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THE DRAWING BOARD

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THE DRAWING BOARD

by

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Dissertation

Presented to the Faculty of the Graduate School of

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Dedication

This dissertation is dedicated to my fiancée Kate Stevenson for her love and support during the long hours I spent working on this project, and to my mother, Alice Pringle, for first introducing me to music.

Acknowledgements

Thanks to John Mills, Jeff Hellmer, John Fremgen, and Andre Hayward for their wisdom, guidance, and support during my time at The University of Texas. Thanks to Sam Robles, Matt Holman, Jacob Sudol, Noah Harmon, Jeremy Bonsall, and Paul Gibson for playing in my very first jazz groups in high school. Thanks to Art Lande for mentoring me as a young composer, and for continually inspiring my music. Thanks to my many other music teachers and mentors, including Allaudin Mathieu, Anthony Coleman, Frank Carlberg, Charlie Banacos, Laurie Frink, Paul Caputo, Bill Stanley, and my first trombone teacher, Doug Klein. Thanks to my parents for encouraging me to do what I love.

The Drawing Board

Alex Bard Heitlinger, DMA

The University of Texas at Austin, 2014

Supervisor: John R. Mills

This is a supporting document for the composition *The Drawing Board*, an extended three-movement work for jazz orchestra, approximately twenty-six minutes in length. *The Drawing Board* is a musical portrayal of an imaginary artist as he undertakes his work, exploring the emotions inherent to the artistic process, including the uneasiness of staring at a blank canvas, the magical feeling of abstract ideas coalescing into something concrete, the frustration of an unfinished or imperfect work, and the unique sensation of artwork gradually revealing itself to the artist. The introductory section of the document outlines my overall musical approach and philosophy, and describes the compositional goals behind this work. The core of the document is a musical analysis that provides insight into various compositional techniques and strategies, showing relationships between the three movements. Topics include form, harmony, melody, orchestration, counterpoint, and contexts for improvisation.

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Chapter 1: Inspiration, Influences, and Goals

The Drawing Board is my first multi-movement work for jazz orchestra and it reflects my current musical direction as a composer. Like many jazz composers, I started out by writing tunes for smaller bands that essentially served as vehicles for improvisation, but I gradually became more and more interested in exploring forms beyond the ubiquitous head-solo-head structure. At first, this led to increasingly elaborate small group writing, but after composing and recording many small group pieces (released on my albums *Green Light* and *The Daily Life of Uncle Roger*), I found myself coming back again and again to many of the same musical strategies and decided to begin writing for big bands in order to explore new possibilities in orchestration and counterpoint. While many of today's great jazz composers work with small groups and/or unique instrumentations, the big band remains a tantalizing compositional vehicle because of its power and vast expressive range.

In my opinion, the biggest compositional trap in writing for big band is resorting to conventions and formulas or imitating a particular composer too closely. Last spring, Maria Schneider told the students here at The University of Texas a story of how, early in her career, Gil Evans asked her to finish one of his arrangements for him. Wanting to do a professional job, she orchestrated it just as she was taught in school, but he was very unhappy with her work because it failed to push the musicians into uncomfortable registers. He explained to her that he could get an extra element of intensity by pushing the musicians to their limit. All of my favorite jazz composers display stylistic elements that 'break the rules' or push the boundaries in some way, although it is never done arbitrarily, but always for specific musical effect. Every time I write a new piece, I try to push myself in musical directions I have not yet explored, and *The Drawing Board* is no

different. Although far from re-inventing the wheel, the piece uses a number of musical strategies that I had never attempted before, including specific timbres, motivic strategies, contrapuntal approaches, and contexts for improvisation. Subsequent chapters will address these techniques in more detail. I will begin by tracing my musical influences, philosophies, and my approach to composing this particular work, starting at the beginning.

The onset of my musical training apparently predates my conscious memory. My mother, a preschool music teacher, claims to have put me on a 'rigorous' ear-training regimen from the time I was an infant, mimicking my baby noises, shifting the pitches up and down and encouraging me to match her. Of course, I have no memory of this, but I do have vivid memories of *Musical Trolley*, a pre-school music course that she taught at the MacPhail Center in Minneapolis. From this class, I learned a profound lesson that still informs my professional and academic career: music is fun. Ultimately, this is the reason I continue to perform, compose, and teach music, but other factors also come into play. First and foremost among them is my curiosity about how music works. I tend to view my role as a composer as a small part of a larger ongoing worldwide research project examining the many manifestations of the mysterious subject known as music. Each person perceives music differently and develops unique musical tastes, yet there seem to be certain underlying truths about why music works the way it does. While theorists continue to examine the subject by analyzing scores and recordings, composers and improvisers take part in this inquiry by putting their own concepts into practice and examining the results. For the composer or improviser this becomes a revealing journey into the workings of one's own mind both on conscious and subconscious levels. Whether masterpiece or musical disaster, a composed or improvised work remains a fascinating reflection of the mind of the person creating it.

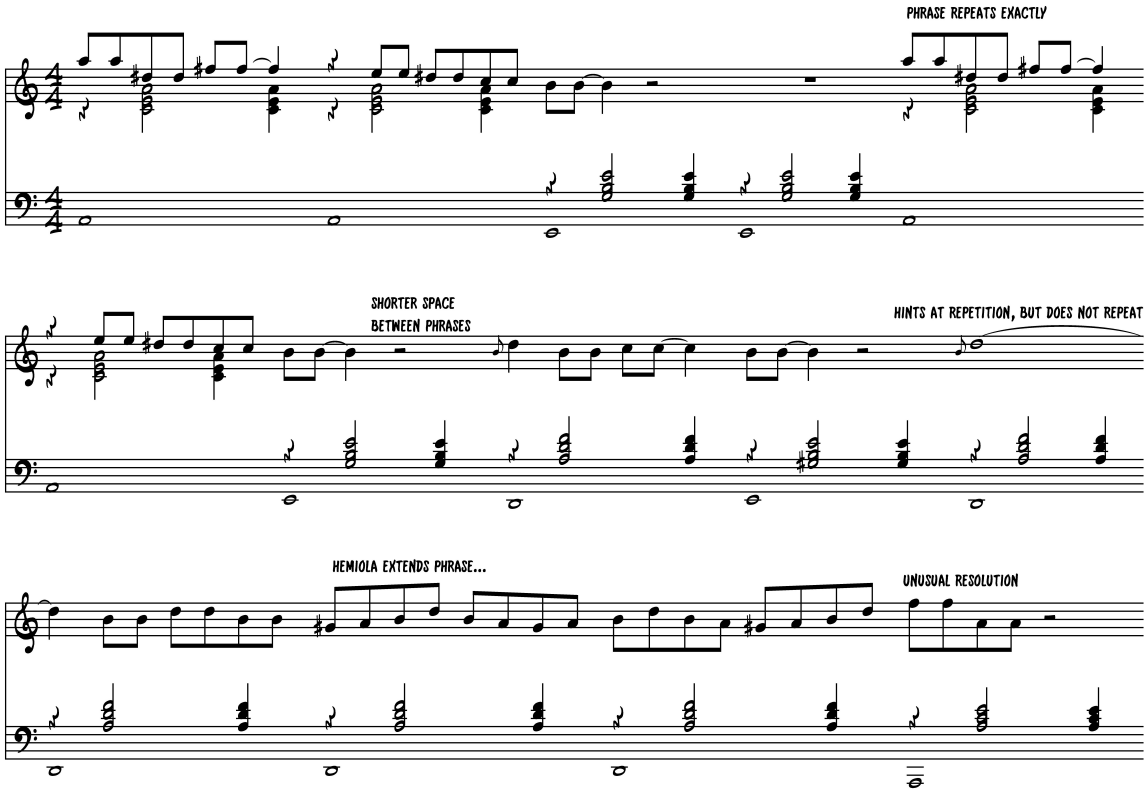
Although I identify myself as a jazz musician, my career as a performer to this date has also included performing with symphony orchestras, classical chamber ensembles, pop groups, experimental projects, and performing music from a variety of folk and world traditions. My listening tastes and habits include all these styles and more, so I have always appreciated Duke Ellington's famous aphorism, "There are two kinds of music: good music, and the other kind." Unless I am composing for a specific commission, I avoid concerning myself with creating music that upholds the traditions or established practices of any particular style or genre, and simply try to create "good" music to the best of my ability, trusting that future musicologists will properly categorize my work.

I suspect that my attraction to, and in-depth study of jazz has less to do with its characteristic musical elements such as swing and improvisation, and more to do with its ethos of fearless creative personal expression. For me, the most beautiful thing about jazz is the way it portrays the distinctive personalities of its great performers and composers. Tracking the evolution of my own musical style has become possible only in recent years, as my body of work has grown to a point where I can reflect on it. This document will shed light on my current musical influences, style, and compositional strategies. However, each of these elements continues to evolve over time. While the stylistic analysis contained herein is as accurate as it can be, I hope and expect that my future work will extend beyond the boundaries and practices of my current approach.

As a listener, I seek out music that engages me, surprises me, and fulfills me emotionally, and each of my favorite improvisers and composers does this in his/her own, unique way. The following examples illustrate a few of the many compositional strategies that I have borrowed from my favorite composers. These examples come from Erik Satie, Thelonious Monk, and Maria Schneider.

Erik Satie's music often uses repetition and space to engage the listener, and unusual resolutions to surprise him/her. Example 1.1 shows the beginning of Satie's *Gnossienne No. 3*, composed in 1890. Like many other Satie pieces, this one lacks barlines, and uses ostinato to create the rhythmic underpinning. The natural unfolding of the phrases dictates the meter, rather than the other way around. In this example, the first phrase leads to a pause, followed by an exact repetition of the phrase, creating the expectation of periodicity. However, the second pause is interrupted by a new phrase. After yet another pause, this second phrase hints that it might repeat as the first phrase did, but then proceeds to strings the listener along with a winding hemiola line that finally lands on the unlikely pitch F (♭6 of A minor), before leaping down to the tonic A in an unusual and delayed resolution.

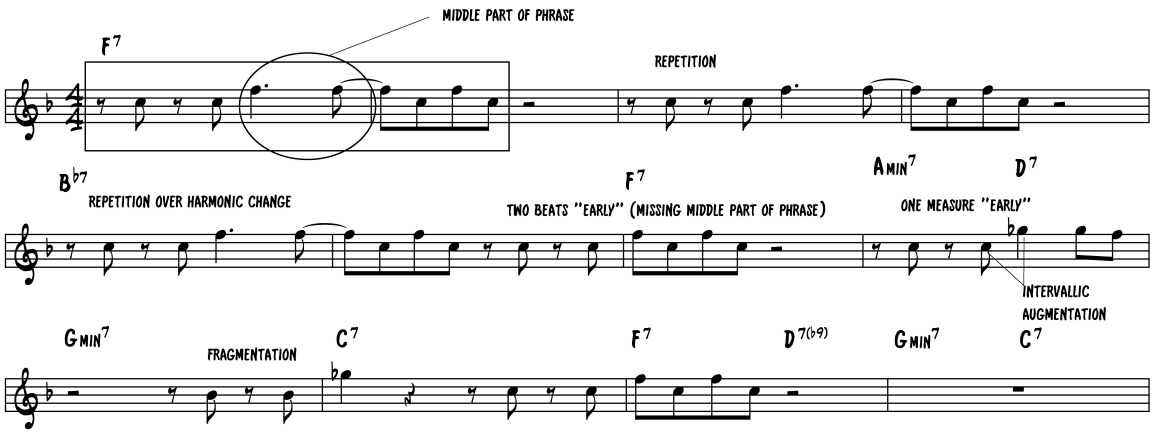
Example 1.1 Excerpt from *Gnossienne No. 3* by Erik Satie



Thelonious Monk uses a similar strategy in his compositions and improvisations. Example 1.2 shows Monk's first improvised chorus on Milt Jackson's composition *Bags' Groove* from the Miles Davis album of the same name. Like Satie, Monk uses repetition to create expectation before defying it. He repeats his initial phrase (a playful back-and-forth between the pitches C and F) three times, with pauses between each phrase. After the third repetition, he interrupts the expected pause as Satie did, but uses the same phrase, now displaced by two beats and missing the dotted quarter note F and the eighth note F that followed it (the middle part of the phrase). The combination of the fourth phrase being both early and shortened, places the fifth phrase an entire measure early. With this phrase, Monk defies another expectation by augmenting the interval from a

perfect fourth to a tritone. He repeats this new version of the phrase, but augments the interval again by lowering the bottom pitch to B♭ and shortening the phrase from five notes to three. To end the chorus, he finally returns to the original pitches, F and C.

Example 1.2 Thelonious Monk's solo on *Bags' Groove* (first chorus)

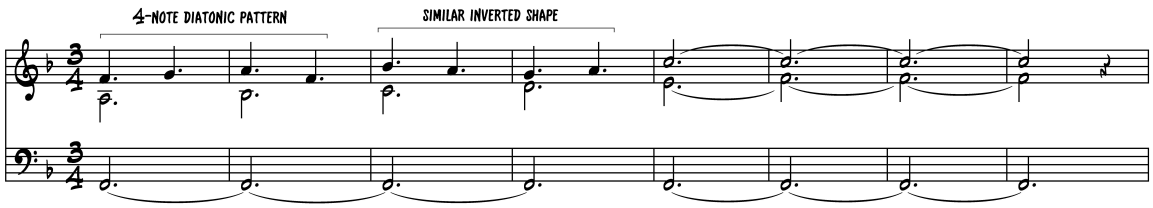


Like Satie's music, Monk's music is full of wit and spontaneity, but in this example Monk proves more concise and focused than Satie, sticking entirely to one idea. Numerous great composers like Bach, Beethoven, and Bartók have demonstrated that lengthy and elaborate pieces can evolve from a simple musical idea. In the world of big band composition, Maria Schneider is one of the acknowledged masters of this approach, and a composer I look to as a model.

In Schneider's 1987 composition *Green Piece*, she develops a simple four-note scale pattern, using a number of techniques including inversion, rhythmic augmentation, diminution, and fragmentation. Because every element of the piece can be traced back to the initial shape, Arnold Schoenberg's term *Grundgestalt* is a perfect description of her approach. I was fortunate to have a private composition lesson with Schneider in April

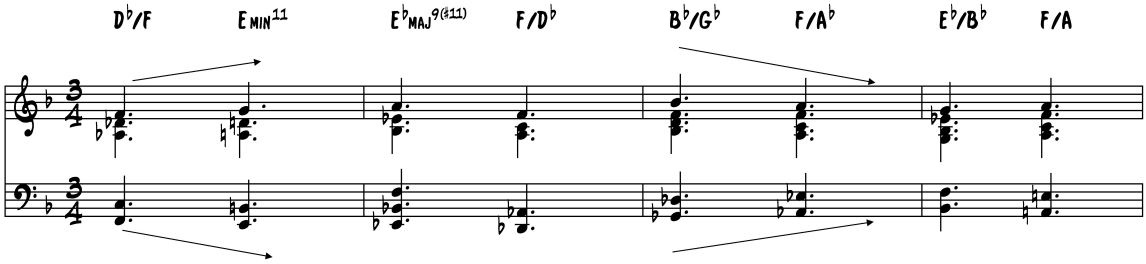
2013, and in our meeting she emphasized the importance of getting the most out of a single idea rather than arbitrarily introducing new ones. This is a concept I have kept in mind ever since. Example 1.3 shows *Green Piece's* first phrase, comprised of a four-note diatonic scale pattern F-G-A-F followed by a similar inverted shape starting on scale degree four: B♭-A-G-A. As the ascending melody occurs in dotted quarter notes, a second line starting on A ascends diatonically by steps in dotted half notes.

Example 1.3 First phrase of *Green Piece* (mm.9-16)



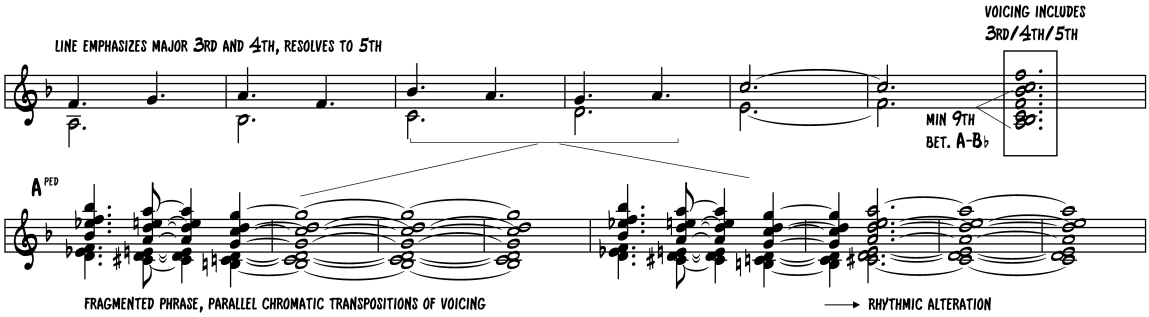
As the theme develops, the harmony grows increasingly dense, yet even complex chord structures generate from the first simple phrase. In Example 1.4, Schneider shifts the stepwise motion from the theme into the bass, which uses contrary motion and adds a chromatic passing chord (E-11) between F and E♭. In the second half of the phrase, the contrary motion continues as the bass ascends while the melody descends. The chords that result from this motion are considerably more complex and dissonant. This natural outgrowth of dissonance resulting from the confluence of linear motivic material is a characteristic of my work as well.

Example 1.4 Thematic generation of complex harmony in *Green Piece* (mm.62-65)



Example 1.5 shows how the linear thematic shape becomes a fixed vertical structure, surprisingly dissonant thanks to the minor ninth interval within the voicing. This structure is then transposed chromatically over a pedal point. The lead voice (and every other voice, due to the parallel motion) fragments, then rhythmically alters the second half of the initial phrase. The concept of linear material generating fixed harmonic shapes is a prominent one in my work as well.

Example 1.5 Theme transformed into vertical structure over pedal point in *Green Piece* (mm.9-14 and mm.107-114)



Like most jazz composers, I am often asked what style of jazz I write and I have always found this to be a difficult question to answer. My reticence might stem from an irrational paranoia that my work is somehow unoriginal, or it might have to do with my

previously mentioned skepticism of stylistic boundaries themselves. However, if I look at my work objectively, it seems to favor modal and/or pedal point progressions with extended or chromatic harmonies rather than clear tonic-dominant functionality, and it frequently avoids swing, rock, funk, latin, and other easy to categorize beats, in favor of spacious even eighth-note grooves or 'free' drumming. Because of these qualities, many of my pieces fall under the ambiguous stylistic category known colloquially among jazz musicians as "ECM," named after Edition of Contemporary Music, the German jazz label started in 1969 by Manfred Eicher. This label popularized a style of jazz that involved lyrical, flowing, cymbal-driven even-eighth note music, often recorded with ample reverb. Of course, the ECM catalogue includes a broad stylistic range, including free jazz, straight ahead jazz, world music and classical, so I have always found the use of the ECM term as a stylistic indicator to be vague and at times misleading, a fill-in for lack of a more specific term. However, many of my favorite jazz composers either recorded for ECM or have what might be termed an ECM sound. Schneider certainly fits this category, as do several other favorites including Kenny Wheeler, Art Lande, and John Hollenbeck. My music frequently emulates Wheeler's lyrical yet angular melodic approach, and shares Lande's penchant for seamless transitions between free improvised and pre-composed material (particularly his band Rubisa Patrol). Hollenbeck's creative approach to timbre has inspired my most recent music, especially his use of vibraphone in the big band, and his clever use of woodwinds and brass for textural purposes.

I am aware of my own tastes and preferences, but I strive to begin each new piece with as few pre-conceptions as possible, following my intuition, and allowing the piece to take whatever shape it might take. In composing *The Drawing Board*, my only aim was to create a large-scale composition that felt cohesive, yet maintained a spontaneous character in the way that a great improvisation does. Rather than plot out the form and

shape of the work beforehand, I wrote the piece as one might navigate an unfamiliar country road after dark, confident in my heading only as far as my headlights could reach. However, I hoped to avoid a particular pitfall that had plagued my earliest work as a composer: the lack of motivic focus. After completing the first movement, I knew that contrast was necessary, but I wanted to avoid introducing too many new and unrelated ideas, so at this stage I heeded Maria Schneider's advice and spent a lot of pre-compositional time re-working and re-imagining the music that I had already composed, attempting to explore the material in every possible way. Through this process, a kind of reverse engineering took place, in which the DNA of one musical 'organism' was re-sequenced to create two more. Just as siblings and cousins do not always appear to be related at first glance, the deeper motivic relationships between the three movements of *The Drawing Board* might not be immediately apparent on casual listening. The mood of each movement is unique, and each movement can stand on its own as a complete piece, but when performed in succession, I believe the three movements create a cohesive whole, in large part due to the interrelatedness of their themes, whether that relationship is heard or merely felt. The analysis that follows will clarify the nature of these inter-movement thematic links, and carefully examine other defining musical elements including form, harmony, rhythmic devices, and orchestration.

Chapter 2: Form, Thematic Material, and Harmony

The Drawing Board's structure is based on motivic and thematic links shared between the three movements: *I. Lines and Circles*, *II. Dissolution-Disillusion* and *III. Unfurling*. The following chapter addresses the topics of form and thematic material simultaneously. The chapter also shows how harmonies often grow from the motives and themes themselves. Charts A, B, and C outline the overall timelines of each movement, including harmonic areas, thematic material, and general descriptions of events. These charts, along with brief overviews, precede more detailed descriptions of each movement.

I. LINES AND CIRCLES

Overview

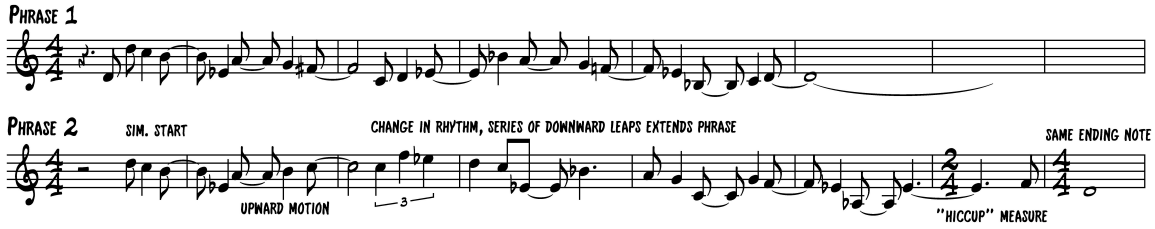
I. Lines and Circles contains two themes (A and B), and contained within these themes are the motivic building blocks for all other themes in subsequent movements. The movement centers around two distinct harmonic approaches, pedal point with shifting harmonies above, and functional harmonic progressions that avoid direct resolution. The timeline and narrative that follows outline the movement in greater detail.

Chart A: *Mvt. I* - Timeline of harmony, themes, and events

Meas. #	Harmonic info	Thematic	Event description
1	G pedal	Prelude	Atmospheric, sparse intro
2-43	G pedal Shifting modes over pedal point	Theme A	Driving cym. groove Flowing/angular melody 1. Pno. 2. F.H./S.Sx/Cl.
44-55	Gmaj → V7sus♭9 Half Cadence (x2) Deceptive → VI(add4)	'Failed' Transition 3-note shape Intro to B	3/4 meter Full orchestration Pno. fills between phrases
56-75	Emaj Functional harmony Resolves → iii G#min/A♭min	Theme B 3-note shape expands/contracts	Five-measure phrases Multi-layer "mobile" texture 5/4 counter-line Ostinato Bass displacement
76-107	A♭Aeol/Lyd Modal oscillation	Intro to Tbn. solo	Drums = lighter texture Subtractive orchestration Upper register bass
108-130	A♭ pedal Shifting modes/pedal	Tbn. solo Harmony from Theme A	4/4 meter, driving groove Additive orchestration Sudden intensity drop Solo ends, upper reg. Bass
131-169	A♭ pedal Unstable	"Shout" Development (A) Fragmented A "1-3-4-5" shapes	Repeating note backdrop Brass + W.W. homophonic Drums fill bet. phrases
170-193	E♭→B♭7sus♭9 Half Cadence HC → B♭ pedal	'Failed' Transition (reharmon./transp.) Theme A fragments Prelude to Pno. solo	3/4 meter
194-213	B♭7sus♭9/B♭Lyd Modal oscillation → C7sus♭9 = V7/F Deceptive → vi/F	Pno. solo Mirrors Tbn. solo	Additive orchestration Solo piano + Rhythm section
194-293	FMaj Functional Resolves → iii (recap) Amin	Recap B Theme A integration	Additive orchestration Multi-layer "mobile" texture Counter-lines, canons Rhythmic dissonance in bass
294-302	Amin → EPhryg Bypasses tonal cent. G	Tragic closure	Decrescendo, dark ending Recalls expo w/o resolution

I. Lines and Circles starts with a sparse, atmospheric introduction, improvised by the rhythm section. In addition to indicating the overall mood, the score includes written harmonics in the bass part to suggest that particular sound to the player. The opening group improvisation transitions seamlessly into a cymbal-driven 4/4 pedal point groove in G, before the initial melody begins in the piano. The flowing, syncopated, and angular melody (Theme A) consists of two long phrases, each beginning with the same five pitches in identical rhythm, but otherwise following entirely different melodic paths, both leading to the pitch D. Long spaces occur between phrases, allowing improvised commentary from the rhythm section. Example 2.1 shows how the second phrase, longer and more complex than the first, extends the line with a series of downward leaps, and ends surprisingly following an isolated "hiccup" measure of 2/4 meter.

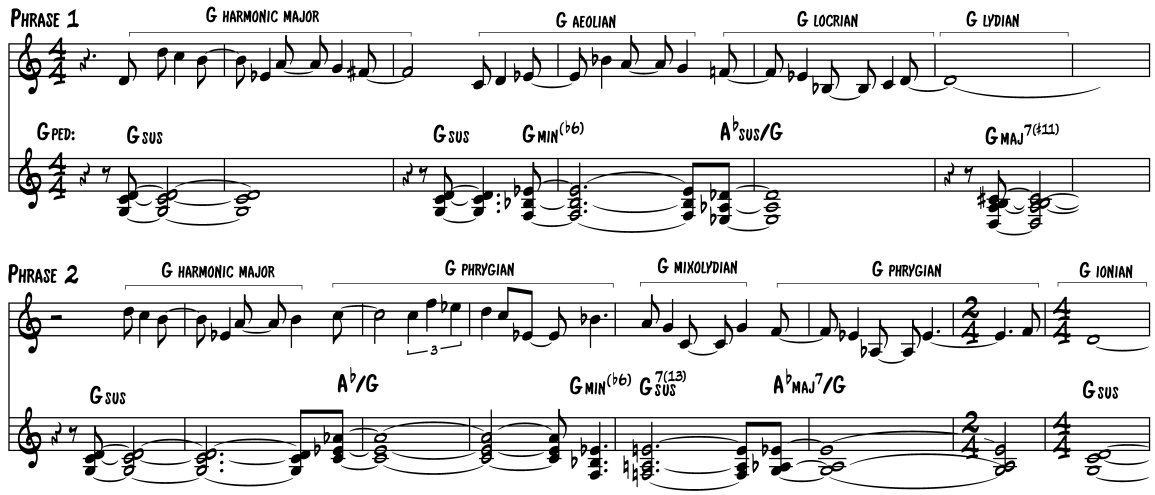
Example 2.1 Comparison of phrase 1 (mm.4-9) and phrase 2 (mm.13-20), Theme A



Both the melody and the shifting harmonic pads move between various modes that share G as the root. Example 2.2 shows how G Harmonic Major (a hybrid of Ionian and Harmonic Minor), G Aeolian, G Lydian, G Mixolydian, G Locrian, G Phrygian, and G Ionian are each suggested at different times in the theme (among them, these modes encompass all twelve pitches). Implied harmonies of the shifting chords are shown on the lower staff. Harmonic resolutions occur from Locrian to Lydian (A♭sus/G to

Gmaj7#11) at the end of phrase 1, and from Phrygian to Ionian (A♭maj7/G to Gsus/Gadd4) at the end of phrase 2.

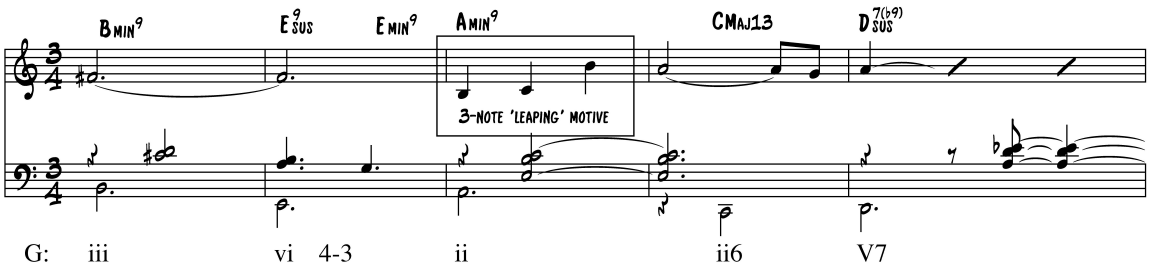
Example 2.2 Shifting modes/harmonies over pedal point in Theme A



The second statement of the theme expands the orchestration, as soprano sax, clarinet, and flugelhorn take over the melody from the piano. The saxophone section thickens the texture with shifting chords below. Trombones 1-4 and bass clarinet punctuate with a low chord following the second phrase in both statements of the theme.

At m.44, the meter shifts to 3/4, as a new transitional section begins (labeled 'Failed' Transition, since it fails to set up V of E major, the key of Theme B). With the full ensemble now playing, a short lilting melody leads to a half cadence on D7sus♭9 and the piano answers with four measures of improvisation over that chord. Example 2.3 shows the phrase itself with a harmonic analysis. The melody is characterized by a three-note motive stepping upwards by half step from B to C, then leaping upwards a major seventh to B.

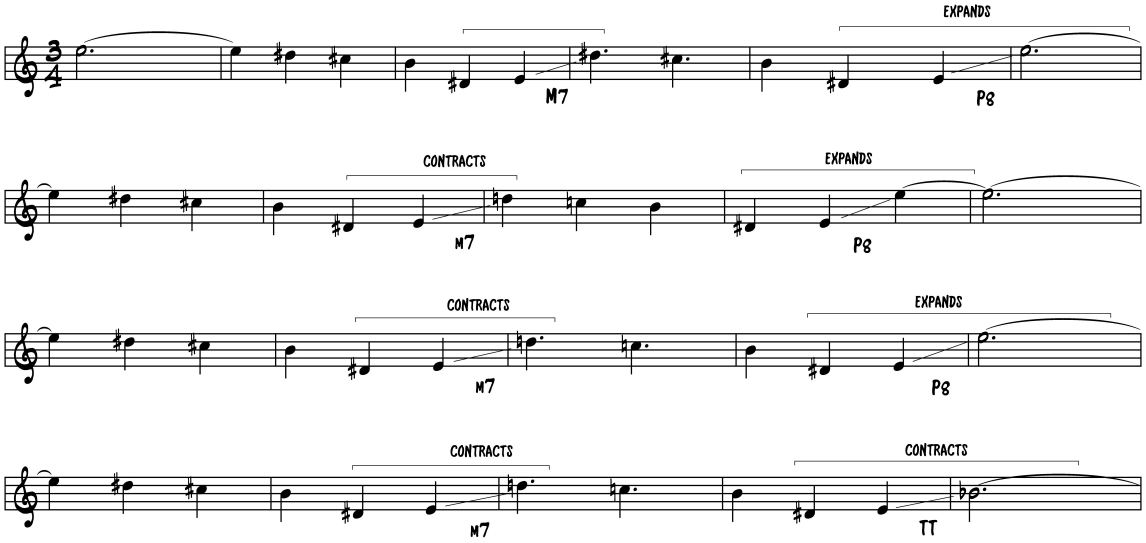
Example 2.3 Harmonic analysis and three-note 'leaping' motive in 'Failed' Transition (mm.44-48)



After two half cadences to D7susb9, a deceptive resolution leads to VI, E major, the key of the next theme, but the E major triad is somewhat blurred by the added 4th in trombone 2, piano and guitar. In jazz nomenclature, this is known as add4, and this is a chord type that becomes central to both this movement and the entire piece.

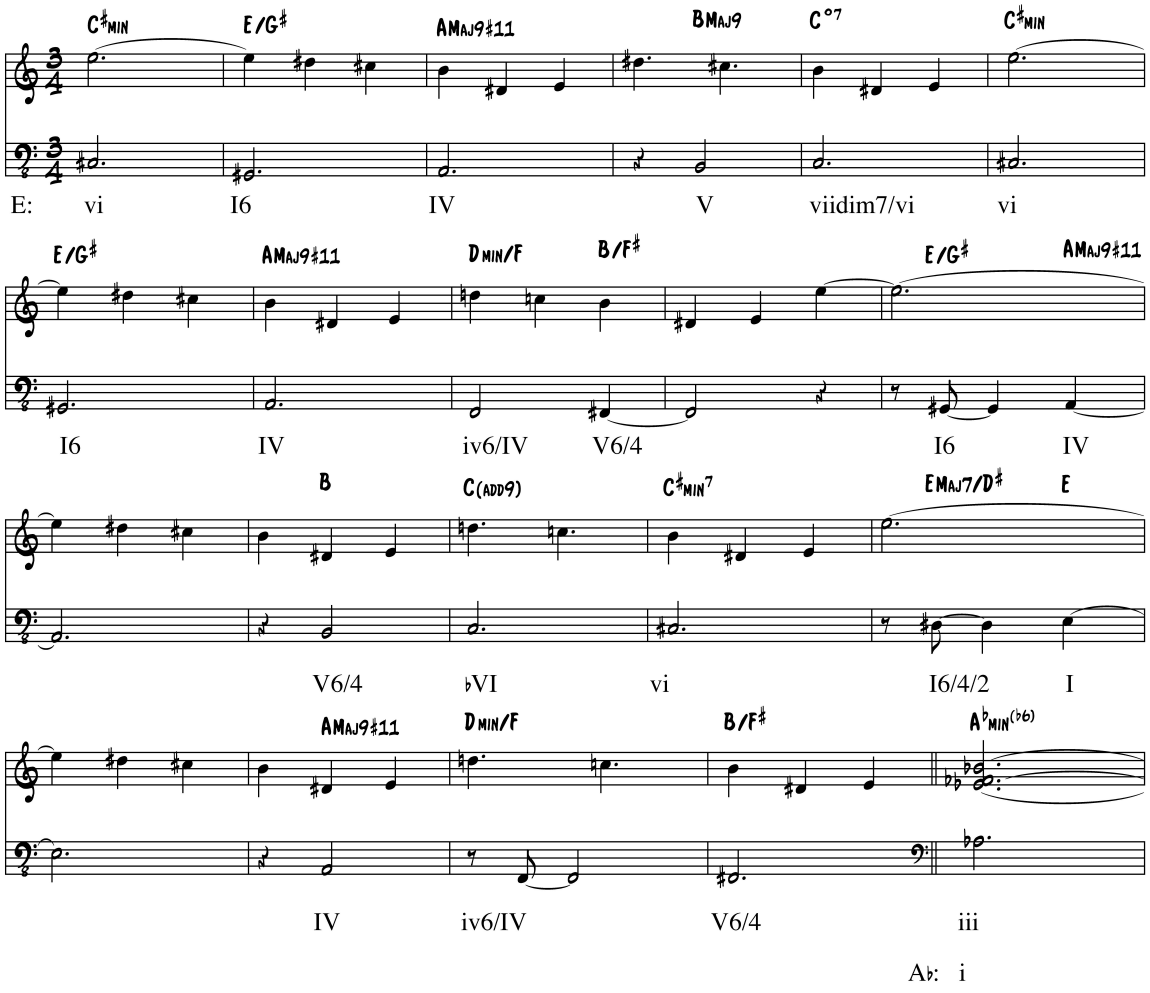
At m.56, the second theme (labeled Theme B) enters, consisting of four similar phrases of five measures each. The upward leap following a half step that characterized the 'Failed' Transition remains central to this theme as well. Example 2.4 shows how the leap is manipulated, either up to an octave or down to a minor seventh at various points.

Example 2.4 Expansion/contraction of three-note motive in Theme B (mm.56-76)



Throughout this section, the harmony remains functional in E major with a few unusual twists. Example 2.5 shows the harmonic analysis.

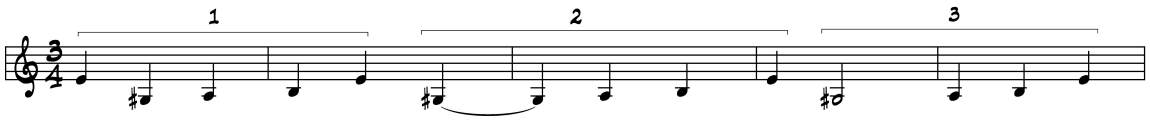
Example 2.5 Harmonic analysis of Theme B (mm.56-76)



Example 2.6 shows a counter-line (labeled counter-line 1) in trombone 2 and tenor sax 1 that uses 5/4 cross rhythm, suggesting three measures of 5/4 meter within the span of five measures of 3/4 meter. Since both the melody and counter-line re-start every

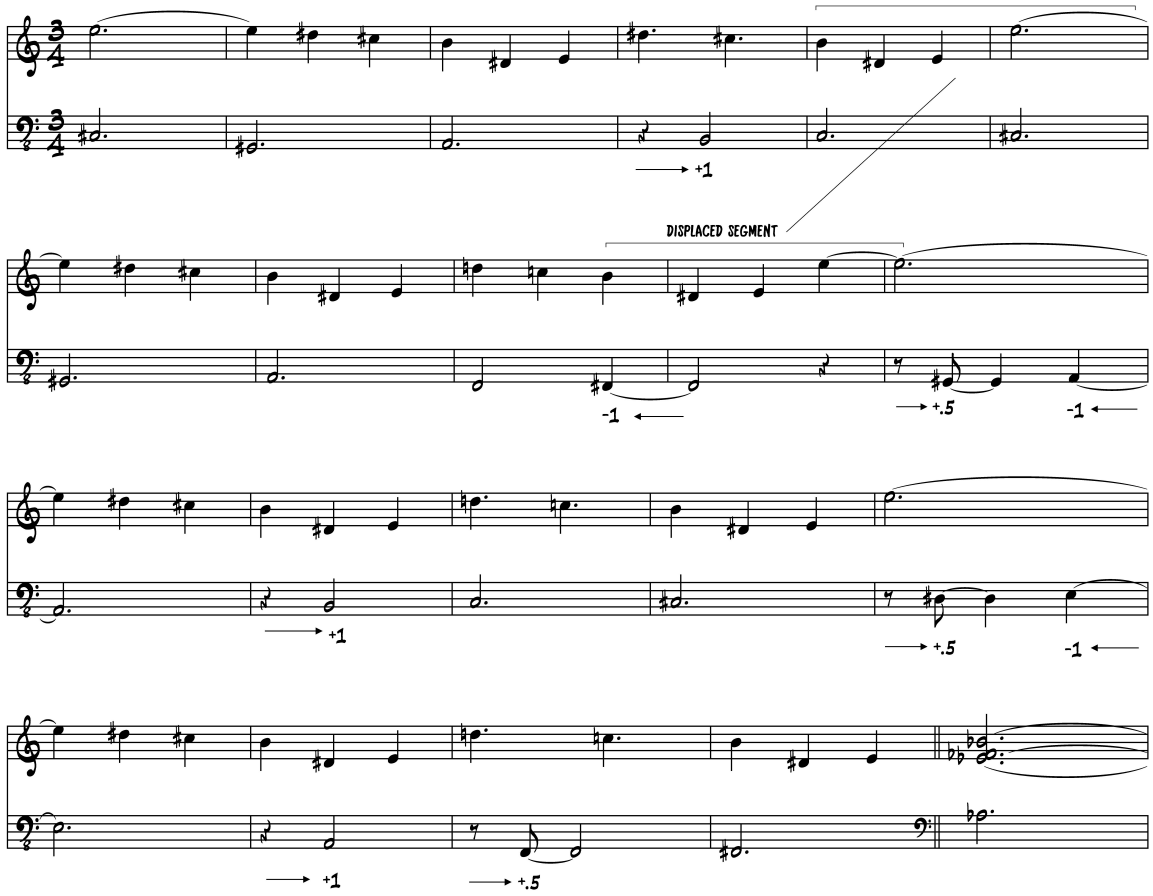
five measures but otherwise orbit independently from each other, a "mobile" texture is created.

Example 2.6 5/4 cross-rhythm in counter-line 1 of Theme B (mm.56-60)



Additionally, both the melody and bass part use displacement to create rhythmic dissonance. Example 2.7 illustrates these displacements, using arrows as well as plus signs to indicate forward displacements, and minus signs to indicate backward displacements. The numbers indicate the distance in beats between the expected and actual arrival points. In one case, an entire four-note segment is displaced by a beat.

Example 2.7 Rhythmic displacement in Theme B (mm.56-76)



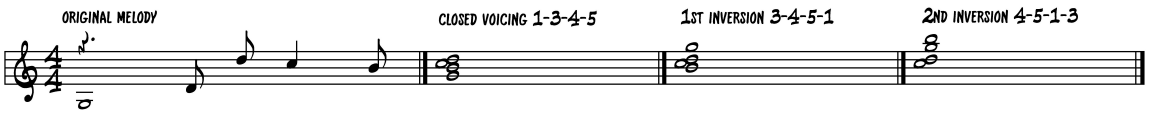
In addition to the melody, bass part, and counter-line, additional accompanying brass and saxophones perform syncopated rhythmic ostinatos on a single mid-range pitch (E) common to all the changing chords below. The theme ends surprisingly, with a final upward melodic leap of a tritone, and the harmony resolves surprisingly to iii, G#/A♭ minor at m.76. At this point, relative to the original tonal center, the piece has modulated to ♭ii.

In addition to the shift in key, a major shift in texture occurs. The contrapuntal and syncopated nature of the previous section dissipates with the held chord, as the bass

moves to its upper register, matching the register of the guitar as both instruments propel the rhythm forward with repeated A♭'s and the drums become more spacious. Trombone 2 begins its solo, and A♭ becomes the new pedal point with a slow modal oscillation between A♭ Aeolian and A♭ Lydian. This oscillating pattern functions as a prelude to the development of Theme A that follows. As the drums stop playing, the texture continues to thin, leaving the solo more exposed. Suddenly, the cymbal-driven 4/4 pedal point groove from Theme A returns. Beginning a new developmental section, trombone 2 improvises over the now-transposed (up a half step) version of the shifting modal pedal point harmonies from Theme A, but one measure is removed from the form in order to propel the energy forward as the solo progresses. The dynamic builds as additional background figures enter behind the solo with each repetition. Following the climax, there is a sudden drop in intensity, as the bass returns to repeated notes on its upper register A♭, again with the guitar, now in 4/4 meter as the trombone solo concludes softly.

The repeated-note texture that concludes trombone 2's solo creates a tense backdrop for the developmental "shout" section that follows at m.131. Here, material from Theme A returns in a new homophonic texture in the brass and saxophones. A vertical intervallic structure, derived from the intervals of the first pitches of Theme A, becomes the basis for the dense chords that permeate this section. Example 2.8 illustrates this structure, referred to as the "1-3-4-5 shape" because the voicing sounds (in isolation) like the root, 3rd, 4th, and 5th of a major scale. The first four pitches of Theme A initiate the shape, which becomes the primary vertical structure for the "shout" section, appearing in various inversions and transpositions over the A♭ pedal point.

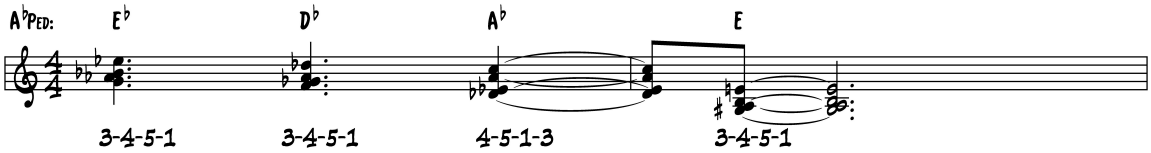
Example 2.8 Inversions of 1-3-4-5 shape in G



Since different transpositions and inversions of the shape occur over an unchanging pedal point, they do not always sound like 1-3-4-5 of the sounding pedal. However, the 1-3-4-5 label creates a clearer picture of how the harmonies shift over the pedal because it illuminates the keys of the upper chords themselves.

With the A♭ pedal point beneath, muted brass and saxophones play fragments of Theme A, rhythmically stretched and thickly voiced, primarily using the 1-3-4-5 shape in various transpositions and inversions. The drums answer these fragments with energetic fills. Example 2.9 shows one of these fragments, with each shape labeled by inversion and transposition.

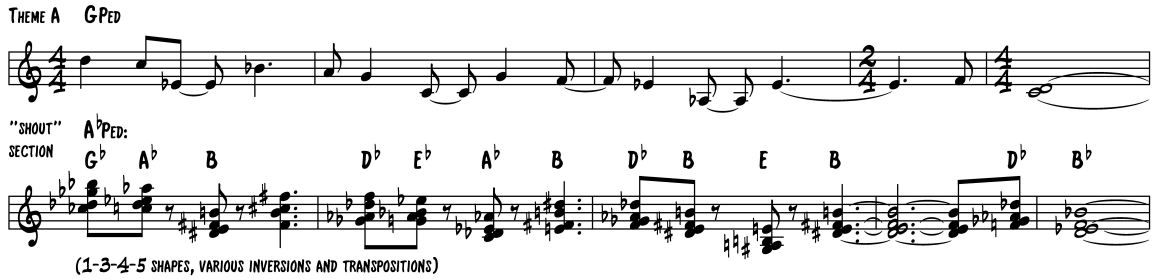
Example 2.9 Transpositions and inversions of 1-3-4-5 shape during "shout" section (mm.131-132)



The full band enters, now un-muted, a perfect fifth higher than before (the pedal point remains the same). At this louder dynamic, elements of Theme A's second phrase are explored, including the series of downward leaps that lead to the culmination of the phrase on a held A♭ Lydian chord. Example 2.10 compares phrase 2 from Theme A

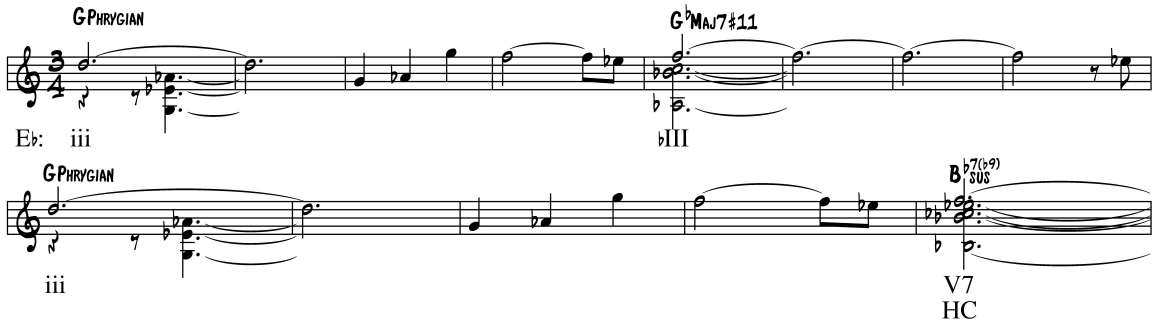
(mm.16-20) with its corresponding phrase during this “shout” section (mm.162-166), again with the 1-3-4-5 shapes labeled.

Example 2.10 Comparison of phrase 2 from Theme A with corresponding phrase in “shout” section



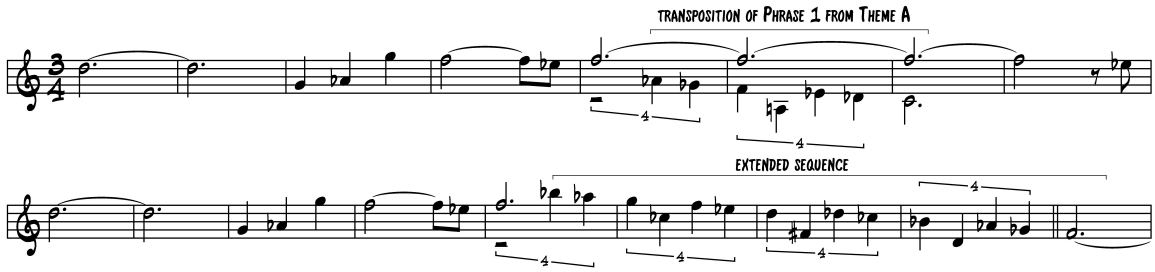
At m.170, the meter changes back to 3/4 and the ‘Failed’ Transition returns, now functioning as an introduction to the piano solo that follows. The lilting melody from earlier is now transposed up a minor sixth to E♭ major, but re-harmonized. Example 2.11 illustrates this re-harmonization. For comparison, refer to Example 2.3. Both phrases end with a half cadence and begin on iii, but the re-harmonization uses a darker Phrygian voicing on the iii chord and sustains it for four measures, moving to ♭III in the first phrase, and V7sus♭9 in the second.

Example 2.11 Re-harmonization of 'Failed' Transition (mm.170-182)



During this re-harmonized transition, transposed material based on Theme A fills the spaces between phrases where the piano fills had occurred earlier. Example 2.12 shows the interpolation of the first portion of phrase 1 from Theme A in four-over-three rhythm. In its second iteration, the phrase is extended through sequence, culminating with a half cadence to B♭7sus♭9 that launches into the piano solo that follows.

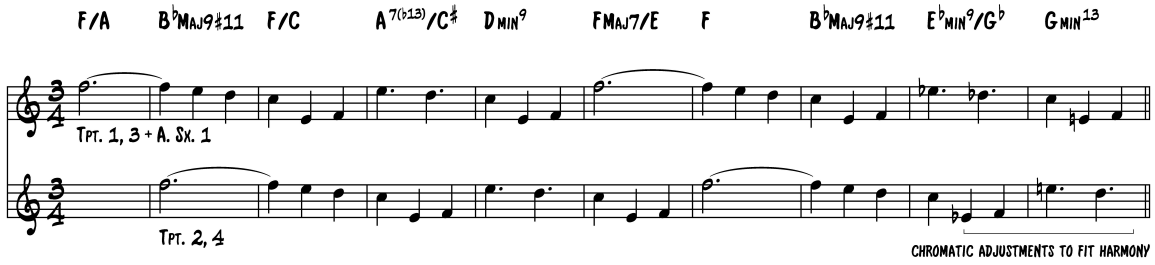
Example 2.12 Interpolation of Theme A material during re-harmonization of 'Failed' Transition (mm.170-186)



As the trombone solo did, the piano solo begins sparsely, now with the rest of the ensemble entirely silent. The beginning of this improvisation mirrors but does not imitate the trombone solo, oscillating between two contrasting parallel modes over a pedal point,

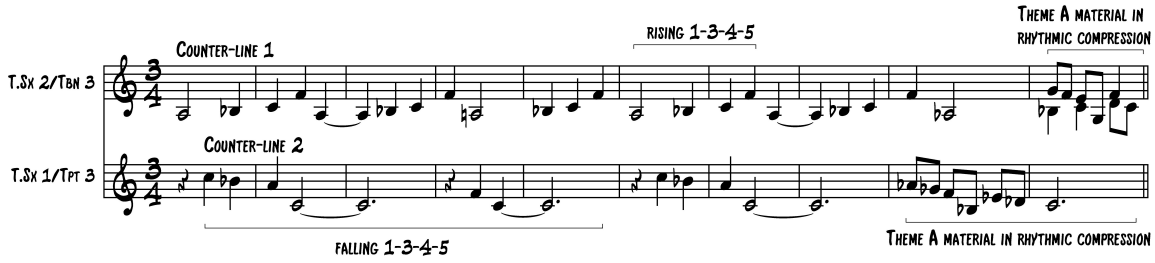
B♭7sus♭9 and B♭ Lydian. The bass and drums re-enter as the solo builds, transitioning into the next section by using C7sus♭9 as V7 of F major, and resolving deceptively to vi (D minor) to begin the next section. The piano solo continues its improvisation as the harmonic progression from Theme B returns, now a half step higher than before, in F major. As before, the phrases occur in five-measure segments. The repeated-note rhythmic ostinato from earlier re-emerges, along with the bass line (now re-aligned from its previous displacement), and the 5/4 counter-line. Theme B itself returns next, first alone, and then in canon, as shown in Example 2.13. Slight chromatic adjustments allow the canon to fit the chord progression (shown above the staff).

Example 2.13 Theme B in canon (mm.244-253)



As the piano solo becomes gradually overtaken by the increasingly contrapuntal texture, the 5/4 counter-line is mirrored by a new counter-line (counter-line 2) that outlines the same pitches in a falling motion over two phrases (both figures outline the 1-3-4-5 shape). Material from Theme A also returns, compressed into brief flourishes of eighth notes, and slightly adjusted to fit the harmony. Example 2.14 illustrates the mirroring counter-lines, and the integration of Theme A material.

Example 2.14 Increased contrapuntal activity and thematic integration during return of Theme B (mm.254-263)



Adding even more contrapuntal density, counter-line 2 moves into canon starting at m.264. Gradually, rhythmic displacement returns in the bass part. The first delayed attack occurs in m.257, and by m.274, the bass displacement increases to a similar level as seen in Example 2.7 (mm.56-75), but here the first attack is delayed by an eighth note and the second attack is anticipated by a quarter note. Increased dynamics, polyphonic density, and rhythmic dissonance all contribute to the mounting tension that culminates (as before) with an unexpected melodic leap up by a tritone, as the harmony resolves to iii, now from F major to A minor. After sustaining the A for four measures, the bass steps down gradually as the pitches above it remain steady. As the bass moves downward to G (the overall tonal center of the piece), the brass and saxes sustain F, E, and B from the previous chord, and a new pitch C enters, creating a G13(add4) chord, sustained again for four measures. Moving past the tonal center, the bass descends to the E at the bottom of its range, as the harmony above again remains constant, creating tragic closure on an E Phrygian chord. Strikingly darker than the material that precedes it, this chord sets the mood for the impending murkiness of the next movement.

II. DISSOLUTION-DISILLUSION

Overview

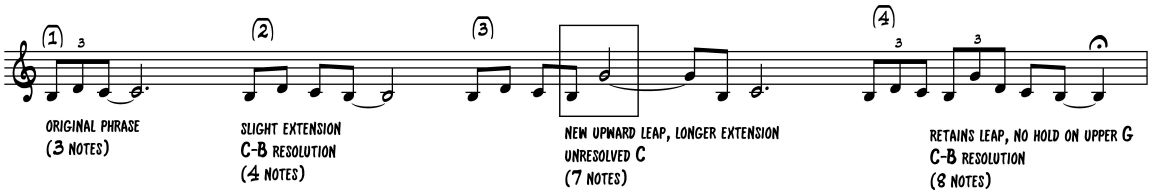
II. Dissolution-Disillusion contains two themes (C and D) that closely relate to each other, and also relate to the primary intervallic shape found in Theme A of Movement I. Based loosely around the tonal center of G, Movement II explores more dissonant harmonies than Movement I, and introduces the textural element of noise. Several variations of Theme C occur throughout the movement, and the superimposition of two minor third transpositions creates harmonic ambiguity. The following timeline and narrative provide a more detailed description of the movement.

Chart B: *Mvt. II* - Timeline of harmony, themes, and events

Meas. #	Harmonic info	Thematic	Event description
1	G(add 4) 4 total pitches inverted 1-3-4-5 shape	Theme C 4 composed phrases 1. short 2. longer 3. longer still 4. longest	Free tempo Mysterious timbre W.W. + brass Vibraphone (arco) Cymbals Staggered, improvisatory
2	G(add 4) ♭6, ♭7 hints at → E w/ G#	Theme D Motives relate to C C continues	Conducted low theme Cntra.Cl./B.Tbn./Bs.
3-18	G7 (ambiguous) ♭2, ♭6, ♭7 5th mode C harmonic minor	Transition	Steady tempo Nervous energy Alt. high/low chords Gtr./Drums free/noise
19-26	B♭sus w/alterations Open, modal Low = transp. stacked 5ths High = P5 + M3	Theme C (transp. up minor third) + Variations on phrase 4 of C	Bombastic Theme in Tpt. + Gtr. Tam-tam scrape Heavy alt. brass chords
27-34	Ambiguous Dissonant/Quartal Non-tonal/free		Bombastic → chaotic
35	Noise		Rhythm section out Loud/chaotic W.W./Brass Conducted decrescendo
36-37	G maj/min Additive harmonic cycle I-iv6-V7/IV I-iv6-V7/IV-♭II I-iv6-V7/IV-♭II-♭VII	Soprano sax solo Dyads in rhythm section mirror phrases 1-3 of C	Rhythm section rubato Conducted backgrounds
38	Ambiguous		S.Sx. + Drums
39-44	G maj/min	False recap C Combination of original and transposed up m3	S.Sx./Vb. melody Leads to held chords Rhythm section phrases (from solo section)
45-47	G(add 4) / F → G(add4) → G(add4) / F#	Recap C Recap D (truncated)	Original key Thicker orchestration Surprise ending to F#

II. Dissolution-Disillusion combines intervallic underpinnings from Movement I with free, expressive improvisational textures, immediately establishing a darker, more impressionistic tone. It begins in un-measured tempo, as piano, tenor sax 2, trombone 2, clarinet, and trumpet 1 enter one by one with the same series of four composed phrases, staggered from each other at their own discretion (they are instructed to "enter during a pause"). The phrases increase in length, with each phrase building on the last. Phrases 1 and 3 end with a held C, leaving an unresolved feeling, whereas phrases 2 and 4 smoothly resolve from C to B. Example 2.15 shows the four phrases of Theme C.

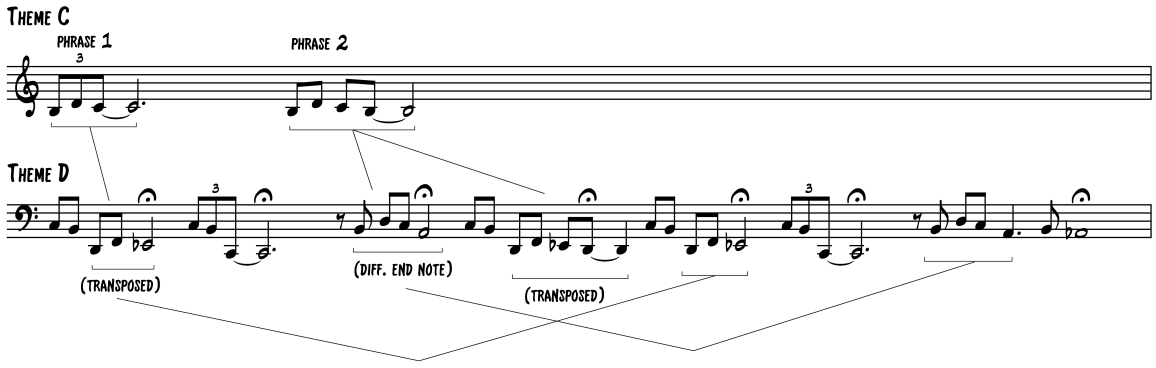
Example 2.15 Melodic analysis of four phrases of Theme C



Once the four phrases have been performed in order, the five musicians may choose any of the phrases in any order from that point on. Meanwhile, the drums improvise in a loosely imitative fashion on the cymbals, while bowed vibraphone (new to this movement) improvises long tones on the four pitches contained within the four phrases. This set of pitches includes B, C, D, and G, comprising the same 1-3-4-5 shape that became a central component of Movement I. Although no chords sound during the opening, a distinct harmonic sonority emerges, suggesting a first inversion G major triad with an added 4th, or G(add4)/B.

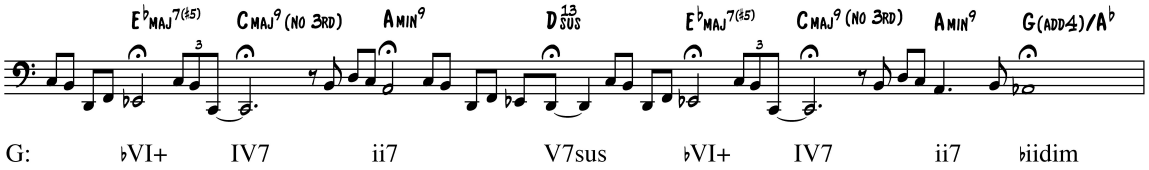
The overlapping phrases of Theme C become the backdrop to Theme D, played by a trio of arco bass, bass trombone, and E♭ contralto clarinet. The conductor conducts each phrase in order to maintain the free tempo, yet keep the musicians together. The E♭ contralto clarinet, rarely found in jazz orchestras, and chosen for its ability to reach lower than the standard B♭ bass clarinet, creates a haunting woody timbre when heard with bass trombone and bowed bass. Example 2.16 shows how Theme D's melody draws mainly from transposed, and/or slightly altered versions of the first two phrases from Theme C.

Example 2.16 Analysis of motivic relationship between Themes C and D



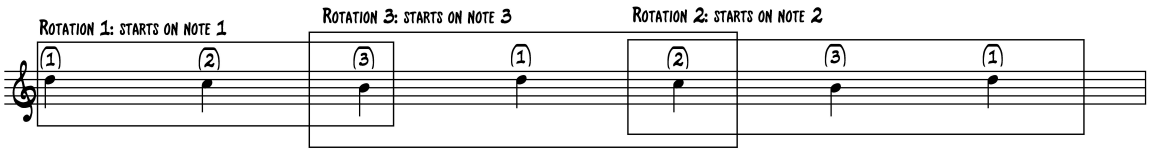
The low-register of the melody shifts the listener's perception of the steady B-D-C-G sonority above. As the theme lands on different pitches, these landing pitches sound like new roots. Example 2.17 interprets how the perceived harmonies could be notated using chord symbols, and how these chords create a kind of functional, but unresolved progression.

Example 2.17 Implied chord progression of Theme D



Theme D's motivic relationship with Theme C also links it with Themes A and B from Movement I. As mentioned earlier, the first three pitches of Theme C (B, D, C) are also the first three pitches of Theme A in Movement I (D, C, B). Theme D begins with these same three pitches as well (C, B, D). Each theme begins the three-note series on a different pitch, but B always follows C, D always follows B, and C always follows D, meaning that the pitch order remains consistent regardless of the rotation of the series. Example 2.18 shows the three-note series with all possible rotations.

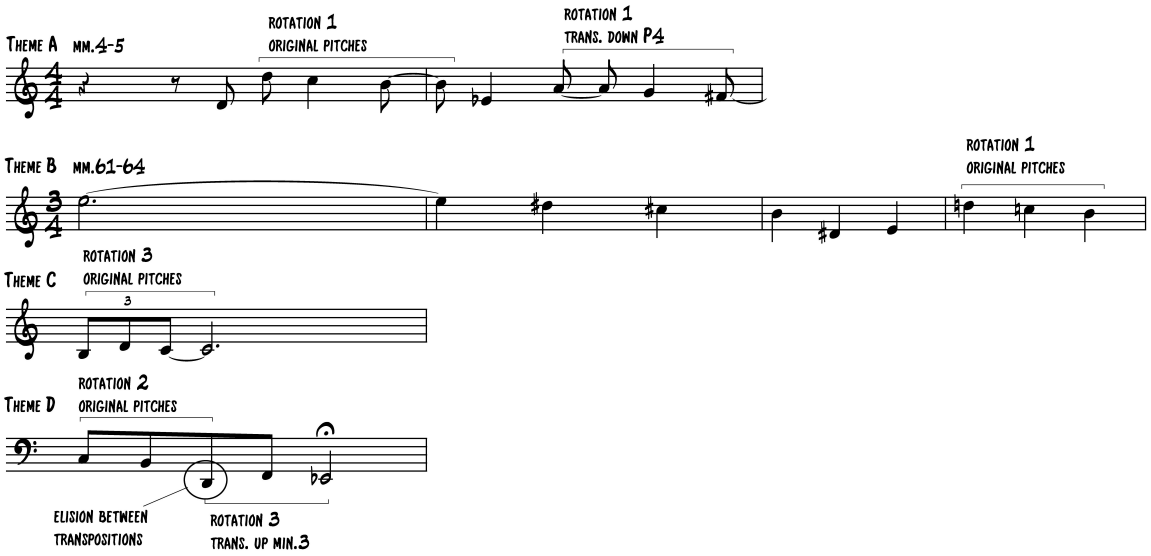
Example 2.18 Three-note series in all possible rotations



Within Theme A, the three-note series occurs in rotation 1 at various transpositions, and the same series also appears prominently (in rotation 1 at its original pitches) in Theme B, first at m.64, then again at mm.69-70 and mm.74-75. Theme C begins the three-note series in rotation 3 at the original pitches, and Theme D uses elision to move between two transpositions of the three-note series: the original pitches in

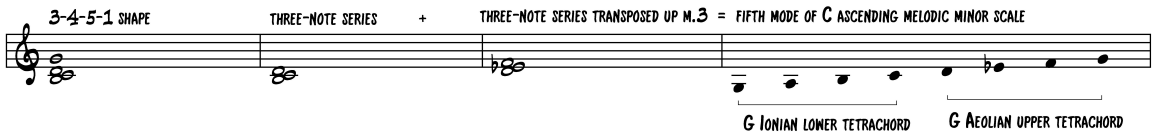
rotation 2 (C, B, D) and up a minor third in rotation 1 (D, F, E♭). Example 2.19 shows the three-note series as it first appears in each theme.

Example 2.19 Rotations and transpositions of three-note series in Themes A, B, C, D



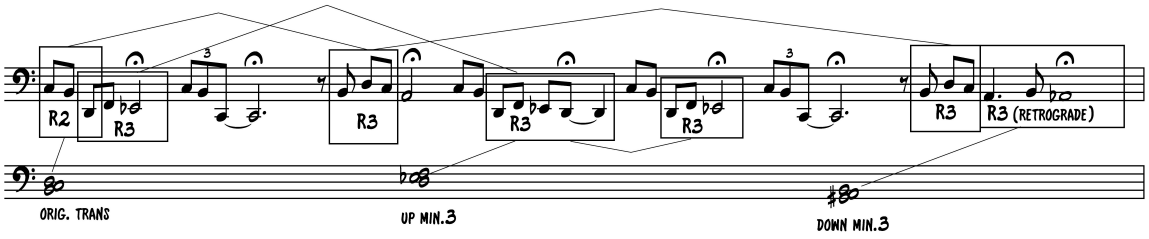
Example 2.20 shows how the minor third transposition of the three-note series (D, E♭, and F) that occurs in Theme D combines with the ongoing 1-3-4-5 G(add4) sonority to create a parent scale that includes the lower tetrachord of G Ionian, and the upper tetrachord of G Aeolian, containing both major and minor qualities. This scale is commonly known as the fifth mode of C ascending melodic minor.

Example 2.20 Derivation of parent scale for Theme D



Theme D uses this scale exclusively until its final phrase, when a third, more dissonant transposition of the three-note series occurs (A, B, G#/A♭), now in retrograde of the original direction. Example 2.21 illustrates the transpositions and rotations of the three-note series in Theme D.

Example 2.21 Transpositions and rotations of the three-note series in Theme D (R = rotation #)

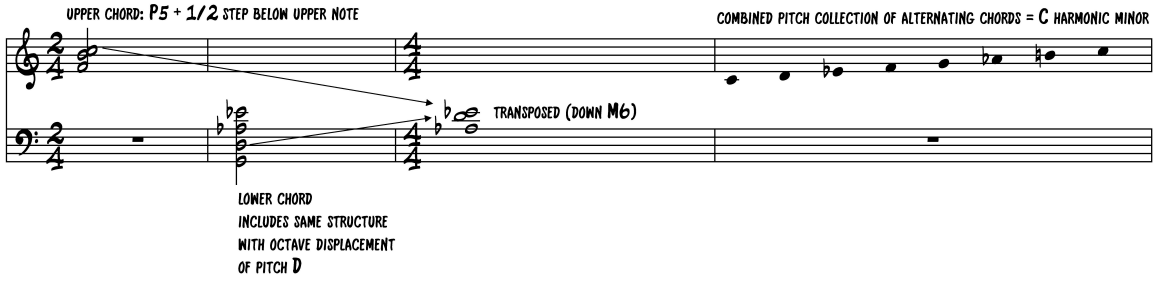


In addition to adding dissonance, this G#/A♭ alludes to m. 52 of Movement I, where the first modulation occurs, downward by minor third, from G to E major. The G#/A♭ in Theme D functions similarly, as a signal that a new section is about to begin.

Following the statement of Theme D, the staggered melodies of Theme C that formed the layered background texture finally unite for an instant at m.3, leading to a series of two alternating held chords, one higher and one lower, that function as a transition into the next section. The pitches that comprise these chords come from a similar parent scale as the one used for Theme D, but now the G#/A♭ that appeared at the end of the theme replaces the A natural, shifting the overall pitch collection from the fifth mode of C ascending melodic minor to the fifth mode of C harmonic minor. Each of the two chords includes transpositions of a three-note intervallic structure comprised of a perfect fifth with a half step below the upper note. Flute 1 and 2, clarinet, trumpets, and

piano play the first higher chord (F, B, C) while E♭ contralto clarinet, trombones 1-3, and vibraphone play the second (G, D, A♭, E♭). As shown in Example 2.22, the lower chord (excluding the low G) is a transposition of the upper one, with the D displaced by an octave, but the lower register and the two minor ninths within the voicing give it a darker quality.

Example 2.22 Construction of two alternating chords (beginning at m.4)

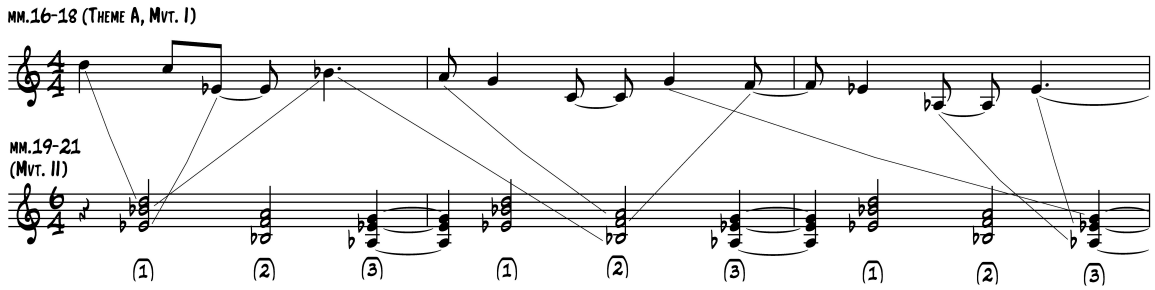


As these chords alternate in tempo, a layer of free "noise" improvisation occurs in the drums and guitar. The guitar plays "gestural, upper-register, non-pitched" phrases that combine with the dissonant chords in the woodwinds and brass, and unsettled rhythms in the drums to create an uneasy emotional atmosphere. The interlude ends with the higher chord, sustained with a fermata.

At m.19, a variation on Theme C presents the phrases in more concrete form than the opening. The melody enters bombastically in a new transposition (up a minor third), accompanied dramatically by a hard scrape on the tam-tam with a triangle stick (the first appearance of this instrument). In slow 6/4 meter, trumpet 1 and guitar (now with distortion) play the melody, as a series of cycling chords alternate below and the drums interject aggressively. Example 2.23 shows how the three three-note upper chords that

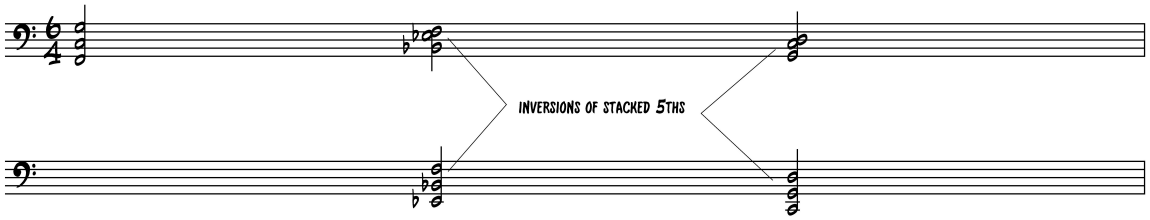
cycle throughout this section relate to the melodic shape of the second phrase of Theme A from Movement I. These chords are orchestrated with trumpets 1-3, and the right hand of the piano.

Example 2.23 Comparison of upper chord sequence in Mvt. II with melodic shapes from Theme A in Mvt. I



The three three-note lower chords are inversions of stacked fifths built on F, E♭, and C. These chords are voiced in trombones 1-3, contralto clarinet, bass (with double stops), and the left hand of the piano. Example 2.24 shows how the three cycling lower chords at m.19 are inversions of stacked fifths.

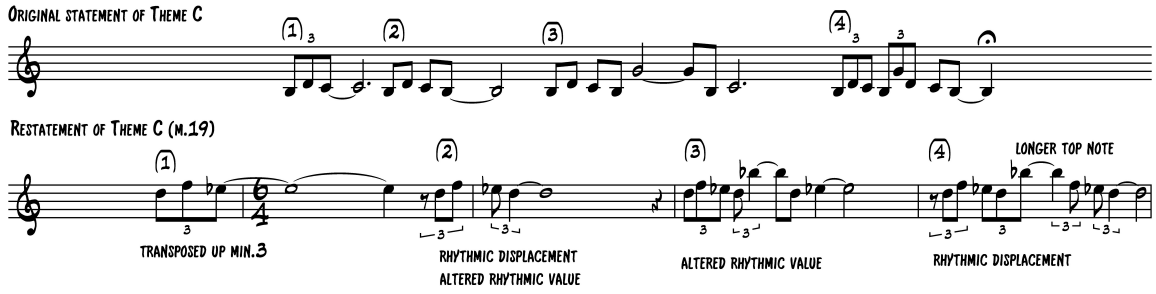
Example 2.24 Three-note cycling lower chords (m.19)



The overall harmonic effect of the upper and lower chords is a loose modal feeling around B♭13sus. Both the major 3rd and perfect 4th are highlighted and both the major 7th and minor 7th appear. The cycling chord progression beginning at m.19 could be interpreted as F7sus-Bbsus(Maj7)-GPhryg.

Above the bombastic alternating chords, the trumpet/guitar melody begins by restating the four phrases of Theme C with slight alterations in rhythmic value, displacement, and transposition. Example 2.25 illustrates the differences between this restatement and the original statement of Theme C.

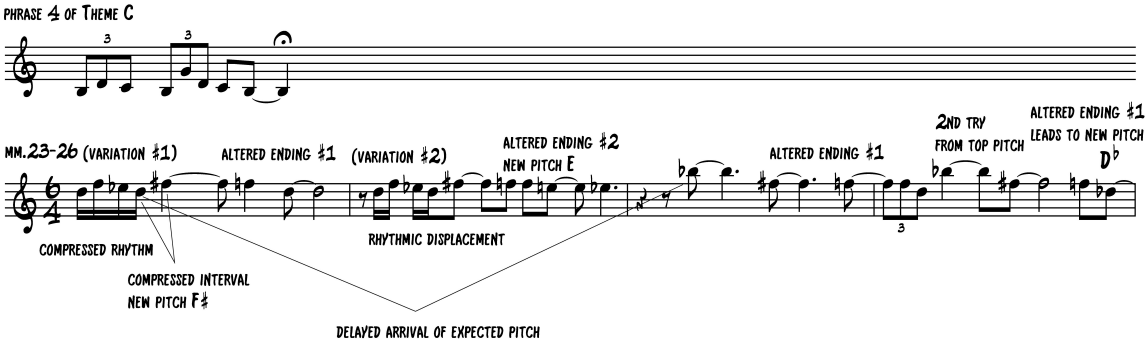
Example 2.25 Comparison of original statement and restatement of Theme C



Example 2.26 shows the next four-measure section, where intense variations on the fourth phrase begin. Soprano sax (unison) and tenor sax 2 (one octave below) join the trumpet/guitar melody, broadening the timbre. Here, the triplets of phrase 4 of the original melody are compressed to sixteenth notes and the expected melodic leap up to B♭ (minor sixth) is compressed to F# (major third). The phrase ending is also altered (labeled altered ending #1), as it skips past the expected E♭ directly to D. In the next measure, a second variation occurs. The phrase repeats, again starting in sixteenth notes, but now rhythmically displaced by an eighth note. The expected melodic leap is

compressed again to F#, this time descending chromatically, and emphasizing the dissonant pitch E on the way down (altered ending #2). Finally, the long-awaited high B♭ arrives but without the expected approach. Now, barely resembling phrase 4 any longer, the phrase again descends 'incorrectly' to F#, again using altered ending #1. In a final effort, it leaps one last time to B♭, but descends incorrectly one final time, this time ending on yet another new pitch, D♭.

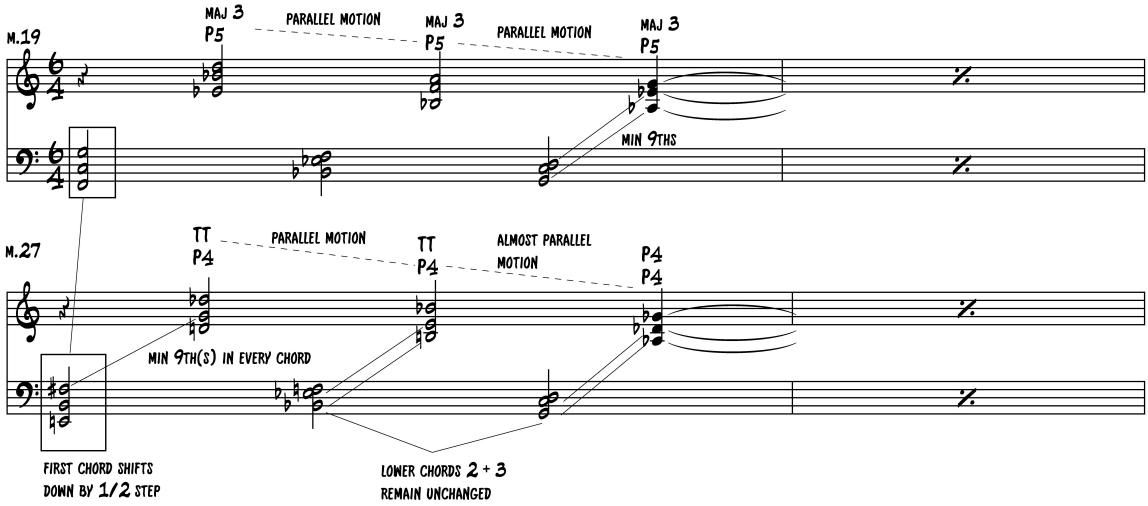
Example 2.26 Variations of phrase 4 of Theme C



At m.27, immediately after the melody lands on the surprising D♭, the bass and trombones shift the first of their cycling lower chords downward by a half step as the upper harmonies shift subtly towards more dissonant, harmonically ambiguous collections, based around fourths and tritones, rather than the prior fifths and major thirds. At this instant, musicians begin to break from the pack, performing "wild" free improvisations unrelated to the composed harmonic material. Alto 1, tenor 2, and trumpet 2 are the first to break off, followed by trumpet 4, trumpet 3, and finally at m.35, all the remaining woodwinds and brass break off at once. Example 2.27 illustrates the harmonic shift that coincides with the initial shift toward free improvisation, comparing

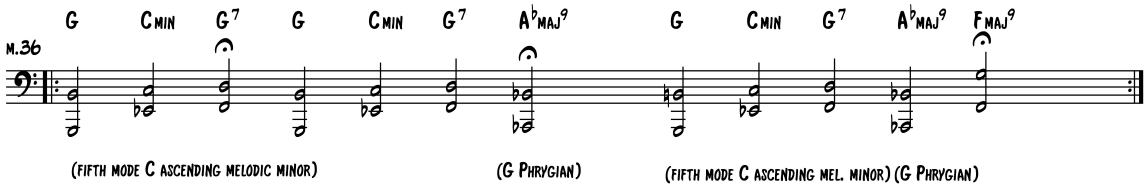
the pitches and interval structures of the more stable cycling chords at m.19 with the more dissonant shifted chords at m.27. Minor ninths are indicated with solid diagonal lines.

Example 2.27 Analysis of dissonant harmonic shift at m.27



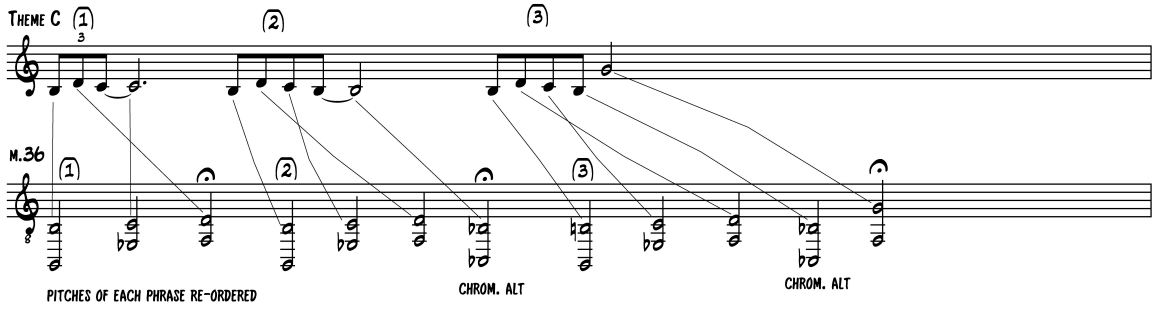
As all the woodwinds and brass break into free improvisation, the rhythm section fades out, leaving only the chaotic texture swirling above. The conductor directs a gradual decrescendo by cutting off individual players one by one. Meanwhile, the soprano sax begins to improvise in an unrelated tempo as the rhythm section returns with a series of slow chords. As the free improvisation fades, the soprano solo grows, creating a dynamic cross-fade. The accompanying rhythm section dyads create a harmonic cycle in the key of G, suggesting both the fifth mode of C ascending melodic minor scale from Theme D (combination of G Ionian and G Aeolian), and G Phrygian at the arrival of the dyad built on A♭. Example 2.28 shows the implied chords and scales during the soprano solo. However, the soloist is not given any explicit harmonic instructions for this section.

Example 2.28 Implied harmony during soprano sax solo



Example 2.29 shows how the upper pitches of these dyads mirror the first three phrases of Theme C, with similar note collections, and the same additive quality in terms of its number of attacks.

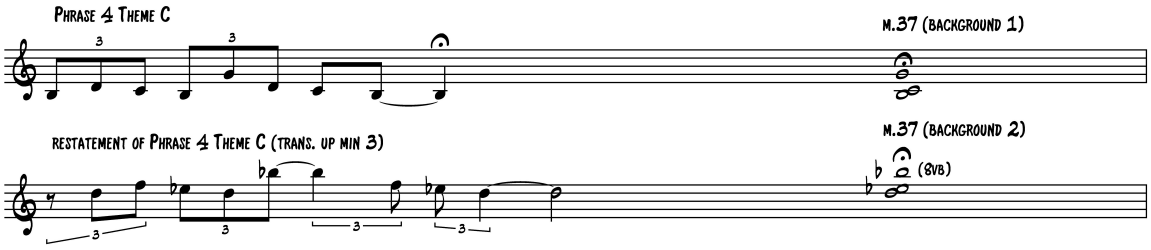
Example 2.29 Comparison of the upper pitches of dyadic harmonic accompaniment during soprano sax solo and phrases 1-3 of Theme C



As the soprano sax solo builds, the conductor cues backgrounds in the horns that may, or may not, relate to the underlying harmony and tempo, depending on when and how they are cued. Numbered cues indicate the backgrounds, consisting of held chords (#1 and #2), textures (#3 and #5), and gestures (#4). The figures build on the harmonic ambiguity between major and minor, at times suggesting both simultaneously. Example 2.30 shows how this harmonic ambiguity occurs as chords based on Theme C in both of

its transpositions (B-C-G and D-E♭-B♭) sound over the G key center. The two chords can occur separately and/or simultaneously, at the discretion of the conductor.

Example 2.30 Harmonic ambiguity in backgrounds for soprano sax solo (m.37), based on transpositions of phrase 4 of Theme C

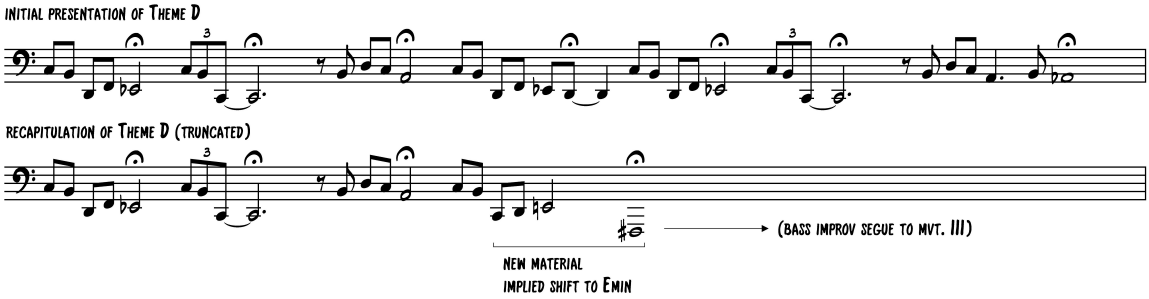


At the conclusion of the backgrounds, the bass, guitar and piano also stop playing entirely, leaving only the soloist and drummer to engage in an open improvised duo. At the conclusion of this duo, a false recapitulation of Theme C occurs. Each of the four phrases of C begins just as in the first presentation of the theme (B-D-C-D), but the phrases land unexpectedly on the second chord from the previous horn backgrounds (D-E♭-B♭). As mentioned earlier, this chord comes from the minor third transposition of Theme C. At m.40, m.42, and m.44, it creates harmonic tension when it sounds against the G major dyad played in the guitar, piano, and bass, as the harmonic cycle that had been played behind the soprano solo returns.

Finally, on the fourth phrase, the ambiguity ceases, and Theme C returns in its entirety, now with fuller orchestration. As the theme returns in m.45, the bass continues to the next pitch in the sequence from the previous section, F, creating a G(add4)/F harmony before fading out and allowing the G(add4) sound of the overlapping melodic phrases (an octave higher than before) to supersede it. As before, Theme C becomes the

backdrop to Theme D, as it returns at m.46. Trombones 1 and 2, and tenor sax 1 expand the orchestration of Theme D by playing one octave above the low instruments who played the theme before. Here the thematic material is truncated, to prevent the movement from sounding too complete. As shown in Example 2.31, the first three phrases match the initial presentation, while the fourth unexpectedly leaps further downward to a low C, stepping upward to D, before a surprise landing on E, a pitch that is not part of the parent scale of the original theme statement (which included E♭).

Example 2.31 Comparison of Theme D presentation and recapitulation



The E natural strongly hints at a shift toward E minor, but the low melody steps one note further to F# (dropping one octave in the bass and E♭ contralto clarinet), creating an unsettling G(add4)/F# sound to conclude the movement, after-which the bass segues to a solo improvisation that begins the final movement.

III. UNFURLING

Overview

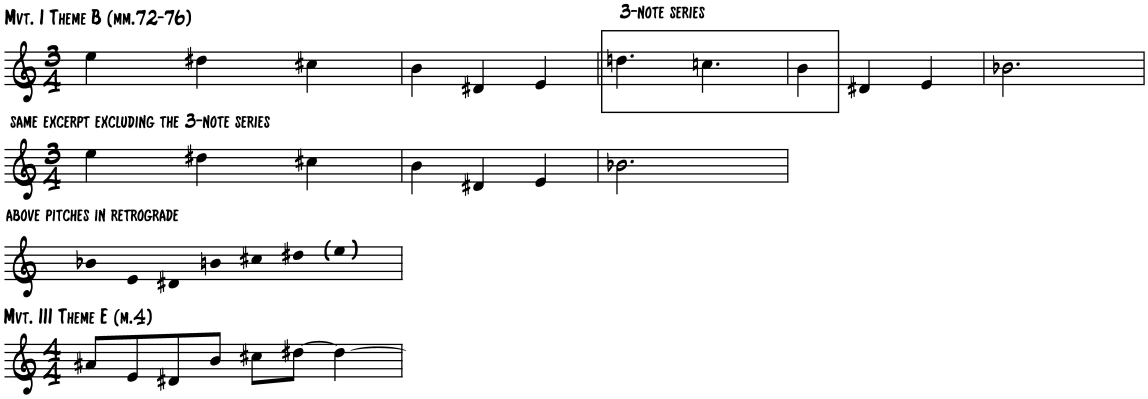
Unlike the previous two movements, *III. Unfurling* contains only one theme (Theme E). Whereas Themes C and D from Movement II are based on Theme A from Movement I, Theme E of Movement III is based on retrograded material from Mvt. I Theme B. Like Theme C, from Movement II, Theme E is additive, with each phrase building on the last. The E Lydian melody is varied, fragmented, and modulated in various ways throughout the movement. The piece culminates with a return to the original key of G, and the final phrase recalls the final phrase of Theme A from the first movement. A timeline and detailed description of Movement III follows.

Chart C: *Mvt. III* - Timeline of harmony, themes, and events

Meas. #	Harmonic info	Thematic	Event description
1-3	Free/chromatic → EPed (Lydian)	Introduction	Bass/drums free improv 4/4 even 8th ped point
4-34	E Lydian → G# Aeolian	Statement - E related to retrograde of B 3 phrases, each longer	Additive theme 8th notes into held notes 1. Pno./Vb./Gtr. 2. Sx./Tbn. Pyramids/swells
34-49	G Lydian → DMaj9(add4) faster harmonic rhythm shifting bass notes w/ modally related harmonies	Variation - E new order of phrases (1, 2, 1, 2, 3)	Full orchestration Pyramids/accents 5/4 cross-rhythm (Vb.) 3/8 cross-rhythm (Pno.) Displaced melody, bass
50-52	C Lydian	Tag related to E	Suddenly soft 3/8 cross-rhythm melody
53-68	C Lydian x 4 A Lydian x 4	Transition into solo related to E	3/4 meter W.W. + muted Tpt. Pyramids Rep. notes – Pno./Bs. T.Sx solo begins
69-92	A = C Lyd + A Lyd B = A2/C#-FLyd-C2/E-A♭Lyd (x2)	T.Sx. solo AAB form 8 meas. phrases	Quartet instrumentation Begins “sparse”
93-124	A = C Lyd + A Lyd B = A2/C#-FLyd-C2/E-A♭Lyd	Backgrnd - E AAB form	Sx./Tbn. Pyramids, displacement Tpts + Vb. during B
125-132	C Lydian x 4 A Lydian x 4	Transition out of solo harmony = A	Bowed bass long tones Open/spacious drums More dramatic pyramids
133-164	A2/C#-FLyd-C2/E-A♭Lyd (x2)	Contrapuntal Development motives from E harmony = Bx2	Imitation Rhythmic displacement 4/3 cross rhythm Build dynamics on rep.
165-188	GPed	Final Chorale Based on E Phrase ends like Theme A (from Mvt. I) Eb-F-D	Free tempo Bs./Pno./Gtr. rep. notes Lush W.W./muted brass Fragmented Theme E

III. Unfurling begins with an improvised bass solo that serves as the point of connection between Movements II and III. The improvisation begins with a cadenza in free tempo before the drums join to create a duo. Mirroring the opening of Movement I, this initial improvisation evolves into a steady pedal point groove with a light, even-eighth note feel in 4/4 meter. The tempo is slower than Movement I, and the tonal center begins in E Lydian. As with Theme A (Mvt. I), the first melody (Theme E) occurs in the piano. Here, the vibraphone and guitar each double a fragment of the melody, sustaining particular pitches to create an E Lydian chord. As shown in Example 2.32, the central motive of the Theme E is derived from retrograded material from Theme B (Mvt. I), excluding the three-note series that was central to each previous theme (see Example 2.19 for reference).

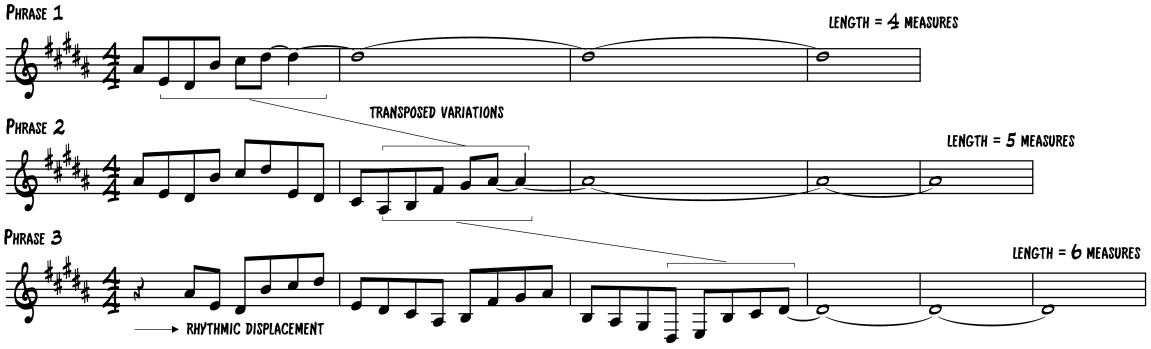
Example 2.32 Derivation of Theme E motive from retrograded Theme B material



Example 2.33 compares the three phrases of Theme E, each a winding line of eighth notes from the E Lydian scale leading to a held tone between each phrase. Like the phrases of Theme C (Mvt. II), the phrases of Theme E are additive, with each phrase

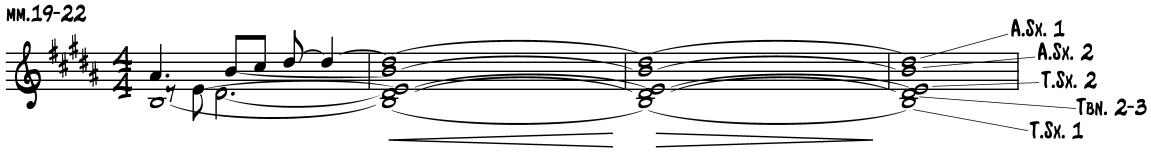
repeating and building on the previous one. The lengths of the phrases also increase, with the first phrase containing four measures, the second containing five, and the third containing six, for a total of fifteen measures. The second phrase builds on the first with a transposition and slight variation of the previous material. The third and longest phrase begins one beat later than expected (beat two of m.13), builds on phrase 2 with another downward transposition (now an octave below the original), and ends with the first chord change of the movement, a G# minor chord at m.16.

Example 2.33 Comparison of phrases 1-3 of Theme E



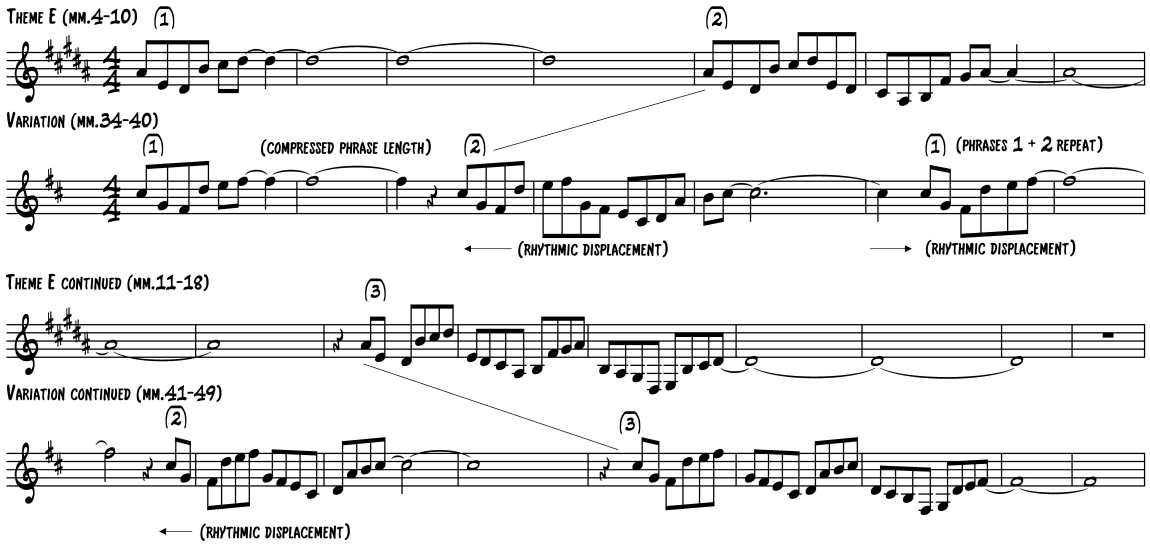
Next, again mirroring Movement I, Theme E repeats with a different orchestration. Here, the saxophone section, with trombones 2 and 3, performs the melody in a pyramid style, with each instrument performing only certain portions of the melody, and sustaining different pitches to create an E Lydian-based chord following the first two phrases, and a G# minor chord following the third phrase. Each held chord has a small dynamic swell, as the piano improvises "tinkles" between phrases. Example 2.34 shows a typical example of pyramid orchestration.

Example 2.34 Pyramid orchestration in Theme E



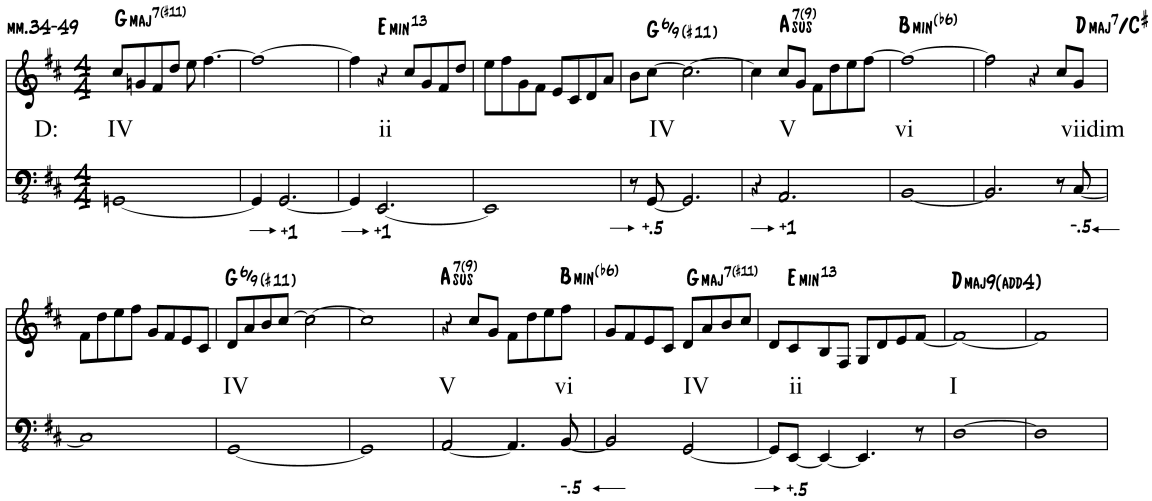
A variation of Theme E follows, as the tonal center shifts from E Lydian to G Lydian. Here, the full ensemble enters at a louder dynamic. The pyramid orchestration continues, with alto sax 1 playing nearly the entire melody, and all other brass and woodwinds playing only portions of it. Additional chords in the trombone section and trumpet 4 fill out the overall texture. The phrases of Theme E are re-ordered and condensed. The first phrase leads to the second, then back to the first, and on to the second and third. The space between the phrases is reduced, allowing five phrases to occur within sixteen measures compared to three phrases that had occurred within fifteen measures before. The five phrases are also rhythmically displaced, starting on beat one, then beat three, followed by beat two, beat four, and finally beat two. Example 2.35 compares the original presentation of Theme E with the variation that begins at m.34.

Example 2.35 Comparison of presentation and variation of Theme E



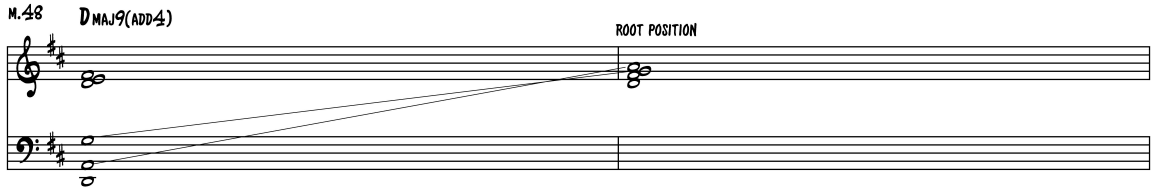
Adding to the rhythmic complexity, the vibraphone performs a 5/4 cross rhythm for the first eleven measures of this section, and the piano performs a 3/8 cross rhythm. The harmonic rhythm of this section also contracts, with no single chord lasting more than nine beats. Throughout the section, the bass pitches remain in G Lydian (D major), but shift to different scale degrees, creating a series of chords sharing the same parent scale. These include GMaj#11, Emin13, A9(add4), Bmin(♭6), C# Locrian (DMaj7/C#), and DMaj9(add4). Example 2.36 shows the chord progression of this section, including jazz chord symbols along with Roman numeral analysis. It also illustrates the increasing rhythmic displacement in the bass part, which only lands on beat one five times during this section, yet lands strongly on weaker beats or off-beats seven times.

Example 2.36 Harmony and rhythmic displacement during variation of Theme E



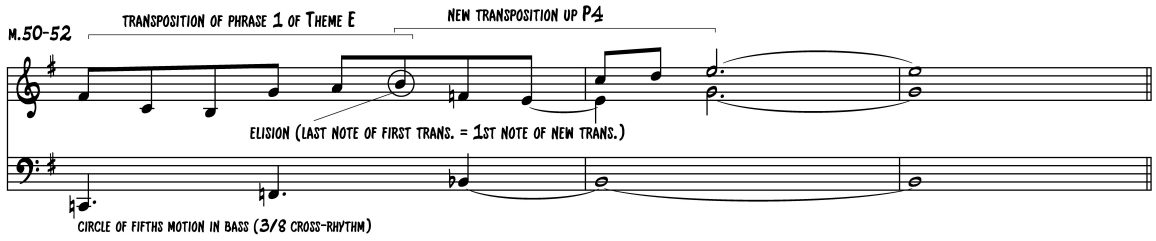
The section climaxes at m.48 on a DMaj9(add4)chord, which contains a transposition of the same 1-3-4-5 shape that has been an important element in previous movements, as shown in Example 2.37.

Example 2.37 1-3-4-5 shape at conclusion of variation of Theme E



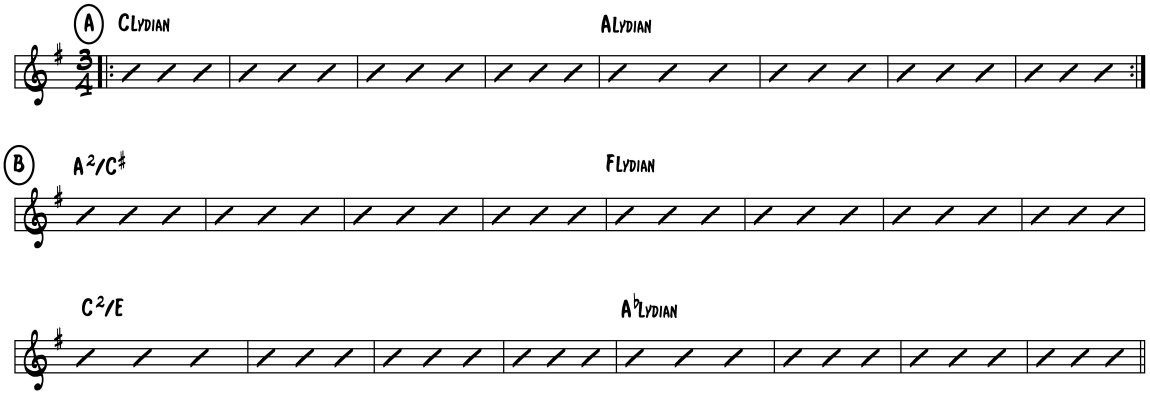
Suddenly, the volume drops, as a brief melodic tag occurs in the piano, accompanied by only bass and drums. Example 2.38 shows how this brief section sequences the first six pitches of Theme E using elision between two transpositions, as circle of fifths motion occurs in the bass using 3/8 cross rhythm.

Example 2.38 Analysis of piano tag following variation of Theme E



Next, the meter shifts from 4/4 to 3/4 and a major shift in timbre occurs with the addition of flutes, clarinets, and trumpets in harmon and cup mute. The first three notes of Theme E are fragmented and displaced as the backdrop to the newly emerging tenor sax 2 solo. Here, the harmony shifts from modally related chords (that share the same parent scale) to chromatically parallel chords (exact transpositions of a chord/scale type at a different pitch level). Mirroring the beginning of the trombone solo in Movement I, the bass switches to the upper register and plays repeated notes. Following this transition, tenor sax 2 improvises over the AAB solo form. The eight measure-long A sections move from four measures of C Lydian to four measures of A Lydian, while the sixteen measure-long B section moves in four-measure segments from A2/C# to F Lydian, then from C2/E to A♭ Lydian. The A2/C# and C2/E chords are somewhat ambiguous. This chord is typically voiced with the root, 2nd, and 5th over the 3rd in the bass, allowing the improviser to utilize either the Lydian or Ionian scale of the root tastefully. Later in the movement, specific Lydian lines appear over these harmonies. Example 2.39 shows the overall form and harmony of this section.

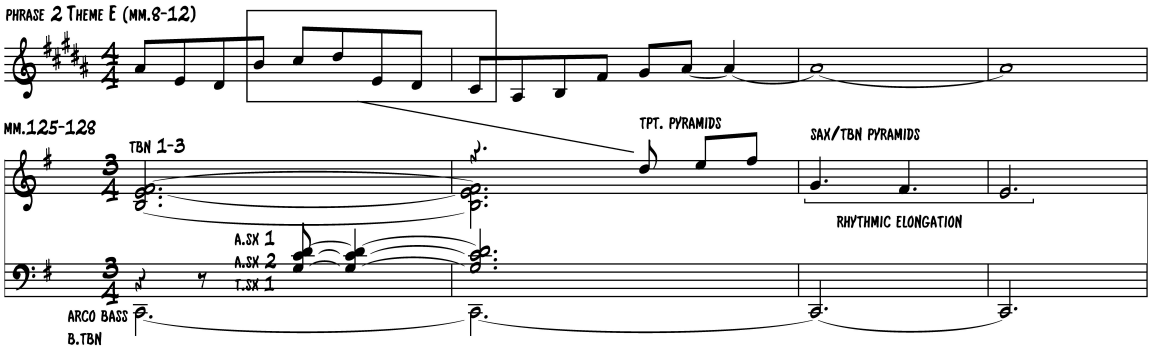
Example 2.39 Solo section form (AAB)



The first two choruses of the tenor sax solo occur in a quartet setting, as the rhythm section is instructed to begin sparsely and gradually build. At m.93, backgrounds enter in the saxes and trombones, returning the first phrase of Theme E four times, transposing to fit the chord progression, and adding rhythmic dissonance through displacement. Leading into the B section of the solo form, the trumpets enter with the vibraphone, as the dynamics build to end the solo.

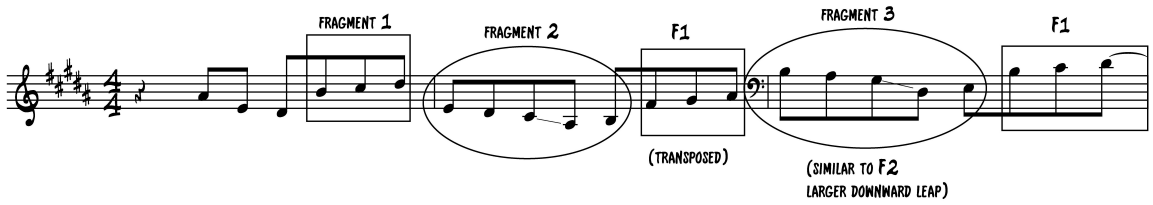
At m.125, the drama builds as the bass moves to arco, and sustains the roots of each chord of the A section with the bass trombone and baritone sax, and the drum character becomes more open and spacious. Accented forte-piano chords, first in the trombones and guitar, then in the saxes, lead to another fragment of Theme E (this one starting on the fourth note of phrase 2). The trumpets begin the upward portion of the phrase (transposed to accommodate the C Lydian harmony) in pyramid eighth notes, followed by the saxes and trombone on the downward portion, rhythmically elongated in dotted quarter notes. Example 2.40 shows a reduction of this section, illustrating the orchestration, and the use of the Theme E fragment.

Example 2.40 Development of Theme E fragment after tenor sax solo



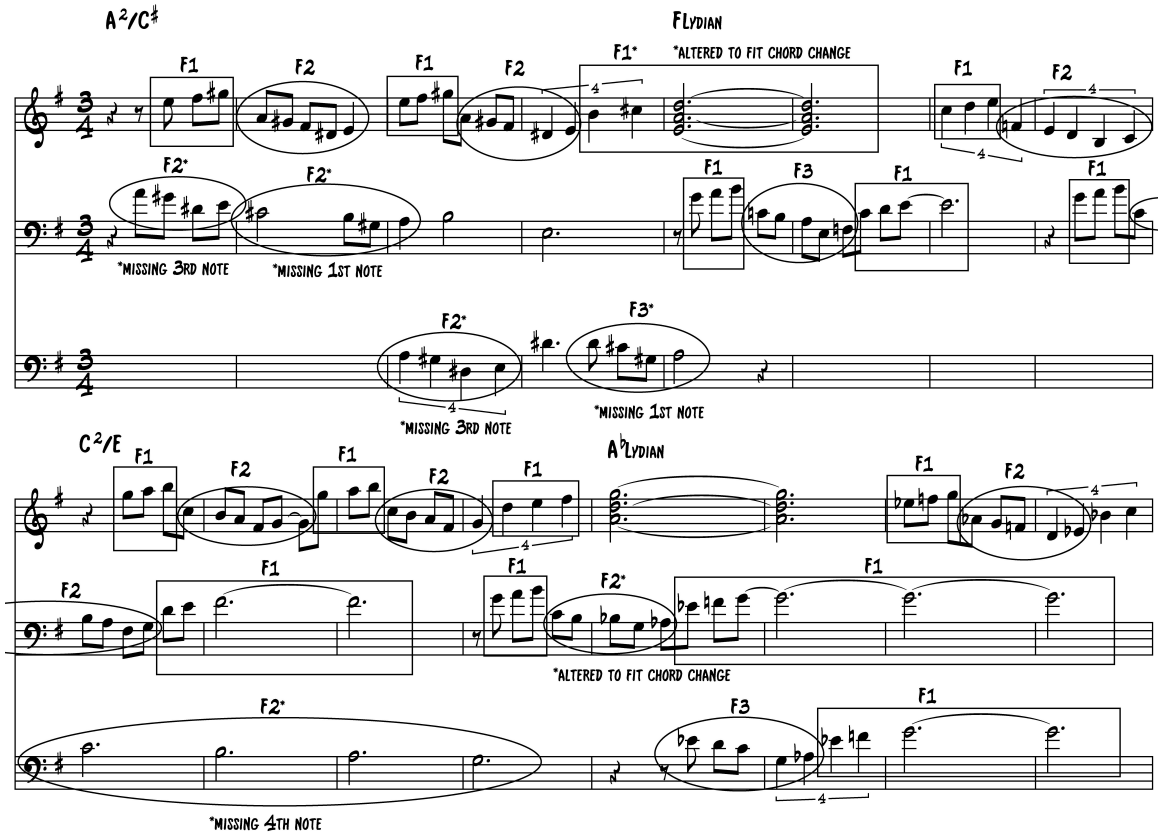
As with Movement I, this movement's climax comes in the form of an extended section of contrapuntal plentitude. While Movement I used this concept to integrate its two major themes (mm. 224-293), Movement III uses it to develop its only theme (Theme E) within the harmonic context of the B section from the solo form. Throughout the thirty-two-measure section, fragments of Theme E weave through the ensemble, sometimes rhythmically stretched to a 4/3 cross-rhythm, but primarily moving in eighth notes. Rhythmic displacement occurs frequently, as it has throughout the piece. Example 2.41 shows the three fragments of phrase 3 of Theme E that are used throughout this contrapuntal section. Fragment 1 is labeled with a rectangle, and fragments 2 and 3, similar in shape, are labeled with ovals.

Example 2.41 Fragmentation of phrase 3 of Theme E



Example 2.42 shows a reduction of the first sixteen measures of this section, with all of the Theme E fragments labeled. In addition to the previously mentioned rhythmic elongation and displacement, fragments also sporadically appear in incomplete form, missing one note. Chord changes occur every four measures, so fragments that traverse more than one chord are altered chromatically to accommodate the shift. In this example, fragments are labeled by number (as in Example 2.41), and noted with an asterisk when either incomplete or chromatically altered.

Example 2.42 Reduction of contrapuntal section, analysis of fragments (mm.133-148)

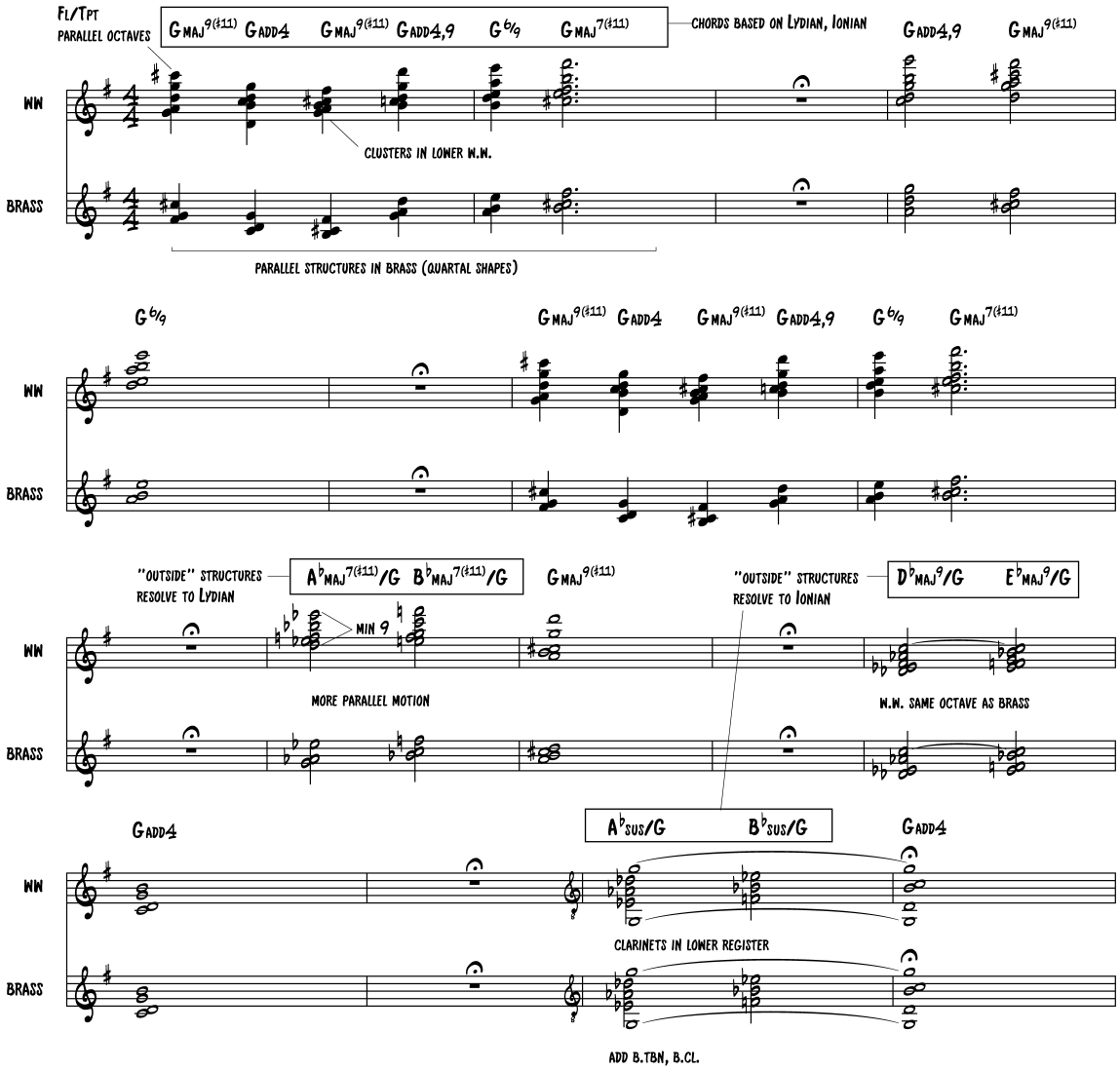


At m.149, the B section's harmonic progression repeats as the contrapuntal section continues and grows. Here, the vibraphone brings back the 5/4 cross rhythm from m.34, intensifying the rhythmic energy of the section. The contrapuntal imitation intensifies over the last few measures of the section as the trumpets ascend to the climax of the entire piece at m.165. Here the A♭ Lydian chord finally resolves to G(add 4), the original tonal center of the piece. As the saxophones and brass sustain and decrescendo the G(add 4) chord (the 1-3-4-5 shape), the bass, piano and guitar play driving repeated attacks on G, and the drums shift to free rhythm.

This rhythm section texture continues and gradually fades, as a final chorale in the woodwinds and muted brass recalls the one fragment of Theme E that was left out of the preceding contrapuntal section: the first three notes of the theme, a descending tritone followed by a descending half step (see Example 2.41). The dense homophony of this final section orchestrates the flutes and clarinets above the muted brass to create an airy quality. At m.171, flute and trumpets 1 and 4 perform the lead line in octaves, as trombone 1 and trumpet 3 perform the same line a perfect fifth below. Trombone 2 and trumpet 2 also perform a parallel line, starting a tritone below the lead voice, then maintaining a perfect fourth below. As the brass and flute stay mostly parallel and maintain structures based on fourths and whole steps, the lower winds create stepwise clusters in the middle of the voicings. Example 2.43 analyzes the harmonic structures of the final chorale. For the first three phrases, the harmonies suggest Lydian and Ionian sonorities with various extensions. On the fourth phrase, more dissonant, "outside" structures move in parallel motion and resolve to G Lydian. This type of resolution recalls the resolutions of the pedal point harmonies during Theme A in Movement I. In addition to the darker colors of A♭ and B♭, the voicings themselves are more dissonant due to the minor ninth interval within the chords. The fifth and sixth phrases echo this

resolution, now in a lower register as the woodwinds descend to the same register as the brass. These last two phrases resolve to G(add4), the initial chord of the piece.

Example 2.43 Harmonic analysis of final chorale



Melodically, the first six notes of Theme E return in the lead voice of the chorale, now in G Lydian. After a pause, notes seven and eight from phrase 2 return, followed by another pause. Phrase 1 returns again, and after yet another pause, the phrase resolves quite differently, moving from E♭ to F to D. This series of notes is meant to recall the resolution of Theme A in Movement I (mm.19-20). The E♭-F-D resolution repeats two more times. On the final phrase, the left hand of the piano and the bass join the bass clarinet and bass trombone on a low G. As the final chord ends, a few remaining repeated G's in the guitar and piano continue, as the drums fade out.

Chapter 3: Compendium of Compositional Techniques and Strategies

This chapter outlines a variety of compositional techniques, illustrating their use throughout *The Drawing Board*. Some of the concepts from Chapter 2 are touched on again.

AVOIDING DIRECT RESOLUTION

The melodies and harmonies of *The Drawing Board* tend to avoid direct resolution, favoring unusual or deceptive paths. Melodic phrases never conclude with a root, and frequently lead to surprising pitches (Theme B leads to #4, Variation of Theme C leads to ♭3, Theme D leads to ♭2). Harmonic resolutions are either deceptive, arrive on I via atypical paths (♭ii, ii), or arrive on altered versions of I (Lydian, add4, etc). Dominant chords never resolve to I. Chart D illustrates the avoidance of resolution at theme/section endings and cadence points.

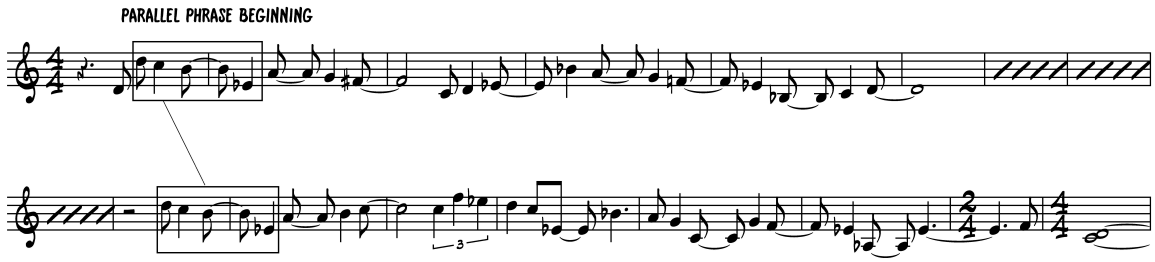
Chart D: Avoiding direct melodic and harmonic resolution

Mvt.	Endings of themes/sections, cadence points (m.#)	Melodic resolution (scale degree)	Harmonic resolution
I	A (m.44)	5	I (add4)
I	'Failed' Transition (m.52)	6	V7(sus♭9) → #VI (add4) (D.C.)
I	B (m.76)	#4	iii
I	"Shout" section (m.167)	2	I (Lydian)
I	'Failed' Transition (m.182)	2	V7(sus♭9) (H.C.)
I	Cadence during piano solo (m.214)	Up to performer	V7(sus♭9) → vi (D.C.)
I	B (recap) (m.294)	#4	iii
II	C (m.4)	4	V7alt/iv (ambiguous)
II	D (end of m.2)	♭2	I (add4) (♭2 in bass)
II	Variations C (m.27)	♭3	ambiguous
II	False Recap C (m.40)	♭3	I (major!)
II	Recap C (m.45)	3	I (add4) (♭7 in bass)
II	Recap D (end of m.46-47)	6, 7	vi
III	E (m.31)	3	vi
III	Variation E (m.48)	3	I (add4)
III	Contrapuntal section (m.165)	5	I (add4)
III	Chorale (m.186)	5	I (add4)

PARALLEL PHRASE BEGINNINGS AND ADDITIVE PHRASES

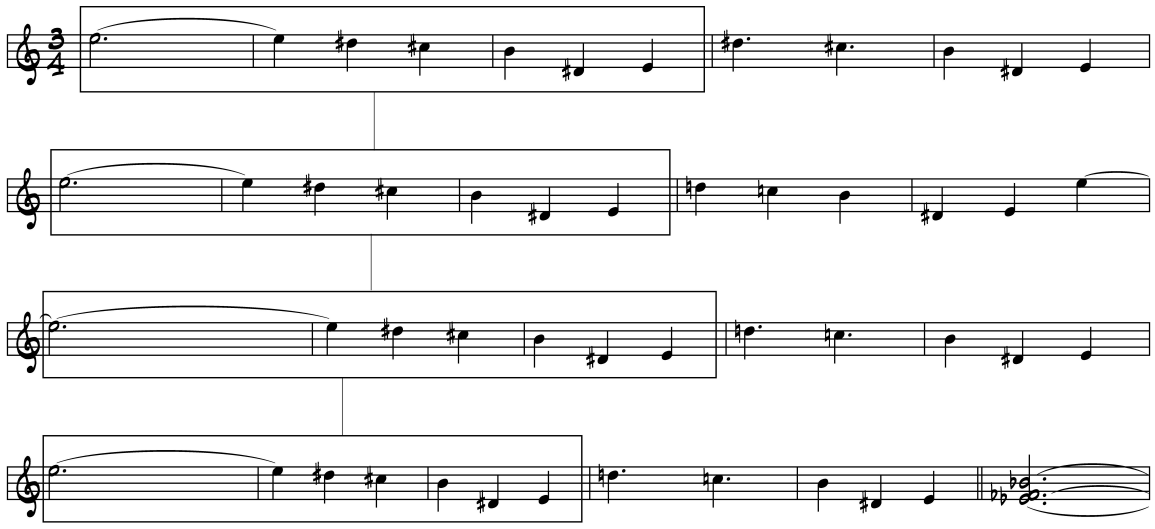
Each theme uses parallel phrase beginnings to establish motivic cohesion, and some themes expand on this strategy by utilizing additive expansion from phrase to phrase. Example 3.1 shows how phrases 1 and 2 of Theme A begin almost identically and then follow different paths.

Example 3.1 Parallel phrase beginnings in Theme A



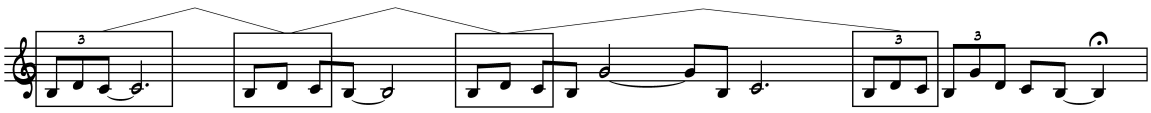
As shown in Example 3.2, Theme B's four phrases also begin identically, with varying middle portions.

Example 3.2 Parallel phrase beginnings in Theme B



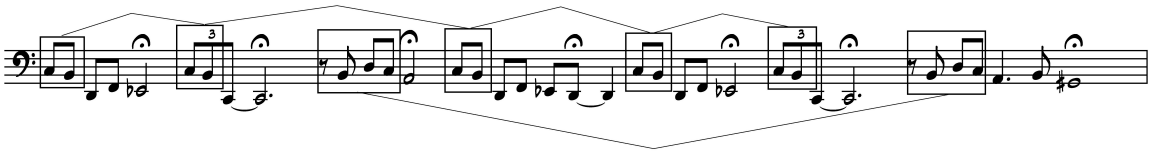
As illustrated in Example 3.3, each phrase of Theme C starts identically in pitch but not in rhythm. As mentioned earlier, Theme C is additive, with each phrase repeating and adding to the previous phrase (see Example 2.15).

Example 3.3 Parallel phrase beginnings in Theme C



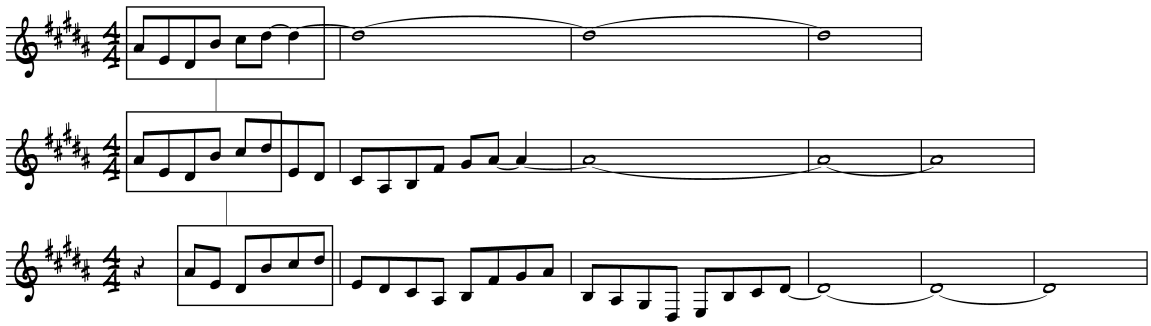
Example 3.4 shows that the seven phrases of Theme D use only two distinct phrase beginnings. Like Theme C, the pitches imitate, while the rhythms vary.

Example 3.4 Parallel phrase beginnings in Theme D



Like Theme C, Theme E is additive, with each phrase beginning identically, repeating the phrase that came before, and adding to it (see Example 2.33), but here the rhythm also repeats exactly, not just the pitches. Example 3.5 shows the imitative phrase beginnings of Theme E.

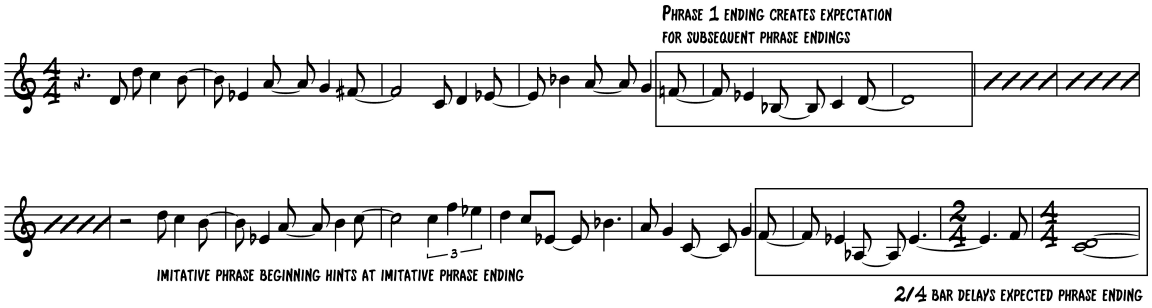
Example 3.5 Parallel phrase beginnings in Theme E



INTERRUPTED OR DELAYED PHRASE ENDINGS

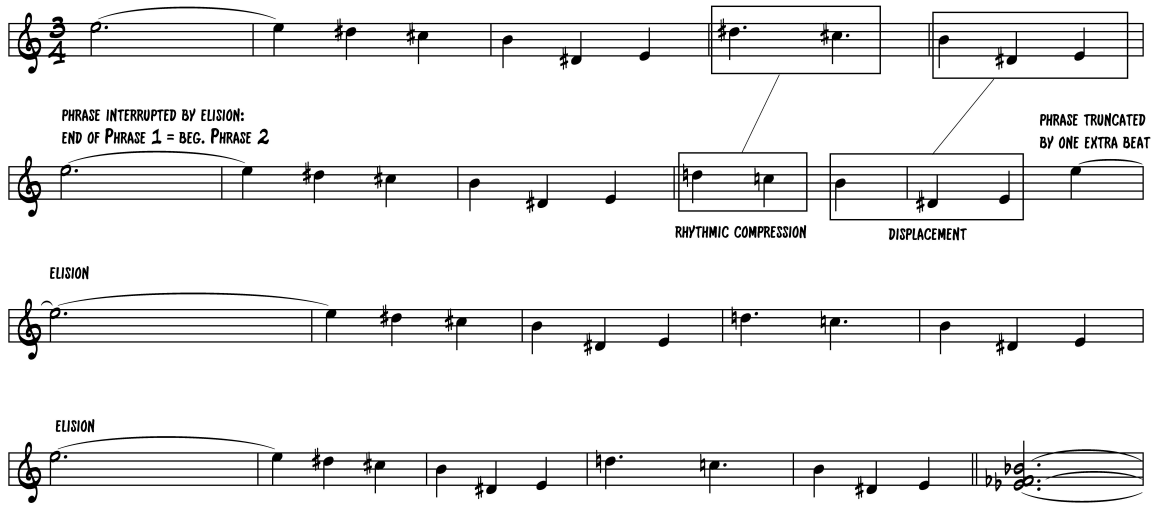
Throughout *The Drawing Board*, the ends of phrases are frequently either extended/delayed or truncated/interrupted from the expected outcome. This is usually achieved through rhythmic compression or elongation, phrase displacement, or elision. Example 3.6 shows the delayed phrase ending in phrase 2 of Theme A (occurring at m.19 and m.39). The ending of phrase 1 creates a reference point for subsequent phrase endings. When phrase 2 begins just as phrase 1 did, it creates the expectation that it will also end the same way (on the "and" of beat 4). Instead, a measure of 2/4 meter delays the final note of the phrase.

Example 3.6 Delayed phrase ending in Theme A



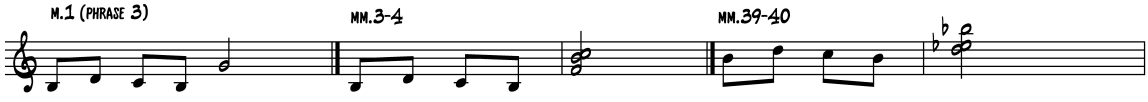
In Theme B, the end of each phrase elides with the beginning of the next, giving each phrase a truncated feeling. In addition to this interruption via elision, phrase 2 is shortened by rhythmic compression and rhythmic displacement in the middle of the phrase. Example 3.7 illustrates interruption through elision and phrase compression in Theme B (mm.56-75). Similar elisions occur between phrases when Theme B returns at m.234 and rhythmic compression and displacement shorten the phrases starting at m.272.

Example 3.7 Phrase interruption in Theme B



In Movement II, Theme C's third and fourth phrases both leap upward from B to G. After many repetitions of this same leap, the ear is conditioned to expect a minor sixth, but in m.3, the same figure leaps a minor ninth to C, the top note of an unexpected chord containing B and F below. Similarly, during the false recapitulation at m.40, the same phrase leaps to a B♭. Example 3.8 compares these three different arrivals. In this case interruptions stem not from the timing, but from the unexpected arrival pitches.

Example 3.8 Mvt. II interrupted phrase endings through unexpected arrival pitches



In Movement III, during the variation of Theme E (see Example 2.36), phrases are truncated through rhythmic displacement. This is discussed thoroughly in Chapter 2.

RE-ORCHESTRATION OF RETURNING AND REPEATING MATERIAL

A central characteristic of *The Drawing Board* is that themes never return or repeat in exactly the same way. In addition to frequently returning in different keys, meters, and registers, themes always return or repeat in different orchestrations. Sometimes this difference is slight and sometimes it is more drastic. The chart below lists the instruments performing each of the piece's major sections, comparing the original statements of material with repetitions and recapitulations. Variations are not included on this chart.

Chart E: Comparison of instrumentation during thematic statements

Section	Initial Statement	Repeat/Recap
Theme A	Pno.	S.Sx, Cl., F.H.
"Failed" Transition	Tpt. 1,3,4, S.Sx., A.Sx., Cl., Pno., Gtr.	Tpt.1, 3, 4, Gtr. (new key)
Theme B	Tpt.1-2, S.Sx, Pno.	Tpt.1-2, S.Sx. (new key)
Theme C	Pno, T.Sx, Cl., Tpt. (cup), Tbn., Vib.	S.Sx., A.Sx., Cl, Tpt. 1-4 (cup), Pno., Vib. (8va)
Theme D	Contralto Cl., Bass (arco), B. Tbn.	Contralto Cl., Bass (pizz), B.Tbn (original octave) T.Sx, Tbn. 1-2, Gtr. (8va)
Theme E	Pno., Vb., Gtr.	Sx. 1-5, Tbn. 2-3

Themes rarely occur in just one instrument or even in one specific family of instruments. More often, melodies combine at least one brass, wind, and rhythm section instrument, creating complex, less distinguishable timbres. This principle is also true for contrapuntal and accompanying material.

EVOLUTION OF MELODIC TEXTURES

In addition to single-line melodies with chordal accompaniment, several other distinct melodic textures occur within *The Drawing Board,* including homophony, pyramids, mobiles (multiple moving, but non-imitative layers) and imitative counterpoint. Themes, variations, and development sections present the material in multiple textures, and the evolution of these textures is a central organizing principle of the piece. Theme A first occurs as a single-line melody, but during the development of the theme, fragments of it appear in homophony. Theme B first appears in a mobile texture, but when it returns, both the subject and counter-line occur in canon. Theme C first appears in imitative counterpoint, later becomes a single line melody with chord accompaniment, and eventually morphs into the dyadic accompaniment to the soprano sax solo. Theme E first appears as a single line melody, its variations utilize pyramids, the development uses imitative counterpoint, and the conclusion uses homophony. Contrapuntal textures often use transposed fragments of previous melodic material. In Movement I, fragments of Theme A are integrated into the Theme B contrapuntal texture. In Movement III, several transposed fragments of the original theme are woven together to create a dense imitative texture.

CONTEXTS AND ROLES FOR IMPROVISATION

Traditionally, jazz improvisers solo over the form of the composed melody but in the case of more complicated or awkward forms, this can become a less practical strategy, and in longer works, extended variations on a chord progression do not always serve the larger purposes of the piece. *The Drawing Board* draws on several strategies to integrate improvised material into the larger work.

Solo improvisations

The role of a solo improvisation in jazz music is often either to allow the spontaneous development of previous melodic and/or harmonic material, or to propel the energy of the piece forward. Throughout *The Drawing Board*, whether the improviser solos over a form similar to the melody, or a new one, there is always a distinct harmonic shift prior to the solo. This achieves several important goals, including delineating the new section, giving the soloist a fresh harmonic palate to work with, and allowing the listener to sense that a developmental section has begun. In addition to the new harmonic territory, solos always begin with a shift in orchestration.

Chart F: Harmonic shifts at beginnings of solos

Movement	Solo, starting key	Previous key
I . Lines and Circles	Trombone, A♭ pedal	E major
I . Lines and Circles	Piano, B♭ pedal	E♭ major
II. Dissolution-Disillusion	Soprano sax, G	Free/noise
III. Unfurling	Bass, free/chromatic	G(add4)
III. Unfurling	Tenor sax, C Lydian	D(add4)

Despite the fresh harmonic contexts, each of the solos has some direct relationship to one or more of the themes. In some cases, the solo shares a similar form to a theme, and in others the connection is motivic rather than harmonic. In the case of the bass solo between Movements II and III, the relationship to the themes is one of contrast since the solo functions as a bridge between sections.

Chart G: Relationship of solos to themes

Movement	Solo (measure #)	Relationship to themes
I. Lines and Circles	Trombone (mm.76-130)	Interpolated oscillating chords Theme A form (minus one measure)
I. Lines and Circles	Piano (mm.192-253)	Interpolated oscillating chords Theme B form (extended cycle)
II. Dissolution-Disillusion	Soprano sax (mm.36-38)	Harmonic cycle motivically related to Theme C (phrases 1-3)
III. Unfurling	Bass (m.1)	Free-form, functions as interlude between Theme D and E
III. Unfurling	Tenor sax (mm.53-124)	New chord progression Background motives relate to Theme E

Group improvisations

In addition to the solo improvisations, several group improvisations occur throughout *The Drawing Board*. In these instances, groups are given general guidelines (atmospheric, wild, etc.) as opposed to specific chord progressions or forms. These group improvisations serve one of two functions, as an introduction/transition, or to create specific textures. The opening improvisation (m.1) uses the phrases "sparse" and "atmospheric" and indicates harmonics in the bass part. This improvisation is intended to portray a searching, yet meditative mood and it functions as an introduction to the entire piece. In Movement II, drums and guitar perform an improvised "noise" duo (mm.4-17) that occurs simultaneously with composed material but bears no relationship to it. In this case, the group improvisation functions as timbre and texture. Later in Movement II, group improvisation functions similarly, as the brass and woodwinds break off into free improvisation (mm.27-35), instructed to perform "wild free improv (multiphonics, screams, rapid)". Again, this occurs simultaneously with composed material and bears no relationship to it. The increasing number of musicians performing free music and

decreasing number of musicians performing composed music eventually leaves everyone freely improvising, creating a swirling, chaotic texture. The next instance of group improvisation comes at m.38, as the soprano sax and drums perform a duo that serves as a transition between the more harmonically structured solo section that preceded it, and the false recapitulation that occurs at m.39. A brief "free" duo (also functioning transitionally) occurs between drums and bass prior to Movement III.

Chapter 4: Conclusion

Composing a piece of this magnitude presented a number of interesting challenges, some of which have already been discussed, including my central goal of finding a balance between the sometimes opposing forces of cohesion and spontaneity. Most difficult for me was remaining aware of the larger temporal framework of the piece while composing without a pre-planned length. As the piece continued to grow, I was forced to re-examine the overall structure and adjust the music I was writing with that in mind. This became both difficult and time consuming. While I have no doubt that sketching out an overall structure before composing would have saved some time and hassle, I am glad I skipped this step because it allowed a more intuitive process of composition and prevented me from forcing square pegs into round holes.

While I found it musically satisfying to write an extended multi-movement work, I am unsure to what extent multi-movement pieces will play a role in the development of jazz composition in the future. Attention spans seem to be dwindling as personal electronic devices offer near constant distraction, and the shuffle feature on iTunes and most other music-delivery methods ensure that a piece like I just composed will never be played back in its entirety. Even die-hard music fans like myself are susceptible to distraction, and an inability to focus on music (or anything else) for longer time periods. It may be wishful thinking, but I suspect and hope that there might someday be a cultural shift in the opposite direction, and a re-discovery of the value of longer musical works.

Although the golden age of big bands from my grandparents' generation is fading further and further from memory, I believe that the big band still has a bright future as a vehicle for composers. Even considering the immense bodies of work of so many incredible big band composers over nearly a century, there are still musical possibilities

that have yet to be explored. As musical styles around the world continue to meld, and as the technical and improvisational abilities of today's musicians continue to increase, the possibilities will only increase further. Whether through big band music or any other means, it is up to composers like myself to continue our 'research' because the human mind is constantly evolving, and music will always serve as a reflection of who we are and how we think. I feel lucky and honored to be involved in this process.

Discography

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Vita

Composer and trombonist Alex Heitlinger has performed at music halls, festivals, and clubs across the United States and around the world. A successful bandleader since 2003, he has released two recordings of original music, *Green Light* (Synergy Music, 2004) and *The Daily Life of Uncle Roger* (self-released, 2008). His work as a freelance musician in New York, Boston, Denver, and Austin, has included gigs with the Duke Ellington Orchestra, Birdland Big Band, New York Symphonic Jazz Orchestra, Darcy Argue's Secret Society, Slavic Soul Party and Travis Sullivan's Bjorkestra. He is a three-time winner of ASCAP's Young Jazz Composer Award in 2008, 2009, and 2010. Alex holds a BM in Trombone Performance from the University of Colorado at Boulder and a MM in Jazz Composition from the New England Conservatory of Music.

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This dissertation was typed by Alex Heitlinger