

GRADUATE RECITALS AND DOCUMENT:
PULSE, PHRASING AND PITCH ORGANIZATION IN *CINQUE VARIAZIONI* BY
LUCIANO BERIO

by

LESLIE PAULETTE WYBER

B.Mus., University of Victoria, 1987
M.Mus., University of British Columbia, 1990

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to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

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Department of

Music

The University of British Columbia
Vancouver, Canada

Date

February 14, 1996

THE UNIVERSITY OF BRITISH COLUMBIA

SCHOOL OF MUSIC

Recital Hall

Monday, April 22, 1991

8:00 p.m.

DOCTORAL SOLO RECITAL*

LESLIE WYBER, Piano

Seven Bagatelles, Op. 33

Ludwig van Beethoven
(1770-1827)

Sonata, Op. 81a
"Das Lebewohl"

Ludwig van Beethoven

- I. Adagio - Allegro
- II. Andante Espressivo "Abwesenheit"
- III. Vivacissimamente "Das Wiedersehen"

INTERMISSION

Mazurka Op. 63 No. 2

Frédéric Chopin
(1810-1849)

Mazurka, Op. 59 No. 1

Mazurka, Op. 50 No. 3

Karol Szymanowski
(1882-1937)

Mazurka, Op. 50 No. 6

Nuages Gris

Franz Liszt
(1811-1886)

Bagatelle sans Tonalité

Drei Klavierstücke, Op. 11

Arnold Schoenberg
(1874-1951)

- I. Mässige
- III. Bewegte

Cinque Variazioni

Luciano Berio
(b. 1925)

* In partial fulfillment of the requirements for the Doctor of Musical Arts degree with a major in Piano Performance.

THE UNIVERSITY OF BRITISH COLUMBIA

SCHOOL OF MUSIC

Recital Hall

Tuesday, March 24, 1992

8:00 p.m.

DOCTORAL CHAMBER RECITAL*

LESLIE WYBER, Piano

A Garland for Marjory Fleming

Richard Rodney Bennett
(b. 1936)

In Isa's Bed
A Melancholy Lay
On Jessy Watson's Elopement
Sweet Isabel
Sonnet on a Monkey

Chanson de Bilitis

Claude Debussy
(1862-1918)

La Flute de Pan
La Chevelure
Le Tombeau des Naiades

Bonnie Dodds, mezzo soprano

Sonata in G Major, Op. 30 No. 3

Ludwig van Beethoven
(1770-1827)

I. Allegro Assai
II. Tempo di Minuetto
III. Allegro Vivace

Cameron Wilson, violin

INTERMISSION

Fantasy in Five Statements

Wallace Berry
(1928-1991)

Larghissimo con affeto
Allegro molto e scorrendo
Come un imagio fantastico
Scherzoso
Agitato; Tempestoso

Stephen Robb, clarinet

THE UNIVERSITY OF BRITISH COLUMBIA

SCHOOL OF MUSIC

Recital Hall

Wednesday, June 14, 1995

8:00 p.m.

DOCTORAL LECTURE RECITAL*

LESLIE WYBER, Piano

Cinque Variazioni (1952/53 rev. 1966)

Luciano Berio
(b. 1925)

- I. Calmo e flessibile
- II. ♩ = poco meno del ♩ precedente
- III. Prestissimo
- IV. ♩ = 192
- V. Calmo
- Coda

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THE UNIVERSITY OF BRITISH COLUMBIA

SCHOOL OF MUSIC

Recital Hall

Sunday, November 26, 1995

8:00 p.m.

DOCTORAL RECITAL*

LESLIE WYBER, Piano

Prelude and Fugue in E-Flat Major, WTC Bk. II

J.S. Bach
(1685-1750)

Prelude and Fugue in E-Flat Major, WTC Bk. I

Prelude and Fugue in D-Sharp Minor, WTC Bk. I

Vingt regards sur l'enfant-Jésus

Olivier Messiaen
(1908-1992)

III. L'échange

VII. Regard des hauteurs

Douze Etudes

Claude Debussy
(1862-1918)

III. pour les Quartes

XI. pour les Arpèges Composés

VI. pour les huit doigts

INTERMISSION

Sonata in A Major, D. 959

Franz Schubert
(1797-1828)

I. Allegro

II. Andantino

III. Scherzo and Trio

IV. Rondo

* In partial fulfillment of the requirements for the Doctor of Musical Arts degree with a major in Piano Performance.

Sonata for Violoncello and Piano

Elliot Carter
(b. 1908)

- I. Moderato
- II. Vivace, molto leggiero
- III. Adagio
- IV. Allegro

Laura McPheeters, cello

* In partial fulfillment of the requirements for the Doctor of Musical Arts degree with a major in Piano Performance

ABSTRACT

This document examines Luciano Berio's *Cinque Variationi* for solo piano (1952–3, rev. 1966) from the perspective of a performer seeking to convey something of the organization of its musical material to a broad audience. Criteria for identifying elementary partitioning (pulse) and grouping (gesture, phrase segments, and phrases) are explored. In analysing relationships between phrases and phrase groups several things must be considered: specific pitch issues, distinctions between primary and auxiliary or accompanimental material, and contour. Throughout the document, suggestions are given for successful realization of fundamental grouping structures in performance.

Although the piece has elements of serial construction, it is primarily underlying linear motion which gives sections cohesiveness. Also, certain pitch classes are given special emphasis and become vital reference points. The placement of and linear movement around these emphasized pitch classes create traditional tonal implications, to varying degrees throughout the work.

Cinque Variationi is a set of variations for which no theme is provided, and it is far from obvious what is being varied. After examining the grouping structures of this piece, it becomes clear that variations refer to each other in unsystematic ways, and that pitch centers serve as reference points across variations.

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Introduction

A question frequently asked of a performer who includes twentieth century art music in recital programs is: How do you listen to new music? This question becomes more insistent when a listener is faced with a piece of new music lacking text, program, and an evocative title; a piece which carries with it no extra-musical allusions to suggest a familiar point of entry into the musical experience.

Through an analysis of *Cinque Variazioni* by Luciano Berio, written in 1952–53 and revised in 1966, this paper will explore one of the vital points of departure in dealing with the issue of intelligibly communicating a twentieth century work. Beyond streams of pure sonority, something of the organization of musical material must be clear. In “common practice” music, at least at some elementary stage, different levels of partitioning (pulse, bars, hyper bars) and grouping (gestures, phrase segments, phrases) are familiar and immediately recognized. This is less true of more recent music; although, as in *Cinque Variazioni*, basic grouping principles stemming from common practice music still often apply, albeit in expanded form and differently realized.

Since rate of motion is determined not so much by the amount of rhythmic activity as by underlying pulse, uncovering a fundamental pulse through the often dense foreground rhythm of a complex twentieth century work such as *Cinque Variazioni* is a chief issue for the performer. In Variations 2 and 4, and the Coda pulse and meter are for the most part straightforward and self explanatory. Significant pulse and meter issues arise in Variations 1, 3 and 5.

In Variation 1 there is no notated meter, but pulse emerges slowly from an amorphous beginning. At first the pulse is quite long but flexible, stretching at times

through written out rubato. It slowly evolves over the course of the variation becoming shorter and more regular. In the latter part of Variation 1 elementary meter appears. In Variation 3, the steady stream of high-speed eighth notes are grouped into pulses whose durations change constantly between quarter notes, dotted quarter notes and dotted eighth notes. Occasionally there are "double entendre" effects where pulse length can be interpreted in two ways at once. In Variation 5, the pulse is clear and regular, but elaborate rubato effects are written around it. Pulse points are delayed or anticipated and elaborate ornaments precede them, by necessity making pulse length flexible.

In terms of larger groupings, separate short gestures group together to form large gestures, or phrases.¹ At phrase endings traditional methods of expressing cadence are also widely used, such as downward leap, narrowing of register, two-note slur, diminuendo, decrease in rhythmic activity, and ritardando. Conversely, upward leap, widening of register, crescendo, increase in metric activity, and accelerando are all methods used in achieving musical "beginnings". These tools are used in constantly changing combinations and variations, and dictate the pacing and the fine points of punctuation in the performance of the work.

Analysing relationships between phrases and phrase groups will also be an important part of the paper.² In coming to terms with these relationships, several

¹ Most writers define phrase in the context of tonal language. This piece is for the most part without a tonal harmonic component, however the basic function and length of its phrases is analogous to that of the phrase in tonal music. Roger Sessions provides a definition which can apply to a broad range of music. "What, for instance is a so-called 'musical phrase' if not the portion of music that must be performed, so to speak, without letting go, or figuratively, in a single breath? The phrase is a constant movement toward a goal - the cadence; and the rhythmic nature of the latter is admirably characterized in the term itself, derived from the Italian verb, cadere, to fall: that is, the 'falling' or downbeat, the moment of release."

Roger Sessions, The Musical Experience of Composer, Performer, and Listener, (Princeton, N.J.: Princeton University Press, 1950), 12.

² "...the phrase is ultimately comprehensible only in association with other phrases, and in relation to the larger formal units which motives and phrases combine to produce."

Wallace Berry, Form in Music, 2d ed., (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1986), 11-12.

things must be considered: specific pitch issues, distinctions between primary and auxiliary or accompanimental material, and contour. To illustrate and clarify these relationships, it is sometimes helpful to suggest elementary reductions, so that movement between pitch classes can be considered.

While the piece is not strictly serial, there are elements of serial construction. Often, although not consistently, the full chromatic aggregate (or ten or eleven pitches of the aggregate) is presented in succession. However, throughout the work, underlying linear motion gives sections cohesiveness. Also certain pitch classes are given special emphasis and become vital aural reference points. The placement of and linear movement around these emphasized pitch classes have, to varying degrees throughout the work, traditional tonal implications.

In Variation 1 a series of pedal points emerges from rather amorphous surroundings and fragments of linear motion can be interpreted in loosely tonal terms. High register pedal points come across as the only stable elements in the metric mayhem that is Variation 3. Tonal reference and directed linear motion are strong elements in all the other variations. In Variation 5 and the coda, intervals of fifths and strings of fifths stand out of the texture with increasing frequency. These emphasized pitches are aural signposts in the constantly shifting textures and metres. Recognizing underlying tonal implications can do a great deal for general accessibility. Phrases, sections and variations share common pitch centers, engendering links between small and large sections of the piece.

At first the variations will be discussed in turn: since this piece is in many ways an essay in metric and gestural diversity, different issues come up in each one. Also within each variation, all these areas of inquiry are interrelated. In making decisions about pulse placement, considering the interplay of gesture is vital. Specific pitch issues must be addressed when discussing segmentation and gestural

interrelationships. In discussing the nature of metre and gesture in each variation in turn, this paper can serve as a kind of annotated listening guide as the reader is taken through the dramatic progression of *Cinque Variazioni*.

Following the discussion of the separate variations, some impressions of the piece as a whole will be given. The most compelling aspect of this variation set is its dramatic impact. The “arching” structure can be roughly described as a progression through the variations from simple, sparse and slow (Variation 1), to complex dense and fast, (Variation 3 and 4) and back again (Variation 5 and the Coda), although this description does not really do justice to the intricate and multifaceted temporal dimension of this piece. It is clear that the piece is dramatically effective, but the piece is a set of variations for which no theme is offered, and it is not obvious what it is that is being varied. The intent of this discussion is not to present rigorous motivic analysis, or to do exhaustive analysis of pitch construction, so a full discussion of the overall formal aspects is beyond the scope of this project. It becomes, however, clear after the annotated listening that variations do refer to each other in unsystematic ways, and that the network of pitch centers serve as reference points across variations. The variations have a circular effect. The outer parts of the piece are slow and evocative and are most directly related to each other in affect and details of pitch and rhythmic make-up.

There are two versions of *Cinque Variazioni*, the original version written in 1952–53 and published in 1954, and the revised edition, published in 1966. In the discussion below, the revised edition is considered the definitive version. However, in portions of Variation 1 there are apparent rhythmic mistakes in the revised edition. These are pointed out and the original version is referred to for clarification. The original version will be briefly referred to in the discussion of meter and rhythm in the first section of Variation 3 (the original version is unmetered, the revised edition has

added meter) to widen the discussion of possible approaches to and interpretations of the equivocal metric arrangement in the revised edition.

Throughout this analysis there will be comments on how a traditionally trained performer would intuitively respond to notation. According to Wallace Berry “... the intuitions of sensitive performers are often valid, as the long-range outcome of deeply assimilated experience conducive to spontaneous responses which indeed may be virtually unerring.”³ However, most performers make intuitive decisions based primarily on experience with the pervasive ‘common practice’ period. In exploring a piece such as this one, where more common musical language is used in conjunction with newer forms of musical expression, this intuition must be enriched by a deeper look at possible impulses behind particular notations. Thus Berry’s caution that follows the statement quoted above must be doubly heeded. “But intuition can also be a capricious guide, and it is clearly inadequate in solving problems, as when a performer faces a dilemma respecting tempo or articulation, and where an interpretive choice needs to be underscored with explanation and substantiation. . . .”⁴ Like many modern scores, the score of *Cinque Variazioni* is rife with verbal directions, accents, tenutos, written out rubato, extremely detailed dynamic markings, etc. However, even if carefully chosen notation could automatically enact the intended accentuation or nuance from a performer, effective communication is still only possible if she understands something of the spirit behind the notation.

³ Wallace Berry, Musical Structure and Performance (New Haven and London: Yale University Press, 1989), 8.

⁴ Ibid.

CHAPTER ONE

Variation One

Metric Organization and Phrase Segmentation of the Whole

The opening, marked *appena percettibile e vago*, is a slow emergence of sound from silence. In these amorphous opening sounds, the process of formulating organized rhythm is heard. The pulse emerges as it gradually shows its subdivisions.¹

The pulse begins as a long span, three eighths, then through the first page it gradually shortens. The amount of activity also increases, but the subtle pulse provides the underlying rate of motion, or pacing. Since the evolution of pacing is an essential element in the variation, the *flessibile* direction probably indicates not so much that the foreground rhythm should be treated flexibly, which would blur the subtle changes in pace, but that flexibility should result necessarily from the undulations and subtle shifts of the pulse. As the variation progresses, the process of working out the organization of pulse and meter continues. The pulse length more or less stabilizes by the end of page 1, and a strong-weak metrical pattern begins to emerge.

In this discussion it may seem that there is an attempt to impose metric properties on a section of music that specifically lacks them, and to impose rhythmic rigidity on a variation which is headed by *aflessibile* marking. However, the intention is, in general terms, to assert that it is not necessarily the case that pulse and meter either exist, and are notated and presented using the standard symbols; or do not exist,

¹. Throughout this unmeasured variation, the notation indicates pulse, since rhythmic groups are beamed in very specific, and quite regular ways.

and leave in their stead a metric void. Aspects of pulse and metre, with varying degrees of regularity, are a constant presence in the variation. After the very amorphous opening, pulse and later meter gradually become more established as the variation progresses. Time signatures cannot communicate this evolutionary process, but denying any evidence of pulse and meter causes the variation to lose some of its skeletal structure.

In the beginning of the variation, as the pulse is emerging, the phrases are separated by commas or rests, and essentially consist of a series of pedal points, often preceded by an introductory, or upbeat figure. As the pulse becomes established and metric patterns develop, the music becomes less static. At the bottom of page 1 and top of page 2, fragments of linear motion appear. The second section of the variation (beginning at the second system of page 2), is entirely made up of contrapuntal lines.

The first part in detail

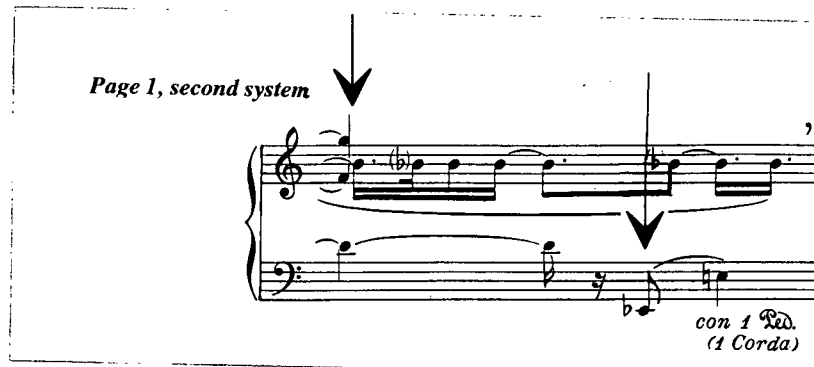
Example 1.1 shows the pulse pattern, indicated by arrows, in the first phrase.

Calmo e flessibile $\text{♩} = 72-82$

pppp (oppena percettibile e vago)

con 2 Red.

Example 1.1: Pulse points, phrase 1.



Example 1.1 cont'd.

Each of the first three pitches is introduced on a separate pulse. Rhythmic activity then doubles with the B4-flat played halfway through the third pulse. Then, in the fourth beat, each half is divided into three. The fifth pulse, where the highest pitches of the phrase are heard is also the "densest" point of the phrase, with four simultaneous pitches sounding. All this suggests accent at this point. The length of pulse changes here. The beaming suggests a pulse of four sixteenths followed by a pulse of three, with the next pulse at the beginning of the second system, where there is no attack to punctuate it. If instead these short pulses are combined into one stretched pulse of seven sixteenths, the pulse is not disrupted. The extra sixteenth comes across as a slight rubato in the first half of the pulse, helping to emphasize the peak of the phrase. This would follow more smoothly from the previous pulse which also has a slight accent at its halfway point (caused by the D4 in the left hand).

According to the beaming, the second system begins with three pulses of four sixteenths. However, there is no attack at the beginning of the pulses, so there is no way to perceive their new length. A listener's tendency would be to continue to assume a regular pulse, so here, since there is nothing contradicting the (approximately) dotted quarter pulse, it continues to be the functional one. Thus, a pulse is assumed at the beginning of the second system, and the E1-flat in the left

hand is heard as marking the following pulse. The performer should take care not to accentuate the E3 following this pulse, despite its implied agogic accent. A diminuendo accompanying the slur from E2-flat to E3 is therefore appropriate.

The first phrase emerges as an arched shape, with increased rhythmic activity to the fifth beat, which could be underlined by a performer with a slight crescendo. Since there are no attacks at the beginnings of rhythmic groupings at the beginning of the second system, a performer would respond by accenting none of these B4-flat's. The decrease in rhythmic activity from the beginning of the second system, to the first comma would lend the effect of diminuendo as well.

Page 1, second system, cont'd.

Phrase 2

Page 1, third system

Phrase 3

a tempo

mp

p

poco accel.

rapido

3

5

Example 1.2: Pulse points, phrases 2, 3, and 4.

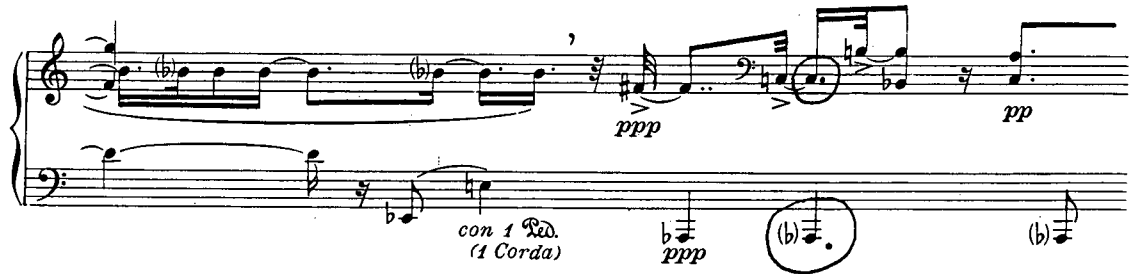
Page 1, fourth system

Page 2, first system

Example 1.2 cont'd.

The comma midway through the second system indicates the beginning of phrase 2. From the comma to the end of the second system there are rhythmic inaccuracies in the revised edition. It seems clear that two dots have been left out, one after the C3, and one after the second A1-flat. The dot after the second A1-flat is present in the original version

Page 1, second system



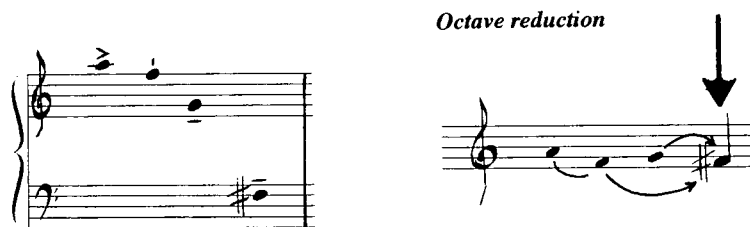
Example 1.3: Corrected version, phrase 2.

With these corrections taken into account, there are three quarter note pulses after the comma in the second system. From the first beat of the third system until the comma mid-way through the third system, the pulse is shortened to three sixteenths. A notated *accelerando* heightens this increase in momentum. As often happens in this variation, the pulse here is dictated by the upper lines. The reiteration of a single pitch in the bass does not occur in any regular rhythmic pattern, so it neither underlines the pulse of the upper lines, nor provides a counter-pulse of its own.

The beginnings of pulse hierarchy emerge in this phrase. The last pulse of the second system sounds as a “preparation”, or “lead-in” for the beginning of the B3 pedal point in the third system. The effect of “lead-in”, or upbeat, is strong because there is no attack at the beginning of this pulse, and because there is a stepwise ascent from A3, attacked on the second sixteenth of the “lead-in” pulse, to B3 at the beginning of the next pulse.

The comma in the third system indicates the beginning of the third phrase. The break at the comma is intended to be very short because of the continuing *accelerando*, and *rapido* marking. The 64th-note figure functions as a “connector” between the phrases. It reiterates the C3–B3 of the previous beat and then rises

rapidly in pitch to the register of the next phrase. The momentum should continue through this figure with no break in the pulse. The next two beats, where the pulse shortens once again, to two sixteenths, sound as “upbeats” to the first F3–sharp of the fourth system. This a point of linear arrival (in terms of pitch class), and the beginning of the third pedal point. At the beginning of the fourth system, at the second “upbeat”, the pulse shortens once again, to two sixteenths.



Example 1.4: Upbeat to phrase 3.

The fourth phrase begins with the 64th-note figure at the bottom of page 1. By comparing the two versions of the score it is apparent that there are two rhythmic misprints in this figure in the revised version. The D4 is missing a beam, which would make it a 128th note, and there should be no dot after the E2–flat in the left hand. In the original version the E2–flat was staccato. It seems the dot below the E2–flat was mistakenly moved in the revised version.

Original version

Revised version

Example 1.5: Original version and revised version, beginning of phrase 4.

The figure in Example 1.5 can be considered an upbeat to the top of page 2, where the F-sharp pedal point is continued an octave higher. As Example 1.6 shows, the F4-sharp at the top of page 2 is a linear arrival point in the middle register, and this strengthens its position as a downbeat.

Page 1, end of fourth system

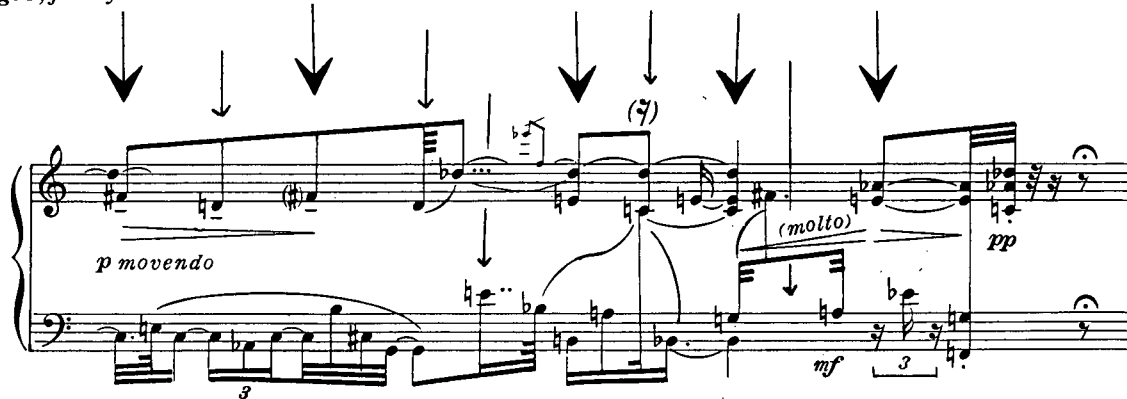
Octave reduction

Example 1.6: Upbeat to phrase 4.

In this phrase the impression of meter is carried a step farther. The alternating F4-sharp -D4 figure in the upper line gives the impression of pulses grouped in two's. Since the F4-sharp is a linear arrival point and the continuation of a pedal point, it is the stronger pulse, D4 the weaker.

At the fifth pulse of the line, the alternating pitch pattern is broken, but fairly simple and regular rhythmic patterns continue for the rest of the phrase. I suggest the strong-weak pattern continues with an extra upbeat, as seen in Example 1.7.

Page 2, first system



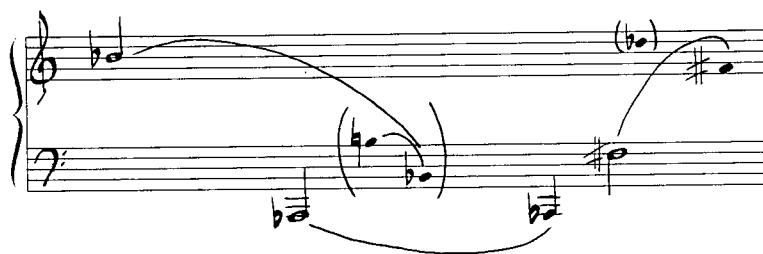
Example 1.7: Pulse hierarchy in phrase 4.

The sixth pulse of the line sounds as a downbeat to a new measure and begins a new strong-weak pulse pattern with a new “harmony”. The (E6-flat, F5) ornament has been added in the revised edition, and this “lead-in” adds weight to the following downbeat. Two E4’s have also been added in the revised edition (see Example 1.8). This pitch choice is odd, since the E4 at the upbeat anticipates the E4 downbeat, and therefore weakens the sense of arrival.



Example 1.8: Original version, first system, page 2.

The first section of Variation 1 can be loosely reduced to a series of pedal points, separated by commas and introduced by upbeat figures. These pedal points are shown in Example 1.9. By phrase 4 the texture is changing and fragments of linear motion are emerging, but one pedal point does occur. The pedal points of this section, B-flat, A-flat and F-sharp, are three of the four important pitch centers throughout the variation set.



Example 1.9: Pedal points, first section.

The second part in detail

The second part of Variation I (line 2, page 2, to the end of line 1, page 3), in strong contrast to the harmonic blocks and pedal points of the first half, is linear and contrapuntal. In this section, tempo and pulse stabilize. Pulse subdivisions are always duple, and they are usually four sixteenths long. Pulses also tend to be in groups of two, in strong – weak (or weak – strong) patterns.

There are two phrases in this section. The first comprises all of line 2 of page 2. The final beat of the line, with its downward leaps, is a recognizable gesture of closure. The second phrase ends at the eighth note G2-sharp at the bottom of page 2. The final section between this G2-sharp and the beginning of Variation 2 can be

considered a coda. Its short dual-chord figures fill a cadential role and the final figure of the variation even provides the bass register open fifths of a traditional cadence.

The first phrase of this section is in two part linear counterpoint. The lower voice provides an accelerated canonic response to the upper voice.

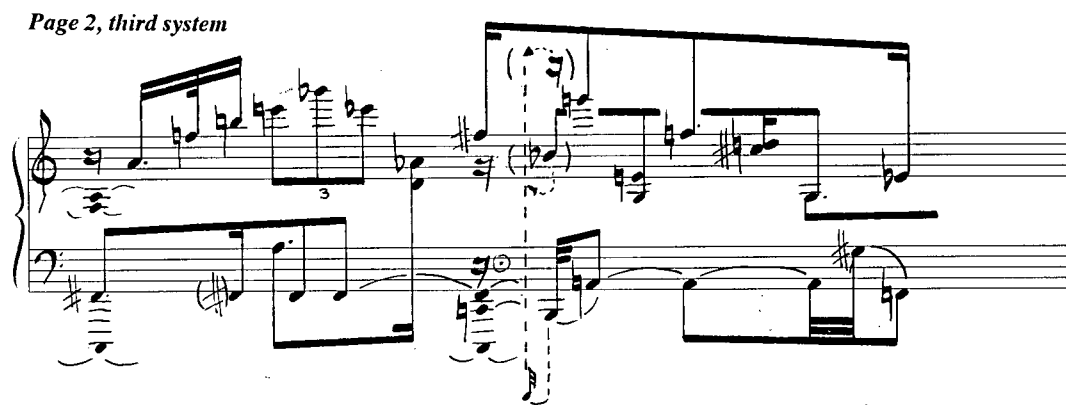
Page 2, second system

The musical score consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. The key signature has one flat (B-flat). The time signature is 4/4. The score begins with the instruction 'a tempo'. The upper staff starts with a half note B-flat, followed by a series of eighth and sixteenth notes. The lower staff starts with a half note B-flat, followed by a series of eighth and sixteenth notes. There are several dynamic markings: 'pp' (pianissimo) and 'ppp' (pianississimo). The score ends with the instruction 'con 1 Corda (1 Corda)'. There are several arrows pointing to specific notes in the upper staff, indicating a pulse hierarchy.

Example 1.10: Pulse hierarchy, phrase 1, second section.

The fifth, sixth and seventh beats of the phrase are shortened to two sixteenths from four. This shortening, along with the small crescendos accompanying each figure at the end of this phrase, serve to increase the momentum to the F2-sharp at the beginning of the next phrase (at the beginning of the third system). Clues to the strong-weak configuration of the pulses are given by the beaming and the registral shape of the lines. In the upper voice, the initial E6-flat is the highest pitch of the phrase, and the B4-flat is approached by leap, both traditional ways of introducing stressed pitches. The final two beats of the phrase follow this stress pattern. The stressed A3-flat is approached by ascending leap, the weaker G4-flat that follows is approached by descending leap.

The metric arrangement of the beginning of the first section of the following phrase is not clear in the score. There are three separate beam groupings (top voice, middle voice, and bottom voice) which do not coincide, and one of the beam groupings is contradictory. The most reasonable pulse pattern, taking into account beaming and linear content, is shown in Example 1.11. A4-flat, although at the beginning of a beam in the upper voice, is beamed in the middle voice as the fourth sixteenth of the previous beat. If F5-sharp, reinforced by a bass attack is considered a pulse point, a regular pulse pattern can be established for the remainder of the segment. Therefore the A4-flat should be beamed only as the fourth sixteenth of the second beat. The result is a chromatic descent on the pulse points (<F5-sharp, F⁵, E⁵>). There are three other rhythmic inaccuracies in the revised version, corrected in Example 1.11.



Example 1.11: Rhythmic corrections, phrase 2, second section.

The final gesture of the phrase is essentially a prolonged and ornamented A-flat. The strong pulse is the one punctuated by the accented E-flat. This is followed by a "stretched" pulse for the cadenza figure.

Page 2, fourth system

Example 1.12: Final gesture, phrase 2, second section.

In the second section of Variation 1, for the first time in the piece, there is a direct relationship between adjacent phrases. The two phrases of the second section span approximately the same range, and both are contrapuntal. (The first phrase has two contrapuntal lines, the second has a sketchy third line added in the middle register.) In both phrases long and short durational values alternate. Also there is a correspondence between the upper lines of the two phrases in terms of pitch content: in the first phrase the upper voice falls chromatically from pitch class E-flat to pitch class A-flat; while in the second phrase, the upper voice hovers around pitch class E-flat, then falls to a pitch class A-flat at the end of the phrase. In Example 1.13 an octave reduction of the upper line is provided.

Page 2, second system*Page 2, third system*

Example 1.13: Pitch correspondence between phrases 1 and 2, second section.

In the final "coda" section, beginning with the two chords at the bottom of page 2, the pulse begins as a quarter. In the middle of line 1, page 3, the pulse expands to a dotted quarter (or three eighths), producing the effect of a written out ritardando.

Page 2, end of fourth system

cont'd over...

Example 1.14: Pulse points, coda.

Page 3, first system

sempre pppp

ten.

Example 1.14 cont'd.

Example 1.15 shows a pitch skeleton of the second section of Variation 1. Octave displacement is used in this example, especially in the reductions of the upper registers. In the first phrase, the lower voice moves from E1 to end the phrase on E1-flat. In the pitch class descent of the upper line, E-flat, B-flat and then A-flat are the most prominent pitches, a succession mirrored in the imitative middle voice. In the lower register of the second phrase the F-sharp pedal point (a reference to the F-sharp pedal of the fourth phrase of the first section) falls to F, and there is a chromatic descent from C to B-flat. The upper voice is centered around the pitch class E-flat. The phrase ends with a prolongation of A-flat. In the short chords of the coda, only in the bass is there evidence of line which is shown in the reduction. The variation closes with a series of open fifths leading to E-flat.

Page 2, second system*Page 2, third and fourth systems*

Example 1.15: Pitch reduction, second section.

In terms of its pitch language, the variation begins with a series of pedal points which do not combine to form any pitch hierarchy. These pitches will be emphasized in many ways in the variations to come. As the variation becomes more linear the pitch E-flat, often preceded by A-flat and B-flat, becomes an increasingly prominent pitch center.

CHAPTER TWO

Variation Two

Overall aspects

In Variation 1 the emergence and evolution of pulse and to a certain extent metre are an integral to the expressive content. In Variation 2 the value of the pulse is constant and meter is fully formed. The presence of metre activates an accentuation response in a performer (first beats are strong, other beats are less strong, and anything not on a beat less strong yet) and, as in common practice music, new or striking elements tend to be placed on downbeats, and phrases tend to begin on upbeat figures. Through the first section of the variation there is a cyclic sequence of meters $\langle 3/4, 1/4, 2/4, 2/4 \rangle$ which has some correspondence to the phrase structure. The downbeats of the first four $3/4$ bars are the downbeats of the opening four phrases.

Variation 2 has two distinct sections. The first section (mm. 1–15.2) begins as strings of sharp rhythmic figures in short isolated gestures. Linear aspects emerge gradually from this texture as the movement becomes more continuous, culminating in the second section which is a continuous string of 32nd notes.

The first part in detail

In the first section of Variation 2, single gestures must be identified. These gestures can be considered analogous to a phrase in language: a group of words with no internal punctuation. Gestures should be heard and played as single units. As in a

scale passage in a cadenza, pitches or rhythms taken out of the context of the whole gesture lose their meaning. Gestures are recognized in the same ways that small groups are recognized in more familiar music. They are often separated by rests or by short periods of rhythmic inactivity as in m. 4 (see Example 2.2). Gestures often begin on a strong beat or are introduced by an upbeat figure, and end with a traditional closing gesture such as a descending leap, as seen in m. 5 (Example 2.2).

Almost every gesture is entirely a composite of selections from three rhythmic figures heard in the opening of the variation. These figures will be considered in terms of relative, not absolute length (i.e. figure 1 is short - long, not thirty second - double-dotted quarter). Notice that figure 3 is identical to figure 1 except for its stress pattern.

1. short - long: unstressed - stressed
2. triplet
3. short - long: stressed - unstressed

Example 2.1: Three rhythmic figures.

In Example 2.2, separate gestures from m. 1–15.2 are circled, and the rhythmic figures from Example 2.1 are identified inside them. Figure 1 is often heard in retrograde (long – short: stressed – unstressed). Phrase divisions are marked with a V-shaped insertion.

The image displays a musical score for a piano piece, spanning measures 1 to 15.2. The score is written in treble and bass staves. It includes various annotations and markings:

- Measure 1:** Starts with the instruction *p ma deciso*. A circled gesture contains a rhythmic figure labeled "1.". Below the staff, the instruction *senza Ped.* is written.
- Measure 2:** A circled gesture contains a rhythmic figure labeled "2. 3.". A V-shaped insertion marks the end of a phrase.
- Measure 3:** A circled gesture contains a rhythmic figure labeled "1.". A V-shaped insertion marks the end of a phrase.
- Measure 4:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 5:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 6:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 7:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 8:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 9:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 10:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 11:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 12:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 13:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 14:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 15:** A circled gesture contains a rhythmic figure labeled "1. retro.". A V-shaped insertion marks the end of a phrase.
- Measure 15.2:** A circled gesture contains a rhythmic figure labeled "2. (INCOMPLETE)".

Example 2.2: Rhythmic figures, gestural and phrase segmentation.

Handwritten musical score for piano, measures 9-15. The score is written on grand staves (treble and bass clef) and includes various musical notations, dynamics, and performance markings.

Measure 9: Treble clef has a half note G4, quarter note A4, and quarter note B4. Bass clef has a half note F3, quarter note G3, and quarter note A3. Dynamics: *pp*. Markings: "1. retro." in both staves, "1. retro." in the bass staff, and "1. retro." in the treble staff.

Measure 10: Treble clef has a half note G4, quarter note A4, and quarter note B4. Bass clef has a half note F3, quarter note G3, and quarter note A3. Dynamics: *p*. Markings: "1. retro." in the bass staff, "1. retro." in the treble staff, and "1. retro." in the bass staff.

Measure 11: Treble clef has a half note G4, quarter note A4, and quarter note B4. Bass clef has a half note F3, quarter note G3, and quarter note A3. Dynamics: *mf*. Markings: "1. retro." in the bass staff, "1. retro." in the treble staff, and "1. retro." in the bass staff. "2. (INCOMPLETE)" is written in the treble staff.

Measure 12: Treble clef has a half note G4, quarter note A4, and quarter note B4. Bass clef has a half note F3, quarter note G3, and quarter note A3. Dynamics: *mf*. Markings: "1. retro." in the bass staff, "1. retro." in the treble staff, and "1. retro." in the bass staff. "2. (INCOMPLETE)" is written in the treble staff.

Measure 13: Treble clef has a half note G4, quarter note A4, and quarter note B4. Bass clef has a half note F3, quarter note G3, and quarter note A3. Dynamics: *cresc...*. Markings: "1. retro." in the bass staff, "1. retro." in the treble staff, and "1. retro." in the bass staff.

Measure 14: Treble clef has a half note G4, quarter note A4, and quarter note B4. Bass clef has a half note F3, quarter note G3, and quarter note A3. Dynamics: *poco...*. Markings: "1. retro." in the bass staff, "1. retro." in the treble staff, and "1. retro." in the bass staff.

Measure 15: Treble clef has a half note G4, quarter note A4, and quarter note B4. Bass clef has a half note F3, quarter note G3, and quarter note A3. Dynamics: *poco...*. Markings: "1. retro." in the bass staff, "1. retro." in the treble staff, and "1. retro." in the bass staff.

Example 2.2 cont'd.

It has already been mentioned that the metric placement of "beginnings" tends to be traditional. Upbeats occur, all involving the pitch classes G-sharp and A, at the beginning of the first phrase, the beginning of the third phrase (end of m. 8), and at the beginning of the fifth phrase (end of m. 12). In the following discussion of specific phrases, particular attention will be paid to how closure is achieved. Directional movement, rhythmic content and other cadential characteristics of closing figures all play a part.

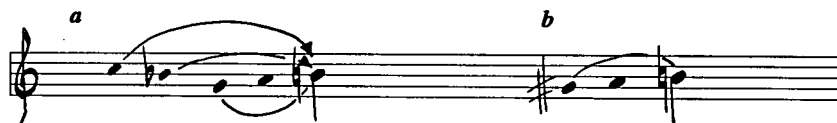
In each of the first three gestures of the first phrase, one pitch is dominant and sustained (G-sharp, E, and D). A harmonic block is built one pitch at a time. In Example 2.3, the long, upper register pitches are stemmed and the auxiliary pitches are moved to a common octave. Notice that each of these separate groups are chromatic clusters and there is what could be considered stepwise motion to, or neighbor motion around, each stressed pitch (displaced across many registers). The fourth gesture is a second, ancillary ascent to D.



Example 2.3: Reduction, phrase 1.

The two gestures in m. 4 have the effect of aural exclamation points between phrase 1 and phrase 2. They also can be considered upbeats to phrase 2. Like conventional upbeats, they begin on weak parts of the beat, and their pitches, if reduced to one octave, imply a linear point of arrival on the upcoming B4. Example 2.4a, illustrates two ways in which the B4 at the downbeat of m. 5 is a linear arrival point. In Example 2.4a the pitches of the second gesture of m. 4 is reduced to one

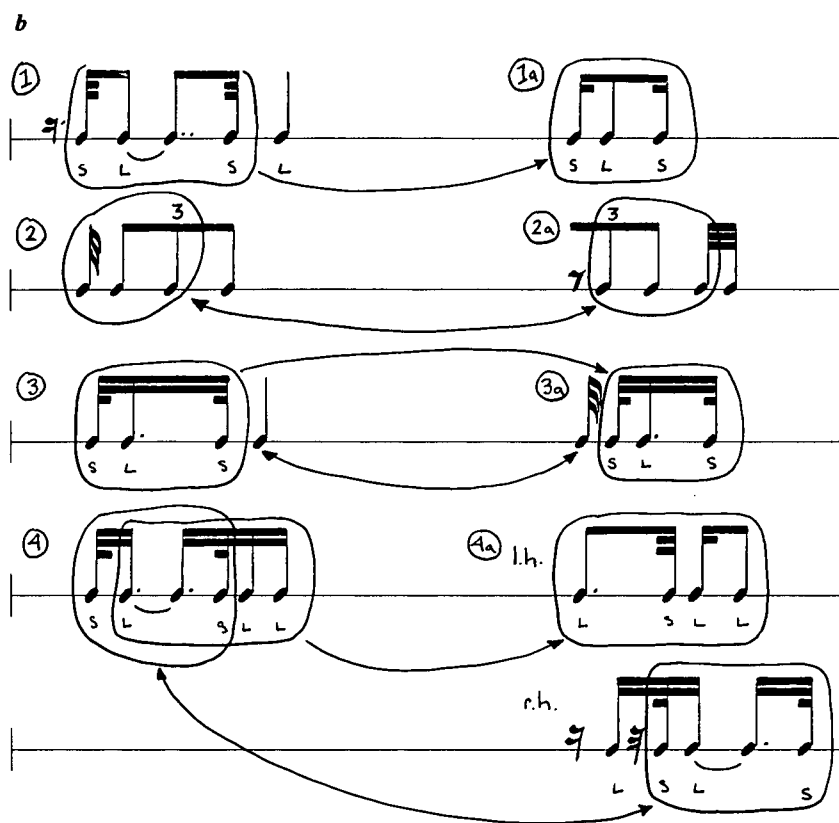
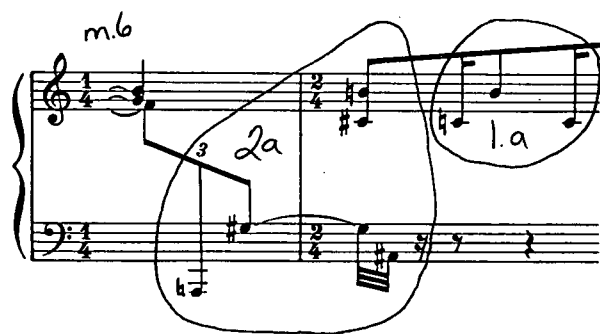
octave and in Example 2.4b the last pitch classes from the two gestures are isolated. They both form a stepwise progression to B4.



Example 2.4: Reduction of upbeat figures, m. 4.

Phrase 2 transposes the underlying pitch content of phrase 1 a minor third up. These phrases are not only paired: in many ways phrase 2, although not a systematic retrograde, is a reversal of phrase 1. The gestures in phrase 2 correspond to the gestures in phrase 1 in retrograde order, and elements of retrograde exist in some gestures. Example 2.5a shows the corresponding gestures in each phrase, and Example 2.5b shows where durations are in retrograde order (considered in terms of relatively long or short durations).

Example 2.5: Correspondence between gestures, phrases 1 and 2.



Example 2.5 cont'd.

Phrases 3–5 have enough similarities to phrases 1–2 to make phrases 1–5 sound as a section. As discussed above, mm. 1–15.2 are based on common rhythmic

figures, and the gestural language of the opening of the variation persists in phrases 3–5. However, texture changes significantly, and whereas there are many links among phrases 3, 4 and 5, there are few specific references in these to phrases 1 and 2. Like phrases 1 and 2, phrases 3–5 function as a group, and can be considered a second “subsection” within the section spanning from m. 1–15.2.

There is a continuous line running through most of phrase 3 (see Example 2.6), recognized aurally by the repeated rhythmic motive it contains (dotted sixteenth, thirty-second and two sixteenths). The E-flat of m. 10 ends the phrase, so is set up as an arrival point. It also forms a perfect fifth with the uppermost voice, B-flat, giving the end of the phrase characteristics of a tonal cadence. The disjunct gestures around the line fill an accompanimental role, adding color and brilliance. They repeat pitches from the line, fill in the chromatic space between them, and fill in chromatic space around B-flat. In Example 2.6a the line in phrase 3 is circled on the score. In Example 2.6b, the prominent pitch classes are drawn with stems, with the pitch classes of the accompanying gestures in brackets surrounding them.

Example 2.6: Continuous line, phrase 3.

Phrase 4 consists essentially of three registral layers.

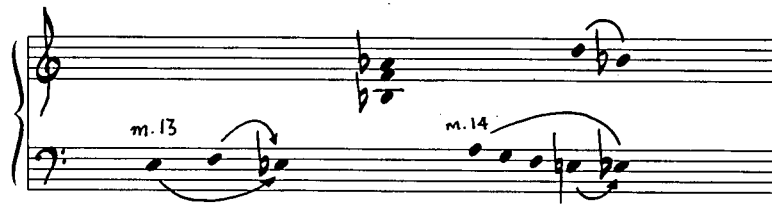
The musical score for Phrase 4 is presented in two staves. The upper staff (treble clef) features three distinct registral layers, each enclosed in a circle and numbered 1, 2, and 3. The lower staff (bass clef) also features three corresponding layers, numbered 1, 2, and 3. The first layer (1) is marked *mf* and *f*. The second layer (2) is marked *f*. The third layer (3) is marked *fff* and *mp*. The score includes various musical notations such as notes, rests, and dynamic markings.

Example 2.7: Phrase 4, registral layers and reduction of lower register.

The pitch classes in the bass voice make up a chromatic cluster, and each gesture moves in stepwise motion to F, set up as a point of linear arrival. This register reduces to an ornamented pedal point. The tonal implications of this line, combined with the middle register in which the dyad (C4, B4-flat) is repeated, are clear. This phrase which stresses F and B-flat is nestled between two phrases with concerted linear arrivals at E-flat.

The upper register pitches of phrase 4 are independent of these tonal implications. G6-sharp and E6 refer to the first two sustained pitch classes of phrase 1, and B is the first and highest sustained pitch in phrase 2. Of course these pitches combine to form a triad, but one with no functional harmonic relationship to the pitch centres of the neighboring phrases.

In phrase 5 (mm. 13–15) a prominent E \flat in the bass line (m. 13) is preceded by two neighbors. A linear descent to the pitch class E \flat in m. 15 follows. In the upper voice, a (B \flat 4, F4, A \flat 4) chord follows the E \flat in m. 13, and in m. 14–15, D6, falls, to B \flat 4, in a clear allusion to “dominant” function. E \flat has emerged as a tonal center of some significance.



Example 2.8: Reduction, phrase 5, cadence.

Second part in detail

In the final sections of Variation 2 (m. 15.2 to the end), E \flat continues to be set up as a point of metric and linear arrival. This section contains a very clear directional line embedded in a twelve tone row heard approximately four and a half times in succession without transposition, beginning at the downbeat of m. 16. Only the metric placement and register of the pitch classes change continually. (After the fourth, partial repetition there is no ordered row, although the complete aggregate continues to be unfolded with little pitch repetition.)



Example 2.9: Twelve tone row, second section.

The three phrases between m. 15.2 and the dotted double line (after m. 20), shown with gestures identified in Example 2.10, combine to form a transitional passage. More regularly spaced and rapid note values, wide leaps, principally of interval class 1 or 2, and two crescendos gather momentum for the arrival at the *piu mosso*.

The image displays three staves of musical notation, each with handwritten annotations and segmentation marks. The first staff, labeled 'm. 16', shows a melodic line with a '5' (quint) interval and a 'poco.' (poco) marking. The second staff, labeled 'm. 17', includes 'p sub.' (piano subito), 'mf' (mezzo-forte), and 'cresc.' (crescendo) markings, with several phrases circled. The third staff, labeled 'm. 19', shows a phrase circled with a '5' interval marked. The notation includes various note values, accidentals, and dynamic markings, illustrating the segmentation and gestures discussed in the text.

Example 2.10: Segmentation, transitional passage.

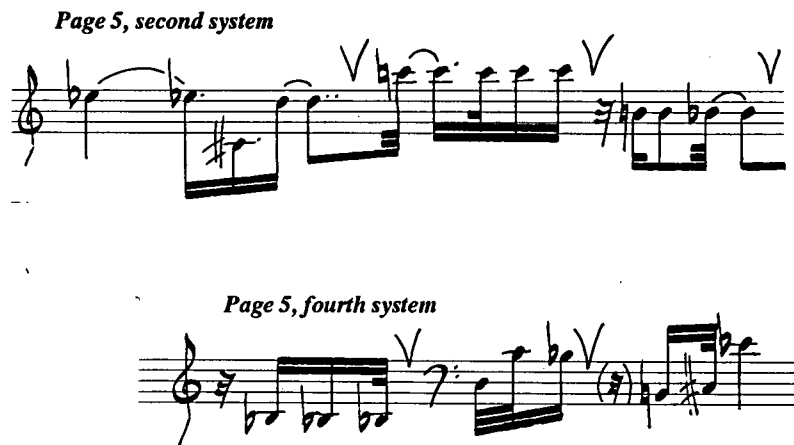
By means of chromatic surrounding and linear approach, in pitch class terms, the accented E5-flat which begins the *piu mosso* is set up as a local point of arrival.



Example 2.11: Reduction, m. 20.

The music from the beginning of the *piu mosso* to the quintuplet thirty-second-notes in the last line of page 5, constitutes one long section. The tone row and subsequent chromatic aggregates in continuous thirty-seconds are accompaniment to a long line, stemmed separately in the score. Within this section, separate gestures are demarcated by rests or relatively long periods of inactivity in the stemmed line.

Example 2.12 isolates the line and indicates the gestural segmentation.



Example 2.12: Gestural segmentation, Piu mosso.

When this line is reduced to a single octave, B-flat is seen to be the first point of linear arrival. It is also the ending pitch of two gestures. A linear ascent to E-flat follows.

Page 5, second system



Example 2.13: Principle line reduction, Piu mosso.

In the final meteoric gesture, beginning at the first thirty-second quintuplet in the last system of page 5, all linearity is lost, dissipated by the furiously mounting pace. In this flurry of notes, again, the pitch E-flat is given prominent positions as the opening pitch (E4-flat) and the highest pitch (E7-flat) of the gesture.

CHAPTER THREE

Variation Three

Overall aspects

In the constant stream of rapid eighth notes of this variation, the first step in aural comprehensibility is to hear some metric and gestural shape. The eighth notes are too fast to function on any aural level as individual pulses. The beaming of eighth notes indicate pulses shifting frequently and irregularly from quarters to dotted quarters with occasional areas of flux where more than one grouping can be interpreted.

What makes this variation particularly difficult to follow is not the frequent change of pulse rates, but the lack of continuous linear presentation. By "linear" I do not mean only conjunct melodic writing, but the continuous unfolding of material through time, where events are complete and follow each other smoothly. In Variation 3 some fragments, or gestures, sound as if they have been cut off, interrupted by an unrelated thought. Also, single pitches or chords in the outer ranges of the piano, sometimes preceded by an upbeat, exist completely on their own, unrelated in register to the material immediately around them. The result is a kind of stream of consciousness where continuity is frequently interrupted, but familiar fragments jump in and out; not motivic development or process, but random association.

The first part in detail

In the discussion of pulse issues in the first section of the variation, from m. 1–44, the original version of the score, identical to the revised edition but lacking meter and bar lines, will occasionally be referred to. The added barlines and meters in the revised version make the issue of pulse placement at times ambiguous, since there are a few places where the beaming and meter contradict each other. Until measure 34, the 6/8 time signature is always avoided in favor of 3/4, but very often the beams indicate 6/8 (see mm. 7, 9, 10, 12, 13, 14, 15). Within the other time signatures in the section, principally 5/8 and 7/8, the groupings of eighth notes vary greatly and are often not the usual 2+3 or 3+2 in 5/8, or 3+4 or 4+3 in 7/8. This is not necessarily a problem, but in comparing the two versions of the score, the metered version often confounds the issue, seemingly clear in the other version, of where the pulse lies.

It seems that in adding meters and bar lines, often the composer's intention was to underline and even intensify the asymmetry of the rhythm. It is a useful exercise for the performer to learn the section counting with the groupings rather than against them, so occasionally alternative, less equivocal barrings are suggested which would aid a performer in coming to terms with the rhythm of this section. The almost unrealistically rapid *Prestissimo* ($d = 72$) tempo marking becomes more approachable the more seamless and simple the physical and mental processes of the performer.

An alternative is to follow the unmetered original version. Where, according to the beamings in conjunction with accent markings and motivic groupings, the pulse seems to be in flux, ambiguous, or absent, perhaps adding any meter makes the rhythmic outline look either too definite, or provides information that can look contradictory. Also, the look of the unmetered score invites more immediate

perception of whole gestures and shapes, rather than single pulses and metrical hierarchies.

Segmentation and pulse placement

The first section of the variation contains two phrase groups. The phrase structure at the beginning is straightforward, and becomes increasingly fragmented as the variation progresses.

The first phrase group, mm. 1–15, is comprised of three phrases, the first two phrases (mm. 1–4 and mm. 5–8) making up a traditional antecedent-consequent pair. Both phrases have two members. The first member of phrase 2 refers directly to the first member of phrase 1. In Example 3.1 the divisions between phrases are shown by square brackets. The divisions between phrase members are shown by V-shaped insertions. Pulse placement is shown by arrows.

The image shows a musical score for a piano piece, specifically the first section of a variation (measures 1–15). The score is written for piano (p) and includes dynamic markings such as *p sub.*, *senza ped.*, *ff*, and *p*. The score is divided into two main phrase groups. The first phrase group (measures 1–8) consists of two phrases: the first phrase (measures 1–4) and the second phrase (measures 5–8). The second phrase group (measures 9–15) also consists of two phrases. The score is annotated with arrows pointing to pulse points, V-shaped insertions indicating phrase boundaries, and square brackets indicating phrase members. The tempo is marked as *senza ped.* (without pedal). The key signature is one flat (B-flat) and the time signature is 3/4.

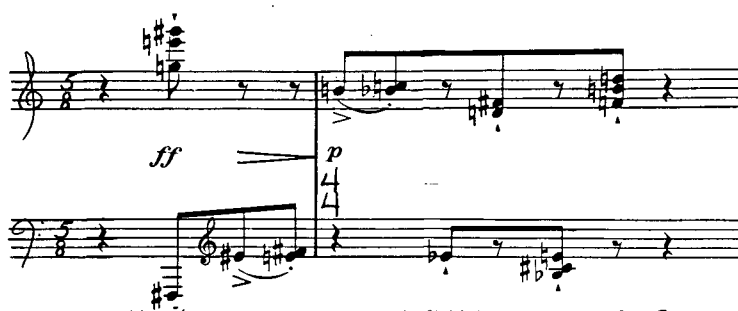
Example 3.1: Pulse points, phrases 1 and 2.

Example 3.1 cont'd.

The final two measures of the second phrase (mm. 7 and 8) have dotted quarter pulses. Measure 7, although notated as a 3/4 measure functions as a 6/8 measure.

In measures 3 and 4, the 7/8 + 3/4 meter sequence looks unusual, with a beam straddling a barline. There are a few alternatives, all problematic. The barline could be placed between the beams, after the (E4, F4-sharp) dyad. This way, the second of

the two slurred figures, which have identical pitch structure an augmented fourth apart, would begin in a stronger metric position than the first. However, the second of two similar figures is usually weaker, an echo. The diminuendo from the first figure to the second, makes this case no exception. The downbeat would seem misplaced at the beginning of the second figure.



Example 3.2: Alternate barring, m. 3.

The barline could be placed between the F1-sharp (in the left hand) and the E4-sharp, but again a beam would straddle it. The two bars could be combined into one, but then a rather cumbersome 13/8 bar would result.

The one aberration in the constant quarter pulse from mm. 1–7 occurs in m. 3. In this bar the third to fifth eighths are beamed together, making it look like the second pulse of the 7/8 bar is a dotted quarter, surrounded by quarter pulses. However, it is not set up to sound like a dotted quarter pulse. The *ff* chord on the third eighth of m. 3 is a pulse point. There is no indication up to this chord that the quarter pulse has been disturbed, and it is by far the most accented point in the phrase. The accented E4-sharp on the fourth eighth of m. 3, the beginning of a two note slur figure, is also a pulse point, as is the accented B4 on the sixth eighth of m. 3, which

begins the answering two note slur figure. The result is a pulse an eighth long, embedded in a series of quarter pulses. The pulse at the *ff* chord sounds as if it has been cut off half-way through. The more normative version of the section is given in Example 3.3.



Example 3.3: Normative version, phrase 1.

The first phrase, the “antecedent”, is registrally “expanding”. The two lines, one in each hand, are continually moving in opposite directions. The two note motives in m. 3 represent this expanding quality in microcosm.



Example 3.4: Contour, phrase 1.

In the “consequent” phrase registral closure is achieved. The phrase begins by referring to phrase 1, but here the right hand line in m. 5 and the left hand line in m. 6 move toward each other. At the end of phrase 2, the upper line again moves toward the lower line.

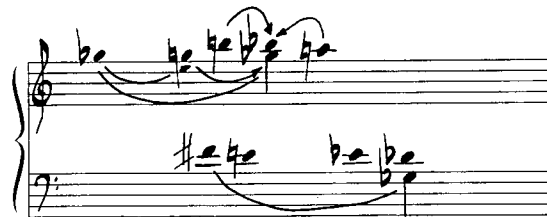
Example 3.5: Contour, phrase 2.

The placement of the pitch class F-sharp, a focal point in these two phrases, emphasizes this expanding and closing quality. The F3-sharp in the left hand of measure 1, and the F1-sharp in measure 3 are the beginning and ending points of the bass descent in these two measures. The two note slur containing (E4, E4-sharp, F4-sharp) immediately following the F1-sharp in m. 3 is the point from which the next divergence of the phrase occurs. The outer two pitches of the two chords which end phrase 1, D5 and B3-flat, are equidistant from F4-sharp.



Example 3.6: Reduction, phrase 1.

The pitch class F-sharp frames the second phrase. G5-flat (F5-sharp) is in a prominent position in m. 6 as the top note of an *sff* chord. F4-sharp is the first pitch of the left hand in m. 7, and G3-flat is the bass note that ends the phrase. The F-sharp pitch class is not only a reference point, but it is set up as a tonal point of arrival at the end of the phrase. In m. 7, the end of phrase 2, there is a linear descent from F4-sharp to Db4, which forms an open fifth with G3-flat. Also, in the upper register, the G5 upper neighbor, between the G5-flat in m. 6 and G5-flat in m. 7, helps in making G-flat sound as an arrival point.

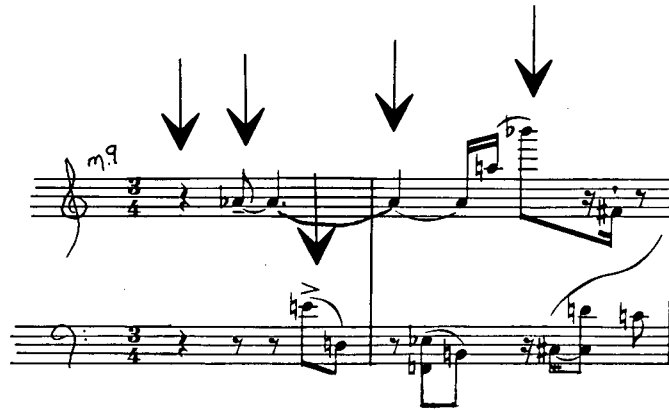


Example 3.7: Reduction, end of phrase 2.

It is no coincidence that B-flat and G-flat (which together would form a major triad with the open fifth in the left hand) are prominent in the upper line at the end of the phrase. The effect is of a triad that has a very definite presence but never quite happens simultaneously.

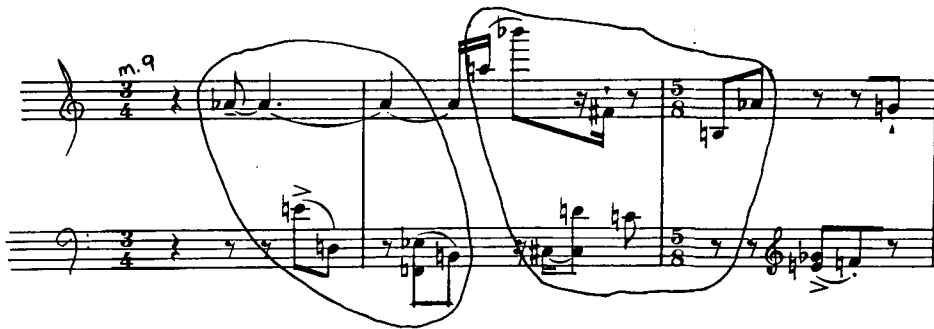
All measures in the third phrase (mm. 9–15), except for m. 11 (in 5/8), are notated as 3/4 measures and beamed as 6/8 measures. It seems clear in these measures that the pulses are a dotted quarter, and the functional time signature is 6/8. In m. 9, the attack points of all the events concur with the 3/4 time signature. (A4-flat on the third eighth, E4 on the fifth eighth and D3 on the sixth eighth.), but the note values and rests are those of a 6/8 bar. The beaming shows that this is a temporary shift to duple groupings in a context of triple groupings.

The “pulse play” in mm. 9 and 10 is interesting. M. 9 could be thought of as a 6/8 bar with dotted eighth pulse undisturbed. The A4-flat would then be heard as an anticipation, and the two-note slur figures in mm. 9 and 10 would be a conformant metric pair. However the tenuto under the A4-flat and the accent over the E4 in m. 9 contradict this interpretation since, if these attack points are to be heard as just before and just after pulse points they could not be accented. The other possibility is to play this measure as a 3/4 measure, with the A4-flat and E4 occurring on pulse points. This way there is a shift in the metric profile of the two note slur figures. The first begins on a quarter pulse, the second on the second eighth of a dotted quarter pulse.



Example 3.8: Pulse points, beginning of phrase 3.

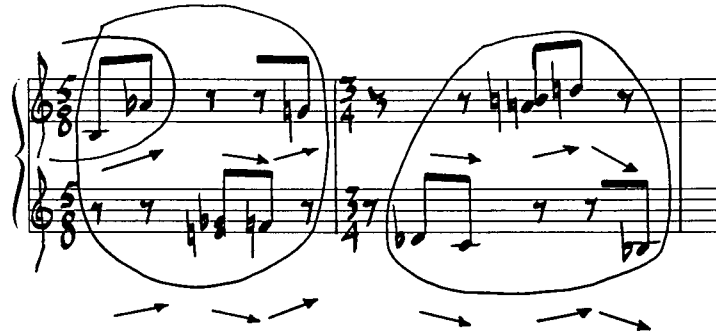
There are seven gestures in the third phrase, all paired except for one. The first gesture pair ends on the A4-flat of m. 11, shown in Example 9. It is framed by recurring A4-flat, and the slur from C3-sharp to A4-flat is a visual clue that the <B3, A4-flat> of m. 11 is part of the gesture begun in m. 10.



Example 3.9: First gesture pair, phrase 3.

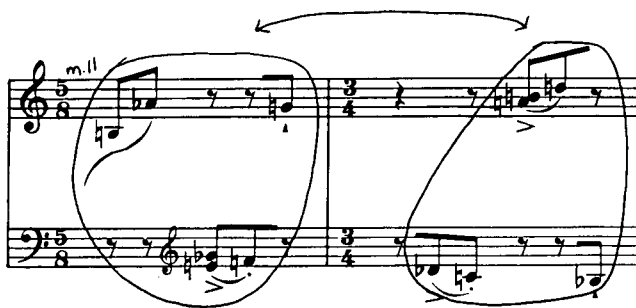
An accented (E 4, G4-flat) dyad sounds as the beginning of the next gesture pair. The three eighths of the second beat of m. 12 are a clear response to the three

eighths of the second beat of m. 11. They both are comprised of a dyad followed by two single notes, and the figure in m. 12 reverses the contour of its pair in m. 11.



Example 3.10: Paired motives, phrase 3.

The second beat of m. 12 is preceded by an upbeat of two eighths. The second beat of m. 11, is also preceded by two eighths, the two eighths that ended the preceding gesture. An elision occurs here, but an elision that is clear only retrospectively. After hearing mm. 11 and 12, it sounds as if the gesture pair had started at the beginning of m. 11, as in Example 3.11.



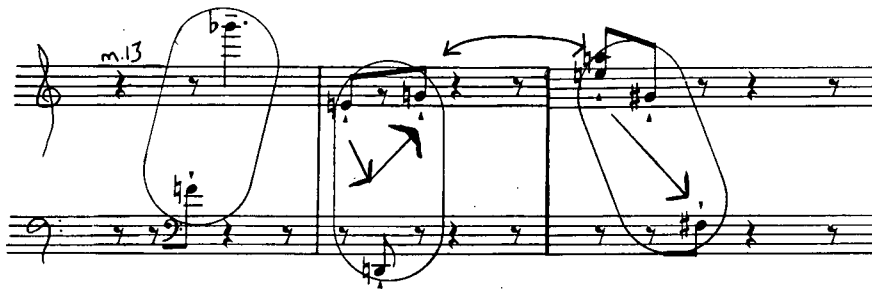
Example 3.11: Second gesture pair, phrase 3.

As in mm. 8–9, the pulse play makes this paired gesture slightly asymmetrical. Both gestures contain a group of two eighths and a group of three eighths. However the second gesture is preceded by an eighth rest. The effect is of two $5/8$ measures, the second starting late. The eighth rest preceding the second gesture comes across as a comma, a breath mark separating the two gestures.



Example 3.12: Actual meter, second gesture pair, phrase 3.

M. 13 contains the unpaired gesture of the phrase. The gesture in m. 14 and the gesture in m. 15 are paired and create an arched contour, which effectively closes the phrase. The pitch class F-sharp (G-flat), prominent in phrase 1, and heard in isolation in the uppermost register in m. 13, ends the phrase.



Example 3.13: Final gesture pair, phrase 3.

The beginning material of the second phrase group (mm. 16–45) is a variation of the beginning material of phrases 1 and 2 (mm. 1–2 and mm. 5–6). The continuous eighth note line in m. 16 is the retrograde of the eighth-note line in m. 2, two octaves higher. The eighth note lines in mm. 1 and 17 are identical, one octave apart. These three two measure segments (mm. 1–2, 5–6, and 15–16) stand out as the only instances of continuous eighth notes and continuous line in the variation. Mm. 5–6, and 16–17 are heard as clear beginnings, since they refer directly to the beginning of the variation.

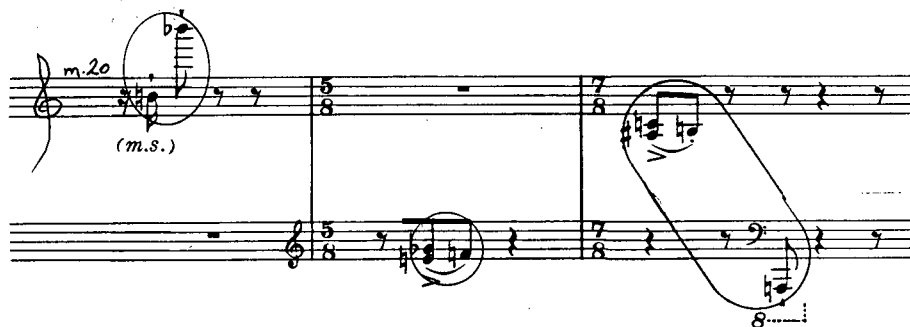
As in m. 3, in m. 18 the continuous pulse flow is slightly disrupted, or jarred. The E1, on the downbeat of m. 18, like the chord on the third eighth of m. 3, "closes off" the preceding two measures. It is followed on the next eighth by a two note slur figure. Even though it is beamed together with the first eighth of the bar, the second eighth, as the beginning of a two note slur figure, sounds like a pulse point too, especially since it is followed by two bars of two note slurs beginning on pulse points. Again, a pulse has been cut off halfway through.

The accent on the second eighth of m. 18 underlines that this point begins the second gesture of the phrase. However the segmentation here works on two levels. Notice that the first three eighths of m. 18 and the last three eighths of m. 18 form a pair of similar motives. The normative version of this segment is given in Example 3.14. With an added eighth rest before the E1, the constant quarter pulse is not disrupted and the motives in m. 18 are metrically paired.



Example 3.14: Normative version, m. 18.

The remainder of the fourth phrase is segmented in Example 3.15. The two note slur figures, as in m. 3 and m. 11, make up set class (0, 1, 2). Closure is achieved by the registral descent and diminishing activity through mm. 20–21. The beginning of each two note slur sounds like a pulse point, but since the two note slurs are an irregular distance apart the sense of regular pulse dissipates altogether.



Example 3.15: Segmentation, mm. 20–22.

The next phrase spans mm. 23–31, and includes two groups of gestures separated by an isolated gesture in m. 26 (see Example 3.16).

The image displays three systems of musical notation. The first system, measures 23-24, is in 7/8 time and features a treble and bass staff. The second system, measures 25-28, is in 2/4 time and features a grand staff. The third system, measures 29-30, is in 2/4 time and features a grand staff. Hand-drawn circles and arrows are used to highlight specific musical gestures and groupings across the measures.

Example 3.16: Gestures, phrase 5.

The metric distribution in the revised edition seems somewhat arbitrary in this section. The groupings within the two 7/8 measures that contain the first two gestures of the phrase (mm. 23 and 24) are unconventional (3+3+1). Considering the motivic correspondences and beamings, a reasonable pulse distribution for these measures is

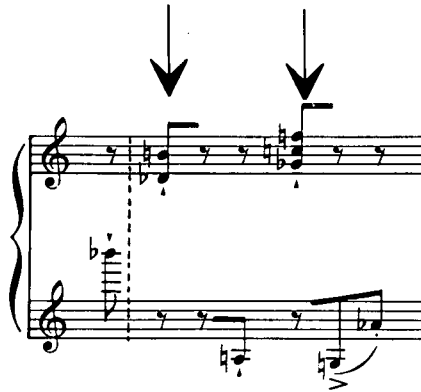
given in Example 3.17. The last three eighths of m. 23 correspond to the last three eighths of m. 24, which have a two eighth upbeat. The slurring and beaming of this segment would indicate three dotted quarter pulses. The first four eighths could be read as two quarter pulses, which would contradict the beaming (as in Example 3.17a), or as a dotted quarter pulse followed by a “cut off” pulse of one eighth (Example 3.17b).

The image displays two musical staves, labeled 'a' and 'b', representing two alternative interpretations of pulse points in measures 23 and 24. Both staves are written in treble and bass clefs. Staff 'a' shows a complex slurring and beaming of notes in measure 23, with four downward arrows indicating pulse points. Staff 'b' shows a different interpretation of the same notes, with five downward arrows indicating pulse points. The notation includes various note values, rests, and accidentals.

Example 3.17: Pulse points, mm. 23–24, two alternatives.

The B6-flat at the downbeat of m. 25, a pitch alone in its register which precedes a series of pitches in a common register, seems to function gesturally as an

upbeat. It is an upbeat according to the beaming. The B6-flat is stemmed separately, and it is followed by two groups of three eighth notes.



Example 3.18: Pulse points, m. 25.

It is interesting to speculate about the unorthodox barline placement at m. 25. The pitch B6-flat, isolated in register from the surrounding pitches, punctuates the first section of this variation (mm. 10, 18, 23, 25, 26 and 30). As the section proceeds, the isolated B6-flat, and F6, the pitch that supplants it in m. 30, are heard with increasing regularity; and from m. 25 on are placed in accented metric positions. These pitches gain prominence as points of reference in increasingly fragmented surroundings.

Example 3.19 presents an alternative barring for mm. 27–31, which unlike the barring in the revised edition, reinforces the apparent pulse points according to the beaming, motives and accents.¹

¹ The barring as presented in the revised edition, although not reflecting the pulse distribution, has a certain consistency. Measures 27 to 30 remain in 5/8 meter, and the five gestures in measures 27 to 31 are all in separate measures.



Example 3.19: Alternative barring, mm. 26–31.

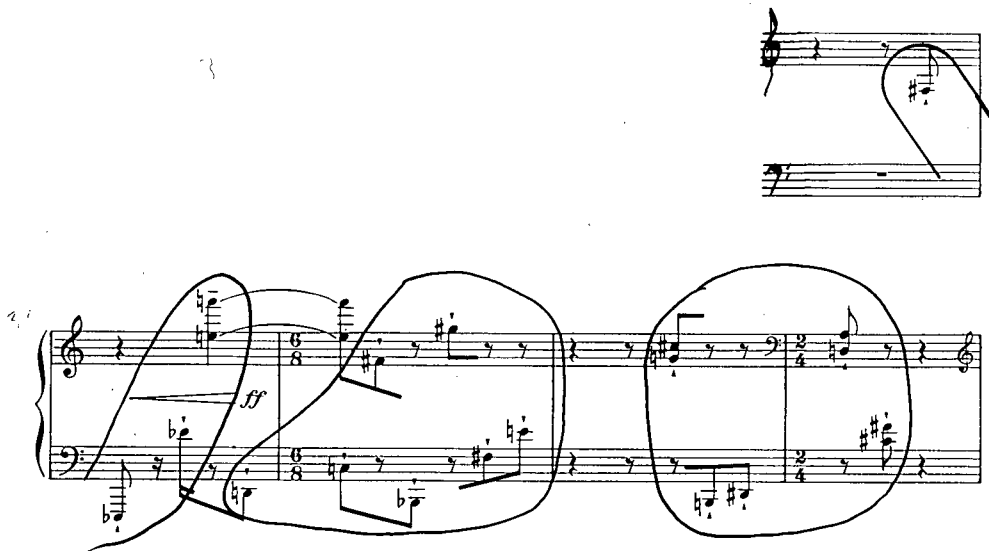
In Example 3.19 the two three-note chords, the strongest points of mm. 27 and 28 and the beginning points of gestures, occur on downbeats. The first eighth of m. 29 in the composer's barring cannot function as a real downbeat since there is no set of regular groupings in the measures immediately preceding it which places it at a pulse point. The pulse inevitably occurs on the second eighth of the measure (G2), where a slurred group of three eighths begins, with the first eighth marked with an accent. In Example 3.19, G2 is the downbeat. In m. 30 the most accented point occurs at the third eighth, where two pitches sound simultaneously and the highest pitch in the vicinity sounds. In Example 3.20 the downbeat occurs here. The result is a 6/8 measure followed by a 7/8 measure with a 3+4 grouping.

Measures 27 and 28 contain a gesture pair. Both gestures have three attack points, and the pitch sequence of the two gestures is closely related. The first chord of m. 27 is transposed up a tritone at the beginning of m. 28. The other two pitches in measure 27, C3-sharp and D5, are transposed up a major second, to E3-flat and E5,

in m. 28. The pulses in the first gesture are a quarter long, and the quarter pulse length continues in the second gesture because of the strong motivic correspondence between the two gestures. The rhythm of the second gesture sounds as a variant of the rhythm of the first, an eighth shorter. Example 3.19 illustrates this. The first gesture is in a $3/4$ measure, its pair is in a $5/8$ measure.

The remainder of the first section of Variation 3 (mm. 32–44), which can be loosely considered a phrase, consists of three bursts of activity separated by rests. There is no continuity and little motivic correspondence between these three gesture groups, but what ties the disparate group together is the often repeated (F6, E5) dyad. At the end of the previous phrase, in m. 29, there was a “progression” in the uppermost register from the increasingly prominent B6–flat to F6. In this final phrase there is a strong sense of F6 as a focal point among the disjunct gestures.

The first group of gestures in the phrase extends from mm. 32–36. The third gesture “answers” and closes the second. The contour of the last three eighths of the second gesture corresponds to the contour of the first three eighths of the third gesture (the answer), and the final two eighth note dyads “close” the figure.



Example 3.20: Gestures, phrase 6.

As in the first three phrases of the section, the pitch class F-sharp plays a prominent role, and helps to tie the group of gestures together. The phrase begins with an F3-sharp, and the top pitch of the dyad that ends the segment is F4-sharp (m. 36). In Example 3.21a the pitch class F-sharp and its upper and lower neighbors are circled, and the resulting continuity is diagrammed in Example 3.22b. In the context of the whole phrase, the pitch class F-sharp functions as an upper neighbor to F6.

a

m. 33

ff

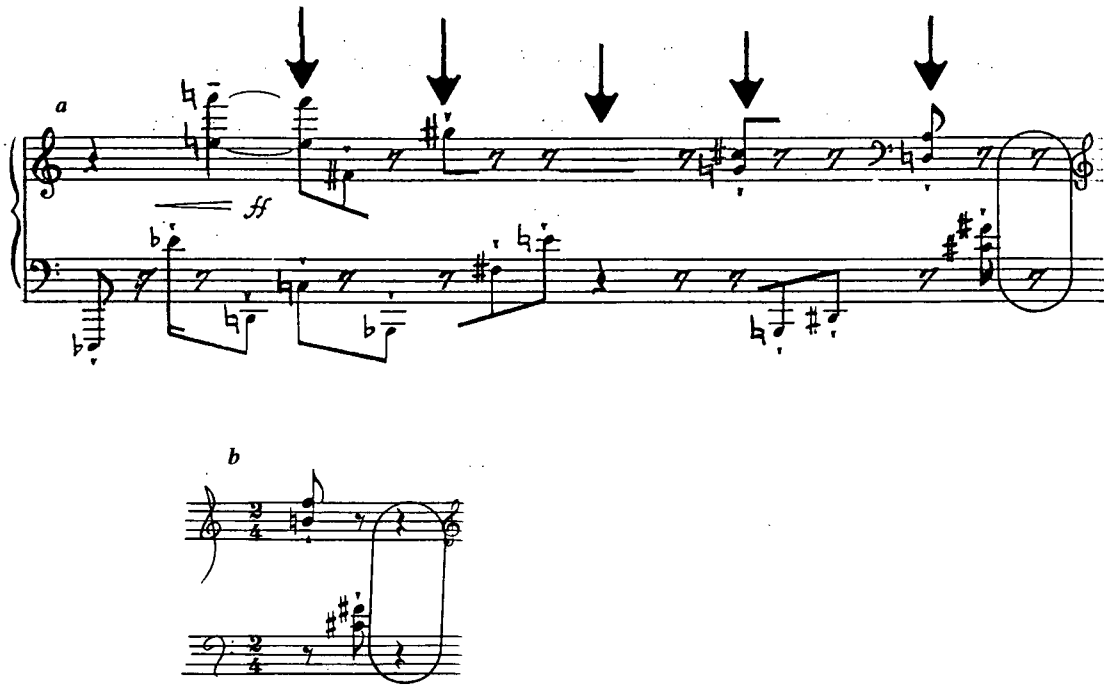
b

Octave reduction of upper register

Example 3.21: Centrality of F-sharp, mm. 33-37.

In the original version at the place corresponding with m. 36 in the revised edition, there is an eighth rest after the C4-sharp - F4-sharp dyad. The pulse remains constant at a dotted quarter for five beats. In the revised edition, at the end of m. 36, the eighth rest has been changed to a quarter rest, resulting in two quarter pulses for

the bar. The combination of a longer rest, and the change in pulse length makes the end of this measure more of a stopping place.



Example 3.22: Original version, mm. 33–36 and revised version, m. 36.

In the next segment (mm. 37–39), variation in pulse length ceases and, the pulse length stabilizes at a dotted quarter. The rate of movement changes for the first time in the variation, from continuous eighths to continuous dotted eighths grouped in paired dyads. The attack point on the second eighth of every dotted quarter pulse makes this change in rate more complex. It could sound like there are two simultaneous subdivisions of the dotted quarter pulse, two dotted eighths and three eighths if the player made an effort to emphasize the beginning of each pulse and the second eighth of each pulse, and de-emphasized the second dotted eighth. However this interpretation would seem a bit forced. The dotted eighths are grouped into paired

dyads, each dyad to be played in one hand. The first two are falling minor sevenths, the second two are rising minor tenths. Both dotted eighths should be equally accented. The eighths played between these dyads sound more as interjections inserted into the principle line, reminders of the eighth motion of the previous section. They increase the activity level and make it clear that there is a new subdivision, at the same tempo, of the dotted quarter pulse, not a continuation of the eighth note motion with a slower quarter pulse.

In this segment there is increased activity. It has the greatest density of attack points and the longest period with no silences, thus far in the variation. Through the segment there is also increasing intensity. The register of the paired dyads is not just rising, but thrusting upwards, which gives this section a sense of forward momentum. The whole segment could be considered an upbeat to m. 40. The voice leading of the uppermost register (excluding the B6-flat), fragmented as it is, supports this.



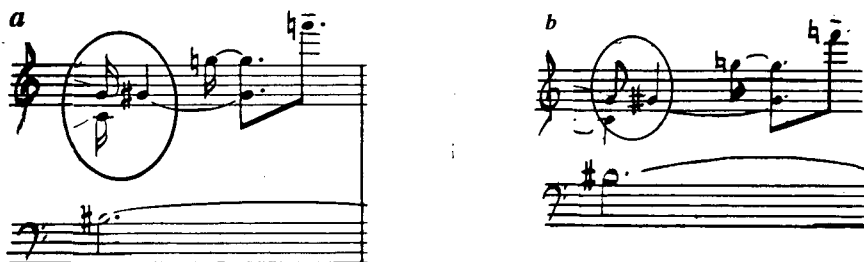
Example 3.23: Upper register voice leading, mm. 37–40.

The final segment of the section, (mm. 40–44) is the culmination and climax of the variation thus far. There is a great sense of arrival here, primarily because of the “arrival” at F6, which recurs with great insistence through the segment.

Mm. 45 and 46 function as a lead-in, or upbeat to the second section of the variation beginning in m. 47.

The second part in detail

In this section of Variation 3 (mm. 47–58), there is one inconsistency in the rhythm of the revised edition, which seems to be a simple misprint. The first beat of the upper staff of m. 49 is missing a sixteenth. At the analogous spot in the original version (the bottom line of page 8) the dotted half note G4-sharp is tied to an eighth, not a sixteenth, as in the revised edition. It seems the editor mistakenly added an extra tail to what should be an eighth here.¹



Example 3.24: Revised version and original version, m. 49.

Another difference in the revised edition in this section is the addition of a tempo marking. Whereas in the original, the only tempo indication is *a piacere, ma quasi a tempo*, in the revised edition there is a specific metronome marking of $\text{♩} = 72$, exactly half the suggested tempo of the outer sections. The idea of having a proportional relationship between the tempos of the sections is appealing, but since the suggested tempo of $\text{♩} = 72$ in the outer sections is, if not impossibly fast, extremely difficult to achieve, the player must decide whether to maintain the 2:1 tempo ratio and play the middle section slower than the suggested tempo, or to

¹ The C4-sharp is changed from a quarter in the original version to a sixteenth in the revised version. Perhaps this is also a mistake, but if so it does not provide a rhythmic inconsistency.

approximate the suggested tempo relationship to keep the middle section from lagging.

The pulse length in this section is much more regular. There are only two deviations, to a quarter pulse, from the otherwise regular dotted quarter pulse, which occur on the first beats of mm. 50 and 52, the two $\frac{5}{8}$ measures. Instead of the frequent and irregular alternation of pulse length from a quarter (or two eighths) to a dotted quarter (or three eighths) of the first section, in this section the (usually) regular pulse length is subdivided into both duples (two dotted eighths) and triples (three eighths), either simultaneously or in alternation. This dual subdivision, hinted at in mm. 37–39, is fully set up in the “upbeat” m. 46, where there are two groups of three eighths in the upper line, and two groups of two dotted eighths in the lower line.

Activity is continuous in this section, with no rests to act as obvious phrase divisions. It is essentially one phrase with three separate phrase members. As in the second section of the first variation, the upper line from m. 47–m. 54, when reduced to a common octave is seen to be a series of stepwise descents. (Except in m. 50 where there is a descent of two minor thirds.) The points where one descent breaks off and another begins are the two divisions between phrase members. The first phrase member encompasses an octave descent. In Example 3.25a the three phrase members are identified, and in Example 25b the descending upper line is isolated and reduced to one octave.

a

p sub.

Red.

m. 48

m. 52

cresc.....

(f')

f a tempo

(♩ = 104)

Red.

Example 3.25: Segmentation of second section, and reduction of upper line.



Example 3.25 cont'd.

Two pitches are important reference points, and help to demarcate the segmentation. The most obvious and important central pitch is C-sharp, particularly C4-sharp. A pulsating C4-sharp pedal begins the section (mm. 47-48), C6-sharp begins the second phrase member at the end of m. 52, and the C4-sharp pedal returns at the end of the section in mm. 55-56. There is a chromatic cluster (with all pitch classes reduced to one octave as in Example 3.26) around C4-sharp in m. 55, and since C4-sharp is the most prominent pitch (as a pedal point) in this cluster, it could be considered a point of linear arrival.



Example 3.26: Octave reduction, mm. 47-55.

As well as framing the section from mm. 47-57, C4-sharp marks the registral midway point between the upper and lower contrapuntal lines. The pedal points act as

a kind of divider between the activity above and below it. Above the C4-sharp pedal in mm. 55 and 56 large leaps in the upper line lead to C7-sharp at the registral and dynamic apex of the section in m. 57.



Example 3.27: Upper register, mm. 55–57.

In this section, the line in the upper staff is the dominant one. It moves most continuously, and although it moves through wide intervals, often over an octave, its contour is smoother than the contour of the lower line. It tends to move in one direction for three pitches or more, which makes it easier to follow as a line.

The first two gestures (mm. 47–48), one above, the other below the C4-sharp pedal, are paired, the second an almost exact inversion of the first. The next two rising gestures, in mm. 49 and 50 are also paired, and are followed by a single gesture.

Example 3.28: Segmentation, mm. 47–52.

The upper line in the second phrase member (beginning in m. 52.2) is one continuous gesture, even though the registral distances between pitches is large (minor sevenths to minor ninths). The sense of closure at the end of this phrase member is quite strong, because both the upper and lower lines finish on the same pitch class. G6, preceded by its lower neighbor, is the goal of the upper line ascent, and G2 is the goal of the lower line descent. This ending does not have a chance to

settle, because the next member begins a sixteenth after the G6 sounds, on A³ in measure 54.

The third phrase member is one surge, with the left hand leaping lower and the right hand higher. As discussed above, the C7-sharp on the second beat of measure 57 is the apex of the right hand surge, preceded before the chord on the downbeat by its lower chromatic neighbor C7. The chord on the downbeat of measure 57, although a strong secondary arrival point, is not the ultimate goal of the line and the section. Momentum is not completely dispelled here. A player should project continued tension through this chord (aided by the damper pedal which functions to join the chord and the succeeding gesture.)

The single descending line in mm. 57–58 is both an ending to the middle section and a preparation for the last section of the variation, called a coda in the original version. In this transitional passage there is a progression from the pitch class C-sharp, the central pitch of the second section to F-sharp (or G-flat), one of the central pitches of the coda (and, as discussed above, the first section).



Example 3.29: Descending line, m. 57–58.

The third section in detail

Like the section that precedes it, the final section of Variation 3 has a constant pulse. Whereas there were two subdivisions, duple and triple, of the pulse in the previous section, here there are only triple subdivisions. (The quarter rest at the

beginning of the initial 5/8 measure is heard as a pause, or breath mark, not a quarter pulse.) There is one phrase in the section, ending at the eighth rest in measure 65, which is followed by a transitional passage to the next variation.




The first two gestures of the phrase, shown in Example 3.31, are a pair.

The image displays musical notation for two systems. The top system, labeled 'm. 59', shows a treble and bass staff in 5/8 time. A circled gesture in the treble staff is marked 'p e legg.' and includes a contour line. The bottom system, labeled 'm. 61', also shows treble and bass staves. It contains two circled gestures, each with a contour line and arrows indicating melodic movement. The notation includes various accidentals and rests, with a '(senza R.D.)' marking below the first staff of the bottom system.

Example 3.30: First gesture pair, third section.

Both have a rising upbeat of two eighths, the second of which is a dyad. (The first is a minor third, the second a major third.) The last full beat of the second gesture is a contour inversion of last full beat of the first. Following the upbeat, the first gesture is a rapid ascent, beginning on B1-flat, and arriving at the end of the gesture on E6. The second gesture parallels and continues the ascent. It starts from a higher point and is a beat shorter. The goal of the second ascent is a semitone higher (F6) than the goal of the first (E6). This linear "progression" between the end of the first gesture and the end of the second, the rising minor second, corresponds to the linear progression from

the leading tone to the tonic in a perfect cadence. These two gestures, therefore sound like they have an “antecedent-consequent” relationship.

The first two gestures introduce the pervasive motive of this last section, identified by its rhythm and contour. (There are more specific pitch and intervallic correspondences between occurrences of this motive, but what makes it immediately recognizable are its contour and rhythm.) The rhythm is:  , the contour of the eighths is: , or its inversion: . In the original manifestation, the final attack is a dyad, and sounds like an arrival, or resolution. In fact all the material of this section can be considered to be repetitions complete or incomplete, with or without modifications, of this motive. Often there is an upbeat to the motive. The first motive, in m. 60, has an upbeat of five eighths, the second an upbeat of two eighths. After the first two gestures, the presentation of this motive becomes more and more fragmented. In gesture 3, the first three attacks of the motive are heard three times, introduced by a two eighth upbeat. (See Example 3.30.)

On the fourth eighth of m. 63, where the fourth and final attack of the motive is expected, a sixteenth rest instead occurs, then a sixteenth upbeat to another beginning of the motive, which turns out to be complete. This is the only irregularity in the constant dotted eighth pulse. The extra eighth comes across as a slight hitch or stutter.

In mm. 62–65, the upbeat figure is played with. Traditionally, if there is more than one attack in an upbeat, the pitch direction ascends. The upbeat figures ascend in mm. 59 and 61. The second two eighths in m. 62 descend, which would normally make them sound more like a closing gesture than an upbeat, especially since the general direction of the three eighths that follow is upward. However, the first two gestures began with an obvious upbeat and are so closely related to each other that the natural tendency is to hear the second gesture ending as the first did (at the

downbeat). If the second and third eighths of m. 62 belong to the previous gesture the strong parallel between the two gestures would be partially destroyed, and the pair would sound a little unbalanced. Example 3.31 shows the two segmentation possibilities.

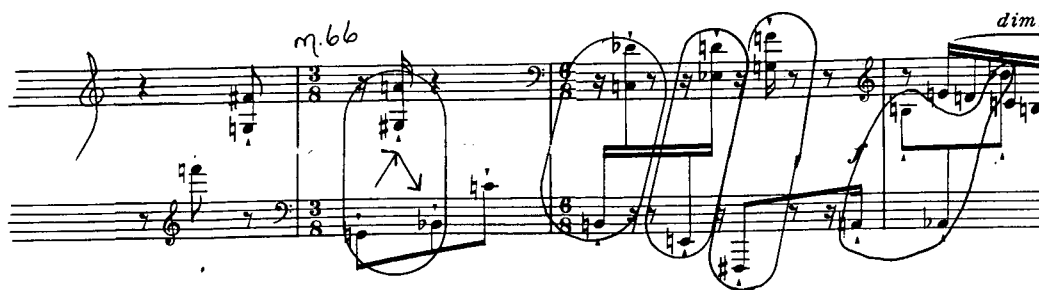
The musical score for Example 3.31 is presented in three systems, each showing two staves (treble and bass clef) in 8/8 time. The first system, labeled 'm. 59', shows a piano (p) dynamic and a 'legg.' (leggiero) marking. A bracket indicates a segmentation possibility between measures 59 and 60. The second system, labeled 'm. 61', shows a mezzo-forte (mf) dynamic and a 'f' (forte) marking. A bracket indicates a segmentation possibility between measures 61 and 62. The third system, labeled 'm. 64', shows a 'ff' (fortissimo) marking. A bracket indicates a segmentation possibility between measures 63 and 64. The score includes various musical notations such as notes, rests, and dynamic markings.

Example 3.31: Two segmentation possibilities, mm. 59–63.

This figure is retrospectively colored by what follows. Like the second two eighths of m. 62, the second two eighths of m. 65 follow the complete four note motive, and are played while the dotted quarter that completes the motive is still sounding. But these two notes must be a closure gesture, since an eighth rest follows them, and there is nothing for them to lead in to. This fourth gesture begins with an upbeat, and ends with a reversal of that upbeat (in shape only, not in terms of exact intervals), giving it a palindromic quality. This “upbeat banter” gives the section a playful quality. The segmentation is ambiguous and parallelisms are askew.

The last two eighths of m. 65, which can be classified in no other way than as an upbeat (since they are preceded by a rest) also descend. However the direction to the downbeat is also downward, so this figure sounds as an inversion to the upbeat figures in mm. 59, 61 and 64.

In the next three measures (mm. 66, 67, and 68) Variation 3 fragments and dissipates as Variation 4 begins. The defining motive of the section is still in evidence. In m. 66 the time value of the first three notes is halved. In m. 67, the motive is cut off after only two notes. Three notes of the motive, in eighth notes, are heard preceded by a sixteenth upbeat in m. 68, but the cascading runs of Variation 4 have already begun.



Example 3.32: Fragmented motives, mm. 66–68.

CHAPTER FOUR

Variation Four

Overall aspects

The forward drive and energy level of each successive variation increases until Variation 4, the dramatic climax. There are two sections in the variation, the first from mm. 1–15, the second from mm. 15–24. From mm. 1–12 in the first section there are two distinct lines; a rapidly moving chromatic accompanying line (heard in the right hand in mm. 1–3) and a slower moving generally less conjunct primary line (heard in the left hand in mm. 1–3). The pulse is a constant sixteenth. At the climax of the section (mm. 13–14), the excess of momentum built up in the constant crescendo of the closely contained lines in mm. 1–12 results in an abrupt change of texture, with *fff* chords and cascading wide leaps. In the second section (mm. 15–24), although the linear texture and regular pulse of the previous section does surface (mm. 15.5–16 and mm. 19.3–20.2), there is a vastly different texture and rhythmic make-up. Instead of the continuous 64th note motion, there are short discontinuous fragments. Although there is technically a sixteenth pulse throughout, it is much harder to follow, since it is difficult to hear a constant pulse through the tempo alterations (mm. 15, 18 and 22) and frequent rests or longer notes amidst almost frantic action (end of m. 17, end of m. 18, end of m. 20, end of m. 22). Also, in a piano piece, wide leaps inevitably mean slight delays.

It is interesting to note that most of the second section of Variation 4 was added in the 1966 revision. The original version ended at m. 17. Since the added

portions in the revised edition (mm. 18–24), with their stop and start pacing and relative lack of linear progression, differ so much from the first section, the revised variation could be criticized for lack of cohesion. However, the proportions of the revised variation seem more apt. In the original version after a dead halt at the end of m. 14, there is barely time to work up great excitement and momentum again, with only four measures left until the end of the variation. In the revised edition, the two sections are more similar in length, and there is time for two momentous build-ups.

The first part in detail

Section 1 (mm. 1–14) is divided into two phrases (mm. 1–8 and mm. 9–14). In the beginning of phrase 1 (mm. 1–6), there is a degree of metric complexity because, although there is a clear and regular pulse throughout the section, the pulse groupings, implied by the accents and slurs in the 64th note line and by the beamings and tenutos in the slower moving line, differ in the two lines. Example 4.1 shows the apparent pulse groupings of the two lines. In mm. 4 and 5 the groupings of neither line wholly agree with the original barring. (In Example 4.1 the measures of the slower moving line are numbered 1a..... 5a.)

Example 4.1: Perceived pulse groupings, mm. 1–5

The musical score consists of two systems of piano music. The first system shows measures m.4 and m.4a. Measure m.4 is in 5/16 time and contains a series of beamed notes. Measure m.4a is in 8/16 time and also contains beamed notes. The second system shows measures m.6 and m.5a. Measure m.6 is in 5/16 time and contains beamed notes. Measure m.5a is in 8/16 time and contains beamed notes. The score includes various musical notations such as beamed notes, slurs, and square brackets indicating groups of notes. Dynamic markings include pppp and pp.

Example 4.1 cont'd.

At the beginning of the first phrase there are five, four-note fragments in the slower moving primary line, all beamed separately. (The third fragment has five notes because it has a sixty-fourth note upbeat.) The rhythm of the last three fragments is identical to the rhythm of the first two, twice as fast, and all fragments primarily rise in pitch. The effect through the section is of constant acceleration.

As shown by square brackets in Example 4.1, the fragments in the slower line divide naturally into two groups. The fifth beat of the 5/16 measure of Example 4.1 (m. 2a in Example 4.1) is really an “extra beat”. The dot after the F6 which ends the second fragment works as a comma, or breath mark dividing the second fragment from the third. In the same way, the third beat of m. 4a in Example 4.1 acts as a comma between the fourth and fifth fragments (although fragments 3–5, as discussed below, are heard as a group).

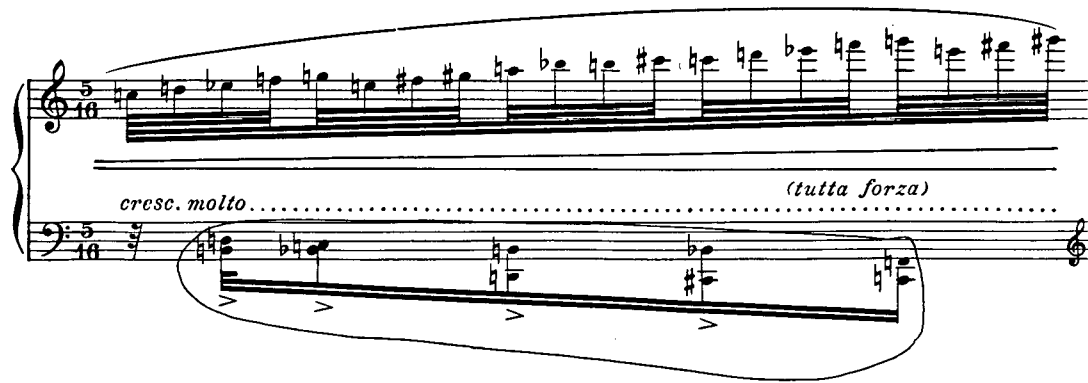
The first two fragments are heard as a pair. They have the same rhythm and general contour (both ascend), and exhibit a degree of pitch closure. The pair begins and ends with the same pitch class. (F1 begins fragment 1, and F6 ends fragment 2.) The last three fragments have identical contour as well as identical rhythm, and this is the basis for hearing them as a group. The rapidly descending third segment of the first phrase (mm. 7–8) registrally connects this phrase, rising to C7 in m. 6, to the E1–flat at the beginning of the second phrase.

The second phrase of the section (mm. 9–14) has none of the metric complexity of the beginning of the first phrase. The two lines previously at odds join forces, one rising the other falling to the farthest ends of the keyboard, to reach a powerful climax in mm. 13–14.

Like phrase 1, phrase 2 is divided into three segments. In the slower moving line, the first two segments include two fragments.

The musical score for Example 4.2, 'Segmentation, phrase 2', is presented in two systems. The first system begins at measure 9, marked with a mezzo-forte (*ff*) dynamic. The piano part (left staff) features a series of chords, with some measures containing a '5' indicating a fifth. The right hand (right staff) plays a melodic line with eighth notes. The second system continues the piece, with the piano part showing a descending line and the right hand with a rising line. The dynamic changes to mezzo-forte (*mf*) in the second system. Various musical notations like 'ff', 'mf', and '5' are present.

Example 4.2: Segmentation, phrase 2.



Example 4.2 cont'd.

The division between the first two segments occurs where the two lines cross (beginning of m. 11). The first two fragments, registrally above the accompanying chromatic line, end in a similar way and are heard as a pair. The top pitch class of the last two chords are the same: G and E-flat. The third and fourth fragments, registrally below the accompanying chromatic line, both made up of dyads which form conjunct falling lines, are another pair.

The third segment of the phrase (mm. 13–14), like the third segment of the first phrase, is climactic and cascades downward. This climax is much greater, and the descent is less conjunct.

Throughout this variation there is obvious emphasis of, and directed motion to, specific pitch classes. The series of single pitches emphasized strongly suggests some kind of traditional tonal hierarchy. The tonal implications of this variation are certainly a major factor in the pervasive goal directed motion. A segmentation and identification of emphasized and/or key pitches and the more or less overt progression between these pitches provides the clearest and most easily audible framework for hearing this variation.

It has already been pointed out that F, as the pitch class that begins and ends the first segment of phrase 1, particularly stands out in the primary line of the first two measures. F1 is the lowest pitch, and F6, the highest of these two fragments.

In the chromatic upper line from mm. 1–6 there is an unmistakable emphasis on the pitch class B–flat. In Example 3, the first pitch in the chromatic line of the variation, the pitches that are accented, and the pitches that are the apex of the line (m. 6) have been isolated. In Example 3b, these pitches are represented in a common octave. Measures 2 and 4 begin on an accented B–flat, and mm. 1 and 3 begin on A, the lower chromatic neighbor of B–flat. The chromatic line in m. 5 begins on an A–sharp, and at the apex of the line, in m. 6, the line turns around A6–sharp.



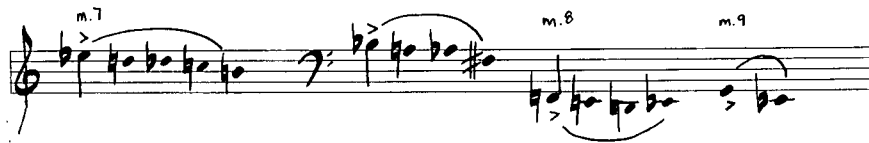
Example 4.3: Primary pitches, chromatic line, mm. 1–6.

If all the pitches of the slower moving primary line from the third sixteenth of m. 4 to the second sixteenth of m. 6 are reduced to one octave, a stepwise ascent to E–flat results. (There is one leap of a third from F–sharp to B–flat.) So, in m. 6 there is an arrival at E–flat in the slower line, and B–flat in the chromatic line.



Example 4.4: Primary line reduced, mm. 4-6.

In the left hand, the descent in m. 7 begins from E5-flat. Following it, the accented pitches, which are the beginnings of chromatic fragments, progress through an ascending cycle of fifths from E-flat to F. The three primary pitches in the first phrase are pointed out again at the close of the phrase.



Example 4.5: Chromatic line, end of phrase 1.

The goal of the descent in mm. 7-8 is E1-flat, on the downbeat of m. 9. It is directly preceded by G. This leaves the distinct impression (especially in light of what follows) of a resolution to the tonic third.

In the first segment of the second phrase, an obvious E-flat major triad is outlined in the top register of the right hand (m. 9). The second fragment of the pair echoes the triad with the (G, E-flat) dyad in the top voice of its last two chords. The accented pitches of the left hand line in m. 9 outline an E-flat minor triad. In the primary line of m. 11, the upper pitches of the dyads descend to D3-sharp (E3-flat). In the primary line of m. 11, the upper pitches of the dyads descend to D3-sharp (E3-flat).



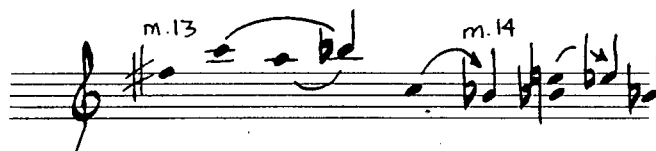
Example 4.6: Allusion to E-flat triads, mm. 9–11.

In mm. 13–14, the primary line is in the left hand. The more disjunct and sporadic chords in the right hand line are like exclamation marks for the steadily falling lower line. There is a directed line in the left hand, as can be seen by isolating the top pitches of its chords. In Example 4.7a, these pitches are shown in the original registers. In Example 4.7b the register of some pitch classes is altered. Until the middle of m. 14 the line lingers around A. The phrase ends with a linear ascent to E-flat in the second half of m. 14.



Example 4.7: Primary pitches, left hand, mm. 13–14.

In the top pitches of the right hand line, first the pitch class B-flat is an arrival point, then E-flat, as shown in Example 4.8.



Example 4.8: Upper pitches, right hand, mm. 13–14.

The final chord of the segment (the last chord of m. 14), the culmination of the climax, contains B4-flat as its highest pitch, and E3-flat as its lowest pitch. The obvious conclusion is that there is a strong suggestion of a tonal cadence in E-flat. The lower line, as illustrated, contains a fairly smooth pitch class ascent to the pitch class E-flat (see Example 4.8). The upper line “prolongs” B-flat, the “dominant”, before moving to the “tonic”. The other pitches in the chords of mm. 13–14 do not fall into the category of “chord tones” for the harmonies suggested by the emphasized pitches. These pitches do not imply any linear directed motion. They primarily add volume and energy to the climax. Their specific pitch is less important.

The linear motion and pitch emphasis (and their tonal implications) outlined in Examples 4.8 and 4.9 provide the framework, which is surrounded in the foreground by a great deal of sonority and energy. The whole first section of Variation 4 strongly suggests a tonal centre of E-flat.

The second part in detail

The second section is made up of spurts of great activity, separated by short pauses (either rests, or note values which are longer than the note values surrounding them). The gestural segmentation is shown in Example 4.9.

The musical score for Example 4.9, measures 15-23, is presented in three systems. The first system (mm. 15-17) begins with a *senza tempo* and *tratt.* marking, followed by a *a tempo* section. Dynamics include *ppp espress.* and *ppp*, with a *cresc. subito* leading to *ff*. The second system (mm. 18-20) features a quintuplet in measure 18 and *fff* dynamics. The third system (mm. 21-23) includes an *acc.* marking and a tempo change to 192, with dynamics *p* and *ff*. The score uses various musical notations such as triplets, quintuplets, and slurs to indicate phrasing and articulation.

Example 4.9: Gestural segmentation, mm. 15-23.

The musical score for Example 4.9 continues on page 78. It shows measures 20 through 22. Measure 20 begins with a quintuplet in the right hand and a triplet in the left hand. Measure 21 features a 'rall.' (rallentando) marking and a 'mf' (mezzo-forte) dynamic. Measure 22 includes a 'fff' (fortissimo) dynamic and a tempo marking of '♩ = 192'. The score is written for piano with treble and bass staves, showing complex textures with many triplets and quintuplets. The key signature has one flat (B-flat), and the time signature is 6/4.

Example 4.9 cont'd.

The outward effect is one of discontinuity. Vastly different textures are juxtaposed, and chordal sections tend to leap freely between registers. However there are correspondences between gestures, fragments of linear activity, and emphasis on particular pitch classes (although they are not as overt and convey far less a sense of tonal hierarchy than the first section.)

The opening chord of the section (at the beginning of m. 15) contains pitch class G in common with the chord that preceded it. Every other pitch in this chord is a semitone away from a pitch in the chord that ended the first section. (One pitch, D, is displaced an octave.) In a sense then, the opening chord of section 2 is both a reference to the end of section 1, and a movement away from it. This is further played out in the ornament (in small notes) that follows the chord. The first two pitches of the ornament B-flat and E-flat are the two central pitches of section 1. "Moving

away" from B-flat and E-flat, the following three pitches, A-flat, D-flat, and G-flat, are the central pitches, played out in this order, of the second section.

In the right hand, at the beginning and ending of the first gesture of section 2 a similar group of pitches, both containing (E4, F4-sharp, G4-sharp) occurs (m. 15.5 and m. 16.5). These are "lead-in" gestures, since both are in upbeat positions. In the first left hand fragment, G2-sharp and E2 are prominent. At the beginning of the fourth beat of m. 16 an E4 in the left hand coincides with A5-flat in the right hand. This is the most accented point of the gesture. Not only is there a written accent in the left hand, at this point the right hand line changes direction.

G4-sharp is reiterated at the beginning of the second gesture (m. 17) as the highest note (and therefore most prominent) of a cluster. As can be seen in Example 11, this is followed by an emphasis on C-sharp (D-flat). (I choose C-sharp, not E-flat as the central pitch here because, unless there are other factors, the higher pitch of a dyad is more prominent.) The final two beats of m. 17 outline a pitch class cluster from F-sharp to A. F1-sharp is the lowest pitch of the gesture, and F1-sharp and G1 end the gesture. In effect, mm. 15-17 work out the ascending fourth sequence <G-sharp, C-sharp, F-sharp> that is introduced in the ornament at the start of m. 15 as <A-flat, D-flat, G-flat>.

The musical score for Example 4.10 consists of two systems of staves. The first system shows measures 15 and 16. Measure 15 is marked 'm.15 senza tempo tratt.' and 'ppp espress.'. Measure 16 is marked 'a tempo' with a tempo marking of 192, 'ppp', and 'cresc. subito'. The second system shows measures 17 and 18. Measure 17 is marked 'ff' and 'cresc. subito'. The score includes various musical notations such as slurs, ties, and dynamic markings.

Example 4.10: The progression <G-sharp, C-sharp, F-sharp> composed out, mm.

15-17.

The portion added in the revised edition (mm. 18-23) is almost entirely made up of material from mm. 13-18 (the last five measures of the original version). Chords and fragments from mm. 13-18 are lifted and placed often in loosely in retrograde order. Measures 18-19.2 and mm. 21-22.1 are made up of chords first heard in m. 13-14.2; the run in the right hand in mm. 19.4-20.1 is very similar to the run in mm. 15.5-16.2; the left hand in mm. 20. 2-20.4 is taken from the left hand in m. 14; the chords in mm. 21-22.1; and m. 23 is almost identical to m. 17. (See Example 4.11.)

Example 4.11: Content of mm. 18–23.

14

m. 20

m. 22

rall.

mf

ff

Red.

192

Example 4.11 cont'd.

However, whereas in mm. 13–14 the emphasized pitch classes were E-flat and B-flat, in the new context of mm. 18–22 the pitch class C-sharp stands out.

In the third gesture (m. 18) there is an ascent in the upper voice of the right hand to from B4-flat to C5 to C5-sharp. The chord which contains this C5-sharp is repeated as the first left hand chord in the fourth gesture at the beginning of m. 19 (chord #6 in Example 11). The next significant quasi-linear progression occurs in the left hand of m. 20.3 and 20.4, where a pitch class linear ascent to C-sharp occurs (event #14 in Example 11). (In m. 14 this pitch class ascent proceeded to E-flat.)

Through the section threads of linear motion become increasingly elusive. However, the pitch class C-sharp is still making its presence felt. On the second beat

of m. 21 the (D4, F4-sharp, C4-sharp) chord, heard at the end of m. 18 and at the beginning of m. 19 (chord #6 from Example 11), is heard again. In m. 22 the chord labelled #3 in Example 11 is a secondary point of arrival for the cascading chords of m. 21. It is marked with an accent, and is the “thickest” (containing four pitches) and lowest chord up to that point. The top pitch of the chord is C4-sharp.

In m. 23 the progression <G-sharp, (A-flat) C-sharp> culminating at F-sharp is clearer than in m. 17. F1-sharp is the lowest, loudest and is the single final pitch of the variation. In terms of pitch emphasis, the final section of Variation 4 composes out the ornamented <A-flat, D-flat, G-flat> on two levels: once in mm. 15–17, and on a broader span, through the whole section (an emphasis on C-sharp in the middle of the section, from mm. 18–22, framed by the sequence <G-sharp, C-sharp, F-sharp> in mm. 15–17 and m. 23).

CHAPTER FIVE

Variation Five

The florid foreground and leisurely pace of Variation 5 and the Coda are a foil to the extreme activity level of the previous two variations. Variation 3 is hectic, complex and scattered; Variation 4, driven. This Variation unfolds in a reflective manner. There is a lack of urgency in the elaborately decorated contrapuntal lines. Momentum and volume do pick up at the end of the variation for two short periods of goal driven activity (mm. 14–15.2 and m. 16), but the weighty, widely spaced chords have nothing like the high level of scarcely-reined in energy present in Variation 4.

Variation 5 has been altered from the original much more than any other section of the piece in the revised edition. Chiefly through artful use of ornaments and dynamic indications, the segmentation in the revised edition is more clearly defined than in the amorphous original, and the segments are by and large shorter, producing a less aimless effect. The original version of Variation 5 can be read as a fairly accurate rhythmic and pitch reduction of the revised version. The elaborate ornaments (often subtly highlighting certain aspects of the pitch language) and rhythmic shifts added to the foreground soften the rather cut and dried aspect of the constant quarter pulse and starkly simple rhythms.

Rhythm and Pulse

The rhythmic changes in the revised version produce the effect of greater freedom. Compare the two versions of the opening of the variation.

The image displays two musical staves, labeled 'a' and 'b', representing the original and revised versions of a musical opening segment. Staff 'a' (top) shows the original version, featuring a vocal line with lyrics 'FRA - TEL - LO!' and a piano accompaniment. The piano part includes a bass line with a dotted line indicating a rubato. Staff 'b' (bottom) shows the revised version, which is more rhythmically complex and includes dynamic markings such as *f*, *pppp*, *pp*, *p*, and *ppp*. The revised version also includes a section marked '8. 1 corda'.

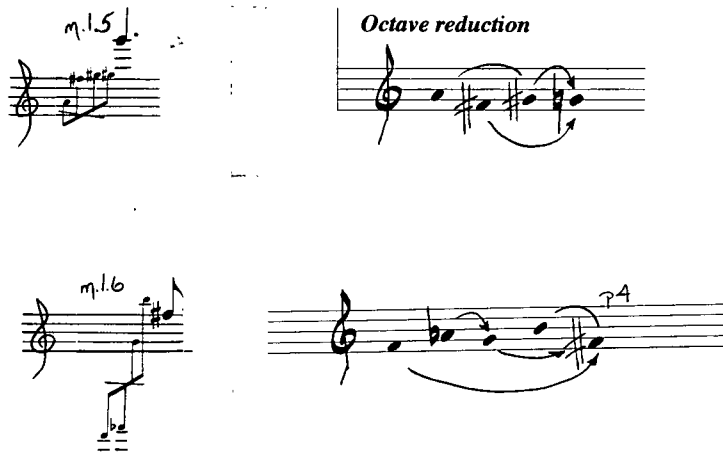
Example 5.1: Original version, and revised version, opening segment.

Throughout the revised variation in the left hand line, and increasingly in the upper lines especially after m. 5, Berio has essentially written out rubatos along with the florid ornaments. In mm. 1–4 the left hand and right hand lines are staggered. The accented, *forte* D5-flat that begins the variation, preceded by an elaborate flourish, comes across as a clear downbeat. The left hand line “shadows” the downbeat by a

triplet eighth, and continues to shadow pulses in the measure slightly. The left hand line provides a “delayed” half note pulse against the dotted half pulse of the right hand in mm. 1 and 2. In mm. 3–4 the left hand continues to shadow the right hand quarter pulse. This is a written out expressive device – similar to one, occasionally becoming a mannerism – that some pianists use in playing music of the romantic period. Later, beginning in m. 5 in both hands, quick notes a ninth of a beat long occur on pulse points preceding principal notes, like grace notes or arpeggiations. In m. 7 a third rhythmic expressive device is added: pulses are anticipated by a ninth of a beat. These rhythmic devices contribute an effect of rhythmic freedom, even whimsy (providing the player takes the rhythms in this spirit and leaves the aspect of counting like mad in the practice room). In comparison, the exactness of the original version sounds somewhat plodding and prosaic. The rhythmic devices also underline pacing. At the beginning, the hesitations contribute to a lazy unhurried atmosphere. Later, the “grace notes” add to the activity level. In the last half of the variation anticipations produce the effect of anxiousness. This along with shorter segments, fairly frequent tempo changes, and less conjunct and generally rising lines (as opposed to the falling, conjunct lines in the first four measures) create greater momentum, leading to the climax in mm. 13–17.

Before discussing segmentation and pitch language, a brief look at the ornaments added in the revised edition. As mentioned above, one of the functions of the ornaments is to aid in demarcating segmentation. Also the very presence of such elaborate unmeasured elements makes a certain rhythmic flexibility inevitable. This adds to the impression of rhythmic freedom contributed by the “rubato” elements. In terms of pitch content, the ornaments highlight the pitches they precede by including its chromatic neighbors and/or the main pitch itself (usually in several octaves). (See Example 5.2a) They may also contain a pitch a fourth or fifth away from the main

pitch, as in a traditional upbeat figure. (See Example 5.2b.) They often contain pitches important in a larger sense in the variation (discussed more specifically below.)



Example 5.2: Pitch content of ornaments.

Segmentation

There are three phrase groups in the variation, and each section has its own specific kind of gesture. The first section (mm. 1–6.2) is melodically almost exclusively made up of the pitch class set (0, 1, 4), as shown in Example 5.3. This is the first prolonged and pervasive occurrence of the three note set, the so called “Fratello” melodic cell from Dallapiccola’s opera, *Il Prigioniero*, that Berio claims is the element linking the variations together.¹ While there are obvious pitch correspondences between gestures, and some pitches occur more than others, there is

¹David Osmond Smith, trans. and editor, Luciano Berio: Two interviews with Rossana Dalmonte and Balint Andras Varga, (London: Boyars, 1985), 53. In the original version the first three pitches of the main voice in Variation 5 are set to the text “Fratello”. This is left out in the revised version, probably at least partly because the added ornaments and dynamics make the score much more cluttered. There is not really a way to insert the word and make it clear which pitches it refers to.

nothing to suggest that these pitches are arrival points, or that they combine together in some way to form a pitch hierarchy in a linear or harmonic sense.

V. Variazione
Calmo ♩ = 60

The image shows a musical score for a piece titled 'V. Variazione Calmo' with a tempo marking of ♩ = 60. The score is in 4/4 time and features a piano (p) and forte (f) dynamic range. The notation includes a treble and bass staff with various musical symbols such as notes, rests, and accidentals. Above the staff, there are handwritten annotations for pitch-class sets: $D^b-C-A [014]$ and $C-A-A^b [014]$. Below the staff, there are more handwritten annotations: $A-B^b-D^b [014]$, $B^b-D^b-D^{\sharp} [014]$, $D^b-D^{\sharp}-F [014]$, and $D^{\sharp}-F-F^{\sharp} [014]$. The score also includes a section marked '1 corda' and various dynamic markings like *pppp*, *pp*, *p*, and *ppp*.

Example 5.3: Pitch-class-set (0, 1, 4), first phrase.

The second phrase group (mm. 6.3–10) has many linear fragments which, opposite to those in section 1, ascend. They tend to leap more freely between several

octaves, and the linear motion is more directed toward specific pitches (the pitches F-sharp and B/B-flat as illustrated below). Whereas the first section has a meandering quality, the second section is more specifically goal directed. These aspects, along with the more unsettled tempo, provide greater momentum. Often, separate contrapuntal voices are made up of chromatic clusters around (a) prominent pitch class(es) (always F-sharp or B/B-flat) producing an effect similar to prolongation.

The third, climactic phrase group (mm. 11–17), has greater textural density, lines that abound with large leaps and an accelerated tempo. A pitch skeleton would reveal that the upper line is one long linear ascent (directed again to F-sharp), and in the bass line there is strong pull to specific pitches and long term chromatic neighbor motion.

The first phrase group is made up of three phrases. The point of division between the second and third phrases (after the fifth beat of m. 4) is made obvious by the ascending leap of a fifth in the upper line, the widest leap between quarters in the phrase, and by the significant and sudden dynamic shift from *mf* to *pppp*.

The division between the first and second phrase (after the fifth beat of m. 2) is less immediately obvious, there being no rhythmic break or dynamic shift. The striking simultaneous sounding of two (enharmonic) perfect fifths at the fifth beat of m. 2, <A4-flat, C4-sharp> and <C4-sharp, F2-sharp>, is the feature that creates closure. Tonal cadence references aside, the intervallic consonance alone signifies a resting place. The ornaments that follow on and around the sixth beat of m. 2 make up an elaborate upbeat. Included in the ornaments is a pitch class ascent from the C4-sharp at the end of the first phrase, to the first right hand pitch of the second phrase, F4. To make sure the division is clear, the player should slightly delay beginning the ornament before the sixth beat of measure 2.



Example 5.4: Reduction of ornament introducing phrase 2.

Along with a common motivic make-up, all three phrases in the first section are of similar length and there are significant correspondences in contour. The upper line descends, the lower line ascends. In Example 5.5 rhythmic and melodic ornament is stripped away from the first five measures.

Example 5.5: Pitch correspondences in mm. 1-6.

As shown in Example 5.5, certain pitch classes, sometimes in a fixed register, are placed in key positions in more than one phrase. A0 begins the bass ascent of phrase 1, and A2 begins the bass ascent of phrase 2. The pitch class sequence <G, F-sharp, D-sharp (E-flat)> begins in the fourth beat of phrase 1 (mm. 1-2) and the third beat of phrase 2 (mm. 3-4). F2-sharp is the bass note of the final sonority in phrase 1, and G4-flat is in the upper voice of the final sonority of phrase 2. In addition, all the same pitches, presented in different orders, begin phrase 1 and phrase 2 (See Example 5.6).

p.c.s. [0, 1, 2, 3, 4, 8]

Example 5.6: Correspondences of pitch classes beginning phrases 1 and 2.

The outer ends of phrase 1 and phrase 3 refer to each other. The pitch sequence <D5-flat, C5, A4> occurs in the upper voice at the beginning of phrase 1, and at the beginning of phrase 3. A4-flat is the highest pitch in the sonority that ends phrase 1 and phrase 3 (G4-sharp).

D-flat, a beginning pitch in phrases 1 and 3; A, the beginning bass pitch of phrases 1 and 2; F-sharp, a key pitch at the end of phrases 1 and 2; and A-flat (or G-sharp) the ending pitch in the upper voice in phrases 1 and 3 are cornerstone pitches in the first three phrases, but, as mentioned above, they are not really pitch

centers. The pitch correspondences form aural relationships between phrases, but these pitches do not combine to form any hierarchy amongst themselves, and we are not drawn to one or another pitch, or group of pitches, as home-base.

In the phrase group that follows (mm. 6.4–10) this aspect changes. Many factors contribute. Perhaps it is not too wide a generalization to say that since the linear direction for the remainder of the variation is mainly ascending (as opposed to the descending lines of the first three phrases), the music has more of a tendency to sound goal directed. Also, only one of the pitches previously stressed, F-sharp, stands out. F-sharp is always significantly present at the end of a segment, and closure gestures point to this pitch as a point of arrival in traditional ways. The chromatic pair (B-flat, B) is also significant in a capacity auxiliary to F-sharp. The centrality of F-sharp and B-flat/B, motivic conformity and, similar contour of separate phrases are the factors that link the next phrase group together.

Phrase-group 1 (mm. 1–6.3) and phrase group 2 (mm. 6.4–10) are very deliberately separated by the quarter rest at m. 6.2 and by the large ornament preceding m. 6.3. The quarter rest in m. 6 is the only rest shared by both hands in the variation. (In the original version there is no division to speak of at this point.) As shown in Example 5.7, there are three short phrases in this group, the second dividing into two segments.

The musical score for Example 5.7 is presented in three systems. The first system shows a melodic line in the upper staff and a bass line in the lower staff, both featuring 9th notes. The second system includes a tempo change to "Poco più (♩ = 72)" and dynamic markings of *mf* and *ppp*. The third system is marked "Calmo" and features a melodic line in the upper staff and a bass line in the lower staff, both featuring 9th notes. The score is written in a key with one sharp (F#) and a common time signature of 4/4.

Example 5.7: Segmentation of second phrase group.

The general shape of lines is a factor that link these phrases into a group.

Large ascending leaps, often interval class 1 or 2, are common. The pitch language is consistent, particularly the central function of F-sharp and (B, B-flat), and there are significant linear connections between phrases.

The first phrase can be reduced to a kind of prolongation of the pitch class F-sharp in the upper line, and a linear ascent from F-sharp to B in the lower line. There

is a very noticeable closure gesture at the end of this phrase. The descent from C3-sharp to B2 is prominent after a chain of ascending intervals. This progression calls to mind a 2–1 descent in a tonal cadence. F-sharp and B are the most prevalent pitches in the final sonority. They are the last pitches to sound, and they are the highest pitches in each hand. Consistent with the language of the piece, the other pitches form chromatic clusters around the main pitches.



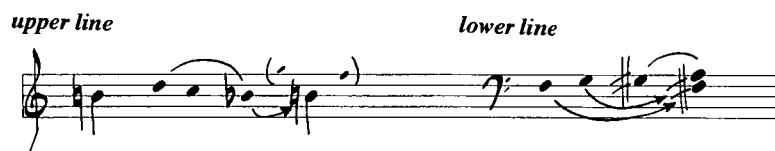
Example 5.8: Reduction, mm. 6–7.

B-flat is the prominent pitch class in the beginning of the second phrase. The upper-line ascent in m. 8 begins and ends with B-flat, and B1-flat is the bass note that begins the second segment of the phrase. F-sharp, the central pitch of the second segment, is the beginning and ending pitch class in the upper line. Two stepwise ascents (E3 to F3-sharp and F2 to G2) close the phrase, following the wide intervals common in the rest of the phrase.



Example 5.9: Reduction, second phrase.

The third phrase begins with a single pitch, B³, preceded by an ornament. Clearly there is an aural connection between this and the B3-flat at the beginning of the second phrase. B5, at the end of the phrase, and B5-flat that precedes it, are the most prominent pitches in the upper line. Present in the middle register is a chromatic cluster around F-sharp (with F-sharp as the most prominent pitch because it is the last pitch heard.)



Example 5.10: Reduction, third phrase.

Mm. 11–12 (made up of two short segments) function as a long upbeat or introduction to the climactic section (mm. 13–17) rather than as an autonomous phrase. The upper line ascents in the two segments, which begin after rests on the downbeats, help give the section an upbeat quality. Also there is an arrival on A1-flat in the bass at the downbeat of m. 13 after both voices have hovered around the pitch class A-flat for all of mm. 11 and 12.



Example 5.11: Reduction, mm. 11–12.

The rest of the variation is essentially one section which can be broken up into a phrase ending at m. 15.2, followed by a coda to the end of m. 17. F-sharp (again), and E-flat are central pitch classes. In Example 5.12 a simple reduction of mm. 13–15.2 is sketched. The upper line is reduced to an ascent to F-sharp. The lowest line moves from G-sharp to E-flat, through its chromatic neighbor D, then moves back to D at the end of the phrase. The independent inner line in m. 13 hovers around E-flat, then moves to a strong B-flat.



Example 5.12: Reduction of each register, mm. 13–15.

The ornament before the first cluster of the coda to Variation 5 (m. 15.3) makes E7-flat, the top pitch of the second cluster, the focal point of the two clusters. There are two D-flat's, which ascend (in a pitch class ascent) to D, the highest pitch of the first cluster, which then ascends to E-flat. G6 stands out as the highest pitch in the ornament, and the <G6, E7-flat> connection creates a clear triadic reference.



Example 5.13: Reduction, mm. 15.3–15.4.

In mm. 16–17 the upper line begins another pitch class ascent, ending at the single pitch, G1-flat, at the end of the phrase. The (D2-flat, A2-flat) open fifth which immediately precedes the G1-flat that closes the variation is the arrival point of a linear descent in the bass. It has an inescapable "dominant" quality.



Example 5.14: Reduction, mm. 16–17

The fifth sonorities that end the variation sound quite extraordinary after five variations dense with interval class 1 and 2. Apart from the obvious tonal analogy they create, the open fifth sonorities prepare the move into the spacious textures, and simple pitch language of the Coda. This is foreshadowed earlier in Variation 5 (especially in the revision since several melodic fifths are present in the ornaments) where instances of harmonic and melodic interval class 5 and 7 are relatively frequent.²

² Listed are all the aurally obvious instances of harmonic and melodic fifths (i.e. interval class 5 or 7): The ornament note, B5 to the main note, F#5 at the end of measure 1, F#4-C#5 in the ornament before the C4 in measure 2.2, the Ab4-C#4-F#2 sonority in measure 2.5, the ornament note G4 to main note D5 in measure 4.2, G#1-D#2 in measure 7.1, in measure 7.5 the sonority includes B2 and F#5, the ornament note F6 to the main note Bb3 in measure 8.1, Bb3-D#2 in measure 8.1, Eb4-Bb6 in measure 8.4, the sonority F#2-C#3-B4 in measure 8.6, C# 6 in measure 9.3 to F#3 measure 9.4) Although, not surprisingly, the pitch class F# turns up fairly frequently on the list, the insertion of fifths does not seem to be particularly systematic, leading one to believe it is the sonority itself not its tonal connotations that is the most important factor.

CHAPTER SIX

Coda

Overall aspects

The coda, considered independently of the variations, has an entirely self-explanatory metric make-up and a straightforward phrase structure. The materials used are minimal and the small-scale structures transparent. Two exact palindromic structures in the first eight bars, pointed out below, are easily audible. The coda is the most overtly tonal portion of the piece. Two pitch classes, through simple repetition and large scale neighbor motion, are set up as obvious pitch centres, and stark fifth progressions imply elementary tonal hierarchy.

There are two fairly large phrases, with the final section (mm. 14–19) functioning as a coda for the second phrase. The first phrase begins with an introductory measure (labeled m. 0), and ends at the beginning of m. 9. Many factors in the introductory measure point to the G-sharp (A-flat) at the beginning of m. 1 as a point of arrival. The rising fourth <E4-flat, A4-flat> is outlined in the upper line, a chromatic pitch class descent to A-flat immediately precedes the downbeat of m. 1 and A1-flat dominates the bass voice of m. 0.



Example 6.1: Reduction, m. 0.

Example 2 identifies the two palindromic structures in mm. 1–8.

First palindrome

musical score for the first palindrome (mm. 1–3). The score is in G major (one sharp) and 3/4 time. It features a piano (p) and pianissimo (pppp) dynamic range. The melody in the right hand includes a triplet of eighth notes in m. 1 and a triplet of quarter notes in m. 2. The bass line in the left hand features a triplet of eighth notes in m. 1 and a triplet of quarter notes in m. 2. The phrase is labeled "Phrase member 2".

mm. 4–6 – pitch order from mm. 1–3 reversed.

Second palindrome

musical score for the second palindrome (mm. 4–6). The score is in G major (one sharp) and 3/4 time. It features a mezzo-forte (mf) and mezzo-piano (mp) dynamic range. The melody in the right hand includes a triplet of eighth notes in m. 4 and a triplet of quarter notes in m. 5. The bass line in the left hand features a triplet of eighth notes in m. 4 and a triplet of quarter notes in m. 5. The phrase is labeled "Phrase member 3".

m. 8 – pitch order from m. 7 reversed.

musical score for m. 8. The score is in G major (one sharp) and 3/4 time. It features a mezzo-forte (mf) dynamic range. The melody in the right hand includes a triplet of eighth notes in m. 8. The bass line in the left hand features a triplet of eighth notes in m. 8. The phrase is labeled "m. 8".

Example 6.2: Palindromic structures, and phrase segmentation, mm. 1–9.

The pitch order in mm. 4–6 exactly reverses the pitch order in mm. 1–3. M. 8 is a pitch order palindrome of m. 7, except in two minor details. D4 is not re-attached in m. 8, and F4 is attacked at the beginning of m. 8, not at the end. Rhythmically, the

palindrome is not exact, but the length of corresponding pitches is very similar in the forward and reverse members of the structure.

The phrase in mm. 1–9, a series of arching contours, does not segment entirely along the dividing lines of the palindromes, as shown in Example 2.

In the first segment the ascending leaps in the upper line of m. 1 close with a chromatic descent to E-flat. The sense of cadencing on E-flat is heightened by the final left hand chord of the segment, which provides G and B-flat, the other two pitches of an E-flat major triad. If the upper line of the segment is reduced to one octave, the centricity of E-flat is even more apparent.



Example 6.3: Reduction of upper line, mm. 1–2.

The first two measures of the second segment contain a “prolongation” of E-flat. (The D2 in the left hand functions as a long term chromatic lower neighbor to E2-flat in m. 9). While the segments from m. 1.3–2 move chromatically toward E-flat, in m. 5 there is a chromatic movement away from E-flat, to E and F.



Example 6.4: Reduction of upper line, mm. 3–5.

Greater tonal pull is created in the third segment, where consecutive harmonic and melodic fifths and fourths dominate. In the lower register, chromatic upper neighbors of E-flat and B-flat are heard. The result is an unmistakable cadence to E-flat, with B-flat functioning as a dominant.

a lower registers

m. 3 m. 7

b upper register

m. 1 m. 3 m. 6-8

Example 6.5: Reduction, mm. 7–9.

There are two pitch centers in mm. 0–9, as shown above, E-flat (Example 6.5a), and F-sharp, Example 6.5b). The uppermost register, contains only two pitches, F6-sharp ornamented by its upper neighbor G6.

The remainder of the coda contains one phrase (mm. 9–14) divided into two segments (mm. 9–11.4 and m. 11.5–14). Both segments end with strong cadences to E-flat. Tolling in the bass is the cycle of fifths from C-sharp (D-flat) to E-flat. In the upper register, F6-sharp is introduced by B5, an aural reminder of the other central pitch in phrase 1. The C1-sharp played with E2-flat at the downbeat of m. 14 is not a pitch arrival point. It adds a quality of elusiveness and makes the cadential resolution

a little murkier. B-flat, immediately preceding the arrivals at E-flat in mm. 11.2 and 14, continues to be set up as a dominant.

The musical score for Example 6.6, "Cadential material, mm. 9-14," is presented in three systems. The first system (mm. 9-10) shows a treble staff with a melodic line and a bass staff with a more active line. Annotations include "espress." and "2da. sino alla fine". The second system (mm. 11-12) continues the melodic development with "tratt. e sospeso....." and "a tempo" markings. The third system (mm. 13-14) concludes with "legatissimo", "p", "rall. e dissolvere.....", and "pppp". Various musical notations such as slurs, ties, and dynamic markings are present throughout.

Example 6.6: Cadential material, mm. 9-14.

The final cadence to E-flat in m. 14 is followed by an "extension" or coda in which the music slowly dissipates, in keeping with the spirit of open-endedness and ambiguity that was ever present earlier in the piece. B4-flat, our "dominant", tolls

softly in the upper register. As the bass slowly rises, permanently leaving E-flat "home-base", the apparent "dominant" quality of B-flat dissolves. The arrival point of the bass ascent is F2-sharp, the ever-present upper-register pitch earlier in the coda, the one element uninvolved in the directed motion to E-flat. The final bass chord is a low rumble, in which it is actually difficult to hear specific pitches. The music fades away from the defined and directed language of the coda.

CHAPTER SEVEN

Conclusions

In part this paper has shown how the outlining of pitch centers is an important element in defining grouping structures and shown that recognizing the tonal underpinning throughout the piece helps general aural comprehensibility. On a broader scale, a look at the network of pitch centers across variations sheds some light on why this work is plausible as an integrated whole. Example 7.1 shows the major pitch centres in the variation set.¹



Example 7.1: Major pitch centers.

The piece is firmly centered on E-flat in the beginning, middle and end. Variation 3 is settled between E-flat centered variations. Its B6-flat pedal point represents a move to the “dominant” in the B section of a ternary form.

¹ In Chapter 2 it was mentioned that the pedal points in the first section of Variation 1, Bb, Ab, and F#, are three of the four important pitch centers of the piece. Ab, which does not show up in Example 7.1, occurs as a more local pitch center.

Variation 3 also has aspects typical of a scherzo movement: quick tempo, metric shifts and ambiguities, and a light-hearted character. It is also in three parts, with a calmer middle section and outer sections which are similar in affect if not directly related in content. In the outer sections of the variation, the middle register often points to F-sharp as pitch center, and the middle section is clearly centered at C-sharp, representing the I - V - I tonal areas of a scherzo movement.

In the second section of Variation 4 and in Variation 5 there is another move “away” from E-flat, then in the Coda, E-flat squarely arrives again.

David Osmond Smith considers this piece “a reversal of the usual trajectory of the variation set”². The coda is, in its sparseness and simplicity, the most “theme like” part of the piece. However, even it does not present a melodic fragment or a set of motives the outlines of which can be traced throughout the piece. Rather, the coda has small references to the other variations, and a few bigger, more obvious references to, or perhaps more specifically quotes from, Variation 1.

Like Variation 2, the coda begins with a sustained G-sharp.

II. Variazione

$\text{♩} = \text{poco meno del } \text{♩} \text{ precedente}$

p ma deciso

senza Ped.

CODA alle 5 Variazioni

sempre pppp

Example 7.2: Opening of Variation 2 and Coda.

² David Osmond Smith, *Berio*, (Oxford, New York: Oxford University Press, 1991), 9.

Like the first section of Variation 3, the coda has two distinct, registrally specific pitch centers. In Variation 3 there is a B6-flat pedal point, and in the lower registers, F-sharp is a pitch center. In the first section of the coda, the F6-sharp is the only pitch present, once preceded by its upper neighbor, G6 (in m. 3). In the lower registers, E-flat is the pitch center.

As in Variation 4, Coda contains conjunct chromatic lines, though at an extremely reduced rate.

IV. Variazione
♩ = 192

pppp (legatiss. e volante)

m. 4

pppp

CODA alle 5 Variazioni
sempre pppp

p ppp pppp

ppp

Example 7.3: Chromatic fragments, Variation 4 and Coda.

Like Variation 5, the pitch-class-set (0, 1, 4) pervades the Coda, as can be seen from the first four measures.

V. Variazione
Calmo ♩ = 60

Handwritten pitch-class sets above the staff:

- $D^{\flat}-C-A [0,1,4]$
- $C-A-A^{\flat} [0,1,4]$

Handwritten pitch-class sets below the staff:

- $A-B^{\flat}-D^{\flat} [0,1,4]$
- $B^{\flat}-D^{\flat}-D^{\sharp} [0,1,4]$
- $D^{\flat}-D^{\sharp}-F [0,1,4]$
- $D^{\sharp}-F-F^{\sharp} [0,1,4]$

Other markings in the score include *f*, *pp*, *ppp*, *p*, *1 corda*, and a *5* marking above the final measure.

Example 7.4: Pitch-class-set (0, 1, 4) in Variation 5 and Coda.

The musical score for Example 7.4 cont'd consists of two staves: a piano (left) and a right hand (right). The piano staff begins with a treble clef and a key signature of one sharp (F#). The right hand staff begins with a treble clef and a key signature of one sharp (F#). The piano staff has a tempo marking of *sempre pppp* and a dynamic marking of *p*. The right hand staff has a dynamic marking of *ppp*. The piano staff features a sequence of notes: D (quarter), E-flat (quarter), F# (quarter), and A (quarter). This sequence is annotated with *D - E \flat - F# [0, 1, 4]* and *D \flat - C - A [0, 1, 4]*. The right hand staff features a sequence of notes: E-flat (quarter), F# (quarter), G (quarter), and A (quarter). This sequence is annotated with *E \flat - F# - G [0, 1, 4]* and *A - C# - C [0, 1, 4]*. Both staves include fingerings (3, 4, 5) and a dotted eighth-sixteenth rhythm. The piano staff also includes a 9-measure rest and a 3-measure rest. The right hand staff includes a 3-measure rest and a 3-measure rest.

Example 7.4 cont'd.

The open fifths in mm. 9–11 of the coda, and the dotted eighth–sixteenth–eighth rhythm refer directly to the end of Variation 1. The two pitches of the left hand pedal point (F-sharp and G-sharp) at the close of the Coda (mm. 16–17) are two of the pedal points in the first section of Variation 1, and the two pitches of the right hand pedal point at the close of the Coda (mm. 14–19) are two of the pitches that begin the piece.

Variation 1

pppp (oppena percettibile e vago)
con 2 Rdo.

Variation 1 (ending)

sempre pppp
ten.

Coda

espress.
2 Rdo. sino alla fine

Opening of Var. 1

Final Cadence, Var. 1
tratt. e sospeso.....
ppp
a tempo

legatissimo
p
rall. e dissolvere.....
pppp

Example 7.5: Correspondences between Variation 1 and Coda.

Cinque Variazioni lacks many features of the “traditional” theme and variation, but it comes across as a compelling dramatic whole, ending as it began.

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