An original composition, Symphony No. 1, Pollock and an analysis of the evolution of Frank Zappa's "Be-Bop Tango"

William Morris Price

Louisiana State University and Agricultural and Mechanical College, wprice1@lsu.edu

Follow this and additional works at: https://digitalcommons.lsu.edu/gradschool_dissertations

Part of the Music Commons

Recommended Citation
https://digitalcommons.lsu.edu/gradschool_dissertations/3644
AN ORIGINAL COMPOSITION, SYMPHONY NO. 1, POLLOCK
AND
AN ANALYSIS OF THE EVOLUTION OF FRANK ZAPPA'S *BE-BOP TANGO*

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Musical Arts

in

The School of Music

By
William Morris Price
B.M.E., University of North Alabama, 1995
M.M., Louisiana State University and Agricultural and Mechanical College, 1998
May 2004
ACKNOWLEDGMENTS

I wish to thank my teacher and friend Dr. Dinos Constantinides, for his years of guidance and instruction. His emphasis on craftsmanship, imagination, and musical integrity is an inspiration for all. I would like to thank the members of my committee, Dr. Jeffrey Perry, Dr. Stephen David Beck, Dr. Jan Herlinger, and Dr. John Lowe, for their sage advice and encouragement in the preparation of this document.

I would also like to extend my deepest gratitude to Gail Zappa and The Zappa Family Trust. Ms. Zappa's personal insight regarding Frank's music and her ability to get to "the crux of the biscuit" was enlightening to say the least, and provided the analysis with a greater degree of depth that may have otherwise been absent. Thank you Gail.

And above all, I wish to thank my wonderful wife, Robin, for her infinite patience and unwavering support.
TABLE OF CONTENTS

ACKNOWLEDGMENTS. ................................................................. ii
LIST OF TABLES. ................................................................. v
LIST OF FIGURES. ................................................................. vi
LIST OF EXAMPLES. ............................................................... vii
PERFORMANCE NOTES .......................................................... xi
ABSTRACT. .............................................................................. xii
PART I. AN ORIGINAL COMPOSITION, SYMPHONY NO. 1, POLLOCK. .... 1
PART II. AN ANALYSIS OF THE EVOLUTION OF FRANK ZAPPA’S
BE-BOP TANGO. ................................................................. 101

CHAPTER
1. INTRODUCTION. ............................................................... 101

2. BE-BOP TANGO: BACKGROUND AND INTRODUCTION. .......... 113
   Historical Perspective. ....................................................... 113
   Historical Evolution of the Be-Bop Tango. .......................... 116

3. BE-BOP TANGO FOR UNSPECIFIED INSTRUMENT AND
   PIANO: ANALYSIS. ........................................................... 120
   Melody. ................................................................. 120
   Harmony. ............................................................ 121
   Pitch Collections. ....................................................... 130
   Form and Structure. .................................................... 131
   Thematic Variations and Episodes. .................................... 148
   Orchestration and Historiography. ...................................... 190

4. BE-BOP TANGO FOR CHAMBER ORCHESTRA: ANALYSIS ......... 204
   Background. ............................................................ 204
   Form and Reconstruction. ................................................ 208

5. BE-BOP TANGO: INFLUENCES AND PHILOSOPHY. ............... 242

6. CONCLUSION. ............................................................... 252
   Epilogue. .............................................................. 255

BIBLIOGRAPHY. ................................................................. 258
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.1. <em>Be-Bop Tango</em> for chamber orchestra, Orchestration.</td>
<td>273</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.</td>
<td><em>Be-Bop Tango</em>, Formal Outline of Theme Group A.</td>
<td>135</td>
</tr>
<tr>
<td>3.2.</td>
<td><em>Be-Bop Tango</em>, Formal Outline of Variation A1.</td>
<td>150</td>
</tr>
<tr>
<td>3.3.</td>
<td><em>Be-Bop Tango</em>, Formal Outline of Theme Group C.</td>
<td>172</td>
</tr>
<tr>
<td>3.4.</td>
<td><em>Be-Bop Tango</em>, Formal Outline of Theme Group D.</td>
<td>180</td>
</tr>
<tr>
<td>4.1.</td>
<td><em>Be-Bop Tango</em> for chamber orchestra, Interlocking Variation Structure.</td>
<td>241</td>
</tr>
<tr>
<td>A.1.</td>
<td><em>Be-Bop Tango</em>, Chord Quality Continuum.</td>
<td>266</td>
</tr>
<tr>
<td>A.2.</td>
<td>Formal outline of <em>Be-Bop Tango</em> for unspecified instrument and piano.</td>
<td>267</td>
</tr>
<tr>
<td>A.4.</td>
<td>&quot;Be-Bop Tango (of The Old Jazzman's Church),&quot; <em>Roxy and Elsewhere</em>.</td>
<td>270</td>
</tr>
<tr>
<td>A.5.</td>
<td>Formal Outline of <em>Be-Bop Tango</em> for chamber orchestra.</td>
<td>272</td>
</tr>
</tbody>
</table>
## LIST OF EXAMPLES

<table>
<thead>
<tr>
<th>Example</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1. Habanera Rhythm.</td>
<td>116</td>
</tr>
<tr>
<td>2.2. Marcato-sincopa Rhythm.</td>
<td>116</td>
</tr>
<tr>
<td>2.3. Marcato-sincopa Tango Rhythm Combined with Jazz Harmony.</td>
<td>119</td>
</tr>
<tr>
<td>3.1. <em>Be-Bop Tango</em>, Tango Introduction, Piano, Tritone Resolution, mm. B-C.</td>
<td>124</td>
</tr>
<tr>
<td>3.2a. <em>Be-Bop Tango</em>, Variation A1/c, Resolution by Similar Motion</td>
<td>124</td>
</tr>
<tr>
<td>3.2b. <em>Be-Bop Tango</em>, Variation A1/c to Tango Reprise (<em>T1</em>), Resolution by Similar Motion - Displaced by Register.</td>
<td>124</td>
</tr>
<tr>
<td>3.3. <em>Be-Bop Tango</em>, Variation A1/a, Tritone Resolution, Parallel Motion.</td>
<td>125</td>
</tr>
<tr>
<td>3.4. <em>Be-Bop Tango</em>, Variation A1/b, Tritone Resolution, Parallel Motion, Displaced by Register.</td>
<td>125</td>
</tr>
<tr>
<td>3.5. <em>Be-Bop Tango</em>, Anti-climax, Unresolved Added-Tone.</td>
<td>125</td>
</tr>
<tr>
<td>3.7. <em>Be-Bop Tango</em>, Phrase C/c’, Incomplete Cadence.</td>
<td>129</td>
</tr>
<tr>
<td>3.8. <em>Be-Bop Tango</em>, Phrase C/c’, Passing Progression and Prolongation.</td>
<td>130</td>
</tr>
<tr>
<td>3.10a. <em>Be-Bop Tango</em>, Tango Vamp and Introduction, Primary Sonorities, Reduction.</td>
<td>133</td>
</tr>
<tr>
<td>3.10b. <em>Be-Bop Tango</em>, Tango Vamp and Introduction, Separate Musical Line and Tetrachord Collections.</td>
<td>134</td>
</tr>
<tr>
<td>3.11. <em>Be-Bop Tango</em>, Vamp and Introduction, Reduced Voice-Leading, Total Collection</td>
<td>134</td>
</tr>
<tr>
<td>3.13. <em>Be-Bop Tango</em>, Main Theme Group A.</td>
<td>136</td>
</tr>
</tbody>
</table>
3.15.  *Be-Bop Tango*, Main Theme A, Phrase A/a, Motivic Reduction. .................. 137
3.16c.  *Be-Bop Tango*, Theme Group D, Phrase D/d', G#-B-G Trichord. .................. 139
3.17.  *Be-Bop Tango*, Main Theme A, Phrase A/a, Melodic Construction. ................. 140
3.19.  *Be-Bop Tango*, Main Theme, Transition from Phrase A/a to Phrase A/b. .......... 143
3.20.  *Be-Bop Tango*, Main Theme A, Phrase A/b. ........................................ 144
3.21.  *Be-Bop Tango*, Main Theme A, Phrase A/b'. ....................................... 145
3.22.  *Be-Bop Tango*, Main Theme A, Phrase Endings, Dyad Relationship. .............. 146
3.25b.  *Be-Bop Tango*, Main Theme A, Phrase a. ......................................... 152
3.28.  *Be-Bop Tango*, Variation A1, 1st Half of Phrase A1/a-b, Motivic Development ... 155
3.29.  *Be-Bop Tango*, Variation A1, 2nd Half of Phrase A1/a-b, Motivic Development. .......................................................... 156
3.32.  *Be-Bop Tango*, Variation A1, Phrase Endings. ...................................... 160
3.33.  *Be-Bop Tango*, Variation A1/c, Voice Leading. .................................... 161
3.35. *Be-Bop Tango*, First Tango Variation: T1. .................................. 164
3.36. *Be-Bop Tango*, Variation A2, Rhythmic Augmentation and Registral Displacement 166
3.37. *Be-Bop Tango*, Episode B, Clusters. ......................................... 167
3.38. Charles Mingus, *Trio and Group Dances*, Rhythmic Figure. ............... 168
3.40. *Be-Bop Tango*, Episode B, Timbral Modulation, Reduction. ............... 170
3.41. *Be-Bop Tango*, Theme Group C. .............................................. 171
3.42. *Be-Bop Tango*, Theme Group C, Phrase C/c. .............................. 172
3.44. *Be-Bop Tango*, Theme Group C, Phrase C/c’. ............................ 177
3.45. *Be-Bop Tango*, Theme Group C, Phrase C/c’, Compound Melodic Descent. 178
3.46. *Be-Bop Tango*, Phrase C/c’, Chord Progression ............................ 179
3.47. *Be-Bop Tango*, Theme Group D. .............................................. 181
3.48. *Be-Bop Tango*, Theme Group D, Phrase D/d, Bb Pivot. .................... 182
3.49. *Be-Bop Tango*, Theme Group D, Phrase D/d, Melodic Palindrome Reduction. 183
3.50. *Be-Bop Tango*, Theme Group D, Phrase D/d and Phrase D/d’. ............. 183
3.51. *Be-Bop Tango*, Theme Group D, Phrase D/d’. ............................. 184
3.52. *Be-Bop Tango*, Theme Group D, Phrase D/d’, Interlocking Motive A Structure. 185
3.53. *Be-Bop Tango*, Theme Group D, Phrase D/d’, Reduction. ................. 185
3.54. *Be-Bop Tango*, D/d’, Final Chord. .......................................... 186
4.2. Be-Bop Tango for chamber orchestra, Theme Group A, Phrase A/a, Reduction. 211
4.3a. Be-Bop Tango for chamber orchestra, Main Theme A/b and A/b’, Percussion Interjection, Reduction. 212
4.3b. Be-Bop Tango, Variation A1, Phrase A1/a Percussion Introduction, Reduction. 213
4.3c. Be-Bop Tango, Episode B, Composed Percussion Parts, Reduction. 214
4.4. Be-Bop Tango, Theme Group A, Phrases A/b and A/b’, Instrumentation, Reduction. 214
4.7. Be-Bop Tango, Transition between Phrase A/b’ and Variation A1, and Added Percussion Parts, Reduction. 219
4.8. Be-Bop Tango, Variation A1/a-b and A1/c, Reduction. 221
4.9. Be-Bop Tango, Tango Reprise: T1. 223
4.10. Be-Bop Tango, Tango Reprise: T1, Measure Permutation, Reduction. 224
4.11. Be-Bop Tango, Variation A2, Orchestration, Reduction. 228
4.13. Be-Bop Tango, Episode B, Composed Percussion Parts, Reduction. 233
4.15. Be-Bop Tango, Theme Group D, Orchestration, Reduction. 238
4.16. Be-Bop Tango, Codetta/Second Tango Reprise: T2, Reduction. 239
PERFORMANCES NOTES

Symphony No. 1, Pollock is scored for the following instrumentation:

2 Flutes (Either Flute can double on Piccolo)
2 Oboes
2 B-flat Clarinets (Clarinet 2 doubles on B-flat Bass Clarinet)
2 Bassoons

4 F Horns
3 B-flat Trumpets
3 Trombones
Tuba

Timpani (5 - 32", 29", 25", 23", & 20")

3 Percussion
1. Triangle, Metal Wind Chimes, Tom-Toms (5), 20" Kick Bass Drum, 18" China Cymbal, Bamboo Wind Chimes, Bass Drum, 16" Crash Cymbal, Guiro, Hi-Hat Cymbals, Snare Drum, Celesta, Xylophone, 18" Suspended Cymbal

2. Tam-Tam (large), Glockenspiel, Crotales, 18" China Cymbal, 16" Crash Cymbal, Cuica (medium), Snare Drum, Timbales, Congas, Small and Large Woodblock, Bongos, Agogo Bells (mounted), Vibraphone, Samba Whistle

3. Vibraphone, 18" Suspended Cymbal, Marimba, Xylophone, Tambourine (mounted)

Piano

Harp

Strings

All instruments in the score, with the exception of octave transposing instruments, appear at concert pitch (Score in C).

All accidentals remain in force throughout the measure, unless cancelled in the usual manner.

The approximate duration of the work is 22'30".
ABSTRACT

Part one of this dissertation is an original composition, *Symphony No. 1, Pollock*. It uses as a conceptual impetus the abstract expressionism of Jackson Pollock's paintings from the 1950's. It employs the following instrumentation: (2-2-2-2, 4-3-3-1, 3 percussion, piano, harp, strings). The work is composed in one movement, which is divided into four major sections (A-B-A/C-B) that are distinct from each other with respect to style and tempo.

The first major section of the composition serves as a slow introduction. The second major section serves as a contrast to the opening movement and is based conceptually on Pollock's abstract works and formally on the principle of interlocking variations. The third major section consists of a varied return to the slow introduction. It is followed by a fast dance in triple meter and a slower passage that emphasizes interrupted gestures through sudden silences, contrasting areas of textural density, and the juxtaposition of dissimilar compositional materials. The final major section consists of a varied return to the dynamic gestures of the second section. The dense instrumentation, the juxtaposition of dissimilar materials, and the use of pandiatonic techniques assists in the representation of Jackson Pollock's textural canvases.

Part two of the dissertation provides an analysis of the evolution of Frank Zappa's *Be-Bop Tango*. It is divided into five chapters. The first chapter consists of an introduction and biography of the composer. The second chapter provides historical information about the materials used in the work. The third chapter includes a detailed analysis of the original unspecified instrument and piano score, how it relates to Zappa's compositional aesthetic, and a historiography of how the score was orchestrated for his amplified chamber ensembles. The fourth chapter discusses and explores the chamber orchestra version of the work, how it differs from the original score structurally, thematically, and harmonically, and how Zappa and his
assistant Ali N. Askin revised and arranged the work for chamber orchestra. The fifth chapter examines Zappa's early influences and how they manifest themselves in the work, and the sixth chapter provides a summary of the findings of the previous chapters.
Trb. 1, 2, & 3
Tpt. 1, 2, & 3
Bb Cl. 1 & 2
Hn. 3 & 4
Hn 1 & 2
Ob. 1 & 2
Fl. 1 & 2
Perc. 3
Perc. 2
Perc. 1
Vln. 2
Vln. 1
Piano
Harp
D.B.
Timp.
Vla.
Vc.

348
?
?  
?
÷
÷
÷
÷
÷
÷
68
CHAPTER 1

INTRODUCTION

"The present-day composer refuses to die."
- Edgard Varèse, July 1921

Frank Vincent Zappa was born on December 21, 1940 in Baltimore, Maryland. His father, Frank Vincent Zappa Sr., a metallurgist and engineer, worked for various defense contractors in Maryland and California. Zappa Sr. was born in Sicily and emigrated to the United States as a child, and his wife, Rose, was first generation American (her father was Italian and her mother was French and Sicilian). In the first ten years of Frank Jr.'s life, the Zappa family moved and lived in five different cities, and eventually settled in the small town of Lancaster, California.¹

At an early age Zappa's musical interests lay in collecting African-American rhythm and blues (R&B) and doo-wop records, which included music by such artists as Chester "Howlin' Wolf" Burnett, Johnny "Guitar" Watson, Clarence "Gatemouth" Brown, Hank Ballard and the

Midnighters, The Velvets, and The Robins. Zappa's passion for R&B, doo-wop, and rock 'n' roll continued unabated throughout his career.2

Zappa's formal musical training began at the age of 12 with percussion lessons. He eventually started performing with various high school ensembles and local popular music groups. Two years later, with the purchase of an album featuring the music of modernist composer Edgard Varèse, Zappa discovered an aural soundscape complementary to his love of R&B. Although completely different musical styles, Zappa did not perceive a philosophical dichotomy existing between the two, only that they both contained a particular "attitude" or emotional drive and "came from the same universal source."3 Varèse's works not only inspired Zappa to investigate the subtleties of instrumental timbre, but they also suggested to the young composer that a visual approach could be used as a model to achieve balance and dramatic

---


Rock 'n' roll, or rock, a style of American popular music developed in the 1950s, evolved from the 12-bar blues form and the fast, driving rhythms of R&B. Rhythmically, the first beat of each measure is emphasized while the weak beats of the measure are accented; straight eighth-notes predominate. In the 1960s and 1970s, as the genre evolved, rock composers began to incorporate extended complex formal structures into their compositions. Early rock 'n' roll instrumentation featured electric guitars, saxophone, and a rhythm section (piano, string bass, and drumset), and was eventually supplanted by amplified and electronic instruments, including keyboard synthesizers and electric bass guitar. Charles Hamm, The New Harvard Dictionary, ed. Don Michael Randel, s.v. "Rock 'n' roll" and "Rock." (Cambridge, MA: The Belknap Press of Harvard University Press, 1986), 710-712.

timing in a musical work. The balanced materials could include abrupt changes in tempo, the juxtaposition of dissimilar musical styles, and/or the inclusion of non-musical dramatic elements within a live performance of a musical composition.\textsuperscript{4} Besides R&B and Varèse several other musical recordings that had a major influence on Zappa's early musical development and aesthetic include Igor Stravinsky's \textit{Rite of Spring} and Anton Webern's \textit{Symphonie}, op. 21.

A composer ripe for musical reference, Stravinsky's music appears, directly and indirectly, on several of the early works of the Mothers of Invention; thematic fragments from Stravinsky's ballet \textit{Petrouchka} and the "Royal March" from \textit{Histoire du soldat} are used in the Mothers' second album \textit{Absolutely Free} (1967). In addition, Zappa included extra-musical references to the composer and his work in the form of musical titles ("Invocation and Ritual Dance of the Young Pumpkin" on the Mothers' debut album \textit{Freak Out!} (1966) and "Igor's Boogie" on Zappa's second solo album \textit{Burnt Weeny Sandwich} (1970)).

Pedagogically, Stravinsky's compositions and recordings taught Zappa the value of melodic cellular development (how a motive can be manipulated by slight changes in pitch and rhythm), and according to Jonathan Bernard, that a ballet can have an episodic musical form "parallel to its narrative functions."\textsuperscript{5} These two concepts weigh heavily in Zappa's musical development and will be discussed in the ensuing analysis.

\textsuperscript{4} Varèse was a constant influence in Zappa's life and work. As a tribute to his spiritual mentor, Zappa wrote an article for the June 1971 issue of \textit{Stereo Review} magazine entitled "Edgard Varèse, Idol of My Youth." And in 1981, Zappa was invited by Joel Thome, conductor of the Orchestra of Our Time, to participate in a concert entitled "A Tribute to Edgard Varèse," which was held at the Palladium in New York City.

\textsuperscript{5} In an article entitled "The Musical World(s?) of Frank Zappa," Jonathan Bernard provides an analysis that reveals that Zappa may have appropriated the general design of Stravinsky's ballet \textit{Agon} while composing his orchestral work \textit{Dupree's Paradise}. Jonathan W. Bernard, "The Musical World(s?) of Frank Zappa," \textit{Expression in Pop-Rock Music}, ed. Walter Everett (New York: Garland Publishing, 2000), 173-184; and Jonathan W. Bernard, "Listening
In addition to his early listening habits, Zappa credited two of his former music teachers for developing his interest in music composition; his band director at Mission Bay High School introduced him to the works of Anton Webern and twelve-tone music, and his music instructor at Antelope Valley High permitted him to compose for and conduct the high school orchestra. Although Zappa eventually abandoned any desire to compose using twelve-tone techniques, his later musical style reflects his interest in Webern's approach to pointillism and Klangfarbenmelodie (tone-color melody). Webern's influence can be easily heard on the recorded orchestral passages on "Brown Shoes Don't Make It" from the Mothers of Invention second album *Absolutely Free* (1967) and is examined further in chapter five.

Zappa's early musical endeavors were influenced not only by the works and recordings of Varèse, Stravinsky, Webern, Chester "Howlin' Wolf" Burnett and Clarence "Gatemouth" Brown, but also by the visual aspect of the musical score. While in high school, Zappa enrolled in several art classes. In an interview with Michael Bloom, Zappa stated that even at an early age the visual element of the score had an impact on his work,

> I'd never seen music on paper. What I had seen had been orchestra parts they give you in high school, beginner stuff. Then I saw a score. It just looked so wonderful--the very idea that this graphic representation, when translated into sound waves through the efforts of skilled craftsmen, would result in music. I said hey, I've gotta do this! So I got a ruler, I went out and bought some music paper, and I just started drawing. I didn't know what [expletive deleted] I was doing, but I could look at it. Then I went around looking for people who could play it, to find out what it would sound like. That's how I started out.6

Zappa's interest in the visual score and its aural results continued throughout his career and became a major influence on his musical philosophy, particularly form and melodic

---

development. When he was asked about his compositional processes and how he organized and balanced his materials (whether the materials in questions were aural, visual, or even professional) Zappa stated that,

Composition is a process whereby elements are organized into structure determined by the composer. This is the broadest, most general outline I can give you. If I make a film, that is a composition; it's a matter of organizing visual elements, behavioral elements, textural elements and space and time elements, the same way as I would organize notes on a piece of paper. I think of overall structure the same way. If I'm giving a performance with a band, the show itself is a composition involving sections, which are smaller compositions. An interview is also a composition.7

In addition, Zappa used analogues and terminology associated with painting and film to explain his compositional methods. Alexander Calder's mobiles were constant models of inspiration.8 They were used to explain the dramatic timing of a musical passage, the balance between instrumental families in the recording process, or the aesthetic or emotional content of a musical episode or overall work. Harmonies were referred to as "climates" or "scenes." His studio tape collage experiments from the early 1960s clearly illustrate his interest in the visual arts.

In 1958, with the realization that his talents as a percussionist were less than satisfactory, Zappa switched to electric guitar. His previous exposure to the driving rhythms of R&B and frenzied guitar solos of the blues quickly became a major influence, and as Zappa matured musically, his interest in the guitar inspired him to search for new performance techniques and experiment with electronic sounds.

7 Ibid., 22.

8 In an interview with Gail Zappa, she mentioned that the composer created graphic overviews of his compositions, even as far back as his earliest works; they were heavily influenced by Calder's sculptures, and reflect Zappa's interest in the interaction of three-dimensional shapes within a musical construct. Gail Zappa, interview by author, 9 and 11 November 2003, Baton Rouge, LA/Los Angeles, CA, telephone.
During his senior year in high school, Zappa was permitted to enroll in a harmony course at Antelope Valley Junior College. After high school graduation, he enrolled in a harmony course at Chaffee Junior College in Alta Loma, California, and audited a composition course at Pomona College in Pomona, California; these classes included basic harmony, required keyboard practice, and composition. However, due to Zappa's displeasure and frustration with the constricting rules of the common practice period, Zappa quit college after six months and discontinued his formal musical studies. According to Zappa, the rest of his musical training came from listening to recordings, performing in bands in beer joints and cocktail lounges, and "spending a lot of time at the library."9

During these formative years, Zappa began composing quite early. When he was 15, he composed his first known work, a solo percussion work entitled Mice,10 and by 1960 he wrote two movie scores, Run Home Slow and The World's Greatest Sinner. In 1963 Zappa presented a concert of his music at Mount St. Mary's College in Los Angeles, California; the titles of the works reflect his continued interest in the visual arts. The program consisted of Piece No. 2 of Visual Music for Jazz Ensemble and 16mm Visual Project, Piano Pieces from Opus 5, Collage One for String Instruments, Opus 5 for Piano, Tape Recorder and Multiple Orchestra, and Two Fragments of Prepared Tape to be used in Opus 5.

As Jim Schaffer points out in his article "The Perspective of Frank Zappa," Zappa's interest in contemporary classical music was not something he acquired as he got older, it was present from the beginning. According to Zappa, "I hadn't even tried to write a rock 'n' roll thing

---

9 Miles, Frank Zappa: In His Own Words, 18.

until I was 21 years old. All the rest of the music that I had been writing, from the time I was 14 until that time, had nothing to do with rock, jazz or anything else. I was writing strictly chamber or orchestra music.”

In 1963, with the money he made from scoring *The World's Greatest Sinner*, Zappa purchased a five-track recording studio in Cucamonga, California from long-time friend Paul Buff and renamed it Studio Z. He then immersed himself in the techniques of audio recording and sound manipulation, "beginning a life of excessive overdubbage -- nonstop, 12 hours a day," and experimented with techniques associated with *musique concrète*, including varying tape speeds, change of tape direction, looping and delay techniques, and various other editing procedures (cutting and splicing). This autodidactic approach to audio recording would later resurface on the early Mothers of Invention recordings, influence his Synclavier pieces of the 1980's, and would have a profound effect on his concepts of musical form and style.

While Zappa was working and living in Studio Z, he continued to compose contemporary classical music and perform with various lounge bands and rock groups. Many of these groups performed a wide variety of popular music, ranging from rock songs to jazz and Latin standards. This exposure to various styles of music would have a significant effect, positive and negative, on his compositional aesthetic, particularly in his use of stylistic juxtaposition and modulation.

---

11 Jim Schaffer, "The Perspective of Frank Zappa," *Down Beat*, September 1973, 15. Contrary to the quotation provided above, it has been noted that during his adolescence Zappa had been performing with and composing for various popular music ensembles.

12 Zappa, *The Real Frank Zappa Book*, 43. The term *overdub* refers to the technique of adding another part to a multitrack recording, doubling a preexistent track with a second track ("sweetening"), or to replace one of the existing parts. Gail Zappa, interview.

13 *Musique concrète* is a form of electro-acoustic music that uses natural (concrete) or environmental sounds, which are recorded and eventually modified in order to create a new composition.
In 1964, dissatisfied with the lounge band repertoire and the tribulations of the contemporary art music scene, Zappa joined the Soul Giants, a blues band from Pomona, California. Zappa convinced the group to start writing original material and renamed them The Mothers of Invention.

The following year, Zappa and the Mothers of Invention were offered a record contract from Tom Wilson, a producer for MGM records. Their debut album *Freak Out!* (1966) is regarded as the first rock 'n' roll concept album and the first double disc rock album. It satirized not only the prevailing sociopolitical, cultural, and educational institutions of the day, but also the hippie counterculture movement. Musically, the album makes references, directly and indirectly, to several of Zappa's early musical influences, including Johnny "Guitar" Watson, Edgar Varèse, and Igor Stravinsky.\(^\text{14}\)

*Freak Out!* was followed by several more albums including: *Absolutely Free* (1967); *Lumpy Gravy* (1967); *We're Only In It for the Money* (1968), which featured an album cover that parodied the Beatles' *Sergeant Pepper's Lonely Hearts Club Band* album (1967) and contained small sections of orchestral music that Zappa composed a year earlier; a doo-wop tribute album entitled *Cruising with Ruben and the Jets* (1968); and the double album *Uncle Meat* (1969). These albums explore different modernist compositional techniques including *musique concrète*, quotation, and stylistic allusion, while continuing to experiment with musical form by creating jarring juxtapositions of musical genre and content.

In 1969, Zappa began planning to film *200 Motels*, a Dadaist movie concerned with the organized chaos of touring and life on the road; however, due to economics and Zappa's dissatisfaction with the limitations of the musicianship in the ensemble and the restrictions it

imposed on his compositions, the Mothers of Invention were officially disbanded. Nonetheless, Zappa persevered. Ever the entrepreneur, he established his own record company, continued to compose the soundtrack for his film, and released the album, *Hot Rats* (1969). This recording established him as a significant solo artist and guitarist employing recording and touring musicians when the need arose. Over the next twenty-three years, Zappa recorded, produced, and released over 55 recordings of his own music, toured non-stop performing to audiences around the world, and continued to compose contemporary classical music.

One of his first major classical music milestones occurred in May 1970. Zubin Mehta and the Los Angeles Philharmonic Orchestra along with the newly re-established Mothers of Invention performed several orchestral excerpts from Zappa's film *200 Motels* to a sold-out concert at the CONTEMPO music festival in Pauley Pavilion on the campus of the University of California, Los Angeles.


In January 11, 1983, conductor Kent Nagano and the London Symphony Orchestra were hired by Zappa to perform and record several of his orchestral works including *Bogus Pomp*, *Envelopes*, and the ballets *Mo 'n Herb's Vacation*, *Bob in Dacron-Sad Jane*, and *Pedro's Dowry*. The resulting album, *The London Symphony Orchestra: Zappa, Volume 1*, was released in June
1983. Later in that same year, Zappa conducted several works by Varèse and Webern at the Edgard Varèse Memorial Concert at the San Francisco War Memorial Opera House, and was commissioned by Pierre Boulez to compose a work for the Ensemble Intercontemporain. The commissioned work, *The Perfect Stranger*, was premiered by Boulez on January 9, 1984 at the Theatre de la Ville in Paris and featured two other works written for the occasion, *Dupree’s Paradise* and *Naval Aviation in Art*? These three works, along with several of Zappa's Synclavier pieces, were included on the album *Boulez Conducts Zappa: The Perfect Stranger* (1984).\(^{15}\) Originally released by Angel/EMI, the album reached number seven on the Billboard Classical chart and remained on the classical sales chart for almost a year. The project brought Zappa his third Grammy nomination for Best New Classical Composition (*The Perfect Stranger*).\(^{16}\)

In April 1984, Zappa was invited to speak at the 19th Annual Conference of the American Society of University Composers (ASUC) at Ohio State University in Columbus; several of his works were performed including *Naval Aviation in Art*, *The Black Page*, and *The Perfect Stranger*. And in June of that same year, Kent Nagano and the Berkeley Symphony Orchestra presented "A Zappa Affair," a concert which featured several of Zappa's ballets including *Bob in Dacron-Sad Jane*, *Mo ’n Herb’s Vacation*, *Sinister Footwear*, and *Pedro’s Dowry*.

During this time, Zappa was commissioned to compose not only orchestral works, but

---


\(^{16}\) Don Menn, ed., "Zappa!" *Keyboard Magazine* and *Guitar Magazine*, special issue, (San Francisco: Miller Freeman, 1992), 83; and Frank Zappa, *The Perfect Stranger*, Rykodisc RCD 10542, 1984, compact disc.
chamber pieces as well. In 1985 the Kronos String Quartet commissioned and premiered *None of the Above* at the Herbst Theater in San Francisco, and the Naumberg Foundation presented the Aspen Wind Quintet with a monetary award to commission and premiere Zappa's *Times Beach* at Alice Tully Hall in New York City.\(^{17}\)

Two years later, Zappa won his first Grammy for Best Rock Instrumental for *Jazz from Hell* (1986), an album primarily consisting of Synclavier works, and in 1988 Zappa received his sixth and seventh Grammy nominations for his albums *Guitar* (1988) and the political satire *Broadway the Hard Way* (1988).

One of the highlights of the composer's career took place in 1990. While returning from Moscow on a business trip, Zappa made a stop in Prague and met the new president of Czechoslovakia, Vaclav Havel. After a discussion with Havel and his advisors, an agreement was made in which Zappa would serve as an overseas representative for trade, tourism, and cultural matters, and a foreign financial agent for the new Czech administration; however, this endeavor was short-lived due to the personal involvement of former U.S. Secretary of State James Baker acting on behalf of the U.S. administration and its interests at that time.

In late 1990, Zappa was diagnosed with advanced prostate cancer; it was inoperable. During his remaining years, he continued to compose with a renewed frenzy and pursued new opportunities when they arose; one such project would be his greatest achievement.

In the summer of 1991, Andreas Molich-Zebhauser, manager of the Ensemble Modern, a European modern music ensemble known for their performances of serious classical music,

\(^{17}\) During the 1980s, Zappa's interests extended beyond musical issues. In September 1985, Zappa testified before the United States Senate Commerce, Technology, and Transportation Committee to oppose legislation pertaining to the censorship of rock music and its lyrics. Throughout his career, he advocated freedom of speech, supported numerous voter registration drives, and considered running for President of the United States.
approached Zappa with a proposed series of commissioned concerts that would feature his music at the 1992 Frankfurt (Germany) Festival. The Ensemble Modern presented the chamber orchestra version of the *Be-Bop Tango*, along with eighteen other compositions by Zappa, in a ninety-minute celebration of the composer's work. Other venues on the subsequent tour included Berlin and Vienna. In December 1993, a live recording of the "The Yellow Shark" concerts was released by Barking Pumpkin Records and reached number two on Billboard's classical chart.¹⁸

In addition to instrumentation, various changes were made to the formal structure of the *Be-Bop Tango*. Some of the changes included the composition of written percussion passages, the inclusion of aleatoric devices and passages, and the expansion and contraction of thematic areas within the work.

The purpose of this dissertation is to provide a historical and analytical summary of the evolution of the *Be-Bop Tango*; it will be divided into six chapters. The first and second chapters serve as an introduction to Frank Zappa and the *Be-Bop Tango*. The third chapter includes a detailed structural, thematic, and harmonic analysis of the unspecified instrument and piano score, how it relates to Zappa's compositional aesthetic, and how the score was orchestrated for his amplified chamber ensembles. The fourth chapter discusses and explores the chamber orchestra version of the work, how it differs from the first version structurally, thematically, and harmonically, and how Zappa and his assistant Ali N. Askin orchestrated the work for the Modern Ensemble. The fifth chapter examines Zappa's early influences and how they manifest themselves in the work, and the sixth chapter provides a brief summary of the findings of the previous chapters.

CHAPTER 2

BE-BOP TANGO: BACKGROUND AND INTRODUCTION

"This is bebop, even though you think it doesn't sound like that . . ."
- Frank Zappa, Be-Bop Tango (of The Old Jazzman's Church)

Historical Perspective

An important aspect that was considered in the analysis of Frank Zappa's Be-Bop Tango was the meaning of its title. It suggests two different styles of popular-art music, bebop jazz and the South American tango. The term "bebop" refers to a style of jazz that flourished between 1940 and 1960 that emphasized melodic improvisation, extended harmonic exploration, complicated rhythmic procedures, and virtuosic performances. It was developed in the New York City neighborhood of Harlem by trumpeter Dizzy Gillespie, saxophonist Charlie Parker, and bassist Charles Mingus in the early 1940's as a musical and philosophical reaction against the perceived constraints of swing jazz.  

A popular style of dance music in the 1930s and 1940s, swing was usually performed by an ensemble consisting of ten or more musicians, or "big band." It relied heavily on arrangements and was associated with composers and performers such as Duke Ellington, Count Basie, and Benny Goodman. Conversely, bebop was usually performed by a small group of musicians, a "combo." In solo passages, a wind player or pianist would

---

create a disjunct complex melody; the rhythm section combined silence with punctuations that reinterpret traditional harmonies (chromatically altered pitches in a diatonic context - flattened ninths, raised elevenths, and flattened thirteenths).²

The use of the jazz idiom as a major component within a classical composition is not a recent development. After World War I, European and American composers began incorporating ragtime rhythms, blues scales and harmonies, and jazz instrumentation into their compositions. Some representative composers and their works include Suite "1922" by Paul Hindemith, Histoire du soldat (1918) and Ebony Concerto (1945) by Igor Stravinsky, Jonny spielt auf (1927) by Ernst Krenek, Dmitri Shostakovich's Suite for Jazz Orchestra No. 1 (1934) and Aaron Copland's Piano Concerto (1927). After World War II, the fascination with American jazz declined, however, Gunther Schuller and other composers associated with the "Third Stream" continued to combine jazz and classical music, but the movement never regained its pre-War popularity.

The second style alluded to in the title of the work is the tango. Developed in Argentina and Uruguay, the tango is an amalgamation of: western European dance forms, melodies, harmonies, and instrumentation; African and Cuban rhythms, most notably the candomble drum rhythms of African slaves and the Cuban habanera; and South American folk idioms, including the Creole milongas of the Argentine prairie lands.³ The early tango was performed by small


ensembles that consisted of flute, violin, guitar or solo piano. Eventually, the German bandoneon, a large button and bellows accordion-like instrument, was added to the ensemble.\(^4\)

The tango was brought to Europe in the early 1900's by visiting Argentine musicians and dancers. Favored in Paris, its exotic popularity eventually spread throughout Europe in the 1920's and 1930's and was performed by small ensembles and orchestras. Just as American jazz enticed European composers, elements of the South American tango started appearing in the works of such notables as: Stravinsky, *Histoire du soldat*; Darius Milhaud, *Saudades do Brasil* (1921); William Walton, *Facade* (1922); Virgil Thomson, *Sonata da chiesa* (1926); and Alban Berg, *Der Wein* (1929). After a short hiatus in the 1940's and 1950's, the tango made a worldwide resurgence in the 1960's and 1970's.

The tango is characterized by a prevailing duple meter, syncopated rhythmic accompaniment, and a two-part form that emphasizes a tonic to dominant tonal relationship. The early rhythms of the tango were influenced by the Spanish Andulusian *habanera*, which is a duple meter figure that uses a dotted eighth and a sixteenth-note followed by two eighth-notes (example 2.1).\(^5\) Eventually, as the tango evolved from a piece for small ensemble to a work for orchestra, the *habanera* tango rhythm was displaced by the *marcato*, a steady four-beat pattern


with an emphasis on the last eighth-note of the measure, or sincopa (example 2.2). It is this composite rhythm that Zappa explores in the Be-Bop Tango.

Example 2.1. Habanera Rhythm  
Example 2.2. Marcato-sincopa Rhythm

Historical Evolution of the Be-Bop Tango

During the late 1950's and early 1960's, the tango was revived in the United States and was heard on nearly every available medium including recordings, radio, television, and movies. It is uncertain how familiar Zappa may have been with the musical characteristics of the tango, but in the early stages of his career (circa 1960) he performed with various nightclub and lounge bands that may have included Latin American inspired dance songs in their set-lists, including the tango.

Moreover, Zappa's infatuation with the music of Stravinsky may have also contributed to his burgeoning affinity for the tango. Documented as early as 1966, Zappa fondness for Stravinsky's Histoire du soldat began with the quotation of the "Royal March" on the Mothers of Invention's second album Absolutely Free. Later, in 1972 Zappa performed the role of the narrator at the Hollywood Bowl; the performance was conducted by Lukas Foss. Zappa's

---

6 The term sincopa refers to any accented eighth-note performed between the beats of a measure. However, its usage does not provide or imply a momentary change in the prevailing meter. Pablo Aslan, The Evolution of Tango Music, Avantango website, [online], available from http://www.avantango.com/Pages/Articles/musichist.html, 25 March 2003, and adapted from "Tango Stylistic Evolution and Innovation" (Masters thesis, University of California, Los Angeles, 1990).

admiration for the work has been noted numerous times, and since the sixth movement of the concert suite, "Trois Dances," consists of a tango, waltz, and a ragtime piece, it can be assumed that the work may have been an influence, direct or indirect, during the creation of the Be-Bop Tango. And although the two composers approached the tango in different ways (Stravinsky modified the melody while Zappa emphasized the basic rhythm) the overall musical style is still apparent. Therefore, it is safe to assume that Zappa was musically conversant with the popular dance form, either through actual performance or the various forms of media. Zappa's later original compositions and recordings reflect this early exposure. They include the Be-Bop Tango from 1973, a 1974 Helsinki performance of the Finnish tango Satumaa, and "Sheik Yerbouti Tango" from the album Sheik Yerbouti (1979).8

According to an interview with Gail Zappa, the Be-Bop Tango was composed in 1972 and originally named The Malcolm McNabb. It was intended to showcase the performance abilities of a trumpet player Zappa employed during his 1972 tour.9 Later, according to performance date archives, the work was renamed Farther O'Blivion and appeared in a larger suite of the same name; Zappa performed the composition on tour with his amplified chamber ensemble in the fall of 1972.10 During that time, the

8 Frank Zappa, You Can't Do That On Stage Anymore, Vol 2. Rykodisc USA RCD 10563/64, 1988, compact disc; and Frank Zappa, Sheik Yerbouti. Rykodisc USA RAC 10528, 1988, compact disc.


9 Gail Zappa, interview. In late 1972, Malcolm McNabb was employed as a member of Zappa's twenty-piece ensemble called The Grand Wazoo Orchestra and its successor, the Petit Grand Wazoo Orchestra.

Farther O'Blivion medley consisted of "Steno Pool" from The Adventures of Greggery Peccary, followed by "Farther O'Blivion" (the main theme from the Be-Bop Tango), and finally an instrumental version of Zappa's song "Cucamonga," named after the small town in California where Zappa's first recording studio, Studio Z, was located. Farther O'Blivion was scored for clarinet, saxophone, trombone, electric guitar, electric bass guitar, drumset, percussion, keyboards, and violin.

In 1973, on the tour's final performance date in Sweden, Farther O'Blivion was recorded live in Stockholm, on August 21, 1973 and is included on the album Beat the Boots I: Piquantique. Later, in that same year Farther O'Blivion was renamed the Be-Bop Tango.11

The Be-Bop Tango was also included on a second live recording from that same tour entitled Roxy & Elsewhere (1974). The title of the album refers to the location where the recording was made, in this case the famous Hollywood nightclub The Roxy Theatre. On this recording, the Be-Bop Tango is retitled "Be-Bop Tango (of The Old Jazzman's Church)." The reference to the "Old Jazzman" can be interpreted as a double innuendo. It serves as a sarcastic quip used by Zappa to assert his ironic disdain for the perceived constraints of jazz music and as a veiled acknowledgement of his bop influences.

During the 1970's, the Be-Bop Tango existed only as a score for unspecified instrument and piano.12 Each member of the ensemble was given a copy of the score and Zappa arranged the work according to the instrumentation available.13 The main thematic materials and melodic lines are performed by the violin, trombone, marimba, and guitar. They are supported

11 Travers, interview by author.
13 Humphrey, Interview.
harmonically by the piano and electric bass guitar, while the percussionists are used to keep a steady beat, and to add improvised percussion parts and interjections between melodic phrases. Eventually, the composition was expanded to include interpretive dance segments performed by trombonist Bruce Fowler and randomly selected members of the audience. This later addition has implications in the orchestral arrangement of the work.

In the first four measures of the *Be-Bop Tango* (mm. A-D) the basic rhythm of a marcato-sincopa inspired tango is used in conjunction with the expanded harmonic vocabulary of bebop jazz (Example 2.3). However, as the piece continues the musical discrepancies become less obvious. The two popular-art music styles are superimposed, juxtaposed, and completely fused into one contemporary art music composition, and when they are combined with twentieth-century avant-garde compositional techniques and the amplified instrumentation of rock 'n' roll, the *Be-Bop Tango* transcends any one style and exemplifies Zappa's unique and eclectic musical voice.

Example 2.3. Marcato-sincopa Tango Rhythm Combined with Jazz Harmony

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

---

14 In keeping with Zappa's artistic philosophy and his claims that his *oeuvre* is undifferentiated with regards to its artistic merit, regardless of style or genre, the terms *art, art music,* and *serious music* will be applied only to classify the works according to the general perception of style (rock, jazz, contemporary art music, etc.). Furthermore, the term *popular* will be only used to refer to commercially successful music; the term *popular-art* will be used to identify any musical style that originated from popular sources and has evolved to a generally accepted degree of higher musical aesthetic or musical style.
CHAPTER 3

BE-BOP TANGO FOR UNSPECIFIED INSTRUMENT AND PIANO: ANALYSIS

"This is sort of like jazz in its own peculiar way. . . "
- Frank Zappa, Be-Bop Tango (of The Old Jazzman's Church), 1974

Melody

Due to its frenetic tempo, extremely disjunct melodic lines, and rhythmic intricacy, the Be-Bop Tango epitomizes the bebop philosophy of "an intimidatingly difficult tune that excludes outsiders."¹ The melodies are extremely angular; employ sudden shifts between stepwise motion and leaps, although thirds and fifths are more common; frequently change from diatonic to chromatic collections; and feature segments usually associated with whole-tone and octatonic collections. Rhythmically, they are characterized by moments of frenetic complexity followed by a sustained pitch that serves as a moment of repose. In an interview with Jim Schaffer in 1973, Zappa explained the importance he placed on melodic construction.

I'm interested in melodies and it's the one thing I find lacking in most of the music today. The construction of melody is a specialized art form. I know a lot of people who can write and arrange but don't pay too much attention to where the melody is. It's a big challenge to write a melody. That's why people who can improvise well against chord changes are so unique because that's a challenge met instantaneously. When all you're

presented with is the harmonic skeleton, your challenge is to create a personalized melody against that set of chord changes, it's a very impressive feat.²

The melodic variations that follow the main theme of the *Be-Bop Tango* employ continuous melodic and rhythmic alteration, dividing the melody into separate motives, which are then developed progressively.

**Harmony**

Due to his early immersion in the music of Varèse, Stravinsky, Webern, and R&B, when Zappa eventually encountered music of the common-practice era it sounded fundamentally strange to him, whereas "a piece of 'modern music,' after all, even if actually composed 50 years previously, was in some sense of Zappa's own time if not of his own place."³ He eschewed the music and compositional techniques of the common-practice period, but ironically, many of the chord structures and harmonic progressions that appear in his works are adapted from common-practice, jazz, and popular music styles, albeit altered.

The *Be-Bop Tango* is pitch centric, and its harmonic language is based on non-traditional functional tonality. It features extended tertian harmonies that follow traditional common-practice procedures and voice-leading, including the appropriate resolution of the tritone and non-chord tones; extended tertian harmonies that do not follow traditional common-practice procedures, and are left unresolved or resolve according to altered voice-leading procedures; added note chords; enharmonic respellings of tertian chords that obfuscate the chord spelling and root orientation; and interlocking triads that form closely spaced chromatic structures that resemble tone clusters.

---


³ Bernard, "Listening to Zappa," 73.
Zappa identified certain chord structures as "climates" rather than functionally-determined results of a tonic to dominant relationship. Chord quality (minor, major, diminished, etc.) was associated with a certain mood or visual scene. As Zappa explained in an interview with Tim Schneckloth,

You have a chord that tells you where your harmonic climate is - where the event is taking place. The chord is like the establishing shot in a movie - where you see the exterior of the building, or the alley with the garbage cans. It tells you where it's happening. Then the action takes place. So you have a chord, and you have three notes that provide certain types of emotional activity versus the chord. And that emotional activity is redefined every time you change the order of the notes and the space in between the notes.4

For example, "an augmented chord has a mysterious climate; if it's a diminished chord it's a little tenser; if it's minor it's serious; if it's major it's happy; if it's major seventh you're falling in love."5

An issue related to the concept of harmonic climate and its overall quality concerns the function of individual notes within the climate (or chord structure), how the notes interact, and how register affects the function of a particular note. In an article from 1983, Zappa stated,

You have to say to yourself, "Is C the root?" If it's the root, you've got to play it one way. "Is C the 3rd?" If it is, you've got to play it another way. "Is C the augmented 11th?" Well, then is has to be played still another way. And you have to intone it to make it sound like the proper interval of the scale. You have to think, "What is the function of the pitch that I'm playing? How does it relate to the harmonic scheme that I'm operating in?" Because if you don't play it to sound like the interval that it's supposed to be, then it doesn't get the information across. And the melody works a lot better if you're thinking your intervals in terms of their function in the harmonic climate.6


This explanation may seem somewhat simplistic, but it illustrates Zappa’s thoughts about note choice and its specific function within a harmonic structure.

Designated by Zappa as "bebop chords," sonorities containing an augmented eleventh are used extensively throughout the Be-Bop Tango, hence the title. The augmented eleventh chord (a major or minor triad with a raised eleventh) has been used extensively by late-Romantic and early twentieth-century composers, who regarded the raised eleventh as a non-chord tone that resolves up by half-step due to its chromatic inflection. In the modern era, contemporary classical and jazz composers, and popular songwriters consider the raised eleventh and its simple equivalent, the raised fourth, as an altered note used for non-functional chord coloring and as an extension of tension that resolves according to its proximity to the root of the chord.

Throughout the Be-Bop Tango, the raised fourth (or tritone) and its compound equivalent, the raised eleventh, are considered essential to the motivic and harmonic structure of the work. Harmonically, this interval is resolved using a variety of methods:

1. The tritone resolves according to traditional practices (contrary resolution of both tones by semitone) (Example 3.1),

2. The tritone resolves by a whole step and semitone in: a) similar motion (Example 3.2a) and b) similar motion displaced by register (Example 3.2b).

3. The tritone resolves to another tritone by parallel motion, usually by the interval of a descending minor or major second (Example 3.3),

4. The tritone resolves by parallel motion and is displaced by register (Example 3.4),

---

5. The unresolved raised note is used as an added tone that colors the sonority without resolving (Example 3.5).  

Example 3.1. *Be-Bop Tango*, Tango Introduction, Piano, Tritone Resolution, mm. B-C

Example 3.2a. *Be-Bop Tango*, Variation A1/c, Resolution by Similar Motion

Example 3.2b. *Be-Bop Tango*, Variation A1/c to Tango Reprise (*T1*), Resolution by Similar Motion - Displaced by Register

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

---

In the following analysis, dynamic markings have been omitted from various musical examples for reasons of space and clarity.
Example 3.3. *Be-Bop Tango*, Variation A1/a, Tritone Resolution, Parallel Motion

Example 3.4. *Be-Bop Tango*, Variation A1/b, Tritone Resolution, Parallel Motion, Displaced by Register

Example 3.5. *Be-Bop Tango*, Anti-climax, Unresolved Added-Tone

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
Although Zappa associated certain chords with a specific climate, he continued to identify chord structures according to common-practice terminology and conventional methods of harmonic analysis, even if the chord in question did not function within those parameters. In the following analysis, for the sake of clarity, the structure and root of a sonority will be identified using common-practice terminology. For example, a sonority containing the pitches Ab-C-D-Eb will be classified as an Ab major triad with a raised fourth. Since Zappa identified this type of sonority as a "bebop chord," it can be construed that the composer was thinking about tertian harmonic structures, but within non-traditional common-practice parameters.

Conversely, when common-practice analytical methods are unable to classify a particular sonority, either due to its structure or function, the ensuing analysis will use the methods prescribed by Paul Hindemith to identify the root of the sonority and the relationship of intervallic strengths within the sonority (see Example 3.23, page 147 and Example 3.26, page 154). The quality of the sonority, whether it is consonant, neutral, or dissonant, will be determined by interval strength and the context in which the sonority appears.  

Furthermore, the Be-Bop Tango will not be analyzed according to non-tonal chromatic jazz or popular music theory. According to David Liebman, "Non-tonal chromaticism refers to melodic lines and harmonies that have no discernible key or root orientation." Since the Be-Bop Tango is pitch centric, non-tonal jazz theory will be inapplicable for the ensuing analysis.

---


11 In bebop and free jazz it is common to find harmonic progressions that incorporate unrelated bass lines and root movement, which create an interesting intervallic and linear
Moreover, the sonorities within the work follow functional relationships. Although the sonorities are constructed with bebop and/or free-jazz styles in mind, due to the ambiguous and diverse harmonic language of the Be-Bop Tango it is ideal to analyze the quality of each sonority and chord succession according to intervallic construction rather than by common-practice methods or jazz theory. Therefore, set theory and interval content analysis will be used to classify and categorize each sonority within the Be-Bop Tango; the contextual relationships that exist between each sonority will be examined and a continuum of harmonic quality will be constructed.

Using modified set theory procedures, each sonority was reduced to its corresponding pitch class set in prime form. Then, all of the pitch sets were analyzed for similarities in interval content, and using interval vectors, grouped accordingly. A harmonic continuum, ranging in quality from consonant to dissonant, was constructed according to the specific number of intervals occurring in the vector of each chord (Appendix A, Figure A.1). A sonority containing only interval classes 3, 4, or 5 (minor third, major third, and perfect fourth, respectively) in its interval vector was classified as a consonant or neutral chord; the designation of whether a sonority is neutral or consonant is based on its context. A sonority containing only interval classes 1, 2, or 6 (minor second, major second, and tritone, respectively) was classified as a dissonant chord due to the tension of the corresponding members of the chord. Sonorities that consisted of a combination of consonant and dissonant interval classes were classified according counterpoint, and in popular music one can find many examples of non-functional harmonic progressions; however, in the Be-Bop Tango even though the bass line in certain passages may seem independent from the chord progression it is still fundamental in the construction of the sonorities within the progression.

to their context within a given passage. Figure A.1 provides a numbered continuum of the chord types found in the *Be-Bop Tango* (from most consonant to most dissonant), their prime set order, their interval vector, and their quality within the continuum. In the following analysis, a sonority will be identified by its numbered continuum position, abbreviated quality, and interval vector. For example, in m. 31, the chord D-A#-B-C# is identified as: (D-25, vector [2 1 2 1 0 0]). D-25 indicates that the chord is dissonant and is assigned the 25th position in the harmonic continuum. The vector supplies the various intervals that the sonority contains: two minor seconds, one major second, two minor thirds, one major third, and no perfect fourths or fifths.

Generally, chord progressions in the *Be-Bop Tango* follow non-traditional, functional harmonic procedures. For example, in the final phrase of each of the major theme groups, neutral chords (N) progress to dissonant chords (D), which are used to maximize dramatic tension. The dissonant chords resolve to more neutral or consonant (C) sonorities (Example 3.6). This type of progression is similar to common-practice cadential progressions.

Concerning the cadential function of the chord progression in following example, a cadential sonority, complete or incomplete, is identified as: any chord that contains a perfect perfect fourth or fifth.

Example 3.6. *Be-Bop Tango*, Phrase A/b', Harmonic Progression

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
interval between an outer voice (either in the bass or soprano line in the piano or in the melody and piano voices) and its adjacent inner voice; follows a dissonant chord; and appears at the end of a major phrase group. However, context determines if the cadential sonority is complete or incomplete. Therefore, a complete cadential progression is classified as any dissonant chord that resolves to a consonant chord, which consists of a perfect interval between an outer voice (bass or soprano) and its adjacent inner voice, and is located at the end of a major phrase group. In the example above, the cadential chord that appears on the second eighth-note of beat 2 of m. 10 (and prolonged through m. 11), is classified as a complete cadential sonority because it contains a perfect fifth between the bass and tenor voice, it follows one of the most dissonant chords in the work, and appears at the end of the main theme group.

Incomplete cadential progressions are defined by context. For example, in m. 31 (Example 3.7), the chord D-A#-B-C# (D-25, vector [2 1 2 1 0 0]) is followed by a C-E#-F#-A# sonority (C-5, vector [1 1 0 1 2 1] and its enharmonic equivalent, Gb-Bb-C-F. Seemingly, the final chord of the phrase meets the proposed criteria for a complete cadential sonority, however, due to the equivalent quality of the two chords in m. 32 and the interval of a major third, A-F,

Example 3.7. Be-Bop Tango, Phrase C/c’, Incomplete Cadence

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
that is created between the melody and the top note of the piano on beat 2 of m. 32, the chord progression is identified as an incomplete cadence. The phrase sounds as if it has reached a point of repose but not one of finality.

Overall, dissonant sonorities are usually preceded by neutral sonorities and followed by consonant sonorities (N-D-C-N). This creates a functional progression that relies on the exploration of intervallic relationships rather than traditional bass line and voice-leading procedures. One exception to the general guideline occurs in m. 37 (Example 3.8). A dissonant

Example 3.8. Be-Bop Tango, Phrase C/c’, Passing Progression and Prolongation

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

sonority, D-A#-B-C# (D-25, vector [2 1 2 1 0 0]), is preceded and followed by a neutral sonority, A-F#-Eb-F (N-17, vector [1 1 2 1 0 1]) and Bb-D-E-F (N-13, vector [1 1 1 1 1 1]), respectively.

In this case, the dissonant chord is considered a passing chord that is used to color the harmonic climate and prolong the neutral quality of the passage, (N-D-N).

Pitch Collections

The Be-Bop Tango uses a variety of pitch collections including diatonic scales, specifically the Lydian mode, which features a raised fourth, and the Mixolydian mode; whole tone collections that occasionally include added notes; partial octatonic scales; and chromatic
collections. However, since a majority of the theme groups are constructed from diatonic collections in a non-traditional approach, the work can be described as pandiatonic.

Concerning the relationship between the harmonies and pitch collections, generally, diatonic collections correspond to consonant or neutral collections, diatonic-chromatic and chromatic collections correspond to dissonant sonorities, and whole-tone collections correspond to neutral collections. The term diatonic-chromatic collection refers to diatonic collections that contain two or more added chromatic tones and form an altered scale.

**Form and Structure**

The form of the *Be-Bop Tango* for unspecified instrument and piano is a modified variation-rondo, *T-A1-T1-A2-B-C-D* (Appendix A, Figure A.2). Formal divisions are derived from phrasing, motivic coherence, and pseudo-cadential progressions used at key points within larger passages.

**Tango Vamp and Introduction: T**

The first seven and half measures of the piece are introductory and employ the rhythmic characteristics of the dance-hall tango; it is labeled *T* in the formal analysis (Example 3.9). The tango uses a steady quarter-note rhythm and emphasizes the last eighth-note of each measure; the actual number of measures has been abbreviated for the sake of space. They are labeled in the score as mm. A-D and mm. 1-4.

Measures A-D serve as a repeated vamp section. On the two recorded performances of the *Be-Bop Tango* (1973 and 1974), Zappa uses the vamp to introduce the composition to his

---

13 In Example 3.9, measures that use the same material will be identified as a single unit (i.e., measures A and B equal measures A-B).
audience and to provide a slightly skewed historical perspective of the tango and bebop. On both recordings, the trombone performs the tango rhythm and adds an unwritten glissando on the last eighth-note of each measure; it supplies a burlesque quality to the composition. The rhythmic motive can be seen as a stylistic allusion rather than an actual parody of the Argentine dance.

The root progression in the tango vamp and introduction ascends sequentially by a major second from Eb-Ab to F-Bb. The harmonic progression contains both chromatic and diatonic sonorities. The sonority in mm. A-B, and its transposition in mm. 1-2, combined with the last eighth-note of each two measure group, can be analyzed as two segments of an octatonic collection, Db-Eb-E-Gb-G and Eb-F-F#-Ab-A, respectively.

Conversely, in mm. C-D and 3-4, the sonorities resemble a major triad with an added raised fourth, Ab-C-D-Eb and Bb-D-E-F, respectively. Although the added raised fourth (or eleventh) in mm. C-D and 3-4 resolve accordingly, the resolution is a by-product of the

14 Frank Zappa, Roxy & Elsewhere, Barking Pumpkin Records D2 74241, 1974, compact disc; Frank Zappa, Piquantique, Rhino Records R2 70544, 1991, compact disc; and Zappa, The Real Frank Zappa Book, 139-197. Whether in print or on stage, Zappa gained a reputation for educating his audiences on the purpose and intentions of his music. His concerts would invariably include moments of audience participation and improvisation.

132
sequential progression, and can be considered a reluctant acceptance of common-practice harmonic procedures for the sake of stylistic allusion. Both the octatonic segments in mm. A-B and 1-2 and the diatonic sonorities in mm. C-D and 3-4 reinforce the eclectic language of the piece.

When each measure and musical line in the piano part, including the last eighth-note of each measure, is separated and reduced to its basic pitch collection, a chromatic tetrachord is formed (Example 3.10a and 3.10b). In Example 3.10a, each two-measure group has been reduced to its primary sonority.

Example 3.10a. *Be-Bop Tango*, Tango Vamp and Introduction, Primary Sonorities, Reduction

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

In Example 3.10b, each separate musical line (the last eighth-note of each measure, the soprano line, the alto line, etc.) is extracted from its corresponding sonority and given a separate staff (Last 8th, S, A, T, B). When all of the lines are extracted and analyzed individually, each line forms a four-note chromatic collection. For example, the last eighth-note in each measure of the tango vamp and introduction (Example 3.10b, Last 8th), forms a four-note chromatic cell, Gb-G-Ab-A.

When all the individual musical lines are combined, they form an eleven-note chromatic collection (Example 3.11). B-natural is the only pitch excluded from the collection, until it appears in m. 5, where it is used as the lowest bass note of the first phrase of the main theme.
Furthermore, the primary melodic and harmonic materials of the piece can be observed within the first eight measures. The rising chromatic tetrachords in the soprano and bass lines provide a preliminary insight into the primary motivic cell that will be developed throughout the work (Example 3.12). The soprano line, Ab-A-Bb-B, occurs on the last eighth-note of each measure, while the bass line, G-Ab-A-Bb, emphasizes the regular four-beat pulse. The outer voices follow a progression of major sevenths, an interval that is crucial to the thematic structure of the work. When these two lines are combined they form a five-note chromatic cell, G-Ab-A-Bb-B, which is used to compose the main *Be-Bop Tango* theme and its subsequent variations.
Example 3.12. *Be-Bop Tango*, Tango Vamp and Introduction, Reduced Ascending Outer Voice-Leading

\[
\begin{array}{cccc}
A-B & C-D & 1-2 & 3-4 \\
\end{array}
\]

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

**Main Theme Group A**

At the end of the tango introduction (m. 4), the tritone in the Bb-D-E-F chord is resolved; the E in the piano resolves to F on the second eighth-note of beat 4 in the melody and the Bb in the bass voice of piano resolves to Ab on the downbeat of m. 5 in the soprano voice; the voice-leading is displaced by an octave (Example 3.13).

Starting on the last eighth-note of m. 4, the main theme group is introduced. It is labeled A, and is comprised of seven measures (Example 3.13). It can be subdivided into three parts: \(a\) consists of mm. 4-6; \(b\) consists of m. 7-8.3; and \(b'\) consists of mm. 8.4-11. Phrase \(b'\) is an extended elaboration of \(b\) (Figure 3.1).

<table>
<thead>
<tr>
<th>Section</th>
<th>Subsections</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>4-11</td>
</tr>
<tr>
<td></td>
<td>(a)</td>
<td>-4-6</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>-7-8.3</td>
</tr>
<tr>
<td></td>
<td>(b')</td>
<td>-8.4-11</td>
</tr>
</tbody>
</table>

Figure 3.1. *Be-Bop Tango*, Formal Outline of Theme Group A
Main Theme Group A

When a 32nd septuplet appears in the work, the beam is broken, however, in the subsequent orchestral arrangement this is not the case.

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

Main Theme A, Phrase A/a

The first phrase of the main theme, A/a, can be divided into two primary motives, Motive A and Motive B, and one secondary motive, Motive C (Example 3.14). In the following example, each motive is circled and labeled.

When the first phrase of the main theme is reduced to its simple intervallic content, all three motives are easily identified (Example 3.15). In the examples below, the first statement of Motive A contains the first occurrence of Motive C. The majority of the variations and theme
groups in the Be-Bop Tango (A, A1, A2, C, and D) are based on the development and manipulation of these three motives.

Example 3.14. Be-Bop Tango, Main Theme A, Motives A, B, and C

The first half of the main theme group is constructed using a descending minor second, an ascending major ninth, a descending major seventh, and an ascending minor second. These five notes form a five-note cell, F-E-F#-G-Ab, and is labeled Motive A, and was foreshadowed
in the first eight measures of the tango vamp and introduction. The ascending leap of a major
ninth, E-F#, is an important interval. It accentuates the pointillistic and angular character of the
thematic material and reinforces the musical philosophy of the work, especially as it pertains to
bebop.

The first three notes of Motive A, F-E-F#, are used to construct an oscillating chromatic
trichord; it is labeled Motive C. Developed throughout the work, Motive C is considered to be a
sub-set of Motive A; however, when the three-note subset appears as a descending or ascending
chromatic trichord it will be analyzed as a contracted statement of the last three notes of Motive
A.

Motive C is used not only to explore the intervallic relationship between oscillating
minor and major ninths (including their simple equivalents), but also minor and major thirds,
their inversions, and compound equivalents (Examples 3.16a-c). In the following examples,
various permutations of Motive C are circled for ease of identification. This vacillating gesture is
an essential motive and permeates the entire composition.

Example 3.16a. Be-Bop Tango, Main Theme A, Phrase A/b’, G#-A#-G Trichord

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved,
Used by Permission.

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

Example 3.16c. *Be-Bop Tango*, Theme Group *D*, Phrase *D/d’*, G#-B-G Trichord

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

The second primary motive of the *Be-Bop Tango* is rhythmic and consists of a rapidly executed septuplet followed by a dotted eighth-note triplet figure; it is labeled Motive B (Example 3.17). It is constructed using transposed statements of Motive C and Motive A, both of which are interrupted by either a skip of a minor third or a leap of a diminished fifth. The first note of the septuplet, Ab, skips down a diminished fifth to D. Used as a pivot interval between the previous chromatic pentachord (Motive A), and the following chromatic trichord (Motive C), the tritone is followed by an ascending step of a major second and an ascending diminished
Example 3.17. *Be-Bop Tango*, Main Theme A, Phrase A/a, Melodic Construction

The septuplet is followed by a dotted eighth-note triplet figure. The D from the previous septuplet ascends by step to E and then skips down a minor third to C#. When E is combined with the previous four notes of the septuplet figure, Db-F-Eb-D, the resulting aggregate forms a transposed statement (T = 2) of Motive A, Db-F-Eb-D-E.

The descending minor third on beat 4 of m. 5, E-C#, can be interpreted as an unfolding of the thematically important minor third in the bass line in the tango vamp and introduction (Example 3.18 and Example 3.12b). And although the C# at the end of A/a is accented, it does not provide a feeling of finality due to its rhythmic position and function as a syncopation; however, it does supply the necessary rhythmic dissonance between the regular tango pulse and...
the syncopated melodic accent to propel the phrase forward to the next subphrase of the theme group.

Concerning the harmonic structure of the first theme group, Ab is established in m. 5 as the primary pitch center of the composition. The harmonic progression in mm. A-4 can be interpreted as an unfolding of the dominant pitch center (Eb) to a perceived tonic (Ab) through a sequential progression. Moreover, the opening vamp and introduction can be interpreted as a harmonic anacrusis that leads to the main theme group in m. 5, where Ab is established as the pitch center of the first theme group.

In terms of pitch centricity (or key center), Zappa stated that, "I don't like chord changes. I like to have one tonal center that stays there, or possibly with a second chord that varies off the main tonal center, and then I play around that." 15 This statement is essential in understanding Zappa's harmonic procedures. In other works from this period, Zappa uses primary and secondary tonal centers as well. According to James Grier, "the harmonic structure of Dog Breath (1969) is actually less complex than the style it parodies, reciprocating between only two chords in each section: tonic and dominant in the first section, and subdominant and dominant in the second section." 16 In the Be-Bop Tango, Ab is the main tonal center.

---


The first sonority in m. 5, Ab-C-D-Eb (or an Ab major triad with a raised fourth (N-12, vector [1 1 1 1 1 1])), is the most important sonority in the *Be-Bop Tango*; it is used as the home key area. In phrase *A/a* (see Example 3.17), the raised fourth (D) is located in the bass voice while the remaining members of the Ab major triad are placed in second inversion. The raised fourth can be analyzed as a common tone (C.T.) held over from the previous Bb major triad with a raised fourth, Bb-D-E-F. The Ab in the top voice of the piano resolves to G on beat three of m. 5, while the C in the tenor voice resolves to B in the bass. The G on beat 3 of m. 5 resolves down to F# on beat 4, while the Ab is held as a common tone between the two sonorities. The B ascends by a minor second to C. Displaced by register, the motion from C to B to C can be analyzed as a lower chromatic neighbor embellishment.

Additionally, when the Bb major triad, Ab major triad, and their respective raised fourths, E and D, are combined they form an Ab Lydian collection, but if the Bb is analyzed as the starting pitch, a Bb Mixolydian collection results. This double interpretation of the bi-modal relationship can be clarified when the harmonic structure and melodic line of the passage is examined in context. Since Ab appears usually at the beginning of major theme groups, analyzing the collection as Ab Lydian seems to be the better of the two readings.17

Concerning the chord progression in m. 5, the root movement descends by semitone from Ab to G to F#, while in the bass voice a G# diminished triad is arpeggiated. The root of the triad continues to accentuate the centricity of the theme area, Ab. However, the goal of the descending progression is F, the root of the harmony that begins the second phrase of the first theme group, *A/b*. This four-note chromatic descent in m. 5 and m. 6, Ab-G-F#-F, continues to

---

17 All of the pitch collections mentioned in this analysis are referential and do not imply traditional voice-leading.
emphasize the beginning four-cell motive used in the tango vamp and introduction and the first four notes of the main theme, F-E-Gb-G.

When the final chord of \( A/a \) (G#-C-F#-A#) is combined with the E in the melody a whole tone segment is formed, E-F#-G#-A#-C; however, the E can be analyzed as an escape tone that resolves to C#. The resulting harmony propels the music forward due to the dissonance that occurs between the C-C# semitone dyad and C-F# tritone. Resolved in m. 7, the C# in the melody descends by semitone to C, while the F# in the piano resolves to F-natural, the secondary pitch center of the theme group.

**Main Theme A, Phrase A/b**

The transition from phrase \( A/a \) in mm. 5-6 to phrase \( A/b \) in m. 7 is achieved by the use of the descending semitone gesture described above (Example 3.19). Beginning on the downbeat of m. 7, the second phrase of the main theme, \( A/b \), continues to explore the septuplet and eighth-note triplet figure from Motive B in m. 5 (Example 3.20).

When the first seven notes of the septuplet, C-Bb-C-Db-C-Bb-C, are analyzed in conjunction with the accompanying piano chord, A-F#-Eb-F, they form a diatonic collection
Example 3.20. Be-Bop Tango, Main Theme A, Phrase A/b

Based on the Bb harmonic minor scale starting on C; the F# is respelled as G. During the course of the analysis, any partial diatonic collection used in the construction of the theme groups will be considered a secondary motive and labeled Motive D. In the example above, Motive C is circled and Motive D is identified with a bracket.

Starting on beat 2 of m. 7, the final two notes of Motive D, C-Bb, are followed by a descending leap down of an augmented octave to B-natural. The C-Bb-B trichord is followed by the last sixteenth-note of the triplet figure, G#, which descends by a skip of a minor third and is followed by a descending augmented second (B-G#-F).

As mentioned earlier in the analysis, the interval of a tritone plays an important part within the motivic character of the main theme and ensuing thematic variations and episodes. In the preceding example, the B-natural is emphasized by its dotted rhythmic value and its position in the descent of Motive C. When B is taken in conjunction with the last note of the melodic phrase, F (the G# is analyzed as a non-essential melodic tone), they form a tritone, B-F. In addition, the ascending leap of a minor ninth from C to Bb and the descending leap of a
diminished octave (or respelled as a major ninth) on beat 2 of the measure recall the motives used in m. 5.

**Main Theme A, Phrase A/b’**

The third phrase of the main theme, A/b’, starts on beat four of m. 8, and is considered an extended alteration of the previous b phrase (Example 3.21).

**Example 3.21. Be-Bop Tango, Main Theme A, Phrase A/b’**

Extended by rhythmic augmentation, the rhythm of the phrase has been changed from a septuplet followed by two consecutive eighth-note triplet figure in phrase A/b to a septuplet followed by eighth-note and sixteenth-note figures in A/b’. Moreover, the septuplet on beat 4 of m. 8 is an exact replication of the septuplet used on beat 1 of m. 7.

The septuplet in m. 8 is followed by a quick thirty-second grace-note figure, C-Bb-B, which emphasizes the importance of B-natural in the voice-leading. The septuplet and grace-note figures are followed by a statement of Motive C, G#-A#-G. When the trichord is combined with the preceding thirty-second note figure, all six notes are transformed into an extended statement of Motive A, transposed up a minor third, C-B-Bb-G#-A#-G. The G is prolonged and
ascends by a leap of a minor seventh to F, which is followed by a skip of a descending major third to Db. At this point in the thematic analysis, it will be necessary to respell Db as C#. This will assist in the clarification of the thematic and intervallic relationship that exists between the antecedent ending of phrase A/a and the consequent ending of phrase A/b’.  

When the final note of each of the three phrases of the main theme, A/a, A/b, and A/b’ are analyzed, they form a Db-F-Db cell (the C# at the end of A/b’ is respelled as Db). The Db-F dyad emphasizes a major third (or respelled as a diminished fourth, C#-F) structure (Example 3.22).

Example 3.22. Be-Bop Tango, Main Theme A, Phrase Endings, Dyad Relationship

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

The use of a major third at the end of the A/b’ not only emphasizes the importance of the quality of the third, but also the significance of the intervallic relationship between the last two notes in A/a and A/b; a minor third is used as the final interval in phrases A/a and A/b (E to C# and G#/Ab to F, respectively), and a major third is used at the end of phrase A/b’ (Db-F). In addition, the interval of a third is emphasized within two levels of the thematic structure; on the micro-level,

---

18 The terms antecedent and consequent will be used to define phrases that when combined they form a related musical unit, thematic group, or musical period.
between the final two notes of each phrase, and on the macro-level, between the separate phrases of the main theme group. As seen in the previous example, when the final note of all three phrases are combined they form the interval of a major third, Db-F (C# is respelled as Db).

Further addressing issues of harmony and pitch centricity, F serves as the new pitch center in A/b and A/b′ (Example 3.23). Starting in m. 7, F is embellished and prolonged by a move from F#-C-B. The B descends on beat 1 of m. 8 to F. During the prolongation of the pitch center, the bass voice embellishes F by its upper chromatic neighbor F#. The root and bass voice unite on the last eighth-note triplet of beat 1 of m. 8 and re-establish F as the goal of the progression.

In the third phrase of the main theme group, A/b′, the root progresses from a minor third to an augmented fifth (or minor sixth) to a major second, F-Ab-E-D, is unusual due to its unpredictable movement. Moreover, if the root of the chord, Ab, in m. 9 is respelled as G#, the natural voice-leading of the line is emphasized.

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
The bass voice in mm. 7-10 can be interpreted as an interrupted line that conforms to traditional tonal voice-leading procedures. Starting in m. 7, the bass line moves from A-F#-F and is interrupted by a return to A on beat 4 of m. 8; the F# is a type of appoggiatura embellishment. In mm. 8-11, the bass line is repeated, but during this occurrence, instead of F# returning to F, the F# progresses to E then to A, thus completing the interruption. If the E is considered the dominant of the bass line, this motion described above can be interpreted as an adjusted tonic to dominant relationship.

Concerning issues of chord quality, the sonority F#-Ab-D-E (N-9, interval vector [0 3 0 2 0 1]) in m. 9 progresses to D#-E-F#-G (D-26, vector [2 1 2 1 0 0]) in m. 10 (see Example 3.21). The second sonority is categorized as one of the most dissonant in the piece. Identified as two interlocking minor thirds, the sonority resolves on beat 2 of m. 10 to a G major triad with a major second (C-2, vector [0 2 1 1 2 0]), which according to the harmonic continuum is identified as one of the most consonant chords in the work. Because of its position in the phrase and the perfect fourth in the bottom voices, this chord is classified as a cadential chord. Although it is embellished by an upper neighbor (E) in the tenor voice on beat 3, the two chord structures are consonant in context. The final two measures of the phrase (mm. 10-11) serve as a cadential extension.

**Thematic Variations and Episodes**

The variations and episodes that follow theme group A comprise mm. 12-44 and are improvisational in character. As one can infer from the title of the work, a reference towards a specific type of jazz is alluded to, one that focuses on virtuosic improvisation and modernist compositional methods. However, the combination of precisely written musical notation and
interviews conducted with Zappa's touring musicians attest to the authenticity of an actual written out, non-improvised score.19

The Be-Bop variations and episodes are subjected to various methods of cellular manipulation and motivic development including:

1. Rotation/Permutation procedures
2. Registral displacement
3. Transposition
4. Extension of motivic materials by rhythmic augmentation and diminution
5. And the combination of each of the previous methods.

These five methods will be examined during the course of the analysis.

Concerning issues of thematic construction, the variations and episodes follow some general guidelines.

1. Generally, Motive A is used as the primary source for motivic development. Registral displacement is used to vary the contour of the melodic line and does not hinder the perceived unity of the thematic material.

2. Statements of Motive A and Motive C are usually followed by ascending or descending skips and leaps of a major or minor third, diminished fourth, tritone, augmented fifth, minor sixth, or their compound equivalents.

3. Rotational procedures are used frequently in the Be-Bop Tango variations, specifically the use of cellular permutation, and will be discussed in the following analysis.

4. The minor second, minor third, major third, and their corresponding compound intervals, predominate as the intervals used between the final two notes at the end of phrases.

19 Humphrey, Interview
Variation A1

In the original published score, theme group A is followed by five and one-half beats of silence before the entrance of the first variation, A1. However, on all three recordings of the Be-Bop Tango percussion fills are inserted into the written rests, either improvised by the percussionist or written out by Zappa;20 the written rests in the score assist in the identification of structural divisions within the work.

Starting on the last eighth-note of m. 12, the first variation of the main theme is presented (Example 3.24), and is labeled A1. It is subdivided into three separate phrases: a consists of mm. 12-14; a-b consists of mm. 15-16; and c consists of 17-19. Measures 15-16, or subsection a-b, can be further divided into two smaller subsections, a equals mm. 15-15.2; and b equals mm. 15.3-16 (Figure 3.2).

<table>
<thead>
<tr>
<th>Section</th>
<th>Subsections</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td>12-19</td>
</tr>
<tr>
<td>a</td>
<td></td>
<td>12-14</td>
</tr>
<tr>
<td>a-b</td>
<td></td>
<td>15-16</td>
</tr>
<tr>
<td>a</td>
<td></td>
<td>- 15-15.2</td>
</tr>
<tr>
<td>b</td>
<td></td>
<td>- 15.3-16</td>
</tr>
<tr>
<td>c</td>
<td></td>
<td>17-19</td>
</tr>
</tbody>
</table>

Figure 3.2. Formal Outline of Variation A1

---

Example 3.24. Be-Bop Tango, Variation A1

Variation A1

Tango - Rhythmic Inversion

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
The first phrase of variation A1 is non-transposed and uses rhythmic augmentation to vary Motive A (Example 3.25a and 3.25b). The third and fourth notes of the motive, F# and G, are prolonged by rhythmic augmentation and melodic embellishment. The rhythms have been changed from sixteenth-notes to double dotted eighth-notes plus thirty-second quasi-grace notes.

Example 3.25a. Be-Bop Tango, Variation A1, Prolongation and Permutation

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

The melody in the first complete measure of variation A1 is accompanied by a rhythmic inversion of the opening tango, which has been inverted so that the chords attack on the upbeat rather than the downbeat.

The second half of the first phrase of A1 illustrates the use of developmental pitch procedures. Beginning on the downbeat of m. 14, the first note of Motive B (G) is prolonged by
Ab. In the original theme, Ab is used as the beginning pitch of Motive B, but in variation A1 it acts as an upper neighbor to G; the prolonged G descends by a leap of a perfect fourth to D and ascends to E.

Concerning the development of the motivic material, the use of rotational procedures in variation A1 begin on beat 2 of m. 14. When the second sextuplet of m. 14 is compared to m. 5 of the main theme, the Db and F have reversed their positions and are followed by an interrupted prolongation of the previous E on the last sextuplet on beat 1. The E ascends by a leap of a minor ninth to F, which is prolonged by the interruption of Db and E on the second and third sextuplets of beat 2. This is another example of an interrupted prolongation; however, F and the intervening Db are rotated out of their original position and when F returns it appears in its original position in the main theme.

As can be seen in the example above, F is followed by Eb and D, but instead of ascending by step to E and then skipping down a minor third to C#, as in the main theme, the D descends by a leap of a minor third to B. If the Eb on the fifth sextuplet of beat 2 is treated as a non-essential melodic tone, the successive skips of a minor third in the upper voice, F-D-B, form a descending B diminished triad, which further emphasizes the interval of the tritone. Additionally, the arpeggiation of a diminished triad fills in the tritone used at the end of the second phrase in the original theme, A/b. Throughout the Be-Bop Tango, the melodies in the main theme groups are subject to transposition and pitch permutation procedures.

Concerning issues of harmony in variation A1, Ab is re-established as the main pitch center. The direct root modulation by a tritone in mm. 11-13 (D to Ab) is softened by the intervening rests in m. 12. In the first phrase of A1, the root oscillates between Ab and Bb. The harmonic goal of the phrase is Eb which occurs on beat 2 of m. 14; it is embellished by the E-
natural (Example 3.26). The example below illustrates the implied root motion of the harmony in
the first phrase of variation A1. Interpreted as the dominant of Ab, or the subdominant of Bb

Example 3.26. Be-Bop Tango, Variation A1/a, Implied Root Motion
13

14

j
j
& ‰ b b œœœ ‰ n œœj ‰ b œœœ ‰ n œjœ

b œœ

Pitch Center: Ab

? ‰ œ ‰ œ ‰ œ ‰ œ
J b Jœ
J n œJ

œ
bœ

# œœ
bœ
n œ

œ

bœ

3

Œ bœ
b œœ n œœ
Œ œ b œœ
3

Implied Root Motion

?

bœ

bœ

 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved,
Used by Permission.
(depending on the listener's perspective and the location of the tonal center), Eb is analyzed as
the dominant and the incomplete cadential counterpart of Ab.
The transition from the first phrase to the second phrase in variation A1 involves an
implied melodic descent from the last note of the first phrase, B, to the first two notes of the
second phrase, A and G (Example 3.27). The first two notes of the implied descent (B and A)

Example 3.27. Be-Bop Tango, Variation A1, Implied Descent between A1/a and A1/a-b
2nd Half, Phrase A1/a

Variation A1/a-b

œ >œ
& œ bœ œ œ œ œ bœ œ bœ nœ n˙
>
>
6

Implied Descent

nœ
# ^œ n ^œ œ b œ ^œ
^œ œ œ .
œ
≈ ( œ) œ #œ
œ
œ
b
œ
œ
bœ

&

3

b œœ
? œ
bœ

# œœ
bœ
n œ

7

6

6

14

Œ bœ
b œœ n œœ
3
Œ œ b œœ

15

b b œœœ

Œ

Œ

œ

Œ

Œ

j
n œ. œ
.
‰ b œœ
J

‰

 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved,
Used by Permission.

154

>#œ
œ


are separated by a sixteenth-note rest and the interval of a minor seventh. The next event, a
descending leap of a major ninth from A to G in the second phrase, creates an important melodic
link between the three notes, B-A-G, and forms a cohesive melodic transition between the two
phrases. The transition emphasizes the importance of the interval of a ninth.

**Variation A1, Phrase A1/a-b**

The second phrase of variation A1, A1/a-b, begins with an altered statement of Motive A,
transposed up a major second (Example 3.28). It is subjected to registral displacement
procedures and is followed by a descending skip of a minor third from F to D. When the G# on
beat 2 of m. 15 is respelled as Ab and combined with F and D, all three notes form a D
diminished triad (indicated with a bracket).

Example 3.28. *Be-Bop Tango*, Variation A1, 1st Half of Phrase A1/a-b, Motivic Development

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved,
Used by Permission.

The triad is followed by Motive C and an exact replication of Motive D; however, on last
septuplet of beat 3 the Bb leaps up a major seventh to A, instead of stepping up to C, as it did in

---

21 A dash between subsection letters indicates a passage that uses a combination of earlier
thematic material. The abbreviation T = 2 is used to indicate the material is transposed up two
semitones or a major second.
the main theme. The registral displacement of A on beat 4 interrupts the implied melodic
descent, from Bb to A to G.

The implied melodic descent from Bb to A in m. 15 continues into the second half of
$A1/a-b$ (Example 3.29). Starting on the first thirty-second note on beat 4 of m. 15, the next three
notes (G, F, and F#) form a condensed statement of Motive A, thus completing the chromatic
descent, Bb-A-G-F-F#. The remainder of the phrase is constructed using four three-note
permutated statements of Motive A; the trichords are separated by leaps of a tritone and a major
third. Starting on the second sixteenth-note septuplet of beat 1, the B-A#-G# trichord can be
interpreted as a transposition of the implied descent from beat 4 of m. 15.

Due to its chromatic descent and displacement by register, the final three notes of $A1/a-b$,
C-B-Bb, lend the passage the impression of a definite ending. Although the last note of the
melodic phrase occurs on a strong metrical accent (beat 3 of the measure), any feeling of melodic
repose is negated due to the intervening harmonic progression in the piano part at the end of m.
16.

Example 3.29. Be-Bop Tango, Variation A1, 2nd Half of Phrase $A1/a-b$, Motivic Development

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved,
Used by Permission.
The accompanying harmonic progression in mm. 16-17 vacillates between two added-note chords, a G major triad plus a raised fourth and an A major triad (Db respelled as C#) plus a raised fourth (Eb respelled as D#) (Example 3.30). The A major triad with a raised fourth is an upper neighbor chord and is label N.

Example 3.30. Be-Bop Tango, Variation A1, Phrase A1/a-b to A1/c, Harmonic Progression and Transition

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

The progression is a transposed reiteration of the previous accompanying material in mm. 14 and 15, Ab-Bb-Ab (see Example 3.27).

As illustrated in the example above, the temporal position of the progression creates an elided transition between phrases A1/a-b and A1/c. The final melodic note of A1/a-b (Bb) ascends by a semitone to B-natural, the first note of A1/c. Although interrupted by an eighth-note rest, the ascent is achieved due to the prolongation of B in the accompanying elided harmonic progression, and is displaced by register. The first note of A1/c shares a common tone with the third chord of the progression, a G major chord with a raised fourth. Furthermore, the dissonance that is created in m. 16 by the placement of the Bb in the melody and B-natural in the
piano accompaniment provides a feeling of continuation and forward momentum, and leads to phrase A1/c. 22

The extended elision of the accompanying figures at the end of mm. 14 and 16 renews the drive and interest of the two preceding phrases in the variation. The melodic disparities that exist between the two phrases, A1/a-b and A1/c, are counterbalanced by the elided harmonic progression in the piano, thus creating a more seamless structure.

The bass line in mm. 13-15 and mm. 16-17 oscillates between a major third 15, D-Bb and C#-A, respectively, and is a common occurrence in many of Zappa's works. In his analysis of Zappa's The Black Page, James Borders states that, "the progression involves metrically predictable alternations between two chords a minor third a part (G2 to Bb2)." 23 In variation A1 of the Be-Bop Tango, we see the continued exploration of this type of harmonic motion.

**Variation A1, Phrase A1/c**

At first listening, phrase A1/c appears to be a new theme independent from the two previous phrases, but upon further analysis it is shown to be a third development of the main theme's motives. Due to its obvious difference in rhythm and contour, it is labeled A1/c.

The thematic construction of A1/c follows the same motivic design as the previous A1 themes (Example 3.31). It begins with a skip of minor third from B to D, which is the first note of a condensed development of Motive A, transposed up a major sixth, D-C#-D#-E. The

---

22 The dotted lines serve to illustrate the interrupted melodic voice-leading between melodic phrases and prolongation of the harmonic progression.

remainder of the phrase continues to develop Motive A and Motive C; each motive is separated by a skip of a minor third.

**Example 3.31. Be-Bop Tango, Variation A1, Phrase A1/c**

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

The first altered statement of Motive A is followed by two condensed and transposed statements of the motive, each separated by the skip of a minor third, E to C, and the leap of a minor tenth, D to F, respectively. The third statement of Motive A is followed by a descending skip of a minor third from G to E, which is the first note of a statement of Motive C, E-F#-F. The last note of the trichord (F) leaps down a diminished fifth from F to B.

The main goal of the melodic descent in variation A1 is the Bb on the downbeat of m. 19. If the last two thirty-second notes of m. 18, F and B, are analyzed as escape tones, the descending leap from F# to Bb (or respelled as Gb to Bb), can be viewed as an elaboration on the interval of a major third, however in this case, its inversion, a minor sixth is used. The last two notes of all three phrases in variation A1 illustrate the unique voice-leading used in the *Be-Bop Tango* (Example 3.32).

Structurally, variation A1 employs three phrases just like the main theme, and thematically, the final two notes in each phrase of A1, and their corresponding intervals, perform a
similar function to the final two notes of the main theme. Starting on the last sextuplet in m. 14, D skips down a minor third to B. This descent can be considered an incomplete cadence due to various factors including: the use of a minor third as the final interval of the phrase; the continued rhythmic drive in the melody; and the intervening harmonic progression in the piano.

At the end of the second phrase of variation A1, B-natural resolves by leap, or an implied half-step, to Bb. When compared to phrase A1/a, the stepwise resolution of B-natural to Bb at the end of A1/a-b sounds like a point of repose, but as the music progresses the B acts as a pivot note and chromatic lower neighbor between two adjoining phrases, A1/a-b and A1/c (see Example 3.30).

The final phrase of variation A1 uses a composite of the voice-leading procedures that were used at the end of A1/a and A1/a-b (Example 3.33). The second thirty-second note at the end of m. 18 (B-natural) functions as a grace-note embellishment that revolves to Bb; the final two phrases of variation A1, A1/a-b and A1/c, end on the same note, Bb. However, if F and B are interpreted as escape tones, the descent from F# to Bb can be understood as an elaboration on the interval of a major third which was used at the end of A1/a (for the sake of analytical clarity,
Example 3.33. *Be-Bop Tango*, Variation A1/c, Voice Leading

The F# is respelled as Gb). This use of the interval of a major third completes the intervallic structure that was erected in the first two phrases of variation A1.

When the preceding example is analyzed in conjunction with Example 3.34 (page 163), the first phrase of variation A1 uses a minor third, the second phrase uses a minor second, and the third phrase uses a major third. The use of a major third as a melodic cadential interval negates any sense of incongruity between the third phrase and the previous two.

Thematically, when the third phrase of A1 is combined with the two previous phrases and their dissimilar thematic functions (A1/a acting as an antecedent and A1/a-b acting as a deceptive consequent), A1/c can be considered the true consequent phrase of the theme group, thus emitting a sense of completion. The *Be-Bop Tango* surprises the listener with the anticipatory resolution of an antecedent phrase to a deceptive-consequent phrase, which eventually resolves to the true-consequent phrase.

Additionally, the chord that accompanies the final note of A1/c, C#-F#-G-B (C-4, vector [1 1 0 1 2 1]), is classified as a cadential sonority. It is constructed using a perfect fourth and a
major third, which are separated by a minor second. The perfect fourth in the piano and the
strong metrical placement of the last note of the melody reinforces the analysis of m.19 as a point
of repose.

When the root movement in A1/c, G-A-Bb-A-F#, is combined with the bass line, C#-A-
Bb-D#/Eb-D-C#, C# is established as the pitch center of the phrase, and is prolonged by
harmonic progression in mm. 17-19. Starting on the last quarter-note triplet in m. 17, the
sonority A-E-Db-Eb can be respelled as an A major triad with a raised fourth, A-C#-D#-E. It
completes the G-A progression begun in m. 16. The sonority ascends by parallel motion to the
next chord, Bb-F#-Eb-F, which is also similar in construction to the sonority used in m. 1 (A-F#-
Eb-F); however, the bass note has been changed from A to Bb. It can be construed that the
change was made so that the previous bass note (A) would not be repeated, thus creating a more
interesting bass line, albeit non-functional. Additionally, the altered bass line is symmetrical.
When the Bb is respelled as A#, it contains by minor seconds separated by a perfect fourth. (The
chord can be respelled as an Eb minor in second inversion with an added second, Eb-F-Gb-Bb.)

The third chord of the progression, D#-C#-Eb-A, can be respelled as A-C#-D#, and is
similar in construction to the first chord of the progression, minus the fifth of the chord. It
moves to a sonority consisting of D-G#-A-C#, due to its close spacing, interval content [2 0 0 1 2
1], and position in the phrase, this sonority is considered dissonant in quality. Respelled as an A
major seventh chord plus a perfect fourth (A-C#-D-G#), the chord descends by parallel motion to
C#-F#-G-B (C-4, vector [1 1 0 1 2 1]) in m. 19, and resolves the harmonic tension created in the
previous measure. Although the final sonority is closely spaced, the use of the perfect fourth in
the bass and tenor voice, the position of the chord at the end of the phrase, and the parallel voice-
leading from the previous chord provide the necessary criteria for classifying it as a complete
cadential sonority.

Concerning the bass line in mm. 16-19, it is similar to the implied root movement used in
mm. 13 and 14, and resembles a double neighbor embellishment (Example 3.34).

Example 3.34. Be-Bop Tango, Variation A1/a-b to A1/c, Piano Part, Reduction

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved,
Used by Permission.

The parallel semitone modulation used in the root and bass lines in mm. 18 and 19, D-G#
to C#-F#, resembles a common jazz harmonic procedure called side-slipping. Side-slipping
involves a half-step movement either up or down from the established key center, and is intended
to sound like a grace note effect or passing chord.²⁴ Although the chord progression in the
example above is not a literal replication of this process it resembles the procedure in effect.

Moreover, the chord progression in mm. 18-20 serves a dual function; it resolves the
harmonic tension in m. 18, and functions as a transition to the first tango variation, T1.

Concerning the transitory function of the progression, although C# is considered the primary
pitch center of the passage, the embellished extension of the root progression in mm. 17-19 (A to

²⁴ David Liebman, *A Chromatic Approach to Jazz Harmony and Melody* (Rottenberg,
C#) emphasizes the bass note (A) as a secondary pitch center. In the reduction above, the motion from A to C# is repeated and elided from phrase group to phrase group. Thus, when the root of the final sonority at the end of variation A1 (C#) progresses to the bass note of the first sonority in the first tango variation in m. 20 (A), the movement sounds natural. Therefore, the entire progression can be interpreted as an elaborate extension of the oscillating G-A progression in mm. 16 and 17. This is reinforced further by the use of F# as a common tone between variation A1/c and T1.

The harmonic progression in mm. 17-19 illustrates the Be-Bop Tango's use of functional note substitution within an previously established sonority, and reinforces the argument that the sonorities in the Be-Bop Tango are used as both functional harmonies and as predetermined pitch cells that can be altered within any given musical situation.

**First Tango Variation: T1**

At the end of the A1/c, an altered version of the tango introduction is presented, however, only mm. 1 and 3 from the opening tango (corresponding to mm. 20 and 21 in T1) are performed and then repeated (mm. 22 and 23). Due to its structural contraction and oscillating harmonic scheme, the altered tango reprise is labeled as T1 (Example 3.35).

Example 3.35. *Be-Bop Tango*, First Tango Variation: T1

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
The return to the tango introduction assists in the determination that mm. 1-4 are truly an introduction and not just an extension of the opening vamp in mm. A-D. In the opening tango, the harmonic structure was interpreted as the unfolding of the dominant of the main pitch center Ab (Eb to Ab). But since the tango vamp and the unfolding of Eb dominant are deleted in variation \( T1 \), the subsequent root progression from F to B in mm. 20-23 makes the arrival on Ab in m. 24 sound incomplete and lacking a forward goal. Although \( T1 \) begins on Ab, as did \( A/a \) and \( A1/a \), the parallel modulation from \( A1/c \) sounds somewhat haphazard and forced, as if the progression still requires completion. This is further reinforced by the sudden juxtaposition of the chaotic melodic material in variation \( A1 \) and the strict tango rhythms of \( T1 \). Both styles provide the transition with a feeling of temporal and stylistic discontinuity.

**Variation A2**

Following the tango reprise, the second variation of the main theme group begins on beat 3 of m. 23 and is labeled \( A2 \). It is similar to the first variation; it is non-transposed and uses rhythmic augmentation and rotational processes to develop and extend the phrase (Example 3.36).

In the example below, when the rhythmic structure of variation \( A2 \) is compared to the rhythmic structure of the main theme (see Example 3.13), the rhythmic proportions of the first two notes have been increased by two-thirds; the sixteenth-notes, F and E, have been changed to quarter-note triplets. The intervals of an ascending leap of a major seventh (mm. 23-25, G to F#), ascending minor seventh (mm. 26-27, D to F), and descending major ninth (F to Eb) continue to be emphasized. Besides the exploration of compound intervals and the drastic change in dynamics, the intervening eighth-note rest on beat 1 of m. 25, the repeated leap of a major seventh, and the temporal disjunction it creates is reminiscent of the music of Edgar
Varèse. As was noted in chapter two Zappa was heavily influenced by the music of Varèse and this variation is a clear example of this.

Example 3.36. Be-Bop Tango, Variation A2, Rhythmic Augmentation and Registral Displacement

![Music notation](image)

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

Just as Motive A led to Motive B in the first phrase of variation A1, the altered version of Motive A in mm. 23-26 leads directly to Motive B, which is now reduced rhythmically to a quintuplet followed by two eighth-note triplets and a septuplet in m. 26. The rhythmic augmentation at the end of A2 lends the phrase an impression of a written *ritenuto*.

Concerning the motivic development of the variation, when variation A2 is compared to the first phrase of the main theme group, the first three notes of the quintuplet (G#-D-E) are transposed up an octave; C# (or its enharmonic equivalent Db) retains its original position. The final note of the quintuplet (F) is transposed down an octave. The last two notes of Motive B (Eb and D) are prolonged for four counts in m. 27. A sixteenth-note quintuplet and two eighth-note triplet figures are used to extend the phrase and explore the implied voice-leading of the descending melodic line. The distance of the minor ninth between Eb and D further accentuates the pointillistic and angular character of the thematic material and leads directly to episode B.
Addressing issues of harmony, Ab is re-established as the main pitch center of A2. The initial Ab major triad with a raised fourth is prolonged for three measures, however, the expected harmonic progression that was established in the main theme group (m. 5: Ab-C-D-Eb to B-G#-F-G), and variation A1 (m. 13: Ab-C-D-Eb to Bb-D-E-F), is supplanted by the overriding voice-leading in the melody. Accompanying the last two notes of the phrase, the bass line in mm. 26 and 27 descends by step from D to C and is mirrored in the melodic line, Eb to D in m. 27.

The tone cluster in m. 27 foreshadows its use episode B, where it is explored further. Although the bottom note and the inner sonorities of the tone cluster are indeterminate in pitch, the top note of the cluster is indicated as C, and can be interpreted as the superimposed, anticipatory goal of the voice leading in mm. 27-28, Eb to D to C; the actual cadence occurs on the downbeat of m. 28 (Example 3.37).

Example 3.37. Be-Bop Tango, Episode B, Clusters

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

25 A tone cluster is any closely spaced collection of three or more pitches that are related by an interval of a second and are sounded simultaneously. David Cope, *New Directions in Music*, 7th ed. (Prospect Heights, IL: Waveland Press, 2001), 50-51.
Measures 28-30 continue to explore the sonic brutality of the indeterminate tone clusters. Yet, because of the passage's obvious function as a contrasting section and its use of twentieth-century avant-garde piano techniques it is labeled episode B. The clusters were foreshadowed not only in m. 27, but also in the triplet interjection between A/a and A/b1 in m. 12 and in the extreme chromaticism in m. 14. The septuplet rhythms are derived from the septuplet figure in m. 5.

Although not specifically identified by Zappa as a musical quotation, the rhythmic figure in mm. 28-29 sounds similar to a recurring brass figure that appears in the composition "Trio and Group Dances" from Charles Mingus's album The Black Saint and the Sinner Lady (1963) (Example 3.38).²⁶

Example 3.38. Charles Mingus, Trio and Group Dances, Rhythmic Figure

Mingus's gesture in "Trio and Group Dances" appears unobstructed in its formal positioning. Its importance as a structural signpost within the seemingly open-ended improvisations and composed episodes makes the gesture a strong musical anchor that the surrounding passages can adhere to.

It is uncertain if Zappa had access to The Black Saint and the Sinner Lady before or during the composition of the Be-Bop Tango, but it is well documented in his personal writings and compositions that he was quite familiar with the creative endeavors of certain bebop and avant-garde jazz composers, including Charles Mingus, Thelonious Monk, and especially Ornette Coleman and Eric Dolphy. In addition, Zappa employed jazz musicians in his touring ensembles and recording projects, and several of his compositions use titles that make references to jazz music and specific jazz composers. Therefore, it may be construed that Zappa knew of the Charles Mingus recording and may have consciously or unconsciously used this material as a quotation (or as a subconscious allusion) in his own work.

After further analysis of episode B, formally, it serves a triple purpose. First, it is used as a contrasting section between variation A1 and theme group C. It explores musical concepts associated with the post-World-War II avant-garde including indeterminate cluster notation and quotation.

Secondly, the top note of the tone clusters acts as the goal of the descending voice-leading line that started in variation A2 (Examples 3.39). Starting in m. 27, the musical line descends from Eb to D in the melody. Displaced by register, the line then descends to C, the top note of the cluster. Each pitch in the implied descent is displaced by an octave.

The third and final function of episode B involves a modulation of timbre (Example 3.40). In mm. 27-30, as the melodic line descends in pitch, the overall timbre changes as well.


Example 3.40. *Be-Bop Tango*, Episode B, Timbral Modulation, Reduction

The descending modulation in Example 3.40 progresses from: the use a pitched melody (the Eb and D in the melody); to indeterminate masses of pitch (the tone clusters); and to non-pitched improvised percussion in m. 30. The descent from pitch to non-pitched timbres in the passage illustrates *Be-Bop Tango*'s convincing use of timbral modulation, and assists in the division and identification of major phrase groups.

Addressing issues of instrumentation, the addition of improvised non-pitched percussion material at the end of episode B in m. 30 acts as a transition to theme group C. On both recordings from the 1970's *ad libitum* percussion parts were used to provide rhythmic interest and add to the overall excitement of the work; however, in the chamber orchestra score the percussion parts are notated exactly. This issue will be addressed in chapter four.
Theme Group C

Measures 31-37 can be seen as the continued development of the main theme. Due to the contrasting melodic contour and rhythmic character between this theme group and earlier variations it is labeled as theme group C (Example 3.41).

Example 3.41. Be-Bop Tango, Theme Group C

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

It is the longest theme group in the composition and is subdivided into two separate phrases: c consists of mm. 31-32; and c' consists of mm. 33-37 (Figure 3.3).
The melody in the first phrase of theme group C begins on G#, the enharmonic equivalent of the first note of Motive B in the main theme, Ab (Example 3.42). Descending by an augmented fourth to D, the resulting tritone is followed by four altered statements of Motive A and Motive C. Each statement is separated by either a leap of a minor third, its compound equivalent, or a tritone, and is expanded or contracted for developmental purposes; the individual pitches of the cell are displaced by register. The addition of skips of compound intervals between members of the four-note cells and the increase in rhythmic complexity further alters the thematic material from the previous variations. Conversely, as the rhythmic complexity of the melody increases, the harmonic and rhythmic complexity of the piano decreases, which further enhances the frenetic activity of the melodic line.
Starting on beat 4 of the m. 31, a diminished B triad is arpeggiated and continues to emphasize the importance of the interval of a tritone. The last note of the triad (B) ascends by a leap of a major seventh to A#, which descends by a leap of an augmented fifth to D, the first note of m. 32. The septuplet in m. 32 can be analyzed as an altered version of Motive D; it is transposed up a major second and the fifth and sixth notes of the septuplet, Eb and Db, are transposed down an octave. The sixth note of figure (Db) leaps up a major sixth to Bb and then descends by half-step to A. This type of voice-leading occurs twice in the phrase, on the last three sixteenth-note sextuplets in m. 31 (D-B-A#), and on the last three notes of the phrase. This is contrary to how Motive D was constructed in the second phrase of the theme group A, A/b (see Example 3.27).

Moreover, the use of a minor second at the end of C/c exemplifies a reversal of the voice-leading procedures used in each of the first phrases in the main theme (Example 3.43a), and variation A1 (Example 3.43b).

Example 3.43. Be-Bop Tango, Voice-Leading at the End of the 1st Phrase in: (a) Main Theme A; (b) Variation A1; (c) Theme Group C

Example 3.43a. Be-Bop Tango, Main Theme A

Example 3.43b. Be-Bop Tango, Variation A1
In the examples above, a minor third is used to complete the first phrase of theme group A and variation A1, while a minor second is used to complete the first phrase of theme group C. All three examples function as either an antecedent or deceptive consequent phrase within their respective theme groups; however, due to its binary phrase structure theme group C can be considered a truncation of the normal ternary phrasing established at the beginning of the work.

Earlier in the analysis, the interval of a minor second was used to end the second phrase of variation A1, while a major and minor third were used at the end of the first and third phrases, respectively. Since the second phrase of A1 used a different interval for cadential purposes, it was identified as deceptive consequent phrase. An important interval in determining complementary period structures in the Be-Bop Tango, the minor second can be used to determine the phrase structures in theme group C; the first phrase of theme group C and the second phrase of variation A1 use the same semitone descent. Since both passages employ this descent, begin with a manipulated statement of Motive A, and serve as a antecedent phrase, it must be construed that theme group C can be analyzed as a truncated three-phrase period structure that omits the first phrase of the main theme and begins on the second phrase of the theme group. This interpretation explains the similarities in thematic density between the second phrase of A1 and the first phrase of theme group C.
Concerning the harmonic progression in theme group C, the beginning sonority consists of D-A#-B-C# (D-25, vector [2 1 2 1 0 0]), which is a pair of interlocking minor thirds separated by a semitone, albeit re-voiced. Resembling the tone clusters used in episode B, it serves as a harmonic transition between the two sections. Furthermore, when the root of the sonority is respelled (A# to Bb), it can be considered a further continuation of the voice-leading that began in m. 28, Eb-D-C-Bb.

The next two chords in progression, C-E#-F#-A# and F-Gb-Bb-C, are similar in construction, and therefore they contain the same interval vector [1 1 0 1 2 1]; however, the quality of each sonority depends on its voicing and context. The first sonority (C-E#-F#-A#) is considered neutral (N-11). Although it is preceded by a highly dissonant sonority, it is voiced in close position, more so than the chord that follows. When the sonority is re-voiced (and respelled) on beat 3 of the measure, its quality becomes more consonant due to the unhindered perfect fourth in the soprano and alto voices and its strong metrical placement (C-5). Furthermore, the A# is held as a common tone between the all three chords (the Bb on beat 2 of m. 32 is respelled as A# and is transposed down an octave) and assists in the diminishing quality of the chord succession.

Earlier in the analysis, when a perfect fourth was found between an inner and outer voice and appeared at the end of a major theme group, it was classified as a cadential interval. In m. 32, although a perfect fourth can be observed in the top two voices of the piano, when the final note in the melody (A) is combined with the accompanying harmony, the perfect fourth is found between the inner voices of the complete sonority, thus negating any feeling of cadential completion. However, due to the pseudo-cadential structure of the sonority, its rhythmic position (on a semi-weak beat at the end of the first phrase) and its use as a static harmony in the
subsequent phrase ($C/c'$) the sonority and the progression can be classified as a quasi-deceptive
cadential progression. Overall, the chord movement is regressive and decreases in dissonance
strength, D-N-C; the second chord is neutral due to its close spacing.

Since the roots in $C/c$ progress from A# to F# to Bb, and Bb is identified as the root of
the chord in m. 32, it is ascertained that Bb is the main goal of the passage. Moreover, when the
bass line in the first two chords (D and C) is combined with the root on beat two of m. 32 (Bb)
the interconnected lines create an important voice-leading segment, which reinforces the
importance of the relationship that exists between the voice leading from $A2$ to episode $B$ and
from episode $B$ to $C/c$. The descending voice-leading creates a smoother harmonic progression.

Concerning issues of pitch center, starting in m. 32, Bb and F can be interpreted as the
primary and secondary pitch centers of $C/c$ and $C/c'$, and $D/d$, respectively. The Bb-F dyad
heightens the dramatic tension within theme group $C$ and the first phrase of $D$, and reinforces the
harmonic relationship between the two theme groups; both of the sustained sonorities in $C$ and
$D/d'$ (Gb-Bb-C-F and Bb-F-D-E, respectively) contain the Bb-F dyad. Although the dyad
provides the needed cadential stability in m. 37, the close proximity of D and E between the alto
and soprano line destabilizes any feeling of finality.

**Theme Group $C$, Phrase $C/c'$**

Starting in m. 33, the second phrase of theme group $C$ begins on G# (or respelled as Ab),
but instead of leaping down a tritone as it did in the first phrase of $C$, the G# skips down an
augmented fifth to C (Example 3.44). In the example below, phrase $C/c'$ is constructed using
five developed statements of Motive A, C, and D. They are separated by skips of an augmented
fifth, tritone, minor third, and a major sixth. The cells are expanded and contracted for develop-
mental purposes while the individual pitches of the cell are displaced by register.
Two important aspects concerning $C/c'$ require further discussion. First, the repeated skip of a minor third (G and E) in m. 34 is the first and only occurrence of the use of this type of melodic interval in the piece; it can be attributed to the continued development of the minor third motive, which was initiated in the bass line of the tango vamp and introduction.

The second aspect concerns the intervals used at the end of $C/c$ and $C/c'$. At the end of the first phrase, Bb descends by a half-step to A, but at the end of the second phrase, C ascends by a leap of a major sixth to A. The major sixth can be regarded as the intervallic inversion of a minor third, thus completing the melodic phrase (see Example 3.43c). Explained earlier in the analysis, these two intervals correspond to a perceived antecedent and consequent phrase unit. The use of a descending half-step at the end of the first phrase (Bb-A) and a major sixth (or minor third) at the end of the second phrase (C-A) adheres to the thematic design constructed earlier in the work, and can be analyzed as the continuation and development of the final interval found at the end of major phrase groups, especially in the final phrases of theme group $A$, variation $A1$, and variation $A2$.  

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
Starting in m. 35, the second phrase of theme group C is extended by the addition of a repeated quasi-grace note figure (Example 3.45). The figure is constructed using a Bb-E dyad, which is separated by register. It continues the implied compound melodic descent that began on beat 3 of m. 34. In the example below, the bottom line of the compound melody begins on the second note of the sextuplet (D), descends from D to C to Bb, which is displaced by register. Beginning on the fifth note of the sextuplet, the top line of the compound melody (B) descends to A. It then descends by a leap of a perfect fourth to E in m.34. Although the final interval in the melody outlines a tritone (Bb-E), the interval of a perfect fourth in the top line of the implied descent complements the step-wise descent in the bottom line. The final chord in $C/c'$ (Gb-Bb-C-F) is sustained and leads to a progression of three chords, which were included in the tango introduction.

Example 3.45. *Be-Bop Tango*, Theme Group C, Phrase C/c', Compound Melodic Descent

Concerning the quality of the sonorities in mm. 36-38 (Example 3.46), the first and third chords in the above-mentioned progression are neutral in quality and are used extensively throughout the *Be-Bop Tango*, specifically as the beginning sonority of each of the major theme groups. The third chord, a Bb major triad with a raised fourth, is sustained for two measures and is used as suitable climate for the melody in theme group $D$. 

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP). All Rights Reserved, Used by Permission.
Example 3.46. Be-Bop Tango, Phrase C/c’, Chord Progression

The second chord in the progression, D-A#-B-C#, is dissonant in quality (D-25). It is used sparingly and ordinarily only in cadential progressions; however, in this passage it is used for color and variety. The neutral-dissonant-neutral chord progression (N-D-N) in mm. 36-37 reinforces the tension that is created in the anti-climax, and will be discussed later in the analysis.

Considered an example of an extended suspension, the prolongation of E in the melody in mm. 35-37 is resolved by the use of a common-tone in the piano part on beat three of m. 37. The deceptive and anticipatory cadential figure that was constructed in m. 32 of phrase C/c is now fulfilled.

The lack of melodic and rhythmic activity in mm. 36-38 suggests a moment of repose, but on further analysis this is not the case. The musical inactivity within this passage deceives the listener and creates a type of anti-climax. Just as earlier composers inserted rests before a climactic chord, which delayed and added power to any subsequent significant musical event,\(^{28}\)

the thematic complexity of the previous theme groups in the *Be-Bop Tango* (theme group A, its subsequent variants, and developments), and the building anxiety that is created during the perceived stasis in mm. 36-38 is only resolved by the introduction of phrase group *D* in m. 39, thus creating an *anti-climax*. Furthermore, the inactivity of mm. 36-38 increases the musical tension through the expectation of thematic activity, thus manipulating the listener.

Generally, the focal point of a melody or passage is reached through the use of dynamics, rhythmic prolongation, the exploration of a particular interval, or the approach of the focal point from a succession of lesser points. But in the *Be-Bop Tango* we have an example of the extreme opposite, an important point of structural stasis surrounded by frenetic thematic material. This passage provides the listener with time to relax before the commencement of the final dramatic theme group, which leads to the actual climax of the work.

**Theme Group D**

The fourth and final theme group begins on the second eighth-note of beat 3 in m. 38. It is similar to *C*, but due to the differences in the beginning melodic contour it is labeled *D* (Example 3.47). Theme group *D* can be divided into two parts. The first part, *D/d* consists of mm. 38.3-40, and the second part, *D/d'* consists of mm. 41-44 (Figure 3.4).

<table>
<thead>
<tr>
<th>Section</th>
<th>Subsections</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>D</em></td>
<td><em>d</em></td>
<td>38.3-40</td>
</tr>
<tr>
<td></td>
<td><em>d'</em></td>
<td>41-44</td>
</tr>
</tbody>
</table>

Figure 3.4. *Be-Bop Tango*, Formal Outline of Theme Group *D*

---

Expanding on the concept of anti-climax and musical inactivity, the absence of harmonic support in theme group D and the increasing rhythmic activity in the melodic line lend the passage an increasingly neurotic sound.

Example 3.47. Be-Bop Tango, Theme Group D

The first note of D/d (Bb) and the accompanying harmony can be interpreted as a transitory or pivot structure. It creates a slight elision between the last sonority in the anti-climax and the first note of the melody in theme group D in m. 39 (Example 3.48). The first phrase of theme group D follows the same thematic development as theme group C. It begins with a pattern of five consecutive skips alternating between minor thirds and augmented fifths (or
respelled as minor sixths). Analyzed as the inversion and extension of the minor/major third relationship that pervades the work, the first phrase of $D$ continues the motivic development that began in the tango vamp and introduction.

Example 3.48. Be-Bop Tango, Theme Group $D$, Phrase $D/d$, Bb Pivot

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

At the end of the initial minor third-augmented fifth arpeggio, B-natural begins an extended statement of Motive A, B-Bb-A-G#-G, which is followed by three contracted statements of Motive A. The aural relationship between theme groups $C$ and $D$ is further reinforced by the use of the note A; it appears as the last note at the end of phrases $C/c$ and $C/c'$ and as the last note in the first phrase of $D/d$.

An interesting structural device that occurs within $D/d$ is the use of a double melodic palindrome (Example 3.49). Starting on the fourth thirty-second note of beat 3 of m.39, the main palindrome consists of a ten-note series, Bb-C-A-B-A-C-(G#)-B-Bb, centered around B-natural, the central pivot note. Contained within the larger palindrome is a second, smaller five-note palindrome C-A-B-C-A; it is indicated with a bracket.
Example 3.49. Be-Bop Tango, Theme Group D, Phrase D/d, Melodic Palindrome Reduction

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

Serving as a non-essential melodic extension, G# can be interpreted as an arpeggiation and development of the augmented fifth and minor third interval structure, C-G#-B, and is used to extend the phrase. The final four notes of the ten-note palindrome, including the G#, create another permutation of Motive A.

At the end of D/d, the theme group is interrupted by one and three-quarters beats of silence, but before the second phrase can commence, a second statement of the last three notes of the first phrase occurs, B-Bb-A (Example 3.50). The temporal position of this chromatic trichord reinforces its importance as a structurally significant motive. It is used to prolong the phrase and serves as a transition to the second phrase of D.
Starting in m. 41, the second phrase of theme group $D$ is similar in construction to $D/d$; however, it is extended by the addition of a septuplet at the end of m. 41 (Example 3.51). As seen in example below, $D/d'$ is divided into two parts, which are separated by a pivot note, F. The gesture that begins on the second eighth-note quintuplet of beat 2 (Ab-F-B) emphasizes the two of the most important intervals in the *Be-Bop Tango*, the minor third and the tritone, Ab-F

Example 3.51. *Be-Bop Tango*, Theme Group $D$, Phrase $D/d'$

and F-B, respectively. Additionally, the rhythms of the melody have decreased in value so that the maximum dramatic tension can be created.

When the melody in mm. 41-42 is to its simple intervallic structure, an interlocking pattern of extended and contracted statements of Motive A appears (Example 3.52). In the example below, the reduction of $D/d'$ illustrates the interlocking motivic relationships found in the passage. The top line of the reduction is comprised of a six-note extended statement of Motive A, and is followed by a condensed three-note statement of Motive A. The bottom line of the reduction is comprised of four condensed statements of Motive A.

Continuing with the thematic analysis of the second half of $D/d'$, the sixth thirty-second note of the septuplet on beat 4 of m. 41 (B-natural) descends by a skip of a major third to G,
Example 3.52. Be-Bop Tango, Theme Group D, Phrase D/d’, Interlocking Motive A Structure

which is the first note of a four-note chromatic segment, G-A-G#-G. The segment is a transposition of the first three notes on beat 3 of m. 39. The entire septuplet in m. 42 is an exact replication of the septuplet used on beat 3 of m. 39.

Overall, theme group D is more rhythmically active than theme group C. However, at the end of D/d’, the rhythm values increase, from the thirty-second notes in mm. 41 and 42 to a marcato eighth-note triplet and an eighth-note quintuplet figure on the last three beats of m. 42 (Example 3.53), thus creating a written-out ritenuto.

Example 3.53. Be-Bop Tango, Theme Group D, Phrase D/d’, Reduction

Moreover, when the eighth-note tuplet figures are reduced to their simple intervallic structure, a minor third separates a descending trichord from an ascending tetrachord, Bb-Ab-G
and E-F-Gb-A, respectively. The last two notes of the tetrachord (Gb-A) employ an augmented ninth to accentuate the final descending leap of a major sixth (A to C). The final three notes of the piece (Gb-A-C) emphasize yet again the primary intervals of the work, the tritone (Gb-C) and the minor third (A-C). Although the major sixth is an inversion of one of the primary melodic cadential intervals, and was used to end the previous variations and theme groups, the interval does not function as a true ending. Due to the weak metrical position of the final sonority and the retardation of the last note of the melody (C), the ending of the \textit{Be-Bop Tango} provides the opportunity for further embellishment and elaboration.

Concerning the final sonority of the \textit{Be-Bop Tango}, it is comprised of two interlocking diminished fifths, D-Ab/E-Bb, which are supported by a minor seventh built on C#, C#-B (A-29) (Example 3.54). When the final note of the melody (C) is combined with the accompanying

Example 3.54. \textit{Be-Bop Tango}, D/d', Final Chord

\begin{figure}
\centering
\includegraphics[width=\textwidth]{Example3.54.png}
\caption{Reduced Pitch Structure: Final Chord 5-Note Cluster}
\end{figure}

© 1984 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
harmony and reduced to its basic set structure, a symmetrical chromatic cluster, Ab-Bb-B-C-Db-D-E, emerges. Starting the central note of the set (C), the cluster expands by two semitones and a whole step, C-B-Bb-Ab and C-Db-D-E respectively.

In addition, when the root of the final sonority (E) is analyzed in conjunction with the root of the first chord in the Be-Bop Tango (Eb) and the primary pitch center and root of theme groups C and D (Bb), all three roots form a three-note cell that emphasizes the intervals of a semitone and a tritone, Bb-Eb-E. These three roots can be interpreted as the subsequent elaboration of the raised fourth-semitone motive that appears in the melody and harmonic progressions. Furthermore, when the final bass note of the work (C#) is analyzed in conjunction with the last note of the melody, it reinforces the semitone relationship that permeates the Be-Bop Tango. The C#-C dyad creates a conflict in the harmony that is left unresolved. These two factors, the C#-C dyad and the larger semitone Eb to E root relationship, can be construed as just two of the reasons why formally the Be-Bop Tango sounds open-ended in the original score. Perhaps the final sonority represents the stylistic ambiguity inherent in the work, and maybe it serves as a final question mark as it pertains to the next step in Zappa's growth as a composer, but functionally the sonority serves a dual purpose. First, it provides a microcosm of the harmonic character of the work and emphasizes the intervallic construction of the melodies and harmonies used throughout the piece. Secondly, the sonority functions as a structural pivot chord. On the two recorded performances, the final chord functions as a transition between the written score and the following extended improvisations of the Farther O'Blivion and Be-Bop Tango medleys. The ambiguous quality of the final sonority assists with this formal transition and will be discussed in chapter four.
After careful consideration of the previous analytical analysis, the following conclusions can be made concerning the *Be-Bop Tango*:

1. The thematic structure of the theme groups including the main theme, its variations, episodes, and developments, are based upon: the permutation and transposition of a three-note, four-note or five-note chromatic cell; and the separation of the cells by the use of a skip of a minor/major third, a leap of a diminished/augmented fourth/fifth, a leap of a minor/major seventh or minor/major ninth (including their inversions and simple equivalents).

2. Compound intervals and registral displacement procedures are used for melodic variance. When a phrase is reduced to its simple interval structure the music usually follows a melodic contour comprised of a series of half-steps and whole step, followed by a skip or a leap.

3. Minor and major thirds (or their inversions) are used to end phrase groups. When a minor or major third is used in conjunction with a cadential sonority it assists in the feeling of cadential completion, but when the compound equivalent is used, it tends to obfuscate the point of repose. The *Be-Bop Tango* only uses the interval of a major sixth as a phrase ending twice within the piece (phrase C/c', m. 34, and phrase D/d', m. 42). Furthermore, when a minor second is used at the end of a phrase, the music tends to emit a feeling of anticipation.

In m. 34, any feeling of rest is counteracted by the following ascending augmented eleventh in the melodic line in m. 35. This section does not function as a cadential passage, it only increases the tension, and is analyzed as an anti-climax (an area where musical activity decreases in such a drastic way that the passage can be considered a point of climax). The listener's awareness of space and the level of musical anticipation increase as the melodic and rhythmic activity decrease.
4. Generally, the final phrase of each theme group has a tendency to decrease in rhythmic activity while increasing in rhythmic duration; this increase in duration anticipates the final cadence of each theme group.

5. Overall, the harmonic structures and progressions in the *Be-Bop Tango* are variegated and serve a multitude of purposes. The work uses: harmonic cells that substitute individual members according to context, either for functional purposes or for harmonic coloration; regressive chord schemes that do not correspond to either classical or jazz progressions; and unpredictable bass lines that seem to function with a dual purpose, to reinforce the sonorities they accompany and to serve as a quasi counterpoint.

6. The chord progressions in the *Be-Bop Tango* follow a non-traditional functional harmonic structure and are based on interval strengths and context. In the final phrase of each of the major theme groups, neutral sonorities (N) progress to dissonant sonorities (D), which are used to maximize dramatic tension. The dissonant sonorities usually resolve to more neutral or consonant (C) sonorities.

7. Concerning the use pitch collections and how they relate to the accompanying harmonies, diatonic-chromatic and chromatic collections correspond to dissonant sonorities, diatonic collections correspond to consonant or neutral collections, and whole-tone collections correspond to neutral collections. If the interval structure of a particular sonority is ambiguous and can be interpreted as either consonant or dissonant, musical context and the accompanying pitch collection will assist in the classification of the quality of the sonority.

8. In general, the evolving thematic structure, starting from theme group *A* to theme group *D*, resembles a written-out improvisation. Several analysts have postulated that Zappa's style of melodic angularity can be attributed to his use of the guitar as his primary instrument.
However, during an analysis of guitarist Steve Vai’s transcriptions of Zappa's guitar improvisations, Zappa's melodies do not show any predisposition towards the use of extreme registral displacement or involved motivic development. This comparison reinforces the concept that the *Be-Bop Tango* originated as a written composition and not as an improvised piece; it does not reflect a transcription of any of his recorded improvisations. Furthermore, in an interview conducted with Gail Zappa, she stated that the composer wrote most of his works at the piano and not on the guitar.

**Orchestration and Historiography**

Munchkin Music, Frank Zappa’s publishing company, first released the *Be-Bop Tango* in 1984. The title page of the composition indicates that it is scored for *piano and melody*, however, since any instrument or voice can perform the melodic line, the designation *unspecified instrument and piano* will be used to differentiate the original score from later arrangements of the work. Furthermore, since the treble clef and the term *melody* are the only written indications used to denote the range of the performance medium desired, the two official recorded performances of the *Be-Bop Tango* will serve as the major representations concerning how the work was orchestrated for its early performance by Zappa's amplified chamber ensembles.

Mentioned earlier in the analysis, the *Be-Bop Tango* was originally entitled *The Malcolm McNabb*. Later, according to performance date archives, the work was renamed *Farther O'Blivion* and appeared in a larger suite of the same name. It was recorded live in Stockholm, Sweden on August 21, 1973 and

---


31 Gail Zappa, interview.
is included on the official bootleg album *Beat The Boots I: Piquantique* (1991).\(^{32}\) The work was arranged for clarinet, tenor saxophone, trombone, electric guitar, electric bass guitar, drumset, percussion, keyboards, and violin.

In late 1973, while on Zappa was on tour, *Farther O'Blivion* was renamed the *Be-Bop Tango*. The composition was included on a live recording from that same tour entitled *Roxy & Elsewhere* (1974) and renamed "Be-Bop Tango (of The Old Jazzman's Church)." The title of the album refers to the various locations where the recording was made, in this case The Roxy Theatre in Hollywood, the Auditorium Theater in Chicago, and Edinboro State College in Edinboro, Pennsylvania. The "Be-Bop Tango (of The Old Jazzman's Church)" is arranged for tenor saxophone, trumpet, trombone, electric guitar, electric bass guitar, drumset, percussion, and keyboards.

Throughout the 1970's, the *Be-Bop Tango* only existed as a score for unspecified instrument and piano and not as a fully orchestrated score. Each member of the ensemble was given a copy of the score and Zappa arranged the work according to the instrumentation available.\(^{33}\) The main thematic materials were performed either by the violin, trombone, marimba, or guitar. They were supported harmonically by the piano and electric bass guitar, while the percussionists were used to keep a steady beat, and to add improvised percussion parts between melodic phrases. The two recorded performances by Zappa's touring ensembles will be

\(^{32}\) The term *bootleg* refers to any illegal production and distribution of an unauthorized recording of an artist; it may be recorded and edited by someone in the audience or on stage and does not reflect the intentions of the artist and is a copyright infringement. To thwart the bootleggers, Zappa decided to license a series of bootleg recordings, including *Piquantique* to Rhino Records for legitimate release, thereby circumventing and supplanting the bootleger and his/her unauthorized product. These official bootleg releases comprise the *Beat the Boots* series. Gail Zappa, interview.

\(^{33}\) Humphrey, Interview; and Miles, *Frank Zappa: In His Own Words*, 54.
used to explore the early orchestration of the \textit{Be-Bop Tango} and its evolution, from a composition for unspecified instrument and piano to an arranged work for amplified chamber ensemble.

Concerning the overall form of the \textit{Be-Bop Tango}, when the recorded arrangements of the composition are compared to one another, the performance of the original written score does not vary in form or length. The only significant differences include the material that precedes and follows the written score, the orchestration of the melody, the inclusion of studio edited materials in the \textit{Roxy & Elsewhere} recording, and the tempos. The following analyses will provide insight into the differences in instrumentation that exist between "Farther O'Blivion" (as known as \textit{Be-Bop Tango}) and the "Be-Bop Tango (of The Old Jazzman's Church)."\footnote{Although the written portion of the \textit{Farther O'Blivion} medley is known in the performance archives as \textit{Farther O'Blivion}, in the discussion that follows, for the sake of analytical clarity, it will be identified as the \textit{Be-Bop Tango}.}

\textit{Piquantique, "Farther O'Blivion: Steno Pool/Farther O'Blivion (as known as Be-Bop Tango)/Cucamonga"}

On the recorded version of the "Farther O'Blivion" medley from \textit{Beat The Boots I: Piquantique}, the written \textit{Be-Bop Tango} score does not commence until CD track timing 4:21. It is preceded by an instrumental arrangement of "Steno Pool," an instrumental selection from one of Zappa's larger works \textit{The Adventures of Greggery Peccary}, which consists of musical episodes that vary immensely in style (rock 'n' roll, jazz-rock, jazz, and classical avant-garde music), and is followed by the song "Cucamonga."\footnote{\textit{Fusion}, \textit{jazz-funk}, or \textit{jazz-rock} is a style of jazz that emerged during the 1960s that mixed jazz improvisation with the electronic instrumentation, simpler harmonic progressions, and complex, syncopated, eighth and sixteenth-note rhythm accompaniments of rhythm and blues and rock 'n' roll. Mark Gridley, \textit{Jazz Styles}, 335; and Barry Kernfeld, \textit{The New Harvard Dictionary}, Edited by Don Michael Randel, s.v. "Funk(y)." (Cambridge, MA: The Belknap Press of Harvard University Press, 1986), 330.} "Steno Pool" is followed by an extended
trombone improvisation that uses the introductory tango rhythm and fragments of the main
theme of the *Be-Bop Tango* as the basis for its improvisatory excursions. The fragments of the
main theme and tango rhythm return periodically and serve as formal cues for the ensemble.
Figure A.3 in Appendix A summarizes the musical events that occur during the performance of
the "Farther O'Blivion" medley.

The instrumentation used in the performance of "Farther O'Blivion," and especially the
*Be-Bop Tango* is relatively conservative. "Steno Pool" is performed by the entire ensemble and
the following trombone improvisation is accompanied by keyboard, electric guitar, electric bass
guitar, drumset and percussion. The tango vamp and introduction of the *Be-Bop Tango* are
performed by the woodwinds, trombone, drumset, marimba, and keyboard. The melodic lines in
theme group A and its subsequent variations, A1 and A2, are performed by the violin, the only
exception is theme group C which is performed by the clarinet; the natural timbre of the violin is
altered by the use of an electronic chorus device.\(^{36}\) The melody is doubled by the marimba in
theme group A, variation A1, and theme group C, and is doubled in variation A2 by the clarinet
and electric bass guitar. Episode B is performed by keyboard, electric bass guitar, trombone, and
percussion. The variations and theme groups (A, A1, A2, C, and D) are accompanied by
trombone, keyboard, drumset, mallet and non-pitched percussion, and electric bass guitar. In
theme groups C and D the melodic line is performed by the violin and clarinet respectively and is
doubled by non-pitch percussion instruments, including roto-toms, cowbells, and cymbals.

\(^{36}\) *Chorus* is a term used in electro-acoustic music to describe the mixing of several
slightly delayed signals with the original source signal. The effect is used to create a fuller,
stronger, and more ambient sound, and makes one sound source sound like several. Alten, *Audio
in Media*, 229.
In Arved Ashby’s study, "Frank Zappa and the Anti-Fetishist Orchestra," Ashby explains that Zappa's interest in prevalent marimba doublings of melodic lines, especially in the composition *Uncle Meat*, intensified over the years due to his work with mallet percussionist Ruth Underwood (1972-1974). However, Zappa's interest in mallet percussion, specifically marimba and vibraphone, extends as far back as the Mothers of Invention's first album *Freak Out!* (1966).

**Roxy & Elsewhere, "Be-Bop Tango (of The Old Jazzman's Church)"

In late 1973, *Farther O'Blivion* was officially renamed the *Be-Bop Tango* and in early September 1974, it was renamed *Be-Bop Tango (of The Old Jazzman’s Church)*. This later version differs in its instrumentation from the previous performances and recording.

Concerning the official live album released in that same year, Zappa recorded his ensemble on five separate concert dates: December 10, 11, 12, 1973 at the Roxy Theater in Hollywood; May 8, 1974 at Edinboro State College, Edinboro, Pennsylvania; and May 11, 1974 at the Auditorium Theater in Chicago. He compiled his final recording master tape from these five concert records, which were eventually overdubbed at Bolic Studios Inglewood, California and Paramount Studios in Hollywood, California.  

---


38 The term *overdub (or overdubbing)* is used to describe the technique of adding another part to a multitrack recording, doubling a preexistent track (“sweetening”), or to replace one of the existing parts. The term *track* refers to the path on a magnetic tape along which a signal (or signals) is recorded; on a multi-track recording session one instrument is usually assigned to a specific track. Gail Zappa, interview; Alten, *Audio in Media*, 606; and Miles, *Frank Zappa: A Visual Documentary*, 63.
The live recording begins with spoken dialogue by Zappa. He informs his ensemble to prepare for the performance of the composition, instructs the sound recording technician to focus on certain aspects of the performance, and entertains his audience with a humorous pseudo-history of the tango and its subsequent demise in post-war America. During the vocal preface, the dance-hall tango rhythm motive is quietly introduced by the drumset percussionist and keyboardist. At CD track timing 1:25, the written score begins and is performed without alteration to form or style from the previous tour recording; however, the tempo is much faster. Figure A.4 in Appendix A summarizes the musical events that take place on the "Be-Bop Tango (of The Old Jazzman's Church)" recording.

When compared to the previous recorded arrangement of the work, the instrumentation of "Be-Bop Tango (of The Old Jazzman's Church)" is relatively conservative and with a few notable exceptions follows the same instrumentation as the "Farther O'Blivion" medley. Due to Jon-Luc Ponty's dismissal (or resignation) from the ensemble at this point in the tour, the violin is excluded from the ensemble arrangement, therefore the melodies in the main theme groups are performed either by the trumpet, trombone, or keyboard.

Although the "Be-Bop Tango (of The Old Jazzman's Church)" is categorized as a live recording, Zappa used the recording studio not only to edit the recorded document, but he also used it as a compositional tool to add and manipulate his musical materials in the final recording processes. The trumpet, trombone, and keyboard are presented in two recorded forms, one recorded at the live performances and the other recorded, manipulated, and overdubbed in the recording studio; each form will be differentiated in the following analysis. The term studio will be used to indicate the overdubbed instrumental track. For example, the designation studio
keyboard synthesizer refers to a studio overdubbed keyboard synthesizer track inserted later during the final stages of the recording process.

Concerning the specific orchestration employed for the written Be-Bop Tango score, starting at CD track timing 1:41, the tango vamp and introduction are performed by the drumset, non-pitched percussion, keyboard, and electric string bass. The melodic lines in theme group A and variation A1 are performed by the trumpet and studio trombone, and live trombone respectively, and are doubled by vibraphone and marimba.

The musical material in T1 consists of a tenor saxophone improvisation accompanied by the tango reprise, which is performed by electric guitar, drumset, percussion, electric bass guitar, and keyboard. The melody in variation A2 is performed by trumpet, trombone, studio trombone, and electric bass guitar. In episode B, the tone clusters are performed by the trumpet, trombone, keyboard, electric bass guitar, drumset, and percussion. Two types of keyboards are used in the presentation of the melody in theme groups C and D, the live keyboard track and a studio overdubbed keyboard synthesizer part. The main theme group A, variations A1 and A2, and theme group C are accompanied by the keyboard, percussion, and electric bass guitar, while theme group D is accompanied by trombone, keyboard, percussion, and studio keyboard synthesizer.

Concerning the instrumentation of theme group A, an instrument that sounds somewhat like a combination of trumpet and trombone performs the melody. Although a trumpeter and trombonist are listed among the musicians employed during several of the Roxy & Elsewhere concerts, there is evidence to suggest that the trumpet heard on the Roxy recording was added later as a studio overdub, or quite possibly the trumpet is actually a studio alteration of the
original trombone track. In the discussion that follows, several factors involving the possible overdubs will be addressed.

The first factor concerns the sound quality of the recorded instrumental track. The overdubbed hybrid trumpet/trombone track in the main theme group has a cleaner sound than the noisy live tracks and seems to fill the acoustic space. This cleaner sound is most likely due to the use of microphone isolation techniques in the recording process and the inherently higher signal-to-noise ratio that is provided by the recording studio.

Although the volume level of an individual track can be manipulated during the recording of a live performance and the final mastering process, any increase in the volume level of one of the live tracks during the final mastering process would invariably increase the volume of other instrumental tracks, thus affecting the final recording. Due to the inherent problems of microphone isolation and placement problems during a live concert, especially in the 1970s, audio leakage can be a major concern for audio engineers.

A second factor concerning the possible overdubbed tracks of the Be-Bop Tango involves Zappa's history of using the recording studio to: accentuate individual tracks on previously recorded material by duplicating the track with another instrument; "closely intercut live recordings of the same song made on different occasions in an attempt to conflate the best elements of performances that individually are deficient in one way or another;"39 and to add new musical material to a pre-existing recording. This last method provided Zappa with the opportunity to experiment and create new arrangements of a given work.

Related to this last recording technique, Zappa employed the recording studio to create new works from combining instrumental tracks from unrelated recording sessions. This

39 Bernard, "Listening to Zappa," 77.
technique called xenochrony, a term coined by Zappa, involves extracting one track from a pre-existing multi-track recording and combining it with material from an entirely independent recording session.\textsuperscript{40} The differences between recording session tracks might include not only disparities in melody, harmony, and rhythm, but also meter, tempo, and the inherent ambience of the different recording locations.\textsuperscript{41} As Zappa explains,

A classic xenochrony piece would be "Rubber Shirt," which is a song on the \textit{Sheik Yerbouti} album. It takes a drum set part that was added to a song at one tempo. The drummer was instructed to play along with this one particular thing in a certain time signature, eleven-four, and that drum set part was extracted like a little piece of DNA from that master tape and put over here into this little cubicle. And then the [electric] bass part, which was designed to play along with another song at another speed, another rate in another time signature, four-four, that was removed from that master tape and put over here, and then the two were sandwiched together. And so the musical result is the result of two musicians, who were never in the same room at the same time, playing at two different rates in two different moods for two different purposes, when blended together, yielding a third result which is musical and synchronizes in a strange way. That's xenochrony.\textsuperscript{42}

Starting in the early 1960s, with his acquisition of Studio Z, Zappa's knowledge of recording techniques evolved from the simple method of transferring sound to tape to its eventual application as a powerful compositional tool that allowed Zappa to experiment with disparate musical styles, timbres, rhythms, and non-traditional forms in a creative and unrestricted atmosphere. Zappa's endeavors in the recording studio greatly influenced his acoustic works. Not only did it affect the kinds of musical materials and methods he composed

\textsuperscript{40} Watson, \textit{Frank Zappa: The Negative Dialectic of Poodle Play}, 303-304. The terms xenochronicity, xenochrony, and resynchronization are interchangeable. Zappa first used this technique during the recording of his album \textit{Zoot Allures} in the summer of 1976. The concept of exploring simultaneous musical sources, either related and/or unrelated, within a composition have their impetus in the works of Charles Ives and John Cage.

\textsuperscript{41} Watson, "Frank Zappa as Dadaist: Recording Technology and the Power to Repeat," 132.

\textsuperscript{42} Marshall, "The Best Frank Zappa Interview Ever," 17.
with, but also changed his overall philosophy concerning musical time, style, and organization. The instrumentation and musical materials that Zappa would eventually use in the chamber orchestra version of the Be-Bop Tango are a direct result of his experiences in the recording studio.⁴³

The third factor concerning the possible overdubs involves a 1993 interview conducted by Don Menn with Ali N. Askin, Zappa's music copyist and arranger for the 1992 Ensemble Modern concerts. Menn states that, "In particular, he [Ali Askin] cites a Bruce Fowler trombone line doubling a Zappa guitar solo where one layer is recorded at half-speed and then speeded up to sound like a trumpet."⁴⁴ Although this quote may in fact refer to an entirely different composition, the type of recording processes mentioned during the interview may account for the flawless doubling procedures that occur between the studio overdubbed trumpet and trombone on the Roxy recording. Furthermore, since Zappa and Askin used the unspecified instrument and piano score to create the chamber orchestra arrangement, and the second live recording of the Be-Bop Tango contains an overdubbed trumpet and trombone track, it can be inferred from the preceding quote that the arrangement that Askin is referring to may be in fact be the "Be-Bop Tango (of The Old Jazzman's Church)" from the Roxy & Elsewhere. However, in an interview conducted by the analyst with Askin, he mentions that he did not use any of the prior recordings, only the unspecified instrument and piano score.

And finally, the fourth factor concerns the personnel line-up listed in the Roxy & Elsewhere CD program information; the instrumentation includes tenor saxophone, trumpet,

---

⁴³ Many of the acoustic works of certain twentieth-century composers have been influenced by their experiments in the recording studio, including such notables as Karlheinz Stockhausen, Luciano Berio, Iannis Xenakis, Steve Reich, and John Zorn.

⁴⁴ Don Menn, "Zappa!," 83.
trombone, electric guitar, electric string bass, percussion, keyboards. However, on the live recording, when Zappa introduces the individual members of his ensemble to the audience, he lists among the musicians: trombonist, Bruce Fowler; tenor saxophonist and vocalist, Napoleon Brock Murphy; percussionist Ruth Underwood; drumset percussionists Ralph Humphrey and Chester Thompson; electric bassist Tom Fowler; and keyboardist George Duke. The omission of a trumpet player in the introduction suggests that either Zappa failed to mention the musician, or a trumpet part (or a manipulated overdub of the trombone) was inserted later during the final recording process; the trumpet part may have quite possibly been performed by Walt Fowler. The latter explanation is most likely the correct assumption. Zappa had a long history of giving his musicians and ensembles the credit they deserve, especially at the end of live concerts; any omission of a particular performer would be unheard of.

From the four factors mentioned above, the analyst has three possible scenarios concerning the trumpet overdub on the second recording of the *Be-Bop Tango* to contend with. The overdub was either added later as: an unaltered studio overdub; as a synchronic track taken from a early or later performance; or as an altered version of the trombone part. Unfortunately, Zappa never mentioned any specific recording procedures used on the *Be-Bop Tango* sessions.

Further addressing the recorded *Roxy* performance, the "Be-Bop Tango (of The Old Jazzman's Church)" ends with an obligatory fermata and crescendo, which leads to an extended trombone improvisation in a 12/8 rock-fusion style. The trombone solo is frequently interrupted by *tutti* episodes that consist of straight eighth-note "flurries,"45 and is followed by a series of

---

45 A *flurry* is a term coined by Jonathan Bernard to describe a musical figure that consists of "a single 4/4 measure of very rapid figuration." Usually, this rapid figuration is consistent in the rhythmic values it employs (i.e. all sixteenth-notes) and is inserted between two melodic phrases or leads into a major theme area. This musical figure is a prominent musical characteristic of Zappa's *oeuvre*. Bernard, "The Musical World(s?) of Frank Zappa," 173.
ascending sequential chord progressions in the keyboard (CD track timing 4:54). This sequence signals a return to the quarter-note tango vamp and introduction, which is performed by the electric bass guitar and percussion. The tango reprise is followed by a climactic tutti chord and a return to the beginning marcato quarter-note pulse.

However, what follows in the next section of the work can only be described as the continuation of Zappa's Dadaist quest for an active and participatory audience. At CD track timing 5:20, Zappa explains to his patrons what kind of musical processes have just occurred on stage. Then, he announces that keyboardist George Duke will perform the main theme of the Be-Bop Tango as a scat improvisation, and trombonist, Bruce Fowler, will interpret Duke's vocalization through dance. At the beginning of the improvisation, Duke sings "This is Be-Bop, even if you don't think it sounds like it . . .," while Fowler dances to the rhythm of the vocal line. Duke sets the words to the melody of the main theme of the Be-Bop Tango, and eventually extends the improvisation to include scat syllables doubled by the keyboard. After a brief explanation to his audience concerning the various musical events, Zappa extends the improvisation to include randomly selected members of the audience.

In an interview with Ralph Humphrey, one of Zappa's three percussionists during the 1973-1974 tour, Humphrey states that,

---

46 Developed in western Europe during the first world war, Dada was an artistic movement that focused on the concepts of the absurd, irrational and the irreverent. It emphasized the independence of individual artists to explore his or her own methods of expression and embraced a variety of compositional techniques and styles including found-object collage and futurist technical innovations. Matthew Gale, Dada and Surrealism (London: Phaidon Press Limited, 1997) 11; and Watson, "Frank Zappa as Dadaist: Recording Technology and the Power to Repeat," 110.

Bebop, which involves improvisation, is something this piece is not. It is all composed, written out, and meant to be played with no improvisations. Again, it evolved to a point where Frank asked George [Duke] to begin improvising little licks, distorted quotes of sections of the piece while Frank commented on it. He eventually thought it would be good to get the audience to participate by dancing to these little improvisations. Of course, in bebop music, there is no dancing. Once again, Frank is mocking the music and its style.48

According to Ben Watson, having audience members participate and "attempt to dance to Duke's bebop perversions of the tune underlines the distance between jazz specialism and everyday life."49 Throughout his career, Zappa included moments of absurdity and passages of audience participation within the live performances of his compositions, from individual audience members singing with the ensemble to Zappa conducting a mass-audience, free-style poetry recitation. This can be interpreted as one of Zappa's many attempts to demystify the musical process, explore his Dadaist philosophies, entertain his audience, and diminish the perceived distinction between the "high" and "low" art.

During the improvisational interpretation of Duke's scat singing (track timing 10:48), the electric bass guitar leads the ensemble into an episode that combines swing-jazz with Duke's scatting. At 12:22, the percussion, keyboard, electric bass guitar, and marimba perform independent ad-lib improvisations. The complete chaos and textural density of the section increases the dramatic tension within the work.

At track timing 13:26, the ad-lib solo passage decreases in activity, while the electric bass guitar and keyboard return to the basic quarter-note tango rhythm; the tango rhythm resolves the tension created by the ad-lib tutti improvisation. At this point in the recording, Zappa invites the

---

48 Humphrey, Interview

49 Watson, "Frank Zappa as Dadaist: Recording Technology and the Power to Repeat," 117.
entire audience to participate in the improvisational dance. Duke's scatting and Zappa's dialogue continue and lead directly into an R&B song that uses the words "Anything you want to do. . ." as the refrain; it is followed by an extended electric guitar solo performed by Zappa. After his solo, the composer introduces the individual members of performing ensemble to the audience and is followed by a continuation of the R&B refrain and the recording fades out.

Philosophically, the message contained in the blues refrain resonates throughout the live arrangement of the Be-Bop Tango, not only as it pertains to its overall aesthetic of the work, but also the written composition and its juxtaposition of dissimilar popular-art music styles, the extended trombone improvisation, the scat vocalizations, and the improvised dance segments by Bruce Fowler and the audience.
CHAPTER 4

BE-BOP TANGO FOR CHAMBER ORCHESTRA: ANALYSIS

"Jazz is not dead, it just smells funny..."
- Frank Zappa, Be-Bop Tango (of The Old Jazzman's Church), 1974

Background

In the summer of 1991, Andreas Molich-Zebhauser, manager of the Ensemble Modern approached Frank Zappa with a proposed series of commissioned concerts that would feature his music at the 1992 Frankfurt (Germany) Festival. At the time of the collaboration, Ali N. Askin served as Zappa's technical assistant and music copyist, and arranged the Be-Bop Tango for chamber orchestra. His responsibilities included typesetting newly composed music and

---

1 Born in Munich, Germany in 1962, Askin studied composition with Dieter Acker and Wilhelm Killmayer at the Munich Academy of Music from 1982-1986 and attended the Academy of Film and Television in 1987.

Parallel to his academic studies, he began to work with a number of ensembles and projects as a pianist, keyboardist, and composer; he also worked as a radio moderator, copyist, editor, and music teacher. In the late 1980s and early 1990s, Askin worked intensively with several theaters as a composer, musician and musical director.

creating new arrangements of Zappa's early amplified chamber ensemble works and Synclavier compositions.²

According to Askin, his duties were clearly defined. In an interview with the author, he states that at the beginning of the process Zappa made numerous additions to the original unspecified instrument and piano score of the *Be-Bop Tango*, including ornaments, glissandos, and extra notes. Then, Zappa indicated to Askin which instruments should perform which parts. During the preparation of the final score and parts, Askin completed all of the detail work, which included checking for performance playability and making certain that instrumental ranges were not exceeded. Near the end of the process, Zappa checked the arrangement for errors and made the necessary corrections to the draft score.³

David Ocker, an arranger and copyist for Zappa during the late 1970s and early 1980s, elaborates further on the process:

My job as copyist for six of my seven years with Frank [June 1977-Autumn 1984] involved technical musical matters - mostly notational, sometimes orchestrational. I was the guy who had to remember what the bottom note on the piccolo or English horn is, for example. However, when it came to the actual music he made all the decisions. He might play tapes for people and measure their reactions - but the music wasn't finished till HE liked it.⁴


³ Askin, Interview.

The Ensemble Modern presented the chamber orchestra version of the *Be-Bop Tango*, along with eighteen other compositions by the composer, in a ninety-minute concert in Frankfurt. The instrumentation included flute (doubling piccolo and alto flute), oboe, clarinet, tenor saxophone, bassoon, two horns, two trumpets, two trombones, tuba, three percussion, piano, harp, mandolin, guitar, and strings. The woodwinds and strings also double on non-pitched percussion instruments, including maracas, triangle, cymbals, jingle bells, agogo bells, vibraslap, metal guiro, and large wood guiro. Although Askin is credited with the official arrangement, Zappa constantly supervised the process.5

In addition to the instrumentation, various changes were made to the formal, thematic, and harmonic structure of the work including the expansion and contraction of thematic areas, the addition of written percussion passages instead of improvised parts, the inclusion of aleatoric devices and passages, and the substitution of new harmonies. The following analysis will provide an overview of the orchestration, and compare the various alterations made to the *Be-Bop Tango* and how they differ from the original score.

In general, the orchestral arrangement of the *Be-Bop Tango* follows the same instrumentation used in the amplified chamber ensemble arrangements from the 1970s. The woodwind and brass sections perform a majority of the thematic material while the percussion, piano, and strings (including harp, mandolin, and guitar) perform the accompaniment. The brass, percussion, and string sections perform the various interjections that occur between melodic phrases of the main theme, its variations and developments, and episode B. The melody is usually doubled at the unison or octave with one exception, the first phrase of variation A1,

---

5 Frank Zappa, *Be-Bop Tango* for chamber orchestra (Los Angeles: Munchkin Music, 1993); and Askin, Interview. For a detailed score contact Munchkin Music at www.zappa.com.
which is doubled at a major third. The issue of orchestral doubling will be addressed later in the analysis.

Table B.1 in Appendix B summarizes the orchestration of each of the main theme groups and their subphrases. Each measure of the composition is listed at the top of the table. The theme groups and their phrase subdivisions are listed underneath the measure numbers. The instrumentation is listed on the left of the table. Abbreviations and dashes are used in each measure to indicate the length of the event (melody, harmony, etc.) and to denote the function of the musical material: T = Tango rhythm; M = Melody; D = Doubling of the melodic line; H = Harmony, accompaniment usually; C = Timbral color, usually associated with the percussion section; S = solo; and I = interjection, generally a single note or chord.

Generally, the orchestration of the harmonic materials is homogeneous and shifts between instrumental families. For example, in the first eight measures of the orchestral arrangement the brass section performs the opening tango section exclusively. In the second phrase of the main theme \((A/b)\) the harmony is placed in the guitar and strings and supports the melody, which is featured in the woodwinds and mandolin. In the following phrase \((A/b')\) the harmonic progression is distributed among the woodwinds while the trumpets and harp perform the melodic line.

Conversely, interlocking orchestration is used, but it is infrequent. In m. 18 of variation \(A1\), the harmonic progression is distributed among the bassoon, horns, and tuba; the bassoon timbre provides the quarter-note triplet rhythmic interjection with a more exotic sound. A second example of interlocking orchestration can be located in m. 23 of \(A1\). The interlocking thirds of the final sonority of the theme group, F#-G-Bb-B, are divided among the instrumental families, F#-Bb in the woodwinds and B-G in the brass. The division of the orchestral forces
softens the harsh dissonance that permeates the recorded ensemble performances of the original score.

In the analysis of the original score and its subsequent arrangements for amplified chamber ensembles, it was explained that Zappa used various studio techniques, including xenochronic methods, to alter and manipulate recordings of the live performances of the *Be-Bop Tango*. On the *Roxy & Elsewhere* recording of the "Be-Bop Tango (of The Old Jazzman's Church)" Zappa recorded the ensemble live and later inserted overdubbed, studio manipulated instrumental tracks; however, Zappa never mentions any specific studio tracks that may have been altered for the *Roxy & Elsewhere* recording. Through careful listening of the two recordings and examining materials from other sources, including recording location information and interviews with performers and arrangers, it was ascertained that the overdubs were added later in the final mastering sessions. As it pertains to the orchestral arrangement, it can be construed that since Zappa and Askin utilized the original score to create the arrangement, and the live recording of the *Be-Bop Tango* contains a overdubbed trumpet/trombone track, the solo trumpet passages in the orchestral version of the work, specifically in theme group *D*, are in fact a direct transcription of the earlier recording sessions.

The above mentioned recording processes are not unique within the recording industry, but, Zappa is considered by many to be a pioneer in the development of xenochronic techniques. These methods have later implications with regards to the instrumentation used in Zappa's orchestral and non-orchestral works.

**Form and Reconstruction**

Although a few notable changes have been made to the formal, thematic, and harmonic structure of the orchestral arrangement of the *Be-Bop Tango*; it is an almost exact reproduction
of the unspecified instrument and piano score. Formally, the arrangement preserves the modified variation-rondo \((T-A-A1-T1-A2-B-C-D-T2/codetta)\) as its structure, but a short codetta/tango reprise \((T2)\) is added at the end of the composition (Appendix A, Figure A.5).\(^6\) The addition of \(T2\) will be addressed later in the analysis.

One of the basic changes made to the arrangement concerns the tempo of the work. It is written as a quarter-note equals ninety beats per minute, which is considerably slower than the rapid tempos taken by Zappa's earlier amplified chamber ensembles. This decrease in tempo lends the work a sarcastic undertone, and alters the underlying philosophy of the original score. Earlier in the analysis, it was explained that bebop jazz generally featured complex melodies that were performed at fast tempos as to exclude non-bop musicians, or "outsiders." This concept unquestionably coincided with the earlier performances by Zappa's amplified ensembles. However, with the reduction of the tempo in the orchestral arrangement of the \textit{Be-Bop Tango}, the tenets of bebop are cast aside for the florid, sensual pace of the tango and the attractive timbres of the orchestra. Nonetheless, the melodies in the orchestral arrangement maintain a sense of urgency and continue to search for resolution.

A second change to the \textit{Be-Bop Tango} is located at the beginning of the piece. In chapter three it was explained that the first four measures (mm. A-D) serve as a vamp for spoken introductions and instructions. These four measures are numbered and identified as the official beginning of the chamber orchestra arrangement, mm. A-D now equal mm. 1-4. The opening \textit{marcato-sincopia} tango introduction (mm. 1-8) is scored for horns, trombones, and percussion (Example 4.1). In the recorded performances of the amplified chamber ensemble arrangements,

\(^6\) The musical examples that follow are reduced versions of the orchestral score and were created by the analyst. Dynamic marking were omitted for reasons of space and clarity. For a detailed score contact Munchkin Music/The Zappa Family Trust at www.zappa.com.
the trombone was scored in the same location and served the same function. The tango introduction is accompanied by three percussionists using sandpaper blocks, two snare drums, and bass drum, and simulates the function of a drumset in a dancehall setting.

Example 4.1. *Be-Bop Tango* for chamber orchestra, Tango Introduction: $T$, Reduction
Starting on the last eighth-note of m. 8, the first phrase of the main theme is performed by the trumpets, while the staccato sixteenth-note accompaniment figure is performed by horns, trombones, tuba, timpani and sandpaper blocks (Example 4.2).

Example 4.2. Be-Bop Tango for chamber orchestra, Theme Group A, Phrase A/a, Reduction

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

The first change in the harmonic structure of the arrangement occurs in m. 9. The bass line outlines a descending G major trichord, which leads to A in m. 10. Absent in the unspecified instrument and piano score, the lowest note of the arpeggiation (G) is placed in the timpani and emphasizes its importance as the root of the second chord in m. 9.

A second change to this passage is orchestrational and concerns the inclusion of written percussion parts. Since the percussion parts were improvised in the original score, new material was added during the revision process. These new parts were added before the entrance of A/b in m. 10 (m. 6 in the original score), between phrase A/b and A/b’ in m. 11 (Example 4.3a), before
the first thematic variation, $A_1$ (Example 4.3b), and between episode $B$ and theme group $C$ (Example 4.3c).

In addition, the added percussion parts function in a variety of ways. First, they are used for rhythmic motion and a contrast in timbre. In Example 4.2, the percussion is used as a rhythmic transition between the two subphrases of the main theme group. Second, the added parts are used for rhythmic and metric contrast. For example, in m. 12 (Example 4.3a) the triplet eighth-note figure in the piano and strings, and the quarter-note triplets in the snare drum increase the perceived pulse by one-third. This metric alteration obscures the natural pulse of the phrase and establishes a new tempo, which is quickly abandoned in the following phrase, $A_1/b'$. Third, the added percussion parts serve as a thematic anacrusis to the major phrase groups (Example 4.3b). In m. 16, the bongos explore the sixteenth-note septuplets from the previous theme group and lead directly to the first phrase of variation $A_1$.

Example 4.3a. *Be-Bop Tango* for chamber orchestra, Main Theme $A/b$ and $A/b'$, Percussion Interjection, Reduction

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
Example 4.3b. *Be-Bop Tango*, Variation A1, Phrase A1/a Percussion Introduction, Reduction

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

And fourth, the percussion serves as a hybrid of the previous three functions (Example 4.3c). At the end of episode B in the original score, a written indication apprises the percussionist that he or she should perform an improvised drum fill; however, in the orchestral arrangement three measures (eight beats) of composed percussion material are inserted into the score. The new material at the end of episode B (mm. 31-33) functions as a solo passage and acts as a pick-up into the next major phrase group, C/c.

Continuing with the analysis of the orchestration of the main theme group, the second and third phrase, A/b and A/b’, are performed by the woodwind section and the mandolin, and trumpets and harp respectively (Example 4.4). The castanets, bongos, snare drum, and piano perform the interjections that occur between the phrases. Assisting the percussion in the temporal reinforcement of the ensemble, the staccato attack of the plucked string instruments not only strengthens the basic pulse of the passage but also accentuates the melodic line. The pizzicatos can be interpreted as the adaptation of not only the strong piano articulation notated in
Example 4.3c. *Be-Bop Tango*, Episode B, Composed Percussion Parts, Reduction


© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
the original written score, but also the combined sound of the marimba and picked electric guitar from the earlier amplified ensemble arrangements.

At the end of the main theme (mm. 13-15), the trumpets and harp perform the final two notes of the melody, and the woodwinds and remaining members of the brass section perform the accompanying chords in m. 14 (Example 4.5). Using tremolo to sustain the notes of the chord, the harp part can be interpreted as a transcription of the violin tremolo performed by Jean Luc Ponty on the "Farther O'Blivion" medley recording on Beat the Boots I: Piquantique (1973).

Example 4.5. Be-Bop Tango, Theme Group A, Phrase A/b’, Harp Tremolo, Reduction

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

At this point in the analysis, it is important to elucidate on the specific orchestration and function of the brass section, not only as it pertains to the performance of the main thematic material, but also the supplied accompaniments. For example, starting in m. 13, the trumpets perform the final phrase of the main theme group. They are instructed to use a wah-wah type of sound (Example 4.6). Since a specific mute is not indicated in the score it must be inferred that
the trumpet players should use the fingers of their left hand to slowly change the timbre from a closed, muted sound to an more open and brighter tone; it is used in tandem with a quick glissando that ascends by an interval of a minor seventh from G to F (m. 14).


Moreover, on the second eighth-note of beat 2, the trombones perform the same gesture with plunger mutes. The altered trumpet and trombone timbres contain jazz-like connotations that reinforce the overall musical philosophy of the piece. The woodwind and low brass sections are used to articulate and reinforce the last chord of the phrase.

A second example of the orchestration and function of the brass parts involves the transcription and notation of improvised trombone glissandos, which were used in the live performances of the tango introduction. On the first recording of the Be-Bop Tango (*Piquantique*: "Farther O'Blivion") the trombone and rhythm section performed the primary tango rhythm. The trombonist added a glissando between the last eighth-note of one measure to the first note of the next measure. Even though the glissando is absent in the original score, it does add a burlesque quality to the composition. Due to its unique melodic character and humorous overtones, the trombone glissando is transcribed and inserted into the orchestral arrangement and occurs on the last eighth-note of every two-measure group (see Example 4.1). The transcription and notation of unwritten melodic ornaments (glissandos, pitch bends, grace notes, and tremolos), and their subsequent appearance in the orchestral arrangement provides

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
sufficient evidence that the original score and live recordings were both used to create the orchestral arrangement of the *Be-Bop Tango*.

A second example of this type of orchestration can be found in the harp part at the end of theme group A (mm. 14-15). As noted earlier in the analysis, the harp performs a tremolo, which is constructed using a Db-G dyad in the right hand and a C-F#-B trichord in the left hand. When combined, these two cells form a set of three dyads, C-Db/F#/G/B-Db. The various dyads explore the motivic relationship between the intervals of a minor second and a diminished third; the dyads are separated by an augmented third and major third respectively. However, the tremolo is absent in the original score, but its origin can be found on the live recording of the "Farther O'Blivion" medley. During the section that featured the *Be-Bop Tango*, violinist Jean Luc Ponty performed a tremolo on the last note of phrase A/b', but subsequently, due to Ponty's dismissal before the Roxy recording tour dates the tremolo was omitted. Just as the violin tremolo was used to create dramatic tension during the live performances, the combined harp tremolo and flute fluttartongue in the orchestral arrangement heightens the dramatic effect of the phrase, acts as a transition to variation A1, and can be interpreted as the transcription and adaptation of the violin tremolo.

The division of the orchestral forces among the three phrases of theme group A and the resulting contrast in timbres supplies the piece with musical drive, which was lacking in the performances of the amplified chamber ensemble arrangements. Due to the new orchestration and its quasi-pastiche quality, it is the contention of the analyst that the presence of timbral momentum provides the work with greater depth, and supplants the need for *allegro* and *vivace* tempos to create musical interest.
The next important change to the arrangement concerns the structure of the final sonority in theme group A (m. 14). In Example 3.6 of the previous chapter, the chord progression is classified as a complete cadence, however, in the orchestral arrangement the final chord of the progression, a G major triad plus a major second, has been changed to a dissonant sonority, C#-C- E-F#-G-A# (D-28, vector [2 2 4 2 2 3]) (see Example 4.5). The construction and context of the new sonority cancels its previous cadential classification, and continues to drive the music forward. Consequently, the resolution of the main phrase is delayed until the final phrase of variation A1 in m. 23.

The next change to the arrangement is thematic. In the original score, five and one-half beats of silence are inserted between the end of theme group A and the beginning of variation A1. Nevertheless, the notated rests were abandoned during the live performances by Zappa's ensembles. Usually, one of his three percussionists would maintain a steady pulse to provide rhythmic drive and temporal unity, while the other two percussionists would improvise percussion fills; the improvisations added to the rhythmic interest of the work.\(^7\) In an interview with percussionist Ralph Humphrey, he stated that, "At some point, Frank felt it necessary to keep a pulse running through his difficult pieces, not only for the band's sake, but for the audience's as well. I don't think the pieces were composed with this in mind. I feel that the pieces work much better with no pulse. Then, the rhythmic pushing and tugging would be much more effective and create a tempo that would seem to change constantly."\(^8\) In the subsequent orchestral arrangement of the Be-Bop Tango, the steady pulse is abandoned. At the end of

\(^7\) During the 1973 and 1974 performance tours, Zappa employed two drumset percussionists, Chester Thompson and Ralph Humphrey, and one classically trained percussionist, Ruth Underwood.

\(^8\) Humphrey, Interview
m. 15 two written beats of silence are followed by three beats of written percussion music (Example 4.7).

Starting on the last eighth-note of m. 16 in the example below, the melody in the first phrase of \( A1 \) is scored for marimba and first violin, and is doubled two octaves higher by the glockenspiel and a major third lower in the second violin. The phrase is accompanied by the trumpets and trombones performing a rhythmic inversion of the introductory tango, which supplies formal depth to the passage.

The second phrase of the variation, \( A1/a-b \), is scored marimba and violin (Example 4.8). Tom-toms double the rhythm and contour of the phrase and add an additional color to the overall timbre of the passage. The melody in the third and final phrase of variation \( A1 \) is score for flute and doubled by the tenor saxophone, marimba, and cello.

When doubling the melody, Zappa had a proclivity for using mallet percussion. In \( A1/a \), the glockenspiel supplies the phrase with a lighter sound as opposed to the dark, mellow brass
sound of the main theme group (see Example 4.7). The doubling of the melodic line at a major
third in the second violins is the only instance of a non-octave or unison doubling within the
work. It can be inferred that this doubling procedure may have been used to provide harmonic
variety and/or to intensify the string sound.

The timbral weight of the orchestral sound drops dramatically between $A1/a$ and $A1/a-b$;
the bright orchestration of $A1/a$ modulates to a darker, yet thinner sound, which arises from the
use of marimba, tom-toms, and a fortissimo violin part in $A1/a-b$. Timbral modulation is not a
new concept, but in Zappa's music it is essential, not only for the contrast and variety it provides,
but also how it reinforces his general philosophical aesthetic concerning orchestration and its
affect on musical form.

Interrupting the melodic flow of variation $A1$, several quarter-note triplet counterfigures
are inserted and are scored for bassoon, horns, and tuba, and harp, mandolin, guitar, and
pizzicato strings respectively (Example 4.7 and Example 4.8). Providing a linear rhythmic
counterpoint, these figures reinforce not only the harmonic shift in the passage, but also the
timbral modulation that began in $A1/a$. The dark sound of the low brass counterfigure that ends
$A1/a$ shifts to a lighter, quicker plucked string sound at the end of $A1/a-b$. Additionally, when
the two melodic phrases and their accompanying counterfigures are analyzed, a timbral voice-
exchange takes place. The melodic line shifts from a bright sound to a darker sound, while the
counterfigures shift from a dark sound to a lighter sound.

The harmonic progression that accompanies $A1/c$ is scored for bassoon, horns, and tuba,
and is reminiscent of the quarter-note triplets used at the end of $A1/a$ and $A1/a-b$. Lending the
phrase a fuller, more intense sound, the combination of instruments in $A1/c$ continues the timbral
modulation initiated in the first two phrases. The passage progresses from the lighter thinner

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
timbre of the second phrase to a richer, more blended sound in the final phrase. The thematic, harmonic, and formal functions of these figures were explained in the chapter three.

An additional change in the orchestral arrangement can be observed in the various doubling procedures and how they affect the perceived timbre of certain passages. In mm. 21-23 of the previous example, the melody is performed by the flute and is doubled an octave lower by the tenor saxophone. Absent in the original score, this type of melodic doubling emphasizes the importance of the thematic material, but it does obscure the function of the harmonic progression at the end of the phrase. At the end of $A1/c$ in the original score, the $C\#-F\#-G-B$ sonority functions as a point of repose and transition, but in the orchestral arrangement the $Bb$ and $B-$natural are voiced in the same register in the tenor saxophone and the horn parts; the resulting harmonic conflict annuls the original cadential effect.

The next change made to the Be-Bop Tango concerns the first tango reprise ($T1$) in mm. 24-27 (Example 4.9). It is two-fold and involves the addition of *ad-lib* solos and indeterminate vocal "noises," and the permutation of mm. 25-26. In the original score (mm. 20-23), the passage oscillate between two sonorities, $Eb-F-F\#-A$ (N-17) and a $Bb$ major triad with a raised eleventh (N-13), but in the orchestral arrangement, the second and third measures are rotated out of their original positions, thus creating an ascending harmonic progression (Examples 4.9 and 4.10). For the sake of clarity and space, the piano part has been omitted from Example 4.10.

The measure permutation of mm. 25 and 26 supplies the passage harmonic direction. It provides a bass line that ascends from $A$ to $Bb$ as opposed to the wandering harmonic scheme associated with the $A-Bb-A-Bb$ root progression in the original score; the new measure order increases the dramatic tension of the passage.
Example 4.9. *Be-Bop Tango*, Tango Reprise: T1

**T1: First Tango Variation**

ad-lib Saxophone Solo

Pizz. Upper Strings

Woodwinds (Flute)

Pizz. Lower Strings

Right hand: ad lib. solo a la Monk (Shown solo as played by Hermann Kretzschmar of Ensemble Modern). Left hand play as written.

Left Hand loco

Laugh, mumble, etc.

(Woodwinds + Brass)

(Brass + Strings)

Flute + Piano + Strings

Pizz. Strings

(Woodwinds + Brass)

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
Example 4.10. *Be-Bop Tango*, Tango Reprise: *T1*, Measure Permutation, Reduction

Concerning the orchestration of *T1*, the percussion and string sections perform the introductory tango *marcato-sincopa* rhythm while the tenor saxophone and piano perform rubato *ad-lib* solos. The woodwinds (excluding the tenor saxophone), brass, harp, mandolin, and guitar are instructed to "laugh," "mumble," and make noises that usually associated with the atmosphere of a crowded nightclub. The woodwinds and strings exchange parts in mm. 25 and 26, and on beat 3 of m. 27.

The *ad-lib* saxophone solo is based on the manipulation of a minor trichord, D-E-D-F. In m. 26, the gesture is repeated and transposed up a major second, E-F#-E-G. The trichord and its subsequent transpositions reinforce the structural importance of the minor third, which is used throughout the *Be-Bop Tango*. The saxophone *ad-lib* solo reappears in the final tango variation/reprise (*T2*) in mm. 49-50.
In Example 4.9, the *ad-lib* piano part clearly illustrates Zappa's knowledge of the compositional and improvisation practices of the jazz composer and pianist Thelonious Monk. The right hand performs a series of Db whole-tone scales, while the left hand performs eight-notes that alternate between an F# diminished triad and an F dominant seventh chord. The bi-tonal clash these two chords create further reinforces the minor second and the tritone as structurally significant intervals. Since the whole-tone collection has been used previous in the piece, most notably at the end of m. 5 and as an added-note whole tone collection in m. 9, the purpose of this collection in *T1* becomes increasingly clear. The inclusion of a stylistic *homage*, or allusion, to Monk's style of composition and performance (unorthodox melodic construction, unexpected phrase endings, whole tone collections, unusual chord progressions, tone clusters, irregular accents, and asymmetrical rhythmic structures) within the nightclub atmosphere of *T1*, reflects not only Zappa's knowledge of prior popular-art music styles, but his depth as an artist. As the passage continues the allusion is broken by the minor third arpeggios in m. 25 that ascend chromatically from D# to Eb. The Eb resolves to D natural on the second eighth-note of m. 26.

The first tango variation (*T1*) is important for several reasons. First, the aleatoric vocal parts provide a temporal connection between the earlier live recordings of the original score and the orchestral arrangement. Both contain noises associated with a live musical event. The two

---

9 The indication *ala' Monk* refers to bebop jazz composer and pianist Thelonious Monk (1917-1982). Zappa's fascination with bebop and free jazz composers included other such notables as saxophonist Ornette Coleman, woodwind specialist Eric Dolphy and bassist Charles Mingus. Besides the obvious *homage* to Thelonious Monk in the tango reprise of the chamber orchestra arrangement, the theme to Monk's composition *Straight, No Chaser* is quoted by keyboardist George Duke in the improvised section following the performance of the written score of the "Be-Bop Tango (of the Old Jazzman's Church)" on the recording *Roxy & Elsewhere*.

live recordings of the *Be-Bop Tango* contain stage noise (performers tuning, practicing, chatting, etc.), audience banter (laughing, talking, drinks being served, etc), and other extraneous sounds, which are inserted into the orchestral arrangement. However, the origins of the transcribed nightclub noises in the arrangement can be found five years prior to the *Piquantique* and *Roxy & Elsewhere* recordings. On the Mothers of Invention second album *Absolutely Free* (1967), two songs, specifically "America Drinks" and "America Drinks and Goes Home," are set in a cocktail bar and contain sounds associated with this environment: the cash register, customers engaged in senseless conversations, clinking drinking glasses, and "an insipid lounge band and vocalist."11

This type of environment is a recurring theme in Zappa's work. Furthermore, this is not the first time an aleatoric passage was included in the performance of the *Be-Bop Tango*. Documented on *Roxy & Elsewhere*, Zappa inserted an interpretive dance passage to accompany keyboardist George Duke's scat vocalization of the main *Be-Bop* theme.12

When asked about the orchestration and notation of the tango reprise in the orchestral arrangement, Ali Askin stated that during the arranging and rehearsal process, "Mr. Zappa decided to put this [the aleatoric jazz section] in when they [the Ensemble Modern] were rehearsing the piece in 1992. He did it on the spot. He told Herrmann Kretschmar [the pianist] to play a jazz fill in that bar [the pianist's instructions in the orchestral score consist of the right hand performing an *ad-lib* solo *ala* Monk] while the left hand plays a series of chord reminiscent

---


of the opening tango harmonies]. He didn't tell us why he wanted to do that, but he liked that loose kind of jazz club ambience."\(^{13}\)

Since \(T1\) employs general stage directions to imitate the sounds of a nightclub or lounge, it can be construed that the addition of the indeterminate nightclub ambience in the orchestral arrangement was heavily influenced by Zappa's previous experiences with various lounge bands in his youth, his experimentation in the recording studio with recorded environments on the early Mothers albums, and the types of venues he performed in during his later years. \(T1\) is the direct transcription and arrangement of the audience noise and concert hall ambience Zappa experienced as a live performer. For a discussion concerning the concepts of allusive and referential environments and temporal transference in Zappa's music please see chapter five.

The second reason why \(T1\) is important is because structurally it provides a clearly defined formal separation between variation \(A1\) and \(T1\). In the early recordings of the original score, \(T1\) sounds slightly banal and subdued when compared to the active thematic material that precedes and follows it. The inclusion of the \textit{ad-lib} tenor saxophone solo and the extraneous nightclub noise clearly delineate the passage from its surroundings, and provides the necessary boundaries that enable the section to reach a greater formal distinction that was otherwise lost in the unspecified instrument and piano score.

Continuing with the instrumentation of the orchestral score, the next change to the \textit{Be-Bop Tango} is located in variation \(A2\). Starting on beat 3 of m. 27, \(A2\) is scored for flute, tenor saxophone, piano, and strings (Example 4.11). Due to the soft dynamics and registers employed, its overall timbre is lighter in sound; the piano doubles the melody two octaves higher.

\(^{13}\) Askin, Interview
The rhythms in the accompanying brass parts are derived from the rhythms in m. 9, and are used as rhythmic interjections.

The orchestration of the woodwinds in variation A2 provides another example of timbral modulatory methods and Zappa's unique orchestral doubling procedures. In the first two measures of A2, the flute performs the first four notes of the main theme (F-E-F#-G), and is doubled an octave lower by the tenor saxophone. When the F# and G are repeated in m. 29, the flute is doubled by the oboe at unison, and leads directly to a quintuplet on the last beat of the measure. It is performed by the flute, and doubled by the oboe and clarinet at unison.
Considering that the flute is the only instrument used consistently throughout variation, it serves as the primary timbre for the passage. The oboe, clarinet, and tenor saxophone are used to color the sound and provide weight to the melodic line.

The perceived modulation in instrumental color in variation A2 corresponds directly to Zappa's philosophy on timbre and how its weight affected his musical compositions. Zappa has stated in several interviews that timbre is more important than note-choice in determining the genre or style of his works,

I've developed a 'formula' for what these timbres mean (to me, at least), so that when I create an arrangement -- if I have access to the right instrumental resources -- I can put sound together that tell more than the story in the lyrics, especially American listeners, raised on these subliminal cliches, shaping their audio reality from the cradle to the elevator.\textsuperscript{14}

This philosophical stance can be observed in the orchestral arrangement of the \textit{Be-Bop Tango}, through its use of muted brass instruments, specifically the trumpets, the addition of \textit{ad-lib} solos in the tango variations, and the orchestration of the percussion section as a drumset; all of which are reminiscent of jazz and popular music. This issue will be further explored in chapter five.

The next major change to the score concerns the orchestration of episode \textit{B}. Starting in m. 31, the descending Eb-D dyad at the end of A2 leads directly to the first note of episode \textit{B} (C) in m. 32 (Example 4.12). In the original score, it is written as the top note of an indeterminate tone cluster in the piano part, however, in the orchestral arrangement it is written as the lowest note and is scored for horns, low brass, non-pitched percussion, piano, harp, and low strings performing \textit{col legno battuto}.

\footnote{\textsuperscript{14} Zappa, \textit{The Real Frank Zappa Book}, 171; and Watson, "Frank Zappa as Dadaist: Recording Technology and the Power to Repeat," 117.}
Although the last measure of A2 and the first measure of episode B overlap in m. 31 (due to the anticipatory tone cluster), episode B does not formally begin until m. 32. As was noted in chapter three, the inner harmonies and bottom note of the tone cluster are indeterminate; however, in the orchestral arrangement, specific pitches are used in the construction of the chromatic tone clusters. In both instances, the tone clusters are invariable in density and are used for percussive effect.

The tone clusters in episode B are created using a variety of methods. The pianist uses his or her arms to create a chromatic cluster, and although notated as a hand slap, the harpist is...
instructed to create an *ad-lib* tone cluster.\(^{15}\) The horns and low brass play a five note chromatic cluster, A-Bb-B-C-C#, and the low strings play their lowest notes *col legno battuto*. This specificity of notation reinforces the importance of the prior voice-leading in the previous passage, Eb-D-C. Since the woodwinds and high strings are excluded in this passage, the overall sound of the episode can be described as dark and percussive.

The next notable change in episode *B* is related to the *ad-lib* saxophone solo in *T1* and involves the use of indeterminate notation, and how it affects the contour of the perceived melodic line. In the second half of the cluster measures, specifically the quarter-note triplets on beat 3, two different indeterminate notation symbols are used in the low brass and low string parts to indicate the *highest note possible*; specific expression markings are used to denote the quality of the sound. Since both instrumental families use different markings and timbres, different note-heads are used. The trombones and tuba use an inverted V-shaped note-head, and are instructed to play *as high as possible*, while the low strings use a black triangular note-head and use the written indication *very high and squeaky*. Because the *highest pitch possible* differs from instrument to instrument and performer to performer, the use of two different triangular note-heads is possibly the best indication to achieve the desired musical results.\(^{16}\)

\(^{15}\) Since the pitch selection of the harp is limited due to the mechanisms of the pedals, the harpist must find a sonority that closely resembles a chromatic tone cluster. For example, one such sonority would consist of A#, B, C, Db, E#, F, and Gb, and comprise two tone clusters separated by double augmented second, A#-B-C-Db and E#-F-Gb. However, the sonority in the *Be-Bop Tango* harp part is notated as a hand slap cluster. Either method is suitable because at the lower register of the harp, "pedal settings become immaterial because the pitches can no longer be heard clearly." Kurt Stone, *Music Notation in the Twentieth-Century* (New York: W.W. Norton & Company, 1980), 231.

\(^{16}\) Ibid., 65.
indeterminate notation used in episode $B$ has its inception in the works of Krzysztof Penderecki.\textsuperscript{17}

Rhythmically, even though the orchestral arrangement of episode $B$ is written almost exactly like the unspecified instrument and piano score, the use of indeterminate pitch notation and written registral indications (\textit{very high} and \textit{very high and squeaky}) has an effect on the melodic contour of the passage. In the original score, the two quarter-note triplets in m. 28 are written as low indeterminate clusters, however, on the two recordings of Zappa's amplified ensembles from 1973 and 1974, the clarinet and violin play extremely high pitched, dissonant notes on the quarter-note triplet figures. Since these instrumental parts are not indicated in the score, it can be ascertained from the thematic and timbral analysis of the orchestral arrangement that the notation in the original score and its recorded performances were combined to create many of the written indications used in the orchestral arrangement. Additionally, the indeterminate tone cluster notation connects episode $B$ with the indeterminate vocal notation and \textit{ad-lib} solos of the first tango variation ($T1$). This relationship in notation reinforces the hypothesis that episode $B$ is a separate passage and not an extension of variation $A2$. (The musical influence of Charles Mingus' "Trio and Group Dances" and its similarities to this episode was discussed in chapter three.)

Another notable thematic change made to the \textit{Be-Bop Tango} concerns the transition between the ending of episode $B$ and theme group $C$. As mentioned earlier, new percussion

\textsuperscript{17} Krzysztof Penderecki (b. 1933) uses triangular notation in his composition \textit{Anaklasis} for Strings and Percussion Groups (1960). In the performance notes, a black or white triangular note-head indicates the "highest note of instrument (no definite pitch)." Krzysztof Penderecki, \textit{Anaklasis} (Germany: Hermann Moeck Verlag, 1960); and Cindy Bylander, “Krzysztof Penderecki.” \textit{Music of the Twentieth-Century Avant-Garde: A Biocritical Sourcebook}, Edited by Larry Sitsky (Westport, Connecticut: Greenwood Press, 2002), 375.
material is added in mm 34-37 (Example 4.13). This is not only a thematic change (due to the addition of new material that is based on the rhythmic complexity of earlier variations), but since the length of the episode has been altered, the change is formal as well.

Example 4.13. *Be-Bop Tango*, Episode *B*, Composed Percussion Parts, Reduction

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

In the original score a single line staff appears between the piano staves (m. 30). Four slanted beat-slashes divide the measure into four equal time intervals, while the written direction "Drum Fill" is used to indicate to the percussionist that an improvised fill should be inserted in the measure. However, in the orchestral arrangement four extra beats are added at the end of episode *B*, and the new percussion materials are inserted. The passage is divided into three measures of alternating triple and duple meter. Starting on the downbeat of m. 34, percussion 2
and 3, using five tom-toms each, perform an interlocking rhythmic figure that features a series of sixteenth-notes and sixteenth-note tuplets within a rhythmic ratio of 7:6, or a metrical division of seven eighth-notes within the space of six eighth-notes. The two percussion parts converge in m. 35 to perform the same rhythmic figure. The metrical unit is divided into a 5:4 ratio, five eighth-notes within the space of four eighth-notes, while on beat 2 of m. 36 the metrical unit is divided into 11:8, eleven sixteenth-notes within the space of eight sixteenth-notes. Within these three measures and their corresponding metrical divisions, the sixteenth-note and sixteenth-note triplet figures are used to create a quasi-melodic contour, negate the preceding metric pulse in episode B, and give the impression of a slight increase in tempo.

The percussion soli at the end of B performs a triple function. First, it sustains the timbral indeterminacy of the previous cluster episode. Second, the rhythmic complexity of the soli provides a solid transition from the septuplets in episode B to the rhythmic intricacy of theme group C. And third, it increases the dramatic tension caused by the extension of the phrase. Since the orchestral version of the Be-Bop Tango was an attempt to revise and arrange a work that originally contained improvised musical materials for a standardized ensemble, the inclusion of written percussion parts must be construed as Zappa's attempt to create a uniform score that would not deviate from performance to performance.

Continuing with the analysis of the orchestration of the work, starting in m. 37, the melody in theme group C is scored for clarinet and doubled by the guitar an octave lower in the

---

18 In his study of Zappa's The Black Page, James Borders arranges Zappa's rhythmic procedures into two levels of complexity. "Level-one" involves the placement of triplets, quintuplets and larger tuplet divisions on the regular recurring pulse. "Level-two" involves the combination of "level-one" complexity with the division of the basic quarter-note pulse of a measure by a tuplet (three quarter-notes in the space of two quarter-notes). Borders, "Frank Zappa's The Black Page: A Case of Musical Conceptual Continuity," 143-144.
first phrase and by the marimba at unison in the second phrase (Example 4.14). Both instruments are used to accentuate the attack of the individual notes of the melody. The melody is accompanied by sustained sonorities in the woodwinds and brass, while the strings are instructed to play directly on the bridge of the instrument.\textsuperscript{19} Described in the score as a "sand-sound," this extended technique can be characterized as a non-pitched noise and recalls the sandblocks from the previous tango variations.

Near the end of the second phrase of $C$ (m. 41), the orchestration changes from the warm timbre of the clarinet, marimba and guitar to the thin, reedy sound of the oboe, marimba, and piano (Appendix B, Table B.1). When compared to episode $B$ and $C/c$, the orchestration of $C/c'$ is lighter and further illustrates Zappa's timbral modulatory techniques. The modulation encompasses: the combination of the marimba and guitar in m. 40; shifting to the combination of marimba and piano in m. 41; to the use of sustained sonorities in the woodwinds and brass sections, and the \textit{ad-lib} glissandos in the harp in m. 42. The combination of the crescendo in the woodwind and brass sections and the addition of harp glissandos in mm. 42-44 provide a direct contrast to the dry, staccato orchestration of the preceding theme groups. In addition, the harp glissandos are constructed using a synthetic scale, Bb-C#-D#-E-F-Gb-A, that accentuates the chord progression in mm. 42 and 43.

As mentioned in chapter three, mm. 42-44 have been identified as one of the most important moments in the work. Due to the absence of melodic and rhythmic activity, this

\textsuperscript{19} This technique has its inception in the early works of Krzysztof Penderecki from the 1960s. In the performance notes to Penderecki's \textit{Threnody for the Victims of Hiroshima} for string orchestra (1960), a black half circle intersecting the stem of a note indicates that the performer should "play on the bridge." Krzysztof Penderecki, \textit{Threnody for the Victims of Hiroshima} (London: Eulenber, 1960); Cope, \textit{Techniques of the Contemporary Composer}, 141; and Bylander, “Krzysztof Penderecki,” 375-376.

passage is described as an anti-climax. The abrupt, lush orchestration in the orchestral arrangement combined with the sustained sonorities further emphasizes the perceived feeling of
stasis, and counteracts the seemingly chaotic and unsettling anxiety the preceding melodic material produces in the listener. This section serves in a triple capacity: first, it provides a goal for the resolution of theme group C; second, it acts as an anticipatory transition between theme groups C and D; and third, it serves as an anti-climax. Furthermore, the anti-climax provides another example of a modulation of timbre. The harmony and overall timbre shifts from: the woodwinds, timpani, and horns; to woodwinds, timpani, horns, and trombones; and finally to only the brass and timpani. In general, the passage modulates from a bright sound to a dark mellow sound.

The sustained sonorities of the anti-climax lead directly to theme group D (Example 4.15). Starting on the last eighth-note of m. 44, the Bb in the first trumpet is doubled by the timpani, and the string section. As mentioned in chapter three, Bb functions as a common-tone pivot-note between the sustained sonorities of the previous passage and theme group D. The first phrase of the melody is divided between the trumpets. Due to the rhythmic complexity of the thematic material, it can be construed that the division of labor was necessary for practical performance purposes and possibly to increase the perceived anxiety of the melodic line. The horns and low brass perform and sustain the final chord from C/c’ (Bb-F-D-E). The orchestra- tion shifts from the previous lush tutti sound to the stark and exposed timbre of the ensuing trumpet solo; the marimba doubles the final sextuplet of the phrase.

At the end of D/d, on beat 4 of m. 46, the woodwinds and strings perform a rhythmic interruption using non-pitched percussion instrument (claves, maracas, triangle, cymbal, jingle bells, and agogo bells, vibraslap, metal guiro, big guiro, small cymbal, respectively). This percussive accent can be interpreted as an extension of the clusters used in episode B and serves as a timbral half-cadence, which emphasizes the phrasing between D/d and D/d’.
Example 4.15. Be-Bop Tango, Theme Group D, Orchestration, Reduction

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.
The second phrase of theme group $D$ is again divided between trumpet 1 and 2, but is unaccompanied. A second interruption occurs at the end of the second trumpet's statement (beat 2 of m. 48), however, only the percussion section (piatti, snare drum, and bass drum) is used. This accent reinforces the division between solo statement and the final tutti ending.\(^{20}\)

At the end of $D/d'$, the final sonority is performed by the entire ensemble and provides the piece with a strong dramatic climax; this is the only moment in the score where the entire ensemble is used (Example 4.16). The tenor saxophone performs one last reprise of the ad-lib

Example 4.16. *Be-Bop Tango*, Codetta/Second Tango Reprise: $T2$, Reduction

© 1993 The Zappa Family Trust dba Munchkin Music (ASCAP), All Rights Reserved, Used by Permission.

minor trichord motive used in $T1$, F-G-F-Ab. Although transposed up a minor third, the motive functions as a codetta and is labeled $T2$. Motivically, it connects the tango introduction and the first tango variation with the final tango reprise. Harmonically, the first two notes of the saxophone gesture (F and G) are excluded in the construction of the final sonority, C#-B-D-E-\(^{20}\)

\[^{20}\] The Italian term *piatti* (cymbals) is most likely used to indicate to the percussionist that hand cymbals are desired, as opposed to a suspended cymbal.
Ab-Bb-B-E-C. These two notes are non-chord tones, however, when the gesture unfolds from F to Ab, the harmonic conflict that is constructed in the beginning of the measure (between the G in the saxophone and the sonority in the orchestra) is resolved in the penultimate measure; the G resolves to Ab, a chord tone. The doubling of Ab in the saxophone and piano emphasizes the importance of the intervallic relationship of Ab and its tritone (D), and more importantly, it restores Ab as the tonal center of the work.

Concerning the orchestration of the final three measures, the harp glissandos that accompany the final sonority not only accentuate the lush orchestration of the penultimate measure, but they also provide a timbral counterpart to the anti-climax in mm. 42-44. In addition, when the glissando at the end of the work is respelled, it resembles a Bb harmonic minor collection.

At the end of T2, the entire ensemble performs one last percussive accent, which furnishes a musical exclamation point to the seemingly pervasive melodic dialogue. Formally, the inclusion of T2 closes a musical door left open by the ambiguous ending in the unspecified instrument and piano score. Since the orchestral arrangement was intended to be performed as an independent composition and not included in a larger medley, the inclusion of the tenor saxophone codetta (T2) provides a feeling of finality and completes the structural ambiguity that pervades the original score. Simply stated, the work begins with a tango and ends with a variation of the first tango reprise; the conflict that was noted in the score is now resolved in the arrangement. Additionally, with the inclusion of T2 the form of the Be-Bop Tango changes from an open-ended modified variation-rondo to a closed form, modified variation-rondo that consists of two interlocking sets of variations, T-A-A1-T1-A2-B-C-D-T2/codetta (Figure 4.1).
Variation Set 1:  $T \quad T1 \quad T2/{\text{Codetta}}$

Variation Set 2:  $A \quad A1 \quad A2 \quad (B) \quad C \quad D$

Figure 4.1. *Be-Bop Tango* for chamber orchestra, Interlocking Variation Structure

The first set of variations is comprised of the tango motive ($T$, $T1$ and $T2/{\text{codetta}}$). The second set of variations is comprised of the *Be-Bop* theme group ($A$), its variations ($A1$ and $A2$), and the main theme's subsequent episodes and developments ($B$, $C$, $D$).

The variation principle is a favorite of Zappa's and is used in many of his works from the early 1970's. The studio recordings *Lumpy Gravy, Part I* ($A-B1-C-B2-D-B3+\text{Coda}$) and *Burnt Weeny Sandwich, Side I* ($A1-B1-C1-A2-B2-C2$) reveal the use of modified variation and variation-rondo forms in a larger context.\(^{21}\) James Grier's analysis of Zappa's *Uncle Meat* reveals a double or alternating variation structure.\(^{22}\) Zappa abandoned this type of formal organization after the release of *Burnt Weeny Sandwich* and no longer used it to design and organize his lengthy studio albums and large formal works. His unique use of this complex form and its obvious relationship to his earlier immersion into multi-track studio methods left an indelible mark on his later compositions. The influence of the recording studio on the *Be-Bop Tango* will be addressed in chapter five.


CHAPTER 5

BE-BOP TANGO: INFLUENCES AND PHILOSOPHY

"Information is not knowledge,
Knowledge is not wisdom,
Wisdom is not truth,
Truth is not beauty,
Beauty is not love,
Love is not music,
Music is The Best."
- Frank Zappa, Joe's Garage, 1979

Due to its extremely angular melodies and rhythmic complexity, the Be-Bop Tango explores the divergent roles of popular music as entertainment and as art, and investigates the assimilation of various popular-art music styles within a contemporary classical construct. The focus of this chapter is to discuss Zappa's musical philosophy and early influences and how they manifest themselves, directly and indirectly, in the Be-Bop Tango.

Readily observed in the work, the extensive use of cellular melodic development; registral displacement procedures, specifically the exploitation of the intervals of a minor and major seventh, minor and major ninth and augmented eleventh; and the combined use pandiatonicism and suspended tonality illustrates Zappa's prior knowledge of both Stravinsky and Webern. As mentioned in chapter one, from his study of Stravinsky's recordings and compositions, Zappa discerned the importance of melodic development and the methods in which a motive can be manipulated through slight, but noticeable changes in rhythm and/or
pitch. And from his early studies of Webern's recordings and works, Zappa recognized the expressive nature of pointillism and how it could be adapted to create interesting and dramatic melodic lines, not only from one note to the next, but as in the case of the Be-Bop Tango, from melodic fragment to melodic fragment.

Not only does the development of the thematic material in the Be-Bop Tango represent Zappa’s understanding of Stravinsky’s methods, but it also personifies the musical philosophy of bebop jazz. As mentioned in chapter two, bebop emphasized melodic improvisation, angular melodies, extended harmonic exploration, and virtuosic performances. Just as the modernist musical works of the early twentieth-century were a natural outgrowth of the evolving post-Romantic era, bebop evolved from earlier jazz styles, and was developed as a musical and philosophical reaction against the constraints of swing jazz. Generally, bebop was performed by a "combo," a small group of musicians numbering from five to seven performers. In solo passages, a wind player or pianist would create a jagged, fast-moving melody which was sometimes based on the development of a small motive or melodic cell. The soloist was accompanied by the rhythm section (piano, string bass, and drumset) which combined moments of silence with punctuations that explored extended tertian harmonies (chromatically altered pitches in a diatonic context - flattened ninths, raised elevenths, and flattened thirteenth). Consequently, the instrumentation and general musical characteristics of the Be-Bop Tango epitomizes the bebop style and its principal philosophy of "an intimidatingly difficult tune that will exclude outsiders."

1 Watson, "Frank Zappa as Dadaist: Recording Technology and the Power to Repeat," 117.
In the later orchestral arrangement, the melody is performed by a solo instrument and is usually doubled at the unison and/or octave. Accompanying the melody, the ensemble performs various alterations and interpretations of extended pseudo-bebop harmonies.

As was stated in chapter one, Varèse's works inspired Zappa to investigate the subtleties of timbre and impressed upon the young composer the importance of musical balance and timing. Zappa made a connection between Varèse's so-called "blocks of sound" and how the aesthetics and techniques of certain visual art forms could transfer into the musical arts (specifically Calder's mobiles, pastiche methods, and tape collage construction). Zappa interpreted Varèse's blocks of sound as "any material" a composer chooses to balance and manipulate, whether it is visual, musical or dramatic. The balanced materials could include such elements as abrupt changes in tempo between musical passages, the juxtaposition of disparate musical materials, and/or the inclusion of non-musical dramatic elements within a live performance, written or improvised. Therefore, musical style can be incorporated into this broad definition; therefore, different styles of music can be balanced and developed to create tension and release.

Expanding upon the concept above, in an article entitled "Non-foods: Stretching Out with Vamps," Zappa provided insight into his musical processes and explained his personal ideas concerning tension and release. The composer stated, "My idea of a good time is a really simple-minded song followed by something that is out to lunch [something complex, absurd or both], and then back to simplicity again, and then out to lunch again. That's the way the world really is: It's not totally complex, and it's not totally simple. It's a combination of both."² Furthermore,

Zappa explained that, "The shock should be the idea of one type of music juxtaposed on another type of music." 3

As it pertains to the Be-Bop Tango and its use of dissimilar musical styles, the dichotomy that is created between the tango sections and the unrelenting complexity of the main "bebop" theme and its variations can be understood as Zappa's attempt at creating dramatic, stylistic expectations and the eventual release of the constructed tension. Related to Zappa's remarks stated above, the tango sections (T, T1, and T2) serve as the simple passages, while the main theme group (A), its variations (A1 and A2), and episodes (B, C and D) serve as the contrasting complexity, which produces the necessary conflict. Due to the absence of the second tango variation (T2) in the original score, the conflict of stylistic complexity that is created in theme group D is sustained and never fully resolved; however, in the orchestral arrangement when the ad-lib saxophone motive from the first tango variation (T1) is inserted at the end of the work, the initial (or simple) style returns and the conflict is resolved. The previously constructed expectations are satisfied.

Concerning the issues of balance and depth of musical construction, the use of dissimilar musical styles in the composition of the Be-Bop Tango can be observed on three different levels. The first level consists of the juxtaposition of different styles and their development during the formal, or temporal, presentation of the work (from section to section). The second level consists of the superimposition of style, whereby the angular complexity of the pseudo-bebop melody is counterbalanced by the simplistic, beat-oriented accompaniment of the tango. And the third level consists of different musical materials from one style combined with another. For

example, in the introduction, the basic rhythm of the tango is combined with the extended harmonies of bebop jazz. The direct juxtaposition and assimilation of dissimilar styles in the *Be-Bop Tango* can be seen as the direct result of Zappa's exposure to visual collage methods, his appropriation of Varèse's ideas concerning balance and timing, and his immersion into experimental recording techniques.

Another important aspect of musical style and how it pertains to the *Be-Bop Tango* concerns the cultural relationship that exists among the various styles of popular-art music. All three styles (tango, bebop, and art-rock) evolved from popular dance forms that were transformed by the repressed segments of a particular culture. As mentioned in chapter two, the tango was created by the immigrants and indigenous populations of Uruguay and Argentina and bebop evolved from the restrictions of swing jazz. During its inception in the 1950s, rock 'n' roll was accepted enthusiastically by the youth subculture and dismissed by the establishment as a passing fad. However, as the style evolved in the 1960s rock music was not only created for entertainment purposes, but used to spread the message of the youth counterculture. In the late 1960s and 1970s, rock music began to incorporate elements of jazz and classical music into its overall style.

Although the use of avant-garde twentieth-century compositional techniques in the *Be-Bop Tango* may seem antithetical (when analyzed in conjunction with the above mentioned popular-art styles), the underlying tenets of the techniques were created due to the dissatisfaction by modernist composers with the stagnant nature of their musical surroundings. Therefore, since all four styles used in the *Be-Bop Tango* evolved from similar social surroundings and for similar

---

4 *Art-rock* is a term usually associated with a subgenre of rock music that is characterized by complex harmonies, rhythms, and melodies, large musical forms, and orchestral arrangements.
purposes, and to a certain extent, maintain some degree of individuality, the various styles are assimilated into a cohesive and unified composition. This unification of dissimilar styles reflects quite emphatically Zappa's philosophy concerning non-value categorization. The composer claimed his *oeuvre* was undifferentiated with regards to its artistic merit, regardless of style, genre, or function, and his music could function as both art and entertainment.

Exploring the connection between timbre, style, and musical allusion, Zappa created in his compositions stylistic references and subliminal cliches that invoke personal associations and could manipulate the expectations of the listener. As Christopher Smith stated in his article "Broadway the Hard Way," "What results is a participatory, interactive process between composer, performers, and audience, in which reference, quotation, allusion, and parody become the signposts, and the semiotic tools, of a shared perceptual experience." This is not unlike the shared musical experiences of American listeners when they encounter the works of Charles Ives. This philosophical perspective can readily observed in the orchestral arrangement of the *Be-Bop Tango*. The pervasive use of brass instruments, specifically their muting techniques, and the *ad-lib* solos in the tango variations are all reminiscent of jazz. Furthermore, the percussion section is orchestrated in such a way as to emulate the sound of a drumset. For example, in the tango introduction, the sandblocks imitate the sound that wire brushes create when used on the

---

5 Zappa did not see a distinction between different styles of music or in their specific function; "serious" or classical music, and "non-serious" or popular-art music were perceived as equals in terms of aesthetics and value. For an in-depth discussion concerning Zappa, Adorno theory, and Marxism, read Arved Ashby's "Frank Zappa and the Anti-Fetishist Orchestra, " *The Musical Quarterly* 83, no. 4 (Winter 1999): 557-606.

head of a snare drum. All of the popular-art music styles found in *Be-Bop Tango* use a drumset in their primary instrumentation.

Addressing issues of style and indeterminacy, in the first tango variation (*T1*), the woodwinds (excluding the tenor saxophone), brass, harp, mandolin, and guitar are instructed to "laugh," "mumble," and make noises usually associated with the atmosphere of a nightclub. While the tenor saxophone and piano perform rubato *ad-lib* solos, the percussion and string sections perform the introductory tango *marcato-sincopa* rhythm. The pianist is instructed to perform an *ad-lib* solo *a la Monk* while the left hand performs a series of sonorities reminiscent of the opening tango harmonies. As previously mentioned in chapter four, the addition of notated indeterminate nightclub ambience in the orchestral arrangement of the *Be-Bop Tango* could be construed as the transcription and arrangement of the stage and audience noises heard on the previous live recordings from the 1970s.7

Earlier in his career, when Zappa was on tour with his ensemble, portable tape recorders were always operational, on the tour bus, backstage at the concert venue, at the hotel, even in restaurants. Eventually, fragments from these recordings would surface on Zappa's final record projects, and as according to Ben Watson would "become a documentary collage of the process of making music."8 In a conversation with *Rolling Stone* interviewer Jerry Hopkins in early

---

7 Some professionals in the recording industry consider live noise essential to a live recording of popular music. The ambience of the location (crowd noise, the size of the performance space, etc.) adds another layer of excitement to the recording, illustrates the dynamism of the performance, and documents the virtuosity of the individual performers as well as the entire ensemble.

8 Watson, "Frank Zappa as Dadaist: Recording Technology and the Power to Repeat," 115.
1968, Zappa explained the relationship that existed between his use of the recording studio and musical form,

All the material in the albums [MOI, from 1966-1968] is organically related and if I had all the master tapes and I could take a razor blade and cut them apart and put it together again in a different order it would make one piece of music you can listen to. Then I could take that razor blade and cut it apart and reassemble it a different way, and it still would make sense. I could do this twenty ways.9

This statement is an excellent example of Zappa's philosophical perspective concerning technology and its influence on musical organization.

As his personal style evolved in conjunction with the advances made in music technology in the following decades, his live compositions and performances reflected his experiences in the recording studio. Throughout his career, Zappa used the studio as a tool for composition and analysis, and his experience in the recording studio, where materials could be manipulated without the imposition of the barline, transferred to his written compositions. Consequently, his touring ensembles would have to learn how to accurately perform his recorded studio edits and jumpcuts in real time.

During the recording and final mastering process, Zappa employed xenchronic techniques to extract an instrumental track from one recording session, either a live concert or in the studio, and would later insert it into another multi-track recording session. Although the unrelated superimposed track and the main session tracks might contain different studio room ambience and noise, Zappa's time domain and pragmatic compositional approach, "AAAFNRA," outweighed the inherent differences in musical materials.10 Essentially, the notation and addition


of a secondary performance environment (i.e. the nightclub atmosphere in the Be-Bop Tango for chamber orchestra) is another example of Zappa extracting seemingly non-essential material from a recording, in this instance the extraneous noise of the two live Be-Bop Tango recordings, and placing it within a written musical score.

This later addition provides an important temporal connection between the ambience of the recorded crowd noise from the previous live recordings and the inevitable crowd noise, which will inevitably occur before, during, and after the performance of the orchestral arrangement. This dual concept of temporal dislocation and unification can be interpreted as Zappa's incorporation of collage tape techniques, xenochronic methods, and John Cage's musical philosophy of indeterminacy within a written composition. As Ben Watson points out, "the ability of technology [in this case the notated crowd noise] to preserve a tract of time makes us look more closely at the reality of American life."

11 The Be-Bop Tango preserves a "tract of time" and transcends the recorded document.

Additionally, the recorded atmosphere of a particular live event documents the musical, historical, and cultural origins of the written score and its interpretation. Not only does the orchestral arrangement chronicle the Be-Bop Tango's musical construction and evolution, but it also documents the historical context of the performance of the composition (i.e. the recorded crowd noise on "America Drinks" and "America Drinks and Goes Home" on Absolutely Free (1967), the 1973-1974 Frank Zappa and the Mother of Invention performance tour; the Roxy Theater in Hollywood, California; and the various recording techniques used by sound engineers in the 1970s).

---

Of all the privileges the recording process affords, perhaps the most significant is its capacity to allow the listener to reflect and meditate on things that would have otherwise have disappeared. By making the past present, by inviting the audience to contemplate a representation of what previously existed in a different location, the notated environment in the orchestral arrangement enables the audience to penetrate the past in the present performance, thus creating a unification of temporal dislocation. The revised arrangement of the *Be-Bop Tango* is where history and current performance collide.
"I think that if you write music, you should write for your own taste, whatever you like to hear and whatever style you want to write it in for whatever reason. It is a matter of expression, rather than a matter of living and dying by a certain popular style, whatever that style is."

- Zappa, The Mother of All Interviews, 126.

Composed during the early 1970s, the Be-Bop Tango was originally entitled The Malcolm McNabb and was used to feature the trumpet player on Zappa's Grand Wazoo Tour in 1972; it was later renamed Farther O'Blivion. While on tour with his amplified chamber ensembles in the 1970s Zappa would assign different theme groups to various members of his ensemble. Eventually, the written composition was renamed the Be-Bop Tango. On the two official concert recordings of the work, as "Farther O'Blivion" on Piquantique and as "Be-Bop Tango (Of the Old Jazzman's Church)" on Roxy & Elsewhere, the composition was usually featured within a larger medley. Eventually, the Be-Bop Tango was published in 1984 by Munchkin Music for unspecified instrument and piano.

An analysis of the score reveals that the form of the work is a modified variation-rondo (T-A1-T1-A2-B-C-D). The tango sections (T and T1) are based on the combination of bebop harmonies and the marcato-sincopa tango rhythm. The main Be-Bop theme (A), its variations (A1 and A2), and subsequent episodes (B, C and D) are constructed using the development of a
three-note, four-note or five-note chromatic cell, which are separated by a skip of a minor or major third, a leap of a diminished or augmented fourth or fifth, a leap of a minor or major seventh or minor or major ninth (including their inversions and simple equivalents). Compound intervals and registral displacement procedures are used for melodic variance.

The Be-Bop Tango's harmonic structures are variegated and serve a multitude of purposes. The work uses harmonic cells that substitute individual members according to context, either for functional purposes or for harmonic coloration; regressive chord schemes that do not correspond to either classical or jazz progressions; and unpredictable and nonfunctional bass lines that function with a dual purpose, to reinforce the sonorities they accompany and to serve as a simple counterpoint.

The chord progressions in the Be-Bop Tango follow a non-traditional functional harmonic structure and are analyzed according to interval strengths and context. Generally, in the final phrase of each of the major theme groups, neutral sonorities (N) progress to dissonant sonorities (D), which are used to maximize dramatic tension. The dissonant sonorities usually resolve to a neutral or consonant (C) sonority.

Classified as a revised arrangement, the orchestral version of the Be-Bop Tango was arranged by Zappa and Ali N. Askin and premiered in September of 1992 by the Ensemble Modern. The formal, thematic, and harmonic structure of the arrangement is an approximate reproduction of the original score. However, a few notable changes were made to the music, therefore it considered a revised arrangement.

In addition to instrumentation, various changes were made to the score including: alterations to the formal structure of the work, specifically the addition of the second tango variation (T2) at the end of the work; the addition of written percussion parts; minor changes in
harmony; and the inclusion of *ad-lib* solos and aleatoric passages that feature indeterminate vocal sounds, which were possibly derived from transcriptions of early recordings by the composer.

The *Be-Bop Tango* is an excellent example of Zappa's process of revision, as the composer matured, so did his compositions. Like Duke Ellington, another American composer who at various times crossed the line between popular and classical music, Zappa composed for the strengths and abilities of individual members of his touring ensembles. Through years of experience as a bandleader he learned how to alter, adjust, and re-orchestrate his compositions for the proficiencies of his musicians and whatever performing forces were available at the time. For example, the solo percussion piece *The Black Page* went through several changes during the 1970s and 1980s, and was adjusted according to the proficiency of his musicians.¹ To complete the Modern Ensemble's 1992 "Yellow Shark" concert program, several of Zappa's older acoustic compositions were revised and arranged, and his Synclavier pieces compositions were transcribed and orchestrated including *The Dog Breath Variations*, *Uncle Meat*, and *G-Spot Tornado* and *The Girl in the Magnesium Dress*, respectively.

Although Zappa detested labels and categories, in an attempt to classify the *Be-Bop Tango*, terminology usually associated with the composer and musicologist Gunther Schuller will be used, albeit modified. Generally, Zappa could be classified as an example of a “fourth stream” composer. Just as the term "third stream" is associated with any composer or composition that blends classical music with jazz elements, a composer working in the "fourth stream" could be defined as one who combines contemporary classical music with post-World

War II/pre-postmodern popular culture. Zappa drew his musical inspiration not only from the music of Varèse, Stravinsky, and Webern, but also from Dadaist humor, African-American dance music, jazz, doo-wop, rock 'n' roll music, the visual arts, and his socio-political surroundings, all of which eventually coalesced into a unique and individual personal musical style. As it pertains to the *Be-Bop Tango*, Zappa fused elements from bebop, tango, rock 'n' roll, and contemporary avant-garde classical music into a unified and convincing composition. The *Be-Bop Tango* is significant because it provides insight into Zappa's artistic processes, summarizes his musical and extra-musical philosophies concerning organization, style, technology, and revision, and is an archetype of post-World War II American eclecticism.

Since its publication in 1992, the orchestral arrangement of the *Be-Bop Tango* has been performed by various orchestras throughout the world, most recently by the Norrlands Opera Symphony in Umea, Sweden; at the Prague Spring International Music Festival in Czechoslovakia; the Birmingham Symphony Orchestra in England; the Colorado Symphony Orchestra in Denver; the New England Conservatory Orchestra in Boston; and the Orquesta Ciudad de Granada in Seville, Spain.

**Epilogue**

In late 1990 Zappa was diagnosed with advanced prostate cancer; it was inoperable. During the next three years, he continued to compose and supervise his entrepreneurial endeavors. The composer died on December 4, 1993 at the age of 52. After Zappa's death, Ali N. Askin continued to work for Zappa's wife, Gail, and The Zappa Family Trust. He compiled the composer's written scores and transcribed several of his completed Synclavier pieces. And in the summer of 2000, Askin and the Ensemble Modern successfully presented a second Zappa
concert program entitled "Greggery Peccary & Other Persuasions." It was performed in Amsterdam and Bologna, Italy.

The Zappa Family Trust continues to release posthumous recordings and supervise the live performances of the composer's compositions. To date, Zappa's catalogue consists of over 70 CD recordings and numerous scores for a variety of ensembles, and his family's business holdings include several record labels, publishing companies, a merchandizing franchise, and a video production company.

Since 1992 Zappa's contemporary classical music has been performed and recorded by ensembles throughout the world including the orchestra at the Tanglewood Festival of Contemporary Music, the Boston Modern Orchestra, the Sacramento Philharmonic Orchestra, the American Composers Orchestra, the San Francisco Symphony, the Meridian Arts Ensemble, the Omnibus Wind Ensemble, the Cincinnati College Conservatory of Music Wind Symphony, the Netherlands Philharmonisch Orkest, the Royal Concertgebouw Orchestra in Amsterdam, the Adelaide Symphony Orchestra in Australia, the Minnesota Contemporary Ensemble, and the Radio Telefis Eirann Concert Orchestra in Dublin, Ireland.

In 1994, two years after the composer's death, Pierre Boulez stated that, "As a musician he [Zappa] was an exceptional figure because he was of two worlds: the pop world and the classical world. That's not a very easy position because you are regarded by both camps as a traitor. His musicianship is very extensive. I think his pop work will survive because it is very characteristic of a period. And I think the serious work will survive because it is serious, without a doubt."

---

Eclectic and pragmatic, witty and ironic, Frank Zappa resisted any commitment to any one compositional method, style, or medium, and for him, high art and low art, serious and non-serious music existed without distinction. An experimentalist in the tradition of Charles Ives, Conlon Nancarrow, and John Cage, Zappa's unique polystylistic approach to music transcends genre or expressive medium. Musical quotation and stylistic allusion were compositional techniques that provided a greater depth of association and musical meaning to his music. And like John Cage, he was willing to experiment with new ways of thinking to further his own artistic goals. An icon of unrelenting individualism, Zappa's highly personal musical voice is indicative of late twentieth-century modernist composition.

---

BIBLIOGRAPHY


Grier, James. "The Mothers of Invention and Uncle Meat: Alienation, Anachronism and a


Gronow, Pekka. *Once I waited for someone: The story of the Finnish tango*. Virtual


Electronic letter.


James, Billy. *Necessity Is: The Early Years of Frank Zappa and the Mothers of


Koch, Lawrence O. "Harmonic Approaches to the Twelve-Bar Blues Form." *Annual

________. "Thelonious Monk: Compositional Techniques." *Annual Review of Jazz


# APPENDIX A: FIGURES

Figure A.1. *Be-Bop Tango*, Chord Quality Continuum

<table>
<thead>
<tr>
<th>Basic Chord Structure</th>
<th>Pitch Set/Prime Form</th>
<th>Interval Vector</th>
<th>Quality/Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. E-G-A-B</td>
<td>(0, 2, 4, 7)</td>
<td>[0 2 1 1 2 0]</td>
<td>Consonant</td>
</tr>
<tr>
<td>2. G-A-B-D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. D-E-G-A</td>
<td>(0, 2, 5, 7)</td>
<td>[0 2 1 0 3 0]</td>
<td>Consonant</td>
</tr>
<tr>
<td>4. F#-G-B-C#</td>
<td>(0, 1, 5, 7)</td>
<td>[1 1 0 1 2 1]</td>
<td>Consonant</td>
</tr>
<tr>
<td>5. F-Gb-Bb-C/</td>
<td>C-E#/F#/A#</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. A-C#/D#</td>
<td>(0, 2, 6)</td>
<td>[0 1 0 1 0 1]</td>
<td>Neutral</td>
</tr>
<tr>
<td>7. F#/G#/A#/C#</td>
<td>(0, 2, 4, 6)</td>
<td>[0 3 0 2 0 1]</td>
<td>Neutral</td>
</tr>
<tr>
<td>8. C-D-E-F#</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. D-E-F#/Ab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Eb-F-F#/Bb</td>
<td>(0, 2, 3, 7)</td>
<td>[1 1 1 1 2 0]</td>
<td>Neutral</td>
</tr>
<tr>
<td>11. E#/F#/A#/C#</td>
<td>(0, 1, 5, 7)</td>
<td>[1 1 0 1 2 1]</td>
<td>Neutral</td>
</tr>
<tr>
<td>12. Ab-C-D-Eb*</td>
<td>(0, 1, 3, 7)</td>
<td>[1 1 1 1 1 1]</td>
<td>Neutral</td>
</tr>
<tr>
<td>13. Bb-D-E-F*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. G-B-C#/D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. A-Db-Eb-E</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Db-Eb-E-G</td>
<td>(0, 2, 3, 6)</td>
<td>[1 1 2 1 0 1]</td>
<td>Neutral</td>
</tr>
<tr>
<td>17. Eb-F-F#/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. A-B-C-Eb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. E-G-Ab-Bb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Eb-F#/G-A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. D-E-F-Ab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. F-G-G#/B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. F#/A#/B-C</td>
<td>(0, 1, 2, 6)</td>
<td>[2 1 0 1 1 1]</td>
<td>Neutral/Diss.</td>
</tr>
<tr>
<td>24. G#/A-C#/D</td>
<td>(0, 1, 5, 6)</td>
<td>[2 0 0 1 2 1]</td>
<td>Diss./Neutral</td>
</tr>
<tr>
<td>25. A#/B-C#/D</td>
<td>(0, 1, 3, 4)</td>
<td>[2 1 2 1 0 0]</td>
<td>Dissonant</td>
</tr>
<tr>
<td>26. D#/E-F#/G</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. F-G-G#/A</td>
<td>(0, 1, 2, 4)</td>
<td>[2 2 1 1 0 0]</td>
<td>Dissonant</td>
</tr>
<tr>
<td>28. C-C#/E-F#/G-A#</td>
<td>(0, 1, 3, 6, 7, 9)</td>
<td>[2 2 4 2 2 3]</td>
<td>Dissonant</td>
</tr>
<tr>
<td>29. Ab-Bb-B-(C)-C#/D-E</td>
<td>(0, 2, 3, 4, 5, 6, 8)</td>
<td>[4 5 4 4 2 2]</td>
<td>Ambiguous/Diss.</td>
</tr>
<tr>
<td>30. Indeterminate Clusters</td>
<td></td>
<td></td>
<td>Diss./Percussive</td>
</tr>
</tbody>
</table>

*Most frequently appearing chords.
Figure A.2. Formal outline of *Be-Bop Tango* for unspecified instrument and piano

Figure A.2 provides the formal outline for the *Be-Bop Tango* for unspecified instrument and piano version. The measure numbers are listed on the left, the sections and subsections are centered, while the primary event that occurs within these sections is listed on the right. For example, mm. 5-11 is listed as section A and consists of theme group A. It can be divided into three subsections, A/a (mm. 5-6), A/b (mm. 7-8) and A/b' (mm. 8-11), and consists of the first phrase, second phrase, and an extended version of the second phrase respectively.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Sections</th>
<th>Subsections</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-D</td>
<td>T</td>
<td></td>
<td>Tango Vamp</td>
</tr>
<tr>
<td>1-4</td>
<td></td>
<td></td>
<td>Tango Introduction</td>
</tr>
<tr>
<td>5-11</td>
<td>A</td>
<td></td>
<td>Main Theme Group</td>
</tr>
<tr>
<td>5-6</td>
<td>A/a</td>
<td></td>
<td>- 1st phrase</td>
</tr>
<tr>
<td>7-8</td>
<td>A/b</td>
<td></td>
<td>- 2nd phrase</td>
</tr>
<tr>
<td>8-11</td>
<td>A/b'</td>
<td></td>
<td>- extended version of 2nd phrase</td>
</tr>
<tr>
<td>13-19</td>
<td>A1</td>
<td></td>
<td>First Theme Variation</td>
</tr>
<tr>
<td>13-14</td>
<td>A1/a</td>
<td></td>
<td>- 1st phrase</td>
</tr>
<tr>
<td>15-16</td>
<td>A1/a-b</td>
<td></td>
<td>- hybrid of 1st &amp; 2nd phrases of A</td>
</tr>
<tr>
<td>17-19</td>
<td>A1/c</td>
<td></td>
<td>- 3rd phrase</td>
</tr>
<tr>
<td>20-23</td>
<td>T2</td>
<td></td>
<td>Tango Variation</td>
</tr>
<tr>
<td>24-27</td>
<td>A2</td>
<td></td>
<td>Second Theme Variation</td>
</tr>
<tr>
<td>24-27</td>
<td>A2/a</td>
<td></td>
<td>- extended 1st phrase</td>
</tr>
<tr>
<td>27-30</td>
<td>B</td>
<td></td>
<td>Cluster Episode/Quotation</td>
</tr>
<tr>
<td>31-37</td>
<td>C</td>
<td></td>
<td>Theme Group</td>
</tr>
<tr>
<td>31-32</td>
<td>C/c</td>
<td></td>
<td>- 1st phrase</td>
</tr>
<tr>
<td>33-37</td>
<td>C/c'</td>
<td></td>
<td>- altered 1st phrase/extended ending</td>
</tr>
<tr>
<td>38-44</td>
<td>D</td>
<td></td>
<td>Theme Group</td>
</tr>
<tr>
<td>38-41</td>
<td>D/d</td>
<td></td>
<td>- 1st phrase</td>
</tr>
<tr>
<td>41-44</td>
<td>D/d'</td>
<td></td>
<td>- extended 1st phrase</td>
</tr>
</tbody>
</table>
Figure A.3. "Farther O'Blivion," *Beat the Boots I: Pitquantique*

Figure A.3 summarizes the musical events that occur during the recorded performance of "Farther O'Blivion." The CD track timing is listed on the left, the main musical event is centered, while the primary instrumentation that performs the main thematic material is listed on the right. For example, CD track timing 0:00-0:36 consists of a jazz-fusion passage that features the trombone, marimba, guitar and violin. The *Be-Bop Tango*, its phrase divisions, and primary instrumentation are illustrated accordingly.

<table>
<thead>
<tr>
<th>CD Track Timing</th>
<th>Event</th>
<th>Featured Instrumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00</td>
<td>Jazz-Fusion episode</td>
<td>Trombone (trb.), marimba (mar.), guitar (git.), violin (vln.)</td>
</tr>
<tr>
<td>0:37</td>
<td>Jazz-Fusion episode</td>
<td>Git, trb, keyboard (kybd.)</td>
</tr>
<tr>
<td></td>
<td>interrupted by straight eighth-note avant-garde &quot;flurries&quot;</td>
<td>tutti</td>
</tr>
<tr>
<td>1:17</td>
<td>Swing-Jazz episode; interrupted by straight eighth-note episodes</td>
<td>Git solo with tutti accompaniment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>perc and marimba</td>
</tr>
<tr>
<td>2:20</td>
<td>Rock Style Episode</td>
<td><em>Tutti</em> fanfare</td>
</tr>
<tr>
<td>2:26</td>
<td>Rock Style cont'd</td>
<td>Vln.</td>
</tr>
<tr>
<td>3:58</td>
<td>Rock Style cont'd</td>
<td>Non-Pitched Perc.</td>
</tr>
<tr>
<td>4:16</td>
<td>Transition to:</td>
<td>Mar.</td>
</tr>
<tr>
<td>&quot;Farther O'Blivion&quot; (as known as <em>Be-Bop Tango</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:21</td>
<td>Tango Vamp and Intro</td>
<td>Trb, woodwinds (ww.), perc, kybd.</td>
</tr>
<tr>
<td>4:44</td>
<td>Theme Group A</td>
<td>Vln, mar.</td>
</tr>
<tr>
<td></td>
<td>A/a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A/b</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A/b'</td>
<td></td>
</tr>
<tr>
<td>5:07</td>
<td>Variation A1</td>
<td>Vln, mar, git.</td>
</tr>
<tr>
<td></td>
<td>A1/a</td>
<td>Vln, mar.</td>
</tr>
<tr>
<td></td>
<td>A1/a-b</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A1/c</td>
<td></td>
</tr>
<tr>
<td>5:29</td>
<td>Tango Variation</td>
<td>Trb, ww, perc, git, kybd,</td>
</tr>
<tr>
<td>5:39</td>
<td>Variation A2</td>
<td>Vln, electric bass guitar (elec. bs git.)</td>
</tr>
<tr>
<td></td>
<td>A2/ a (1/2)</td>
<td>Clr, vln, elec. bs git.</td>
</tr>
<tr>
<td></td>
<td>A2/a</td>
<td></td>
</tr>
<tr>
<td>5:51</td>
<td>Episode B</td>
<td>Trb., ww, non-pitched perc, kybd</td>
</tr>
<tr>
<td>6:01</td>
<td>Theme Group C</td>
<td>Clarinet (clr.) or sax, non-pitched perc.</td>
</tr>
<tr>
<td></td>
<td>C/c</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C/c'</td>
<td></td>
</tr>
</tbody>
</table>
(table 3.3 continued)

6:23 Theme Group D
D/d Vln (altered electronically), non-pitched perc.
D/d'

6:41 Extended Trb Improvisation
- Tutti accomp., section fluctuates between rock and jazz styles

8:29 Trb improvisation cont'd; addition of basic tango rhythm
8:58 Spoken instructions to audience by Zappa; tango rhythm cont'd
9:17 Tenor saxophone (sax.) improvisation based on main theme of Be-Bop Tango; tutti accompaniment
- using various electronic effects including chorus
10:17 Vln improvisation added to solo sax. improvisation, using wah-pedals and reverberation effects; tutti accompaniment
10:51 Kybd chords, sustained and arpeggiated
11:16 Rock style episode
- vln improvisation cont'd
- tango rhythm cont'd in perc., kybd, elec. bs git.
- kybd used as accompaniment.
11:53 Git. added to the improvisation as counterpoint
- call and response with vln.
- building in tension and density
12:27 Git. solo with perc backbeat on beats "2" and "4" of each measure
13:09 Basic tango rhythm - tutti

13:14 Be-Bop Tango performed by the marimba with specific omissions to the written score:
- measure 11, beats 3 and 4.
- measure 12, beats 1, 2, 3.
- measure 19, beats 3 and 4 to measure 39.
14:23 Non-pitched percussion fill cues the ensemble and leads to:

14:25 Be-Bop Tango, starting on measure 39 - end of the score,
Tutti performance
15:05 Percussion soli
17:24 Tutti passage, builds in density and altered by electronic alteration/effects

"Cucamonga"
17:39 Tutti fortissimo attacks and accelerando
17:49 3/4 swing-jazz style interrupted by brief straight eighth-note "flurries"
18:24 Rock style, builds in density and dynamics
18:44 Spoken dialogue by Zappa: "Thanks" and apologies for wrong notes.
19:02 Repeat of tutti fortissimo attacks, accelerando, and 3/4 swing-jazz
20:00 Fermata, cliche' rock and roll crescendo/improvisation
20:20 Ending
Figure A.4. "Be-Bop Tango (of The Old Jazzmen's Church)," *Roxy & Elsewhere*

Figure A.4 summarizes the musical events that occur during the recorded performance of the "Be-Bop Tango (of The Old Jazzmen's Church)." The CD track timing is listed on the left, the main musical event is centered, while the primary instrumentation that performs the main thematic material is listed on the right. The written *Be-Bop Tango score*, its phrase divisions, and primary instrumentation are listed accordingly.

<table>
<thead>
<tr>
<th>CD Track Timing</th>
<th>Event</th>
<th>Featured Instrumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00</td>
<td>Spoken dialogue: Introduction to Audience</td>
<td></td>
</tr>
<tr>
<td>0:07</td>
<td>Tango rhythm</td>
<td>Drumset</td>
</tr>
<tr>
<td>0:18</td>
<td>&quot;</td>
<td>Drumset and kybd</td>
</tr>
<tr>
<td>1:25</td>
<td>Tango Vamp and Intro</td>
<td>Drumset, perc, kybd, elec. bs git,</td>
</tr>
<tr>
<td>1:43</td>
<td>Theme Group A</td>
<td>Tpt/Trb (studio), vibes, kybd</td>
</tr>
<tr>
<td>1:43</td>
<td>A/a</td>
<td>Tpt/Trb (studio), vibes, kybd</td>
</tr>
<tr>
<td>1:43</td>
<td>A/b</td>
<td>Tpt/Trb (studio), vibes, kybd</td>
</tr>
<tr>
<td>2:01</td>
<td>Variation A1</td>
<td>Trb, mar.</td>
</tr>
<tr>
<td>2:01</td>
<td>A1/a</td>
<td>Trb, mar.</td>
</tr>
<tr>
<td>2:01</td>
<td>A1/a-b</td>
<td>Trb, mar.</td>
</tr>
<tr>
<td>2:01</td>
<td>A1/c</td>
<td>Trb, mar.</td>
</tr>
<tr>
<td>2:18</td>
<td>Tango Variation w/ saxophone solo</td>
<td>Tenor sax, perc, elec. bs git, kybd</td>
</tr>
<tr>
<td>2:26</td>
<td>Variation A2</td>
<td>Tpt, trb, elec. bs git</td>
</tr>
<tr>
<td>2:26</td>
<td>A2/a (1/2)</td>
<td>Tpt, trb, elec. bs git</td>
</tr>
<tr>
<td>2:26</td>
<td>A2/a</td>
<td>Tpt, trb, elec. bs git</td>
</tr>
<tr>
<td>2:36</td>
<td>Episode B</td>
<td>Trb, perc, kybd, elec. bs git</td>
</tr>
<tr>
<td>2:43</td>
<td>Theme Group C</td>
<td>Kybd (live), kybd synthesizer (studio)</td>
</tr>
<tr>
<td>2:43</td>
<td>C/c</td>
<td>Kybd (live), kybd synthesizer (studio)</td>
</tr>
<tr>
<td>2:43</td>
<td>C/c'</td>
<td>Kybd (live), kybd synth. (studio), mallets</td>
</tr>
<tr>
<td>3:02</td>
<td>Theme Group D</td>
<td>Kybd (live), kybd synth. (studio), mallets</td>
</tr>
<tr>
<td>3:02</td>
<td>D/d</td>
<td>Kybd (live), kybd synth. (studio), mallets</td>
</tr>
<tr>
<td>3:02</td>
<td>D/d'</td>
<td>Kybd (live), kybd synth. (studio), mallets</td>
</tr>
<tr>
<td>3:11</td>
<td>Transition to:</td>
<td></td>
</tr>
<tr>
<td>3:16</td>
<td>12/8 Fusion episode, Trb improv.</td>
<td></td>
</tr>
<tr>
<td>3:40</td>
<td>4/4 straight eight-note episode, Trb solo cont'd</td>
<td></td>
</tr>
<tr>
<td>3:49</td>
<td>12/8 Fusion, Trb solo cont'd</td>
<td></td>
</tr>
<tr>
<td>4:11</td>
<td>4/4 straight eight-note episode,</td>
<td></td>
</tr>
</tbody>
</table>
(table 3.4 continued)

4:19 12/8 Fusion episode, Trb solo cont'd

4:54 Sequential Chord Progression

5:03 Quarter note pulse, Trb solo Perc and elec. bs git.

5:12 Tutti Fortissimo Attack: Tutti
followed by a simple
quarter-note pulse

5:20 Spoken dialogue, quarter-note pulse cont'd.

6:16 - T. Monk quote: Kybd; accomp by perc and bs git.
"Straight, no chaser"

6:39 Text Setting/Vocal
- "This is Be-Bop..." George Duke vocal, kybd, perc.
Spoken dialogue, explanation of
events to follow

7:19 Scat/Kybd/Dance improvisation

7:42 Audience participation and improvisation,
dancing and scat singing

9:35 Accelerando of improvisation

9:57 Quarter-note pulse, eighth-note triplet emphasized by perc.

10:48 Transition to:

10:49 Swing jazz, scat cont'd Vocal cont'd, Tutti

11:01 Quarter-note pulse

11:45 Scat/Keyboard/Dance improvisation cont'd

12:22 Tutti independent improvisations

13:26 Quarter-note pulse, spoken dialogue

14:10 Scat Improvisation, dialogue cont'd

14:19 Blues-rock song: Tutti
- "Anything You Want to Do..."
- Guitar Solo

15:42 Spoken dialogue: Blues cont'd
- Introduction of ensemble members

16:19 Blues cont'd, fade until end

16:36 Ending
Figure A.5. Formal Outline of *Be-Bop Tango* for chamber orchestra

Figure A.5 provides the formal outline for the chamber orchestra arrangement of the *Be-Bop Tango*. The measure numbers are listed on the left, the sections and subsections are centered, while the primary event that occurs within these sections is listed on the right. For example, mm. 9-15 is listed as section *A*. It can be divided into three subsections, *A/a* (mm. 9-10), *A/b* (mm. 11-12) and *A/b'* (mm. 12-15), and consists of the first phrase, second phrase, and an extended version of the second phrase respectively.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Sections</th>
<th>Subsections</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-8</td>
<td><em>T</em></td>
<td></td>
<td>Tango Introduction</td>
</tr>
<tr>
<td>9-15</td>
<td><em>A</em></td>
<td></td>
<td>Main Theme Group</td>
</tr>
<tr>
<td>9-10</td>
<td><em>A/a</em></td>
<td>- 1st phrase</td>
<td></td>
</tr>
<tr>
<td>11-12</td>
<td><em>A/b</em></td>
<td>- 2nd phrase</td>
<td></td>
</tr>
<tr>
<td>12-15</td>
<td><em>A/b'</em></td>
<td>- extended version of 2nd</td>
<td></td>
</tr>
<tr>
<td>16-23</td>
<td><em>A1</em></td>
<td></td>
<td>First Theme Variation</td>
</tr>
<tr>
<td>16-18</td>
<td><em>A1/a</em></td>
<td>- 1st phrase</td>
<td></td>
</tr>
<tr>
<td>19-20</td>
<td><em>A1/a-b</em></td>
<td>- hybrid of 1st and 2nd phrase</td>
<td></td>
</tr>
<tr>
<td>21-23</td>
<td><em>A1/c</em></td>
<td>- 3rd phrase</td>
<td></td>
</tr>
<tr>
<td>24-27</td>
<td><em>T1</em></td>
<td></td>
<td>Tango Variation</td>
</tr>
<tr>
<td>24-27</td>
<td><em>T1</em></td>
<td>- ad-lib solo ala' Monk</td>
<td></td>
</tr>
<tr>
<td>27-31</td>
<td><em>A2</em></td>
<td>- ad-lib tenor saxophone</td>
<td></td>
</tr>
<tr>
<td>27-31</td>
<td><em>A2/a</em></td>
<td></td>
<td>Second Theme Variation</td>
</tr>
<tr>
<td>31-36</td>
<td><em>B</em></td>
<td>Cluster Episode/Quotation</td>
<td></td>
</tr>
<tr>
<td>31-36</td>
<td><em>B</em></td>
<td>- indeterminate clusters</td>
<td></td>
</tr>
<tr>
<td>31-36</td>
<td><em>B</em></td>
<td>- written percussion solo</td>
<td></td>
</tr>
<tr>
<td>37-44</td>
<td><em>C</em></td>
<td>Theme Group</td>
<td></td>
</tr>
<tr>
<td>37-38</td>
<td><em>C/c</em></td>
<td>- 1st phrase</td>
<td></td>
</tr>
<tr>
<td>39-44</td>
<td><em>C/c'</em></td>
<td>- altered 1st phrase</td>
<td></td>
</tr>
<tr>
<td>44-49</td>
<td><em>D</em></td>
<td>- extended ending</td>
<td></td>
</tr>
<tr>
<td>44-47</td>
<td><em>D/d</em></td>
<td>Theme Group</td>
<td></td>
</tr>
<tr>
<td>47-49</td>
<td><em>D/d'</em></td>
<td>- 1st phrase</td>
<td></td>
</tr>
<tr>
<td>49-50</td>
<td><em>T2</em></td>
<td>- extended 2nd phrase</td>
<td></td>
</tr>
<tr>
<td>49-50</td>
<td><em>T2</em></td>
<td>Second Tango Variation</td>
<td></td>
</tr>
<tr>
<td>49-50</td>
<td><em>T2</em></td>
<td>- tenor saxophone solo</td>
<td></td>
</tr>
</tbody>
</table>
**APPENDIX B: ORCHESTRATION**

Table B.1. *Be-Bop Tango* for chamber orchestra, Orchestration

<table>
<thead>
<tr>
<th>Measure:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme Group:</td>
<td>Tango Vamp and Introduction</td>
<td>Main Theme Group A</td>
<td>Var. A1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A/a</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A/b</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A/b’</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Measure: 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flute</td>
<td>M--</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oboe</td>
<td>M--</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarinet</td>
<td>M--</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenor Saxophone</td>
<td>M</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bassoon</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horn 1</td>
<td>T</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>---</td>
<td>---</td>
<td>I</td>
<td>H--</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horn 2</td>
<td>T</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>---</td>
<td>---</td>
<td>I</td>
<td>H--</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trumpet 1</td>
<td>M</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>T--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trumpet 2</td>
<td>M</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>T--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trombone 1</td>
<td>T</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>---</td>
<td>---</td>
<td>I</td>
<td>H--</td>
<td>---</td>
<td>T--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trombone 2</td>
<td>T</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>---</td>
<td>---</td>
<td>I</td>
<td>H--</td>
<td>---</td>
<td>T--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuba</td>
<td>---</td>
<td>H</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 1</td>
<td>T</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 2</td>
<td>T</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>C--</td>
<td>I</td>
<td>C-</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 3</td>
<td>T</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piano</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandolin</td>
<td>M--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guitar</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harp</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violin 1</td>
<td>H--</td>
<td>I</td>
<td>M</td>
<td>---</td>
<td>---</td>
<td>H</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violin 2</td>
<td>H--</td>
<td>I</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viola</td>
<td>H--</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cello</td>
<td>H--</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>String Bass</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(table B.1 continued)

<table>
<thead>
<tr>
<th>Measure:</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
<th>28</th>
<th>29</th>
<th>30</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme Group:</td>
<td>(Variation A1 cont’d)------------------Tango Variation: T1----Variation A2-------------------Episode B--------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Flute</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oboe</td>
<td>M--</td>
<td>----</td>
<td>----</td>
<td>A----</td>
<td>----</td>
<td>----</td>
<td>M</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Clarinet</td>
<td>A--</td>
<td>T---</td>
<td>A--</td>
<td>T</td>
<td>M</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Tenor Saxophone</td>
<td>M--</td>
<td>----</td>
<td>----</td>
<td>S--</td>
<td>----</td>
<td>----</td>
<td>--M</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Bassoon</td>
<td>H-</td>
<td>----</td>
<td>----</td>
<td>A--</td>
<td>T--</td>
<td>A--</td>
<td>T</td>
<td>M</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Horn 1</td>
<td>H--</td>
<td>-</td>
<td>H--</td>
<td>----</td>
<td>----</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td>I</td>
<td>C--</td>
<td>----</td>
<td>----</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horn 2</td>
<td>H--</td>
<td>-</td>
<td>H--</td>
<td>----</td>
<td>----</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td>I</td>
<td>C--</td>
<td>----</td>
<td>----</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trumpet 1</td>
<td>--</td>
<td>H--</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trumpet 2</td>
<td>--</td>
<td>H--</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trombone 1</td>
<td>--</td>
<td>H--</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trombone 2</td>
<td>--</td>
<td>H--</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuba</td>
<td>H--</td>
<td>H--</td>
<td>----</td>
<td>----</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 1</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>T--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>C--</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 2</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>C--</td>
<td>T--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td>I</td>
<td>C--</td>
<td>----</td>
<td>----</td>
<td>S--</td>
<td></td>
</tr>
<tr>
<td>Percussion 3</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>T--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>I</td>
<td>I</td>
<td>C--</td>
<td>----</td>
<td>----</td>
<td>S--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piano</td>
<td>T--</td>
<td>----</td>
<td>----</td>
<td>--M</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandolin</td>
<td>H--</td>
<td>--</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>M--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guitar</td>
<td>H--</td>
<td>--</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>M--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harp</td>
<td>H--</td>
<td>--</td>
<td>A--</td>
<td>----</td>
<td>----</td>
<td>--</td>
<td>M--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violin 1</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>T--</td>
<td>A--</td>
<td>T--</td>
<td>AM</td>
<td>----</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violin 2</td>
<td>----</td>
<td>H--</td>
<td>--</td>
<td>T--</td>
<td>A--</td>
<td>T--</td>
<td>AM</td>
<td>----</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viola</td>
<td>H--</td>
<td>--</td>
<td>T--</td>
<td>A--</td>
<td>T--</td>
<td>AM</td>
<td>----</td>
<td>C--</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cello</td>
<td>H--</td>
<td>M--</td>
<td>----</td>
<td>T--</td>
<td>A--</td>
<td>T--</td>
<td>AM</td>
<td>----</td>
<td>C--</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>String Bass</td>
<td>H--</td>
<td>--</td>
<td>T--</td>
<td>A--</td>
<td>T--</td>
<td>AM</td>
<td>----</td>
<td>C--</td>
<td>C--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure:</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>Theme Group:</td>
<td>Episode B-Theme Group C ------------------------------- Theme Group D ------------------ TI Reprise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C/c-------</td>
<td>C/c'-------</td>
<td>(Extension) -------</td>
<td>D/d-------</td>
<td>D/d'-------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flute</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oboe</td>
<td>H--</td>
<td>M--</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
<td>I</td>
<td>M-</td>
<td>-----</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarinet</td>
<td>M--</td>
<td>---</td>
<td>M--</td>
<td>----</td>
<td>H--</td>
<td>-----</td>
<td></td>
<td></td>
<td>I</td>
<td>M-</td>
<td>-----</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenor Saxophone</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>S--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bassoon</td>
<td>H--</td>
<td>H-</td>
<td>H-</td>
<td></td>
<td></td>
<td>H--</td>
<td>-----</td>
<td></td>
<td></td>
<td>I</td>
<td>M</td>
<td>-----</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horn 1</td>
<td>H-</td>
<td>H-</td>
<td></td>
<td>H--</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
<td>M</td>
<td>H--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horn 2</td>
<td>H-</td>
<td>H-</td>
<td></td>
<td>H--</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
<td>M</td>
<td>H--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trumpet 1</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>-----</td>
<td>M</td>
<td>-----</td>
<td>M-</td>
<td>-----</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trumpet 2</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M-</td>
<td>---</td>
<td>M</td>
<td>-----</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trombone 1</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H-</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>M</td>
<td>H--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trombone 2</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H-</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>M</td>
<td>H--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuba</td>
<td>H-</td>
<td>H-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>H--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 1</td>
<td>M--</td>
<td></td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
<td>M-</td>
<td>---</td>
<td>I</td>
<td>C--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 2</td>
<td>S--</td>
<td>---</td>
<td>-----</td>
<td></td>
<td></td>
<td>C--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percussion 3</td>
<td>S--</td>
<td>---</td>
<td>-----</td>
<td>H-</td>
<td>H--</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>I</td>
<td>C--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piano</td>
<td>M--</td>
<td>---</td>
<td>-----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H</td>
<td>-----</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandolin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M-</td>
<td>-----</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guitar</td>
<td>M--</td>
<td>---</td>
<td>M--</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H</td>
<td>-----</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Harp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GH-</td>
<td>-----</td>
<td>--M</td>
<td>GH</td>
<td></td>
</tr>
<tr>
<td>Violin 1</td>
<td>H--</td>
<td>----</td>
<td>--H</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>I</td>
<td>M</td>
<td>H--</td>
</tr>
<tr>
<td>Violin 2</td>
<td>H--</td>
<td>----</td>
<td>--H</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>I</td>
<td>M</td>
<td>H--</td>
</tr>
<tr>
<td>Viola</td>
<td>H--</td>
<td>----</td>
<td>--H</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>I</td>
<td>M</td>
<td>H--</td>
</tr>
<tr>
<td>Cello</td>
<td>H--</td>
<td>----</td>
<td>--H</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>I</td>
<td>M</td>
<td>H--</td>
</tr>
<tr>
<td>String Bass</td>
<td>H--</td>
<td>H--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>I</td>
<td>M</td>
</tr>
</tbody>
</table>
APPENDIX C: LETTER OF PERMISSION

From: "Gail Zappa" <gail@zappa.com>
Subject: Dissertation/ FZ's Be-Bop Tango
To: "William Price" <wprice@eatel.net>


Dear Persons in charge of requiring this information:

We are the rights holders and publishers for the works of Frank Zappa. This is to inform you that William Morris Price has permission to quote excerpts of Frank Zappa's Be-Bop Tango, as included in his above-reference dissertation. And although it is inappropriate for me to say so in this context, I nevertheless feel compelled to tell you that reading it is an extremely satisfying and rewarding experience.

Sincerely,

Gail Zappa
Munchkin Music, a dba of The Zappa Family Trust

(letter by standard mail to follow)

CONFIDENTIALITY NOTICE: This e-mail transmission, e-mail address and any documents, files or previous e-mail messages attached to it may contain confidential information that is legally privileged. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that any disclosure, copying, distribution or use of any of the information contained in or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender. Please destroy the original transmission and its attachments without reading or saving in any manner. Thank you.
VITA

William Price was born in Nobnoster, Missouri, on November 1, 1971. He received his Bachelor of Music Education from the University of North Alabama in 1995 and his Master of Music degree in composition from Louisiana State University in 1998. His principal composition teachers include Dinos Constantinides and Stephen David Beck. Price's music has been performed at many international and regional events, including the American Composers Forum Sonic Circuits Festival, the 2002 National SEAMUS Conference, the 11th Annual Florida Electroacoustic Music Festival, the 2000 World Saxophone Congress, the LSU Festival of Contemporary Music, several Society of Composers, Inc. regional conferences, the Southeastern Composers League Forum, and the North American Saxophone Alliance New Millennium Conference. He has received awards and commissions from numerous organizations including five consecutive Standard ASCAP awards, the 2001 Louisiana Music Teachers Association Commission, and first prize in the 1998 Philips Slates Composition Competition. Price's music has been premiered by Gail Levinsky, John Perrine, the Louisiana Sinfonietta, the Red Stick Saxophone Quartet, the LSU New Music Ensemble, and has been broadcast on public radio stations throughout the country. He is currently the president of the Mid-South Chapter of the National Association of Composers, USA (NACUSA), and his music is published by Conners Publications and Dorn Publications. Price will receive the degree of Doctor of Musical Arts with a major in composition and a minor in music theory in May 2004.