. The top note, F♯6, in fact, is one half-step above the natural range of the baritone saxophone, and is considered an altissimo note requiring a non-standard fingering.[69]

The next passage containing sequence is mm. 11–12. The measures appear to be conventional change-running, but a closer view reveals that Mulligan is using ascending triads to structure his solo at this point. The sequence is imitative rather than exact, as the first instance of the motive includes an interpolated extra note and the inversion changes on the third statement.[70]

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69. Michael Segell discusses the evolution of the altissimo register, including the information that the first instruments built by Adolphe Sax included a mechanism to facilitate playing altissimo notes without the player having to use non-standard fingerings. Michael Segell, *The Devil's Horn: The Story of the Saxophone, From Noisy Novelty to King of Cool* (New York: Farrar, Straus, and Giroux, 2005), 238–239.

70. The G♯ added to the initial four-note motive in m. 11 and the B that follows the second four-note motive serve a purpose; they allow for a triadic motive to be placed

The ascending gesture (“m3”) starts in m. 11 with an four-note motive that can be interpreted either as a second inversion G♯ minor triad with an added seventh or a first inversion B triad with an added sixth. The local harmony is G♯m7, lending support to the first analysis. The second half of the measure, however, features an ascending first inversion C♯ major triad and in that context the first half of the measure is best analyzed as B6. The first half of m. 12 features an ascending A major triad in root position.

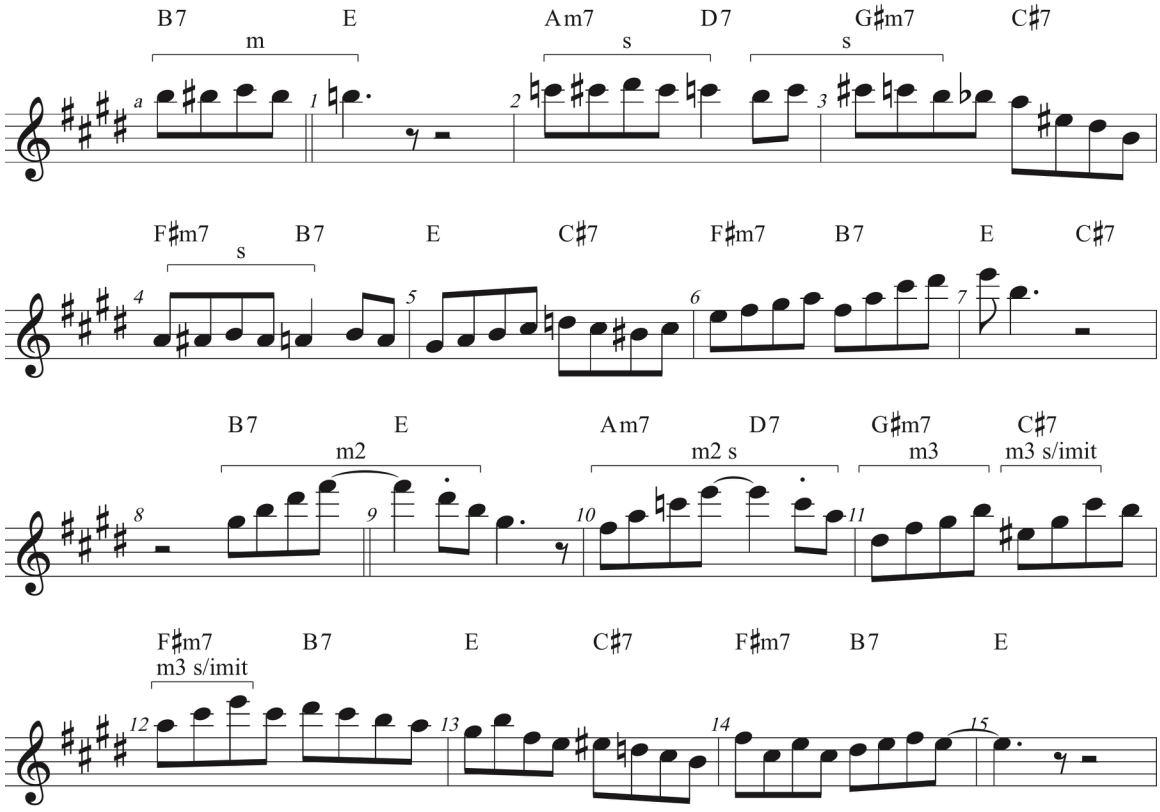

Figure 18. “Line for Lyons,” 1958, mm. a–15

on the beat each time.

Mulligan begins the bridge with a reference to the composed melody, with the slight change of a raised ninth on E♭7 in m. 18 instead of the flatted ninth that is heard in the original melody in that spot. Even with the substitution of the raised ninth for the flatted ninth, it is clear that Mulligan is recalling the composed melody, a possible indication that the composed melody of a tune is always present at some level in his mind as he improvises over it.

He returns to triads in m. 20 ("m"). Here he eliminates the extra note he added in mm. 11–12, giving this triadic passage emphasis through hemiola.[71] It is also highlighted through its placement in the uppermost register of the instrument. Mulligan appears to begin another set of triads in m. 22 but after the first beat moves into a new idea.

The final triadic sequence in this solo occurs in m. 28 with a pair of descending first inversion triads ("m2"). What makes this sequence notable is its chromaticism. Mulligan's use of chromatics tends to be restricted to passing or neighbor tones, or notes altered to accommodate local harmony, particularly the third of an applied dominant (as in mm. 11 and 20, above). In this situation he places a first inversion C♯ minor triad over F♯m7 on the first two beats, resulting in the fifth, the ninth, and the flatted seventh of the chord. The chord changes to B7 on the third beat of the measure and it might be expected that Mulligan sequence the passage down diatonically a whole step, for a first inversion B major triad. Instead, he sequences the entire triad chromatically, playing an enharmonic C minor triad over B7, sounding the flatted ninth, the flatted thirteenth (or enharmonic raised fifth), and third. Mulligan discontinues the sequence after m. 28 but he does begin

71. See Appendix A.3, Figure 68, for the implied meter of mm. 20–22.

m. 29 on a B, which would be the next top note of another chromatically sequenced triad. There is a register change in m. 29, however, making a connection between that measure's B4 and the preceding measure's C♯6-C6 descent subject to speculation.

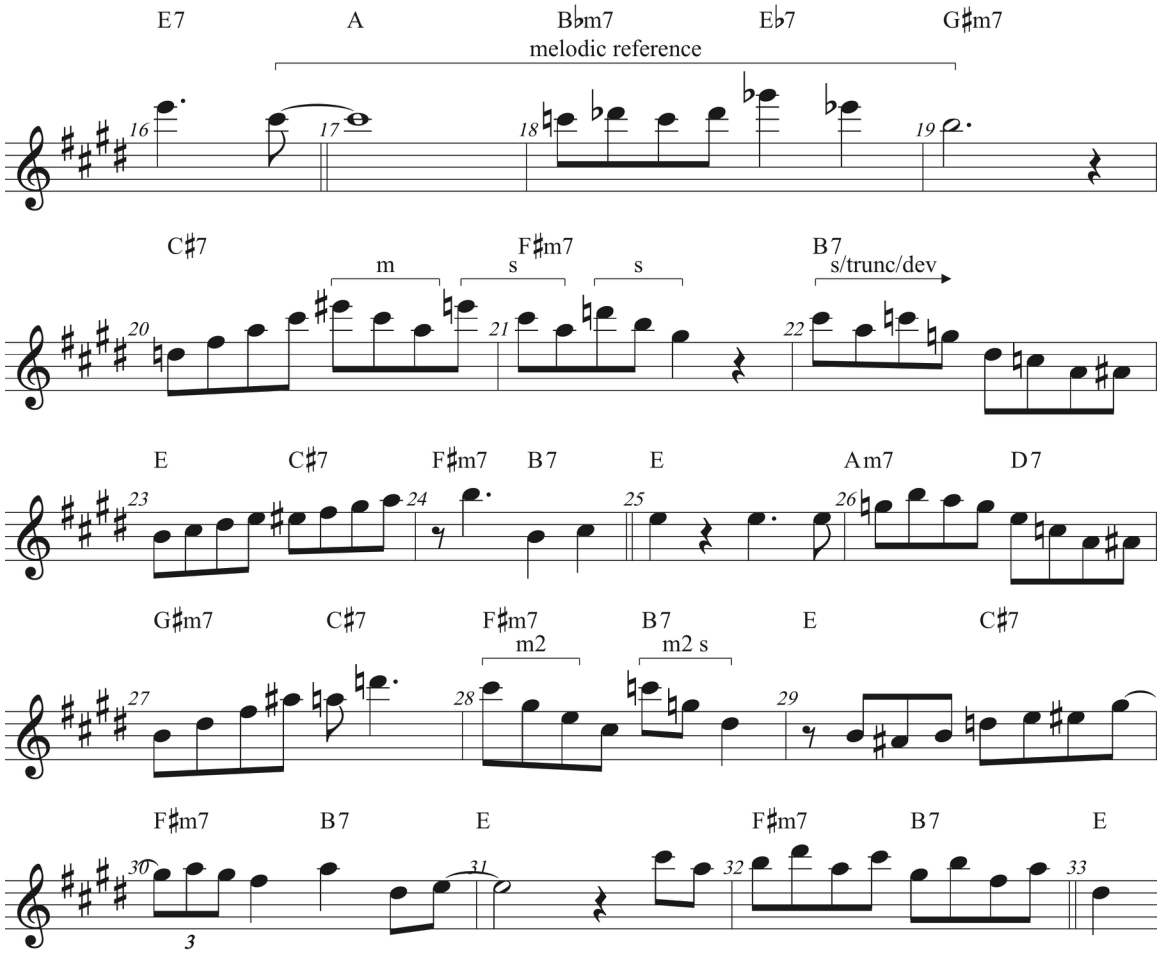

Figure 19. "Line for Lyons," 1958, mm. 16–33

Mulligan's use of repetition and sequence evolves over the course of the 1950s from the simple sequences of his first solo on "Line for Lyons" to the more complex sequences of later solos. It continues to evolve over the next decades as he begins to work with motives in more sophisticated, often subtle ways, creating longer sequences, embedded sequences, and "hidden" sequences in which seemingly disparate elements are, on closer examination, revealed to be connected. Yet even though the sequences might be more complex, less overt, his essential concept remains consistent, with repetition and sequence, significant aspects of the head, also playing important roles in his solos on "Line for Lyons."

Solos from the 1960s

In the early 1960s Mulligan's professional focus shifted from small group to his Concert Jazz Band, a thirteen-piece ensemble.[72] He continued to tour and perform with his quartet, but from 1960 through 1964 most of the recordings released by Mulligan were of the large ensemble. And while many of the arrangements written for the Concert Jazz Band were of earlier Mulligan compositions, the discography compiled by Perier, Dugelay, and Hallqvist indicates that "Line for Lyons" was not part of the Concert Jazz Band's repertory.[73] Later in the decade Gerry Mulligan toured and recorded with Dave Brubeck's trio for several years.[74] While some Mulligan originals were regularly performed in concert by Mulligan and the Brubeck trio, "Line for Lyons" was not one of the selections recorded by that quartet. In fact, the discography lists only six performances or recordings of "Line for Lyons" during the 1960s.[75] Of those, only two were released, and those are included here.

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72. See Carucci, "Concert Jazz Band," 27, for description of instrumentation and style.

73. Mulligan did write a large ensemble arrangement of "Line for Lyons" at some point, as seen in concert footage from 1982, but "Line for Lyons" was not part of the Concert Jazz Band's repertory in the 1960s. Gerry Mulligan, "Line for Lyons," *The Gerry Mulligan Big Band—DanHaag 1982—Pt.1*, recorded 16 July 1982, North Sea Jazz Festival, Den Haag, Holland, accessed 26 January 2020, https://vimeo.com/169589494, 00:07, streaming video.

74. Carucci, "Concert Jazz Band," 86.

75. Many of the quartet performances listed do not include the titles of the compositions. If "Line for Lyons" was played on any of those dates, recordings either do not exist or are unavailable.

25 June 1964, New York. Mulligan, Bob Brookmeyer (trb), Bill Crow (b), Dave Bailey (d)

Pedal point features prominently in this one-chorus solo. The first instance is in mm. 9–13, where the pitch classes B and E are the focal points. In m. 9 Mulligan leaps down from B5 to E5 and then up to E6 ("m"). He repeats the figure, altering it by replacing B5 with A5, reflecting the change from E to Am7. A pickup note C6 at the end of m. 10 leads into a reiteration of the opening intervals, with rhythmic alteration. A fourth statement starts on the last eighth note of m. 11, but instead of the E5-E6 leap that characterizes the first three presentations Mulligan returns to B5. The motive is circumscribed further in its last appearance, where Mulligan eliminates the upward leap completely as he shifts into a lower register.

Leading into the bridge Mulligan moves back into the upper register and returns to E6 as a significant note. The truncated motive from mm. 12–13 becomes the first motive ("m2") of a new melodically imitative, rhythmically exact sequence that begins in m. 15 with an E6-C♯6 pair. Emphasizing the importance of those pitch classes, Mulligan repeats them in m. 17 in augmentation in the same register and direction. In mm. 20–21 the notes are highlighted with the leap of a tenth from C♯5 to E6, followed by a return to C♯6 and movement into new content. Through these devices Mulligan is able to endow even a simple motive with personality and character.

Mulligan moves down from E6 to D♯6 to begin a new sequence in mm. 22, with a line that starts with a descending third followed by ascending scalar triplets and then descending eighths ("m3"), sequenced once. This is a simple, exact sequence, like the sequences from the head of "Line for Lyons" and his earlier solos on the tune, and serves

as an explicit example and reminder that sequence is an important aspect of Mulligan's sound concept for the composed melody and improvised solos for this piece.

Pedal point sequence returns in m. 29, with B4 acting as the pedal underneath a chromatic ascending line beginning in m. 29.[76] Mulligan ends the solo by returning to B4 at the end of m. 32 in a retrograde of the B4-G♯5 interval that started this pedal point sequence.

As noted, pedal point is a significant aspect of this solo. The pedal point sequences all incorporate the pitches B and E. In addition to their use in pedal point, those pitches are structurally significant throughout this entire chorus, beginning or ending most phrases. At certain points—mm. 15, 16–17, and 20–21, for example—they may not technically start or end the passage but they stand out through register change, duration, use of space, or syncopation.

76. In another example of compositional devices, the B4-G♯5 interval that begins the pedal point sequence in m. 29 is a retrograde of the figure that ends the phrase beginning in the middle of m. 25 and ending on beat 2 in m. 27. And the interval that begins the pedal point sequence in m. 29 is in turn used in retrograde to end the entire solo.

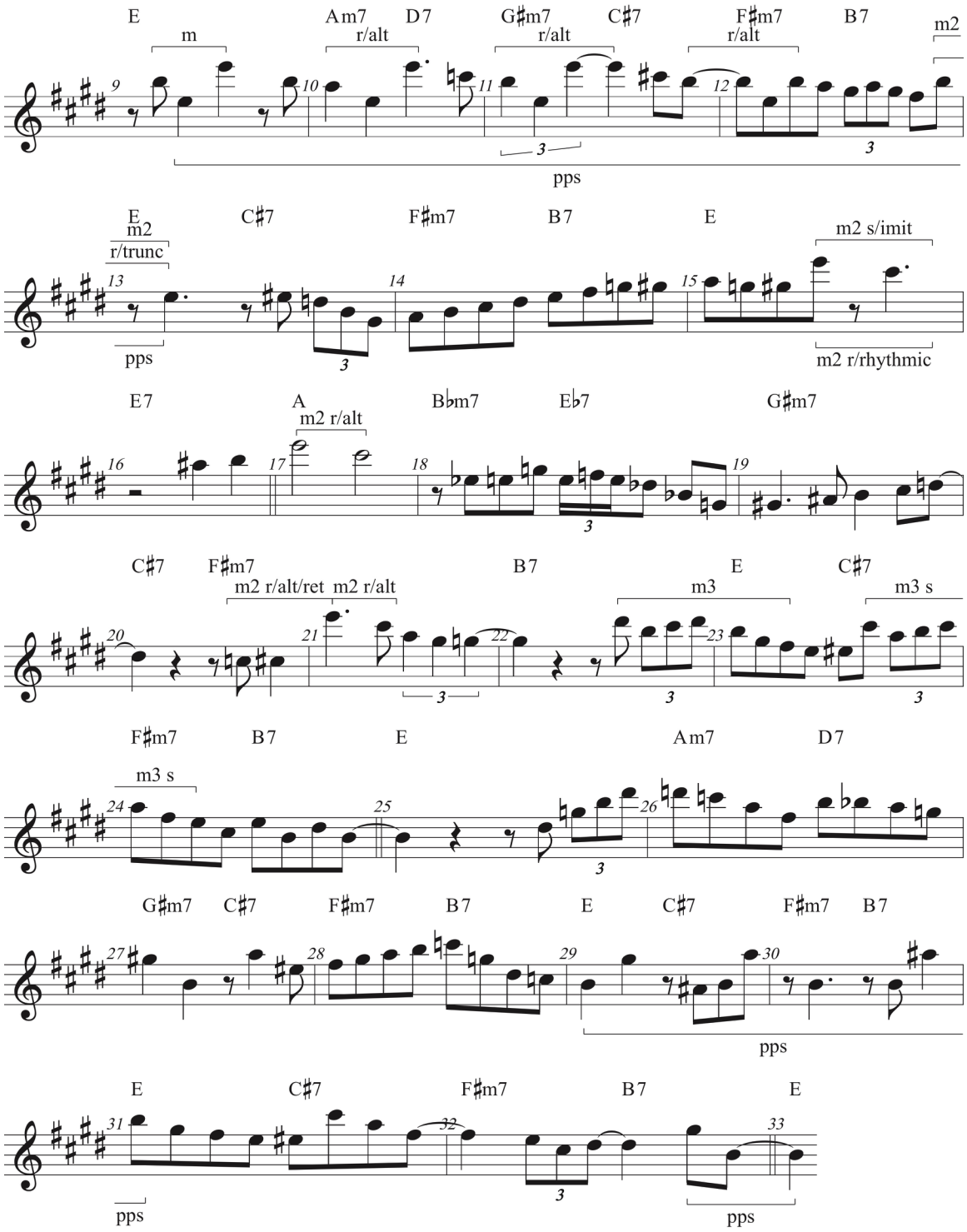

Figure 20. “Line for Lyons,” 1964, mm. 9–33

4 June 1969, New Orleans. Mulligan, Paul Desmond (as), Milt Hinton (b), Alan Dawson (d)

For this appearance Mulligan once again partnered with alto saxophonist Paul Desmond. As before when Mulligan and Desmond played "Line for Lyons" (27 August 1957) the key has been changed from G major (concert pitch) to B♭ major (concert pitch). Mulligan's single chorus from this performance uses far less sequence than the solos seen previously. The first use of sequence is not melodic, but rhythmic ("m"). The main feature of this sequence is a sustained note starting on the upbeat of 1 in mm. 1 and 3. There is an element of imitative sequence from the sustained note to end of the next measure, but rhythm is the defining characteristic of this passage.

The second sequential passage in this solo is an example of pedal point. It begins in m. 14 with a leap from D6 to E5 ("m2"), followed by a repetition expanding the interval from a minor seventh to a major seventh. In m. 15 Mulligan returns to D6 as the starting note of the figure but abandons the wide interval leap to outline a tonic triad. In the second half of m. 15 he transfers the pedal down an octave to D5, and moves from there chromatically to E5, creating repetition, with octave displacement and alteration, of the interval that started the pedal point sequence.

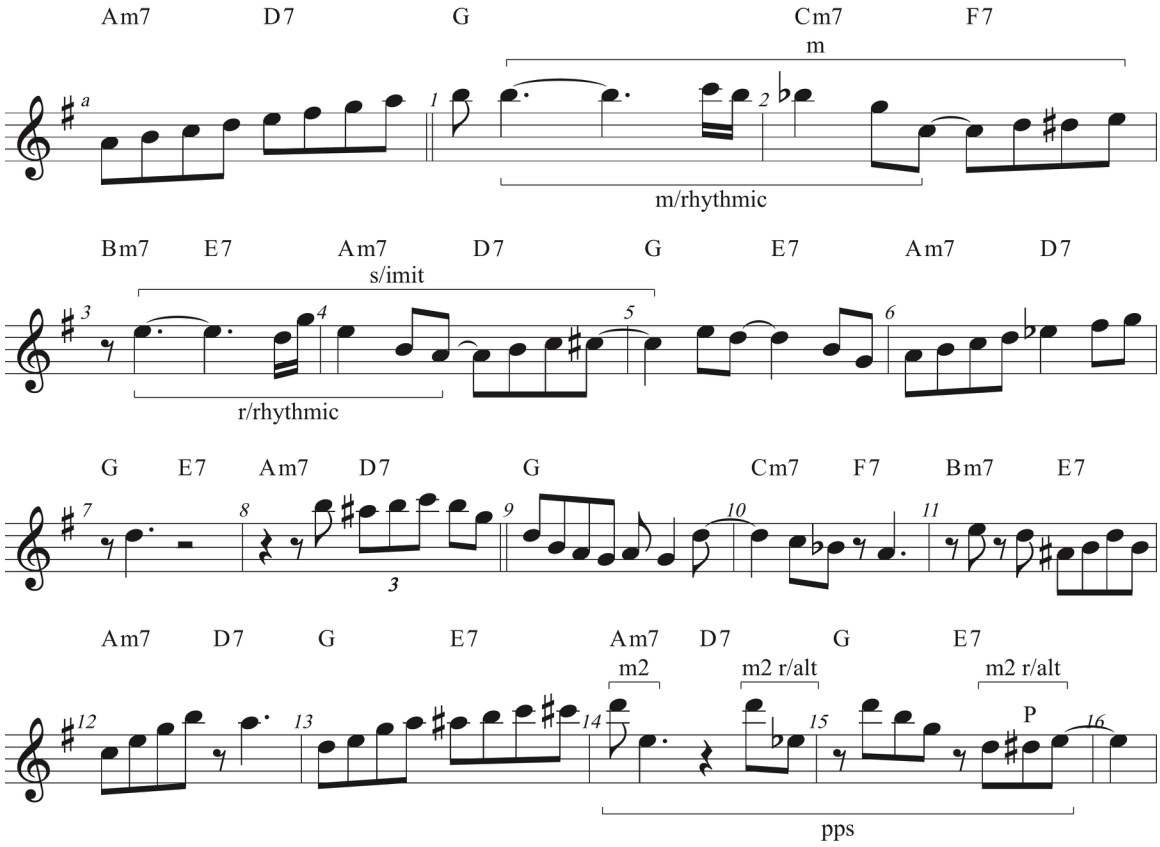

Figure 21. “Line for Lyons,” 1969, mm. a–16

With the exception of the octave and tenth leaps noted in the solo from 1964, the only other version in which wide intervals are featured is the 1957 solo, lending support to the theory that something about playing in G rather than E led Mulligan to use these intervals, either the sound of the key or the ease of playing certain passages in certain keys.

Repetition and sequence remain evident in Mulligan’s solos from the 1960s. Through the use of techniques such as retrograde, elision, and fragmentation, relationships between motives become less obvious, but no less effective.

Solos from the 1970s

26 August 1971, Chateauvallon. Mulligan, Gordon Beck (p), Ron Mathewson (b), Daniel Humair (d)

In the late 1960s Mulligan toured extensively with the Dave Brubeck Trio. From that time forward, Mulligan's preferred quartet format shifted from two horns with bass and drums to baritone saxophone with full rhythm section. This solo from 1971 is the first in this study to use piano in addition to bass and drums.

There are other ways in which this solo differs from those previously discussed. The majority of Mulligan's solos on "Line for Lyons" from the 1950s and 1960s are only one chorus, while this comprises two choruses.[77] This is also the first of Mulligan's solos to feature the use of double-time (sixteenth-note figures, heard on the bridge and last A section of the second chorus).

The first motivic element (m) is a focus on E4, B4, and E5, and features quarter notes instead of the eighth notes more typical of jazz improvisation. The solo from June 1964 also focuses on pitch classes B and E and incorporates quarter notes, but only for just over four bars, while here Mulligan uses the figure for the first three bars, then returns to it at the end of the first phrase for just over another five bars.[78]

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77. Of the eight solos analyzed in the preceding section, six last one chorus or less while only two extend for a second chorus.

78. I consider that the order of the pitches and the specific rhythmic content of each appearance of this motive is less important than the presences of all three pitches (E4, B4, and E5) and of quarter notes, so for this analysis all repetitions of the "m" motive are given a simple "r" designation, with the exception of m. 12–13, which is marked "r/alt" to reflect the absence of quarter notes in that statement.

The second motive ("m2") first occurs in m. 2. It consists of four eighth notes in the intervals descending fourth, ascending seventh, and descending second. This figure is far more angular, less melodic than the motives seen in the preceding solos, and is yet another way in which this solo is different than those preceding.[79] At the end of the first A section, in m. 8, Mulligan plays another angular four-note figure, again starting with a descending fourth and ending with a descending second, but with an ascending fifth in the middle instead of the ascending seventh heard in m. 2. He sequences the motive from m. 8 exactly in m. 10. He opens m. 11 with the notes that ended the motive in m. 10 (B5 and A5), follows them with an ascending fourth and a descending second. He embellishes this motivic statement, adding three more notes: a descending third, a descending second, and a descending fourth. The last phrase of the second A section starts in m. 13 with a complete whole-step upper neighbor on E5, a figure that is repeated two bars letter an octave higher. This three-note figure, which will become significant later in the solo, I consider related to motive m2 by way of the major second interval that closes most of the m2 statements, and have marked as a truncated imitative sequence of m2.

While only two of the m2 motives are related by exact sequence (mm. 8 and 10), there is a unity of sound throughout mm. 1–3 and 8–15 that can be explained by examining the pitch sets formed by motives m and m2 together. The two motives are almost always presented in succession, and the resulting pitch collections all fall into one

79. Jerome Klinkowitz identifies Mulligan's 1971 large ensemble recording "The Age of Steam" as a turning point in Mulligan's playing, describing Mulligan as "bridg[ing] the gap between modern jazz and fusion by drawing on qualities from each." Klinkowitz, 177. The use of relatively dissonant intervals instead of melodic material in this passage reflects trends in jazz in the second half of the twentieth century.

of two set classes: 3-9 and 5-23 (which includes two 3-9 subsets). Table 2 shows the pitch classes, prime forms, and set classes of the m+m2 statements.

Table 2. Pitch classes, prime forms, set classes, “Line for Lyons,” 1971, mm. 1–13

Measure number(s)	Pitch classes used	Prime form	Set class
1–2	{0, 2, 4, 9, E}	(02357)	5-23
8	{4, 6, E}	(027)	3-9
9–10	{4, 9, E}	(027)	3-9
11	{0, 2, 7, 9, E}	(02357)	5-23
12–13	{4, 6, E}	(027)	3-9

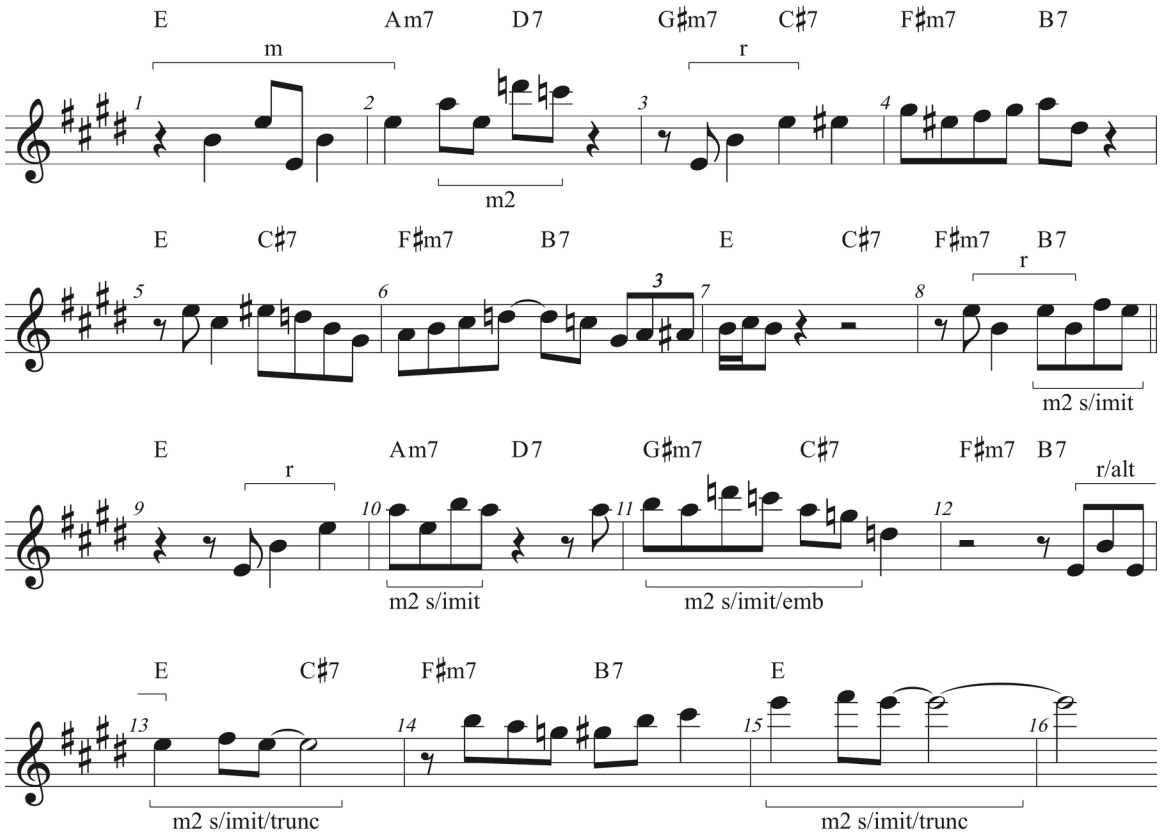

Figure 22. “Line for Lyons,” 1971, mm. 1–16

Mulligan introduces new material on the bridge, alluding to the head in mm. 17–21 by emphasizing the notes of the original composed melody—the thirds of A, G♯m7, and F♯m7—connected by a scalar, sequenced motive.[80] In the last A section of the first chorus the whole step complete neighbor figure first heard in m. 13 becomes the basis for a new sequence. Unlike many of Mulligan’s sequences, which tend to be based on a

80. See Appendix A.3, Figure 69. The 1958 solo also features explicit reference to the head on the bridge (see Figure 19). As mentioned previously, the recall of the head shows that even as he is improvising on a tune Mulligan maintains, on some level, an awareness of the original melody.

stepwise relationship (as in 1952, mm. 9–10 and 22–23; April 1956, mm. 34–36; et al.) or which are transposed to accommodate local harmony (e.g., August 1956, mm. 11–13; 1958, mm. 8–10), in this instance the motive is transposed around the circle of fifths, without taking into account the harmony of the moment. This results in an unexpected flatted ninth—an "avoid" note, one not generally emphasized on a minor seventh chord—on F♯m7 in m. 28.[81] Mulligan resolves the dissonance by altering the exact sequence from a whole step complete neighbor to a half step complete neighbor on the fourth statement, allowing G♮ on F♯m7 in m. 28 to voice lead into a consonant G♯ on E major in m. 29.

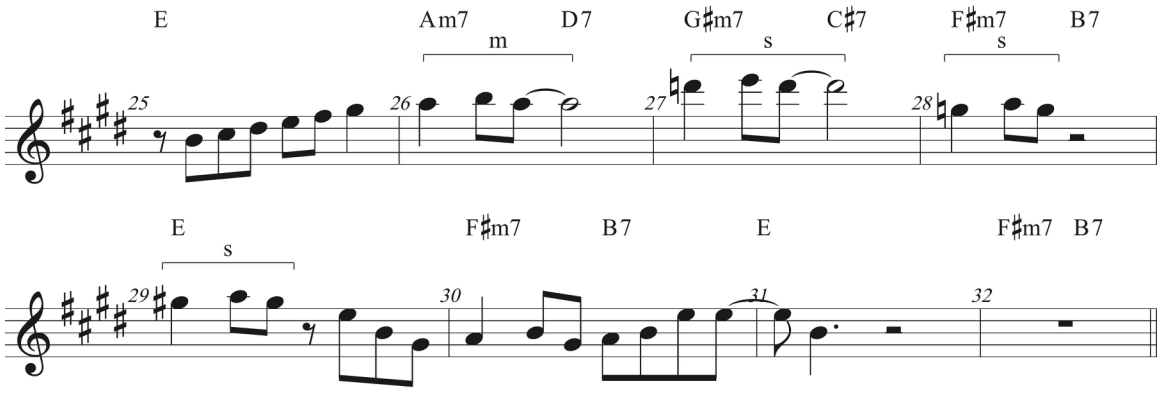

Figure 23. "Line for Lyons," 1971, mm. 25–32

81. For more information on avoid notes see Barrie Nettles and Richard Graf, *The Chord Scale Theory & Jazz Harmony*, (Rottenburg, Germany: Advance Music, 1997), 17, 26–27, 177. Such deliberate use of dissonance is not characteristic of Mulligan. I believe its presence here is, like the dissonant intervals in mm. 1–4 and 8–16, an example of Mulligan's interest in incorporating sounds from rock and fusion jazz in his music, as described by Jerome Klinkowitz (see note 79).

The second chorus begins with the seven-note motive used previously in m. 20, displaced by an octave. Mulligan plays the figure in mm. 33 and 35, following it in mm. 34 with a four-note descending figure. Like mm. 2–4 of the head, mm. 33–36 of this solo contain two smaller gestures (m and m2) that combine to form a single larger motive.[82] On the second chorus Mulligan plays double-time throughout the bridge, using sixteenth note figures instead of the eighth and quarter note figures seen in previous solos. Much of this double-time figuration is scalar, often with neighbor embellishment. The sixteenth note texture makes it difficult to create and develop melodic content, so the sequential activity in this passage is conventional, based on ascending triplets.[83]

The final use of sequence is brief and, again, conventional. In m. 61 Mulligan plays a descending stepwise three-note figure starting on D6, then sequences the figure three times. The passage features rhythmic retrograde, and an anapest figure that marks each three-note figure off as a discrete idea.[84]

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82. See Appendix A.3, Figure 70a. For other analyses of this passage see Appendix A.3, Figure 70b and Figure 70c. While the other analyses are valid, I feel that the four-note motive in mm. 34 and 36 receives so much emphasis through the change in register that it stands out as a discrete entity, in the same way the three-note figure in the opening of the composed melody does. Although the figures in this example are not motivically related to the composed melody, the concept and treatment of motivic elements is quite similar, indicating a consistency of approach in the composed melody and solo.

83. See Appendix A.3, Figure 71.

84. See Appendix A.3, Figure 72. The first two notes of m. 61, D♮ and C♮, are unusual choices over E major. The composed melody of "Line for Lyons" includes a D♮ on the third beat of the first bar in each A section, but it comes after the melody clearly establishes the harmony by arpeggiating an E major triad. There is no way to know whether this is yet another instance of Mulligan demonstrating the trend toward increased use of dissonance in jazz in the later twentieth-century, an intent to imply a tritone substitution of B♭ major, or unintentional.

4 November 1972, Berlin. Mulligan, Paul Desmond (as), Dave Brubeck (p), Jack Six (b), Alan Dawson (d)

This performance of "Line for Lyons" is unusual in its instrumentation in that it has both another horn in the front line and a three-piece rhythm section. Versions previously discussed have either a two-horn plus bass and drums format or a rhythm section of piano, bass, and drums, with only one horn. Paul Desmond is the other horn player, and, as in previous Mulligan-Desmond partnerships, "Line for Lyons" has been transposed to the key of B♭ major (concert pitch). Dave Brubeck shows a keen awareness of the sound of Mulligan's pianoless quartets and keeps his comping minimal, managing to capture the spirit of the pianoless ensembles while still adding to the creative spirit of the group.

Mulligan works with a single motive for most of the first ten bars of the solo ("m").[85] It is comprised of ascending notes that, like mm. 61–62 of the previous solo, could be analyzed as merely linear. But, again as in mm. 61–62 from 1971, Mulligan adds a rhythmic element to the motive to highlight the sequence. In this instance he ties the last note of each grouping over the barline or the middle of the bar. As with the preceding example, the groupings are set off as distinct elements, and the effect is heightened in following measures when fragments of the motive are reused.

85. I have identified the first instance as starting on the upbeat of 3 in m. 1, but it could be argued that the B4 anticipation on the upbeat of 2 is a fragment of the motive, the last note of a hypothetical rise from G4. A case could also be made for the motive beginning with B4 in m. 1, the tied note being the first note of the motive, rather than the last. But when the motive reappears in m. 4 it becomes apparent that the tied note belongs to the end of the preceding motive rather than the beginning of the following motive.

The number of notes in each grouping changes, but the tie remains constant with each statement, regardless of how many notes precede the tied note. This anticipation, a form of rhythmic repetition, is a defining characteristic of this motive and so for this example, with one exception, the motivic statements will be labeled simply "s," for sequence, rather than "s/alt," for an altered sequence. The exception is between mm. 5 and 6, where Mulligan adds an element of syncopation to the motive, making that statement markedly different from the others.

Mulligan leaves the rest of m. 3 and the first three eighth notes of m. 4 empty, then begins working with the motive again on the upbeat of 2 in m. 4. This time the tied note is preceded by four eighths, instead of two as in mm. 1–2. Mulligan leaves space again in m. 5, then begins the motive with a short note highlighting the use of syncopation. The last statement of the motive returns to the pattern of two eighth notes preceding the tied note but features a change in contour. This statement is not linear, as the tied note is a fifth below the preceding eighth note. I consider this to be an altered version of the current motive. The change in contour at the end of m. 6 signals the end of the phrase but $\hat{5}$ as the landing note leaves the passage unresolved.

As the pause on $\hat{5}$ indicates, Mulligan is not finished with this motive yet. He begins the next phrase on $\hat{1}$. The last note of this four-note passage is short, rather than tied, but the sense of anticipation still holds true. From the second half of m. 9 through the end of m. 10 Mulligan reprises mm. 1–2, but up a step. It is only at the end of m. 11 that Mulligan moves away from this motivic content into new material.

This passage, and mm. 1–15 of the 1971 solo, demonstrate the continuing evolution of Mulligan's approach. In the earliest solos on "Line for Lyons" Mulligan generally did not work with a single motive as long. Most of the longer sequential stretches of the earlier solos occur either in the first bars of the solo or on the bridge.[86] In both this solo and the previous, he works with a single idea for almost the entirety of the first half of a chorus.

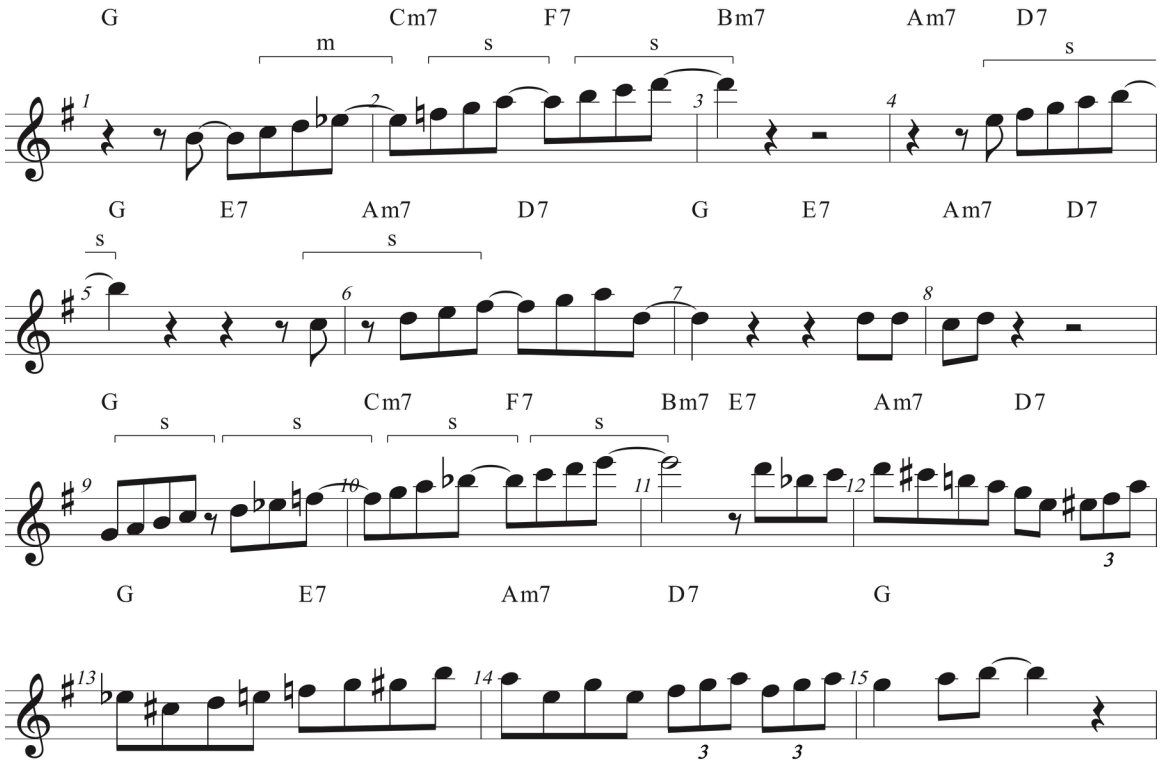

Figure 24. "Line for Lyons," 1972, mm. 1–15

86. Previous instances of extended work with a single motive are 1954, mm. 48–53; April 1956, mm. 18–23; August 1956, mm. a–3 and 48–56; and 1958, mm. a–4 .

The end of the first chorus includes pedal point sequence. In this case the pedal is actually two notes—a G5-E5 pair—with a lower line of A4-B4-A4 that leaves the phrase in a point of non-resolution, as in m. 6–7, above. But after a pause Mulligan uses the sequence as a pickup into the next chorus, altering the rhythm by eliminating the syncopation, and leaping down to A♯5 which then leads into B5 in m. 33 for a satisfying resolution.[87] The use of a dyad instead of a single note as the pedal point is yet another example of the evolution of Mulligan's concept for solos on "Line for Lyons," wherein repetition and sequence remain important aspects but are often extended, embellished, or otherwise made less obvious.

The second chorus of this solo includes surprisingly little use of repetition and sequence. It may be due in part to the occasional use of double-time in the first half of the chorus, the faster motion making it more difficult to create recognizable and malleable motives. It is not until the last phrase of the chorus that Mulligan uses those techniques, and when he does it is a return to the stepwise idea that opened the solo in the first measure. The motive is altered in several ways here, however. The note durations are not always constant as they were previously, but a mix of eighths and quarters. There is one instance of anticipation over the middle of the bar, but the consistent use of a tied note over the barline and the middle of the bar has been abandoned. There is, however, a consistency in the number of stepwise notes. Although I believe this figure is related to

87. See Appendix A.3, Figure 73.

the one at the beginning of the solo I have given it a new "m" designation in the example below rather than identifying it as an altered sequence.[88]

Mulligan plays just past the end of the chorus. At the end of m. 65—two bars into a third chorus—as if to remind the listener that this motivic passage is related to the one that he started with, he reiterates the motive from the end of m. 2 exactly. Because this is explicitly connected to the opening motive I have labeled it as "s (opening)" and placed the bracket underneath to indicate that the s designation does not apply to the motive immediately preceding, but to the motive first heard in the opening measures of the solo. From the final motivic statement Mulligan transitions from a solo voice to a contrapuntal role as the ensemble begins collaborative improvisation.

This is not the first instance of Mulligan returning to motivic material heard elsewhere in a solo but it is the first time he has repeated that material exactly.[89] It appears that even as he moves through his solos he is able to retain, at some level, an memory of material used previously in a solo, and is able to access that material to use again later in that solo. The reuse of material creates a sense of symmetry, as in AABA song form, where the first phrases of the piece are repeated again at the end, or as in sonata form, where the initial thematic material is repeated in recapitulation at the end of the movement, and shows Mulligan's awareness of compositional structure even in an

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88. In a practice known as side-slipping, Mulligan begins the last A section with an arpeggiated F♯ major triad (marked "side-slip" on Figure 25). Jerry Coker defines side-slipping as a process wherein the soloist "will slip into a key or chord that sharply contrasts with the given chord and then, after a brief time, slip back to the given harmony." Jerry Coker, *Listening to Jazz* (Englewood Cliffs, NJ: Prentice-Hall, 1978), 58.

89. See 1952, mm. a and 9 and 1956, mm. 45–46 and 61–62.

improvisational setting. Although the content of the opening motive is simple and conventional, Mulligan's manipulation of it through transposition, rhythmic alteration, and fragmentation allows him to develop and create a narrative thread that bookends the solo.

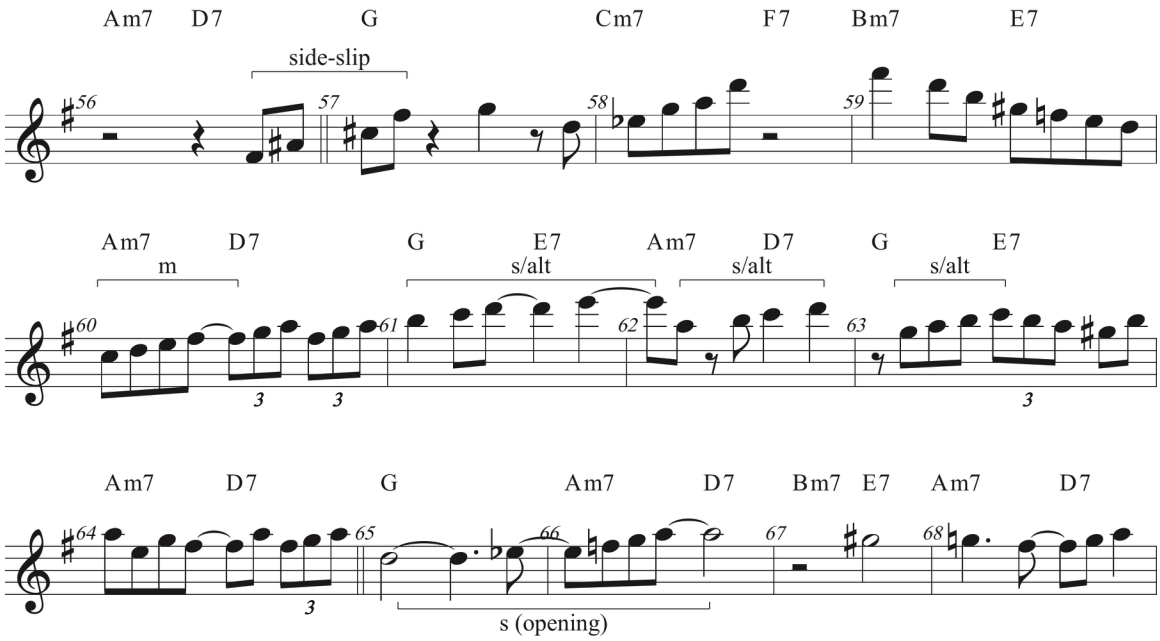

Figure 25. "Line for Lyons," 1972, mm. 56–68

24 November 1974, New York. Mulligan, Chet Baker (trpt), Bob James (p), John Scofield (g), Dave Samuels (vib/perc), Ron Carter (b), Harvey Mason (d)

For this performance Mulligan reunited with Chet Baker, with whom he had not played since the early 1950s. Their group had a two-person rhythm section of just bass and drums, but for this live concert at Carnegie Hall Mulligan opted to use the expanded rhythm section (keyboard, guitar, vibraphone/percussion, bass, and drums) from his 1971 fusion- and modern jazz-influenced recording *The Age of Steam*. Allusion is made to the

earlier quartet by having only the bass and drums play on the head and Baker's solo, with Mulligan providing support and counterpoint. A transition to Mulligan's newer concept is effected when Bob James enters on electric piano during Mulligan's solo, at first providing accompaniment but moving into a contrapuntal role. After solos by James, Scofield, and Samuels, followed by a chorus of collaborative improvisation from the whole group the pianoless quartet returns for the final statement of the head.

Mulligan combines several techniques—sequence, retrograde, and diminution—in the first two bars of his solo. He begins with G♯5 and C♯5 quarter notes on beats 1 and 3 of the first measure. In m. 2 he sequences the pitches down a half step, presents them in retrograde, and reduces the note durations to eighths, placing the pair on beat 1. He uses C5 of the new dyad as the basis for a brief pedal point sequence.

Mulligan returns to the pedal point concept at the beginning of the next A section, expanding on his idea of a single pedal point to use a two-note D♯5-E5 figure as the pedal. The pedal pair is transformed with each presentation. In the first instance the pedal is a quarter note D♯ followed by an eighth note E. In the next statement both notes have been reduced to eighth notes, and in the third iteration the eighth-note pair is repeated. In the final statement, on the second half of m. 11, the rhythm is restored to the original quarter-eighth pattern, but the pedal pair has been transferred up an octave. Mulligan also embellishes the top note of the pedal point sequence. In m. 9 the top note is B5. In m. 10 the top appears to be D6, but Mulligan adds a chromatic descent to C6—a half step above the B5 from m. 9. While he plays through the rest of m. 9, he leaps away from C6, highlighting it and creating a net effect of is a rise from B5 in m. 9 to C6 in m. 10. On the

next instance of the pedal point sequence, in m. 11, the top note is D♯6—a half step above D6 from m. 10. From the beginning of m. 9 through the third beat of m. 11 Mulligan has created a pedal point sequence that features two top-note pairs: B-C and D-D♯.[90]

The third beat of m. 11 is simultaneously the last note of one pedal point sequence and the first of an altered pedal point sequence, in which the pedal has been moved up an octave. The last note of that sequential event is C♯6, extending the B-C line an additional half step. This is a more complex version of pedal point sequence than seen in previous solos, in keeping with other expansion of motivic content as seen in the examples from 1971 and 1972.

The next instance of sequence is a reversion to a more linear, conventional model, a reminder that simple sequence is an important underlying structural element in Mulligan's solos on "Line for Lyons." A four-note scalar passage ("m2") is sequenced twice diatonically, retaining the same rhythmic content. Even this conventional sequence, however, is made more complex by combination with another compositional technique, as Mulligan finishes the sequence with an elided, retrograde version of the motive with an altered rhythm.

90. See Appendix A.3, Figure 74, for a graphic representation of the voice leading in mm. 9–11.

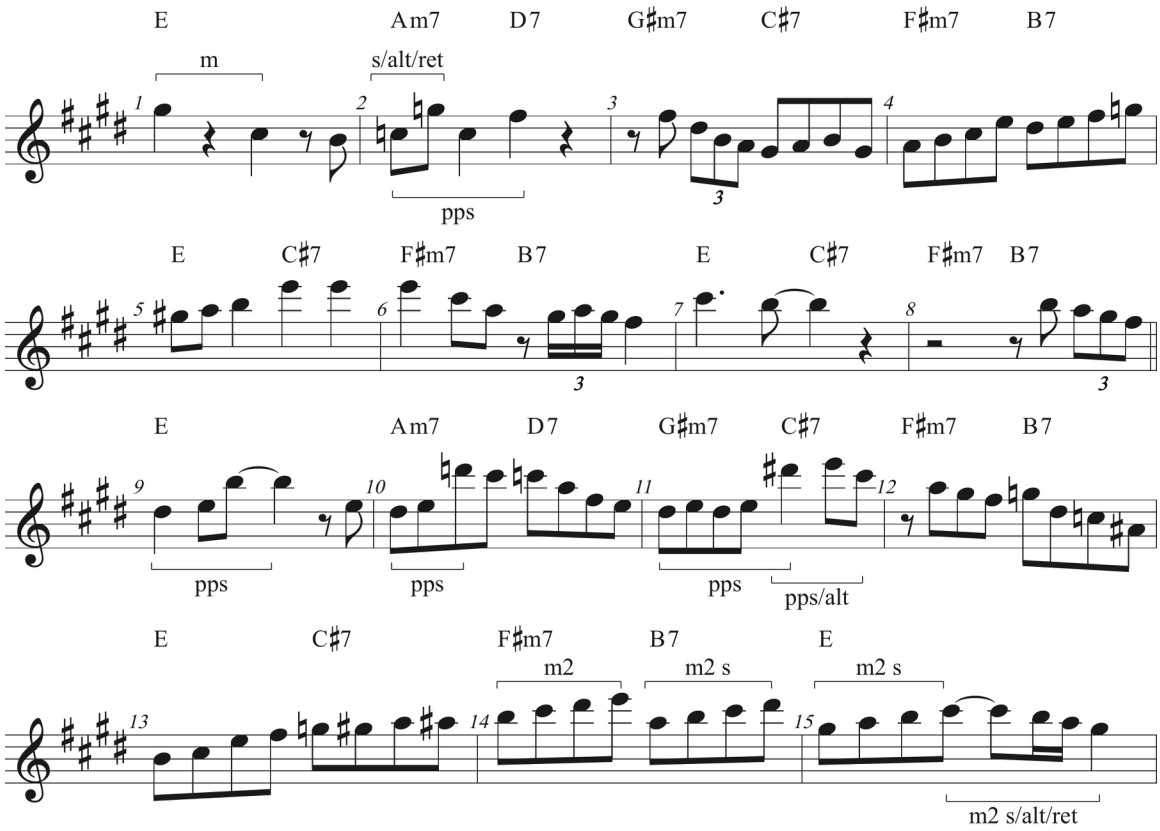

Figure 26. “Line for Lyons,” 1974, mm. 1–15

On the bridge of the first chorus Mulligan works with a whole-step figure, repeating and sequencing it, and altering the rhythm (“m”). The first pair, E♭6-D♭6, is played as eighth notes starting on beat 1 of m. 18, and is repeated on offbeats in the second half of the measure. Much of Mulligan’s sequencing is stepwise, but in m. 19 the figure is moved down an enharmonic perfect fourth, and is delivered primarily in quarter notes played on the beat. Mulligan reduces the interval of sequence in m. 20, when the motive is moved up a minor third, mimicking the rhythm of m. 18 but with the second note sustained and the repetition eliminated. In m. 21 the figure is played with a

combination of eighths and quarters, with some syncopation, and the interval of sequence is reduced further, from a minor third to a whole step. The pattern is broken in m. 22, when the contour is inverted, the whole step is changed into a half step, and the figure moves immediately into new content.

This passage stands as yet another example of the increasing complexity of Mulligan's process of motivic manipulation. He worked with a whole step complete neighbor motive in the 1971 solo, mm. 26–28, but the interval of sequence remained constant at a perfect fifth. This event contains fewer altered tensions than the 1971 example, which included in flatted fifths and flatted ninths on certain chords, but it is more sophisticated in its use of changing interval of sequence and rhythmic alteration.

The next example of sequence contains a level of alteration that renders it more imitative than exact. In mm. 25–26. Mulligan plays repeated quarter notes followed by a descending second inversion major triad arpeggio ("m2"). In the next measure he reverses the figure, starting and ending up a half step. The sequence is not exact in that the arpeggio in m. 26 is a root position major seventh chord instead of a first inversion major triad, but the overall effect is that of a figure played up a half step in retrograde.

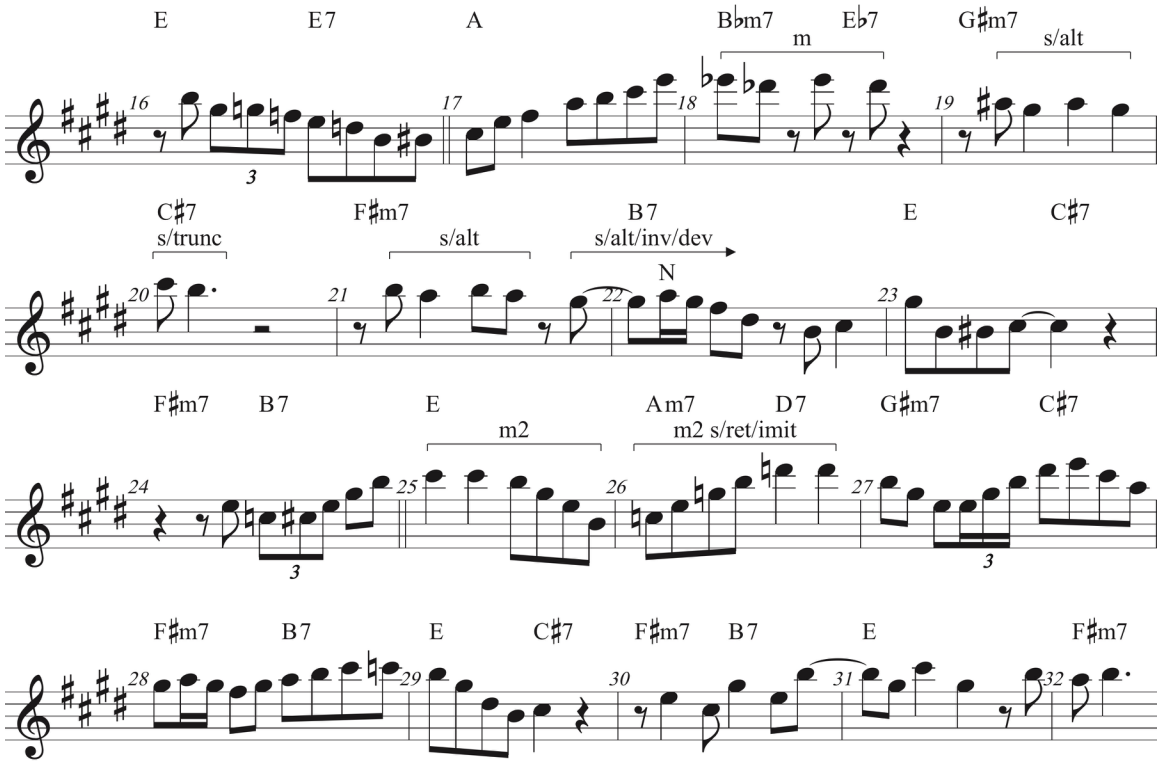

Figure 27. “Line for Lyons,” 1974, mm. 16–32

At first glance the motives in next sequence seem different enough to warrant classification as imitative. Closer examination reveals that the motives involved can in fact be defined as actual sequence, or sequence with alteration. The initial motive is a three-note stepwise descent at the start of a line of eighth notes. In m. 33 the descent is scalar and diatonic to the E major harmony of the moment. In m. 34 the descent is chromatic, seemingly non-diatonic. It may, however, be considered diatonic to the bebop mixolydian scale associated with D7, and so will be labeled as straight sequence rather than altered or imitative.[91] The third sequence starts on the last beat of m. 34, moving

91. The bebop mixolydian scale, also known as the bebop dominant scale, is a

from C♯6 to C6 as part of a C♯ bebop mixolydian scale. Rather than moving directly to B5 at the beginning of m. 35, however, Mulligan inserts a lower neighbor A♯5 before the expected B5. Even with the differences in terms of non-chromatic movement versus chromatic, and the presence of the lower neighbor interruption, a connection between these three motives is clear. Each is set off by a change in register and, in the case of the line starting on beat 4 of m. 34, hemiola.[92]

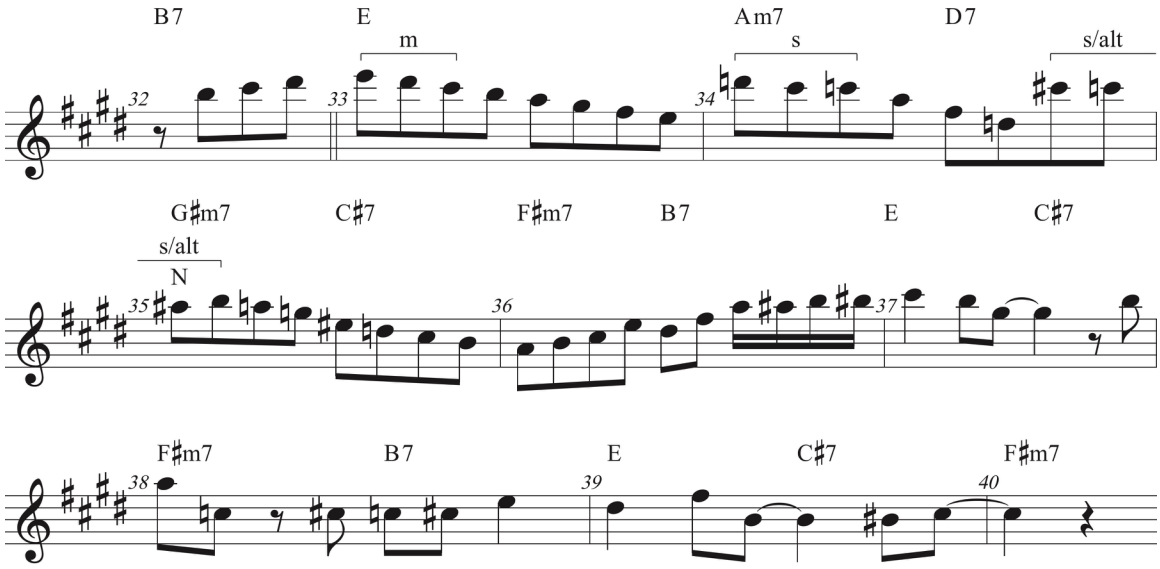

Figure 28. “Line for Lyons,” 1974, mm. 32–40

The last phrase of the solo begins with a passage that bears similarity to the previous example in terms of a descending upper line. In m. 57 a rising line leads to D♯6,

mixolydian scale with a chromatic passing tone between the flatted seventh scale degree and tonic. See Richard J. Lawn and Jeffrey L. Hellmer, *Jazz Theory and Practice* (Los Angeles: Alfred, 1996), 55; Levine, 173.

92. See Appendix A.3, Figure 75, for the implied meter of mm. 33–36.

followed by an escape tone E6 and a descent from C♯6, not unlike the descent that opens m. 33. Measure 58, beats 2–4, replicates the first three beats of m. 34 exactly. At the end of m. 34 the passing chromatic between C♯6 and B5 (delayed by the lower neighbor A♯) is replaced by a complete upper neighbor triplet embellishment to C♯6 in m. 59. The idea of a passing chromatic is retained in m. 59, however, with a B♭ passing tone on the last eighth of the measure.

As in mm. 33–35, the descending lines are preceded by a change in register, although in mm. 57–59 the change is not effected by the dramatic upward leaps that characterize mm. 33–35, but with sweeping arpeggiations (mm. 57 and 59) or a smaller leap (m. 58). Still, the shift to the upper register is emphasized. And, as in the earlier passage, Mulligan uses hemiola to bring out the top notes of each line.[93]

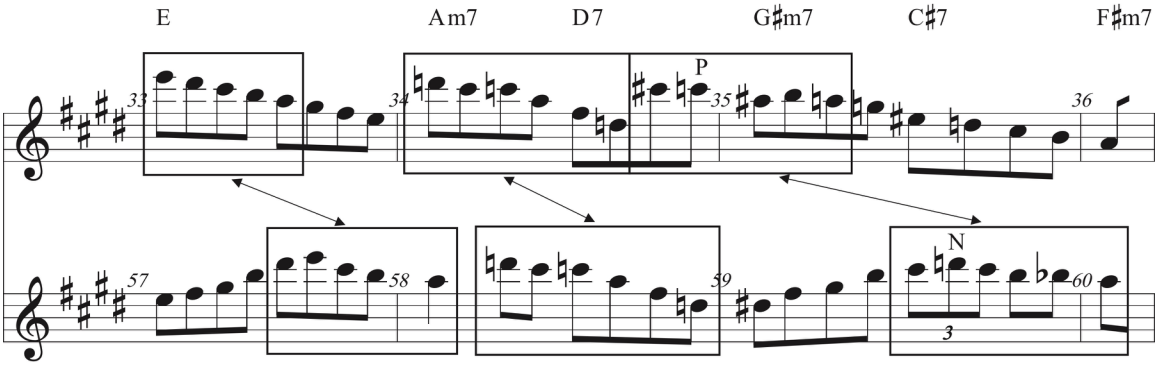

Figure 29. “Line for Lyons,” 1974, comparison of mm. 33–35 and 57–60

93. See Appendix A.3, Figure 76, for the implied meter of mm. 57–61.

Mulligan straddles two eras in this performance: that of the early days of his career, with the pianoless quartets and another horn player, and that of the late 1960s and early 1970s, with a full rhythm section and Mulligan handling the front line duties by himself. His use of repetition and sequence has evolved, for although he is still using the same techniques he did in the 1950s and 1960s, his manipulation of motives is subtler and more complex here. Jerome Klinkowitz notes the change, and is of the opinion that it was inspired by the augmented rhythm section used for *The Age of Steam*. He writes that "Mulligan's playing had undergone a transformation with his new group, showing less tendency to rephrase melodies and more affinity for building on rhythm."[94] Klinkowitz's theory may be upheld by comparing this solo to that of 1972 in Berlin. The Berlin concert featured a full rhythm section but, as noted, Brubeck on piano is careful to keep his accompaniment minimal, and Mulligan's playing more closely approximates that of the 1950s and 1960s than it does in this solo or the one from 1971.

29 December 1976, Paris. Mulligan, Tom Fay (p), Pierre Michelot (b), Bob Rosengarden (d)

This solo is unusual in that Mulligan improvises over three choruses rather than his customary one or two.[95] He also uses more sixteenth notes, although not until the third chorus and far fewer than in the 1971 Chateauvallon performance.

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94. Klinkowitz, 180.

95. Of the twenty versions of "Line for Lyons" transcribed for this study, one solo comprises half of a chorus, eight last for one chorus, eight span two choruses, and three solos consists of three choruses.

The first motive is simple in its surface details: a descending three-note scalar line beginning on third beat of m. 2, followed by a downward leap ("m"). Mulligan, however, uses several techniques to create a more complex imitative sequence. The most obvious change in each statement is a continual reduction in the interval of the downward leap. Between mm. 2 and 3 it comprises a sixth (G♯5-B4), while in m. 4 it is a fifth (F♯5-B4), and in m. 5 it is a fourth (E5-B4).[96] A more subtle alteration is a diminution in note length of the scalar portion. In m. 2 the three notes are presented as a quarter note triplet. In m. 3 a dotted quarter note is followed by two eighth notes, and in m. 4 it is further reduced to eighth-note triplets (with an upper neighbor A5 as the middle triplet) and an eighth note. Mulligan also uses syncopation, note duration, and space to highlight the downward leap and bring the sequence into sharper focus. The leaps to mm. 3 and 5 occur with syncopation over the bar line, and the B4 pedal is either sustained or followed by a rest in each measure.

This passage is also an example of pedal point sequence, with a significant difference between it and previous pedal point sequences. In the previous examples the pedal is the first note in the sequence. In this case the moving upper line B5-A5-G♯5 precedes the pedal B4.

Rhythmic repetition is used in m. 11 and 13 on a pair of descending intervals ("m2"). In m. 11 D6 falls to B5, and in m. 13 G♯5 drops to B4. The rhythm for each pair is a dotted quarter followed by an eighth tied to a note of longer duration. The figures

96. See 1974, mm. 18–21 for another example of reduction in the interval of sequence.

might not stand out were it not for the fact that Mulligan brings attention to the first pair by leaving several beats of space after it, a strategy that he has employed in other solos as well as in the head.[97]

Another point of connection between the two pairs is their complementary relationship: D-B is a minor third, and G♯-B is a major sixth, the latter interval the complement of the former. A final element of connection is the triplet on the last beat of m. 13, the first and last notes of which are D5 and B4, an octave below the pitches in m. 11. From the triplet Mulligan continues the line down to A4 and from there he continues into new material to bring the first half of the chorus to a close and move into the bridge.

97. See "Line for Lyons" head, mm. 2–4; 1964, mm. 15; and 1972, m. 5.

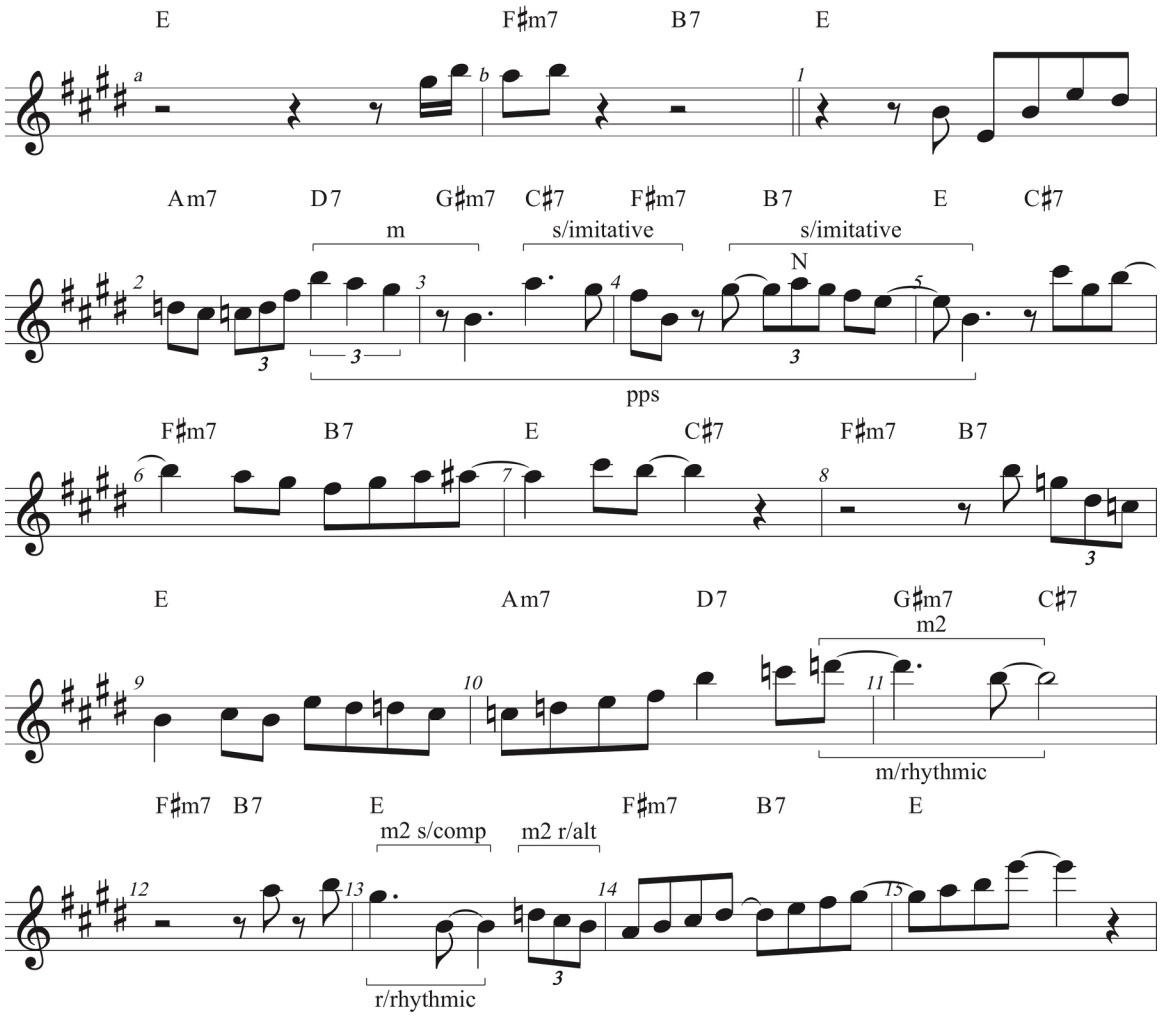

Figure 30. “Line for Lyons,” 1976, mm. a–15

At the end of the first chorus Mulligan works with another descending interval, in this case a third, in a passage that combines diatonic stepwise sequence with subtle rhythmic variation and elision. The first instance of the motive moves from up from G♯5 in m. 25 to A5 and then down to F♯5 in m. 26. He repeats this pattern—up a second, down a third—again in mm. 27 and 28. The number of attacks on the first note of the motive changes from three in m. 25 to none in m. 26–27 to two in mm. 27–28.

Regardless of the number of attacks, however, the duration of the first pitch remains three beats. The repetition of E5 in mm. 27–28, particularly in contrast to the sustained F♯5 in mm. 26–27, creates momentum into the close of this chorus.

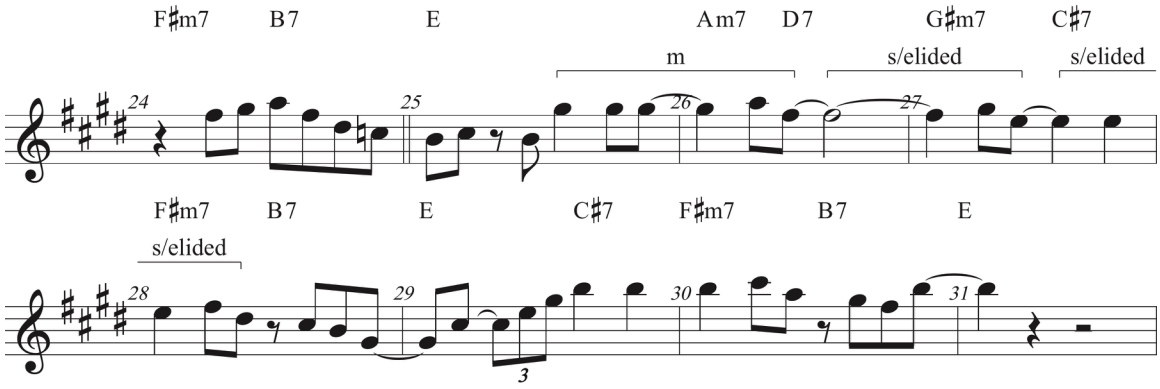

Figure 31. “Line for Lyons,” 1976, mm. 24–31

In the second chorus Mulligan shifts the focus from intervals to scalar content. He begins the chorus with a line that starts on B5, rises to E6, and falls to A5 at the beginning of m. 34, where the pattern begins again. It is sequenced again in m. 35, and while m. 36 does not constitute an exact sequence there is enough similarity in contour that it may be considered an imitative sequence with development. The ascending notes at the beginning of the motive are reminiscent of m. 14 in the 1974 solo, and m. 35 of this solo replicates m. 15 of that earlier solo melodically, although over different harmony. The note durations in this passage are primarily eighths, but Mulligan uses displacement and syncopation to embellish the simple sequence.

As he has done before, in the second A section Mulligan returns to a figure from the first A section ("m/trunc/alt").[98] He truncates the motive, keeping the ascending portion of the line, B5 to E6, although without the chromatic alteration on D6 used in m. 33 and eliminating the descent. In place of the descending notes he leaves space. The truncated motive is sequenced in m. 42, without any alterations in placement, note values, or rhythmic content. Mulligan introduces the gesture again on the last beat of m. 42, this time moving into several measures of running eighth notes.

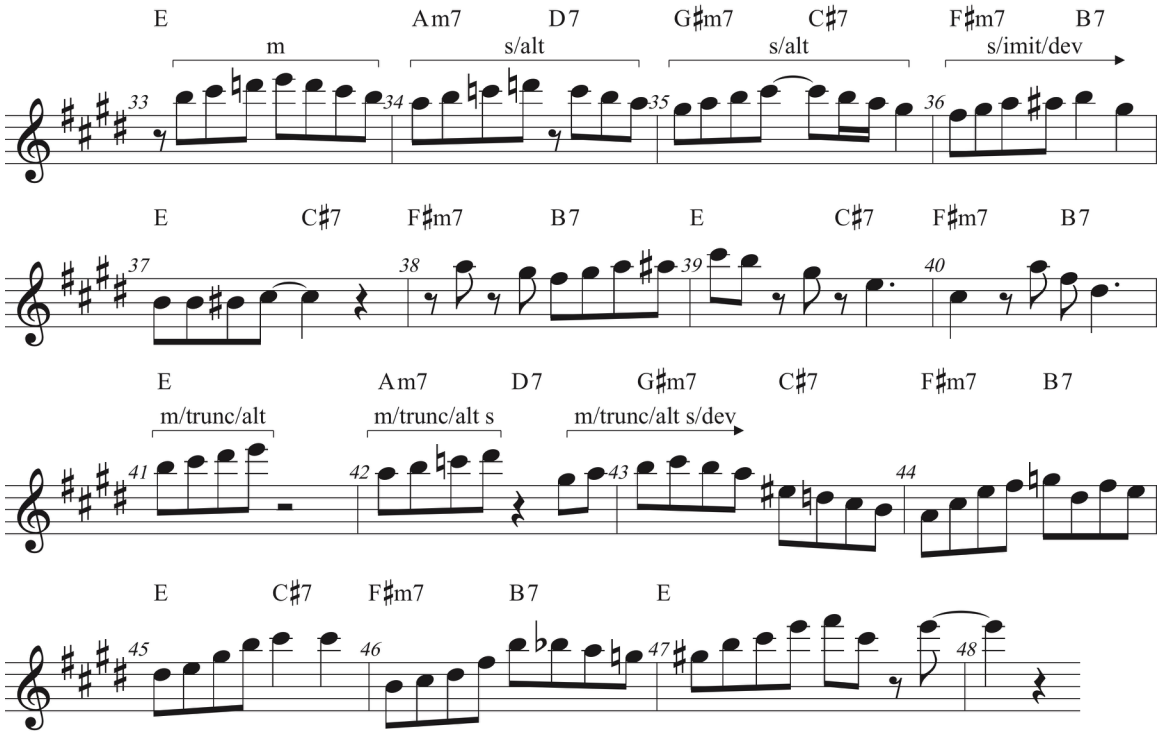

Figure 32. "Line for Lyons," 1976, mm. 41–43

98. See 1952, mm. a and 9.

The bridge features a combination of repetition and sequence, using a motive loosely based on the figure heard in mm. 2–5, inverted so that both the linear content and leap ascend. The motive is altered each time through use of the rhythmic devices diminution and syncopation and the addition of incomplete neighbor and passing tones.

The first presentation of the motive begins in the second half of m. 48, with E5-F♯5 quarter notes moving to C♯6 at the beginning of m. 49. The second presentation, beginning in the second half of m. 49 might be heard as repetition rather than sequence. The opening E5 in m. 49, however, is not the first note of the passage but an incomplete neighbor or pickup note. The motive is actually sequenced up a second, and the first note is F♯5 on beat 4 of m. 49. The harmony in m. 50 requires the interval of sequence to be a diminished second, creating enharmonic equivalence between the last notes of the first and second statements of the motive and reinforcing the sound of repetition.

The third statement of the motive, beginning in the second half of m. 50, at first appears to be sequenced down, starting on E♭5. But as in m. 49, the first note is a pickup, and the motive actually begins with E5 on beat 4 of m. 50. The line moves through a passing tone F5 to a repetition of F♯6 and C♯6 from mm. 48–49.

The fourth statement of the motive is separated from the third by non-related material, and repetition with alteration, the harmony of C♯7 requiring the chromatic alteration of F♯5 to E♯5. The fifth and final instance of the motive is sequenced, and can be analyzed two ways: the first considers B4 the starting note and B♯4 a passing tone, while the second identifies B4 as a pickup note with B♯4 the starting note of the motive. I believe the first analysis is stronger for two reasons. Melodically, B4-C♯5 constitutes a

whole step, which is in accord with the initial statement of the motive while rhythmically, B4 as the starting note places the figure on the upbeat of 3, echoing the motivic placement in mm. 49 and 50.

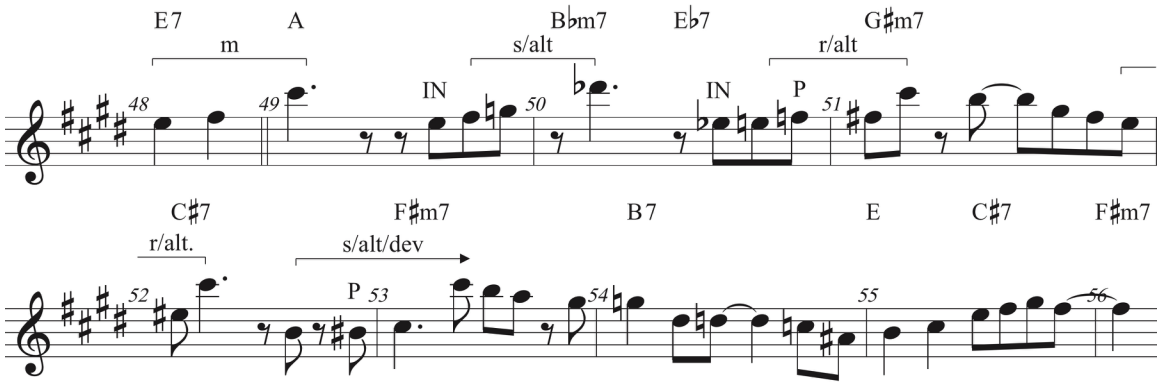

Figure 33. “Line for Lyons,” 1976, mm. 48–56

The third chorus begins with a return to the figure that closed the first chorus (mm. 25–28): an ascending step followed by a descending third (“m”). The rhythm and placement of each statement of the motive is different, but the motive stands out by register, repetition, and duration. In terms of register, the top notes of each pair of thirds are the highest notes of the passage. In the first two motivic statements the first note of the motive (B5 in m. 65–66 and G♯5 in m. 67–68) is stated three times, over two and a half beats for the first statement and three beats for the second statement. The third statement lacks the repetition that opens the first two and is composed of three eighth notes, eliding into a short moment of pedal point sequence.

The next instances of repetition and sequence are brief, but distinctive. Measures 75–76 feature register transfer through downward octave leaps (“m2”), the bottom note receiving emphasis through duration. The harmony moves down a whole step between m. 75 and m. 76 but the octaves are a fourth part, for different sonic effects in the two measures.

Mulligan moves from the octaves into a conventional passage of sequenced scalar lines in mm. 77–78 (“m3”). This passage is unusual in that the original motive includes an accented passing tone while the three sequenced motives do not. Due to the regularity of the sequenced motives I have identified them as unaltered sequences and have noted the passing tone in the initial motive.

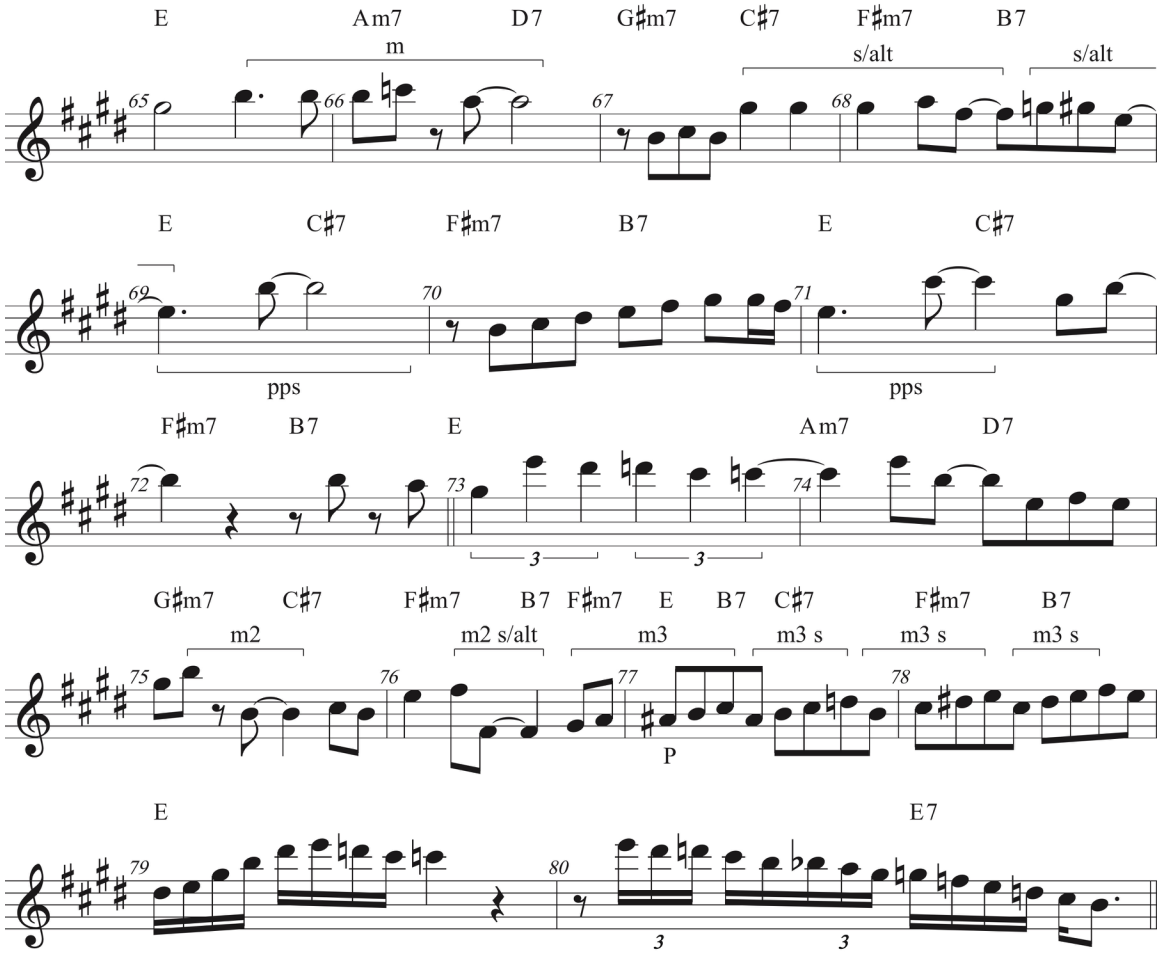

Figure 34. “Line for Lyons,” 1976, mm. 65–80

Mulligan moves into double-time activity in m. 79, and until the end of the bridge alternates double-time figures with running the changes rather than focusing on motivic activity. He returns to motivic development for the last A section of the chorus, using repetition and rhythmic imitation in the first half of the phrase and pedal point sequence in the second half.

The final A section begins with a pickup in m. 88 leading to an eighth-eighth-quarter note figure on the pitches G♯5-B5-C♯6 on the first two beats of m. 89. This anapest rhythm, not highly idiomatic to jazz improvisation, is one Mulligan has used in previous solos to striking effect.[99] The figure is repeated starting on beat 4 of m. 90. The pickup figure uses rhythmic repetition but reverses the order of the first two notes, with a chromatic alteration changing E5 to E♯5. Mulligan uses rhythmic repetition once more, starting on beat 4 of m. 90 but with a drastic change in contour, register, and direction. The first two of these motives are similar enough to be considered repetition with alteration, while the third will only be labeled as rhythmic repetition.

Although the third motivic presentation is differs from the first two in significant ways, it is connected to the second in two subtle ways. The pickup at the end of m. 92 moves chromatically from C♯5 to C5, echoing the chromaticism of the E♯5 to F♯5 in the pickup at the end of m. 90. The implication, at least from the last eighth of m. 91 until the chromaticism continues in m. 92, is that the motive has been transposed and inverted. The two statements are also connected by the pitch class C♯, which ends the first in the C6 register and begins the second in the C5 octave.[100]

The solos in this decade have shown increasing complexity in the manipulation of motives. By using devices such as rhythmic alteration, interpolation of new material, and embellishments such as neighbor and passing tones, the relationships between motives

99. See August 1956 and August 1971.

100. There is a brief element of hemiola in this passage, from the beginning of m. 90 through the first half of m. 91. See Appendix A.3, Figure 77, for the implied meter of mm. 88–93.

become less obvious on the surface. Measures 88–92 may be the most sophisticated yet in terms of creating connections that must be teased out.

Once again Mulligan closes a solo by returning to material from the beginning of the solo. He opened the solo in mm. 2–5 with a pedal point sequence in which the moving line descends from B5 over a B4 pedal. In beginning of the solo the weak metric placement of E5 followed by the leap to B4 results in an evaded descent. At the end of the solo the descent seems to end in m. 96 but is followed immediately by a moving line, with the actual completion of the descent taking place in m. 97. In a neat mirroring of the opening pedal point sequence, in which the pedal follows the moving line, in the closing passage the pedal precedes the moving line.[101]

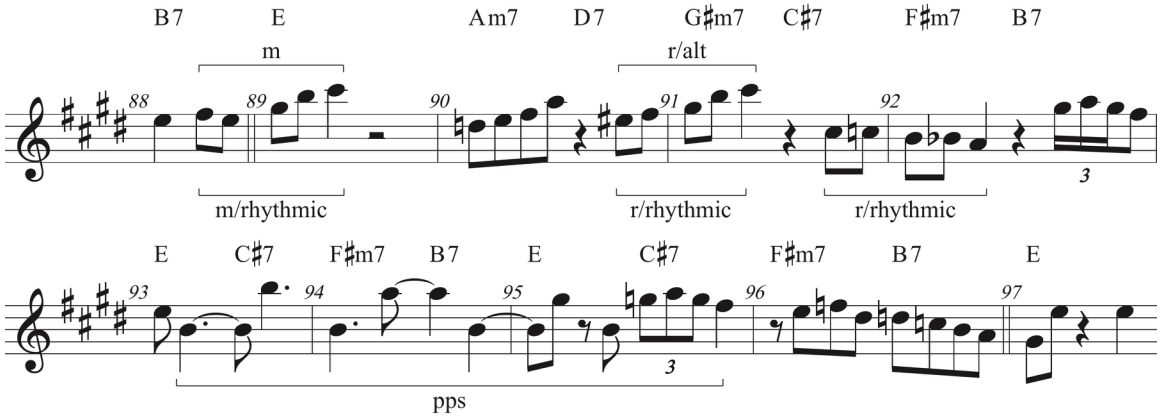

Figure 35. “Line for Lyons,” 1976, mm. 88–97

101. See Appendix A.3, Figure 78 and Figure 79 for graphic representations of the evaded and completed descents.

25 October 1977, New York. Mulligan, Lionel Hampton (vib), Hank Jones (p), George Duvivier (b), Grady Tate (d), Candido Camero (cga)

This performance contrasts the preceding in several ways. In style it more closely resembles the 1950s and 1960s versions of "Line for Lyons" than those recorded earlier in the 1970s. The ensemble is not one of Mulligan's touring or recording groups, but an all-star quintet apparently assembled for the purposes of this recording, and there is no indication whether Mulligan was involved with selecting the instrumentation, personnel, repertory, or performance aspects such as tempo and form.[102] The tempo is relatively slow, and each performer takes only a single chorus, although after their individual solos Mulligan and Hampton trade fours for one chorus. Mulligan does not include any double-time in his solos, and the repetition and sequence used is not complex.

There is no repetition or sequence within the first A section, but it is bookended by a three-note descending figure, first heard in the pickup measure and repeated, with a slight rhythmic variation, on the last bar of the phrase. This motive and how it is used recall Mulligan's first solo on "Line for Lyons," which starts on an inverted, retrograde version of this figure (a three-note gesture ascending from F♯5 to A5). Mulligan does not bookend with the same motive in the earlier solo, but with a sequenced version at the beginning of the next phrase.[103]

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102. This recording was produced by Lionel Hampton. It is unclear who was the actual leader on the date and who had creative control. The use of vibraphone in the front line and the inclusion of conga in the rhythm section, along with the slower tempo, would seem to indicate that Hampton, rather than Mulligan, made such decisions. My decision to include this in the study, even in the face of uncertain leadership, was based on Mulligan's top billing in the liner notes and on the fact that it fulfilled the criterion of small group instrumentation.

103. Mulligan follows the pickup measure with a figure that may or may not have

The next use of repetition is not melodic, but rhythmic. Mulligan begins the second phrase with a figure featuring an eighth-note triplet on the second beat, followed by four eighth notes. He repeats the rhythm twice, altering it the third time by truncating the motive and closing off the passage with a quarter note on the third beat.

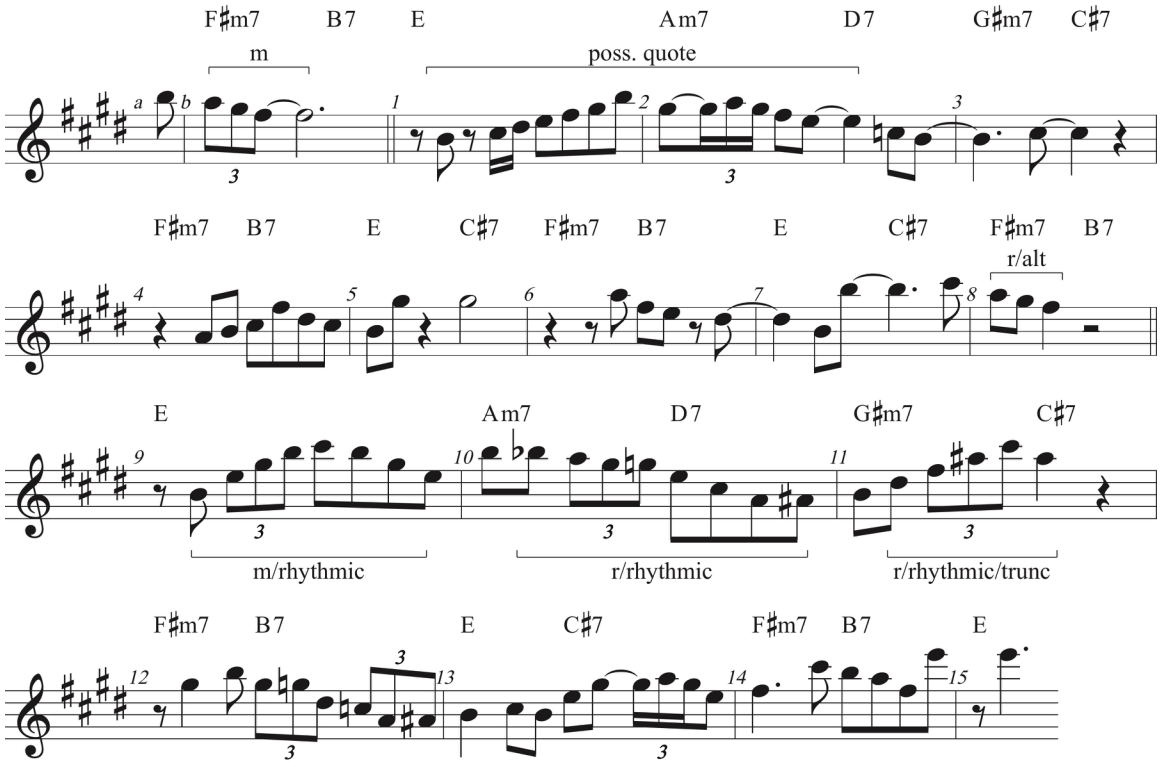

Figure 36. “Line for Lyons,” 10/1977, mm. a–15

been intended as a quote from “Polka Dots and Moonbeams” (marked “poss. quote” on Figure 36). The inclusion of quotes—identifiable motives from other compositions—is common practice among jazz musicians, but is not typical of Mulligan. Jerome Klinkowitz feels that Hampton influenced the performance of “Line for Lyons” to the degree that Mulligan’s solo has “little to do with his original writing of the song.” Klinkowitz, 193. Certainly the presence of the possible quote and the relatively sparing use of sequence make this solo somewhat anomalous.

As in other solos, the composed melody is referenced in the bridge.[104] There is no use of motivic manipulation until the final phrase of the solo, which begins with a simple melodic idea that Mulligan sequences once, altering the end of the figure to allow for development and movement into new material to finish the chorus. The figure is notable for its inclusion of a wide interval in the ascending leap and for the eighth-dotted quarter rhythm emphasized through repetition. The inclusion of a smaller motivic element—the rhythmic figure—within a larger motive mimics the head, in which smaller three-note gestures are motivic elements on their own, and combine to form larger motives.

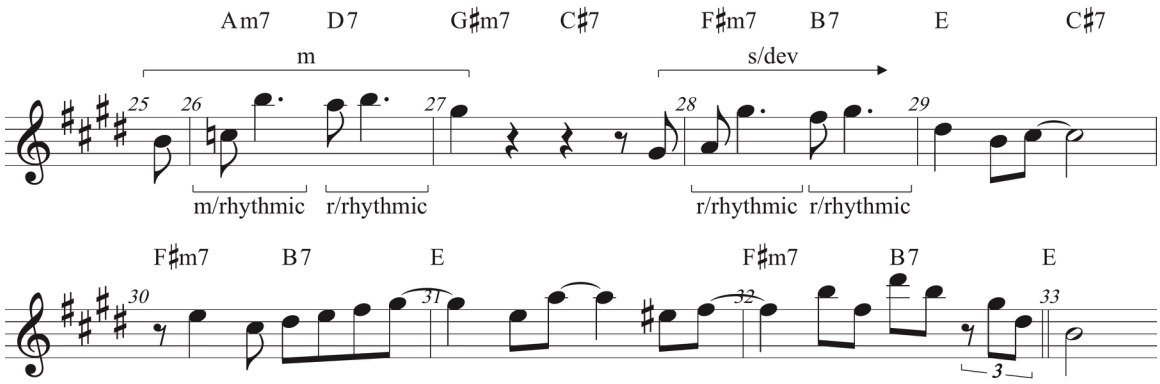

Figure 37. “Line for Lyons,” 10/1977, mm. 25–33

104. See Appendix A.3, Figure 80. See also Figure 19 and Figure 69.

22 November 1977, Stuttgart. Mulligan, Dave Samuels (vib), Tom Fay (p), Mike Santiago (g), George Duvivier (b), Bob Rosengarden (d)

This solo, recorded just a month after the previous one, is more in keeping with the others from the 1970s. Like those from 1971, 1972, and 1974 it comprises two choruses, and includes much characteristic Mulligan language.

The solo opens with a four-note scalar figure followed by a descending arpeggio ("m"). As in other solos from this era Mulligan chooses to alter the figure in subsequent presentations, making the sequence less obvious. In m. 2 he omits the first scalar note and moves the figure over by half a beat. By eliminating the syncopation between beats 2 and 3 he is able to maintain the placement of the last note of the motive on the upbeat of 3. In m. 3 he again uses eighth note displacement, this time in order to move the last note of the figure to beat 4.

Measure 15 features a series of swooping scalar motions connecting E6, D♯6, and C♯6 ("m2"). The contour resembles 1976, mm. 33–35, in inversion. Perhaps the most notable feature is the diminution in note values causing the line to surge forward into the transition to the bridge.

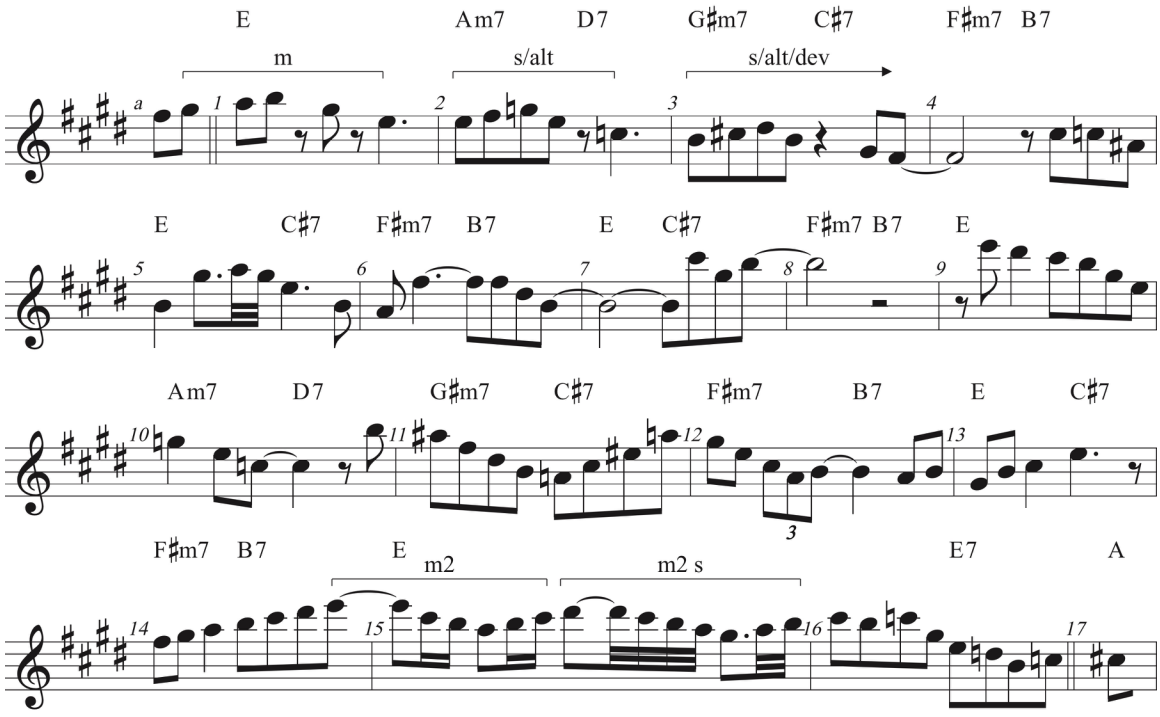

Figure 38. “Line for Lyons,” 11/1977, mm. a–17

On the bridge Mulligan references a motive from a previous solo, the whole-step gesture from the bridge in the 1974 solo (“m”). Unlike the earlier solo, where the sequences are presented without any intervening activity, here he interpolates material between the motive in m. 19 and its first sequence in m. 21, delaying and obscuring the sequence. The first two presentations of the motive are a whole step apart, typical for Mulligan. The third, however, is down a sixth, placing it in an entirely different register, unusual for Mulligan. Moreover, the first two motivic statements are diatonic, each coming to rest on the third of the chord.[105] In m. 22 Mulligan alters the figure, resulting in

105. B5 in m. 19 and A5 in m. 21 are notes from the head (marked “melodic reference” in Figure 39). Mulligan references the composed melody of the bridge in other

both the raised ninth and flatted ninth on B7. The shift in register and function adds complexity to the simple motive.

The last A section opens with altered repetition of a B5-E5 dyad ("m2"). Mulligan uses rhythmic repetition in mm. 25 and 27 in a broken arpeggiation of a tonic triad.[106] He closes the first chorus of the solo with a small motive ("m3"), otherwise unremarkable but given prominence by the emphatic articulation of the closing eighth note and the space that follows each iteration. He uses a similar figure to end his solo in the April 1956 performance, even starting the dotted quarter-eighth figures on the same pitches of B5 and C♯5.

solos as well. See Figure 19; also Appendix A.3, Figure 69, Figure 80, Figure 85, and Figure 87.

106. Since the dyad pairs are related conceptually by the broken arpeggiation they are marked "s" rather than "s/alt."

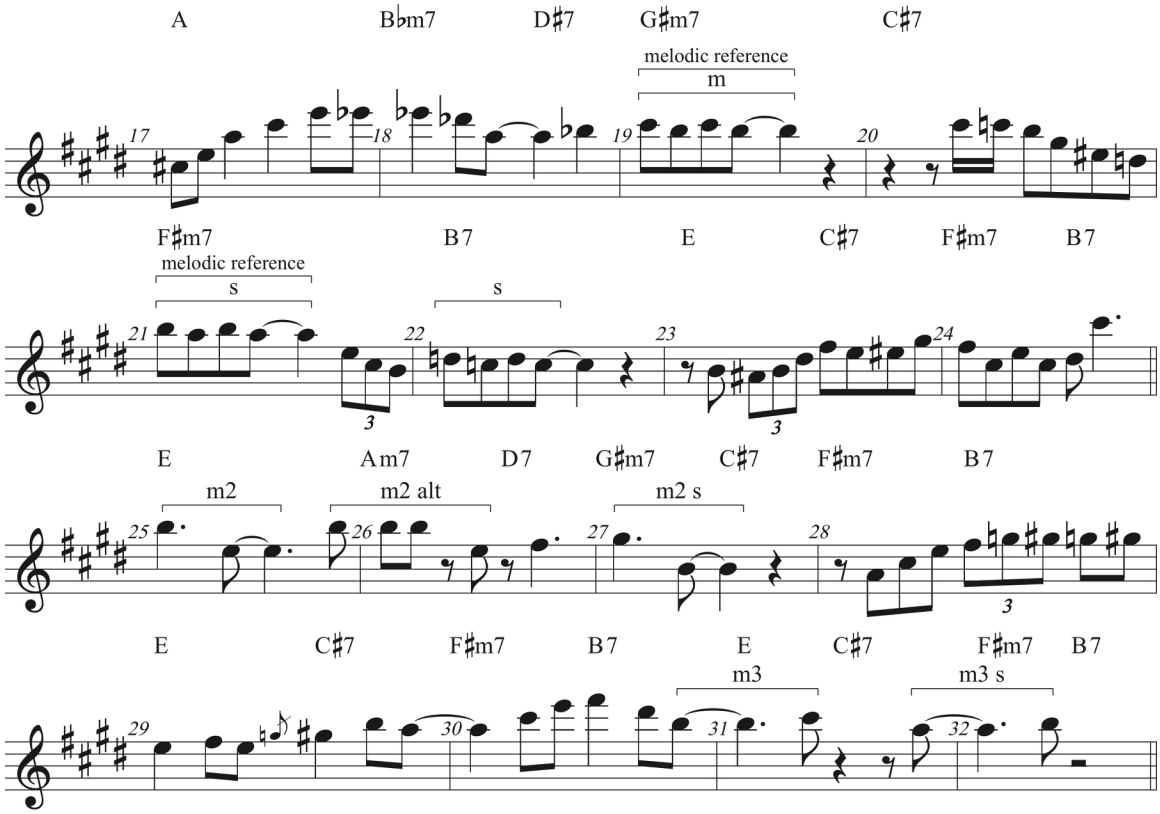

Figure 39. “Line for Lyons,” 11/1977, mm. 17–32

The second chorus begins with a figure featuring a leap down of a fourth followed by a descending step (“m”). The first note is a quarter, the second and third eighths, the third note tied into a dotted quarter or half. The sustained notes stand out in this passage, with otherwise consists largely of eighth-note lines, and serve to draw attention to the figure, making it a focal point of the phrase. As in other solos of this era Mulligan interpolates new material between the motivic statements, and in this case the span between the initial motive and the last presentation is such that it bookends the first phrase of the form.

The second phrase begins with a four-note descending arpeggio ("m2"). On the first sequence Mulligan adds embellishing passing tones between the first two notes, displacing the figure and eliminating the syncopation of the opening motive. He further alters the motive by adding a fifth note to the arpeggio, and continues from there into new material ("m3") in m. 43. He begins the arpeggiated figure again at the end of m. 44, in constant note values, and elides into a repetition of the m3 motive. By this time sequence has become more frequent than repetition in Mulligan's solos, and a separation between sequenced motives is not uncommon. The use of repetition with intervening material is unusual, which calls into question whether the arpeggio that begins at the end of m. 44 is intended to be a sequence of the earlier arpeggio or an embellishment of the m3 figure.[107]

107. The passage from the end of m. 44 through the end of m. 45 could also be a deliberate conflation of the two elements, or an unintentional combination.

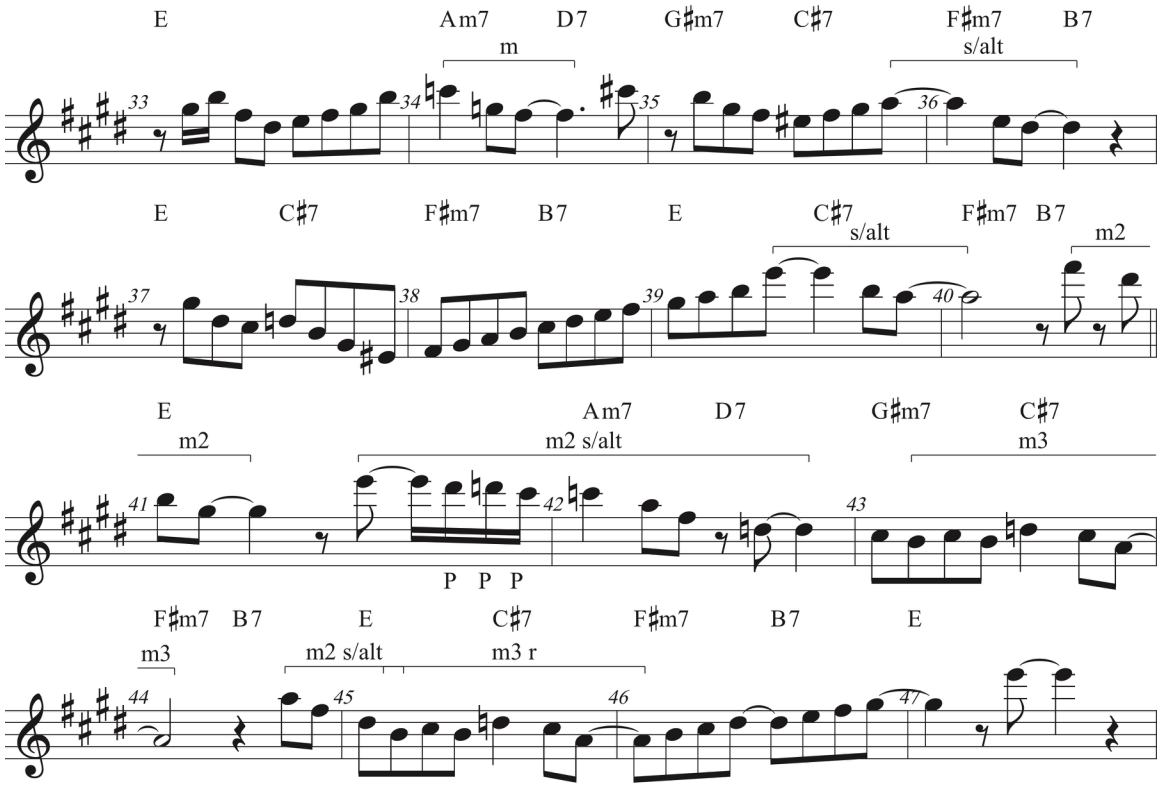

Figure 40. “Line for Lyons,” 11/1977, mm. 33–47

The last A section opens with a passage that combines repetition with alteration and pedal point sequence. The first gesture (“m”) places two quarter notes on G♯5 in the second half of m. 56 followed by a drop to a half note E5 in the first half of m. 57. The gesture is repeated in the second half of mm. 58 into the first half of m. 59 with G5 replacing G♯5. Another motivic element (“m2”) starts on the last beat of m. 58, with an eighth note B5 dropping to a sustained E5. This figure is repeated on the last beat of m. 59, with the upper note raised to C♯6.

In Mulligan’s pedal point sequences the moving line is generally linear, moving in a single direction. By that definition the m1 pair comprises one pedal point sequence

and the m2 pair another. But since a recurring element of Mulligan's 1970s solos is increased complexity in sequences, achieved by alteration and adding additional material between sequenced motives, I have chosen to identify this as a single complex pedal point sequence.

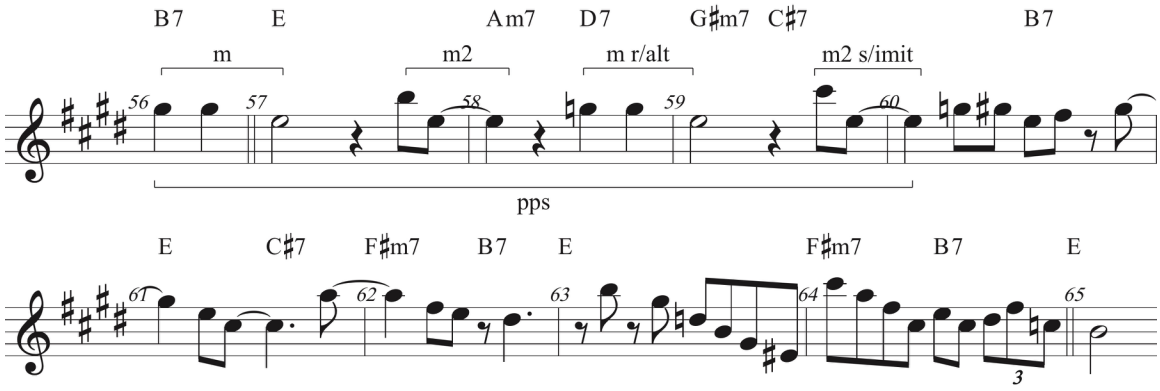

Figure 41. "Line for Lyons," 11/1977, mm. 56–65

The 1970s are a time of continued evolution for Mulligan. He incorporates elements of rock and fusion into his music, and expands his rhythm section to include not just piano, but on occasion guitar, vibraphone, or percussion as well. His improvisation concept evolves as well, continuing his trend toward more complex, less obvious use of repetition and sequence through employment of techniques such as including additional material between motivic statements, using alternating motives, and eliding sequences. Even as his improvisation becomes more complex, however, his solos still includes simple sequences, references to the melody, and other techniques brought forward from his earliest days of recording as a bandleader.

Solos from the 1980s

Mulligan toured extensively in the 1980s, performing with his quartet, the Concert Jazz Band, and with symphony orchestras. He continued to include "Line for Lyons" in his concerts with both the small and large groups, but I was only able to locate three small group performances. The first, recorded in 1980 in Stockholm, was released on DVD as *Gerry Mulligan Quartet in Sweden*. The second took place during a Concert Jazz Band performance: a breakout small group in the tradition of Benny Goodman's quartet, Artie Shaw's Gramercy Five, or Tommy Dorsey's Clambake Seven. The third performance was part of a New Year's Eve concert at a jazz club in Baltimore in 1985, broadcast on Maryland Public Television.

13 June 1980, Stockholm. Mulligan, Donn Trenner (p), Peter Axelsson (b), Ronnie Gardener (d)

This is the second of Mulligan's three three-chorus solos on "Line for Lyons." Like the first three-chorus solo (Paris 1976) it is from a live concert. Both this and the 1976 performances were recorded for broadcast, not for release as audio recordings, allowing Mulligan more freedom to expand than he might have felt on a time-constrained long-playing record.

For this concert Mulligan returned to a three-person rhythm section. According to the discography compiled by Perier et al., this was the only time he played with Peter Axelsson and Ronnie Gardener, and the first time he had played with Donn Trenner since 1952. Perhaps reverting to aspects of his improvisation practice during his earlier years playing in the quartet setting, or perhaps due to unfamiliarity with the playing styles of

the other band members, Mulligan reverts to simpler sequences than found in the solos of the 1970s.

Mulligan begins with a simple figure featuring a three-note descent from G♯5 to E5 and a leap up to B5 ("m"). It is repeated in the second measure but with an alteration of G♯ to G♮ to work with Am7. This is similar to the repetition with alteration used in mm. 56–59 in the November 1977 solo, in which a G♯5-E5 dyad is presented as G5-E5 in repetition. The third measure opens with a line that repeats the three-note descent with an added complete neighbor on G♯. This last presentation of the motive does not feature the leap up to B5, moving instead into new material.

The next segment of sequence also has a connection with the November 1977 solo. The main motive in mm. 10–13 ("m2") is the same as that found in mm. 34–40 of the earlier solo, a descending fourth followed by a descending step. Here, though, the third note is not sustained as long and there is less intervening material between appearances of the motive. The beginning of this passage features hemiola, interrupted in the second half of m. 11 when Mulligan eliminates the tied note on the second eighth and moves immediately to the next statement of the motive.[108] The figure on the second half of m. 11 also features an alteration from the stepwise interval to a third, although it does not seem to serve any obvious function other than to make the second eighth a chord tone on C♯7.

In the 1977 solo Mulligan separates the sequenced motives, perhaps in an attempt to make the sequence more complex or less obvious. Here the rapid succession of the

108. See Appendix A.3, Figure 81, for the implied meter of mm. 10–12.

motives in combination with the rhythmic placement seems designed to draw attention to the sequence. He follows the passage with a beat and a half of rest, further highlighting it.

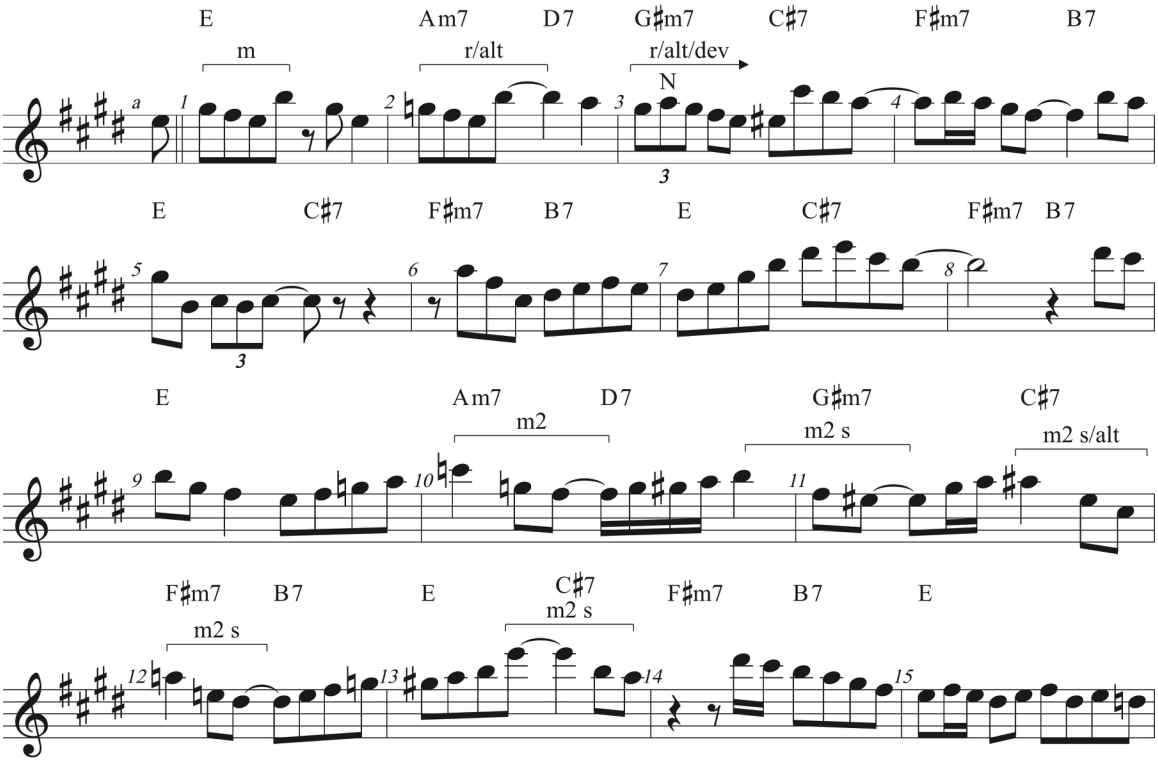

Figure 42. “Line for Lyons,” 1980, mm. a–15

Measure 27 features another brief instance of hemiola in conjunction with a chromatically sequenced triad (“m”).[109] The chromaticism of the figure is not characteristic; Mulligan sequences tend to be more diatonic with respect to the local harmony. In this instance Mulligan might be expected to play the second triad as G♯-E♯-

109. See Appendix A.3, Figure 82, for the implied meter of mm. 27–28.

C♯ or, if he wanted to emphasize a flatted ninth on C♯7, G♯-E♯-D♮. Instead he chooses full chromaticism. In the example below I have chosen to spell the second triad as A-F-D rather than A-E♯-D as I feel the chromatic relationship between the two triads is more significant than the relationship of the notes of the second triad to chord tones and tensions on C♯7.

Mulligan finishes the first chorus with a motive that combines half-step motion with a leap up of a fourth ("m2"). The lower note of the half-step in each occurrence is a neighbor to a chord tone. In most cases the lower note is altered chromatically but aside from that the sequences are diatonic. For the first instance of the motive, in m. 29, there are two incomplete chromatic neighbor pairs. In the second instance, starting on the last eighth note of m. 29, he eliminates the initial half step, creating a complete neighbor figure on A5. Mulligan hints at hemiola in mm. 29–30, but avoids it by preceding the third motivic statement with an extra half-step pair. In the last sequence, starting on the last eighth note of m. 31, he again eliminates the initial half step to create a complete neighbor on F♯5. He also alters the rhythm, making the second F♯ a quarter note. This passage may also be analyzed as a pair of separate, alternating motives, as in mm. 2–4 of the composed melody of "Line for Lyons," while this analysis emphasizes connections between each motivic statement and shows that the passage represents a combination of Mulligan's earlier practices with his later: the diatonic, stepwise nature of the sequences in his solos of the 1950s and 1960s and the altering of rhythm or structure of his sequences of the 1970s.[110]

110. See Appendix A.3, Figure 83.

In mm. 33–44, Mulligan uses rhythm repetition and similarity of contour to create connections between motives. The first motive ("m3"), in m. 33, arpeggiates up an E6 chord starting on C♯5, in a rhythm of two eighths followed by two quarters. Mulligan returns to the figure in m. 37, but changes the inversion, starting the arpeggio on G♯4. In m. 41 the inversion changes yet again, and the arpeggio starts on B4. Measure 43 appears to repeat m. 41, but instead of spelling a complete E6 chord Mulligan eliminates the third, jumping up to B5 instead. The presence of B4 as the first note in mm. 41–43 creates an impression of pedal point sequence in the midst of this section of rhythmic repetition and imitative sequence.

There are additional sequential elements in this section. Measure 42 repeats the arpeggiated figure, but with several alterations. The rhythm is changed from two eighths and two quarters to four eighths, G♯ becomes G♮, and a descending figure ("m4") is added after the arpeggio. This descending figure appears again in m. 44, creating alternating sequences in mm. 41–44. As in solos from the 1970s, connected elements in this passage are separated temporally.

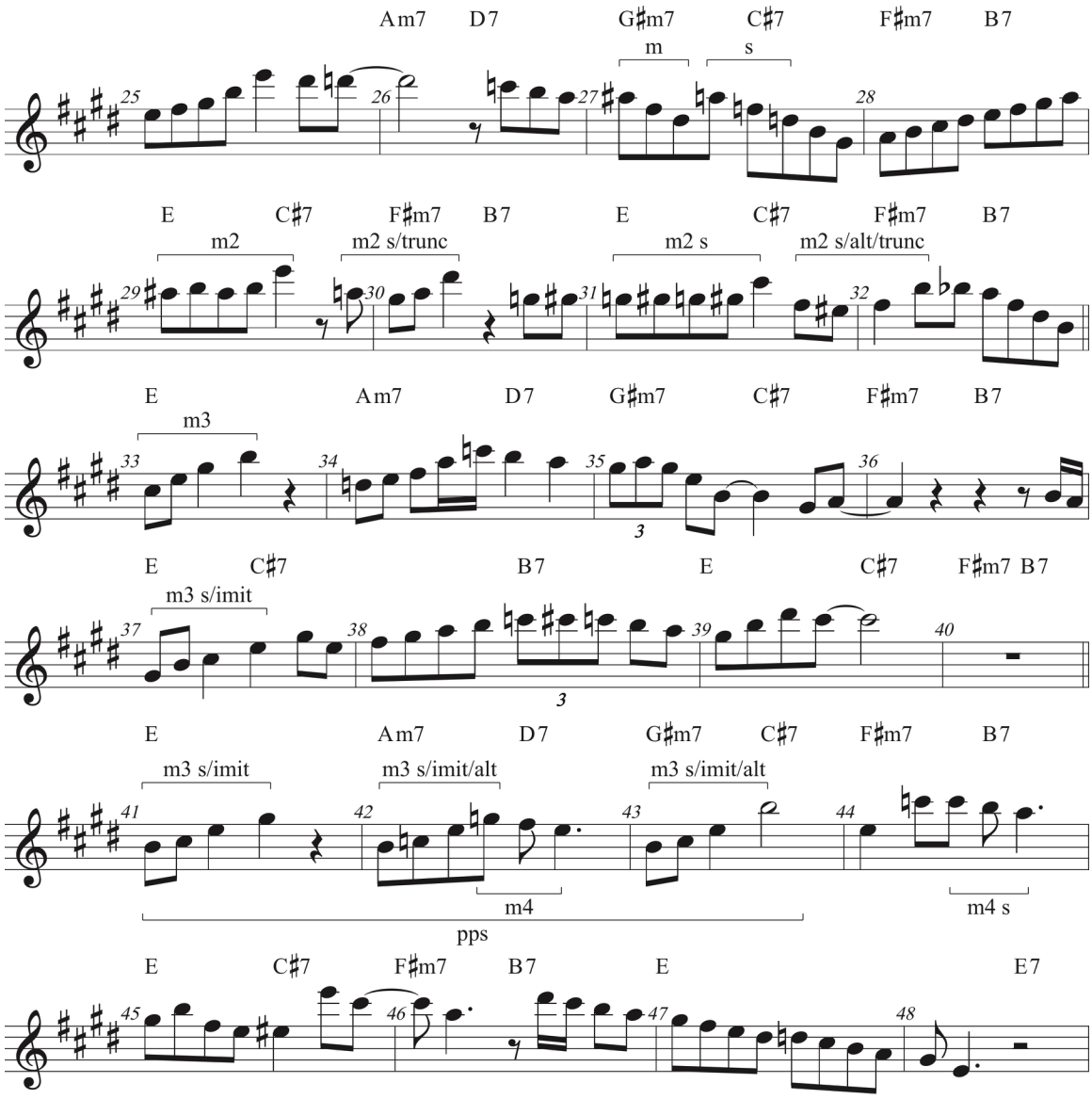

Figure 43. “Line for Lyons,” 1980, mm. 25–48

The last phrase of the second chorus also combines rhythmic repetition and imitative sequence. It begins at the end of m. 56 with a lower neighbor embellishment to an ascending root and third of E major. In the second half of m. 56 the figure is sequenced up to the third and fifth of the chord. The lower neighbor becomes an upper

neighbor at the end of m. 58, and the arpeggiated interval becomes a fifth, the root and fifth of Am7. The end of m. 58 contains even more alteration, as the figure becomes a descending diminished triad, the seventh, fifth, and third of D7. Although the figure and the chord tones emphasized change with each statement of the motive, the rhythmic and thematic continuity in the form of use of chord tones throughout makes this a solid and satisfying sequential segment.

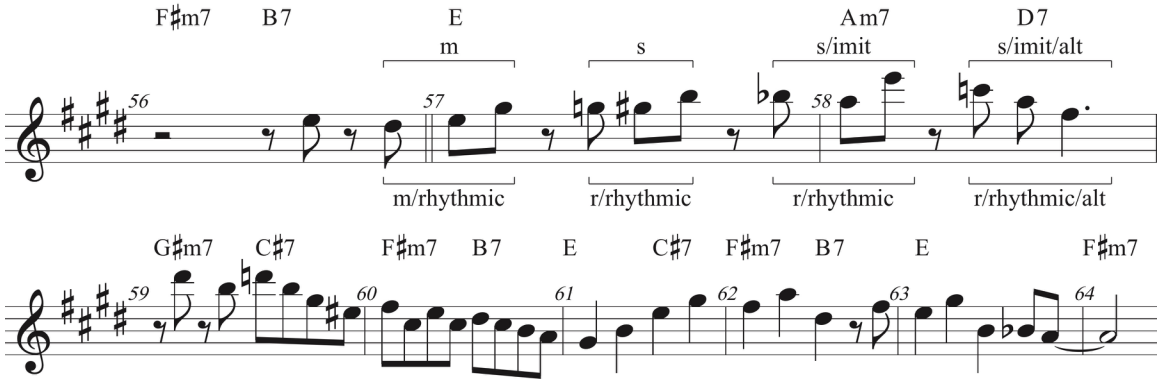

Figure 44. “Line for Lyons,” 1980, mm. 56–64

The remainder of this solo is largely devoid of typical Mulligan repetition or sequence. The sole example occurs on the bridge. The motive consists of a complete neighbor triplet followed by a pair of thirds: one descending, one ascending. The thirds vary between major and minor, depending on the harmony. In two cases—the ascending thirds in mm. 82 and 83—the intervals are thirds in sound only. Functionally they are augmented seconds, and are spelled as such in the example below. The passage contains an elided sequence, the last note of the first motive becoming the first note of the second.

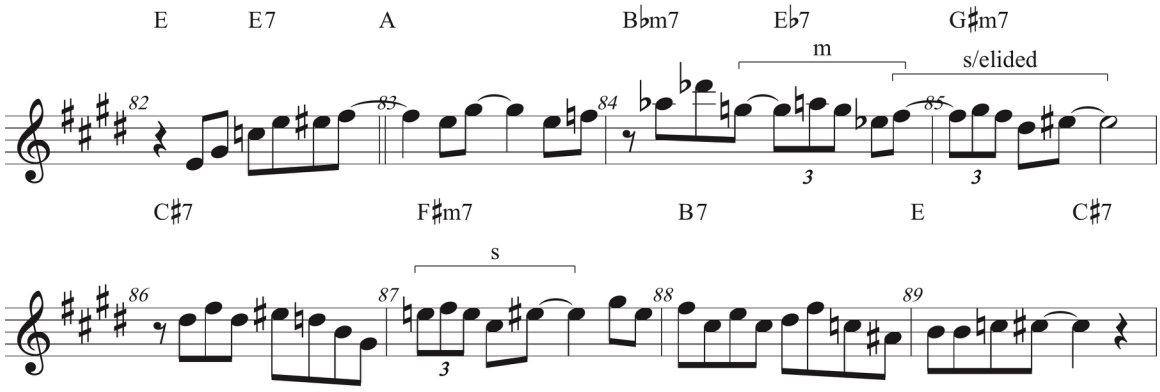

Figure 45. “Line for Lyons,” 1980, mm. 82–89

29 June 1982, New York. Mulligan, Mel Tormé (vcl), George Shearing (p), Frank Luther (b), Richard de Rosa (d)

This small-group version of “Line for Lyons” took place during a concert by the Concert Jazz Band with special guests Mel Tormé on vocals and George Shearing on piano. Tormé announces the selection by saying that they will be recreating the Gerry Mulligan Quartet from the 1950s at the Haig. Although Tormé’s vocalise takes the place of a second horn the original sense of the quartet is lessened by the presence of piano in the rhythm section.

The most notable passage in this one-chorus solo occurs near the beginning, in mm. 3–6. Mulligan plays a series of half-steps, sequenced at intervals of diminished and augmented fourths, and once at the interval of a major third. The initial motive includes an arpeggiation between the two notes and alternating instances of the sequenced motive include a lower incomplete neighbor between the half step dyad. For simplicity “alt” designations have been omitted from Figure 46 below.

The intervals of sequence result in altered tensions on some dominant chords, such as the flatted sixths and ninths on C♯7 and B7 in mm. 3–4, somewhat atypical for Mulligan's treatment of those harmonies in "Line for Lyons." But the voice leading created by the sequence is so strong and compelling that the altered tensions do sound out of character.[111]

Other use of sequence in the solo is less striking. At the beginning of the second A Mulligan plays a figure ("m2") that may be intended as a quote from "Makin' Whoopee" then follows it with altered and fragmented repetitions.

111. See Appendix A.3, Figure 84, for voice leading in mm. 3–7.

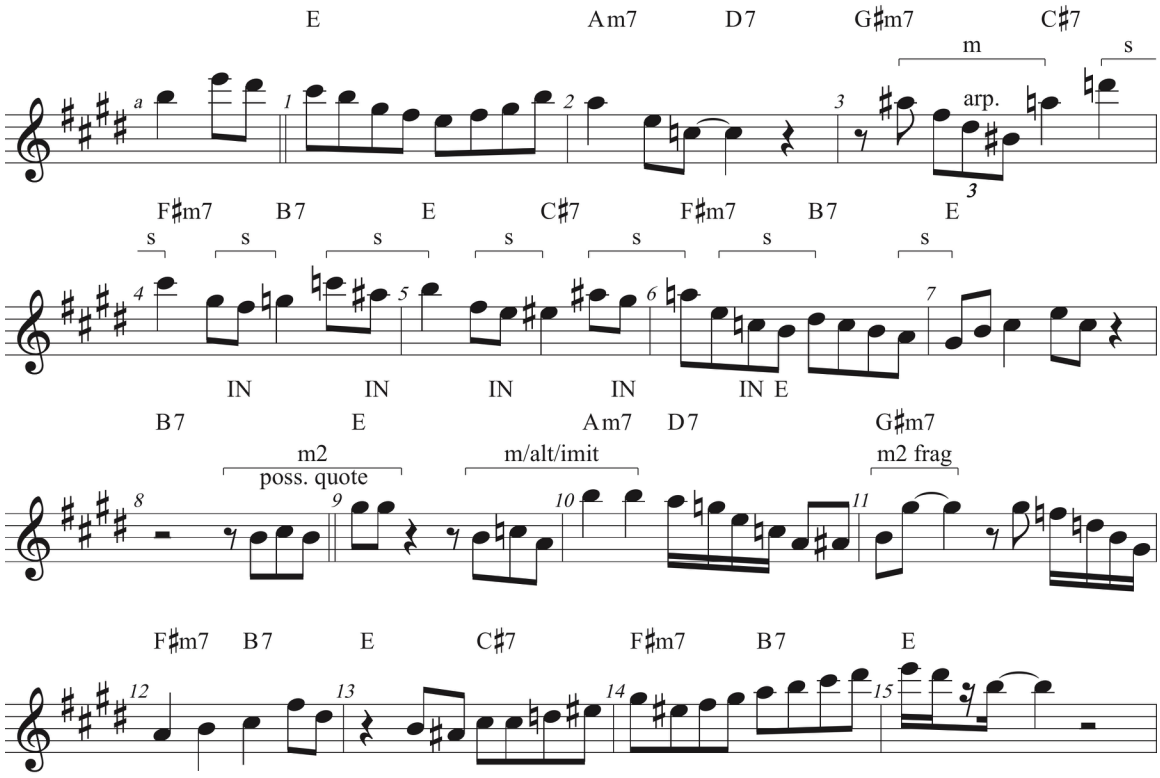

Figure 46. “Line for Lyons,” 1982, mm. a–15

In the bridge Mulligan, as he has done in other solos, focuses on notes from the original composed melodies, the thirds of A major, G♯m7, and F♯m7.[112] The statement of C♯6 on A major in m. 17 is unadorned but B5 on G♯m7 in m. 19 is surrounded by upper and lower neighbors. The double neighbor figure is sequenced on F♯m7 in m. 21. Mulligan also plays the third of C♯7 in m. 20, a measure in which the third of the chord is

112. See Appendix A.3, Figure 85. For other references to the composed melody on the bridge see Figure 19 and Figure 39; also Appendix A.3, Figure 69, Figure 80, and Figure 87.

not the melody note in the head. Mulligan closes the solo with simple sequences of a pair of motives based on descending thirds.[113]

31 December 1985, Baltimore. Mulligan, Toots Thielemans (harm), Ray Brown (b), Mickey Roker (d)

This version of "Line for Lyons" comes from a performance broadcast live on Public Broadcasting Service. The event featured a number of prominent jazz artists and the instrumentation varied for each selection. Mulligan returns to the pianoless quartet format for "Line for Lyons," with harmonica player Toots Thielemans taking on the role of second horn. Mulligan plays just a single chorus of solo, presumably in the interest of allowing for more artists and selections to be included in the broadcast.

The opening of the solo mimics mm. 42–44 of the 1980 solo.[114] As in the earlier performance Mulligan begins with a second inversion E arpeggio beginning on B4 and played as two eighths followed by two quarters. Also as in the earlier solo the next measure features an arpeggiation of Cma7 (an upper structure of Am9) followed by a stepwise descent, although in this solo Mulligan extends the arpeggio to B5, making the descent on A5-G5 instead of F♯5-E5 as in 1980. Measure 3 is an exact repetition of m. 1, while in m. 4 Mulligan eliminates the pickup note into the Cma7 arpeggio, adds a figure combining a passing tone and a complete neighbor on beat 3, and reduces the descending step on the second half of the measure from quarters to eighths.

113. See Appendix A.3, Figure 86.
114. See Figure 43.

Mulligan uses rhythmic repetition and an imitative retrograde in m. 5, simultaneously creating a connection between that measure and those preceding and setting in motion a move to a new register and line. The retrograde is imitative rather than exact because the opening arpeggio in m. 1 is a second inversion E triad while the arpeggio in m. 5 is a second inversion E6 chord. The other instance of sequence in this solo occurs in mm. 29–31, with a pedal point sequence. The pedal point is B4 and the moving line ascends from G♯5 to B5.

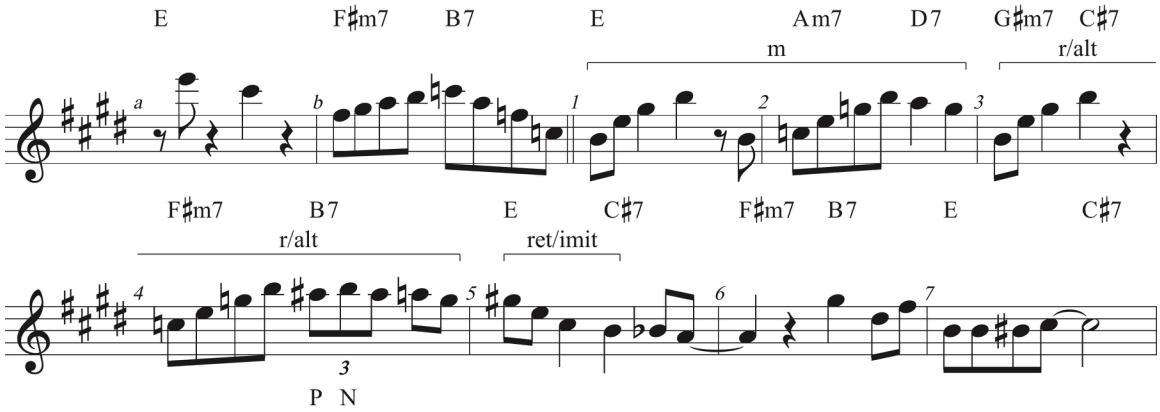

Figure 47. “Line for Lyons,” 1985, mm. a–7

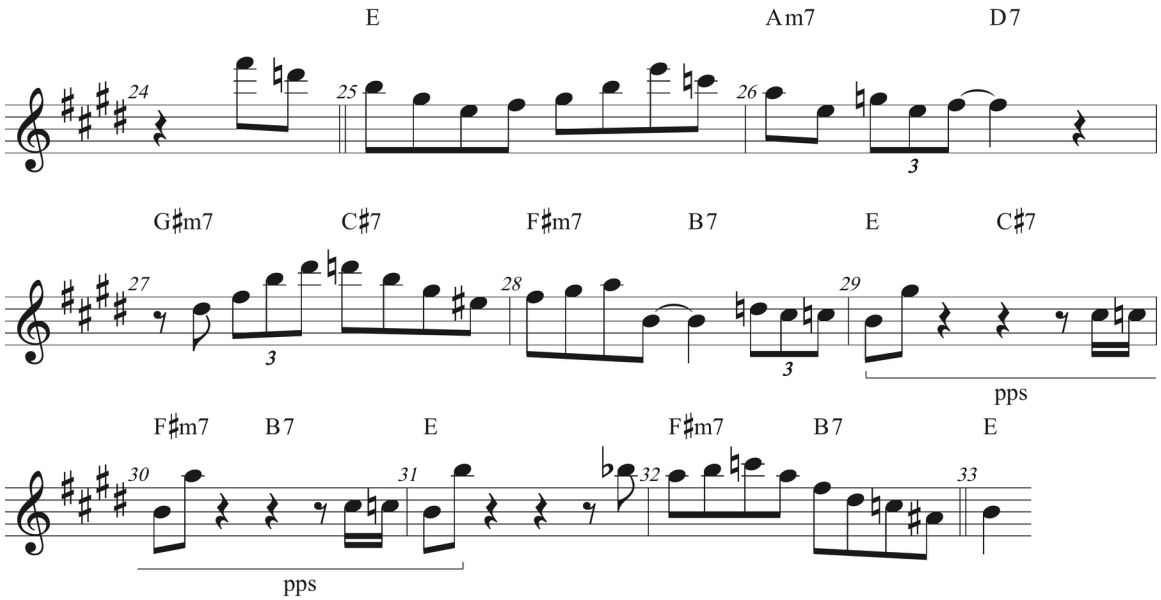

Figure 48. “Line for Lyons, 1985, mm. 29–31

The smaller motives used in the 1980 solo are similar to those Mulligan uses in his solos on “Line for Lyons” in the 1990s: two- and three-note figures instead of the melodic motives and longer, more complex sequences of the 1950s–1970s. The 1985 solo has elements in common with those from both the previous and following decades. The first example, mm. 1–5, is in keeping with the solos from the 1970s while the second, mm. 29–31, is more closely aligned with the 1990s. Given the paucity of small group performances of “Line for Lyons” available from that decade it is difficult to know which solo is more exemplary of Mulligan’s improvisation practice in that time.

Solos from the 1990s

24 October 1991, Leverkusen. Mulligan, Bill Mays (p), Dean Johnson (b), Dave Ratajczak (d)

This version of "Line for Lyons" comes from a jazz festival performance broadcast on German television. After using an expanded rhythm section for much of the 1970s in later years Mulligan went back to a traditional quartet format with a three-piece rhythm section for much of his travel and recording. Mulligan not only reduces the rhythm section for these performances, the motivic content is also more restricted. In the early 1950s Mulligan's motives passages were melodic and the sequences simple and clear over the years, through the 1950s, 1960s, and 1970s the sequences became more embellished and complex. In the 1990s Mulligan's motivic figures are smaller and more concise, as though he is reducing them to their most essential elements.

Mulligan starts the solo, as he frequently does, with motivic content. In this case the defining characteristics of the motive are rhythm and articulation. He plays the figure, an ascending chromatic quarter note triplet in the second half of the measure with a short articulation, in a pickup measure to the first chorus. He repeats it in m. 3, changing the contour from linear to an incomplete second inversion E6 arpeggio. In both instances there is space after the figure, highlighting it as a focal point. In m. 5 he repeats the figure from m. 3, augmenting the rhythm and continuing the arpeggio to completion. Measure 6 is related to m. 5 in terms of the arpeggiated content and use of quarter notes, although the contour and articulation are altered to a degree that I have chosen not to label it as repetition with alteration. While there is no exact repetition or sequence in this passage the connection between motivic elements is clear, and is representative of Mulligan's

move away from overt sequence over time. There is little motivic manipulation in the rest of this first chorus aside from a small instance of sequence in combination with a reference to the composed melody in mm. Mulligan does include reference to the composed melody in the first half of the bridge.[115]

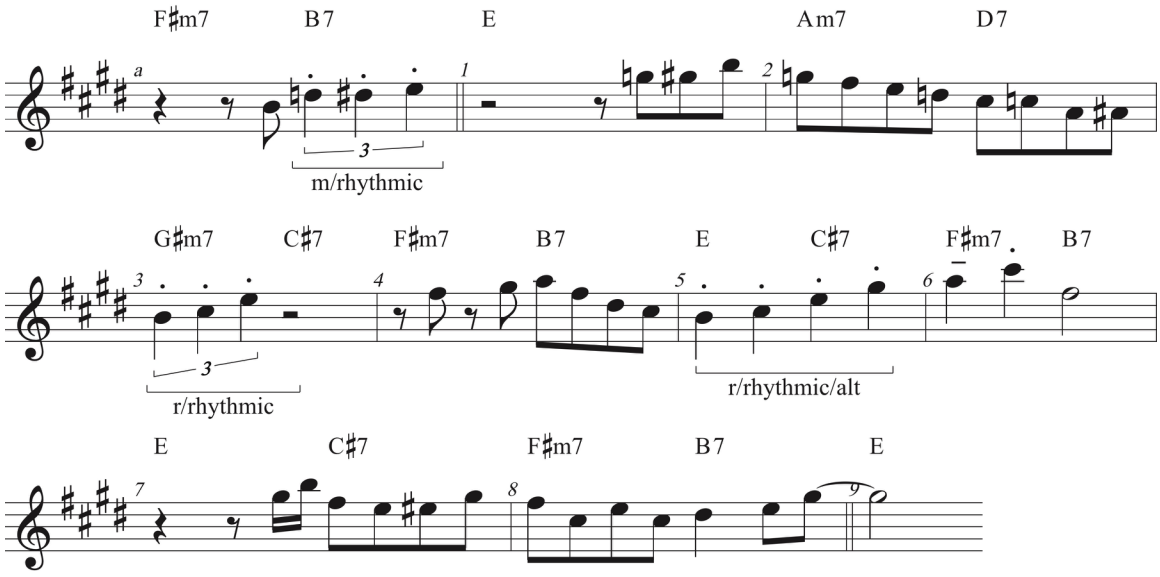

Figure 49. “Line for Lyons,” 1991, mm. a–9

Measures 33–36 contain a subtly altered sequence. There is an obvious rhythmic connection between mm. 34 and 36, which both feature a long note on or tied into the first beat of the measure followed by two eighth notes, the second eighth note tied to a quarter. On closer examination a melodic connection becomes evident as well. If the

115. See Appendix A.3, Figure 87. For other references to the composed melody on the bridge see Figure 19 and Figure 39; also Appendix A.3, Figure 69, Figure 80, and Figure 85.

melody notes of those two measures are considered as pitch collections it becomes clear that m. 36 sequences m. 34 down a minor third (see Table 3, below). Overt sequence is avoided by swapping the positions of the first two notes in m. 36. The phrase is bookended with a figure using rhythmic repetition and imitative sequence.

Table 3. Pitch classes, prime forms, set classes, “Line for Lyons,” 1991, mm. 34 and 36

Measure number	Pitch classes used	Prime form	Set class
34	<7, 0, 6>	(016)	3-5
36	<9, 4, 3>	(016)	3-5

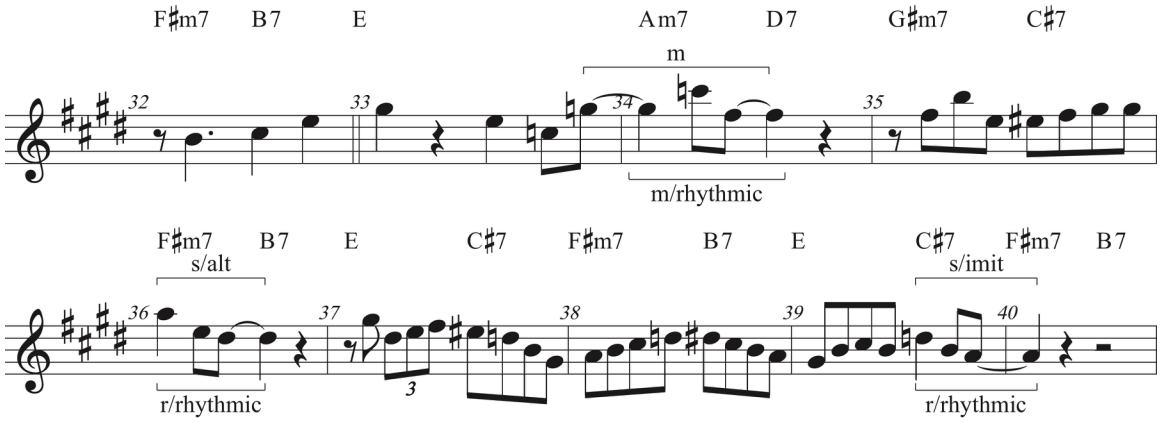

Figure 50. “Line for Lyons,” 1991, mm. 32–40

In the bridge on the second chorus Mulligan returns repeatedly to the notes E5 and C♯5/D♭5 ("m").[116] In m. 49 the two notes are chord tones, the third and fifth chord of A, and in m. 50 they become the flatted third on B♭7 and the flatted seventh and flatted ninth on E♭7. In m. 51 E5 becomes the flatted sixth on G♯m7, traditionally considered an avoid note.[117] The tension is lessened in m. 52 as the two notes become the root and sharp ninth on C♯7 and is resolved completely in m. 53 when they both function as chord tones. Slight tension is introduced in m. 54, as C♯ and E become the ninth and fourth on B7, but they are sequenced into D♯ and B for a satisfying completion of the segment.

The solo ends with repetition and sequence of a simple three-note figure ("m2"). It is first presented as a triplet pickup into m. 57. It is repeated in m. 57 as two eighths and a quarter, and in m. 59 as a quarter and two eighths. In m. 60 it is sequenced down a step, repeating the rhythm used in m. 59.[118]

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116. For the purposes of this analysis the notes themselves are considered the motive, irrespective of duration, rhythm, or ordering.

117. See note 81.

118. The linear passages in m. 57 and the second half of m. 60 may also be considered sequences and inversions of the initial motive. I felt, however, that while they can be analyzed as such, the connection between the figures I have labeled stands out more when the passage is heard, not just seen.

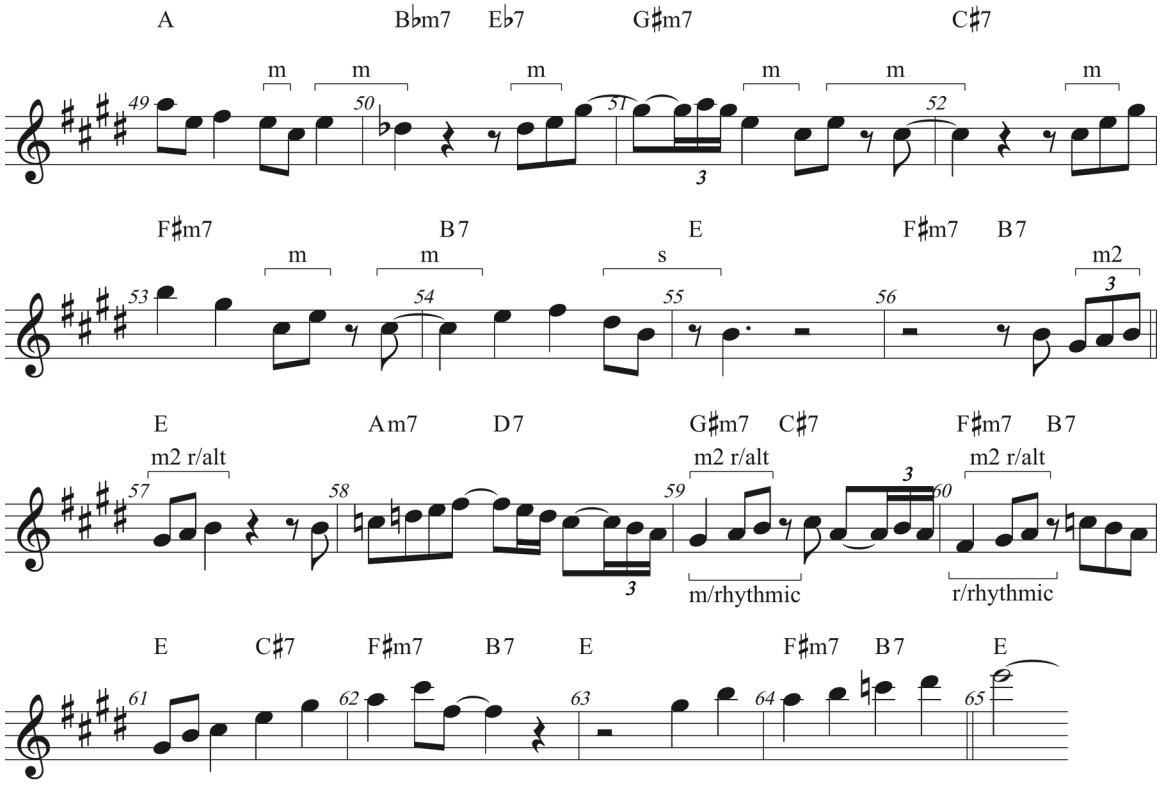

Figure 51. “Line for Lyons,” 1991, mm. 49–65

November 1992, Pittsburgh. Mulligan, Billy Taylor (p), Victor Gaskin (b), Bobby Thomas (d)[119]

The motivic elements used in the previous solo are more compact and less melodic than those used in Mulligan’s earlier solos. The paring down of motivic content is a trend in Mulligan’s solos on “Line for Lyons” in the 1990s, starting with the previous solo and continuing with this one. Even though the motives may be shorter, however, and

119. Billy Taylor, rather than Mulligan, was the leader on this date. Mulligan is listed as the featured performer on the recording, indicating his role as more influential than that of a regular sideman. I elected to include Mulligan’s solo on “Line for Lyons” from this recording on that basis, and on the basis of the recording fulfilling the criterion of small group performance.

the repetition and sequence more imitative than exact, relationships between motivic elements are clear, and continue to demonstrate Mulligan's interest in connectivity and continuity in his solos.

The first motive, occurring in mm. 1 and 3, features a syncopated figure ending on pitch class A. In m. 1 A5 is preceded by an arpeggiated root position E major triad and in m. 3 A4 is preceded by an arpeggiated second inversion E major triad. Although the contour of the two figures is not the same, the use of tonic chord tones preceding pitch class A creates a relationship between them, as does the rhythmic repetition in the last three notes of both measures.[120] Even with the presence of the F♯5 passing tone in m. 1 and the A5 neighbor tone in m. 3 and the different contour of the two motives, the net effect is that of imitative inverted sequence. Both motives are followed by space, making them stand out in the surrounding context.[121]

120. Although the local harmony is G♯m7 to C♯7 in m. 3 it reduces to E major at the background level. See Appendix A.3, Figure 88, for graphic representation of the relationship between mm. 1 and 3.

121. The space is as significant a component in the rhythmic component as the notes, and is included as part of the motive in Figure 52, below.

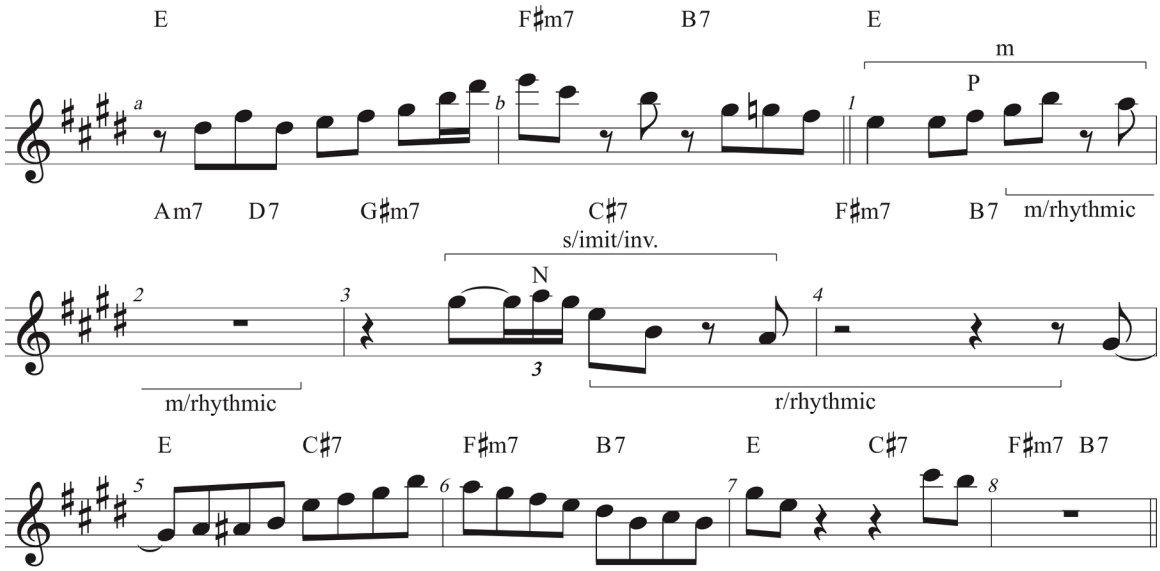

Figure 52. “Line for Lyons,” 1992, mm. a–8

Mulligan returns to the motive from m. 1 at the beginning of the last A section. In m. 25 he once again arpeggiates an ascending root position E triad, eliminating the passing tone used in m. 1 but including the characteristic rhythmic of that measure. He sequences the figure up a fourth in m. 26, with a change in modality to match the local harmony. A related figure precedes this sequence: the second half of m. 24 features the rhythmic motive heard in mm. 1, 3, 25, and 26.

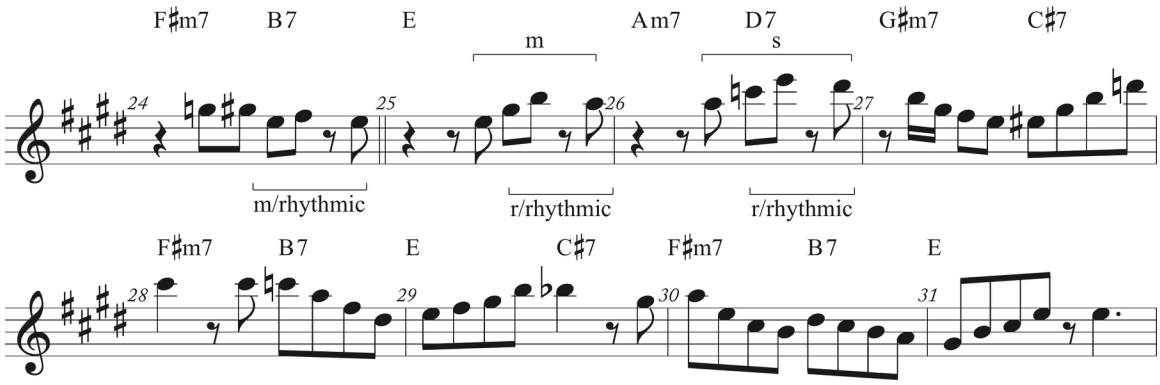

Figure 53. “Line for Lyons,” 1992, mm. 24–31

Arpeggiation is a feature of the next sequenced element as well. Mulligan plays a pickup note into the bridge on the second chorus, following it with two eighth notes in m. 49, creating an ascending A major triad (“m”). He repeats this activity in m. 51, up a step. As in mm. 1 and 3 each of these figures is followed by several beats of rest, giving them emphasis. There is an imitative element in this passage as well, the G5-E♭6 leap on the third beat of m. 50. The aspects that connect this element with the surrounding content are the mimicking of the eighth note rhythm, placement on a strong beat of the measure, the (incomplete) first inversion arpeggiation of the chord, and the presence of space following the leap. I also identify m. 52 as imitative. In the first half m. 52 Mulligan repeats the ascending B major triad first heard starting at the end of m. 50, following it with an ascending G major triad, albeit in root position instead of first inversion as in the preceding measures.

Mulligan closes the solo with a conventional sequence. A descending third in m. 62 is sequenced melodically up a step, with a change in rhythm, in the first half of m. 63.

In the second half of m. 62 Mulligan repeats the interval at the original pitches but with another rhythmic alteration. Measure 63 begins with another descending third and he seems to be starting another sequenced passage but instead moves into new material to bring the solo to a close.

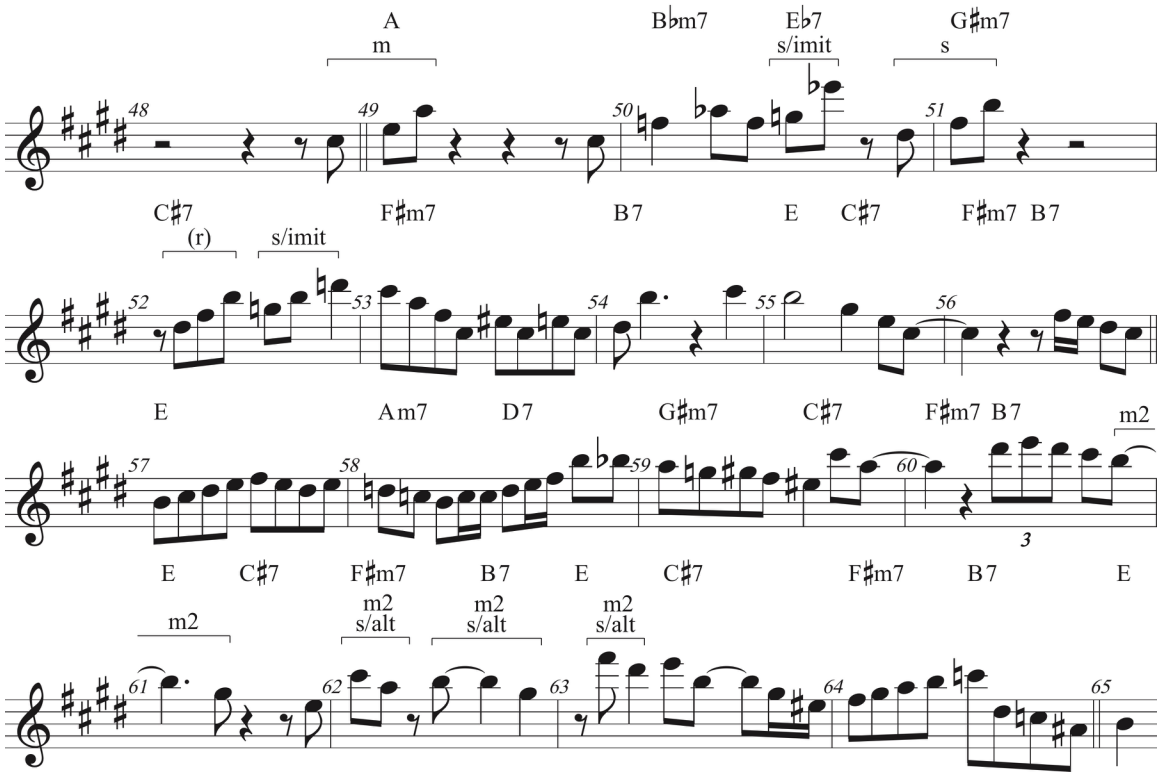

Figure 54. “Line for Lyons,” 1992, mm. 48–65

1–3 October 1993, Pittsburgh. Mulligan, Billy Taylor (p), Chip Jackson (b), Carl Allen (d)

In this version of "Line for Lyons," played approximately a year after the previous version, the motives used are simple and small. The three-chorus solo opens with a combination of repetition with rhythmic alteration, sequence, and pedal point. The motive, a three-note descending scale, starts in the pickup bar, is repeated in m. 2 with a change in rhythm, and is sequenced in m. 3. Between instances of the motive Mulligan returns to a pedal B4, inspired no doubt by Taylor's pedal $\hat{5}$ on the thirtieth bar of the melody. This passage closely resembles the beginning of the 1976 solo, which also sequences a descending B5-A5-G♯ gesture over a B4 pedal.

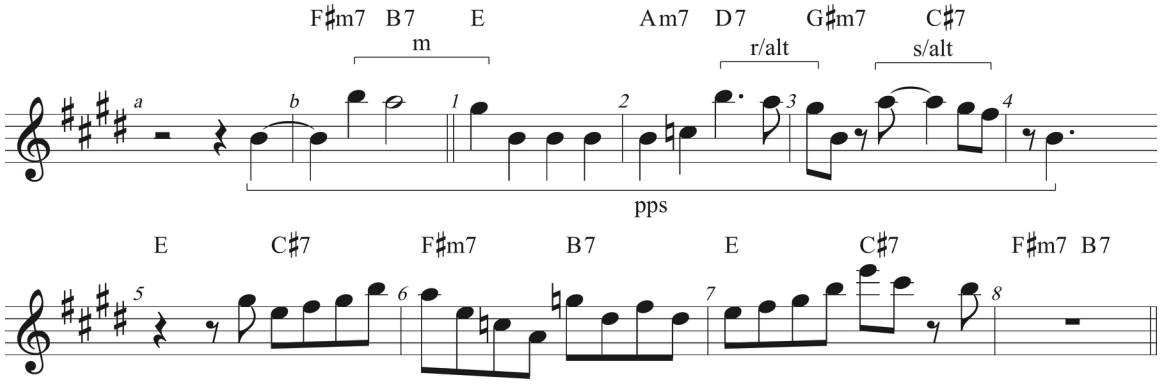

Figure 55. "Line for Lyons," 1993, mm. a–8

The remainder of the first chorus does not feature any notable instances of repetition or sequence. When Mulligan does use sequence again it is not until the first A section of the second chorus. The motive includes a three-note descent like that of the opening sequence, but continues with a downward leap of a third. Mulligan plays the

figure in mm. 37 and sequences it with an altered rhythm in m. 38. At the end of m. 38 he extracts and sequences the last two notes of the motive, the descending third, and finishes the phrase in m. 39 by inverting the extracted third.

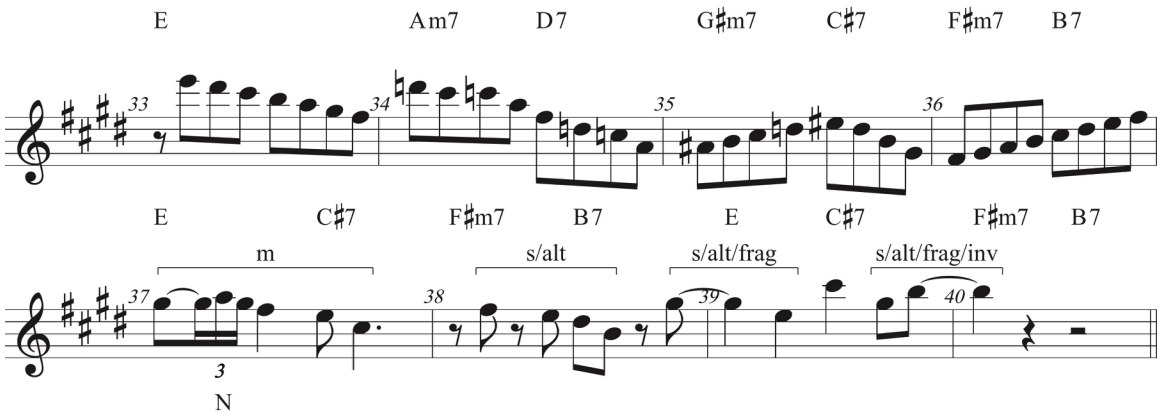

Figure 56. “Line for Lyons,” 1993, mm. 33–40

In m. 49, the beginning of the bridge on the second chorus, Mulligan returns to the ascending first inversion triad he used on the second chorus bridge in the 1992 solo (“m”). In 1992 the true sequence occurred in mm. 49 and 51, with only a hint of sequence in m. 50, but in this version the sequence not only occurs immediately, but with an elegant elision between the two statements of the motive.

The last A section begins with a motive of a neighbor note triplet followed by stepwise descending motion and a downward leap of a sixth (“m2”). The motive begins in m. 57 and is sequenced in m. 58. It is preceded in m. 56 by a slightly different figure, but one with enough similarity it may be considered a preparatory motive, setting up the actual motive to come. The similarity is in the overall contour, including the descent of a

step and the downward leap. The B4 that ends the figures in mm. 57 and 59 is another point of connection between the preparatory motive and the sequence of the main motive.

Mulligan closes the second chorus with a pedal point sequence. The pedal is E5 and the moving line ascends chromatically from G♯5 to B5. The sequence also features rhythmic repetition and use of space between iterations.

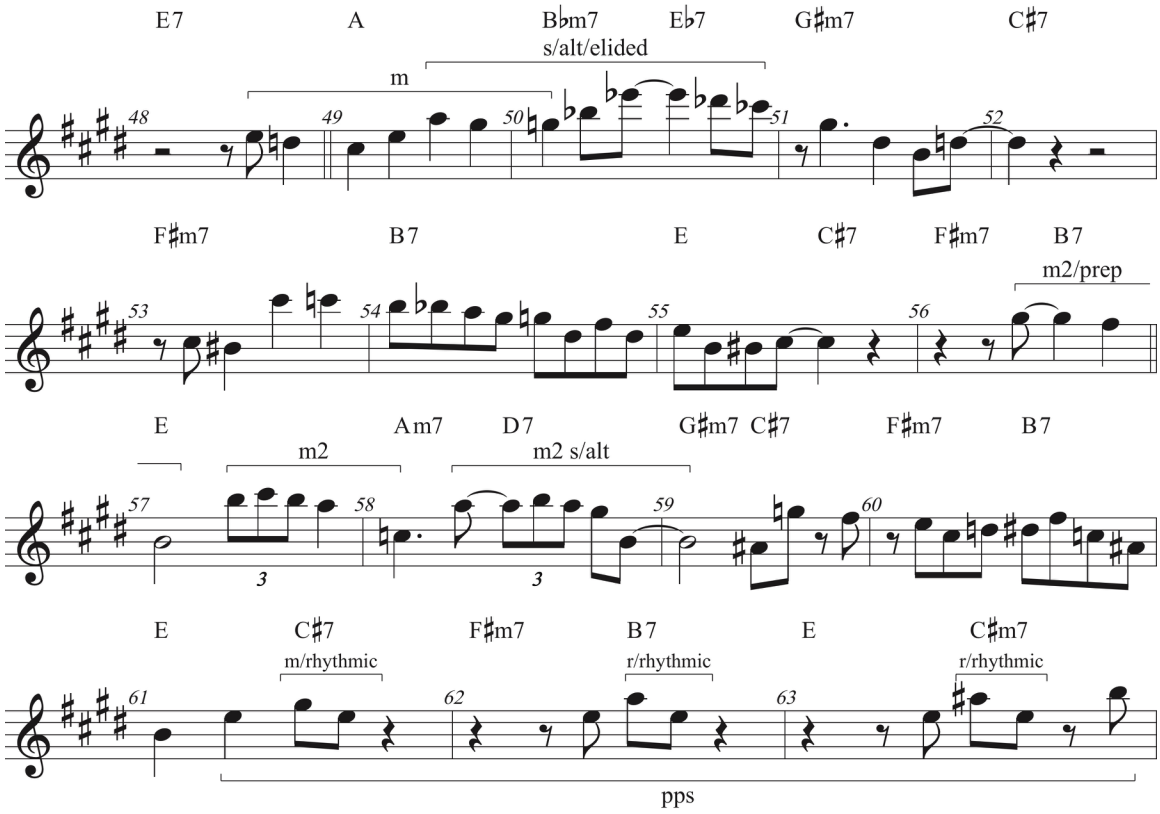

Figure 57. “Line for Lyons,” 1993, mm. 48–63

The third chorus opens in m. 65 with a whole step figure. Mulligan sequences the figure in m. 66 at the interval of a fifth.[122] Instead of sequencing again in m. 67 or moving to new material, Mulligan returns to the figure at the original pitches of C♯6 and B5, this time adding a descending arpeggio. From there he moves into new material. He returns to the expanded motive in m. 73 as the starting point for the next A section, rather in the same way he has begun successive A sections with the same or related material in previous solos. There is no repetition or sequence activity following the presentation of the motive in m. 73.

122. Many, if not most, of Mulligan's sequences tend to be linear. Other exceptions to that custom include three solos from the 1970s: 1971, mm. 26–29; 1974, mm. 18–21; and 1977, mm. 19–22.

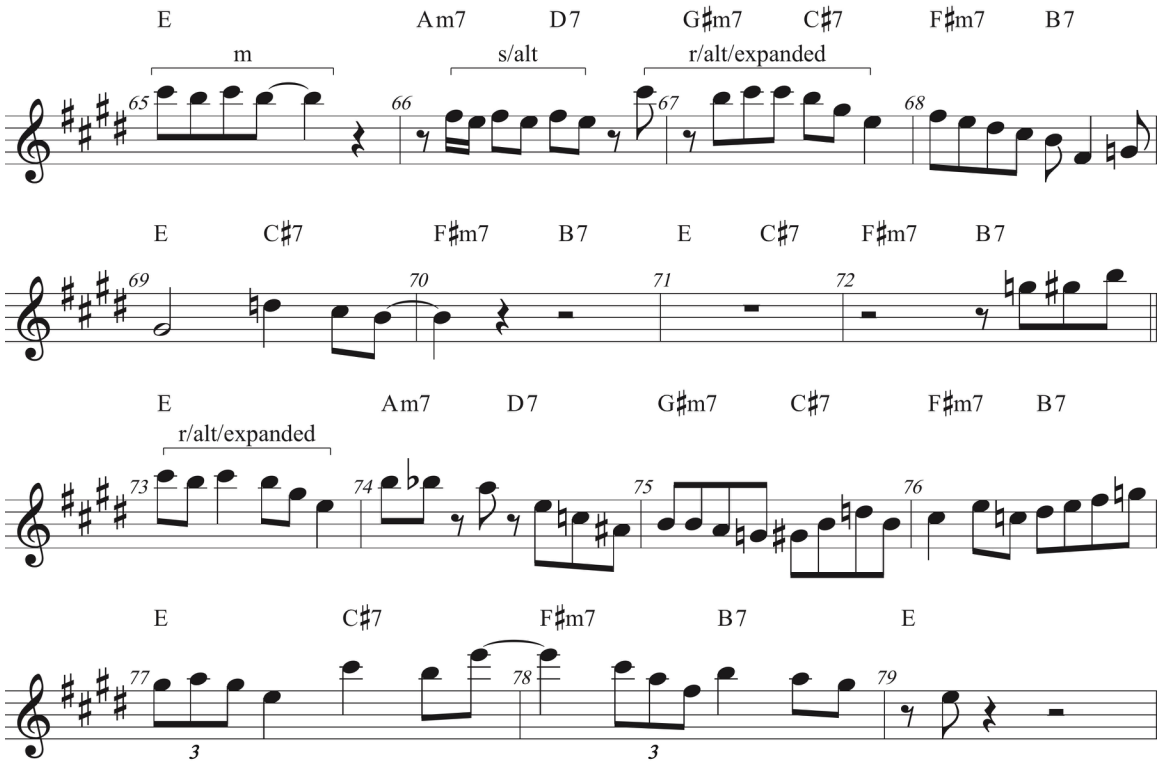

Figure 58. “Line for Lyons,” 1993, mm. 65–79

The solo closes with a conventional complete neighbor figure in the last A section.[123] The figure is made more complex by hemiola and an inversion of the last instance of the figure.[124]

123. Mulligan side-slips at the beginning of the last A section, playing an E♭ major triad on the first bar of the phrase. See note 88.

124. See Appendix A.3, Figure 89, for the implied meter of mm. 93–94.

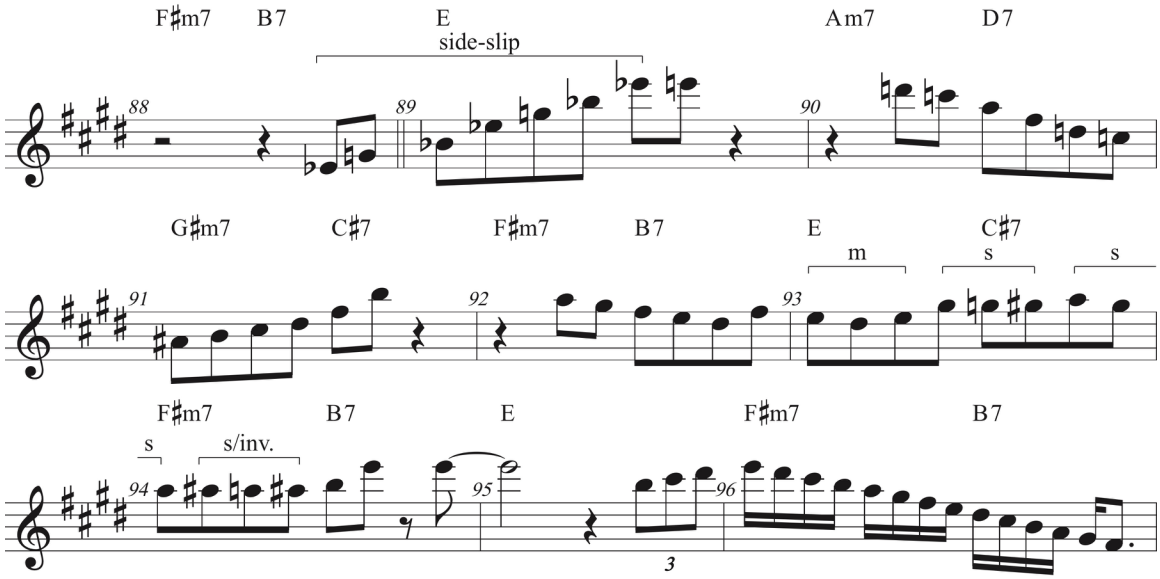

Figure 59. “Line for Lyons,” 1993, mm. 88–96

The sequenced elements in this solo are all based on triads or thirds. They are small and conventional, and on their own they might not be considered remarkable. Viewed in the context of Mulligan’s improvisation over the course of his career, though, they can be seen as evolution in his use of repetition and sequence: a distillation of motives down to essential elements such as rhythm, contour, or concept (arpeggiation, e.g.), while using his habitual practices of syncopation and space to highlight the significance of these essential elements.

Summary

The general trajectory of Mulligan’s use of motivic manipulation in his solos on “Line for Lyons” arcs from the plainer sequences of the early years to the more complex events of the middle years, moving back to simpler, more pared-down presentations in the last years (see Table 4, below). Much of the motivic manipulation in the solos from

the early 1950s is fairly straightforward, with short, easily distinguished motivic statements presented in close proximity and with little embellishment other than rhythmic variation. The paucity of solos from the 1960s (two, compared to six each from the 1950s and 1970s and three each from the 1980s and 1990s) makes it difficult to draw large-scale conclusions about the evolution of his improvisation process in that decade. The solos from the 1960s, few though they are, however, do include some more subtle and complex motivic activity such as truncation, imitation, temporal distance between motivic statements, retrograde, and elision.

Mulligan's music changed with the times in the 1970s. He incorporated rock and fusion elements into his compositions and expanded his rhythm section from two pieces to as many as six pieces. His improvisation on "Line for Lyons" also shows changes in the 1970s, becoming more complex. The motivic connections become more subtle, less obvious, through use of temporal separation of motivic elements, interpolation of new material in between elements, and use of elided sequences and alternating motives. But even as Mulligan expands his techniques of motivic manipulation the essential concept remains the same, and his solos still continue to feature the simple sequences and melodic references seen in his earliest solos along with more complex motivic events.

The solos from the 1980s show connections to earlier decades, while also moving toward a trend in his solos from the 1990s: a paring down of motives, often to just a two- or three-note figure. The motivic connections becomes more overt again in later years, as in the 1950s and 1960s, compared to the "hidden" sequences of the 1970s.

Although Mulligan's use of motivic manipulation changed over the years, at times

tending to be more complicated and less easily analyzed at first glance and at other times remaining simple and obvious, the essential concepts of repetition and sequence—first demonstrated in the composed melody—remain consistent aspects of his improvisation on "Line for Lyons."

Table 4. Summary of Mulligan's use of motivic manipulation in "Line for Lyons" solos

1950s	1960s	1970s	1980s	1990s
6 solos	2 solos	6 solos	3 solos	3 solos
Straightforward Easily distinguished motivic connections Close proximity of motives Little embellishment other than rhythmic	Truncation Imitation Retrograde Elision	Temporal separation of connected elements Interpolation of new material between motivic statements Elision Alternating of two motives Connections between motivic elements often less obvious	Combination of earlier techniques with move toward more pared-down motives	Pared-down motives (two- and three-note figures instead of longer more melodic figures) Return to more overt, easily distinguished motivic connections

CHAPTER 3: FURTHER STEPS TOWARD AN UNDERSTANDING OF MULLIGAN'S PROCESS

The previous chapter shows the use of certain compositional techniques—primarily, repetition and sequence—on a single composition. My research on "Line for Lyons" does not constitute a broad enough sample to provide a complete understanding of Mulligan's improvisational process. It does not, for instance, give any insight as to how Mulligan improvised on selections similar in style and harmony to "Line for Lyons" over the years or how he played on later compositions with different harmonic, stylistic, and formal aspects. Further transcription and analysis focusing on a variety of selections and using a wide range of analytical techniques would be necessary to form a comprehensive theory of Mulligan's approach to improvisation.

Such additional in-depth research fell outside the scope of this dissertation, but as a first step in that direction I transcribed solos on two other Mulligan compositions, primarily to see whether Mulligan incorporated repetition and sequence in those solos to the extent that he did on his solos on "Line for Lyons." A detailed analysis of each of the additional transcriptions fell outside the purview of this dissertations; instead, the improvised content of those solos is discussed in summary.

The two other compositions I investigated are "Curtains" and "The Flying Scotsman." I chose them for their differences from "Line for Lyons" chronologically,

formally, and harmonically.[125] "Line for Lyons" was written in the early 1950s; "Curtains" and "The Flying Scotsman" were written in the 1980s. "Line for Lyons" is a composition in a standard thirty-two bar AABA song form, a form dating to the Tin Pan Alley era, while the solo section of "Curtains" is a highly uncommon sixty-four bar ABCB form. The AABBAA solo section of "The Flying Scotsman" is not unprecedented, but is unusual.[126] Finally, "Line for Lyons" uses functional harmony, "Curtains" alternates sections of non-functional static harmony with functional harmony, and "The Flying Scotsman" is modal, only using static, non-functional harmony. Both "Curtains" and "The Flying Scotsman" reflect later twentieth-century trends in jazz: shifts from traditional forms and functional tonal harmony toward non-standard forms and non-functional harmonies, and I was curious to see how, if at all, Mulligan's approach to improvisation was affected by those later trends.

125. A summary of the characteristics of each composition is show in Table 5, below.

126. Freddie Hubbard's "Little Sunflower," recorded in 1967, is an example of an AABBAA form predating "The Flying Scotsman."

Table 5. Comparison of "Line for Lyons," "Curtains," and "The Flying Scotsman"

	Line for Lyons	**Curtains**	**The Flying Scotsman**
Approximate era of composition	Early 1950s	Late 1970s–early 1980s	Late 1980s
Harmony	Functional	Combination static/functional	Modal
Form	32-bar AABA	64-bar ABCB	Head: 40-bar AABBA Solos: 48-bar AABBAA
Arrangement	No introduction Improvised ending	40-bar introduction, also used for coda	18-bar introduction Extensive interlude between piano and bass solos Extensive interlude between bass solo and return to partial head Extensive coda

“Curtains”

“Curtains” was first performed at a recording session with a ten-piece ensemble on 19 May 1981. According to the discography by Perier, Dugelay, and Hallqvist that recording was never released.[127] It contains an introduction (also used as a coda) and a sixty-four bar chorus. Only the chorus is used as a basis for improvisation. The form is ABCB, with each section comprising sixteen bars. The form remains constant throughout the solo section but the solo lengths and their placement in the form vary. For example, on Mulligan’s first released recording of the piece, on *Lonesome Boulevard*, he solos over ABC, followed by a piano solo over BAB. Mulligan returns for C and half of B. The bass solos over the second half of BAB. Mulligan returns with more improvisation at C and returns to the melody for B. This allocation of solo sections changes for each version.

“Curtains” uses functional but not traditional harmony, and the tonal center shifts every four bars in the first half of each sixteen-bar phrase. The areas of tonicization are F major (concert pitch) for the first four bars of A, the second four bars of B, and the first eight bars of C, E major (concert pitch) for the second four bars of A and C, and F♯/G♭ major (concert pitch) for the first four bars of B.

Sequence is a major component of the melody of “Curtains.” Measures A1–A4, in F (concert pitch), are sequenced down a half step in mm. A5–A8, with a slight alteration in the last five beats of the second phrase. The same material, this time in G♭ (concert pitch), makes up the first half of B, and the second half of B sequences it down a half step. Thus sections A and B each feature a pair of four-bar sequences with some

127. Perier, Dugely, and Hallqvist, 523.

alterations, and the two sections themselves function as eight-bar exact sequences.

Measures A1–A8 are sequenced in imitation in C1–C8. The sequence is a mix of diatonic and chromatic, and there is a slight change in the interval content and contour of the melody in the last five beats of each four-bar phrase in C1–C8. The tonal centers in C are the same as in A, but with a shift from major to a mixolydian modality.[128] Figures 60–62, below, are notated as transposed for baritone saxophone.

128. The mixolydian nature of the melody and harmony in the composition itself does not translate to the solo choruses. Mulligan treats C1–C8 as he does A1–A8.

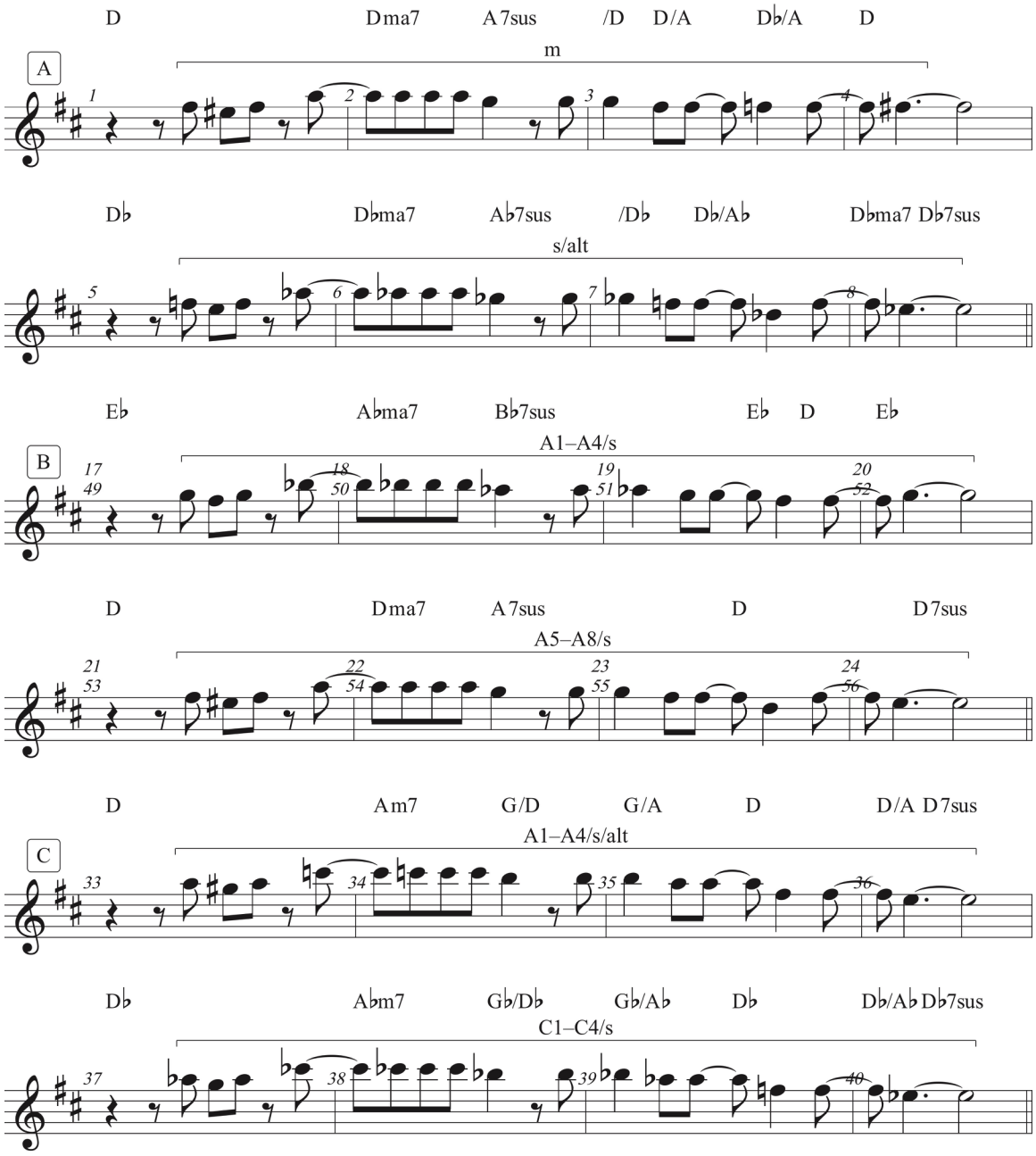

Figure 60. Phrase sequence in “Curtains” melody

A motive composed of the first four notes of the phrase above is used in sequence elsewhere in the melody. The fragment appears in the A9, B9, and C9 phrases. In C9 it is in augmentation and without syncopation.

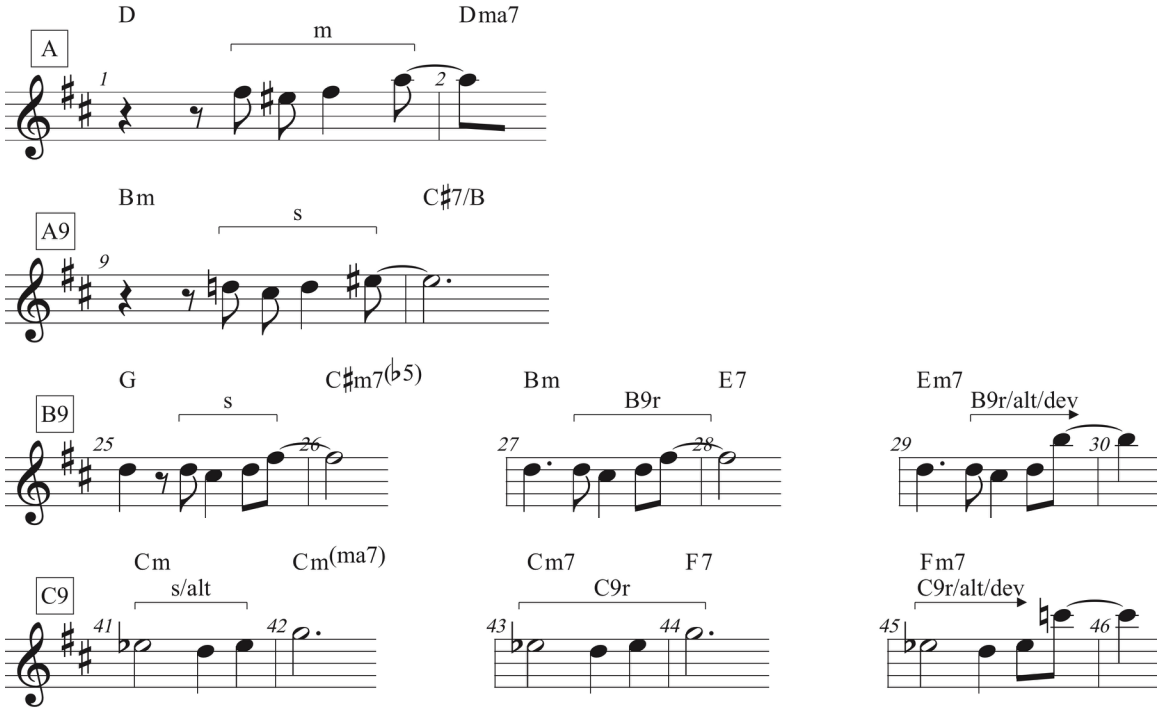

Figure 61. Motive sequence in “Curtains” melody

This four-note motive is fragmented further in the A9 section. After presenting it as shown above, Mulligan repeats the lower neighbor portion of the motive—the first three notes—but eliminates the upward leap that characterizes the motive elsewhere. The rhythm is changed; the first note is lengthened and the third note is placed on the third beat instead of on the second half of the third beat. The eighth-note duration of the middle note, however, is retained, highlighting the relationship of this three-note

fragment to the original four-note motive. A comparison of Figure 61 above with Figure 62 below shows that there is also a relationship between the A9, B9, and C9 phrases, in the use of the motive or a fragment thereof three times. Mulligan maintains unity in this sixty-four bar composition by creating connections at phrase, motive, and fragment levels throughout.

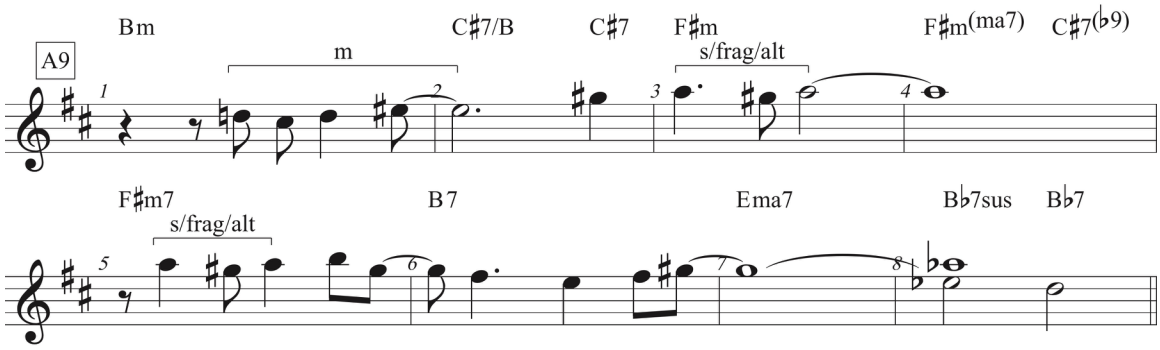

Figure 62. Motivic fragmentation in “Curtains” melody

Examination of the transcriptions of “Curtains” showed that Mulligan did not use motivic repetition and sequence to the extent that he did in “Line for Lyons.” Rather, he uses repetition and sequence with regard to a limited pitch collection—the major pentatonic—that he uses over the static harmony in the first half of each sixteen-bar phrase. The continual return to the sound of the major pentatonic throughout the chorus creates a sense of repetition and sequence, even if the presentation of the pentatonic varies in terms of the order of the pitches.[129] Interestingly, while there is no melodic or

129. Mulligan often plays the major pentatonic as an ordered pitch collection,

harmonic contraindication to the use of the major seventh in those static passages, and the chord symbol on the second measure of each of those static four-bar segments in the piano and drum parts from Mulligan's road books includes the major seventh, for the most part, particularly on the earlier solos, Mulligan chose the major pentatonic as his preferred pitch collection, leaving the major seventh out.[130]

I believe the use of the major pentatonic on "Curtains" serves the same function as motivic repetition and sequence in "Line for Lyons." That is, Mulligan hears certain sounds, whether in the form of a pitch collection or motivic development, as a consistent aspect of his solos on certain tunes, and will return to those sounds for each performance of that tune. His conception of a tune includes not just the same composed melody, or head, for each performance of a tune, but a consistent sound to all of his solos on that tune.

Furthermore, Mulligan's solos on "Line for Lyons" and "Curtains" show connections between the head and the improvisation. In "Line for Lyons" both the composed melody and improvised solos involve extensive use of repetition and sequence. In "Curtains" the measures of static tonal center are paralleled melodically in the composition itself, while in the solos they are paralleled by sound in the form of the recurring major pentatonic.

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without any arpeggiation. See Table 6.

130. See Figure 63, below (shown in concert pitch). Mulligan did not play the major seventh at all in the solos from 1989 and 1990. In 5/1995 he plays it once, as part of what may or may not be an intentional quote of the melody to "People Will Say We're In Love." It is not until 9/1995 that the major seven is sustained, in the opening of Mulligan's solo. Later in 9/1995 the major seventh is included as part of a linear passage (mm. 18–19) and a lower-upper neighbor enclosure on 1 (m. 36).

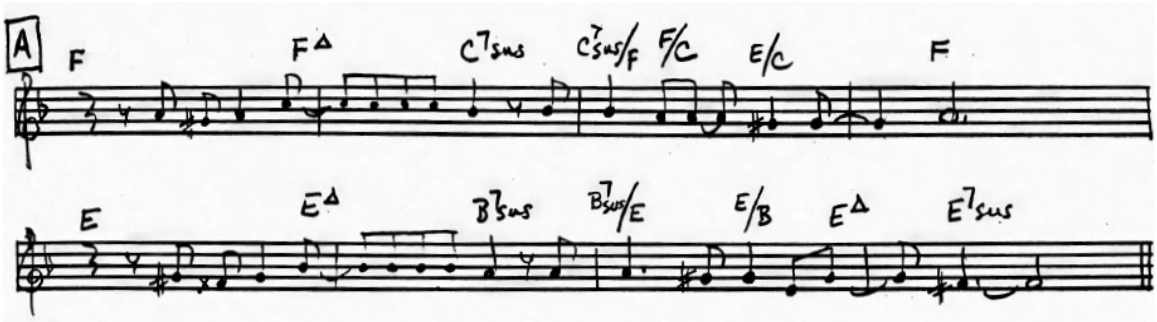

Figure 63. “Curtains” piano part excerpt from Gerry Mulligan Quartet road book

Table 6 lists the compositional devices I found most often in Mulligan’s solos on “Curtains.”[131] Note that certain devices, such as the emphasis on $\hat{5}$, the F♯6-A5 leap, and the $\hat{3}$-$\hat{4}$-$\hat{5}$ melodic figure recur not only from solo to solo, but in the same place in successive solos, further supporting the theory that Mulligan conceives of sounds “belonging” to solos on a piece, even to the point of conceiving them in a particular location in the form.

131. Pitches in Table 6 are transposed for baritone saxophone.

Table 6. Characteristic and recurring elements used in “Curtains” solos

	Year of solo			
Element	1989	1990	5/1995	9/1995
Major pentatonic	m. 4 m. 17 m. 23 mm. 38–40 mm. 100–104 mm. 116 mm. 118 mm. 164–168	m. 4 m. 17 mm. 31–40 mm. 161–166 mm. 225–232	mm. 1–7 mm. 17–23 mm. 53–56 mm. 223–231	mm. 5–7 mm. 20–23 mm. 51–55 mm. 69–72 mm. 177–184 mm. 193–199
D-E♭-F-G tetrachord in C9	mm. 171	mm. 41–44 mm. 235–236	mm. 235–236 (allusion)	m. 204 (fragment)
C-D-E♭-F tetrachord in C9	m. 41 (allusion) mm. 169–172	mm. 233–235	mm. 233–234	mm. 201–202
F♯6-A5 leap	m. 31	m. 63	m. 63	
$\hat{3}$-$\hat{4}$-$\hat{5}$		mm. 65–58	mm. 65–67	
Major seventh on static harmony			m. 167 mm. 228	mm. 1–2 mm. 18–19 m. 36
Blue notes				m. 56 m. 68 m. 196
Conventional sequence			mm. 37–39[a] mm. 50–51[b]	mm. 50–51[c]

[a] Descending diatonic sevenths combined with ascending triplets.
[b] Linear.
[c] Triplets, sequenced and inverted.

The discography lists many more performances of "Curtains" by Mulligan's quartet in the period between 1990 and 1995, but most are described as privately recorded. Others were broadcast on radio or television, but I was unable to locate any audio or video for those broadcasts. Those recordings would be helpful in tracing the evolution of elements that appear in the later solos but not the earlier, such as the blue notes and major seventh in the solos from 1995.[132]

"The Flying Scotsman"

"The Flying Scotsman" was written for a commission by the Glasgow International Festival and named for a train that runs from Scotland to London, reflecting Mulligan's well-documented and long-time interest in trains.[133] The first performance of the piece was at the festival on 3 July 1988.[134] It is a modal composition, with contrasting sections of F minor (concert pitch) and E♭ mixolydian concert (concert pitch). The chorus form of the melody is five eight-bar sections, AABBA, but for the solos another A section is added at the end (AABBAA), bringing the solo form to forty-eight bars.

The melody is notable for its use of tetrachords and pentatonics. The A section utilizes only the pitches D, F, G, and A (concert pitches F, A♭, B♭, and C) while the B section melody uses a C major pentatonic scale (concert pitch E♭ major).

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132. These new elements do not replace the old. Mulligan continues to use the major pentatonic, the C9 section tetrachord, and other elements from earlier solos even as he adds new sounds in the form of blue notes and the major seventh. His essential concept to improvising on "Curtains" remains consistent, much as his approach to improvising on "Line for Lyons" remained consistent even though his sequences became more complex, less overt over time.

133. The Library of Congress, "Gerry Mulligan Biography," accessed 13 July 2019, https://www.loc.gov/item/ihas.200153253.

134. Perier, Dugelay, and Hallqvist, 602.

Similar restriction of pitch content is also a feature of the solos. While at times Mulligan utilizes all seven notes (with or without chromatic alteration), there are also numerous passages in which he plays only three to six diatonic pitches.[135] These passages tend to last from two to four bars. See Table 7 for a list of passages featuring limited pitch collections.[136]

Mulligan uses little sequence in his solos on "The Flying Scotsman," with one exception: a series of descending diatonic seventh chords. Mulligan uses this sequence on the bridge in each of the five solos transcribed for this study. Mulligan could easily have played a sequence like this over the static harmony in "Curtains," but he does not, further supporting my argument that for Mulligan certain sounds "belong" to a particular tune, that they are part of his concept of solos on that tune.[137] The measures in which the tri-, tetra-, penta-, and hexachords and the conventional sequence appear in Mulligan's solos on "The Flying Scotsman" are shown in Table 7.

135. The most chromatic alteration emphasized most often is B♮, which Mulligan uses to reinforce a modal (Dorian) sound of the piece. Other chromatics are generally used as passing tones or as part of an enclosure on a diatonic pitch.

136. Pitches and scale names in Table 7 are transposed for baritone saxophone.

137. Mulligan uses descending diatonic seventh chords as part of a sequential passage once on "Curtains," in the solo from May 1995.

Table 7. Characteristic and recurring elements used in “The Flying Scotsman” solos

	Year of solo				
Element	1989	1990	1991	1993	1995
Descending diatonic sevenths	mm. 28–31	mm. 29–31	mm. 25–27	mm. 29–31	mm. 77–79
D-F-G-A tetrachord	mm. 13–15 mm. 45–47[a]	mm. 13–15 mm. 46–17	mm. 9–11[b]	mm. 2–3 mm. 51–54 mm. 65–71 mm. 81–83	mm. a–2 mm. 12–13 mm. 17–21 mm. 64–68 mm. 93–95
Other restricted pitch content[c]	mm. 5–7 Dm6/7 hex	mm. 5–7 Dm6 hex[d]	m. 15 A-C-D tri	mm. a–3 D-E-F-G-A pent	mm. a–3 Dm pent
	mm. 13–16 Dm pent	mm. 21–23 D-G-A tri	mm. 36–40 Dm6/7	mm. 8–13 D-E-F-A-B pent	mm. 12–13 Dm pent
	mm. 17–23 Gm9 hex	mm. 33–39 Dm6/9 pent		mm. 16–20 G-A-B♭-C-D pent	mm. 17–20 Dsus tetra
	m. 33 Dm6 tetra	mm. 44–47 Dm6 pent		mm. 33–37 D-E-F tri	mm. 25–32 Dm pent
	mm. 37–39 Dm6 tetra			mm. 56–59 F-G-A-B-C pent	mm. 48–56 A-B-C tri
	mm. 45–47 Dm pent			mm. 59–64[e] Dm pent	mm. 57–60 F-G-A tri
				mm. 61–71 Dm pent	mm. 64–68 Dsus tetra
				mm. 86–87 Dm6 tetra	mm. 73–75 Dsus tetra
					mm. 93–95 D-A-C tri

[a] With C passing tone.
[b] With E lower neighbor in m. 11.
[c] Tri-, tetra-, penta-, and hexachords other than the D-F-G-A tetrachord used in the head.
[d] With E passing tone.
[e] Measure 61 includes a G♯ lower neighbor but the predominant sound of the passage is D minor pentatonic.

Summary and Conclusion

Gerry Mulligan does not use a vocabulary of licks and patterns to create his solos. Instead, Mulligan hears certain sounds as appropriate and necessary for his solos on each tune, avoiding other sounds even if they could easily be used. For instance, in "Curtains," particularly on the earlier solos, he chooses to use a pentatonic scale in the first half of each sixteen-bar phrase rather than a seven-note scale.

Mulligan also restricts certain sounds to particular tunes, rather than transferring those sounds to other tunes. For instance, he could have used the descending diatonic seventh chords that are so prominent in "The Flying Scotsman" over the four-bar sections of static harmony in "Curtains," but he does not. Repetition and sequence, a major feature of his solos on "Line for Lyons," is used only sparingly in "Curtains" and "The Flying Scotsman."

Some elements do carry over from one tune to another. Mulligan tends to use the sixth scale degree as a chord tone on tonic major rather than the seventh scale degree, for instance. He also seems to favor the third of the chord as a melody note and returns to it in his solos ("Line for Lyons," "Curtains").

Finally, there are connections between the composed melody of each tune and the improvised solos. The connections may be obvious, as in "Line for Lyons," in which both the head and Mulligan's solos feature motivic manipulation, particularly repetition and sequence. The connections may also be more conceptual, as in the parallelism of the melodic and harmonic construction in the first half of each sixteen-bar phrase of the head to "Curtains" and the parallelism in Mulligan's use of the major pentatonic in those

measures in his solos, or as in the use of restricted pitch collections, albeit not always the same ones, for both the composed melody and improvised solos on "The Flying Scotsman."

The preceding analyses are only the beginning of the formulation of a complete theory of Mulligan's improvisational process. More transcription and analysis would be necessary, and additional analytical techniques such as Schenkerian analysis would be useful tools in understanding the compositional arc of Mulligan's solos.

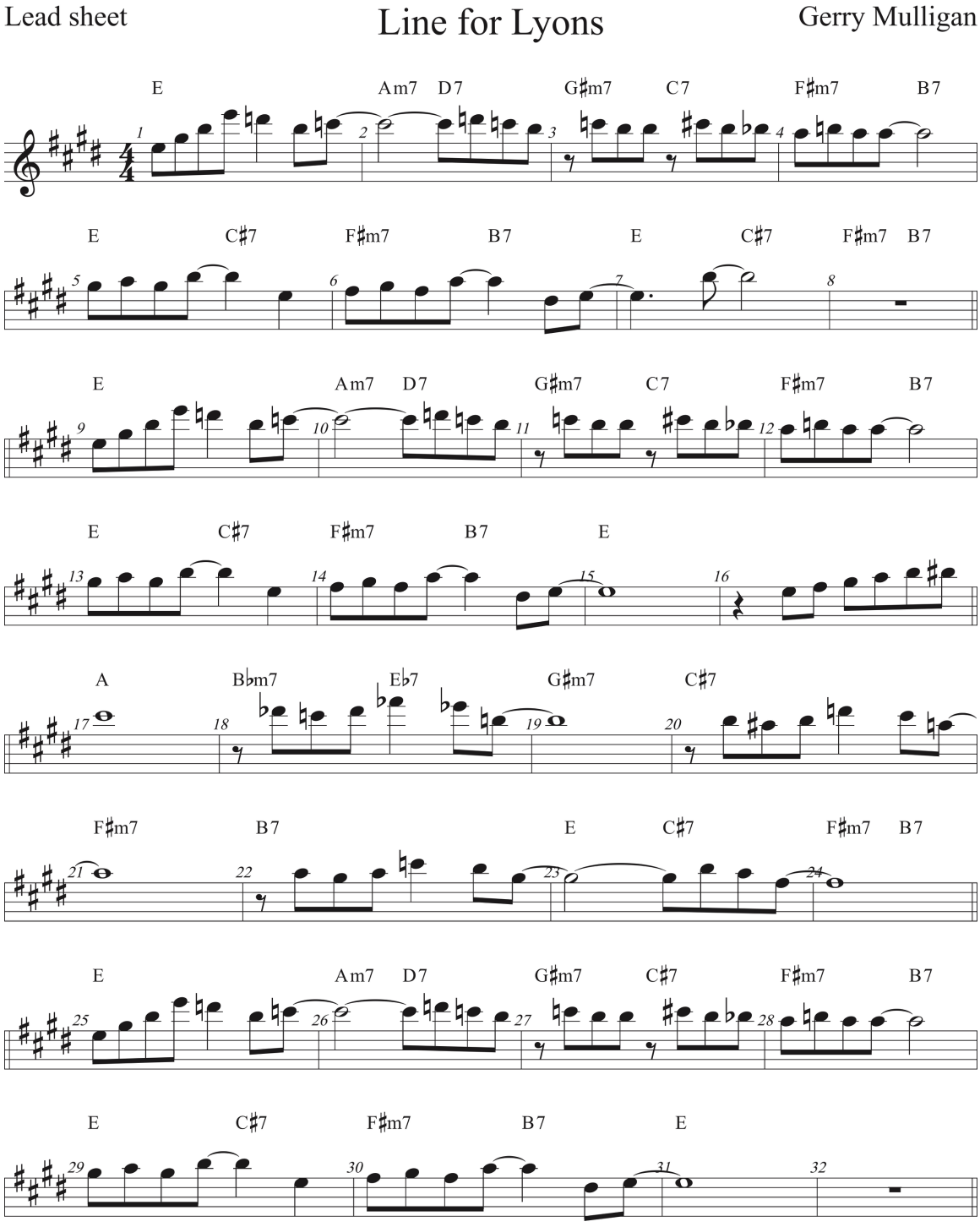
The analyses do, however, demonstrate a consistency of approach in the use of compositional techniques in the creation of Mulligan's improvised solos, and in the restriction of content to certain tunes. Awareness of these aspects of Mulligan's improvisation is an important first step for improvisers and listeners interested in learning about and understanding his process.

I hope that this dissertation inspires students, scholars, and theorists to engage in their own exploration of Mulligan's solos to further augment the research on this illustrious musician, his soloing, and jazz improvisation in general.

APPENDICES

APPENDIX A

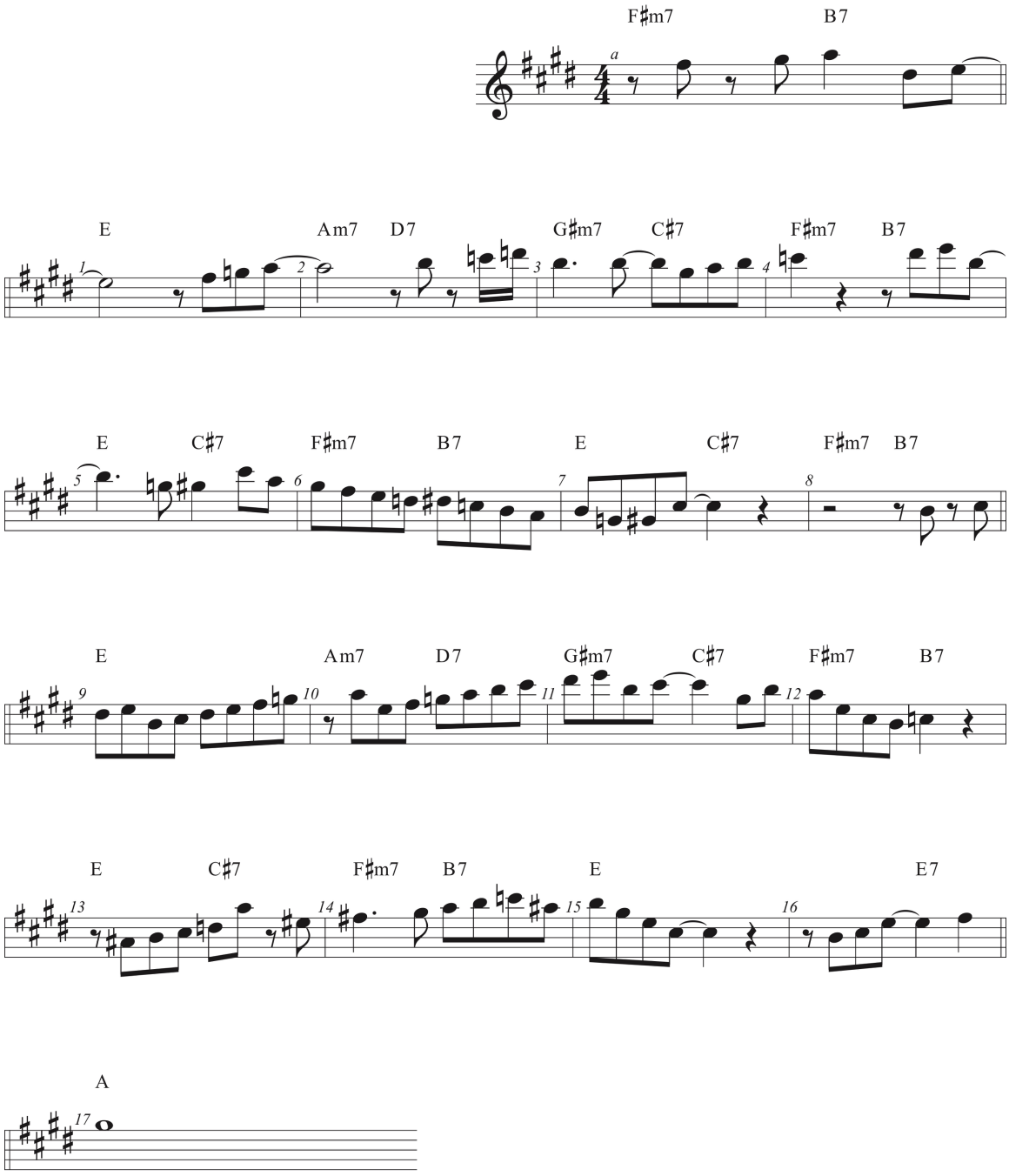
Appendix A.1 “Line for Lyons” lead sheet



Appendix A.2 "Line for Lyons" solo transcriptions

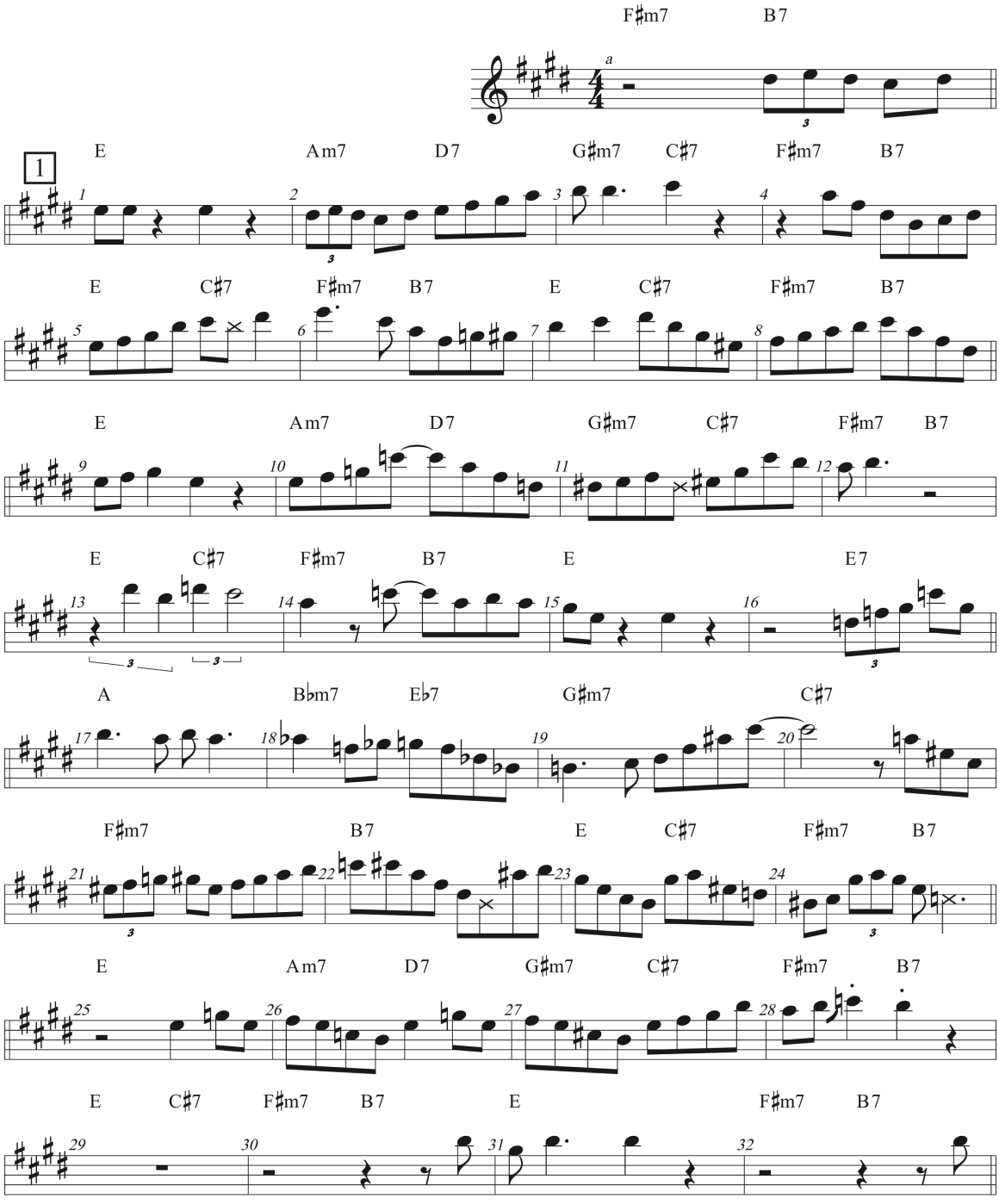
1952 San Francisco

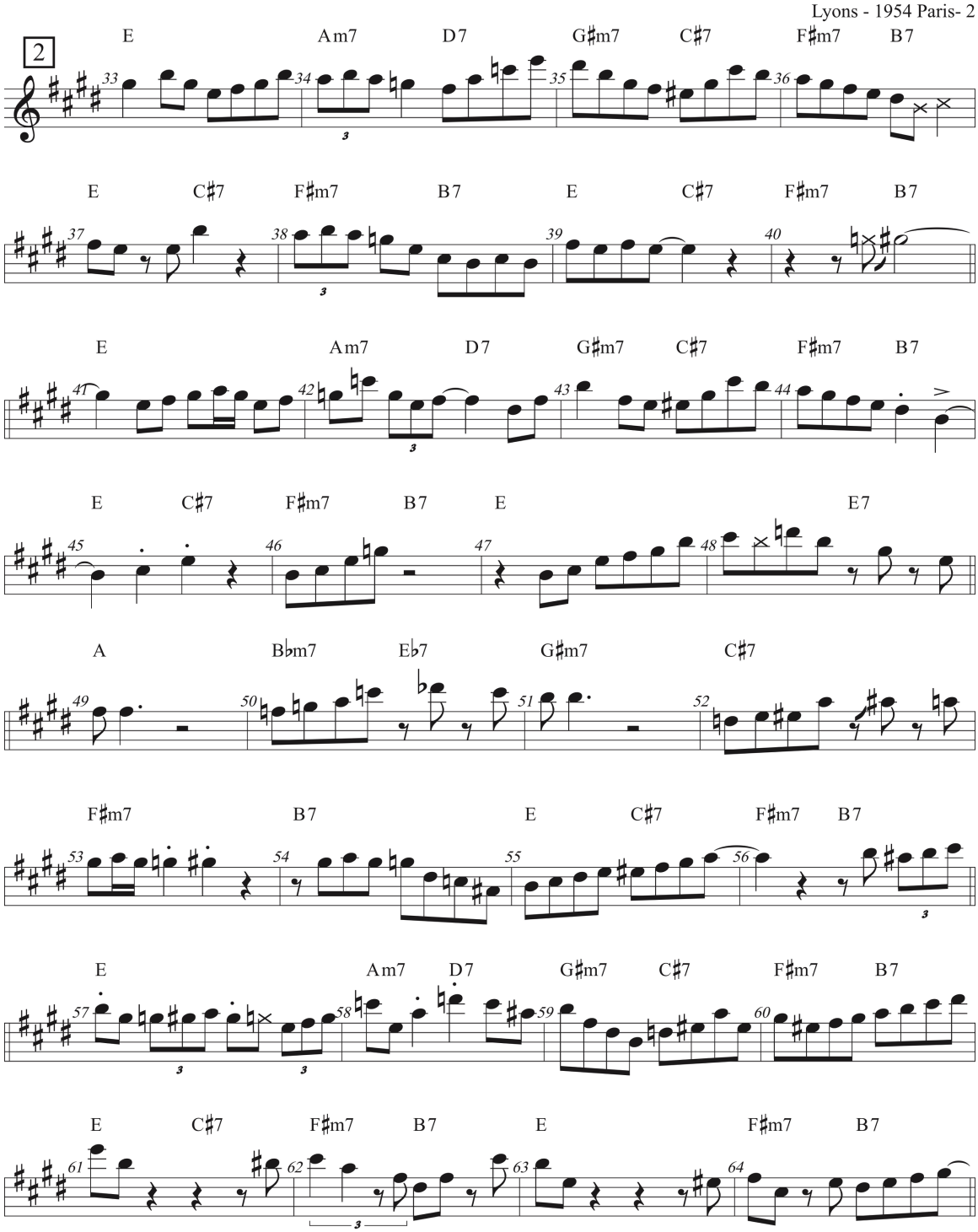
Line for Lyons



1954 Paris

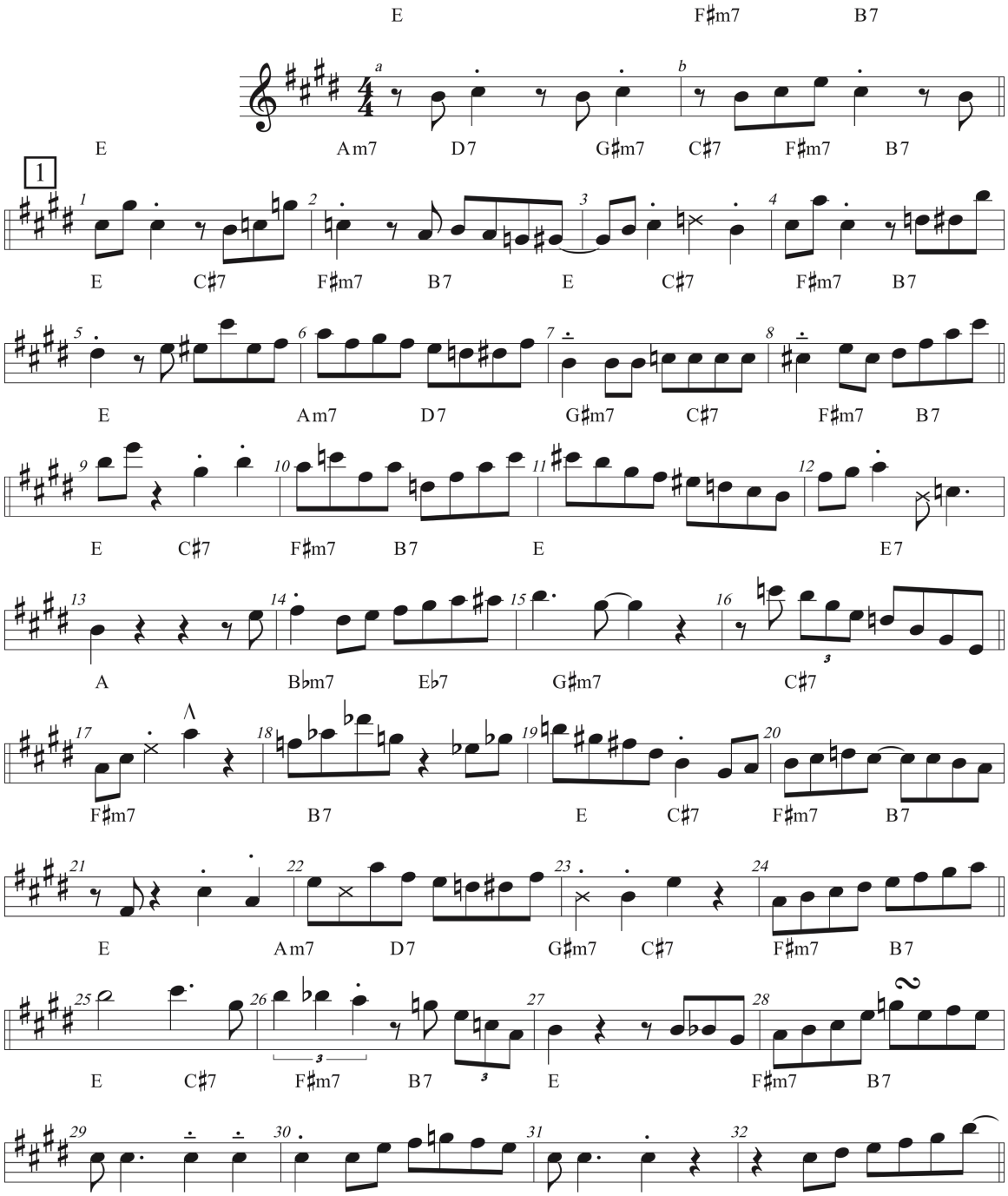
Line for Lyons

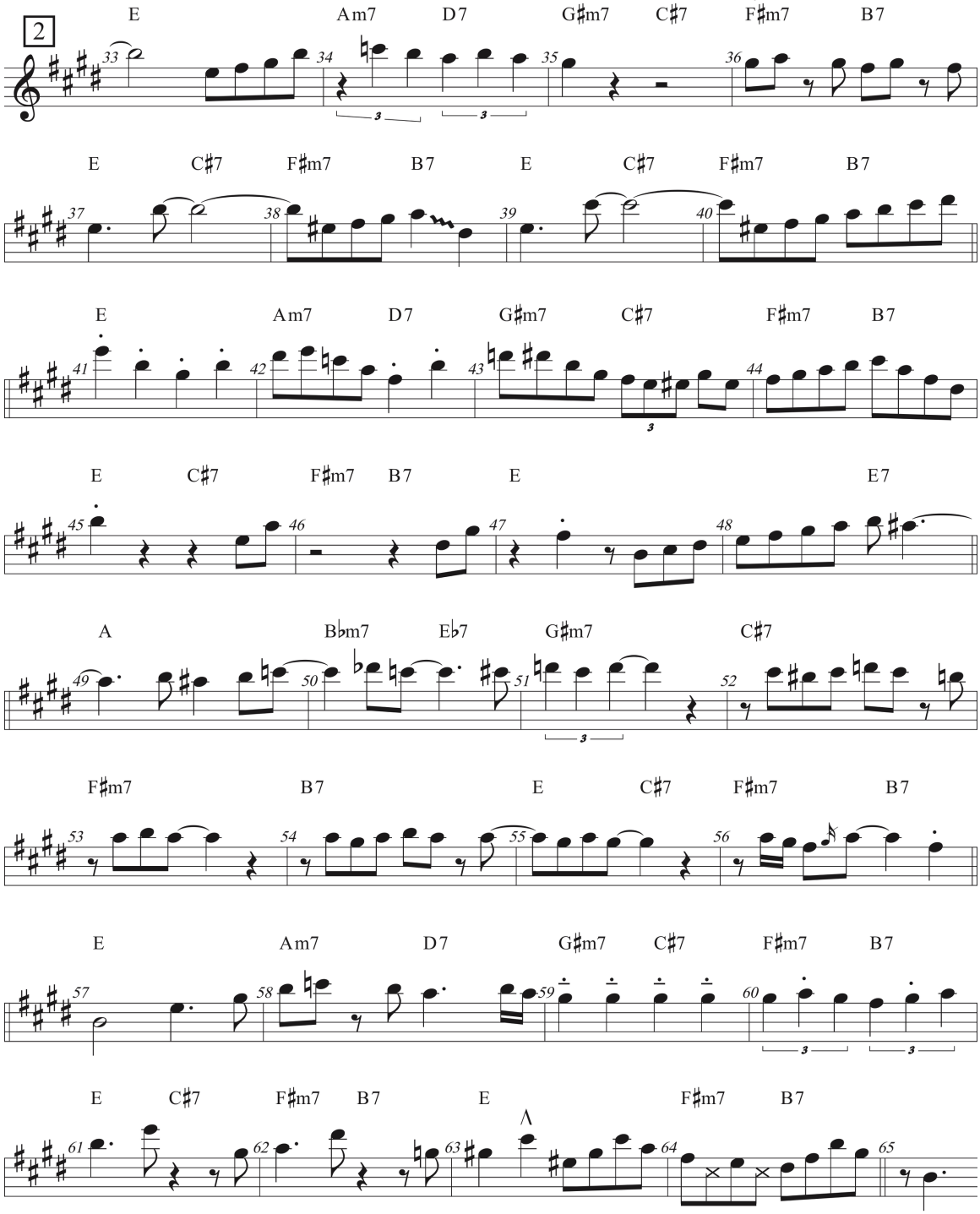



2
E Am7 D7 G♯m7 C♯7 F♯m7 B7
33 34 35 36
E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
37 38 39 40
E Am7 D7 G♯m7 C♯7 F♯m7 B7
41 42 43 44
E C♯7 F♯m7 B7 E E7
45 46 47 48
A B♭m7 E♭7 G♯m7 C♯7
49 50 51 52
F♯m7 B7 E C♯7 F♯m7 B7
53 54 55 56
E Am7 D7 G♯m7 C♯7 F♯m7 B7
57 58 59 60
E C♯7 F♯m7 B7 E F♯m7 B7
61 62 63 64

4/1956 Amsterdam

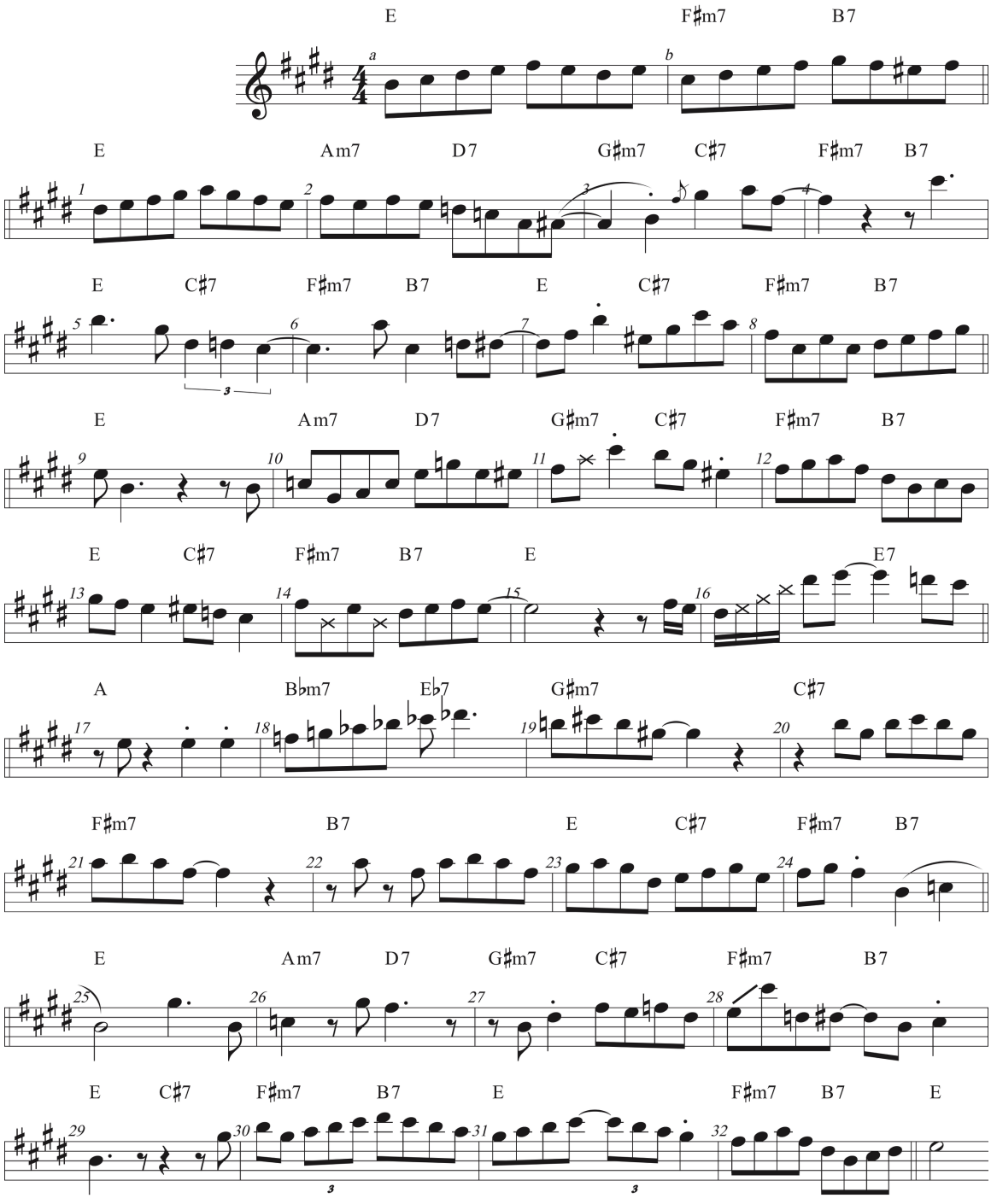
Line for Lyons




2
E Am7 D7 G♯m7 C♯7 F♯m7 B7
33 34 35 36
E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
37 38 39 40
E Am7 D7 G♯m7 C♯7 F♯m7 B7
41 42 43 44
E C♯7 F♯m7 B7 E E7
45 46 47 48
A B♭m7 E♭7 G♯m7 C♯7
49 50 51 52
F♯m7 B7 E C♯7 F♯m7 B7
53 54 55 56
E Am7 D7 G♯m7 C♯7 F♯m7 B7
57 58 59 60
E C♯7 F♯m7 B7 E F♯m7 B7
61 62 63 64 65

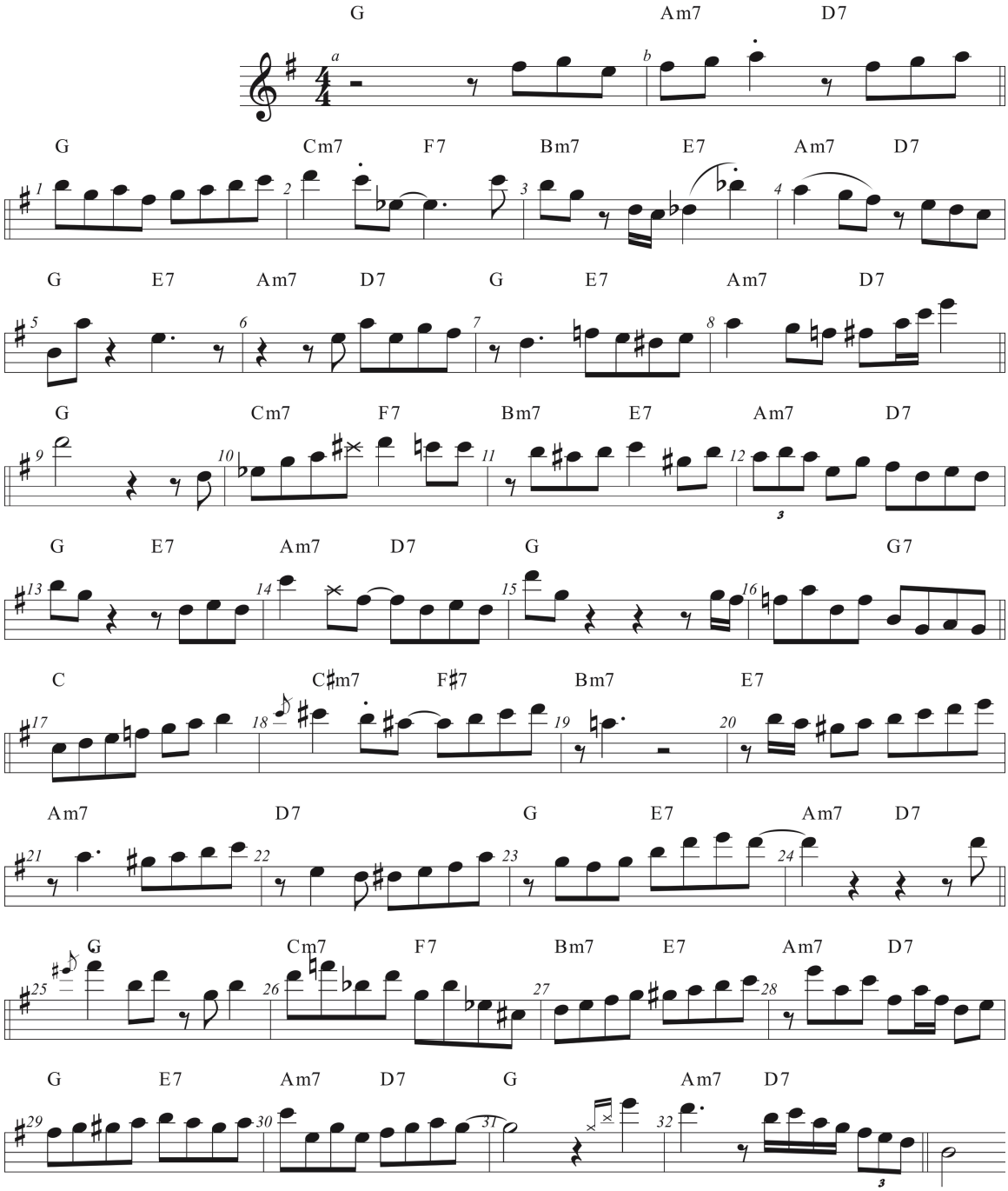
8/1956 New York

Line for Lyons



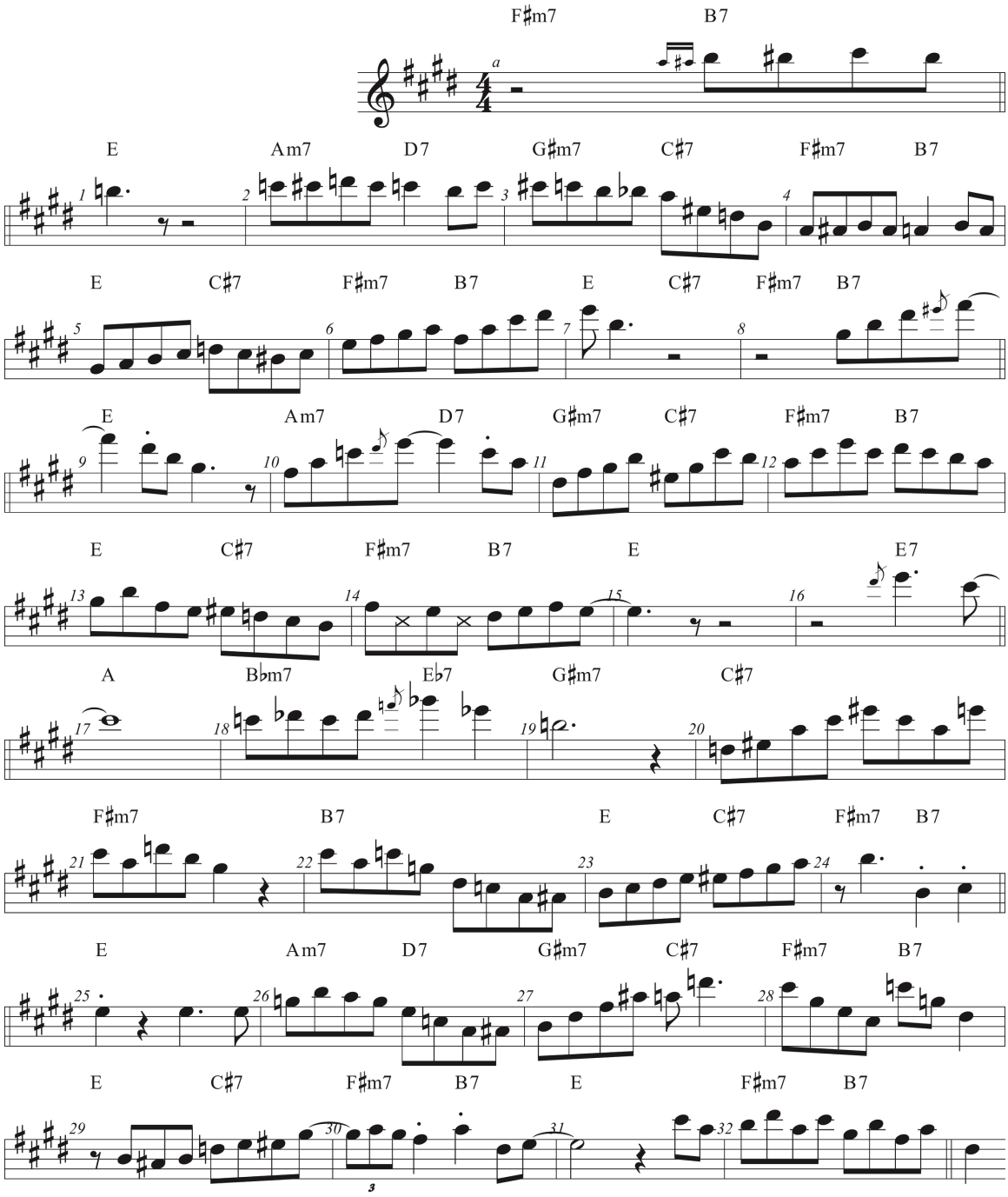
1957 New York

Line for Lyons



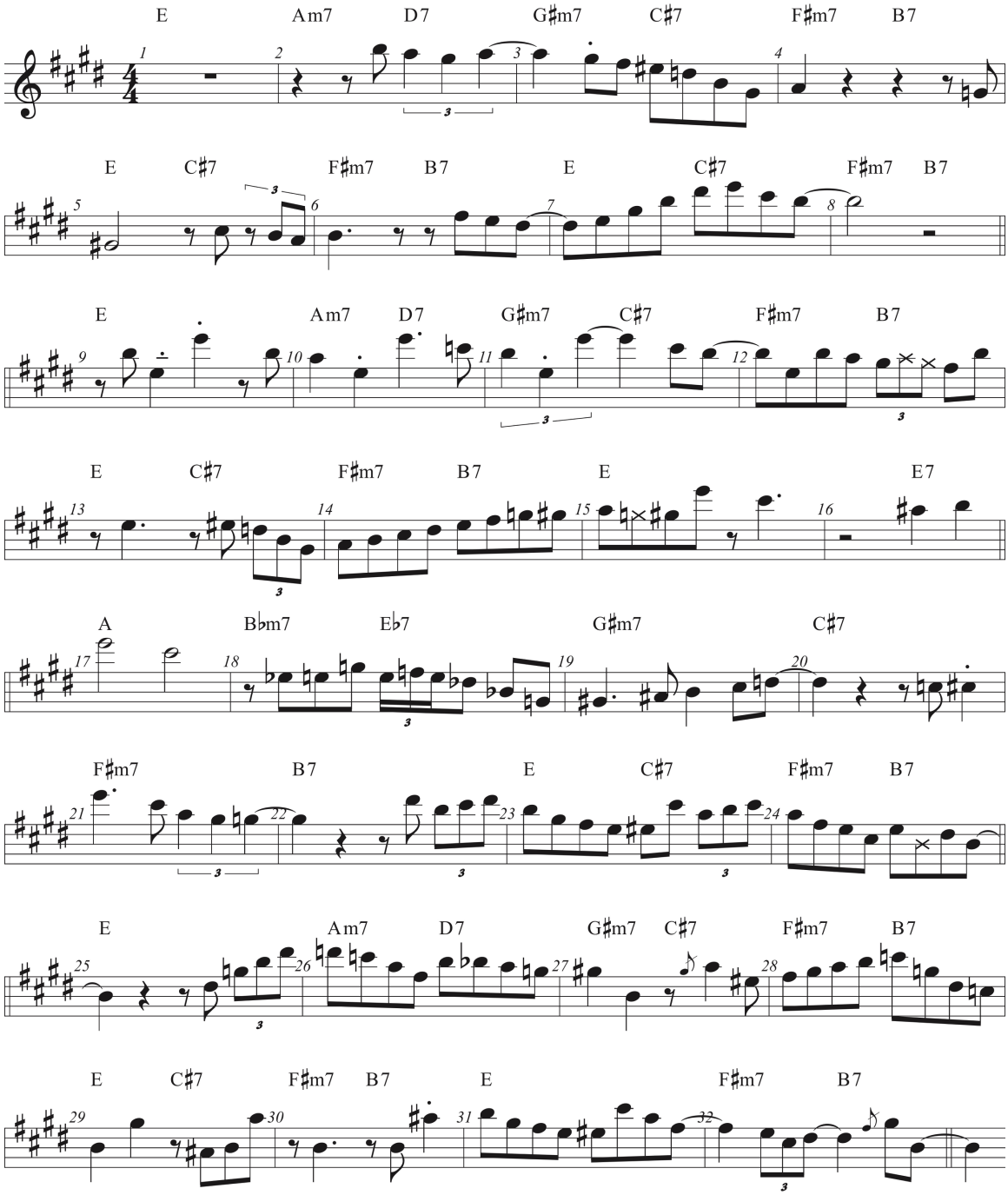
1958 Newport

Line for Lyons



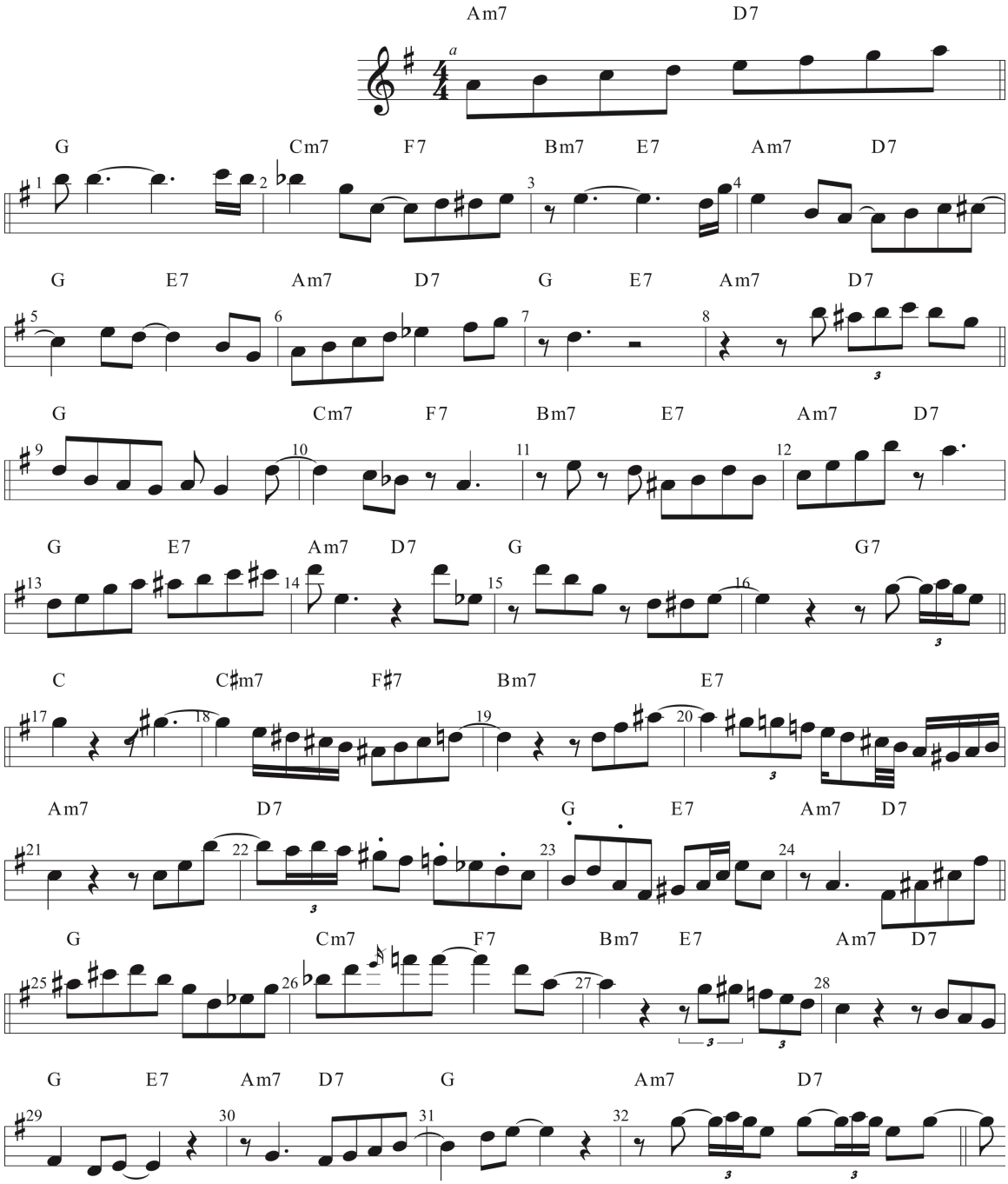
1964 New York

Line for Lyons



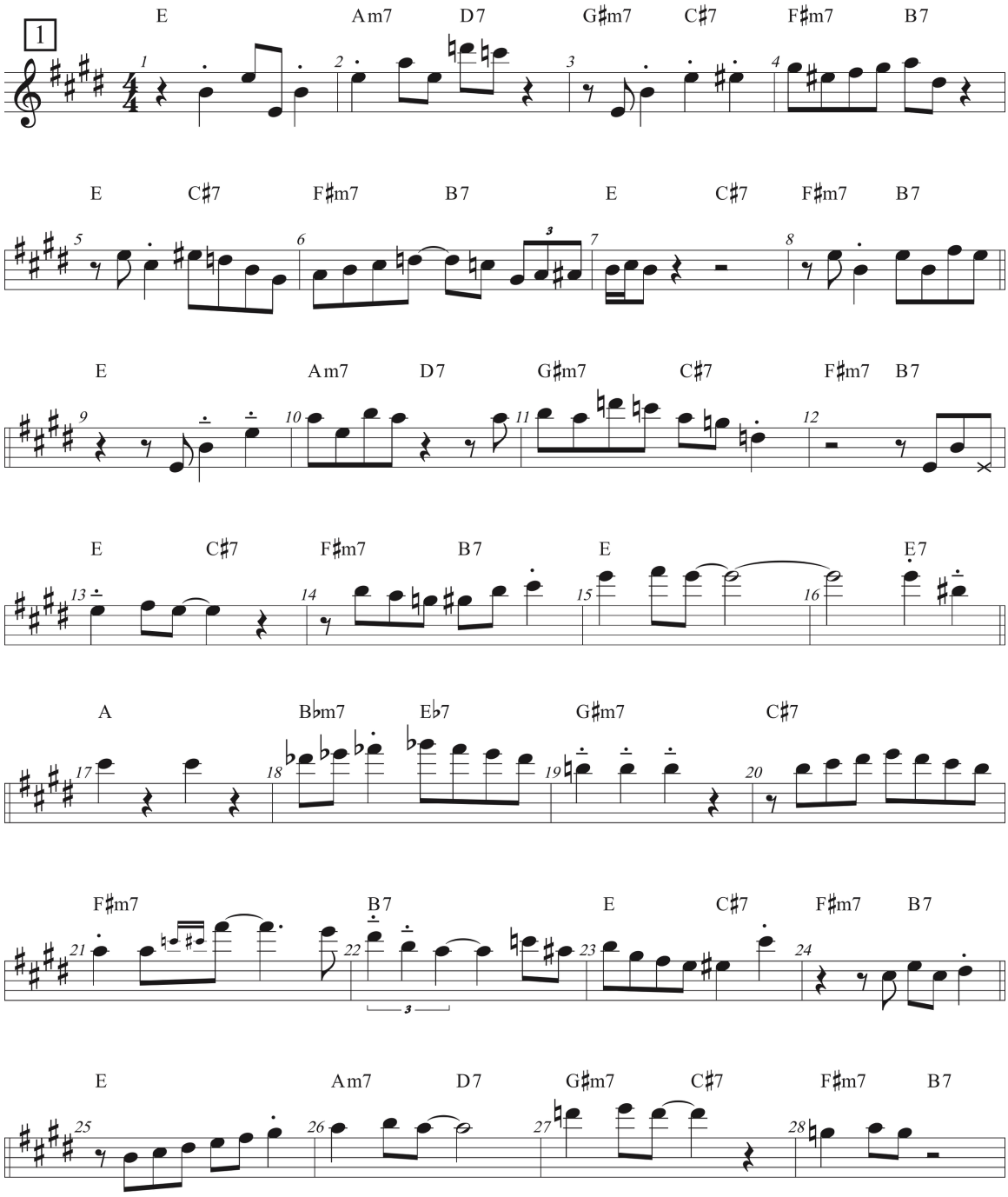
1969 New Orleans

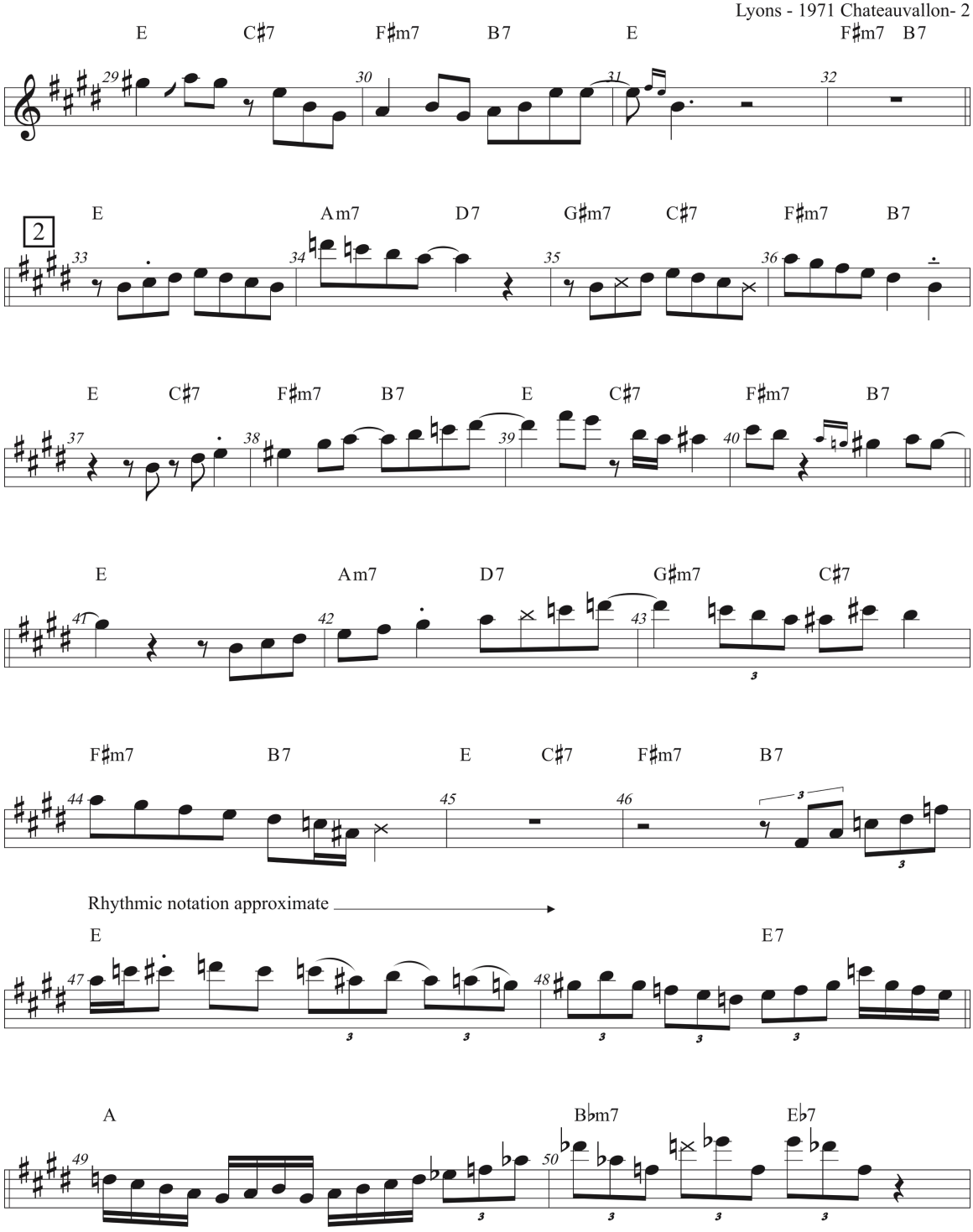
Line for Lyons

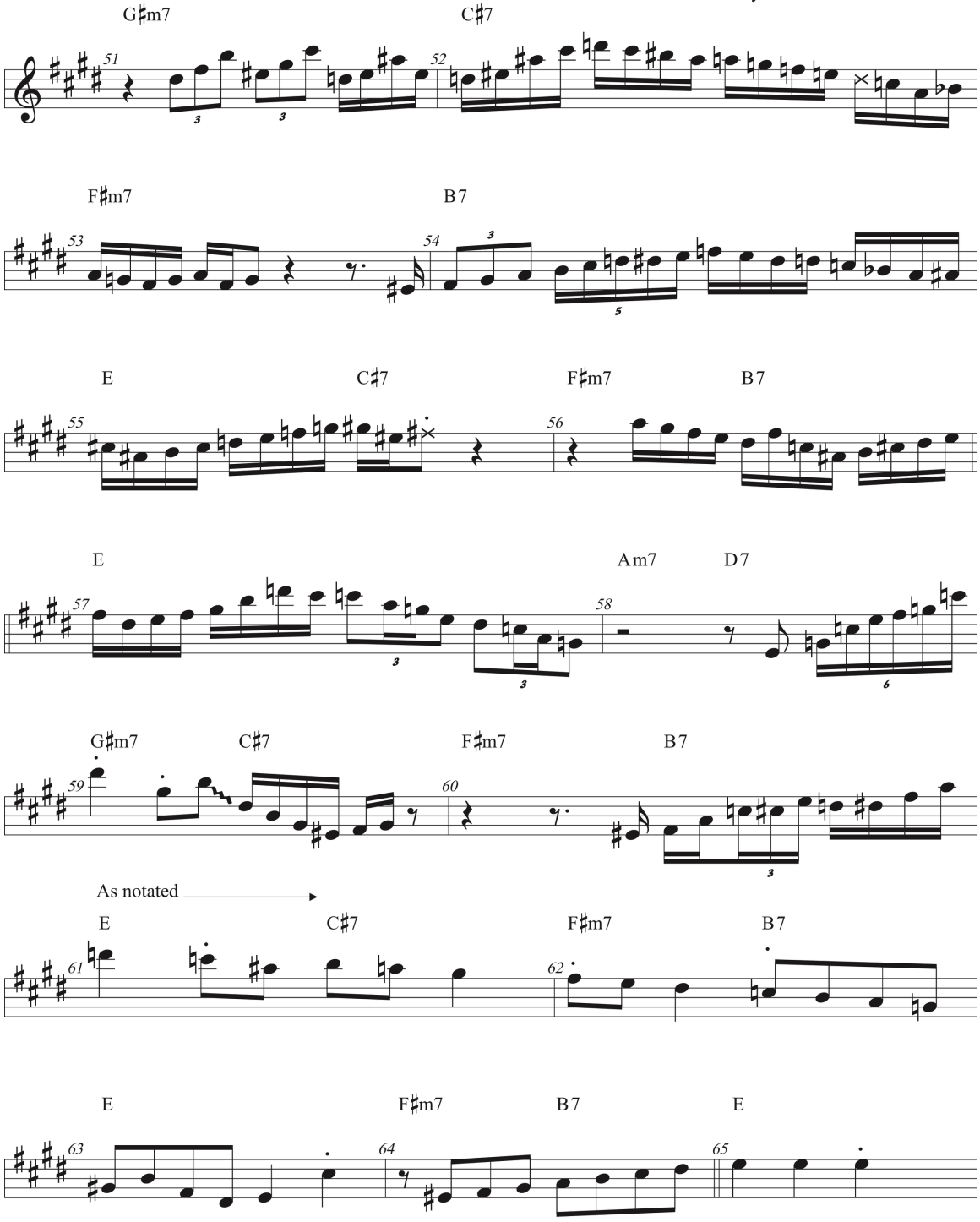


1971 Chateauvallon

Line for Lyons

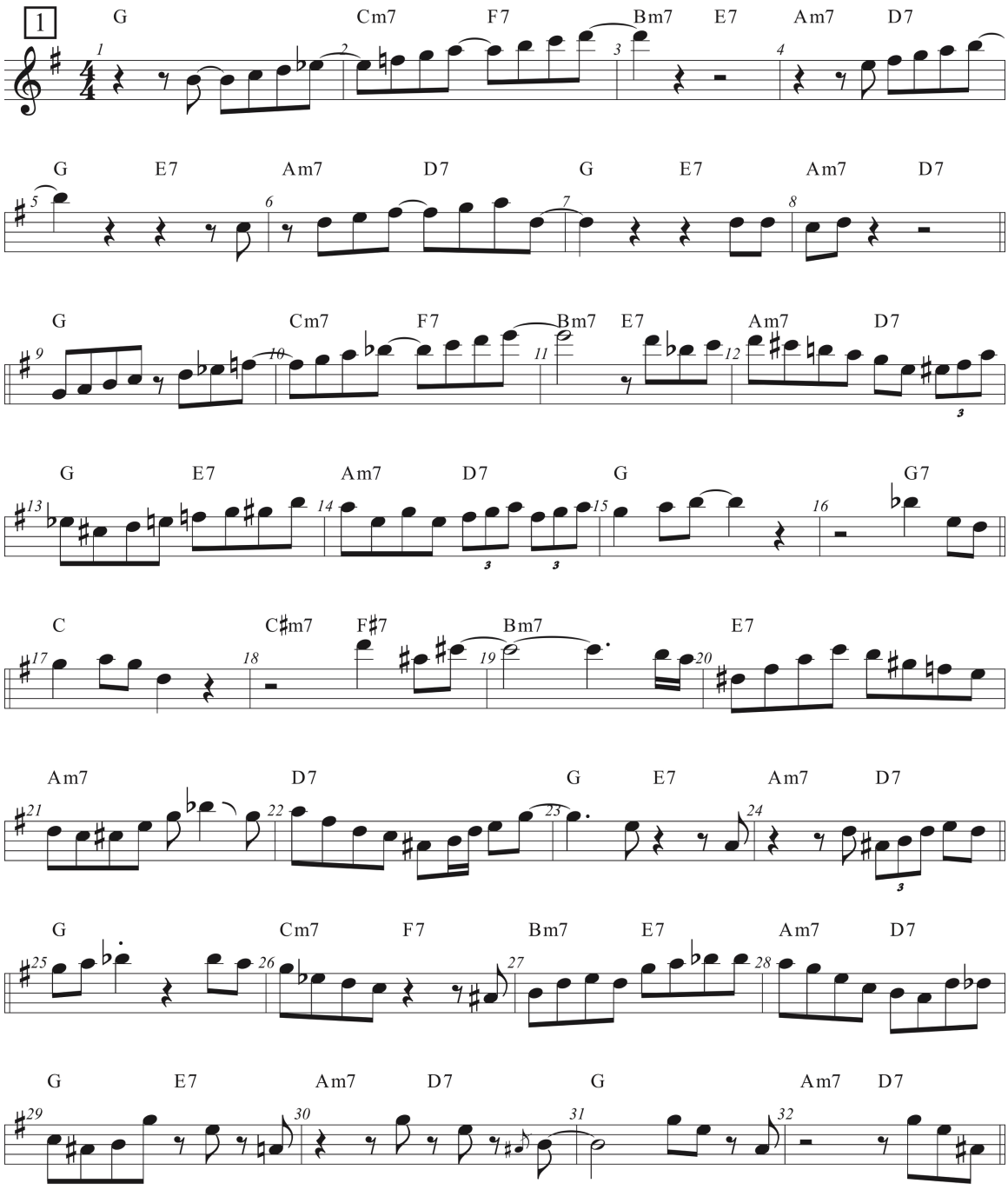


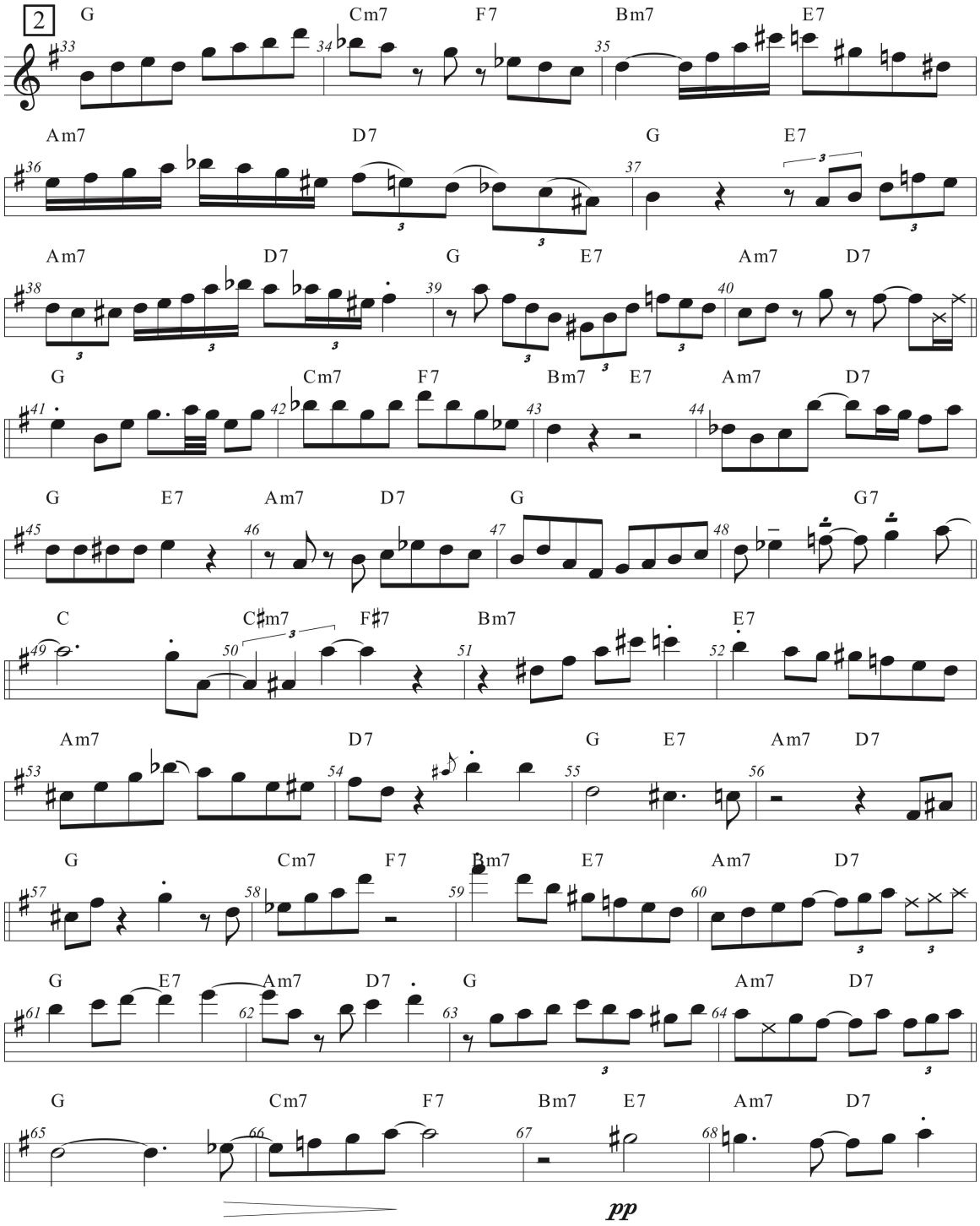

E C♯7 F♯m7 B7 E F♯m7 B7
29 30 31 32
2
E Am7 D7 G♯m7 C♯7 F♯m7 B7
33 34 35 36
E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
37 38 39 40
E Am7 D7 G♯m7 C♯7
41 42 43
F♯m7 B7 E C♯7 F♯m7 B7
44 45 46
Rhythmic notation approximate
E E7
47 48
A B♭m7 E♭7
49 50


G♯m7
C♯7
F♯m7
B7
E
C♯7
F♯m7
B7
E
Am7
D7
G♯m7
C♯7
F♯m7
B7
As notated
E
C♯7
F♯m7
B7
E
F♯m7
B7
E

1972 Berlin

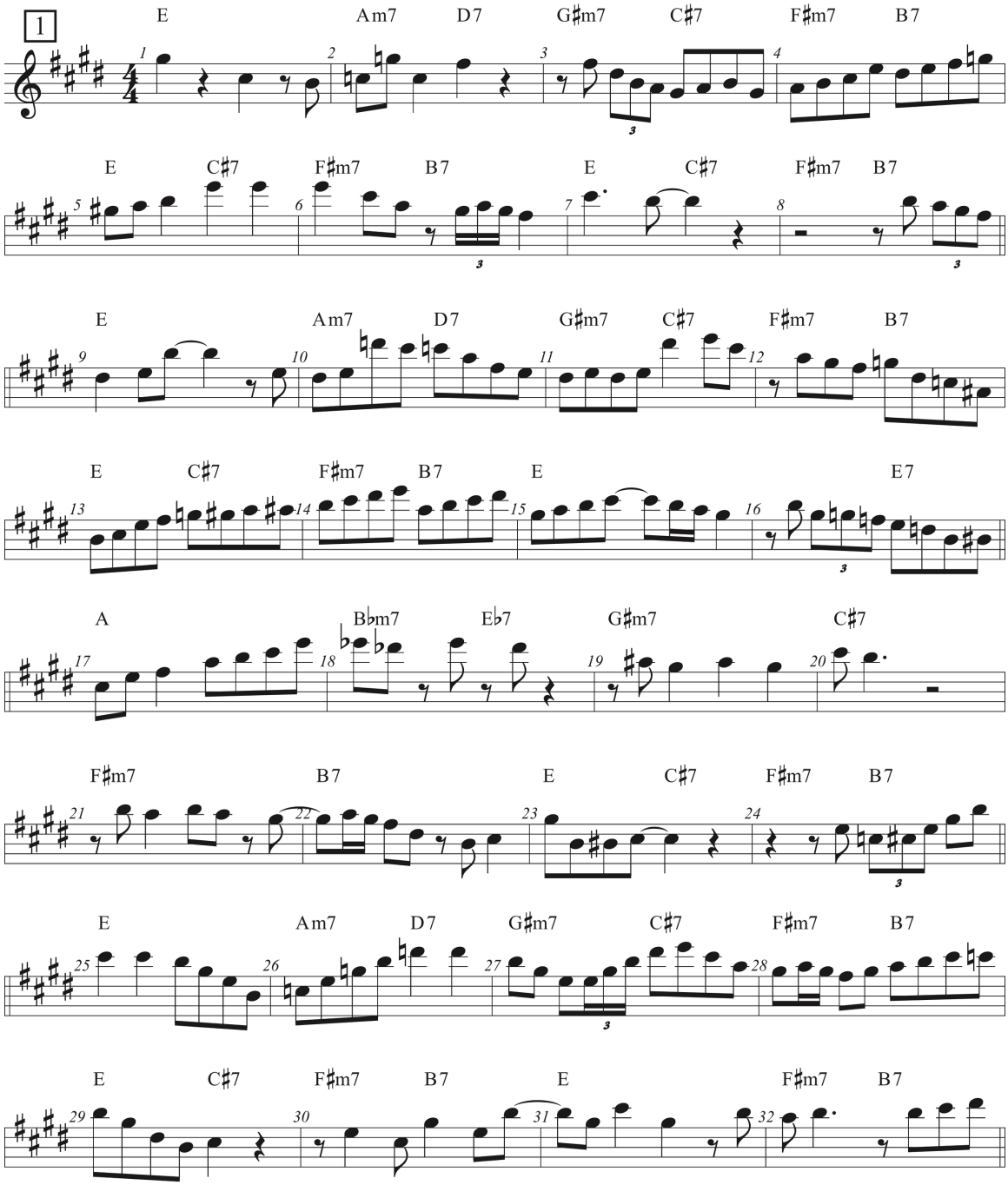
Line for Lyons

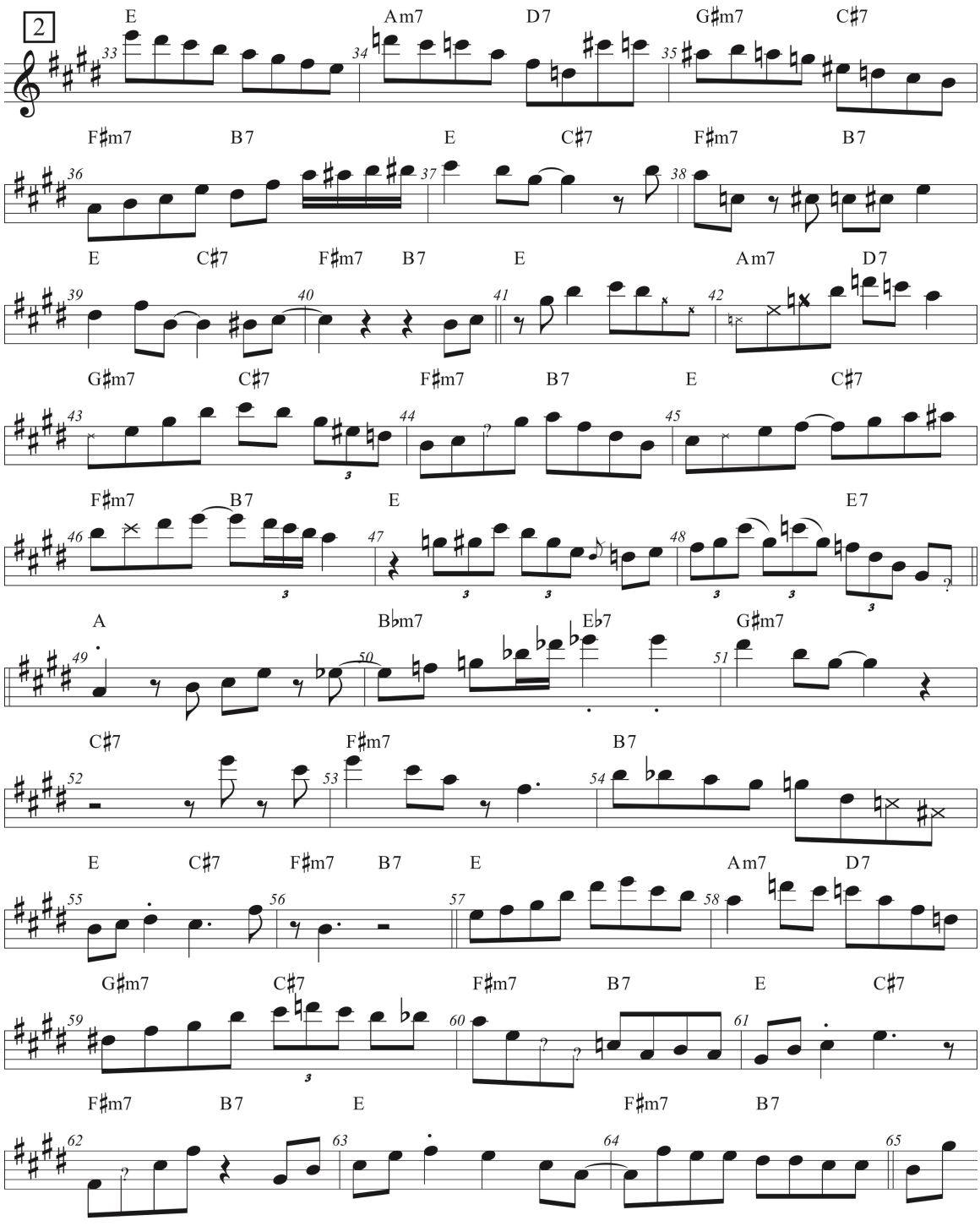



2
G Cm7 F7 Bm7 E7
Am7 D7 G E7
Am7 D7 G E7 Am7 D7
G Cm7 F7 Bm7 E7 Am7 D7
G E7 Am7 D7 G G7
C C♯m7 F♯7 Bm7 E7
Am7 D7 G E7 Am7 D7
G Cm7 F7 Bm7 E7 Am7 D7
G E7 Am7 D7 G Am7 D7
G Cm7 F7 Bm7 E7 Am7 D7
pp

1974 New York

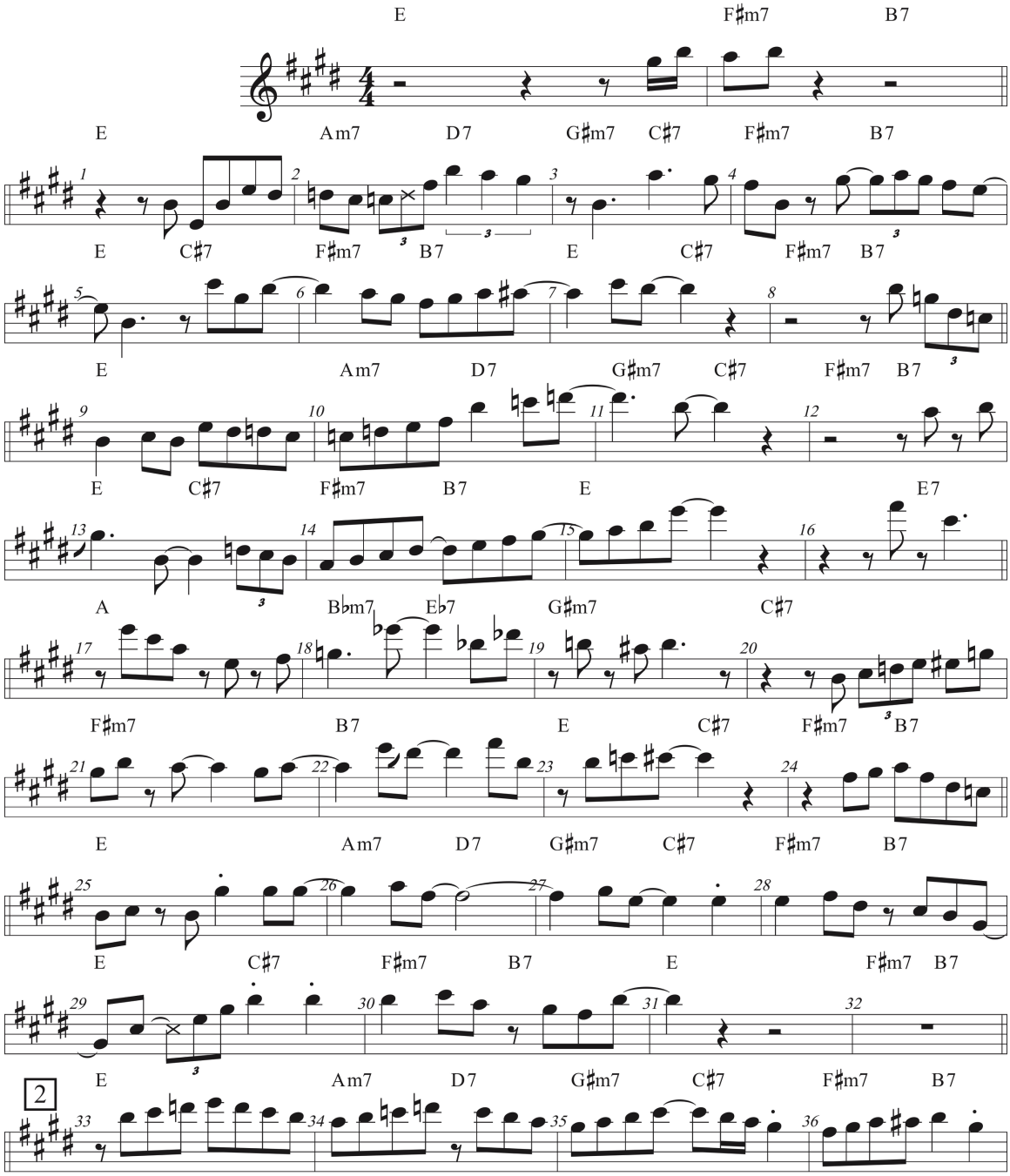
Line for Lyons

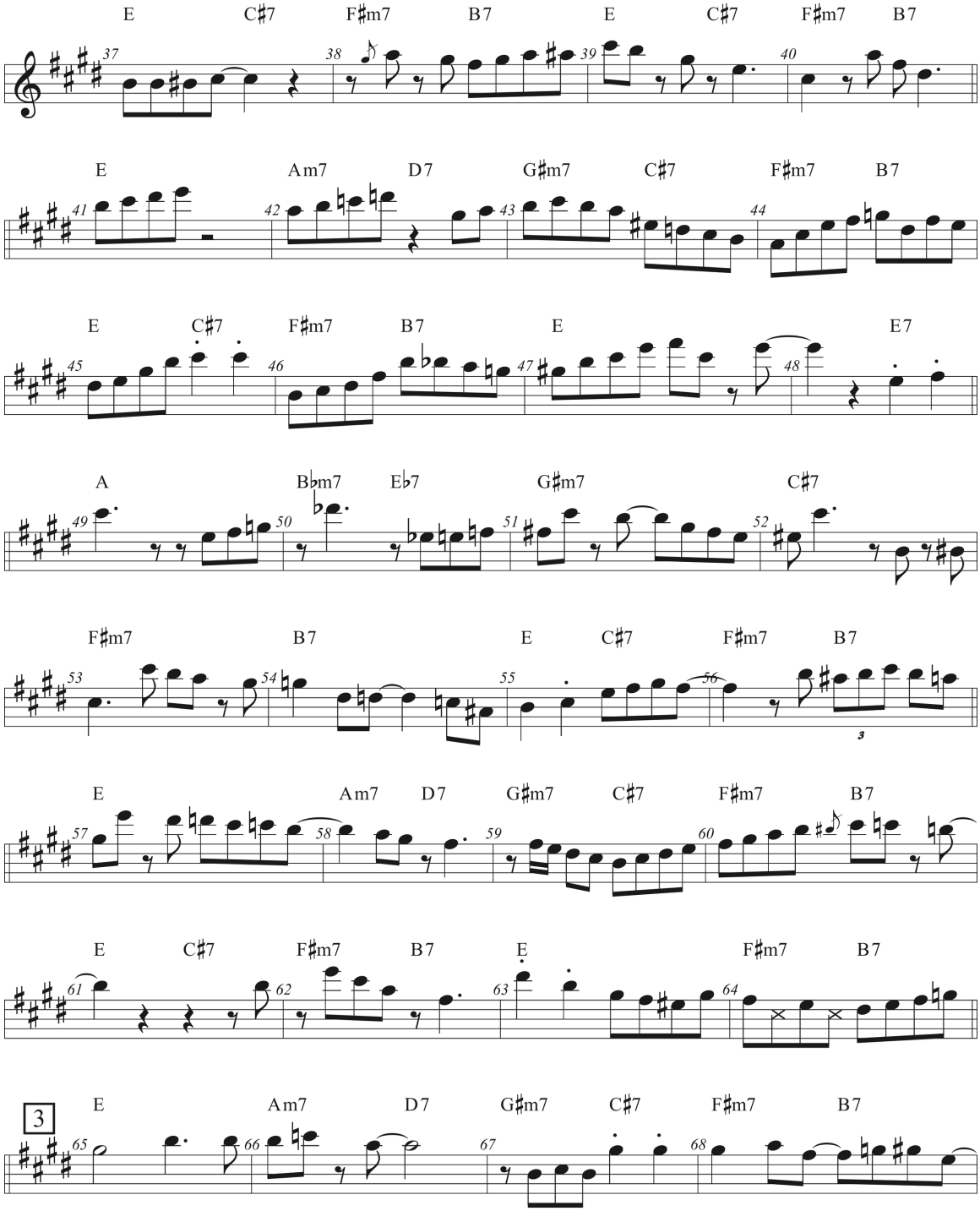


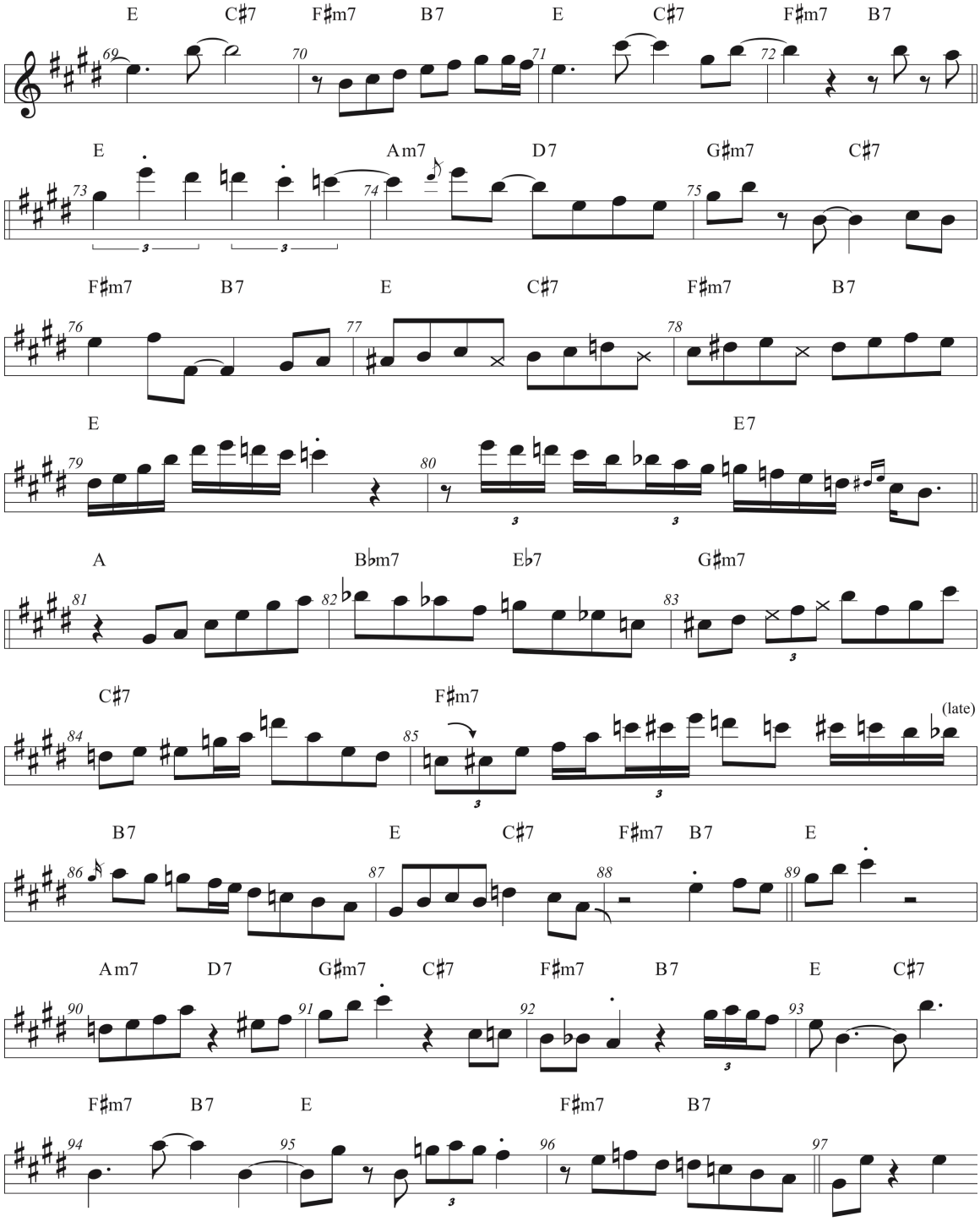

2
E Am7 D7 G♯m7 C♯7
F♯m7 B7 E C♯7 F♯m7 B7
E C♯7 F♯m7 B7 E Am7 D7
G♯m7 C♯7 F♯m7 B7 E C♯7
F♯m7 B7 E E7
A B♭m7 E♭7 G♯m7
C♯7 F♯m7 B7
E C♯7 F♯m7 B7 E Am7 D7
G♯m7 C♯7 F♯m7 B7 E C♯7
F♯m7 B7 E F♯m7 B7

1976 Paris

Line for Lyons

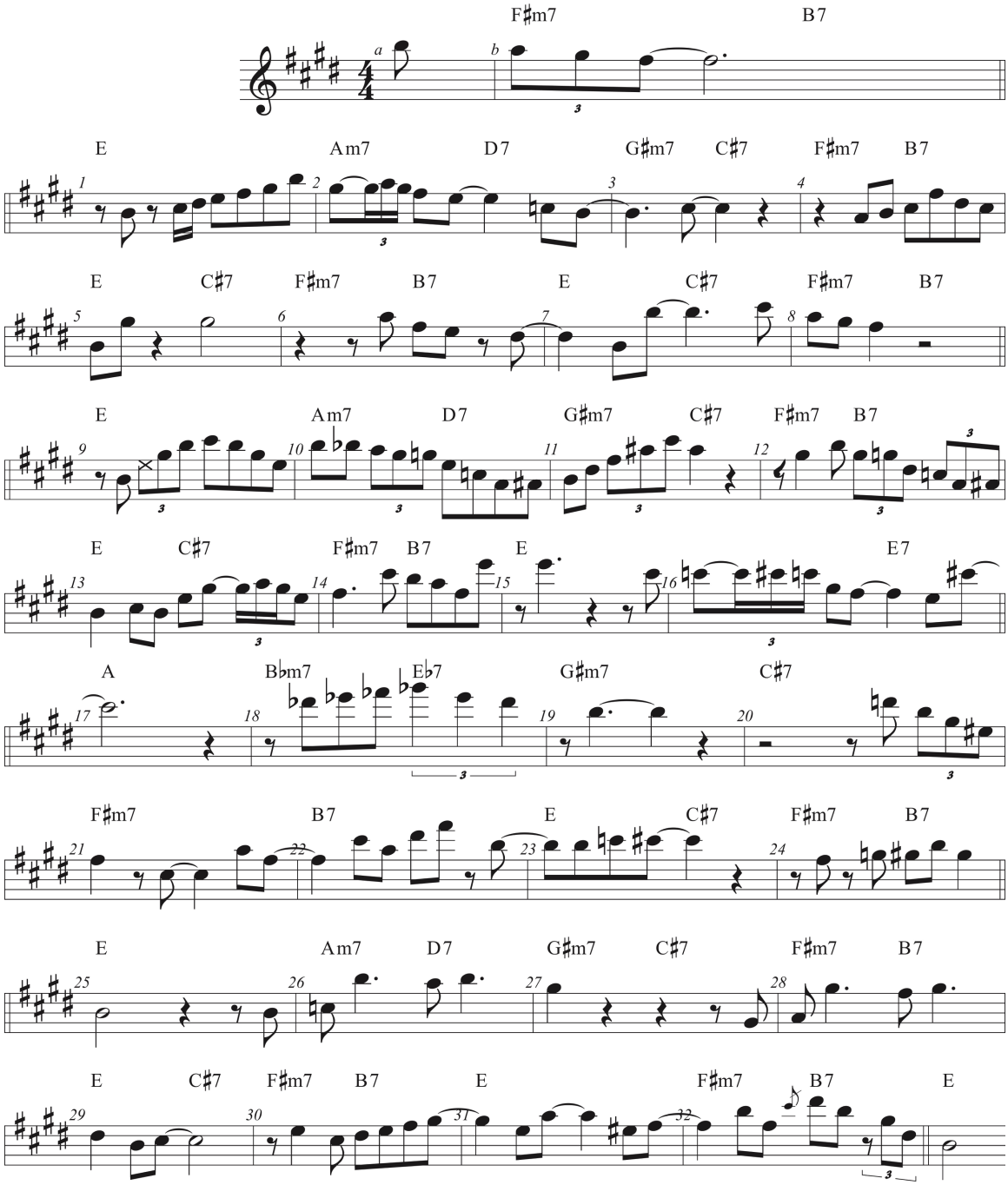



E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
37 38 39 40
E Am7 D7 G♯m7 C♯7 F♯m7 B7
41 42 43 44
E C♯7 F♯m7 B7 E E7
45 46 47 48
A B♭m7 E♭7 G♯m7 C♯7
49 50 51 52
F♯m7 B7 E C♯7 F♯m7 B7
53 54 55 56
E Am7 D7 G♯m7 C♯7 F♯m7 B7
57 58 59 60
E C♯7 F♯m7 B7 E F♯m7 B7
61 62 63 64
3
E Am7 D7 G♯m7 C♯7 F♯m7 B7
65 66 67 68


E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
69 70 71 72
E Am7 D7 G♯m7 C♯7
73 74 75
F♯m7 B7 E C♯7 F♯m7 B7
76 77 78
E E7
79 80
A B♭m7 E♭7 G♯m7
81 82 83
C♯7 F♯m7 (late)
84 85
B7 E C♯7 F♯m7 B7 E
86 87 88 89
Am7 D7 G♯m7 C♯7 F♯m7 B7 E C♯7
90 91 92 93
F♯m7 B7 E F♯m7 B7
94 95 96 97

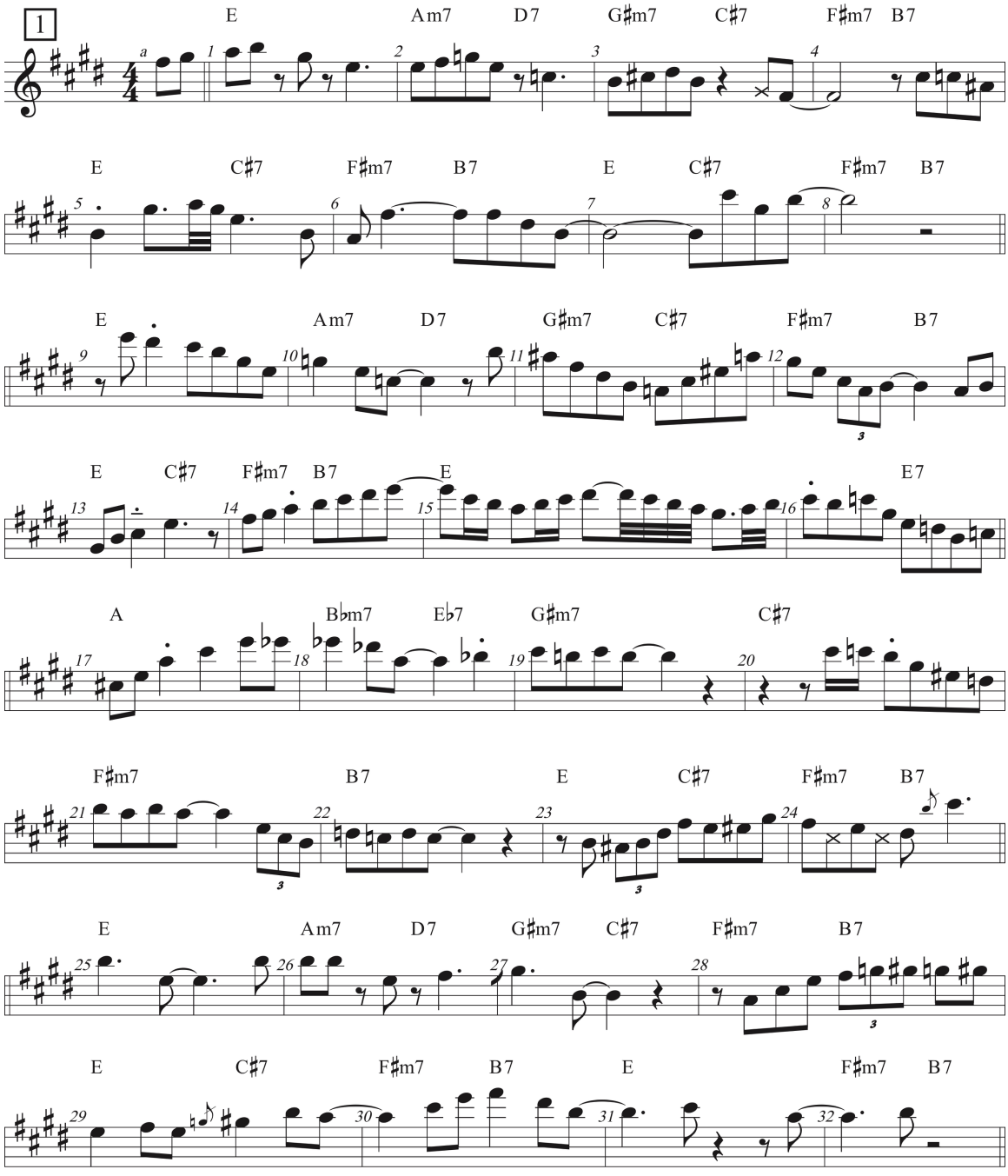
10/1977 New York

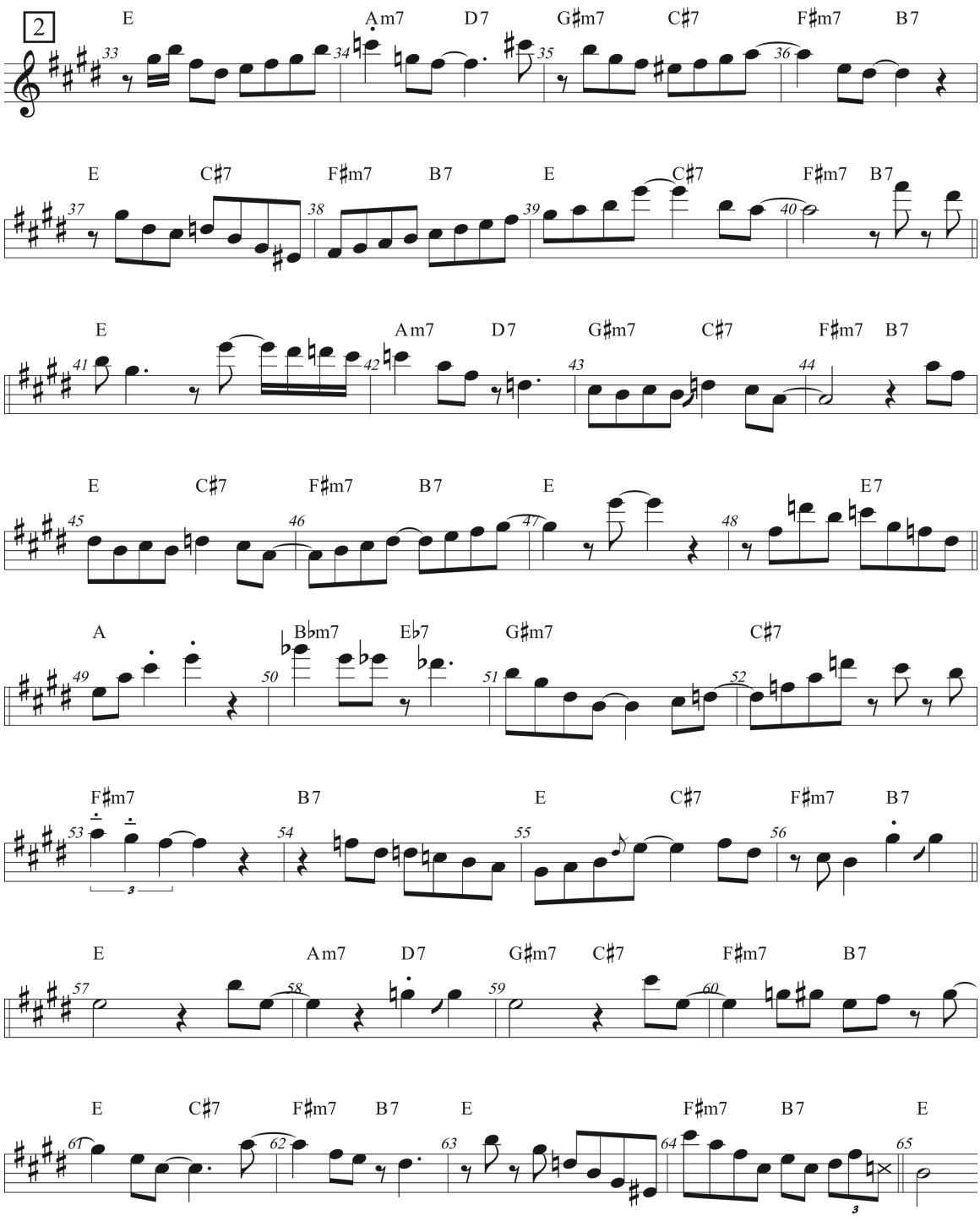
Line for Lyons



11/1977 Stuttgart

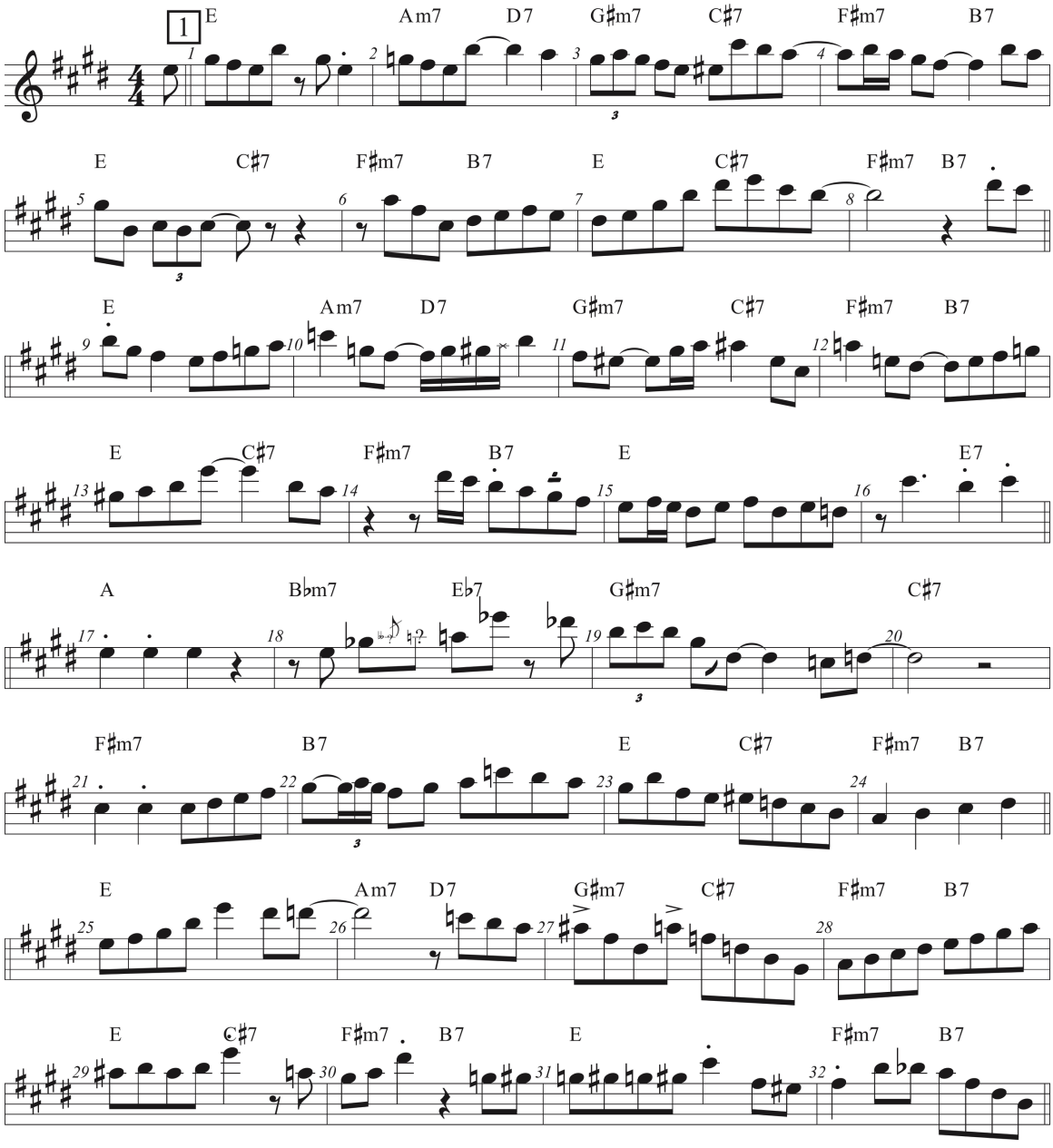
Line for Lyons

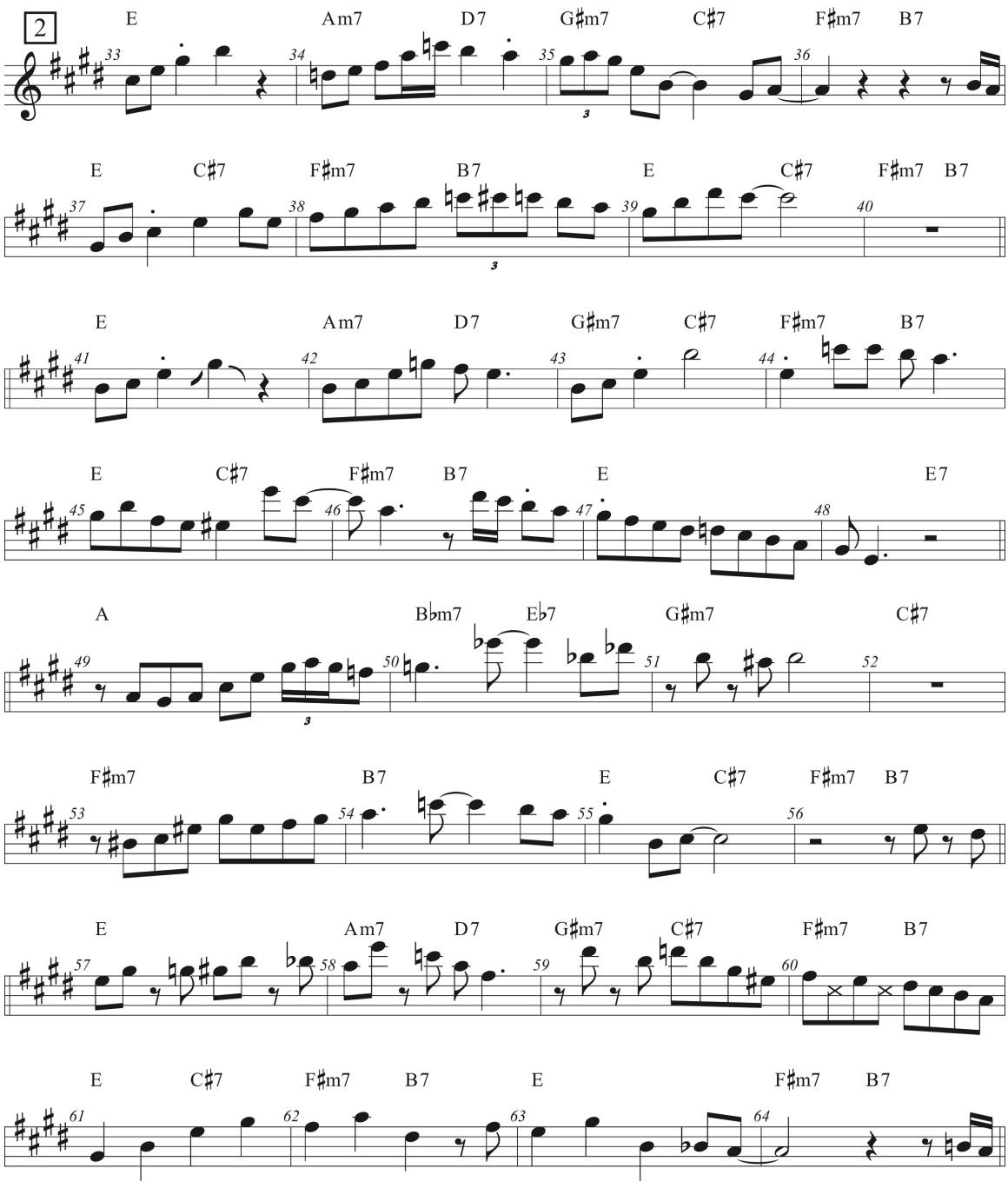


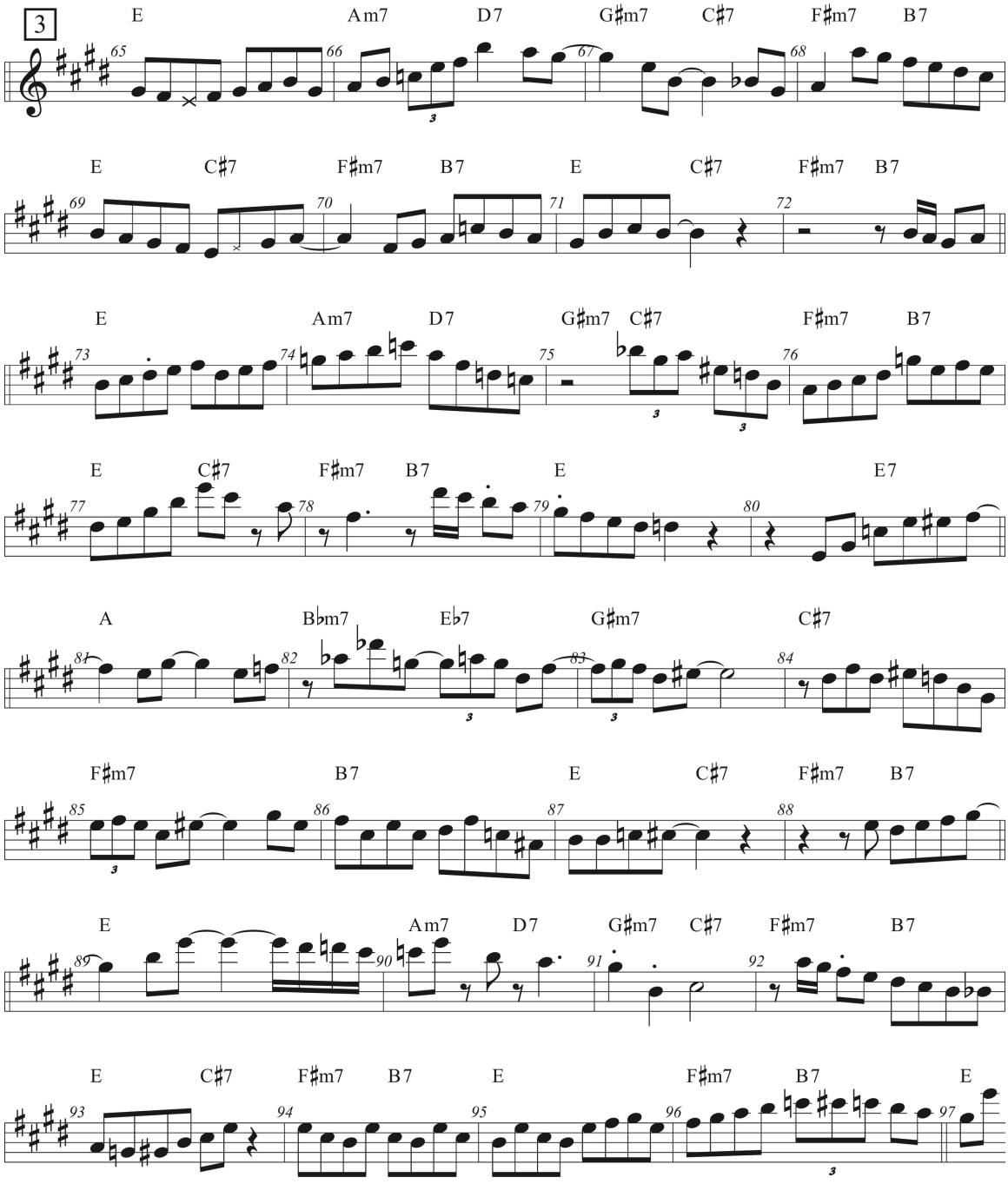

2
E Am7 D7 G♯m7 C♯7 F♯m7 B7
33 34 35 36
E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
37 38 39 40
E Am7 D7 G♯m7 C♯7 F♯m7 B7
41 42 43 44
E C♯7 F♯m7 B7 E E7
45 46 47 48
A B♭m7 E♭7 G♯m7 C♯7
49 50 51 52
F♯m7 B7 E C♯7 F♯m7 B7
53 54 55 56
E Am7 D7 G♯m7 C♯7 F♯m7 B7
57 58 59 60
E C♯7 F♯m7 B7 E F♯m7 B7 E
61 62 63 64 65

1980 Stockholm

Line for Lyons

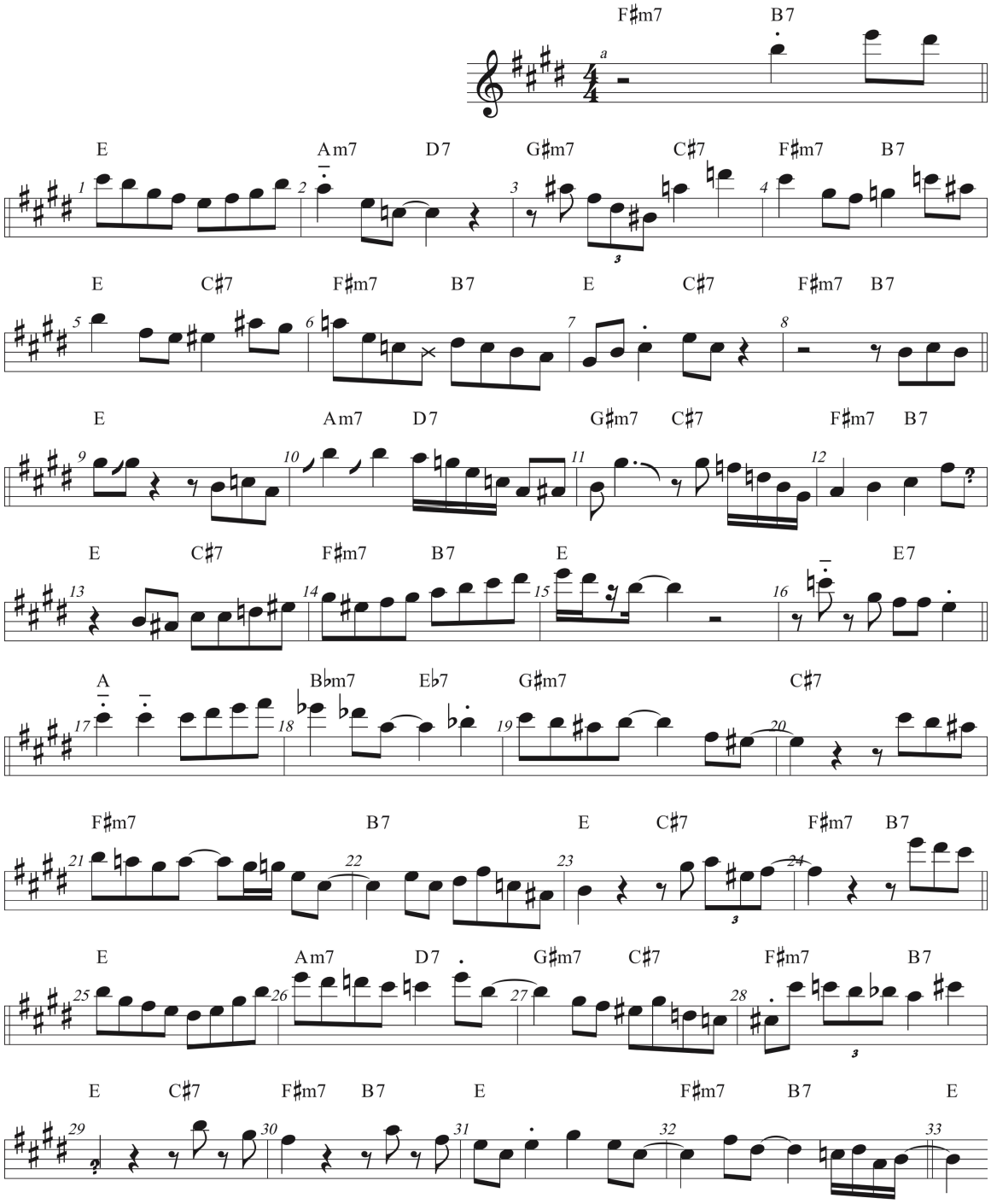



2
E Am7 D7 G♯m7 C♯7 F♯m7 B7
33 34 35 36
E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
37 38 39 40
E Am7 D7 G♯m7 C♯7 F♯m7 B7
41 42 43 44
E C♯7 F♯m7 B7 E E7
45 46 47 48
A B♭m7 E♭7 G♯m7 C♯7
49 50 51 52
F♯m7 B7 E C♯7 F♯m7 B7
53 54 55 56
E Am7 D7 G♯m7 C♯7 F♯m7 B7
57 58 59 60
E C♯7 F♯m7 B7 E F♯m7 B7
61 62 63 64


3
E
Am7
D7
G♯m7
C♯7
F♯m7
B7
65
66
67
68
E
C♯7
F♯m7
B7
E
C♯7
F♯m7
B7
69
70
71
72
E
Am7
D7
G♯m7
C♯7
F♯m7
B7
73
74
75
76
E
C♯7
F♯m7
B7
E
E7
77
78
79
80
A
B♭m7
E♭7
G♯m7
C♯7
81
82
83
84
F♯m7
B7
E
C♯7
F♯m7
B7
85
86
87
88
E
Am7
D7
G♯m7
C♯7
F♯m7
B7
89
90
91
92
E
C♯7
F♯m7
B7
E
F♯m7
B7
E
93
94
95
96
97

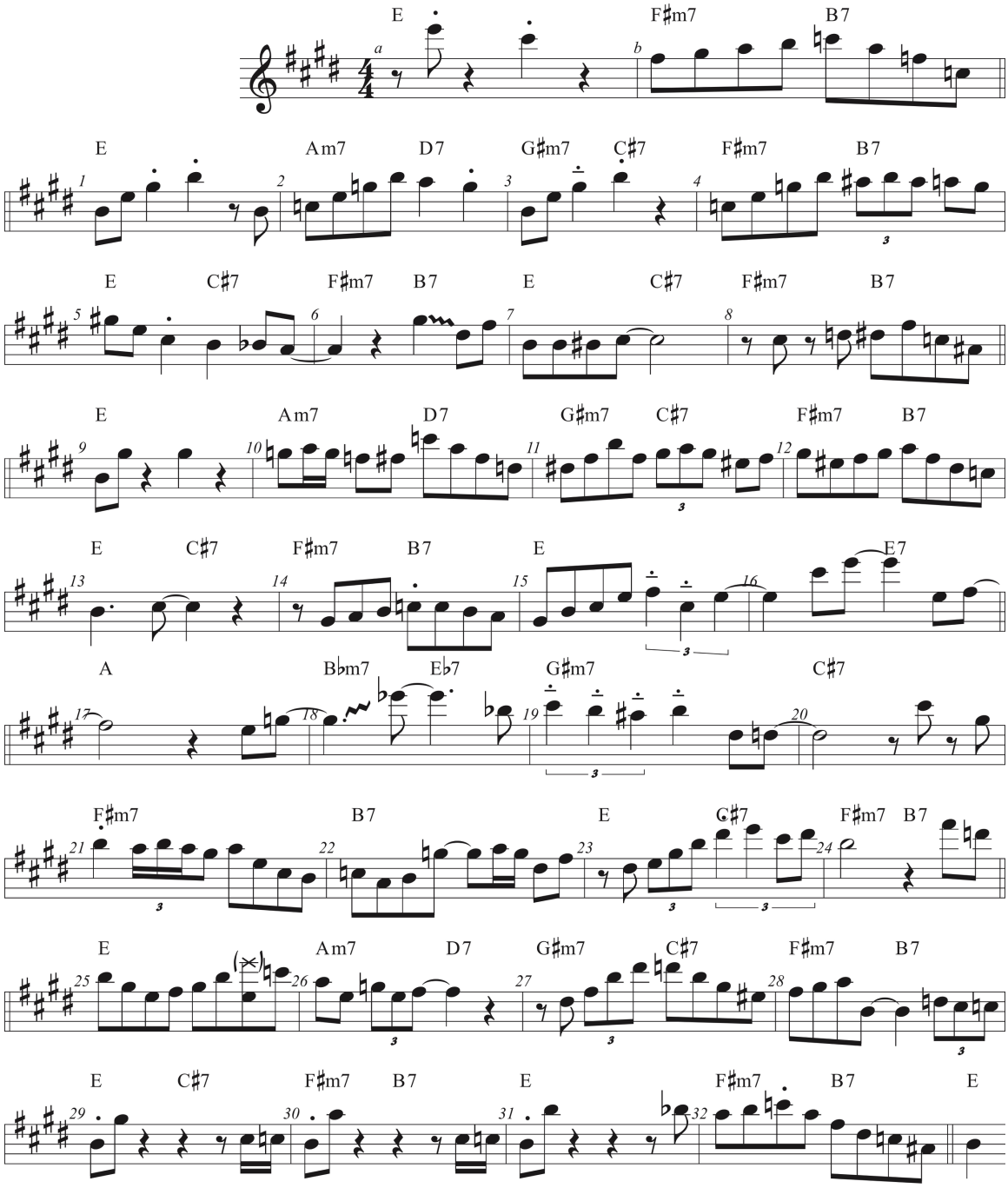
1982 New York

Line for Lyons



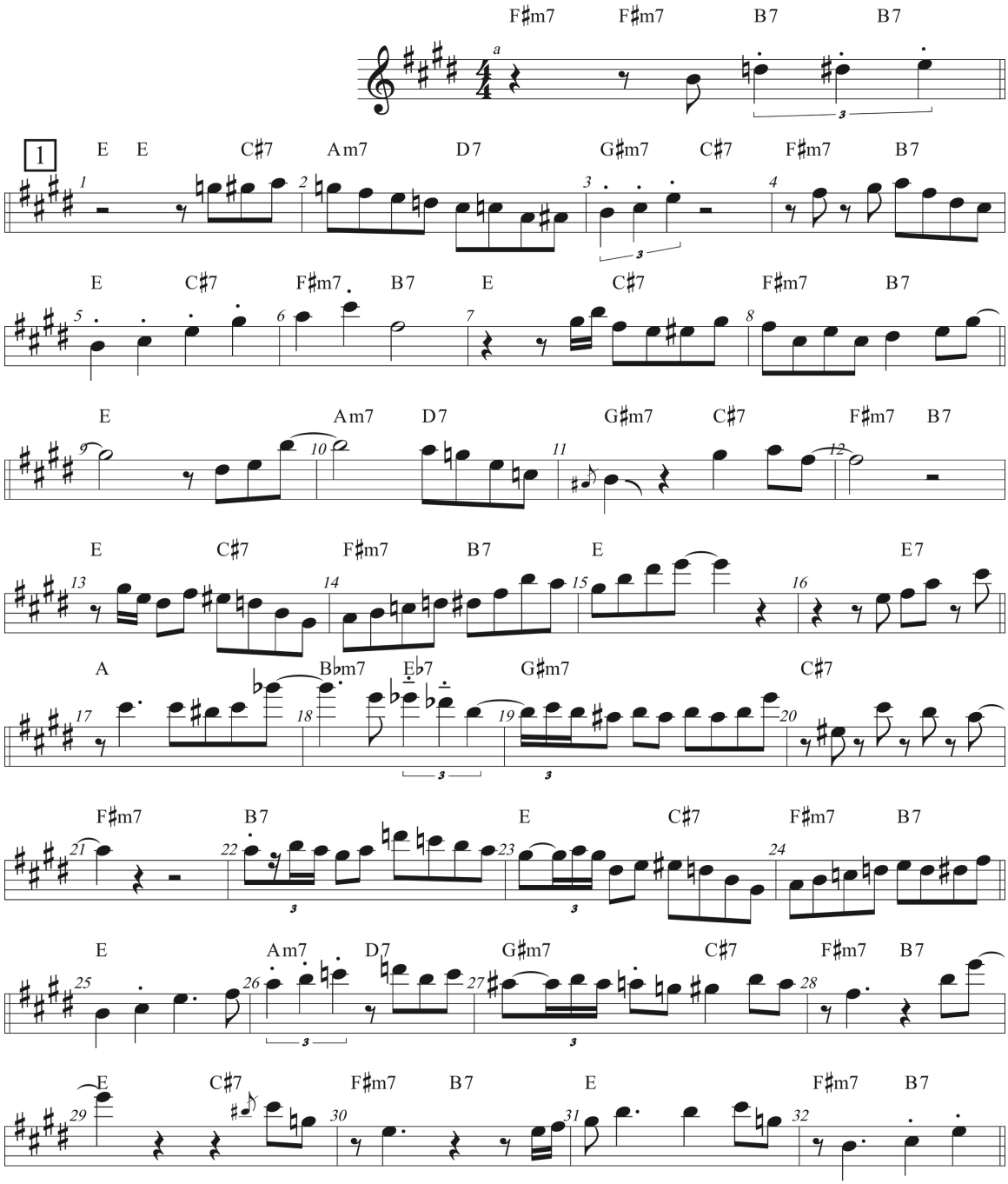
1985 Baltimore

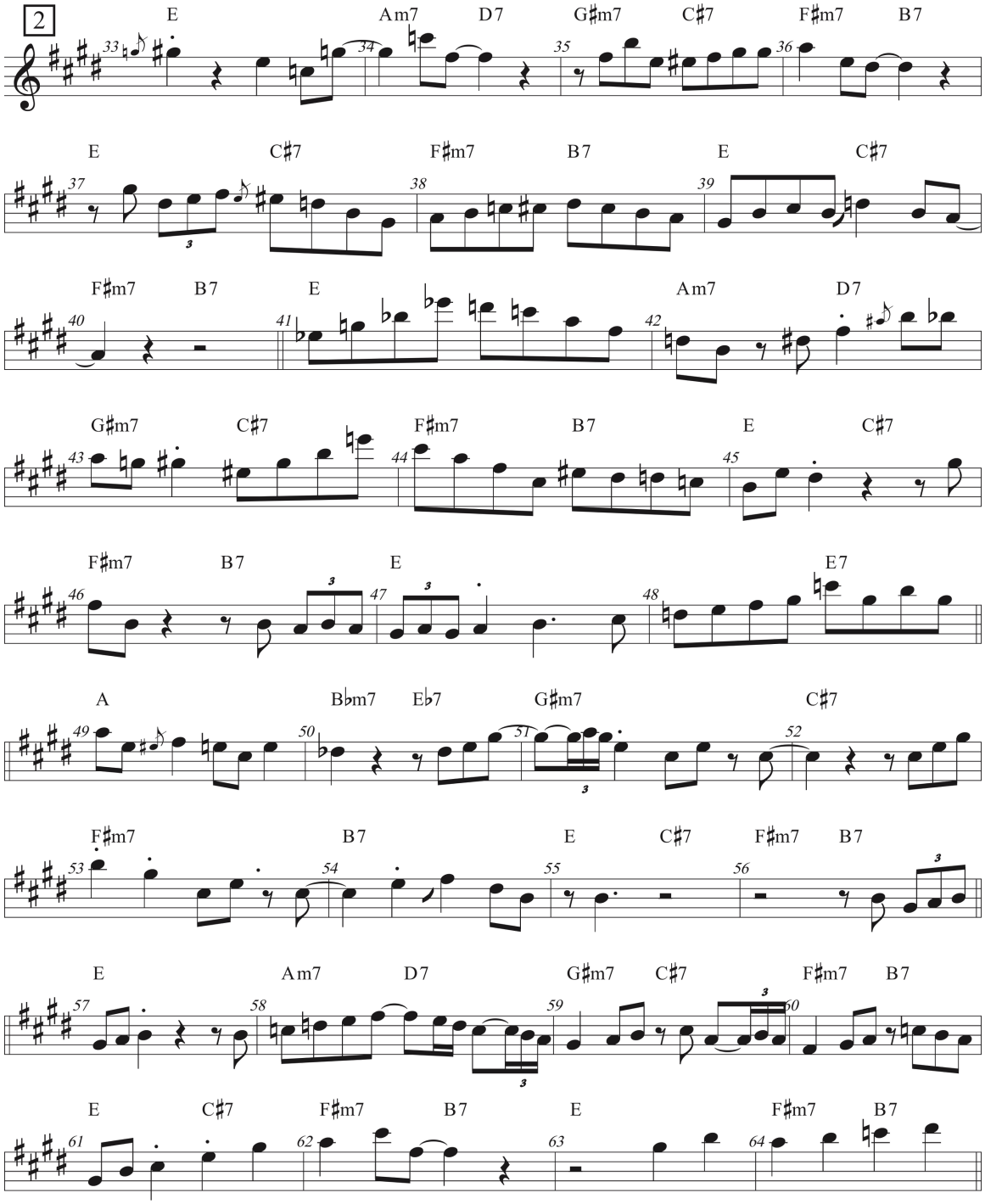
Line for Lyons

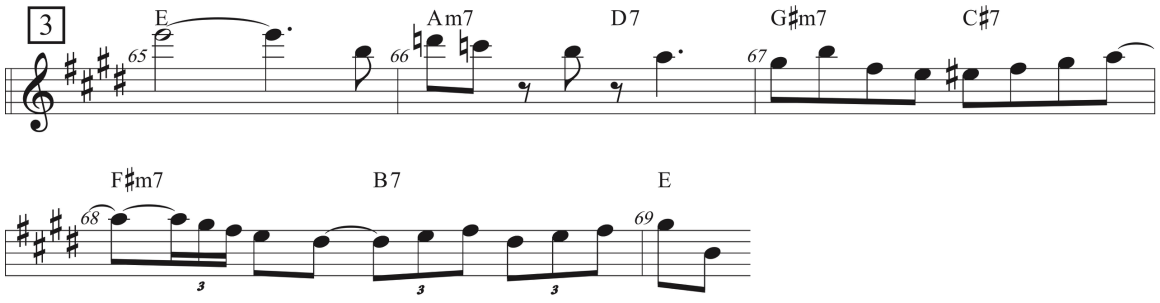


1991 Leverkusen

Line for Lyons

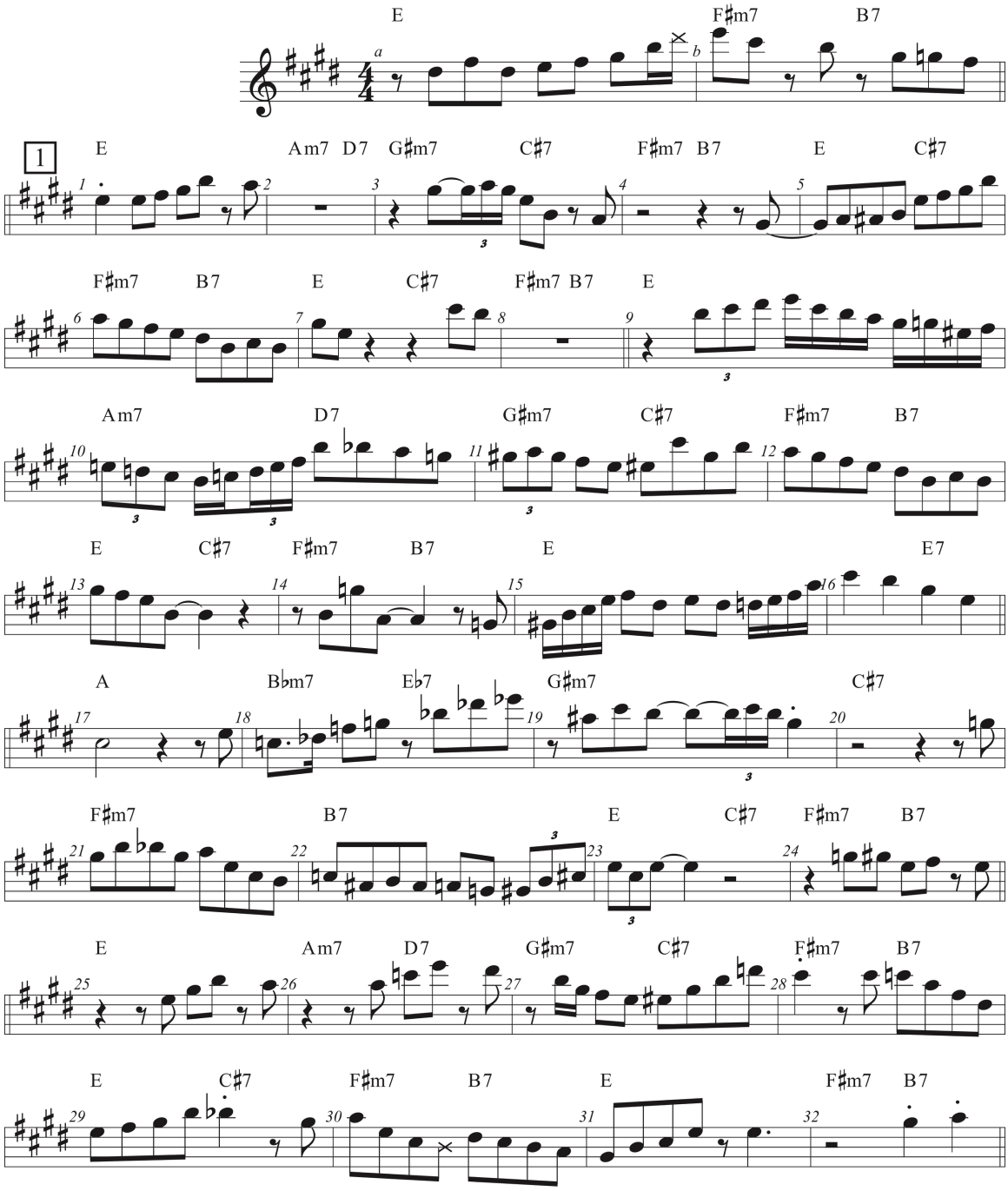


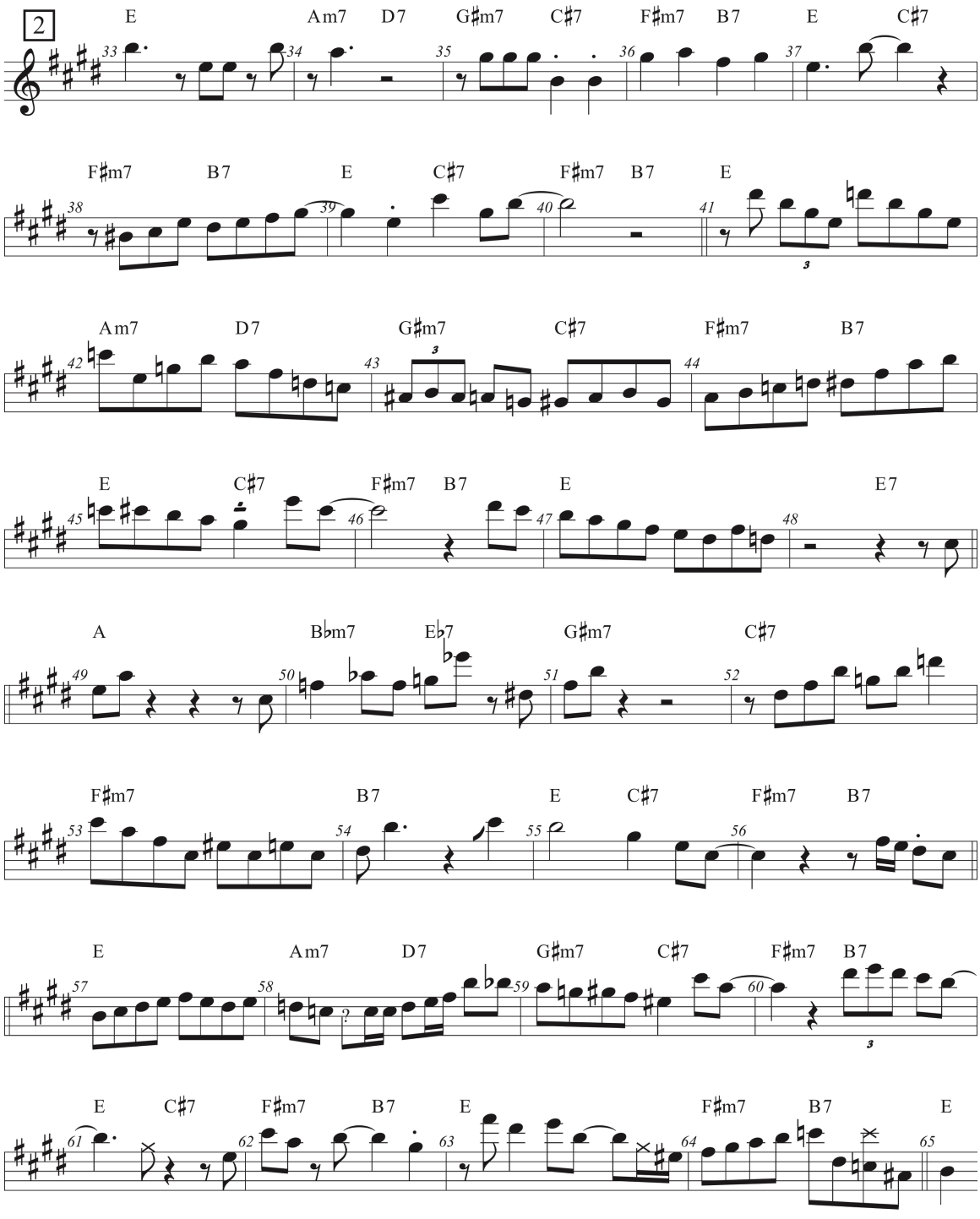

2
E Am7 D7 G♯m7 C♯7 F♯m7 B7
33 34 35 36
E C♯7 F♯m7 B7 E C♯7
37 38 39
F♯m7 B7 E Am7 D7
40 41 42
G♯m7 C♯7 F♯m7 B7 E C♯7
43 44 45
F♯m7 B7 E E7
46 47 48
A B♭m7 E♭7 G♯m7 C♯7
49 50 51 52
F♯m7 B7 E C♯7 F♯m7 B7
53 54 55 56
E Am7 D7 G♯m7 C♯7 F♯m7 B7
57 58 59 60
E C♯7 F♯m7 B7 E F♯m7 B7
61 62 63 64


3
E
Am7
D7
G♯m7
C♯7
65
66
67
F♯m7
B7
E
68
69

1992 New York

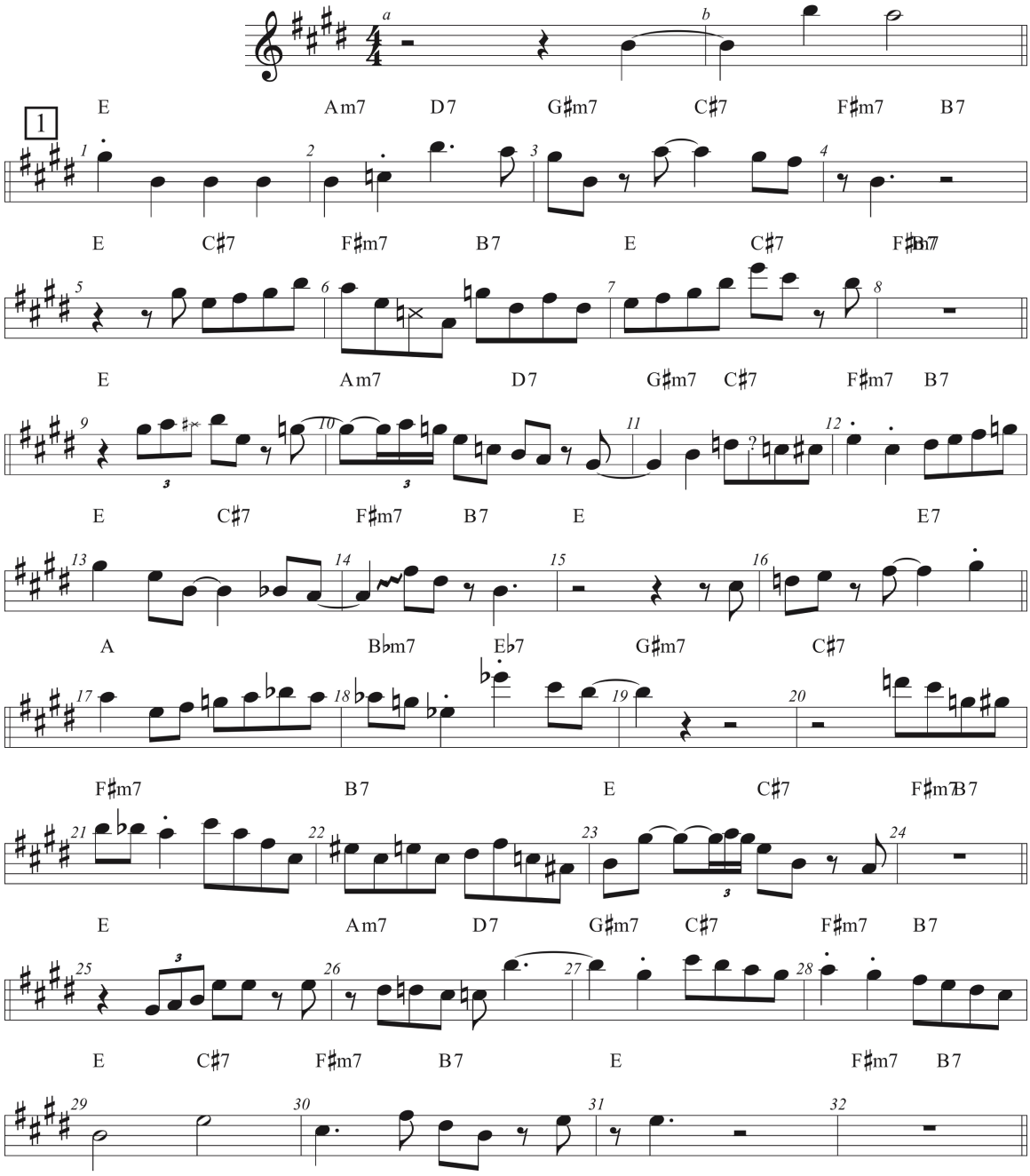
Line for Lyons

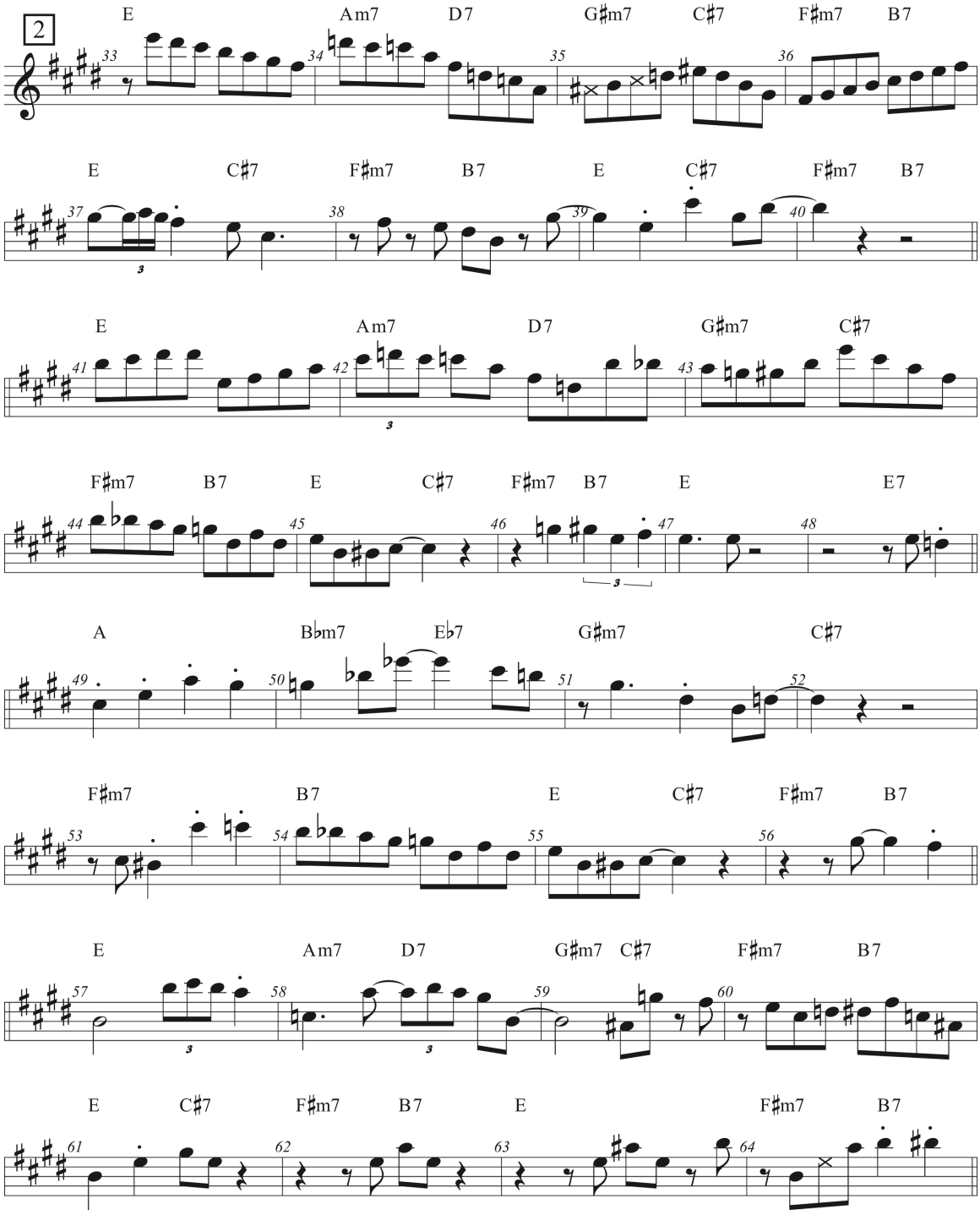


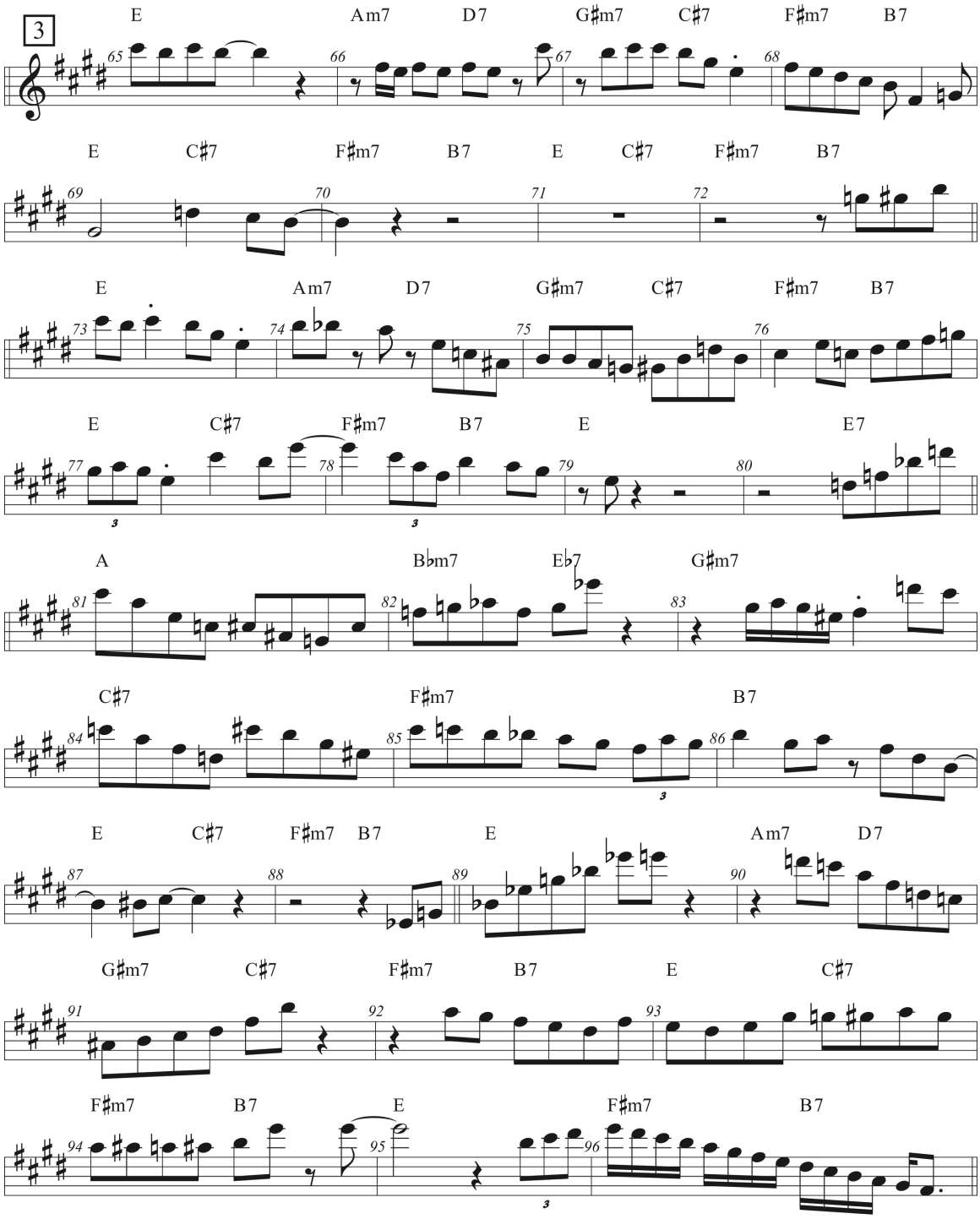

2
E Am7 D7 G♯m7 C♯7 F♯m7 B7 E C♯7
F♯m7 B7 E C♯7 F♯m7 B7 E
Am7 D7 G♯m7 C♯7 F♯m7 B7
E C♯7 F♯m7 B7 E E7
A B♭m7 E♭7 G♯m7 C♯7
F♯m7 B7 E C♯7 F♯m7 B7
E Am7 D7 G♯m7 C♯7 F♯m7 B7
E C♯7 F♯m7 B7 E F♯m7 B7 E

1993 Pittsburgh

Line for Lyons




2
E Am7 D7 G♯m7 C♯7 F♯m7 B7
33 34 35 36
E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
37 38 39 40
E Am7 D7 G♯m7 C♯7
41 42 43
F♯m7 B7 E C♯7 F♯m7 B7 E E7
44 45 46 47 48
A B♭m7 E♭7 G♯m7 C♯7
49 50 51 52
F♯m7 B7 E C♯7 F♯m7 B7
53 54 55 56
E Am7 D7 G♯m7 C♯7 F♯m7 B7
57 58 59 60
E C♯7 F♯m7 B7 E F♯m7 B7
61 62 63 64


3
E Am7 D7 G♯m7 C♯7 F♯m7 B7
65 66 67 68
E C♯7 F♯m7 B7 E C♯7 F♯m7 B7
69 70 71 72
E Am7 D7 G♯m7 C♯7 F♯m7 B7
73 74 75 76
E C♯7 F♯m7 B7 E E7
77 78 79 80
A B♭m7 E♭7 G♯m7
81 82 83
C♯7 F♯m7 B7
84 85 86
E C♯7 F♯m7 B7 E Am7 D7
87 88 89 90
G♯m7 C♯7 F♯m7 B7 E C♯7
91 92 93
F♯m7 B7 E F♯m7 B7
94 95 96

Appendix A.3 Additional examples of motivic manipulation in "Line for Lyons"

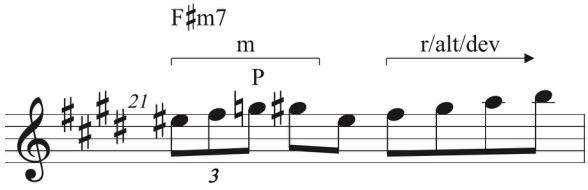


Figure 64. "Line for Lyons," 1954, m. 21, repetition with alteration

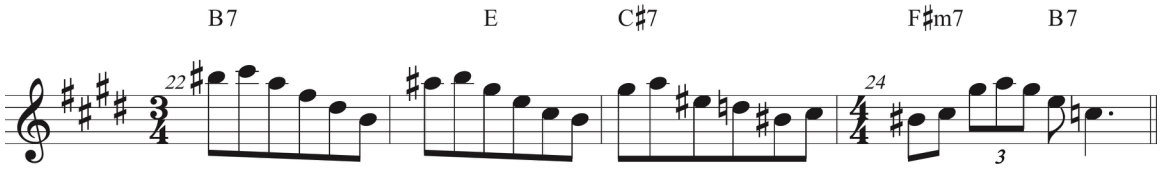


Figure 65. "Line for Lyons," 1954, mm. 22–24 implied meter

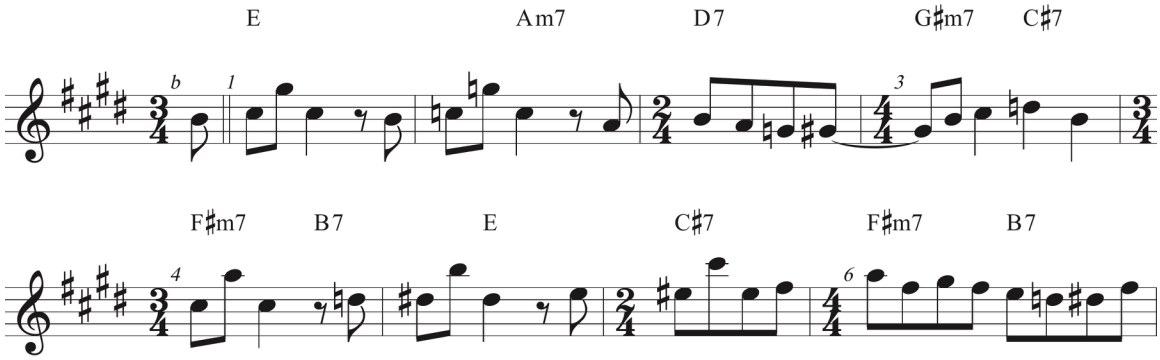


Figure 66. "Line for Lyons," 1956, mm. b–6 implied meter

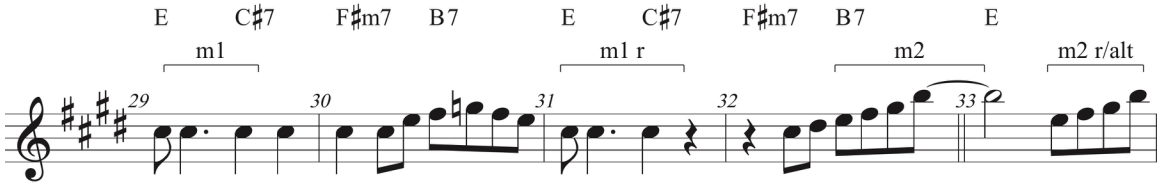


Figure 67. “Line for Lyons,” 4/1956, repetition in mm. 29–33

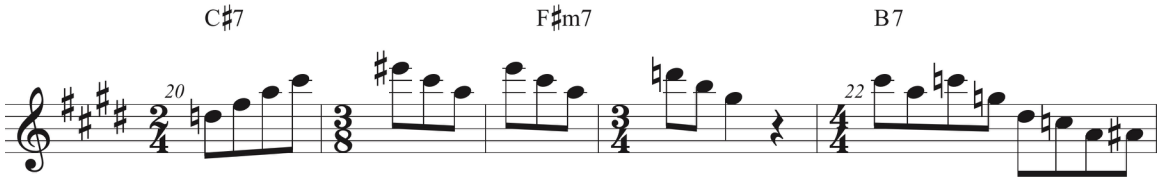


Figure 68. “Line for Lyons,” 1958, mm. 20–22 implied meter

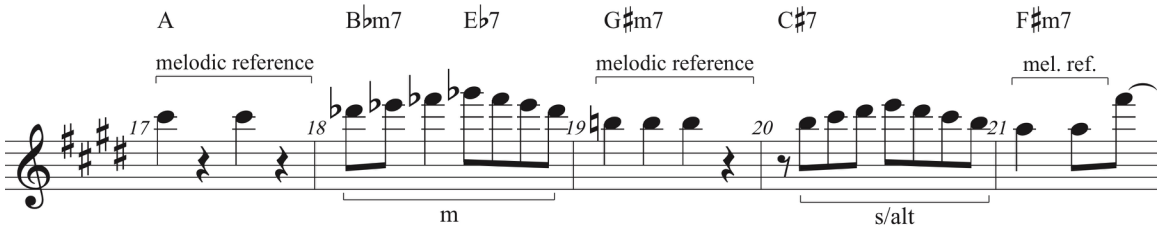


Figure 69. “Line for Lyons,” 1971, mm. 17–21 melodic reference on bridge

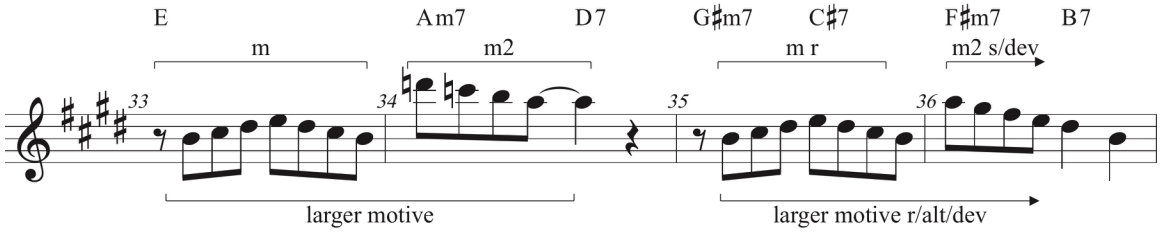


Figure 70a. “Line for Lyons,” 1971, mm. 33–36

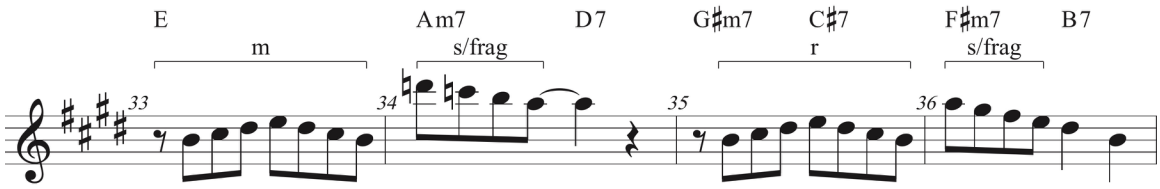


Figure 70b. “Line for Lyons,” 1971, mm. 33–36 analyzed as motive plus fragments

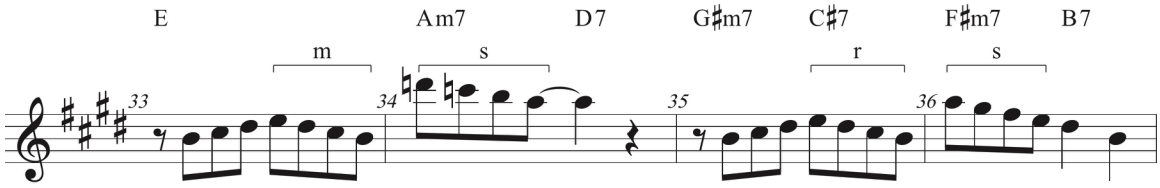


Figure 70c. “Line for Lyons,” 1971, mm. 33–36 analyzed as smaller four-note motive

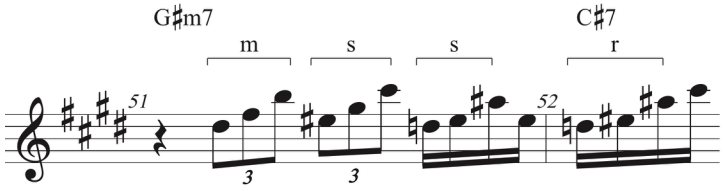


Figure 71. “Line for Lyons,” 1971, mm. 51–52

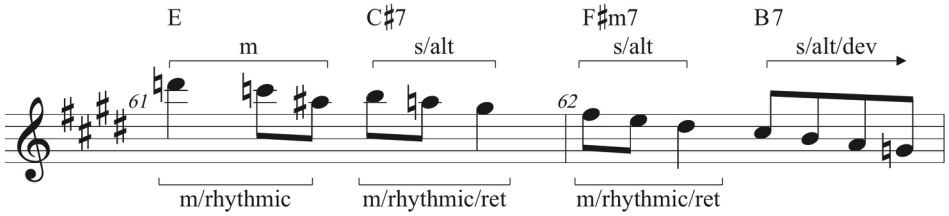


Figure 72. “Line for Lyons,” 1971, mm. 61–62

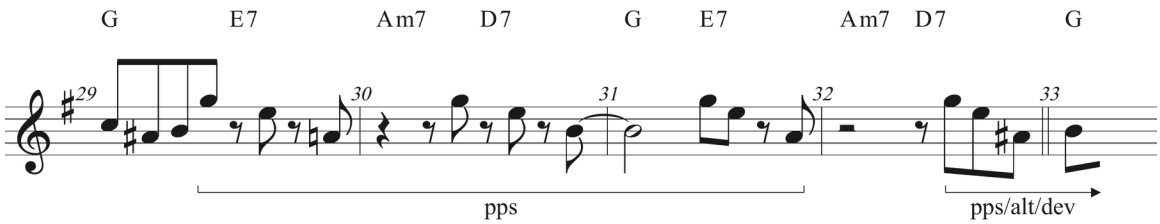


Figure 73. “Line for Lyons,” 1972, mm. 29–33

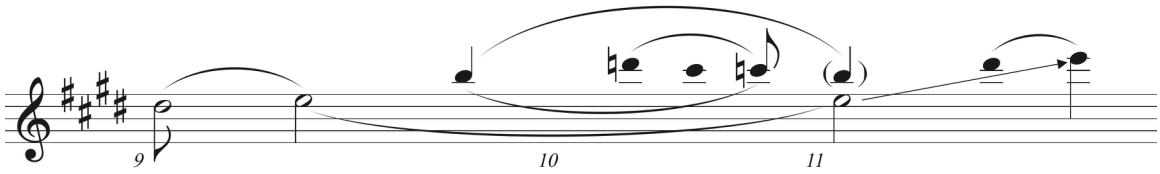


Figure 74. “Line for Lyons,” 1974, mm. 9–11 voice leading graph

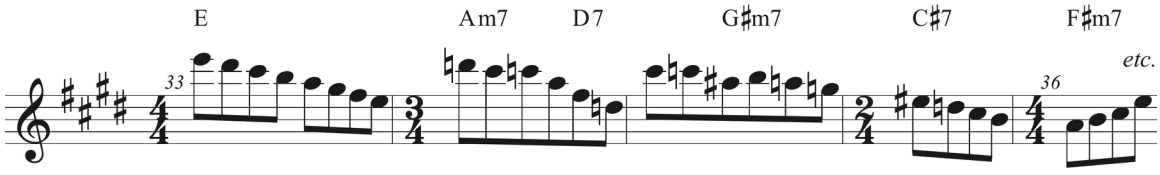


Figure 75. “Line for Lyons,” 1974, mm. 33–36 implied meter

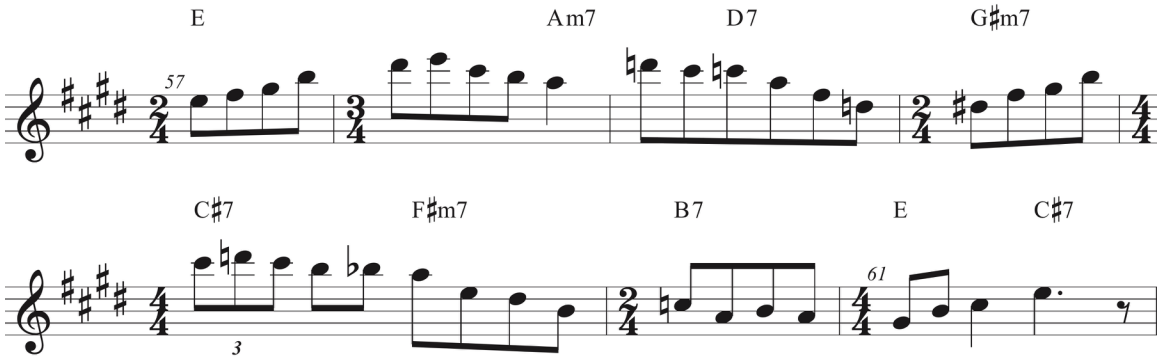


Figure 76. “Line for Lyons,” 1974, mm. 57–61 implied meter

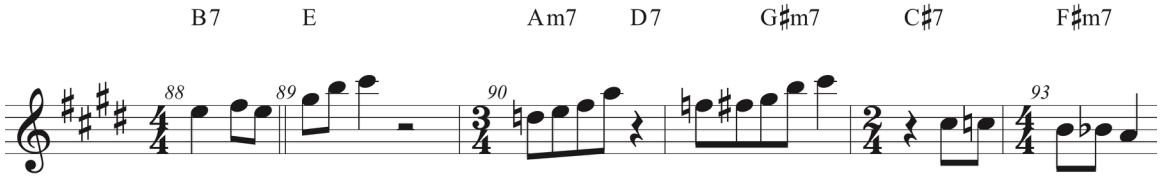


Figure 77. “Line for Lyons,” 1976, mm. 88–93 implied meter

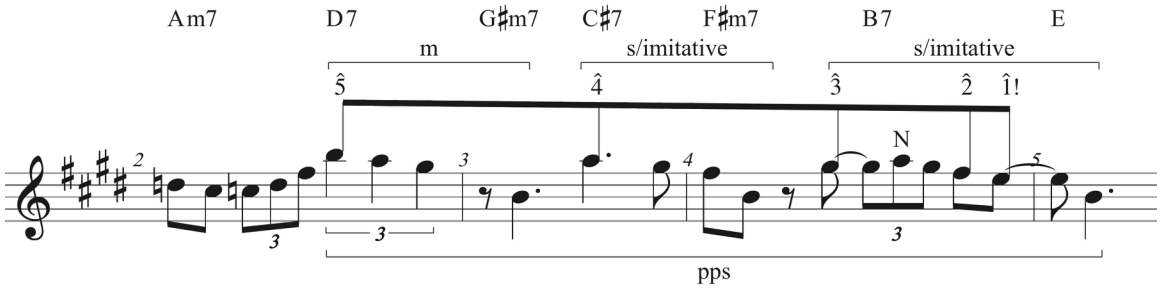


Figure 78. “Line for Lyons,” 1976, mm. 2–5 evaded descent

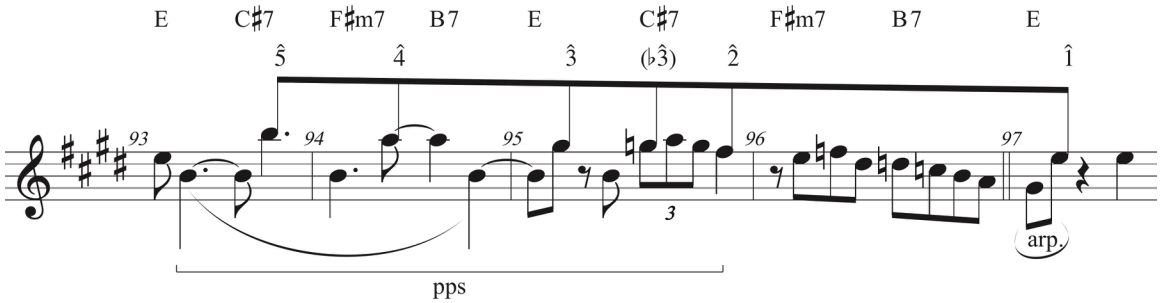


Figure 79. “Line for Lyons,” 1976, mm. 93–97 completed descent

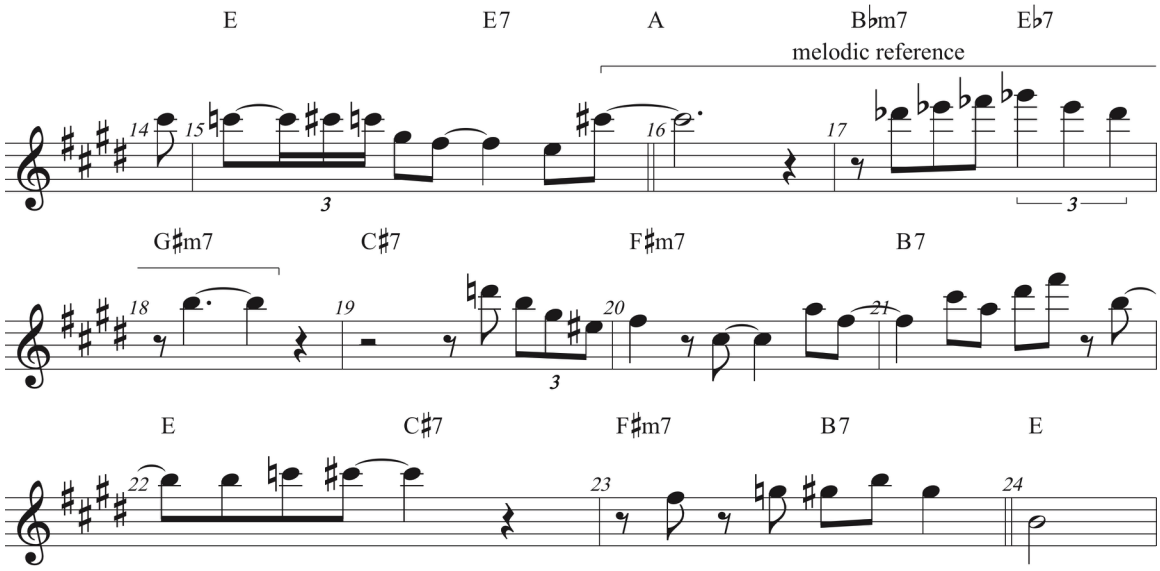


Figure 80. “Line for Lyons,” 10/1977, mm. 14–24 melodic reference on bridge

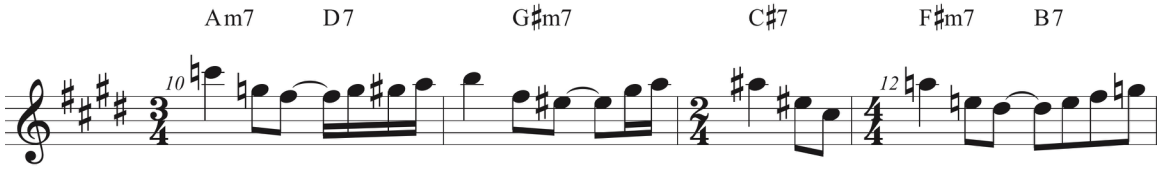


Figure 81. “Line for Lyons,” 1980, mm. 10–12 implied meter

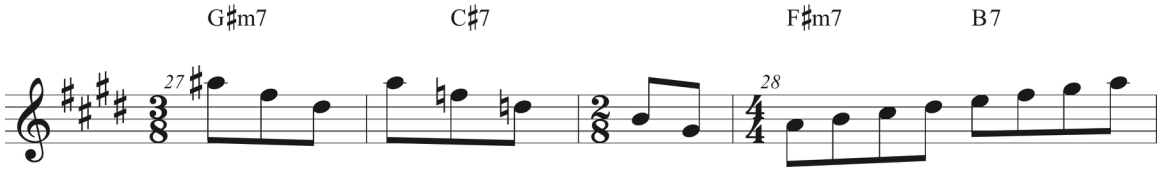


Figure 82. “Line for Lyons,” 1980, m. 27–28 implied meter

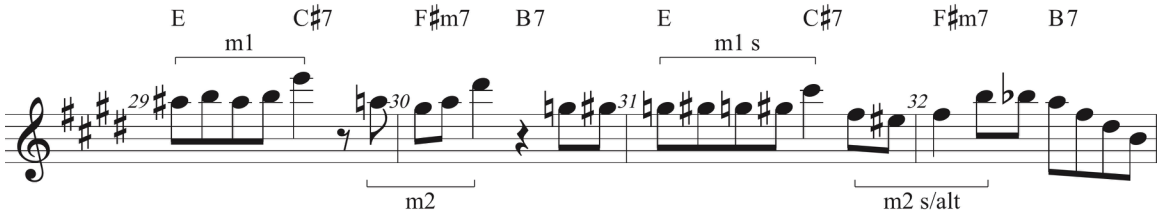


Figure 83. “Line for Lyons,” 1980, mm. 29–32 alternate analysis

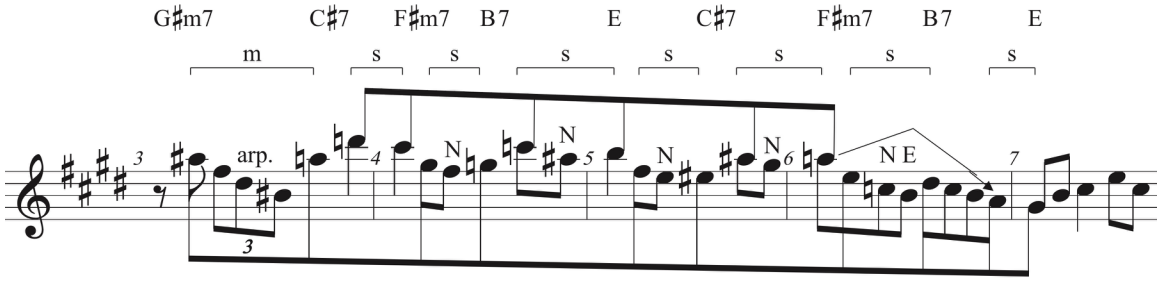


Figure 84. “Line for Lyons,” 1982, voice leading in mm. 3–7

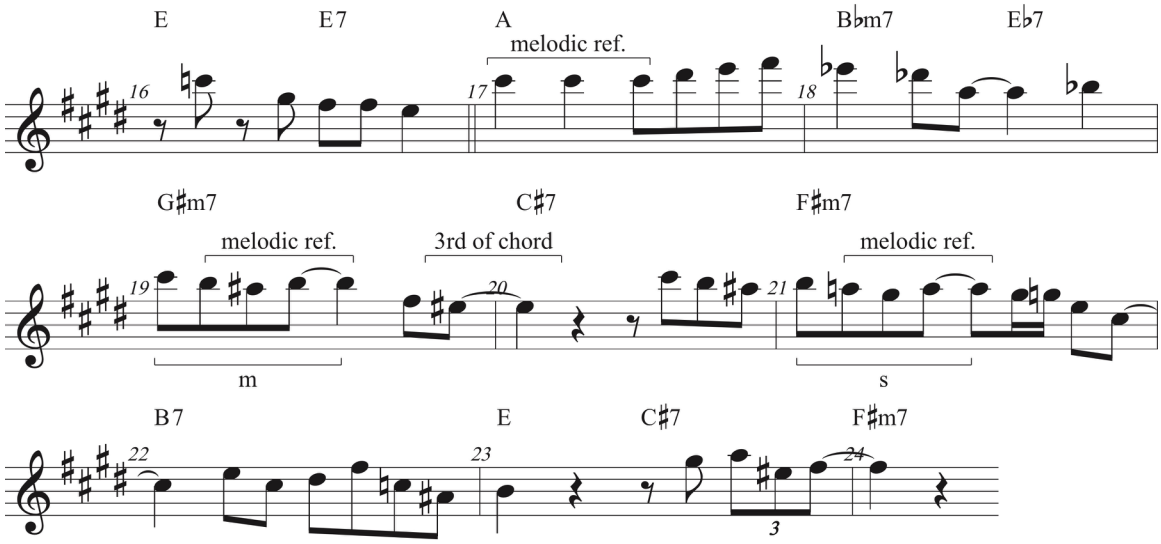


Figure 85. “Line for Lyons,” 1982, mm. 16–24 melodic reference on bridge

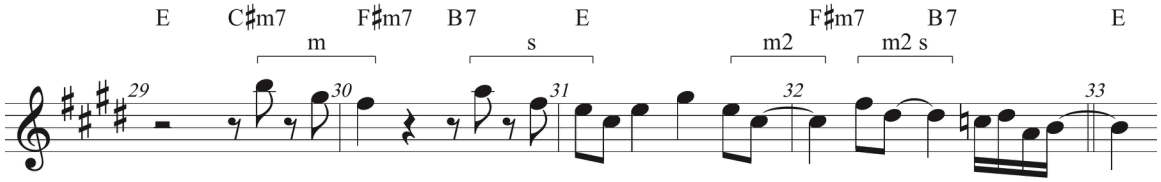


Figure 86. “Line for Lyons,” 1982, mm. 29–33

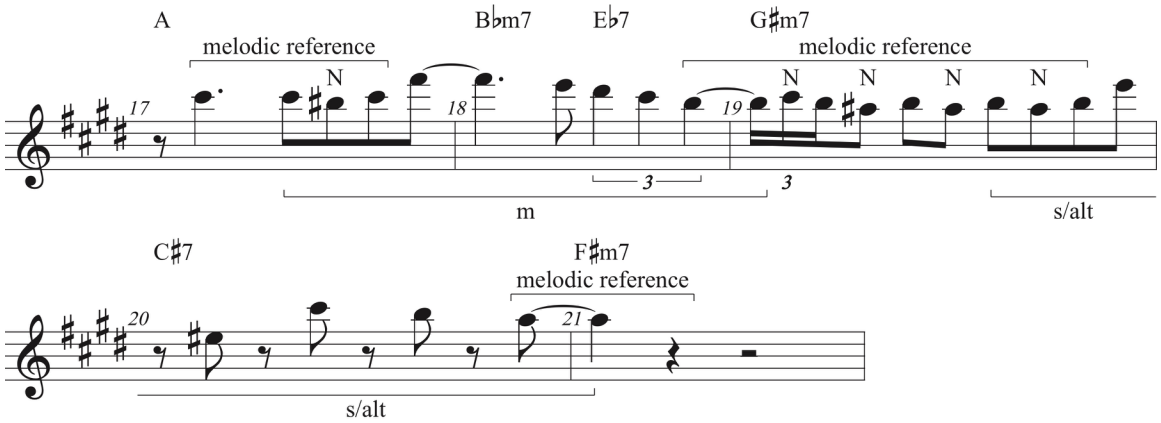


Figure 87. “Line for Lyons,” 1991, mm. 17–21 melodic reference on bridge

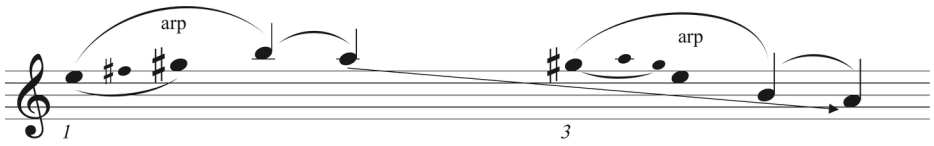


Figure 88. “Line for Lyons,” 1992, mm. 1–3 graphic reduction

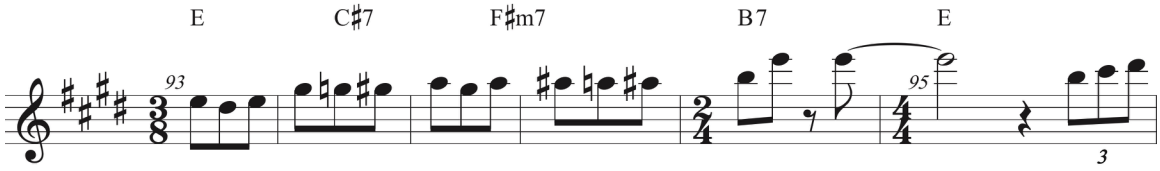
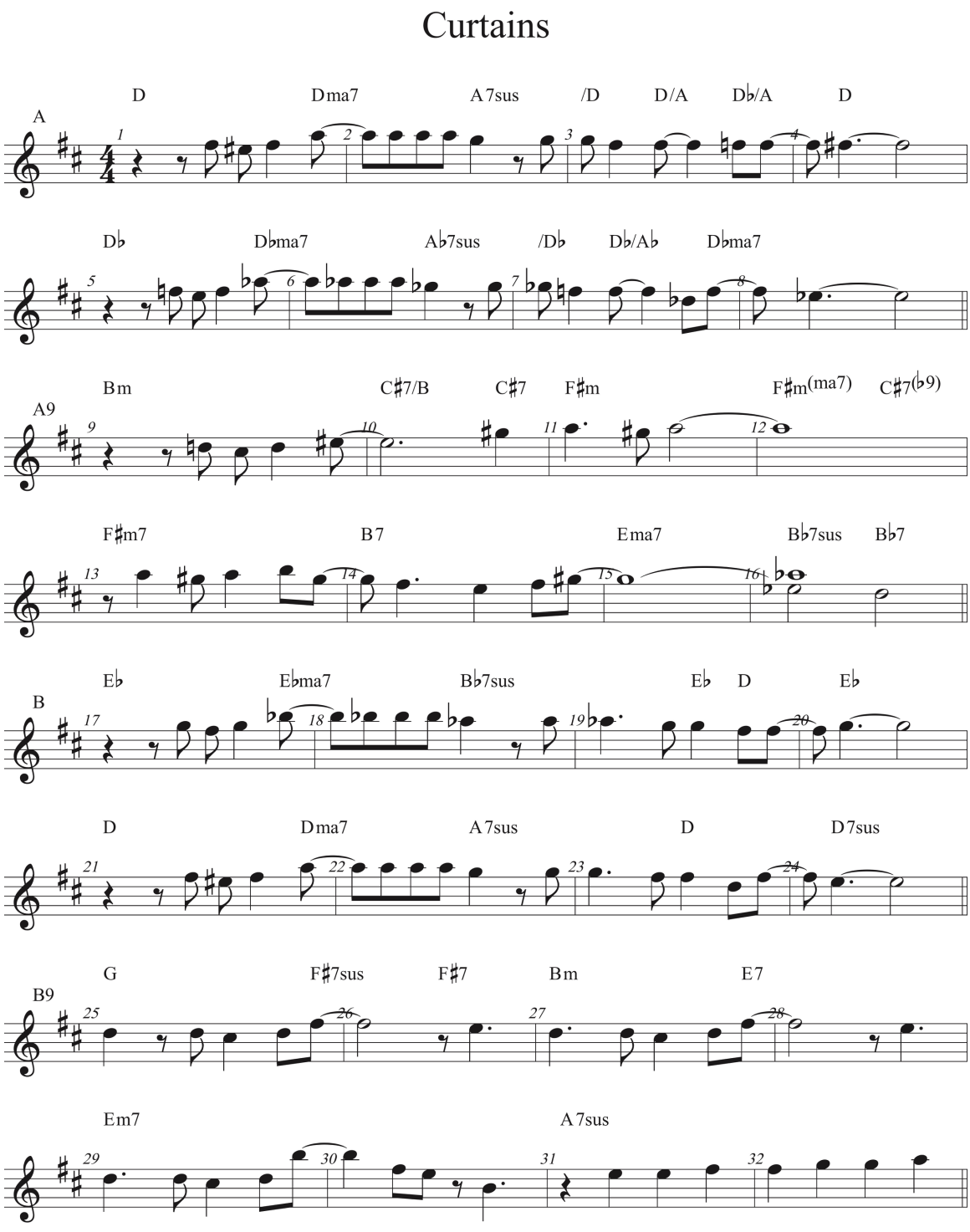
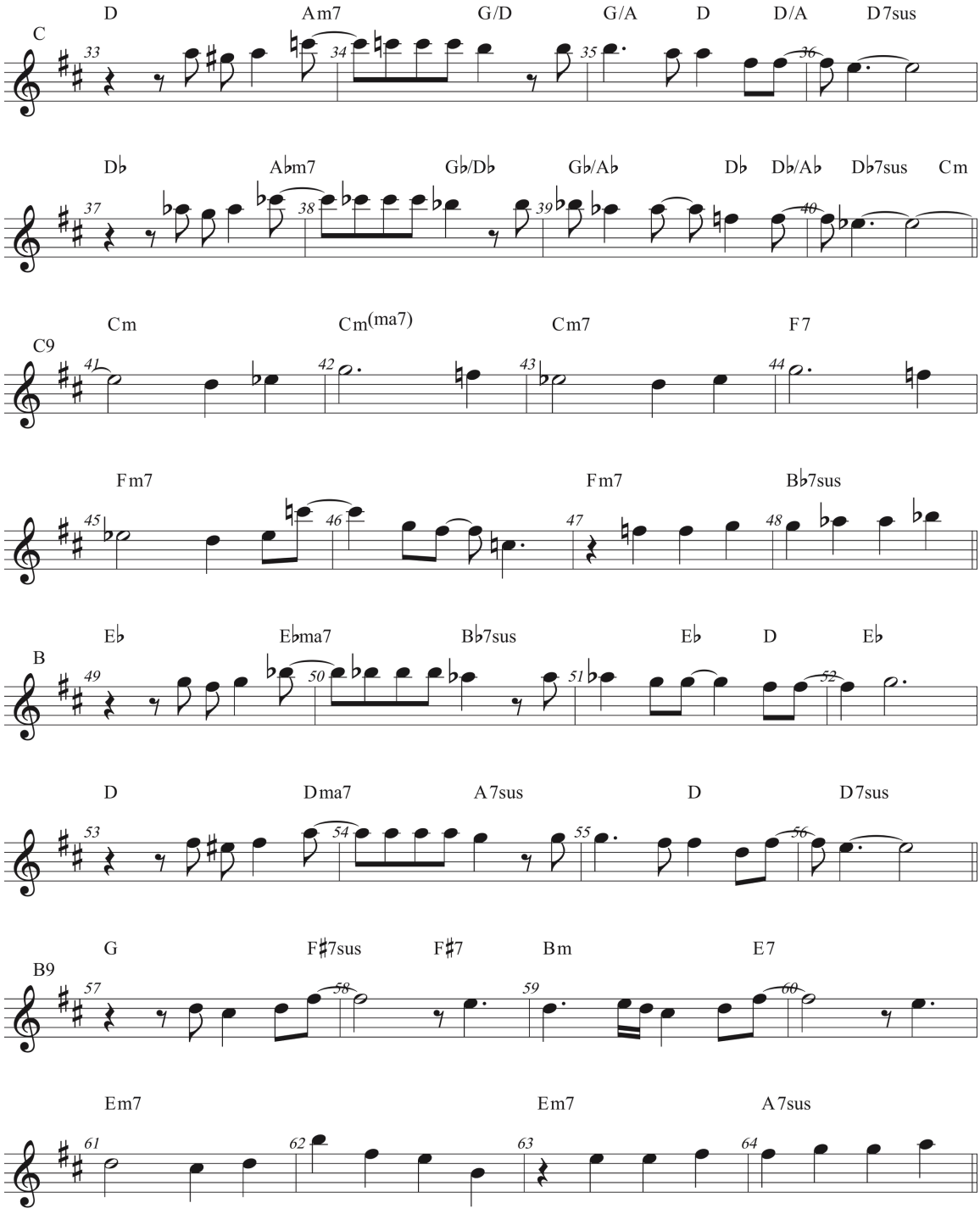


Figure 89. “Line for Lyons,” 1993, mm. 93–94 implied meter

APPENDIX B

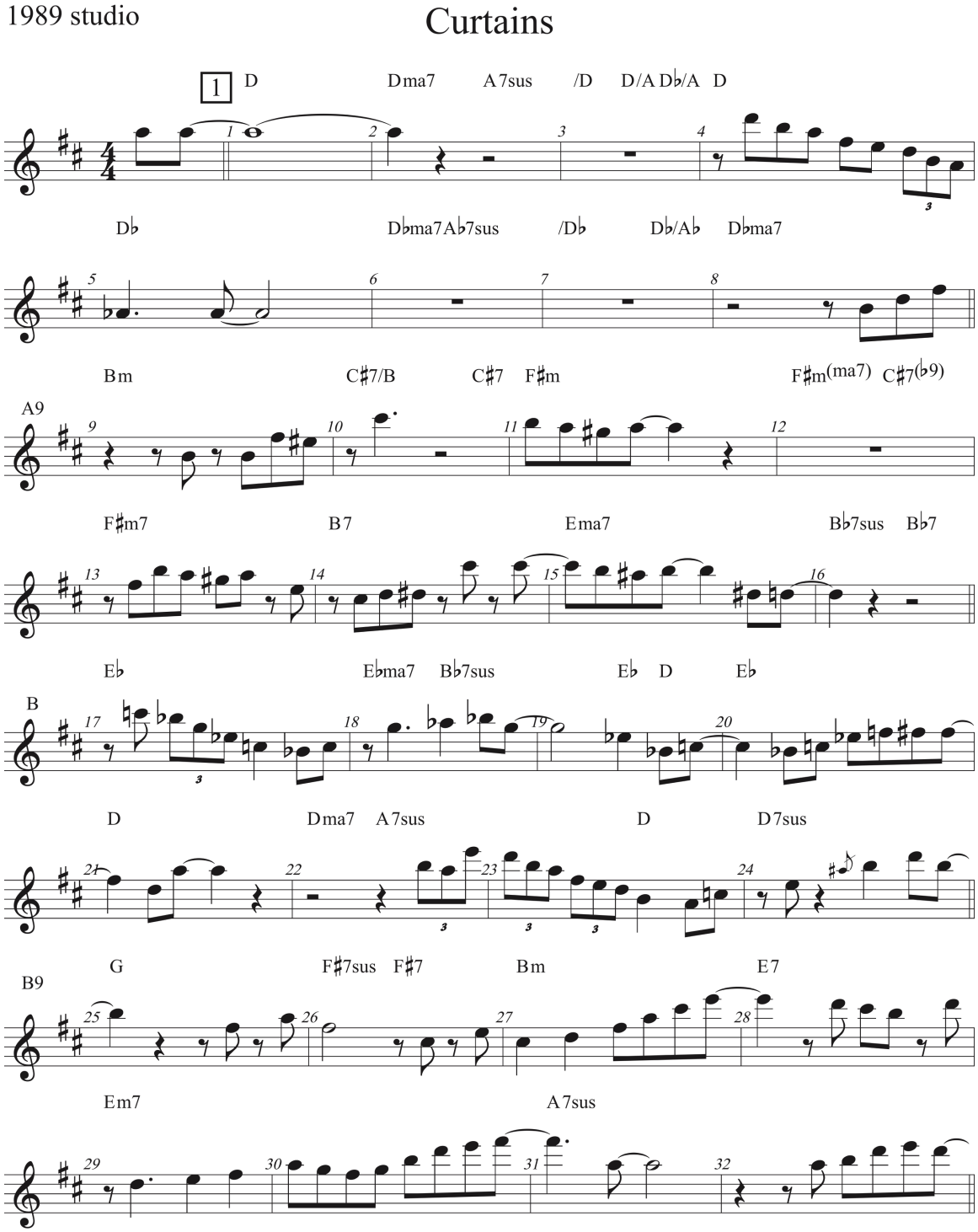
Appendix B.1 “Curtains” solo form

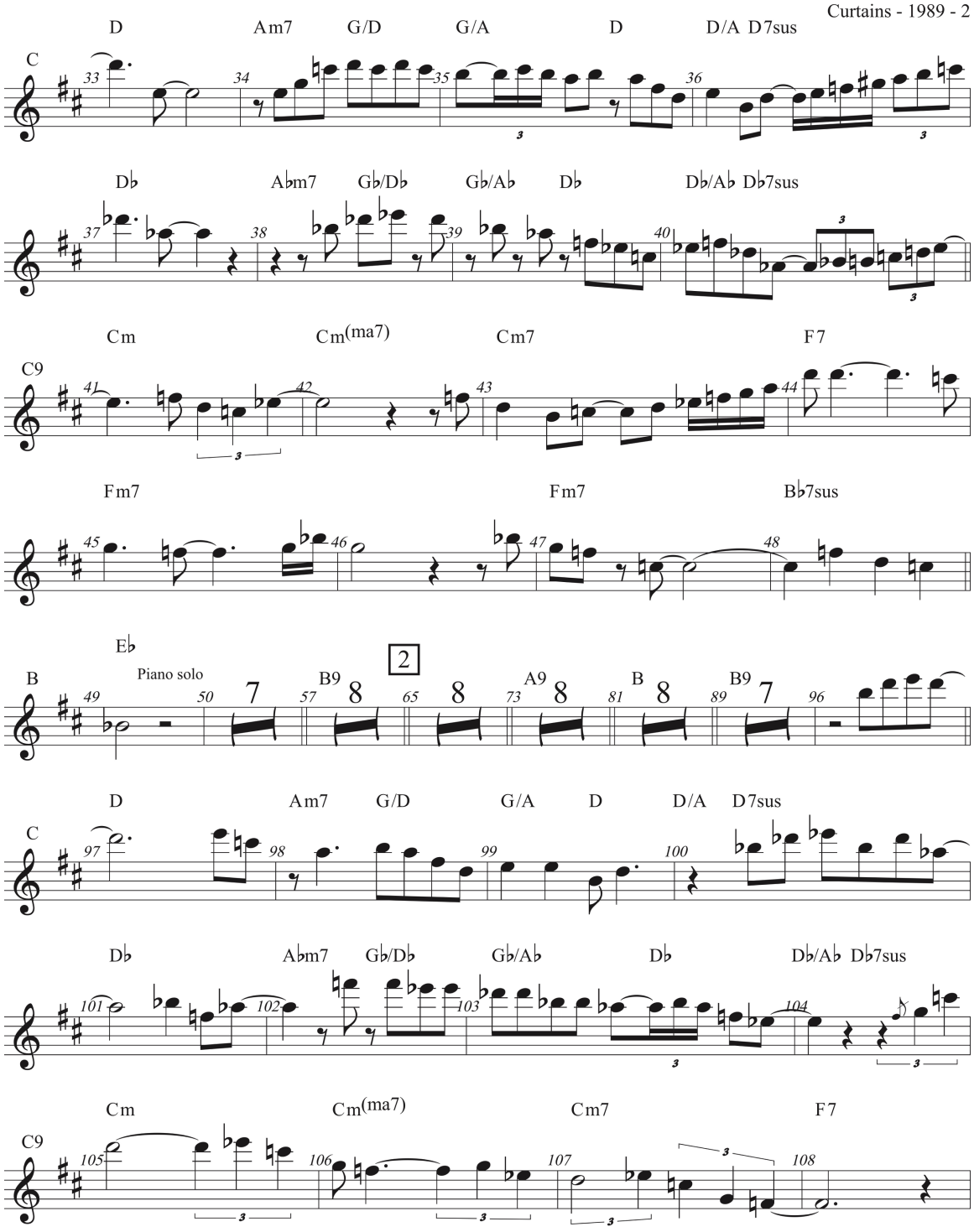


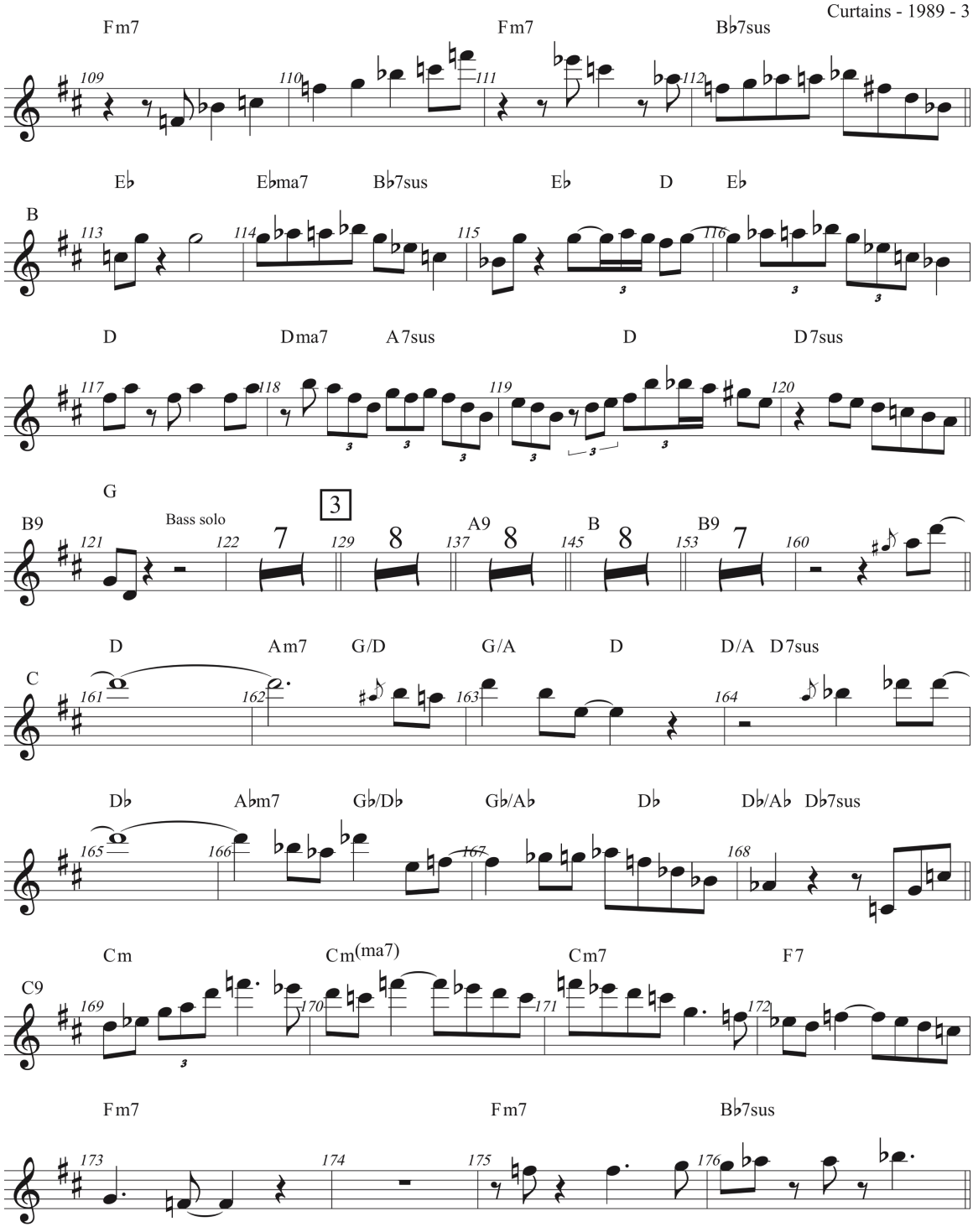

C
D
Am7
G/D
G/A
D
D/A
D7sus
33
34
35
36
Db
Abm7
Gb/Db
Gb/Ab
Db
Db/Ab
Db7sus
Cm
37
38
39
40
C9
Cm
Cm(ma7)
Cm7
F7
41
42
43
44
Fm7
Fm7
Bb7sus
45
46
47
48
B
Eb
Ebma7
Bb7sus
Eb
D
Eb
49
50
51
52
D
Dma7
A7sus
D
D7sus
53
54
55
56
B9
G
F#7sus
F#7
Bm
E7
57
58
59
60
Em7
Em7
A7sus
61
62
63
64

Appendix B.2 “Curtains” solo transcriptions

1989 studio

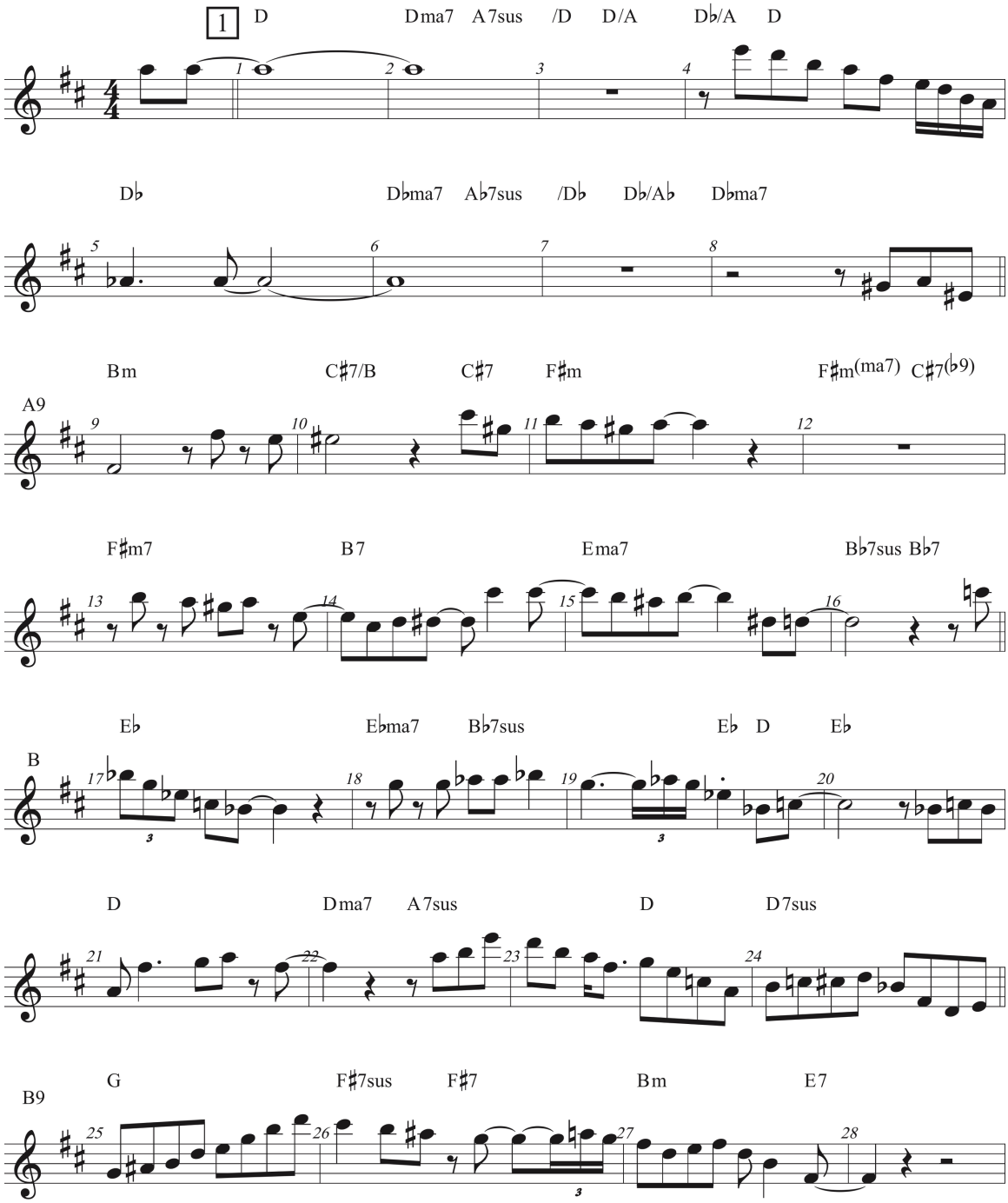


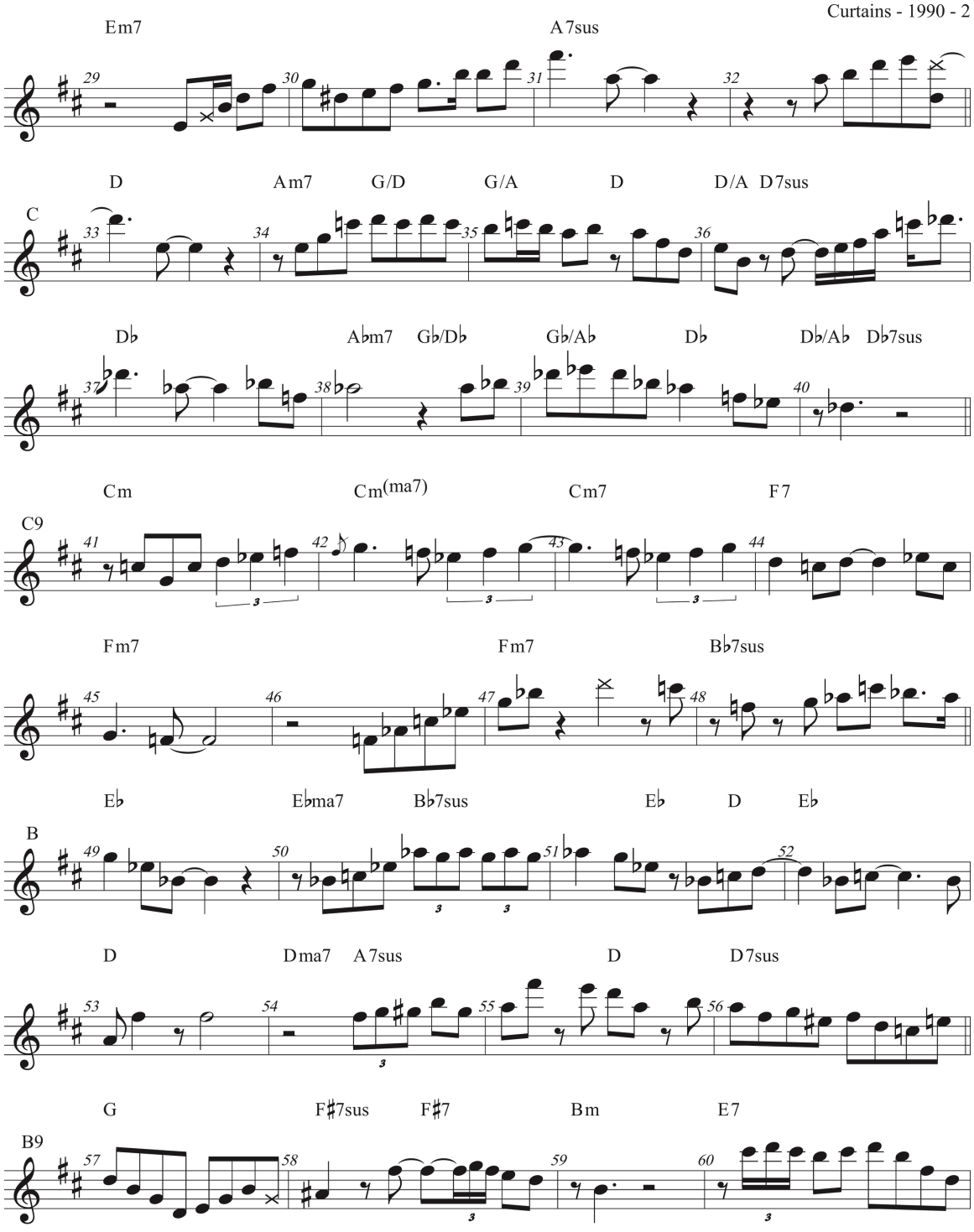

D Am7 G/D G/A D D/A D7sus
C
33 34 35 36
Db Abm7 Gb/Db Gb/Ab Db Db/Ab Db7sus
37 38 39 40
Cm Cm(ma7) Cm7 F7
C9
41 42 43 44
Fm7 Fm7 Bb7sus
45 46 47 48
Eb
Piano solo
B
49 50 57 65 73 81 89 96
2
B9 A9 B9
D Am7 G/D G/A D D/A D7sus
C
97 98 99 100
Db Abm7 Gb/Db Gb/Ab Db Db/Ab Db7sus
101 102 103 104
Cm Cm(ma7) Cm7 F7
C9
105 106 107 108

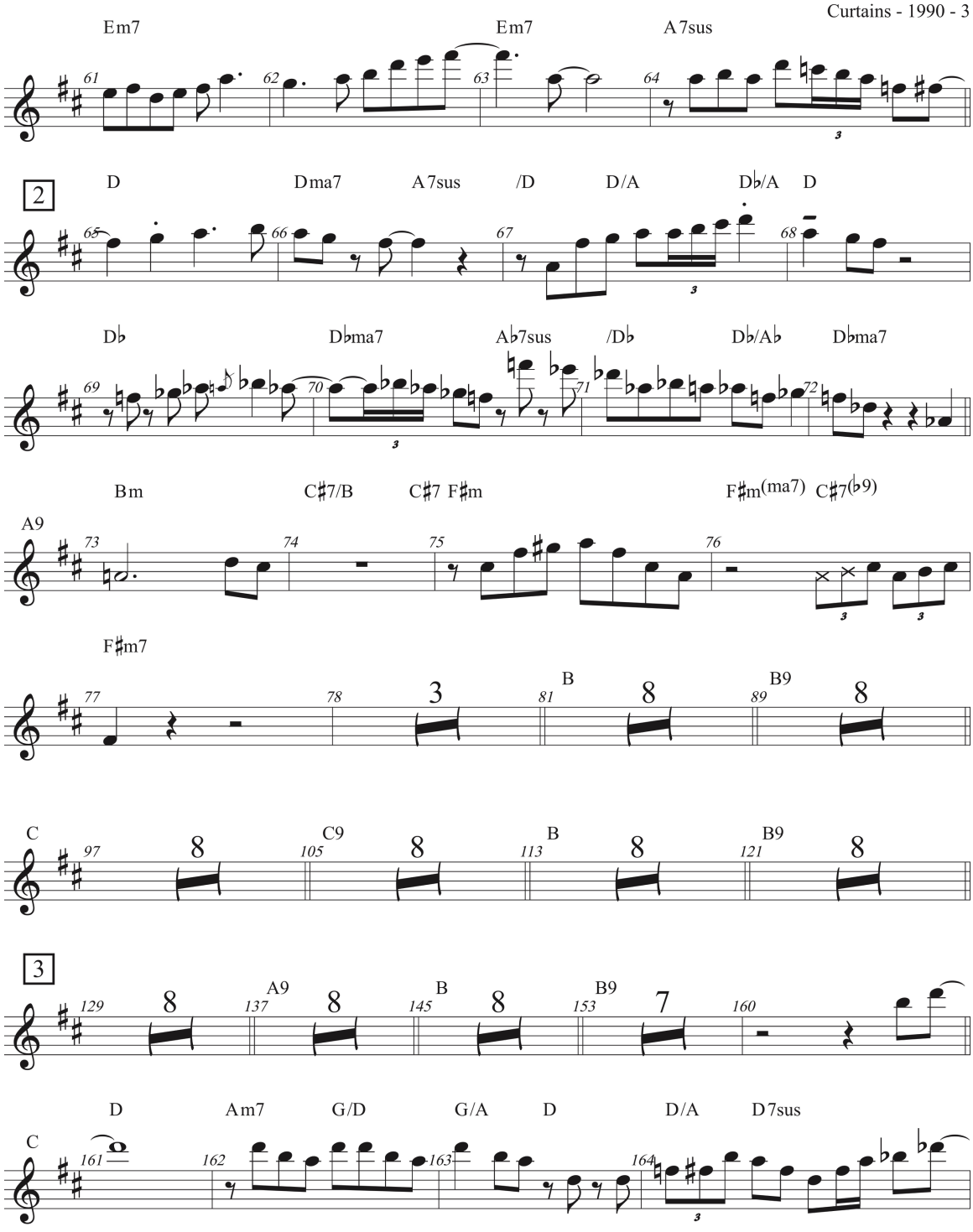

Fm7
Fm7
B♭7sus
109
110
111
112
E♭
E♭ma7
B♭7sus
E♭
D
E♭
B
113
114
115
116
D
Dma7
A7sus
D
D7sus
117
118
119
120
G
B9
Bass solo
3
A9
B
B9
121
122
129
137
145
153
160
D
Am7
G/D
G/A
D
D/A
D7sus
C
161
162
163
164
D♭
A♭m7
G♭/D♭
G♭/A♭
D♭
D♭/A♭
D♭7sus
165
166
167
168
Cm
Cm(ma7)
Cm7
F7
C9
169
170
171
172
Fm7
Fm7
B♭7sus
173
174
175
176

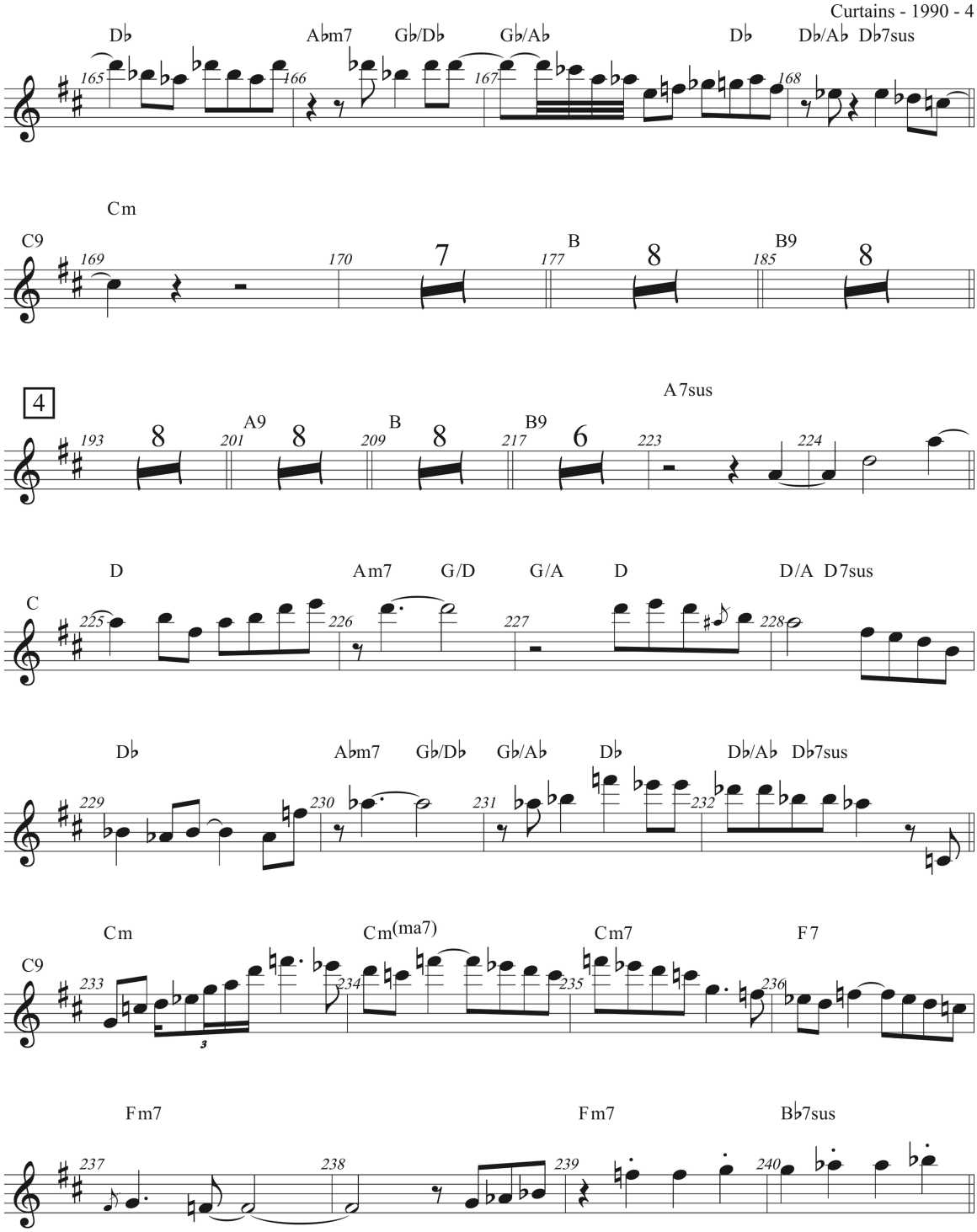
1990 Bern

Curtains



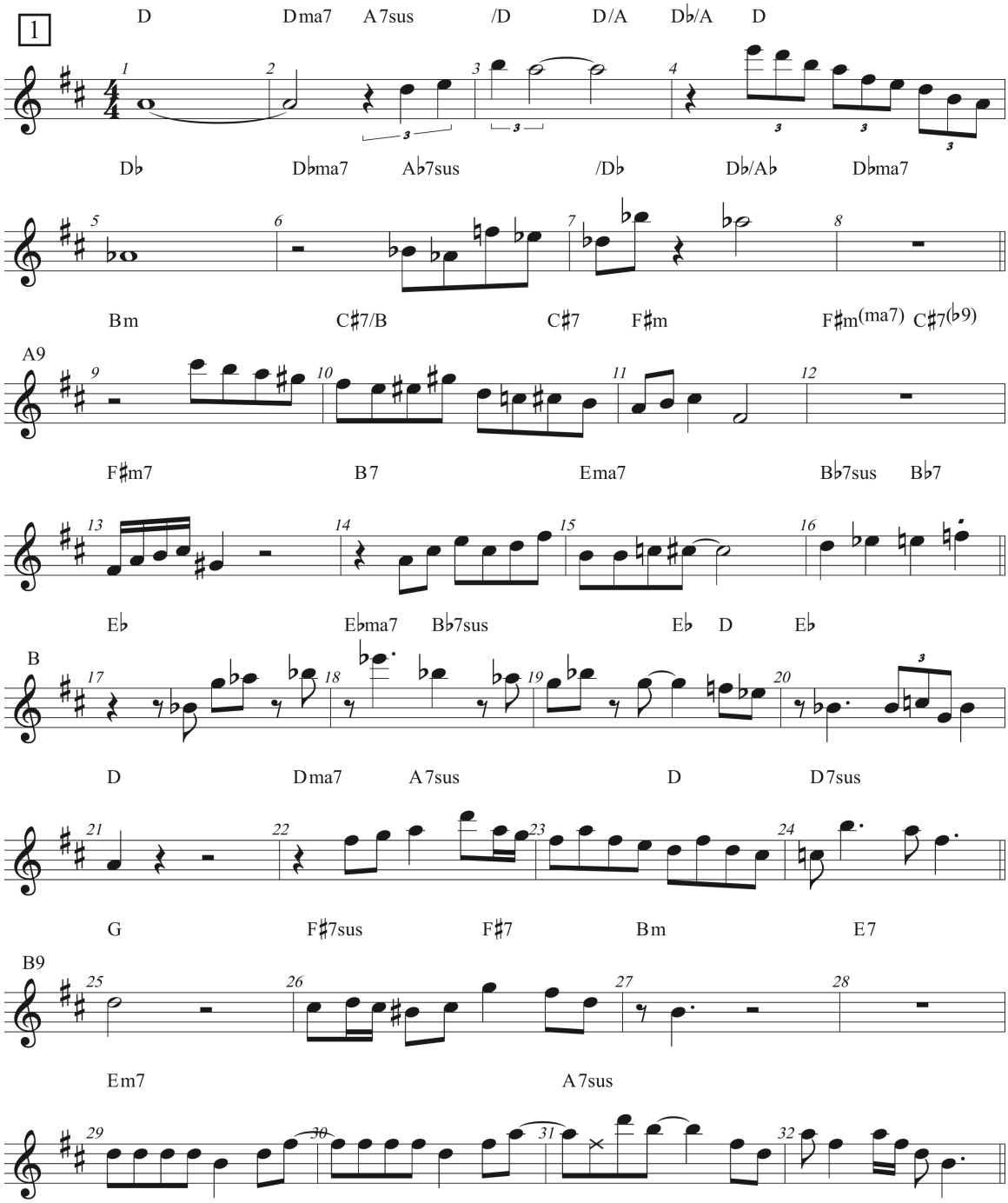

Em7
A7sus
29
30
31
32
D
Am7
G/D
G/A
D
D/A
D7sus
C
33
34
35
36
D♭
A♭m7
G♭/D♭
G♭/A♭
D♭
D♭/A♭
D♭7sus
37
38
39
40
Cm
Cm(ma7)
Cm7
F7
C9
41
42
43
44
Fm7
Fm7
B♭7sus
45
46
47
48
E♭
E♭ma7
B♭7sus
E♭
D
E♭
B
49
50
51
52
D
Dma7
A7sus
D
D7sus
53
54
55
56
G
F♯7sus
F♯7
Bm
E7
B9
57
58
59
60

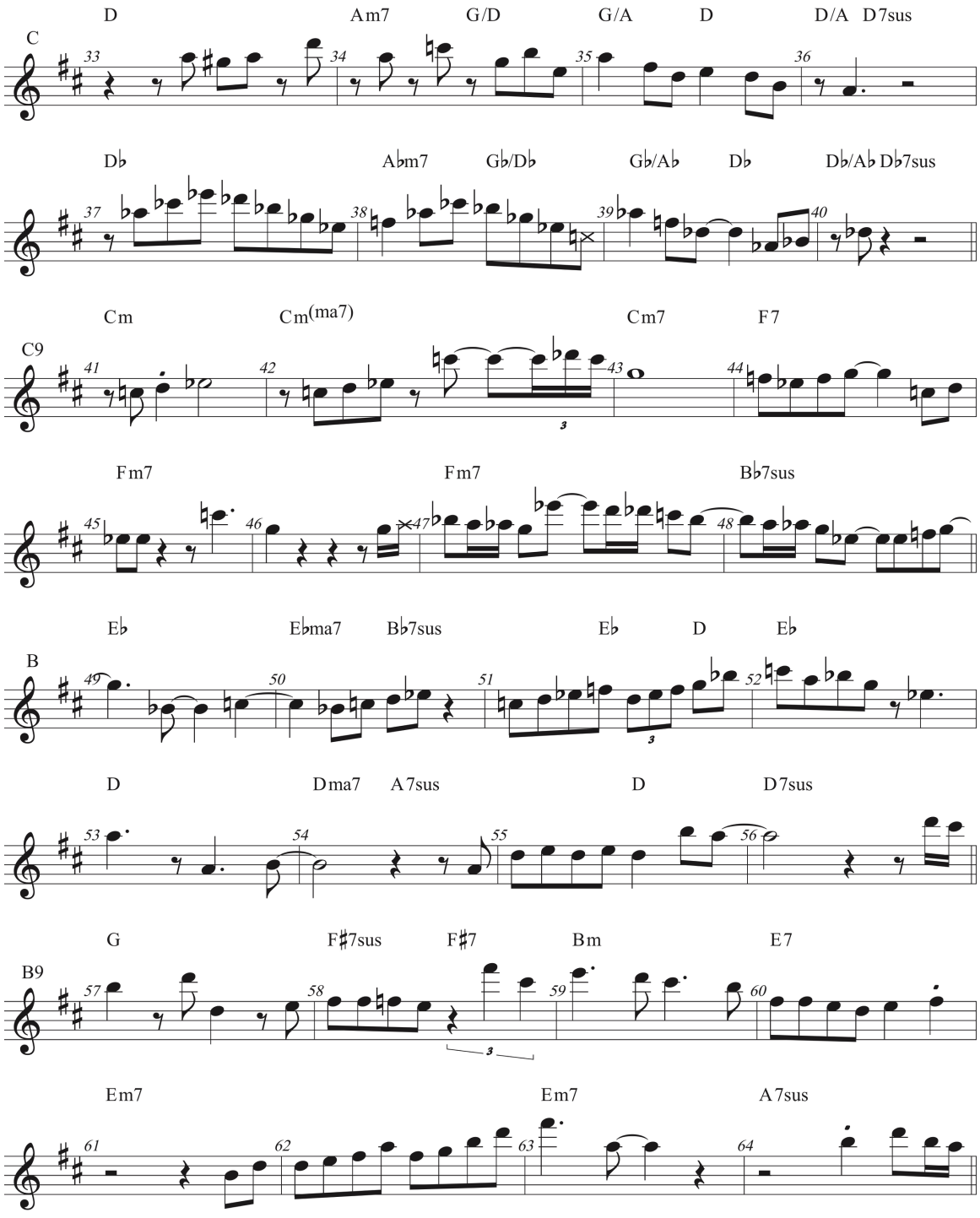

Em7
Em7
A7sus
61
62
63
64
2
D
Dma7
A7sus
/D
D/A
Db/A
D
65
66
67
68
Db
Dbma7
Ab7sus
/Db
Db/Ab
Dbma7
69
70
71
72
Bm
C♯7/B
C♯7
F♯m
F♯m(ma7)
C♯7(♭9)
A9
73
74
75
76
F♯m7
77
78
3
81
B
8
89
B9
8
C
97
8
C9
105
8
113
B
8
121
B9
8
3
129
8
A9
137
8
145
B
8
153
B9
7
160
C
D
Am7
G/D
G/A
D
D/A
D7sus
161
162
163
164

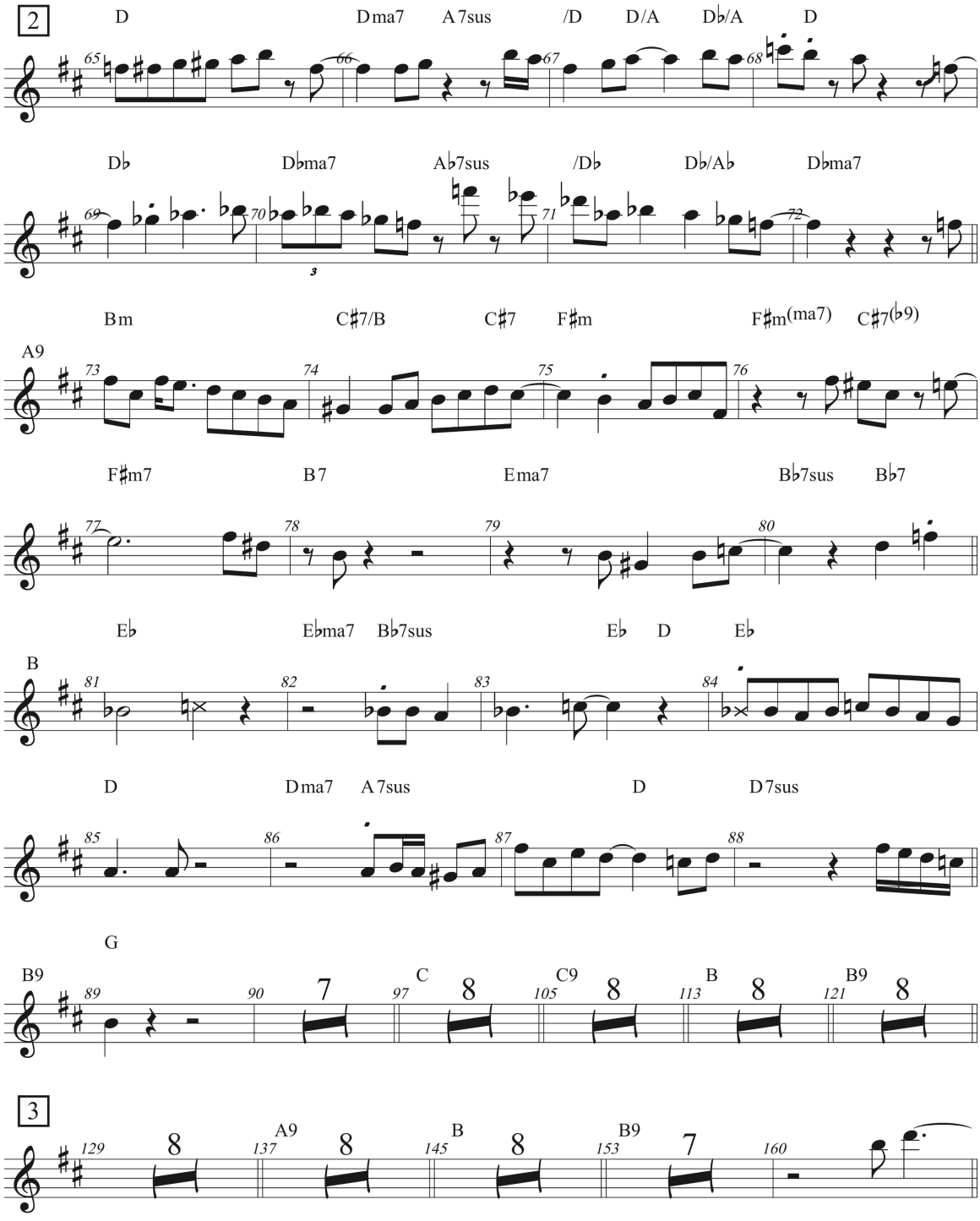

Db
Abm7
Gb/Db
Gb/Ab
Db
Db/Ab
Db7sus
165
166
167
168
Cm
C9
169
170
7
B
177
8
B9
185
8
4
A7sus
193
8
A9
201
8
B
209
8
B9
217
6
223
224
D
Am7
G/D
G/A
D
D/A
D7sus
C
225
226
227
228
Db
Abm7
Gb/Db
Gb/Ab
Db
Db/Ab
Db7sus
229
230
231
232
Cm
Cm(ma7)
Cm7
F7
C9
233
234
235
236
Fm7
Fm7
Bb7sus
237
238
239
240

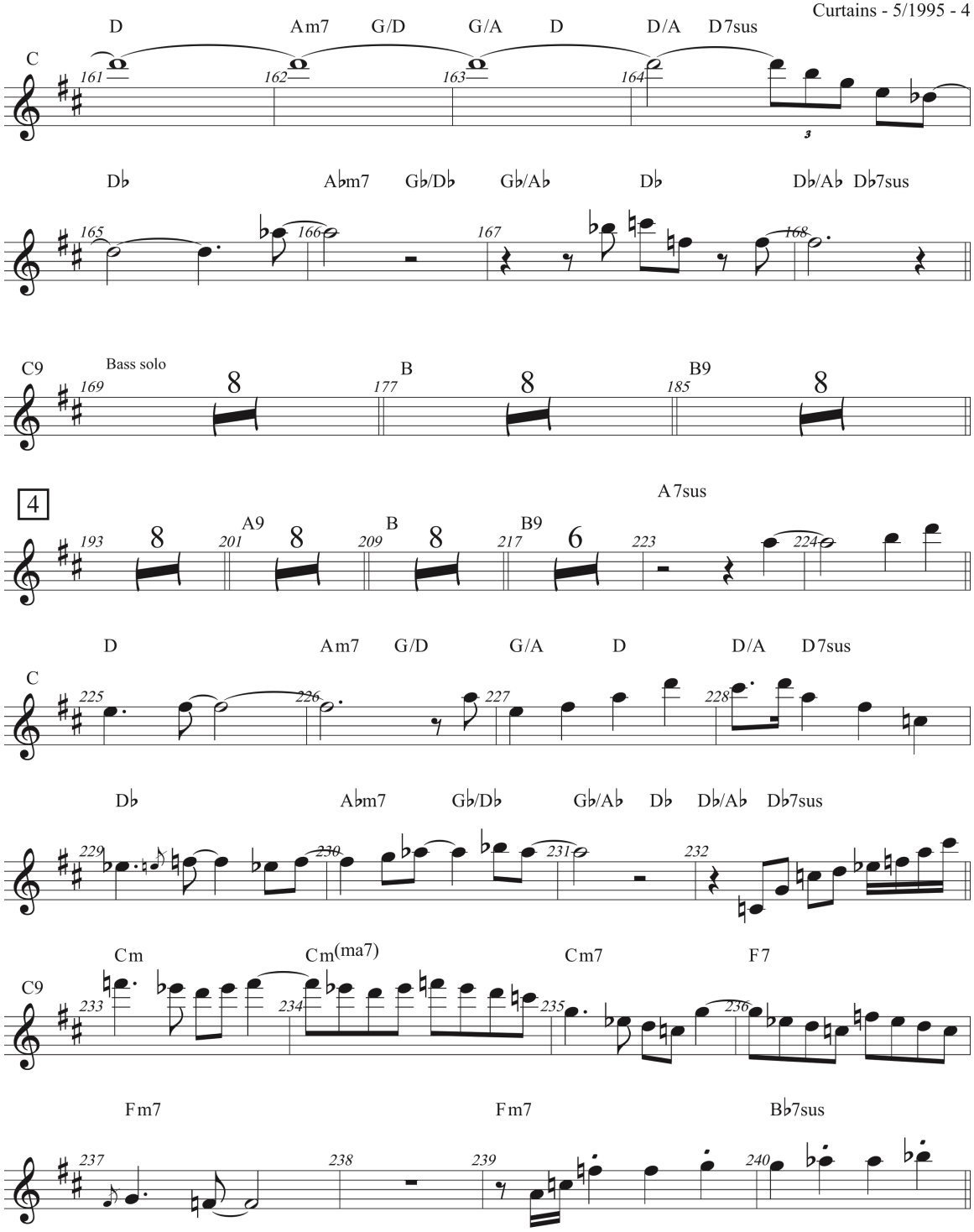
5/1995 Berlin

Curtains



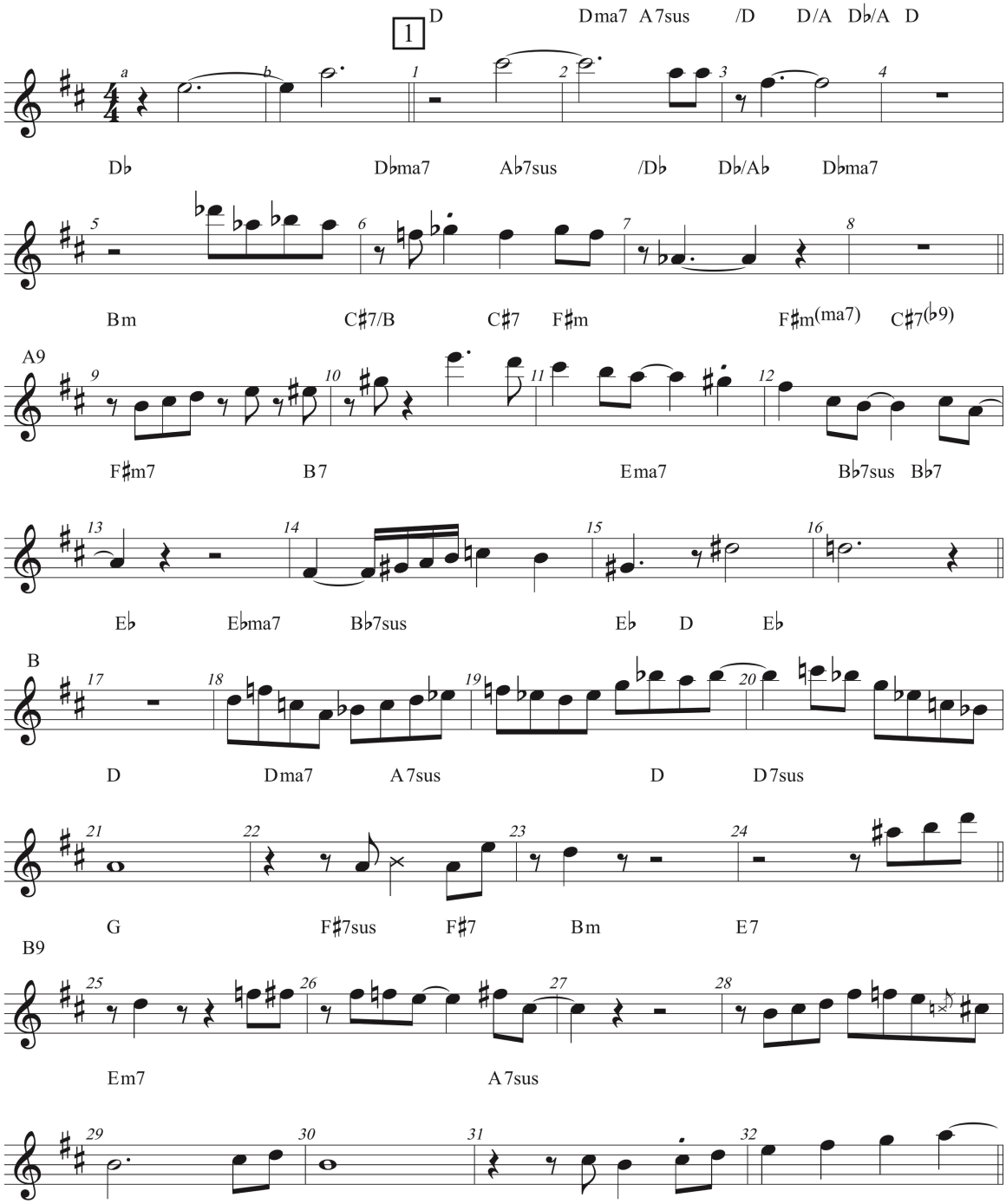

D
Am7
G/D
G/A
D
D/A
D7sus
C
33
34
35
36
Db
Abm7
Gb/Db
Gb/Ab
Db
Db/Ab
Db7sus
37
38
39
40
Cm
Cm(ma7)
Cm7
F7
C9
41
42
43
44
Fm7
Fm7
Bb7sus
45
46
47
48
Eb
Ebma7
Bb7sus
Eb
D
Eb
B
49
50
51
52
D
Dma7
A7sus
D
D7sus
53
54
55
56
G
F#7sus
F#7
Bm
E7
B9
57
58
59
60
Em7
Em7
A7sus
61
62
63
64

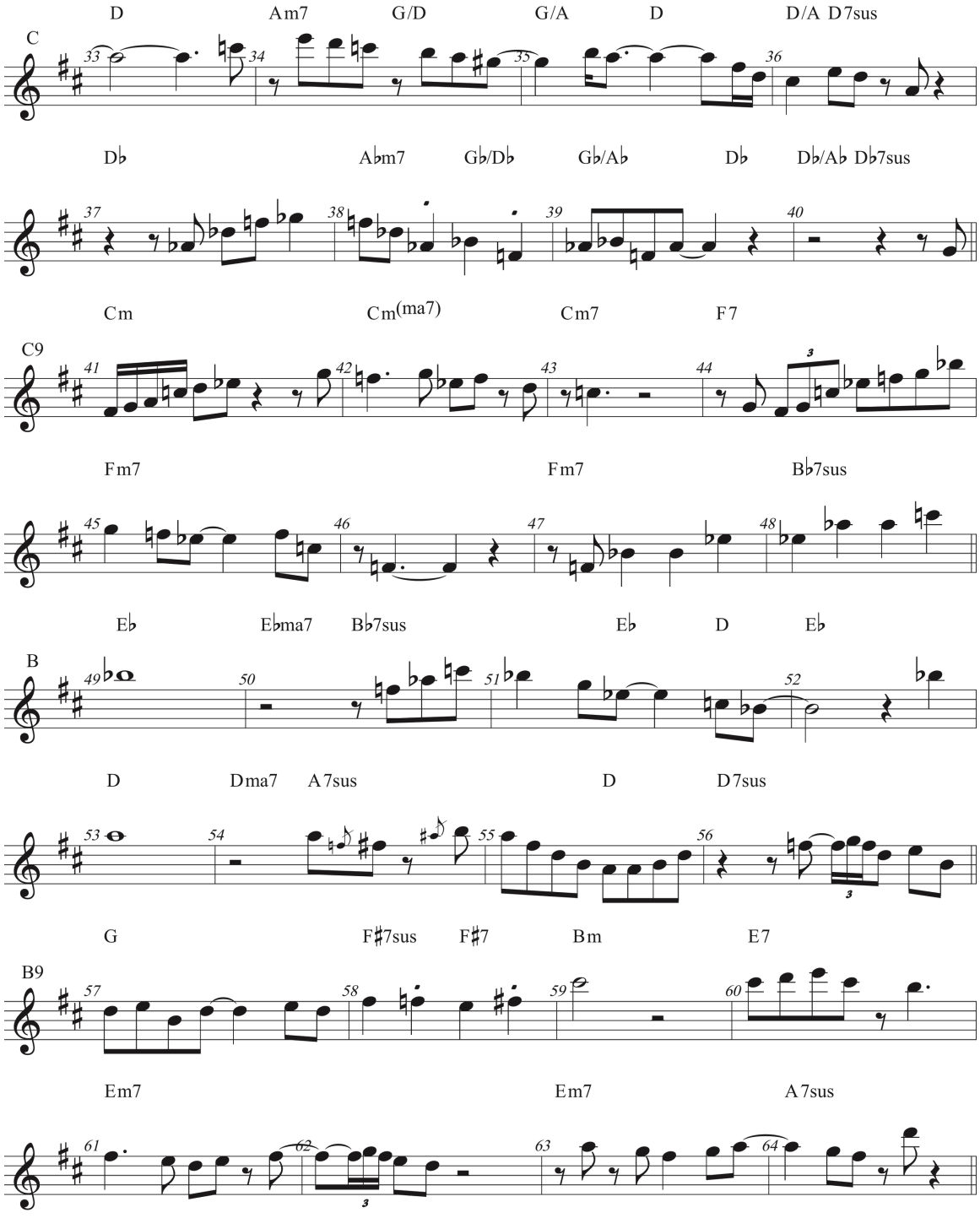

2
D
Dma7
A7sus
/D
D/A
D♭/A
D
D♭
D♭ma7
A♭7sus
/D♭
D♭/A♭
D♭ma7
Bm
C♯7/B
C♯7
F♯m
F♯m(ma7)
C♯7(♭9)
A9
F♯m7
B7
Emaa7
B♭7sus
B♭7
E♭
E♭ma7
B♭7sus
E♭
D
E♭
B
D
Dma7
A7sus
D
D7sus
G
B9
C
C9
B
B9
3
A9
B
B9

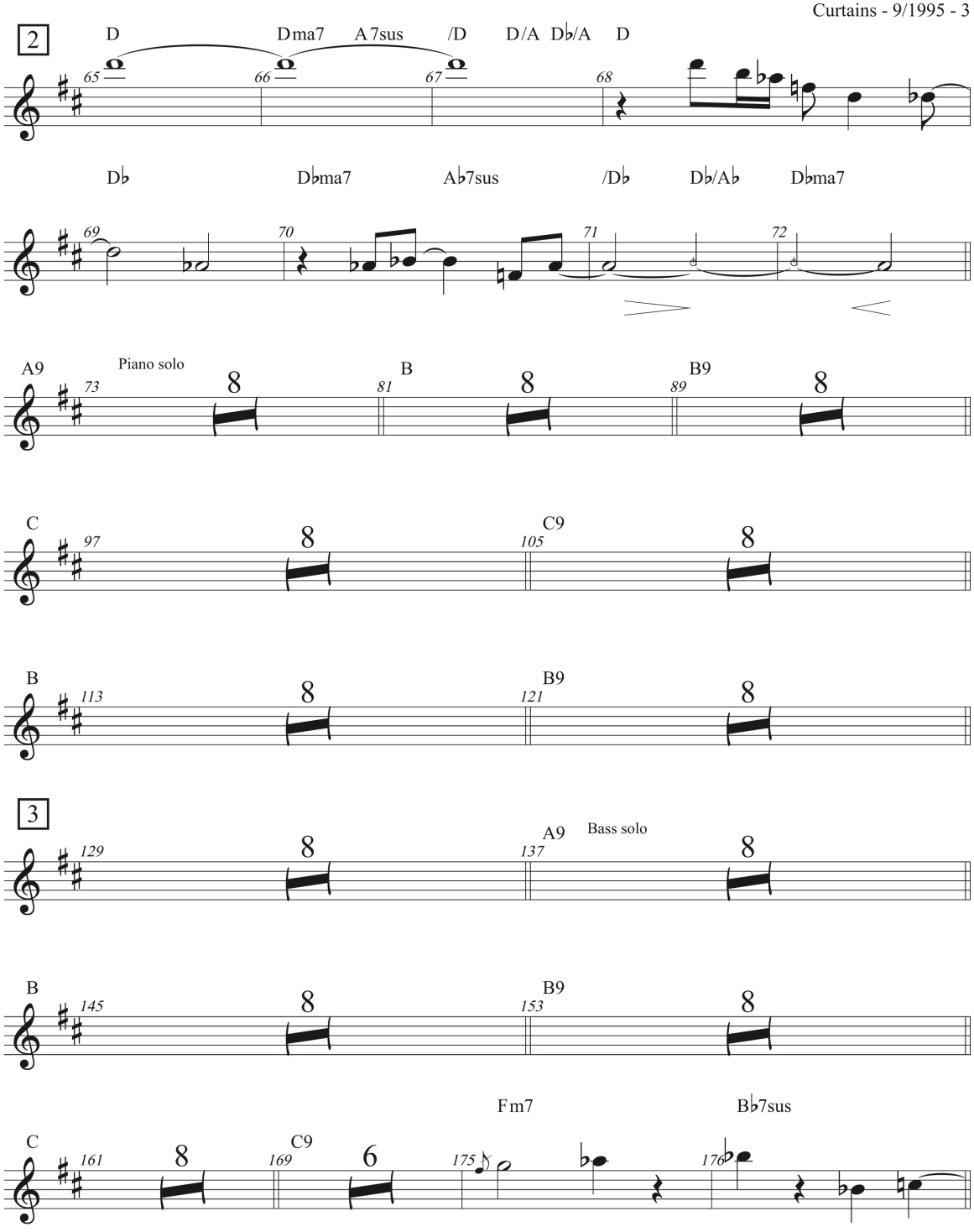

D
Am7
G/D
G/A
D
D/A
D7sus
C
161
162
163
164
3
Db
Abm7
Gb/Db
Gb/Ab
Db
Db/Ab
Db7sus
165
166
167
168
C9
Bass solo
169
8
B
177
8
B9
185
8
4
A7sus
193
8
A9
201
8
B
209
8
B9
217
6
223
224
D
Am7
G/D
G/A
D
D/A
D7sus
C
225
226
227
228
Db
Abm7
Gb/Db
Gb/Ab
Db
Db/Ab
Db7sus
229
230
231
232
Cm
Cm(ma7)
Cm7
F7
C9
233
234
235
236
Fm7
Fm7
Bb7sus
237
238
239
240

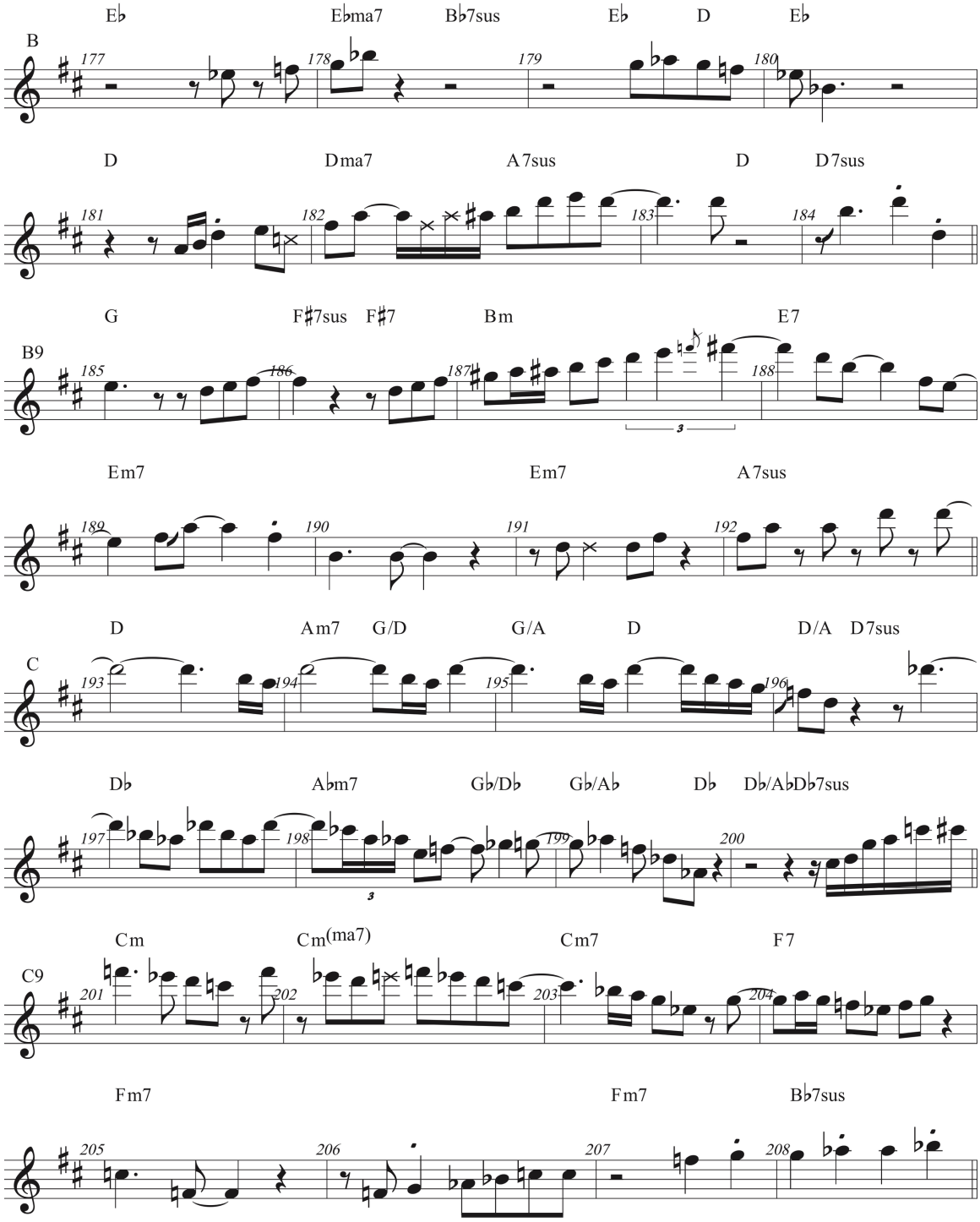
9/1995 Leipzig

Curtains




D Am7 G/D G/A D D/A D7sus
C
33 34 35 36
Db Abm7 Gb/Db Gb/Ab Db Db/Ab Db7sus
37 38 39 40
Cm Cm(ma7) Cm7 F7
C9
41 42 43 44
Fm7 Fm7 Bb7sus
45 46 47 48
Eb Ebma7 Bb7sus Eb D Eb
B
49 50 51 52
D Dma7 A7sus D D7sus
53 54 55 56
G F#7sus F#7 Bm E7
B9
57 58 59 60
Em7 Em7 A7sus
61 62 63 64

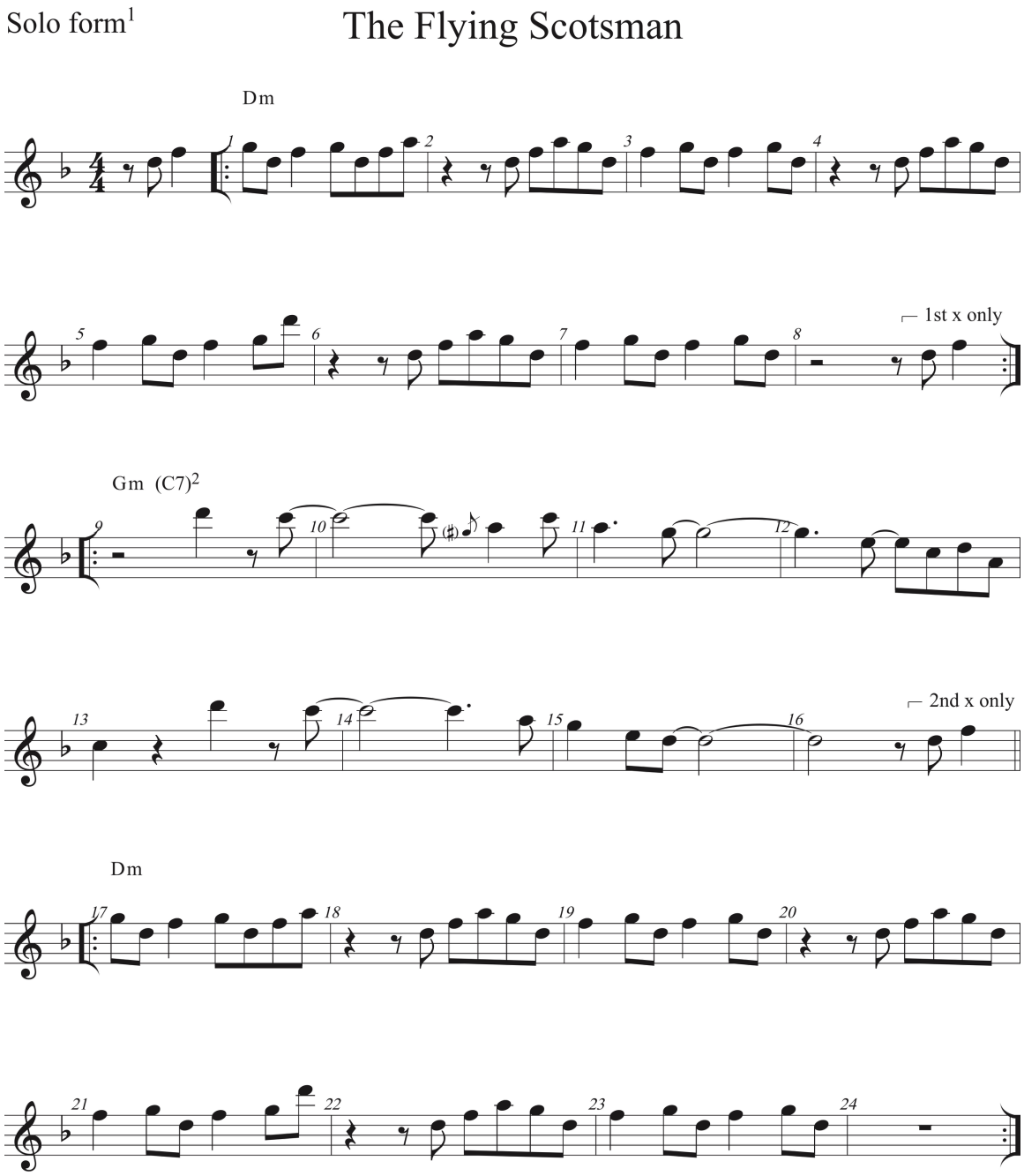

2
D
Dma7
A7sus
/D
D/A
D♭/A
D
65
66
67
68
D♭
D♭ma7
A♭7sus
/D♭
D♭/A♭
D♭ma7
69
70
71
72
A9
Piano solo
73
B
81
B9
89
C
97
C9
105
B
113
B9
121
3
A9
Bass solo
129
137
B
145
B9
153
Fm7
B♭7sus
C
161
C9
169
175
176


E♭ E♭ma7 B♭7sus E♭ D E♭
B
177 178 179 180
D Dma7 A7sus D D7sus
181 182 183 184
G F♯7sus F♯7 Bm E7
B9
185 186 187 188
3
Em7 Em7 A7sus
189 190 191 192
D Am7 G/D G/A D D/A D7sus
C
193 194 195 196
D♭ A♭m7 G♭/D♭ G♭/A♭ D♭ D♭/A♭ D♭7sus
197 198 199 200
3
Cm Cm(ma7) Cm7 F7
C9
201 202 203 204
Fm7 Fm7 B♭7sus
205 206 207 208

APPENDIX C

Appendix C.1 "The Flying Scotsman" solo form

Solo form[1]



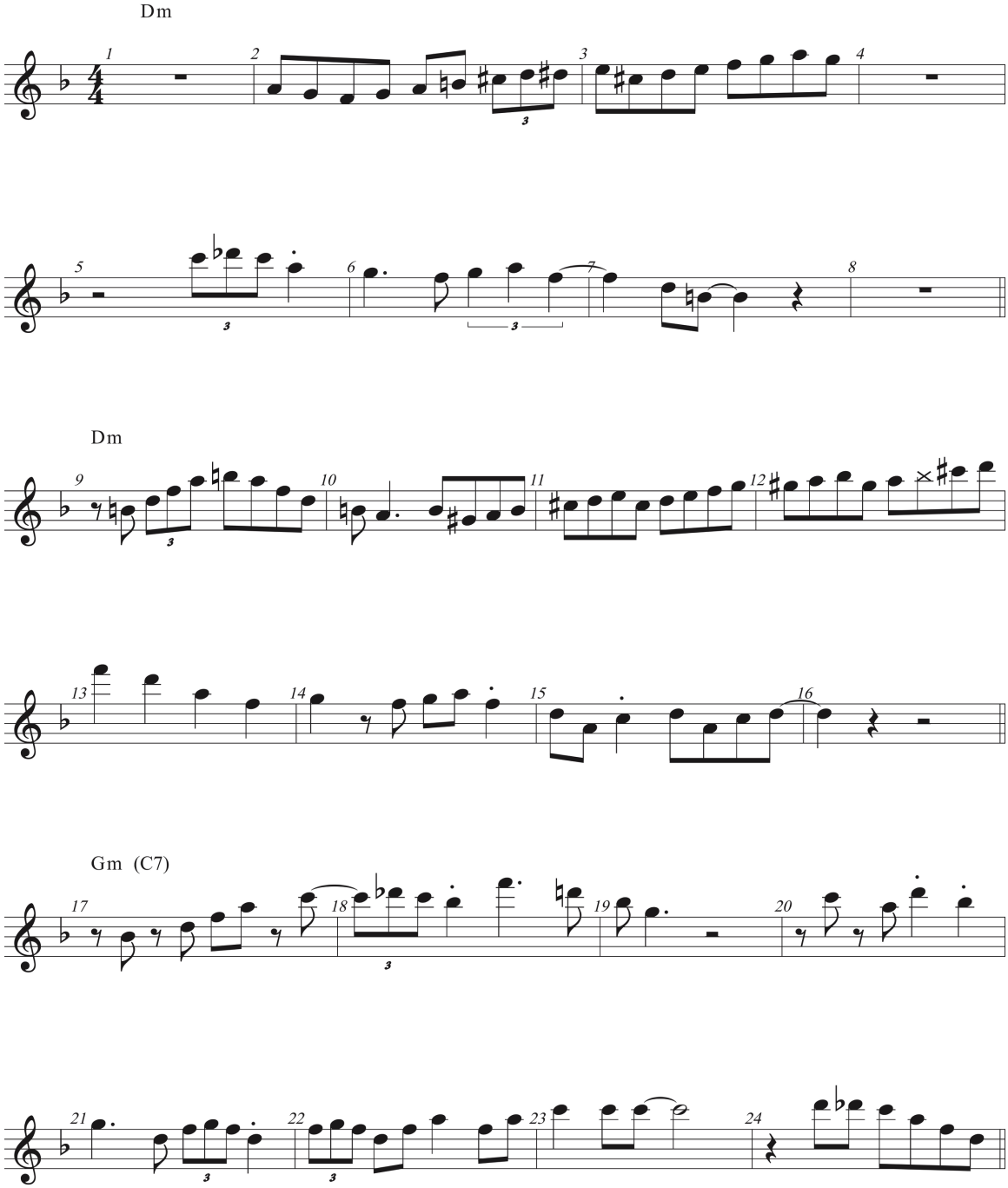
1. In the melody mm. 17–24 are only played once.

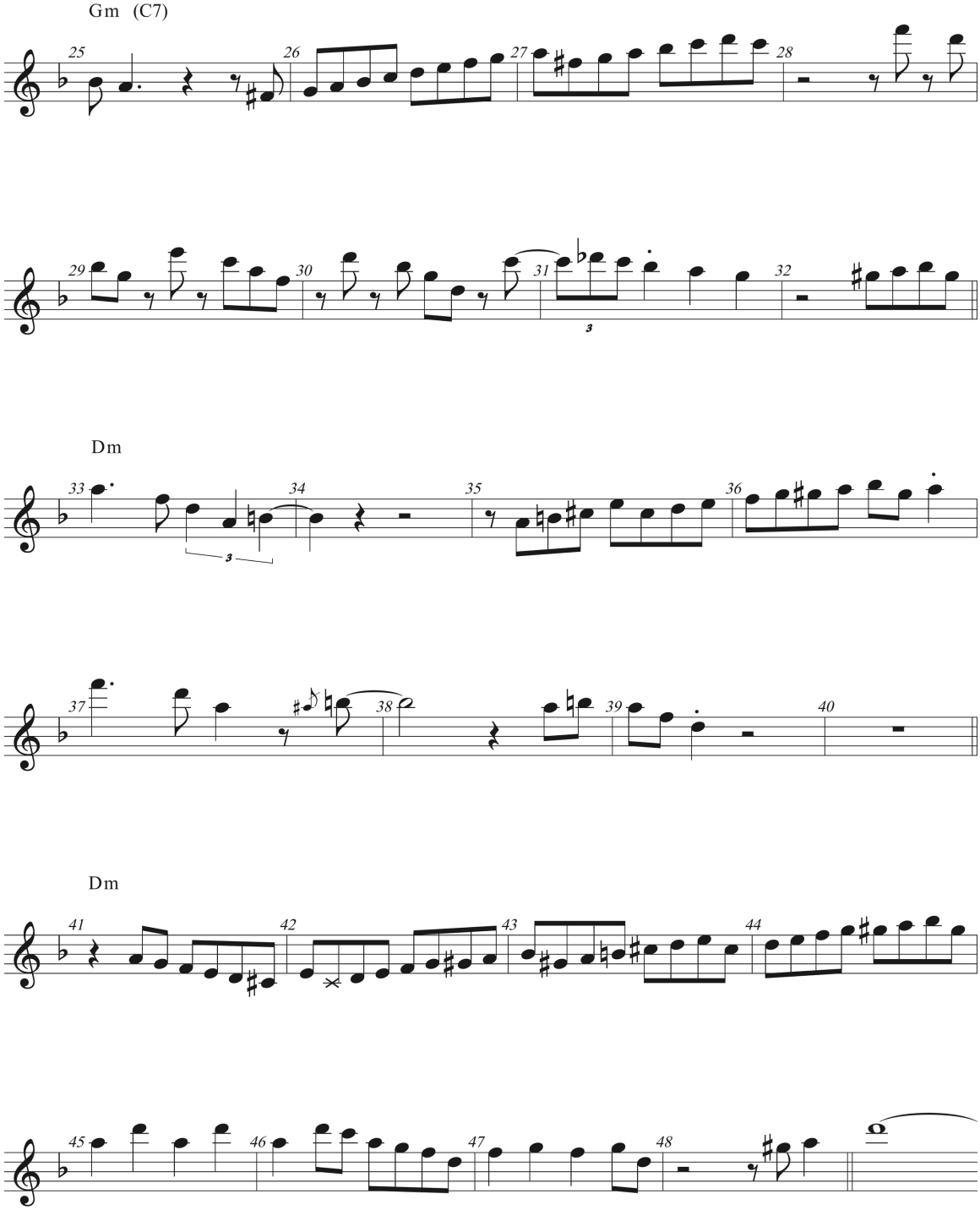
2. The chord symbol used in various scores and parts in the Mulligan archives at the Library of Congress is not consistent. Either G- or C7 may be indicated. At times one part in an arrangement might have the chord symbol G- while another will have C7.

Appendix C.2 “The Flying Scotsman” solo transcriptions

1989 studio

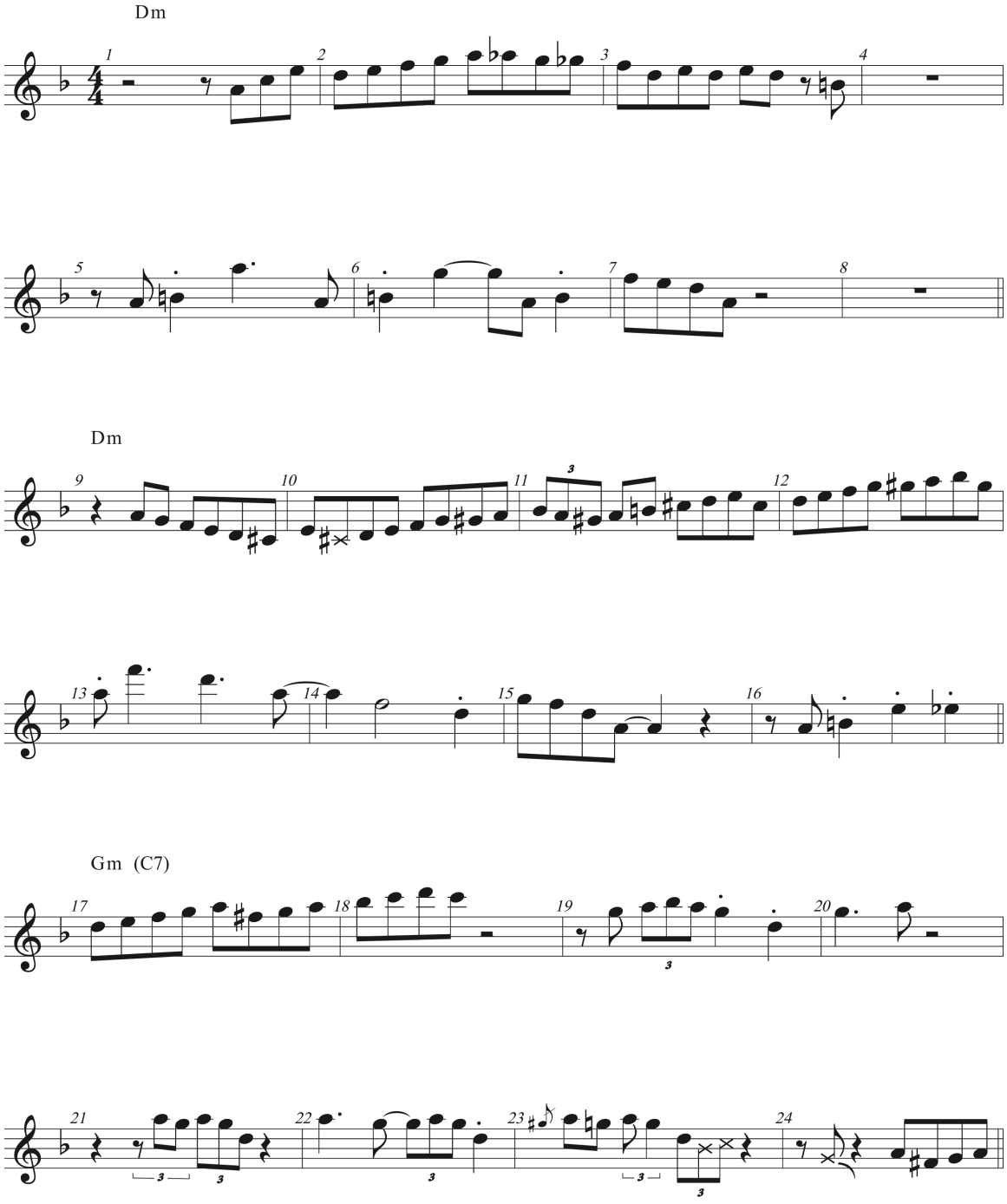
The Flying Scotsman

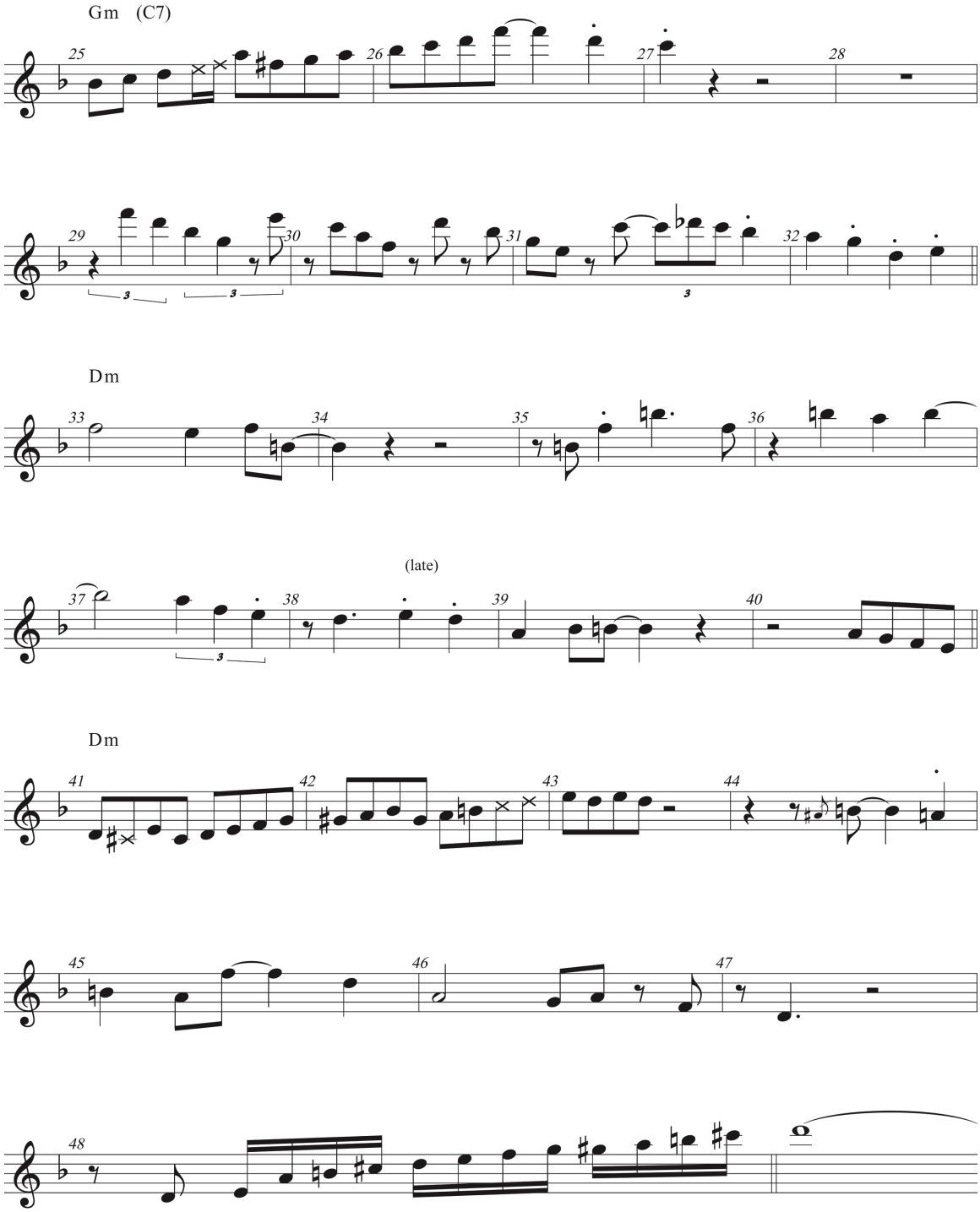



Gm (C7)
25
26
27
28
29
30
31
32
Dm
33
34
35
36
37
38
39
40
Dm
41
42
43
44
45
46
47
48

1990 Bern

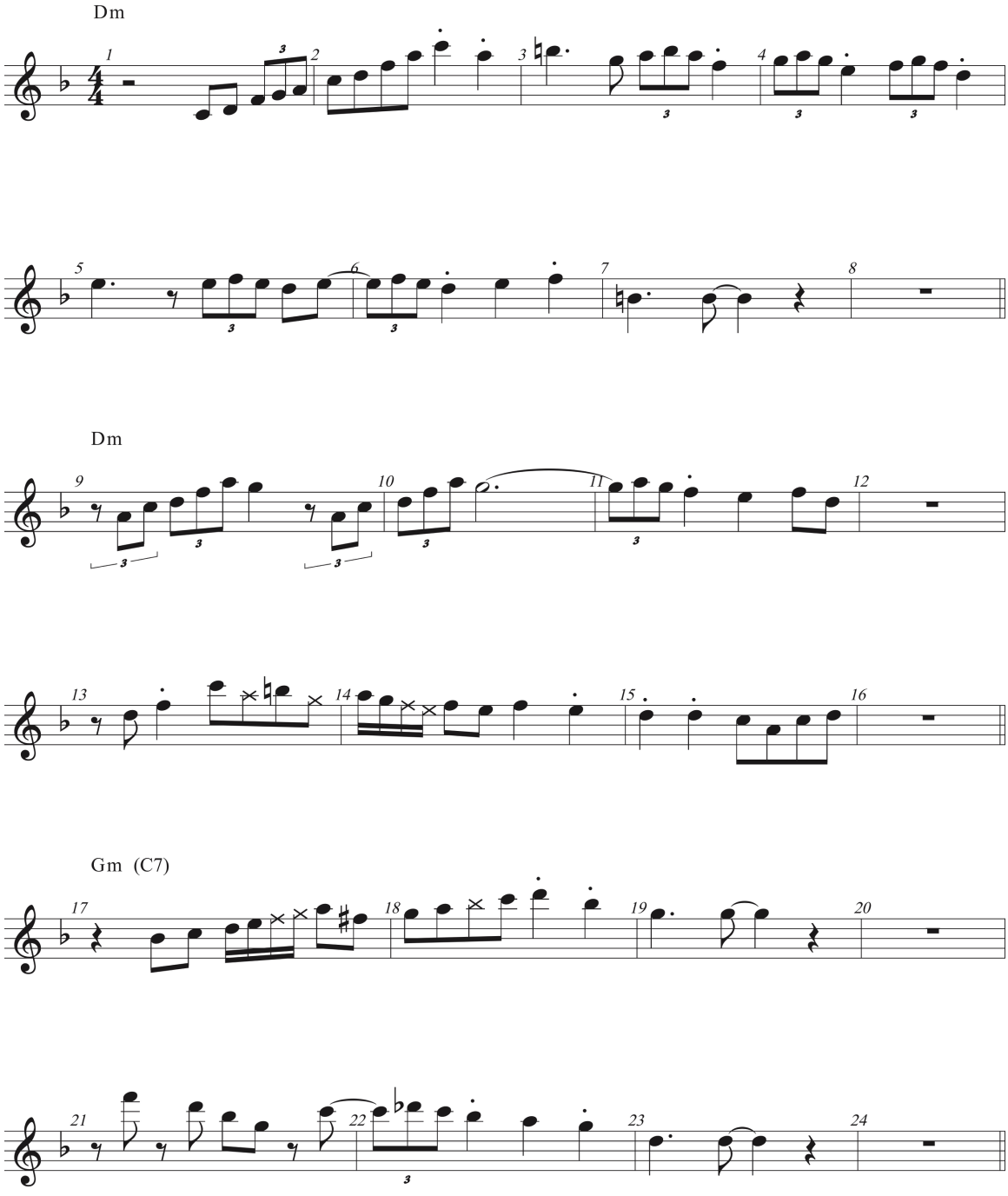
The Flying Scotsman

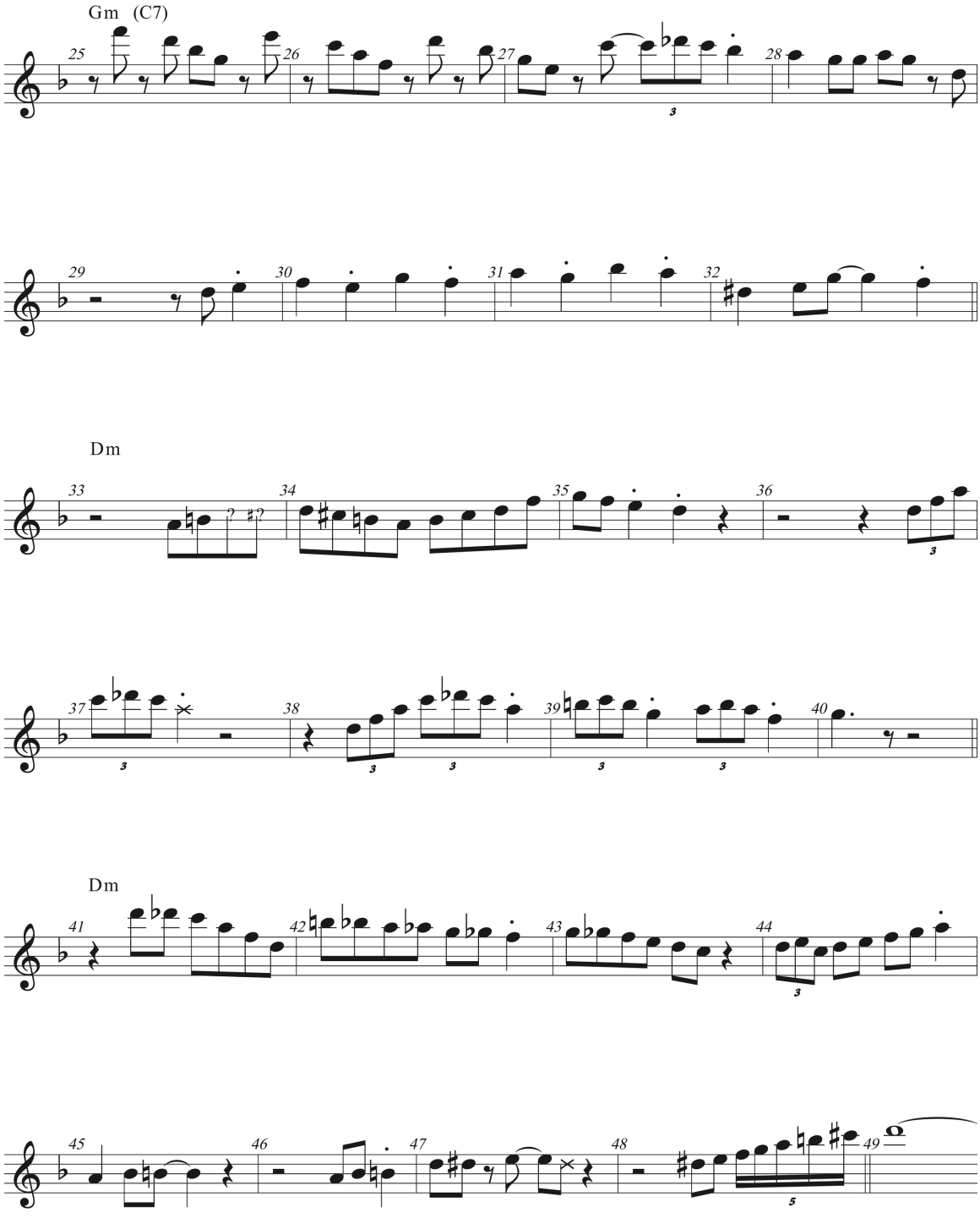



Gm (C7)
Dm
(late)
Dm

1991 Brecon

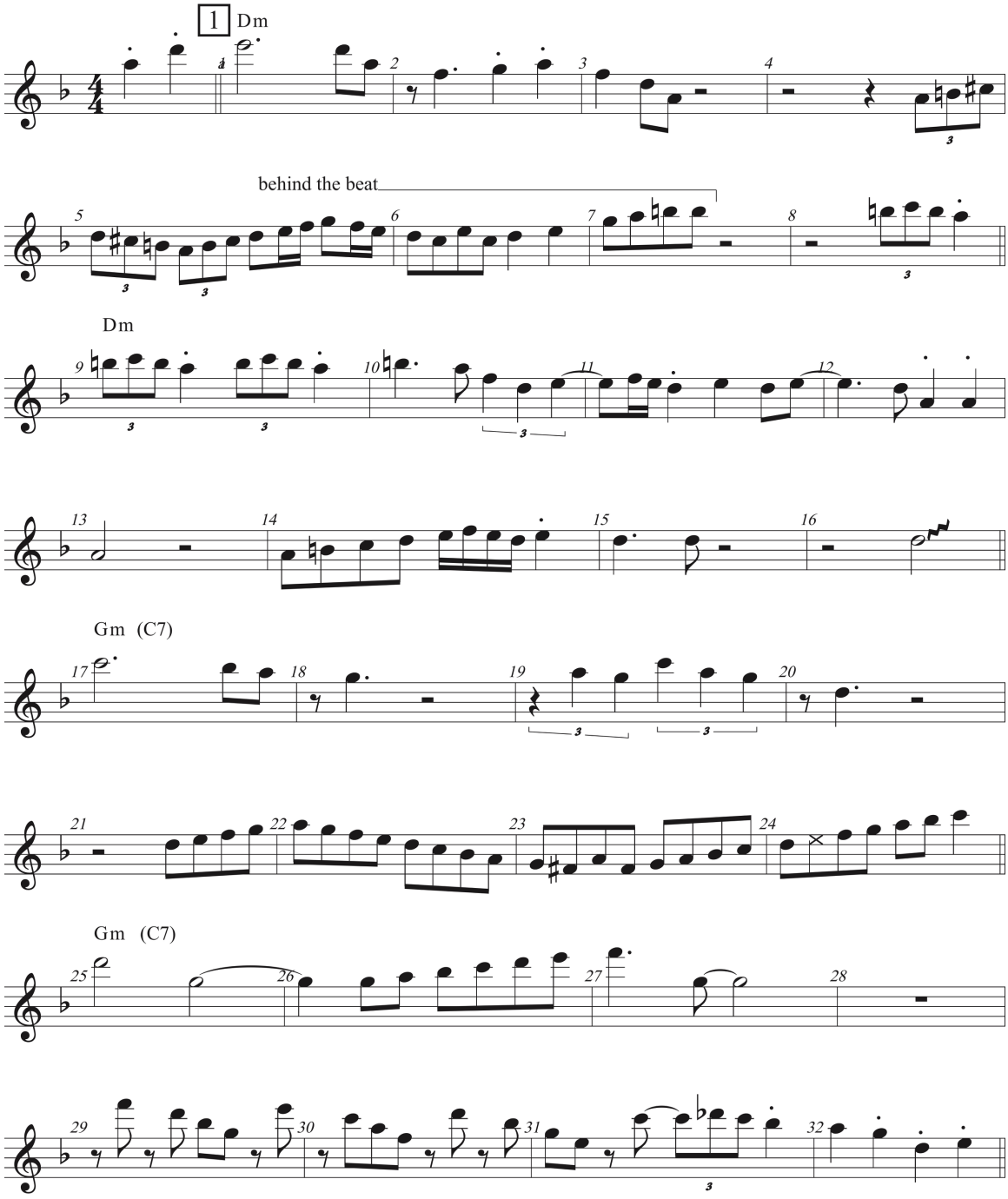
The Flying Scotsman

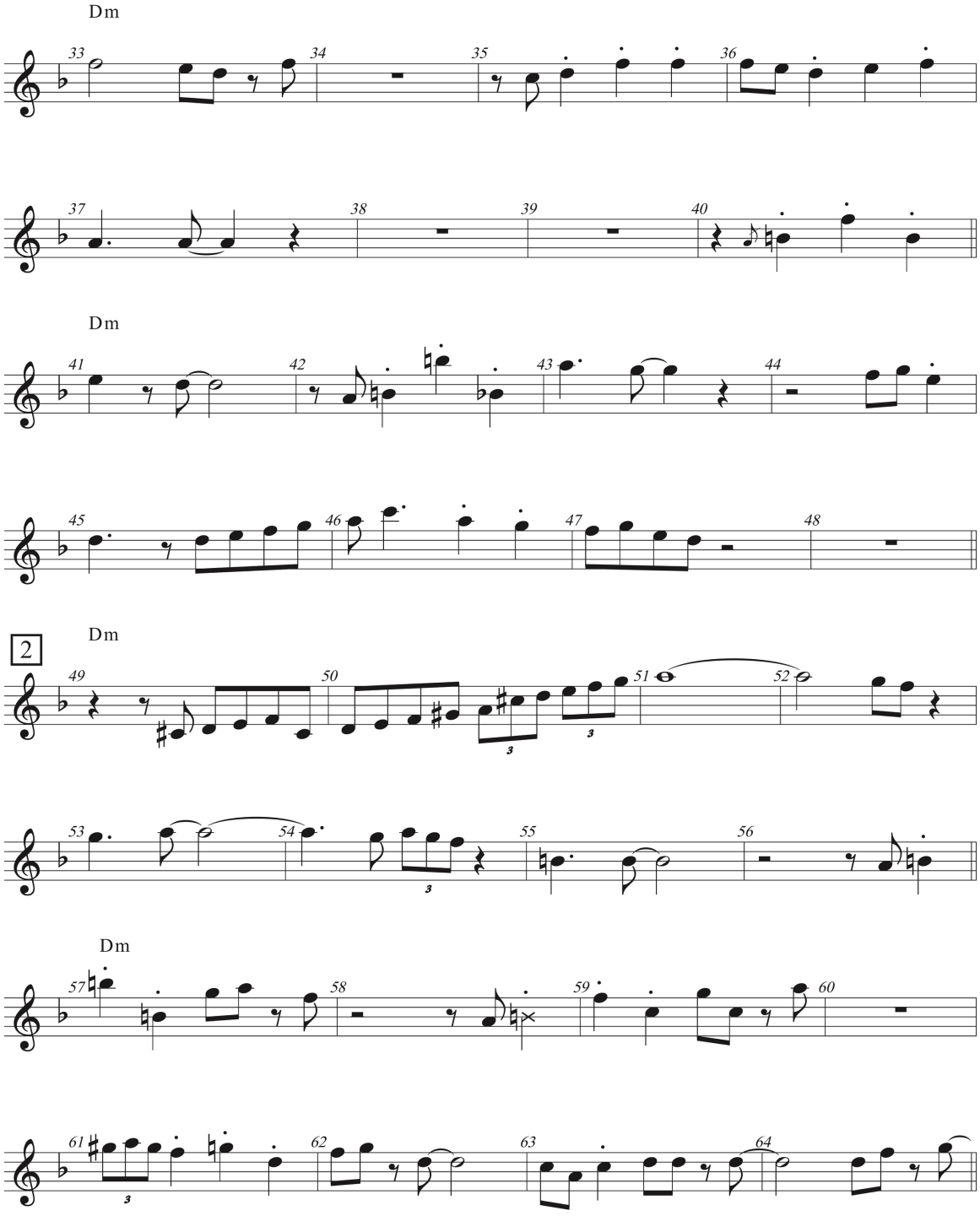


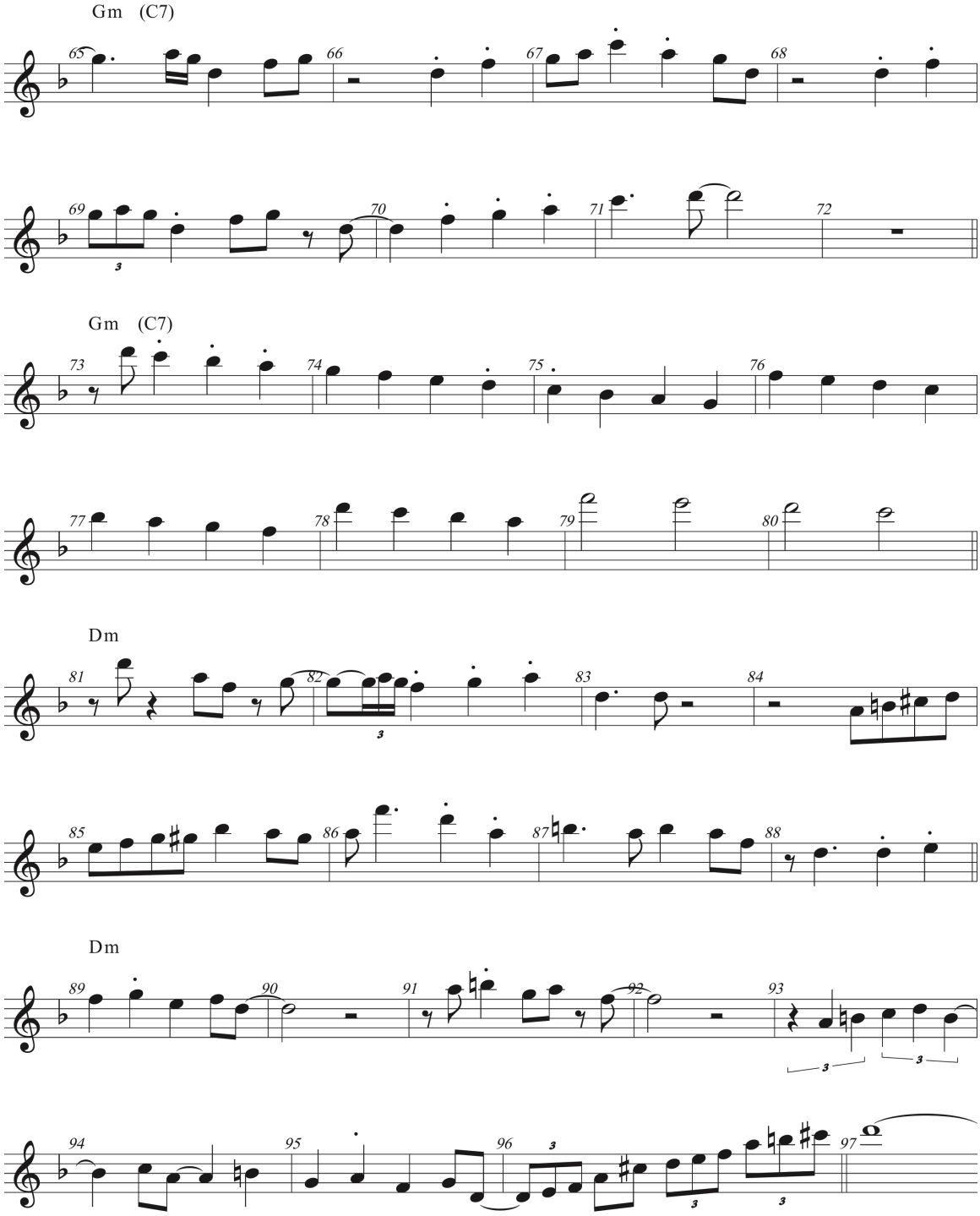

Gm (C7)
25
26
27
28
29
30
31
32
Dm
33
34
35
36
37
38
39
40
Dm
41
42
43
44
45
46
47
48
49

1993 Yokohama

The Flying Scotsman

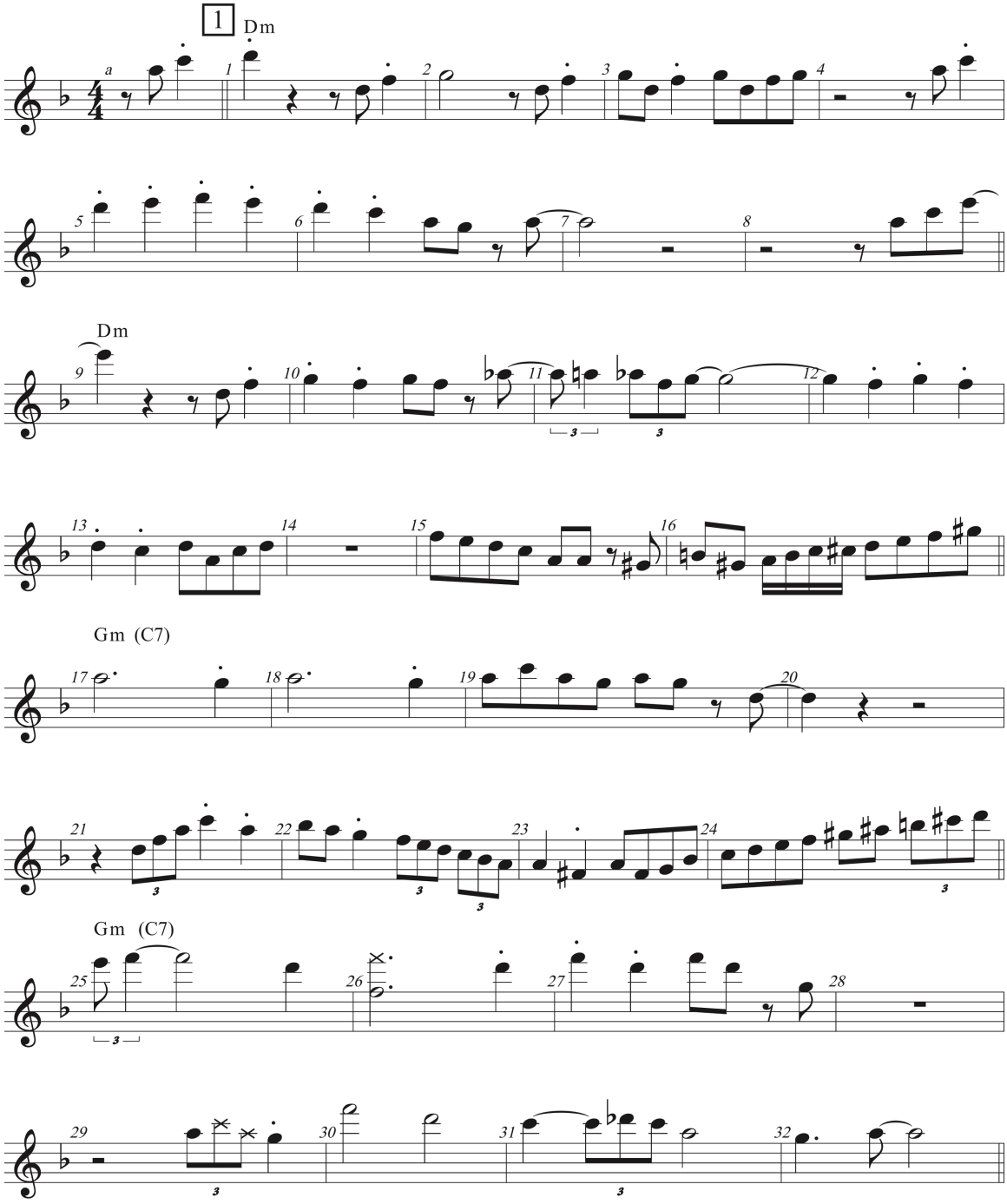


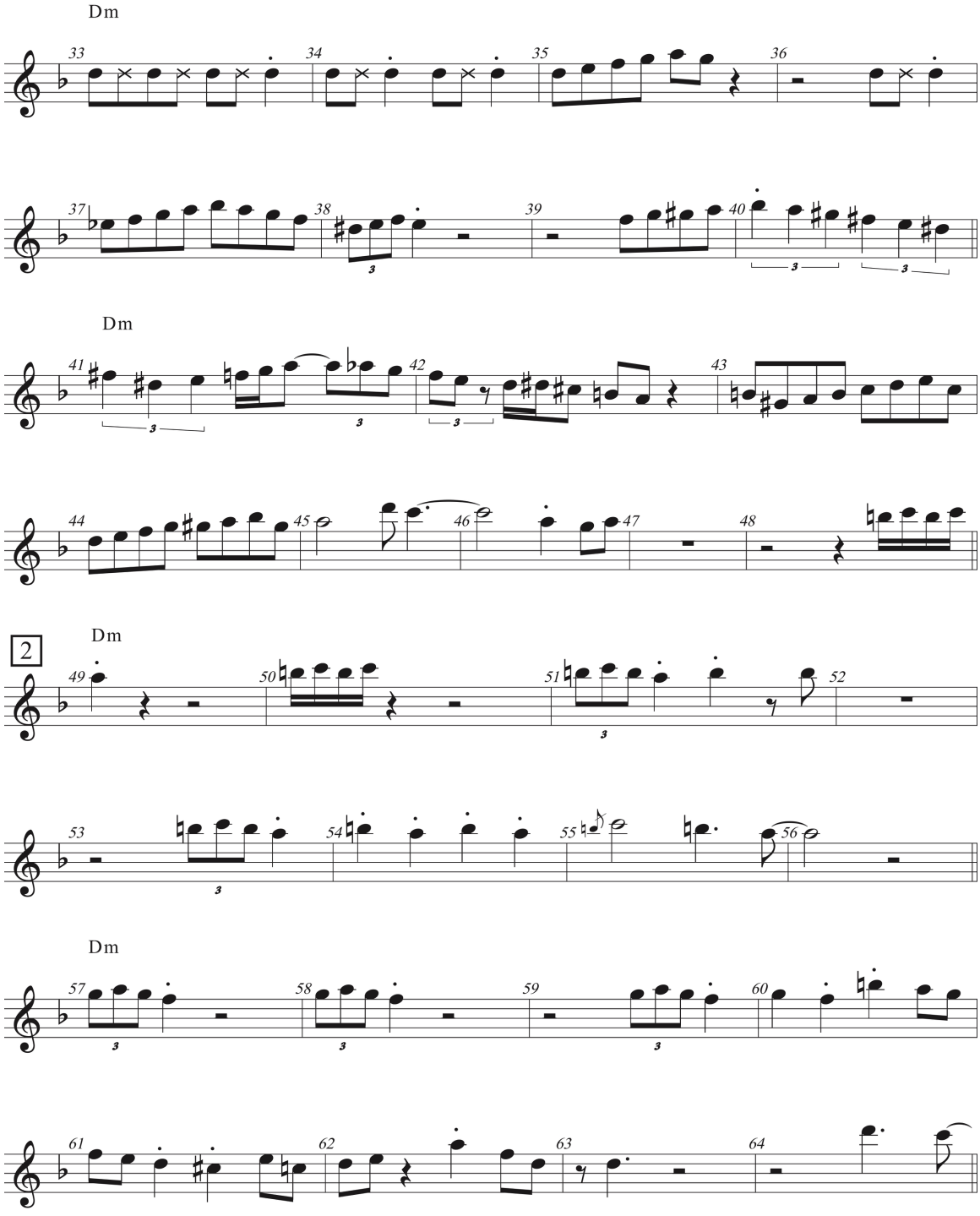

Dm
33
34
35
36
37
38
39
40
Dm
41
42
43
44
45
46
47
48
2
Dm
49
50
51
52
53
54
55
56
Dm
57
58
59
60
61
62
63
64

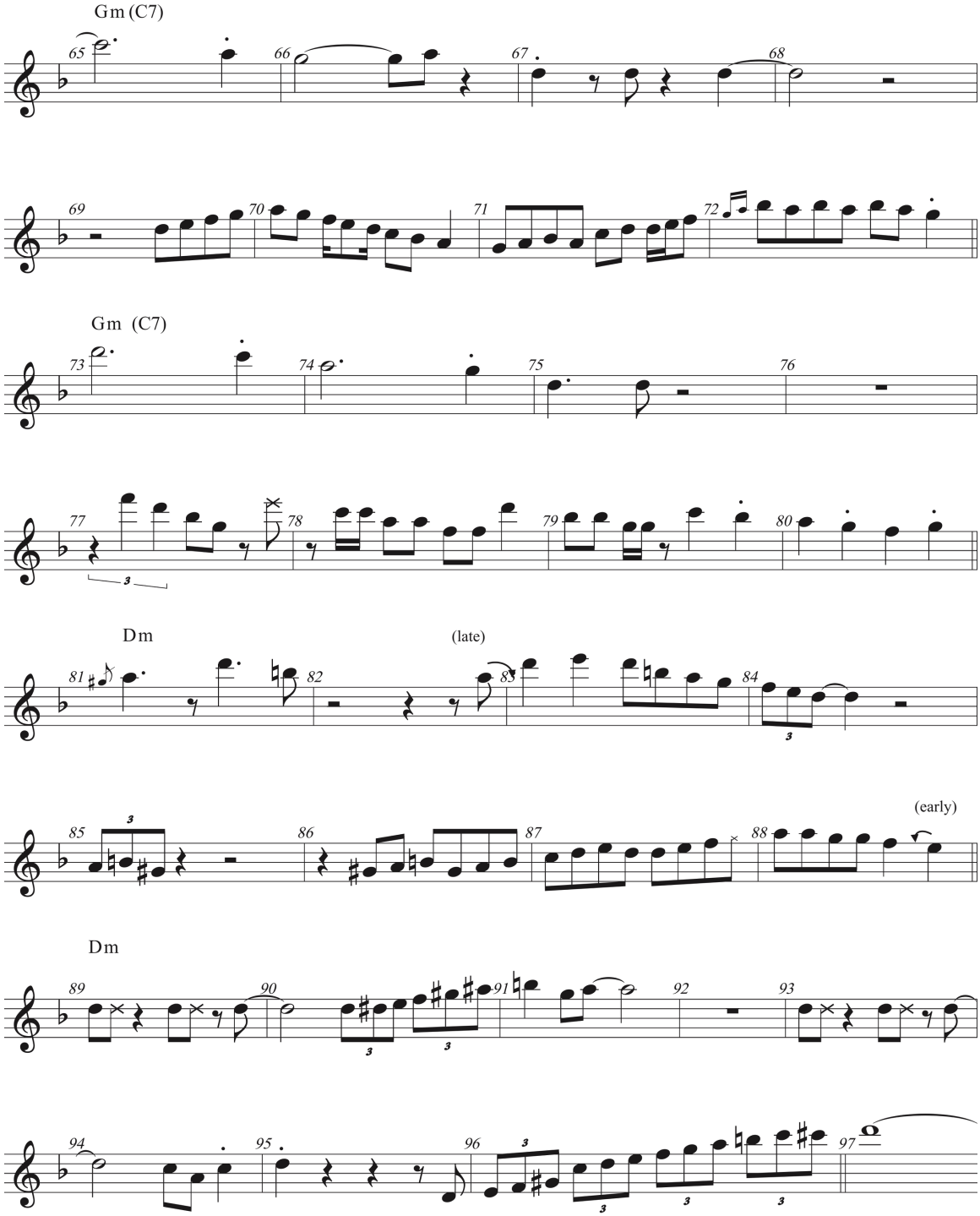

Gm (C7)
65
66
67
68
69
70
71
72
Gm (C7)
73
74
75
76
77
78
79
80
Dm
81
82
83
84
85
86
87
88
Dm
89
90
91
92
93
94
95
96
97

1995 Leipzig

The Flying Scotsman

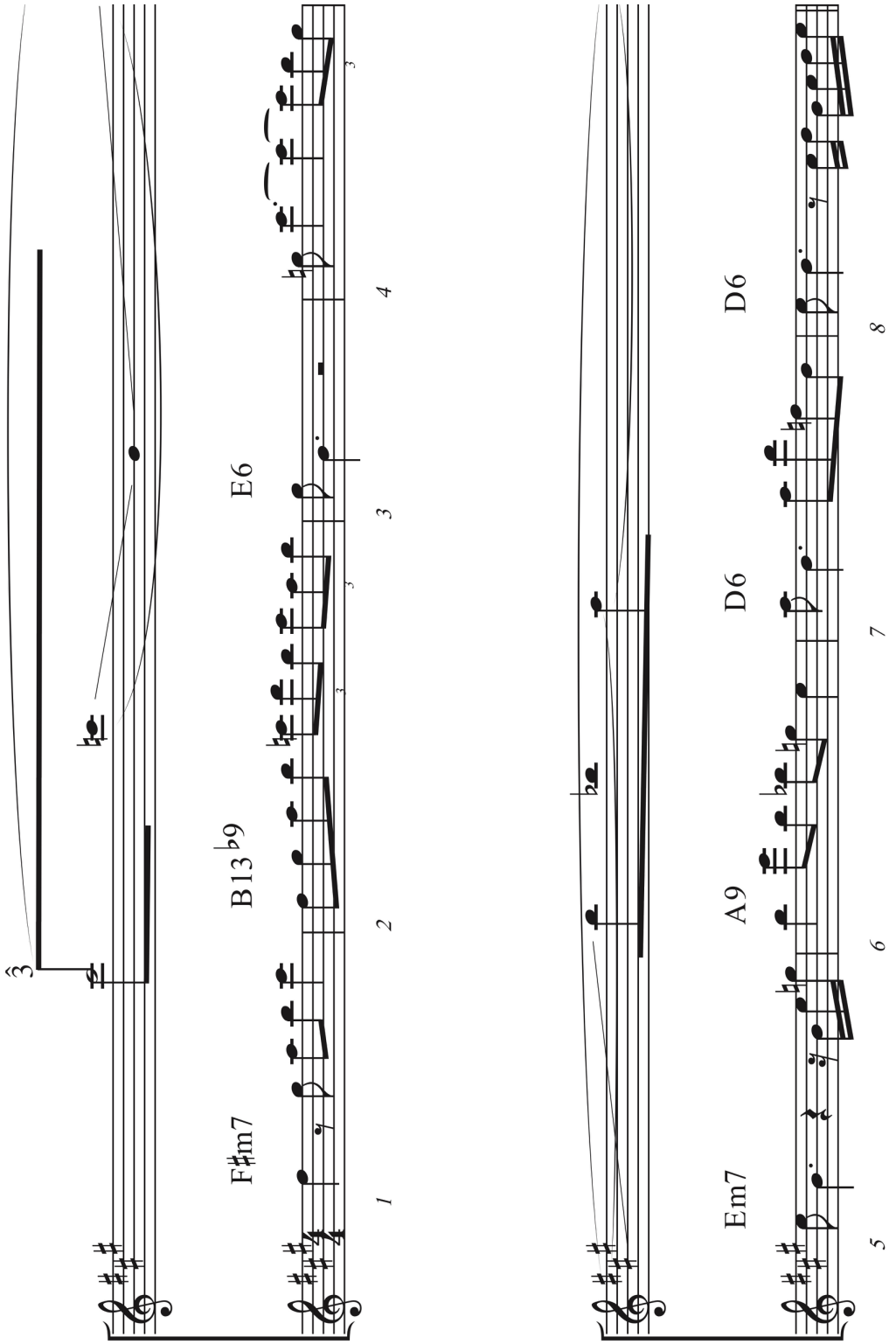



Dm
33
34
35
36
37
38
39
40
Dm
41
42
43
44
45
46
47
48
2
Dm
49
50
51
52
53
54
55
56
Dm
57
58
59
60
61
62
63
64

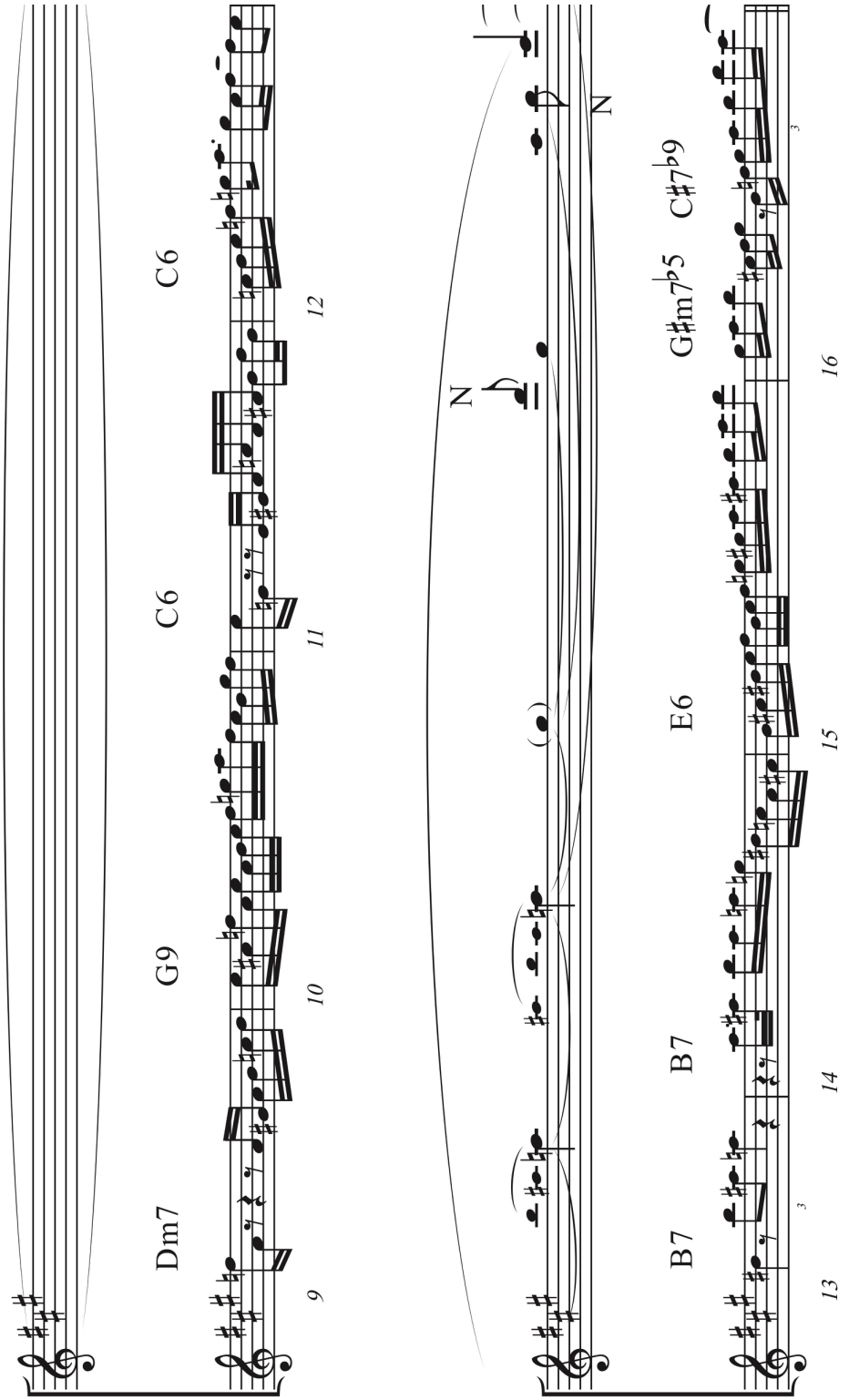

Gm (C7)
65
66
67
68
69
70
71
72
Gm (C7)
73
74
75
76
77
78
79
80
Dm
(late)
81
82
83
84
85
86
87
88
(early)
Dm
89
90
91
92
93
94
95
96
97

APPENDIX D

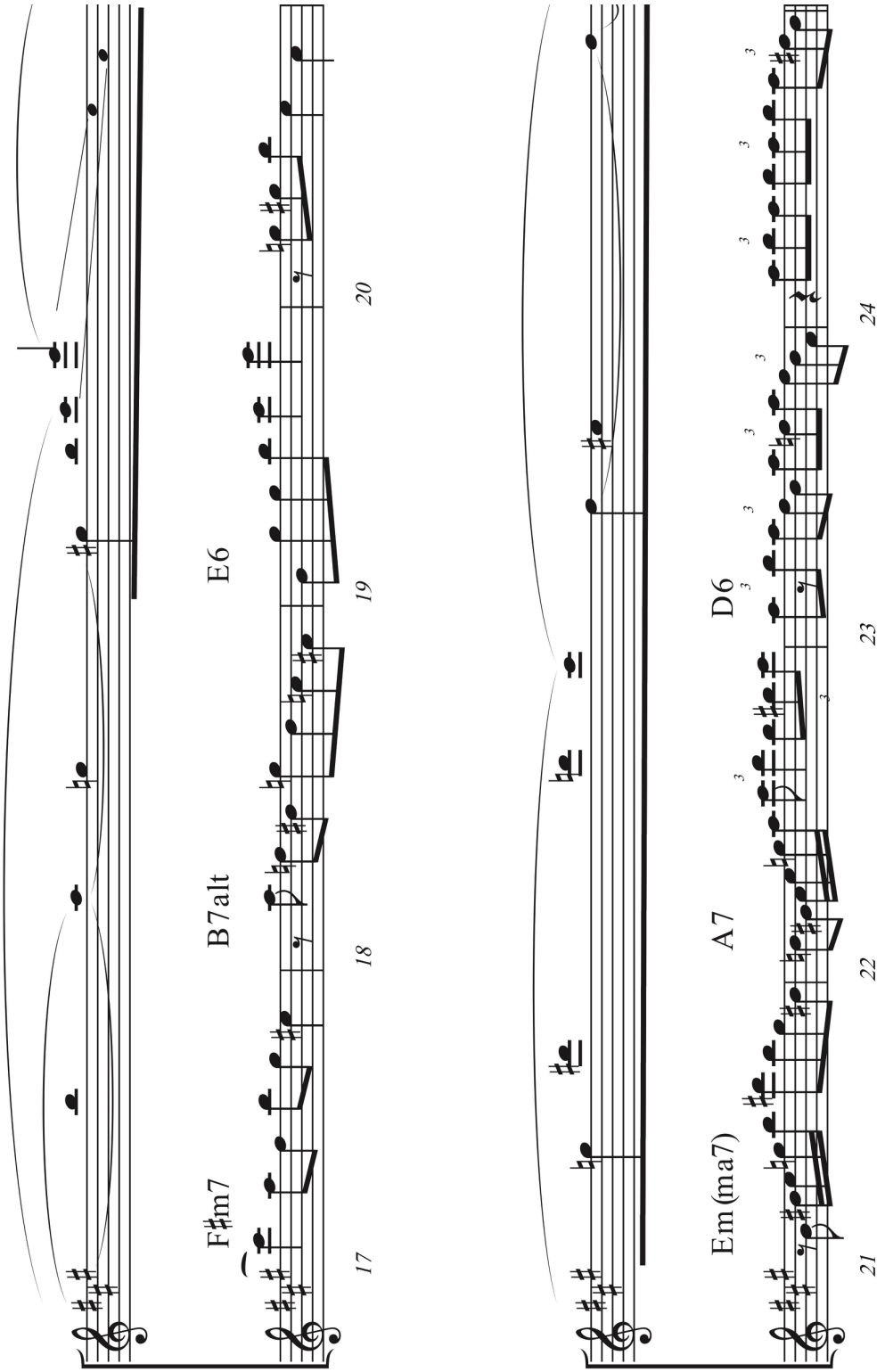
“Laura,” 1957, mm. 1–8 graph



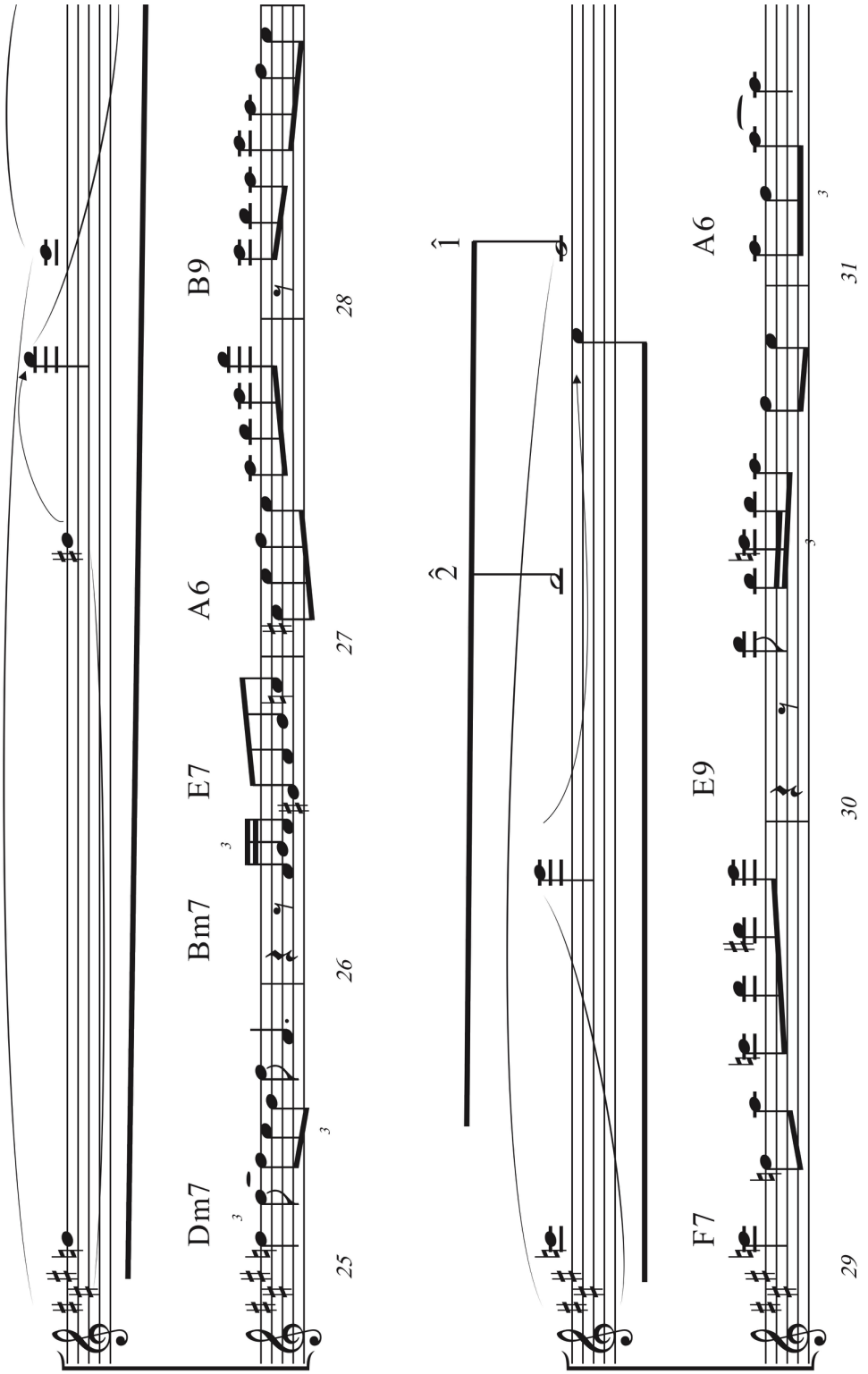
“Laura,” 1957, mm. 9–16 graph



“Laura,” 1957, mm. 17–24 graph



“Laura,” 1957, mm. 24–31 graph



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138. The web page gives 9 September 1995 as the date of the recording, but it is shown in the discography as 8 September 1995. Perier, Dugelay, and Hallqvist, 681.

139. See note 138.

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BIOGRAPHY

Leigh Pilzer is a Washington, DC-based saxophonist and arranger. She has led her small group at many of the area's top venues such as Blues Alley, Twins Jazz, Westminster Presbyterian, the Atlas Performing Arts Center, Jazz at the Garden, the Mansion at Strathmore, and Takoma Station, and the Hill Center, to name just a few. She has toured both nationally and internationally as a member of the Smithsonian Jazz Masterworks Orchestra and The DIVA Jazz Orchestra, and often performs with the National Symphony Orchestra in concert at the John F. Kennedy Center for the Performing Arts and on the orchestra's nationally televised PBS holiday specials.

Leigh is a gifted arranger whose work is in the libraries of SJMO, DIVA, the Bohemian Caverns Jazz Orchestra, the DC-area premier military jazz ensembles, and college and professional jazz ensembles and brass quintets throughout the country. A number of her arrangements can be heard on recordings by DIVA, including her original composition "East Coast Andy," the opening track on *The DIVA Jazz Orchestra 25th Anniversary Project* (2018). Other arranging credits include horn section writing for recordings by Chuck Brown and Eva Cassidy and orchestrations for the critically acclaimed off-Broadway show *Maurice Hines Tappin' Thru Life*.

Leigh holds a Bachelor of Music in Jazz Composition and Arranging from the Berklee College of Music and Master's degrees in Jazz Studies and Saxophone Performance from the University of Maryland, College Park. Leigh has served on faculty at the University of Maryland, Towson University, and George Mason University, teaching Jazz Theory, Jazz Arranging, Jazz History, and Fundamentals of Rock, Blues, and Jazz. Clinics and presentations include "Writing Thaddish: Evolution of a Big Band Arrangement" (8th Annual Jazz Education Network Conference), "Doing Musical Detective Work: Finding and Editing Jazz Repertory Source Material" (Beyond the Notes Musicology lecture series, George Mason University), "Soloing in the Big Band: Strategies for Success" (The DIVA Jazz Orchestra, Beavercreek (OH) Weekend of Jazz), and "Music Theory & Score Interpretation: East Coast Andy" (The DIVA Jazz Orchestra, Dickinson College, Carlisle, PA).

Leigh's debut CD *Strunkin'* was released in late 2016. The CD, recorded live at the Washington Women in Jazz Festival, features six of Leigh's original compositions.