Harmony and Counterpoint in the Ligeti Etudes, Book I: An Analysis and Performance Guide

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HARMONY AND COUNTERPOINT
IN THE LIGETI ETUDES, BOOK I:
AN ANALYSIS AND PERFORMANCE GUIDE

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ABSTRACT

This treatise investigates the harmonic and contrapuntal features of Études pour piano, premier livre (1985) by Hungarian composer György Ligeti. All six etudes undergo chordal and intervallic analysis, revealing Ligeti’s preference for tertian consonance and patterns of traditionally tonal vertical structures placed within a tonally non-functional syntax. In each etude dissonance is shown to be clearly regulated, used to convey various facets of musical expression like tension, humor, emphasis, or disarray. This treatise also briefly examines Ligeti’s varied approaches to layering melodies in each etude, with an emphasis on the musical role of each voice.

In addition, the ramifications for performance are addressed, along with suggestions for overcoming technical and interpretative difficulties. A thorough understanding of harmonic and contrapuntal function is shown to influence interpretative decisions in subtle yet significant ways.
INTRODUCTION

Background and Significance

Ligeti’s three books of etudes for piano have risen to unusual prominence since he received the Grawemeyer award for the first book in 1986. Theorists, composers, and pianists alike have responded to their novelty, variety, and virtuosity. No other set of solo piano works composed within the past fifty years has been the topic of more scholarly publications. Despite their considerable difficulty, concert pianists continue to program them and they have entered the standard repertoire so readily that they figure conspicuously in lists of acceptable etudes for auditions and competitions. It is no exaggeration to say that as a set, these etudes constitute the most important work for solo piano in the latter half of the twentieth century.

Purpose

At present, most articles and dissertations written on these pieces have justifiably concentrated on rhythm, since this is the most salient aspect of all Ligeti’s etudes and a common theme of many of the influences from which he claims to have drawn inspiration (Thelonius Monk, Bill Evans, Conlon Nancarrow, African Pygmy drumming, Indonesian gamelan, etc.). Polyrhythm is a unifying, distinguishing, and prodigious element of the etudes, but it is not the only one. Ligeti’s harmonic language is also worthy of careful analysis, and in-depth study reveals a nuanced treatment of consonance and dissonance. Another important theme is a contrapuntal approach. It is the author’s opinion that these latter two elements have not been sufficiently explored in the literature to date. My first purpose is not only to explore these elements within each of the first six etudes, but also to demonstrate that they are in fact overarching themes throughout the first book which manifest in widely differing guises.
My second purpose is to share performance-related insights that to date have not been fully articulated to a wider audience in a formalized study. I will propose solutions to aspects of the score that are either ambiguous or misleading, and I will suggest alternative solutions to certain technical demands.

**Survey of Literature**

Most of the current published literature examining Ligeti’s *Études* is of an introductory nature, or else focus primarily on polyrhythm. Of a more general nature, Griffiths (1997), Steinitz (2003), Lobanova (2002) and Searby (2010) give excellent biographies which detail Ligeti’s compositional evolution. Ligeti’s interviews (1983) and articles in *Die Reihe* (1958) give fascinating insights into the mind of the composer, which can be useful circumstantial evidence in determining whether certain harmonic and contrapuntal patterns are intended or merely coincidental.

There are four major published sources regarding the topic of Ligeti’s harmony in the first book of etudes. Cuciurean (2000) and Drott (2003) each address the harmony of *Cordes à vide* and *Fanfares* in various ways, including pitch class set analysis, neo-Riemannian analysis, and exploration of harmonic syntax. Callender (2007) gives an astute neo-Riemannian analysis of *Arc-en-ciel*. Shaffer’s (2011) dissertation is of particular note, providing the most comprehensive analysis of *Fanfares* publicly available to date. He also includes a fascinating statistical comparison of Ligeti’s harmonic structures with Bach chorales and popular rock music.

Regarding the first book of etudes, counterpoint has been mentioned in publicly available scholarly sources for all except *Cordes à vide* and *Fanfares*. Any general description of the first
and last etudes must address counterpoint by virtue of the fact that it is such an integral aspect of each piece. Steinitz (2003) gives a pithy description of Désordre that also presents a lucid chart of phrase structure in the etude, and Haapamäki’s (2012) dissertation presents a masterful contrapuntal analysis. Kinzler’s analysis (1991) also deserves special note for its detailed and comprehensive nature. Callender reveals the presence of multiple hidden lamento descents in inner voices in Arc-en-ciel. Halsey’s (2012) analysis of Touches bloquées using pulse streams and Tsong’s (2001) assertion that there are only three clearly defined layers, differentiated by articulation (legato, staccato, and held), address the topic of counterpoint but do not seem to fully acknowledge the aural complexity of Touches bloquées. Finally, Townsend’s thesis (1997) is by far the most intricate contrapuntal and reductive analysis of Automne à Varsovie yet published. There is no work detailing the common theme of counterpoint among the first six etudes.

The most detailed performance comments yet published have been made by Urankers (1998), Liang (2011), and Pace (2012). Urankers gives detailed suggestions for Désordre, Liang addresses the difficulties of Fanfares and Touches bloquées, and Pace gives brief but helpful comments for Désordre, Fanfares, and Arc-en-ciel. My treatise will give brief comments for all six etudes, not in an attempt to give comprehensive instruction, but to provide helpful performance suggestions not already offered in published form.
CHAPTER 1

DÉSORDRE

General Characteristics

Like most of Ligeti’s etudes, Désordre (“Disorder”) features a steady stream of eighth notes, and like several later etudes, the left and right hands play complementary pitch class sets, in this case with the right hand playing only white notes while the left hand plays only black. Furthermore, this first etude, like many Ligeti etudes (e.g. Cordes à vide, Fém, Vertige), develops organically from repetitive parameters. However, in no other etude are the parameters as rigid. Much like a total serialistic or minimalistic composition, much of Désordre’s musical identity has been predetermined by restrictive algorithms. Each hand obsessively repeats a melodic phrase with a clearly defined, predetermined, and consistent melodic contour (color) and rhythmic pattern (talea).²

With regard to color, each hand plays a melody consisting of three to four subphrases. The right-hand phrase is twenty-six melodic notes long, the left hand thirty-three. Because each cycle of the melody is transposed diatonically/modally, it is appropriate to define the template by contour, rather than by pitch class or intervals. Below is a representation of the color in terms of diatonic intervals. For example, “+3” indicates three steps higher than the previous note (whether three white notes in the right hand or three black notes in the left hand) while “-3” indicates three steps lower than the previous note. The last number, in parentheses, is the beginning of the subsequent transposed phrase.

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¹ See, for example, Galamb Borong, En Suspens, Entrelacs, and mm. 67-81 of Der Zauberlehrling.
² The terms “color” and “talea” normally refer to the repetitive sequence of pitches and rhythm, respectively, of the tenor voice of an isorhythmic motet. While the “color” and “talea” of Désordre always coincide with each other and thus do not behave as they would in a typical isorhythmic motet, the terminology is convenient for the short-hand reference to specific elements in this etude and their repetitive and consistent nature.
As can be seen from this template, all subphrases except the last in the left hand start with a repeated note (i.e. the second interval is zero). Leaps tend to be followed by movement in the opposite direction (i.e. intervals larger than one are followed by a change in sign), and the largest leaps, indicated by numbers of higher absolute value, tend to occur toward the end of the phrase, reflecting a wedge-like structure, in which the range of the melody is increased with each subphrase. With each repetition, the melody appears one step higher in the right hand and two steps lower in the left hand. Thus, the two hands move further apart until they reach the limits of the keyboard. After this climax, both melodies suddenly reappear, mid-phrase, in the upper treble register.

Each note of both the left- and right-hand colors has a rhythmic identity (short, medium, or long, designated by S, M, and L) that is retained throughout the piece (see Figure 1.1). Here is a representation of the talea, again divided according to subphrase:

RH: SMSM + MSL / SMSM + MSL / SMSM + MSSM + MSSM
LH: SMSM + MSL / SMSM + MSL / SMSM + MSSM + MSSM / SMSM + MSL

Notice that the talea consists of only three rhythmic motives, including a starting motive (SMSM), cadential motive (MSL), and extending motive (MSSM). At the beginning, the lengths of the short, medium, and long values are three, five, and eight eighth notes respectively. However, they are contracted gradually in right hand first, then in both hands, and then
dramatically at bar 55, until both the short (S) and medium (M) notes are one eighth note long and the long (L) notes are only two eighth notes long at the climax of the piece (mm. 91-97), coinciding with the registral and dynamic extremes of the piece. The talea lengths are then reset, with negligible occasional lengthening in the left hand toward the end of the piece. The effect at bars 55 and 97 is similar to the shifting of gears.

There is one more parameter that deserves note. The accompanying eighth notes in both hands, with few exceptions, ascend by step (whether via white or black notes) and descend by leap (see Figure 1.2). This adds to the excitement of the etude: the whirring motoric accompaniment seems to fight against musical gravity.

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3 For this analysis, bar numbers will refer exclusively to the left hand. Because Ligeti did not indicate measure numbers, authors have used various approaches for labeling events in this etude. For example, Bouliane (2006) counts the bars of the right hand exclusively, Theisen (2003) counts all eighth notes, and Kinzler (1991), referring to the first edition, uses a system that refers to both hands. The latter two approaches seem unwieldy for the reader. Furthermore, the left hand seems to suggest structural prominence and stability for several reasons: (1) the left-hand bars are never interrupted at the end of a line in the second edition (and less often than the right in the facsimile edition), whereas those of the right hand are frequently interrupted at the end of a line in both scores; (2) the length of bars in the left hand is more consistent than in the right—the right hand bars almost immediately start contracting in the first section; and (3) harmony, which is the focus of this analysis, has traditionally been determined by the bass rather than the treble.

4 Note that barring can obscure this fact in places. Sometimes the accompanying eighth notes are grouped with the lower note of the melodic octaves, and other times with the upper note. This appears to be arbitrary, and in any case the ear favors the upper note of the octave as a general rule, making the first interval of the accompaniment an aural descent.

5 Similar use of the effect of constant ascension also appears in Fanfares, L’escalier du diable, and Columna infinita.
Figure 1.1: Talea lengths in *Désordre*, mm. 1-8

Figure 1.2: Contour of accompanimental voices in *Désordre*, mm. 1-8
Harmony

Dyads

Given the aforementioned parameters of pitch class set, color, and accompanimental contour, it would be natural to assume that harmony is a less significant element. In order to gain perspective, one must consider what the harmony would sound like in this etude were harmony to have been of negligible importance during its composition. In the case of Désordre, the pitch class set parameters actually imply certain predispositions toward harmony. That is, the fact that the left hand plays exclusively black notes while the right hand plays white predetermines the likelihood that certain intervals will appear in the absence of other factors.

There are thirty-five unique combinations of one white note and one black note, but only eleven simple intervals, making certain intervals more likely to occur than others. For example, there are five ways to construct a tritone, (C♯ and G, D♯ and A, etc.) but only one way to construct a perfect fourth (F♯, B). Thus a random assortment of these “hybrid” dyads will paradoxically have a predictable ratio of intervallic probability. Figure 1.3 details all possible simple intervals constructed from one black note and one white note. The chart assumes that the black note is in the bass, since this is true without exception in Désordre. Figure 1.4 displays all these possibilities collated according to interval. Note that minor seconds, tritones, and major sevenths would occur most often in a random assortment of hybrid dyads. The chance of each of these intervals occurring is 5:35, or 1:7, while perfect fourths and fifths each have only a 1:35 chance of occurring.
The frequency of intervals in the first section of *Désordre*, mm. 1-54 (Figure 1.5) reveals that Ligeti does not submit entirely to this pattern of intervallic probability. Dyads are depicted as dark blue, and the occasional trichord is treated as two intervals, depicted as light blue. Comparing this with Figure 1.4, we notice that all intervals except the minor seconds and major sevenths closely correspond to the ratios of a random assortment of hybrid dyads. One can therefore conclude that Ligeti intentionally avoids minor seconds and major sevenths in the accompanying voices in this first section of *Désordre*.
Figure 1.5: Dyads in mm. 1-54 of Désordre

In the second section (mm. 55-97), the ratio of intervals conforms more exactly to the pattern of random mixed dyads (see Figure 1.6). The reason for this is likely twofold. Due to the contraction of talea in this middle section, nearly every eighth note in this section contains a melody note (indicated by an accent) in at least one hand. Because these notes are predetermined, the possibility for harmonic choice is significantly restricted. The exigencies of playability and comfort may factor prominently here also, further curtailing harmonic choice and randomizing the intervals in this section. This new level of dissonance contributes to the mounting tension of accelerated motion, increasing sound, and widening range. The intentional releasing of seconds and sevenths into the harmonic palette therefore serves a higher artistic purpose.
The final section adds chords in both hands. Because the talea is reset to longer rhythmic units, once again Ligeti has greater compositional liberty to choose the accompanying figures. Figure 1.7 shows all dyads, i.e. all verticalities except melodic chords, in this third and final section. The layout is reminiscent of the first section, but the contrast with the random assortment (Figure 1.4) is even more striking. Ligeti’s strong avoidance of all seconds and sevenths manifests most overtly in this final section.

**Figure 1.6: Dyads in mm. 55-96 of Désordre**

**Figure 1.7: Dyads in mm. 97-144 of Désordre**
Notice the overall pattern of dyads in this etude (Figure 1.8). As a general rule, Ligeti avoids seconds and sevenths, consequently favoring tritones, sixths, and thirds. This tempering of dissonance is further demonstrated upon closer investigation of the chordal spacing in the third and final section.

![Figure 1.8: Total dyads in Désordre](image)

**Chordal Spacing**

In the third section of *Désordre*, the melodic notes are harmonized with gradually thicker chords until, by measure 117, the right-hand melody is consistently harmonized in tetrachords while the left-hand melody is in trichords. Ligeti uses all six possible unique spacings of black-note trichords within an octave in the left hand, and eighteen of the twenty unique spacings for white-note tetrachords within an octave in the right. This prolific abundance of diverse chordal arrangements shows that variety was a desired goal in the choice of chords for Ligeti. However, this diversity is not random, since the frequency of certain configurations reveals a preference for...
tertian harmony. Nearly every chord can be analyzed as a major or minor triad, seventh chord, or added second chord. Furthermore, the spacings that are rare or absent are the most compact, i.e. the most likely to sound like clusters instead of easily-recognizable chords.

Consider the pentatonic trichords the left hand plays in measures 117-144 (Figure 1.9). Each spacing is represented by a series of “1”s and “0”s, where a “1” represents a depressed black key, while a “0” represents an unplayed black key in the middle of the chord. Of the six possible spacings, spacing III (three black notes adjacent to one another) is the least popular, occurring only three of fifty-three times. Even when it does occur, it is expressed as [025] (which can imply a minor seventh chord) rather than [024] (a cluster of whole tones). In fact, most of the left-hand trichords are easily analyzed as triads or incomplete seventh chords.

![Pentatonic trichords in Désordre, mm. 114-144](image)

**Figure 1.9: Pentatonic trichords in *Désordre*, mm. 114-144**

Moving on to the right-hand tetrachords (Figure 1.10), one notices that certain spacings are dramatically favored over others. Again, the spacings are represented by “1”s and “0”s, where a “0” represents an unplayed white key in the middle of the chord. As expected, some of the most compact and dissonant spacings (e.g. A, C, J, and N) are rare or absent. A clear pattern

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6 The numbers in parentheses provide a visual representation of the chordal configurations, and thus make few harmonic implications. For example, Spacing I, also named 1011, refers to chords in which there is one black note between the lowest and middle note. This can take the form of a quartal/added second chord (C#, F#, G#) as in m. 119, a major chord (F#, A#, C#) as in m. 123, or a minor chord (A#, D#, F#) as in m. 114.
becomes apparent when we consider the families of tetrachords that are inversions of one another (Figure 1.11). Family F1 is essentially a cluster chord and its inversions; family F2 can be expressed as a triad with an added fourth and its inversions; family F3 is slightly ambiguous, but most often appears as a seventh chord with an added fourth, and family F4 is essentially a triad with an added second and its inversions, and family F5 is a seventh chord and its inversions. As can be seen in Figure 1.11, the most familiar and consonant\(^7\) chords (Families F4 and F5) appear most frequently, while the most dissonant (Families F1 and F2) appear least often.

\[\text{Figure 1.10: Diatonic tetrachords in Désordre, mm. 116-144}\]

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\(^7\) “Consonance” and “dissonance” are loosely defined in this treatise in the following terms: consonant chords are formed primarily by thirds, sixths, and fifths, whereas dissonant chords are formed primarily by seconds, sevenths, tritones, and fourths. I am thus drawing upon the classic understanding of consonance and dissonance as accepted in Western art music from roughly the fifteenth through nineteenth centuries.
In conclusion, all of the harmonic choices in *Désordre* point to purposeful design, and specifically, the preference for consonance in the outer sections as a foil to the accumulation of dissonance in the middle section, which leads effectively to a dynamic climax in measure 97. The spacing of melodic chords in the third and final section help accentuate the melody in both hands in the upper register of the piano, where the instrument has less natural resonance. The means by which Ligeti chooses to harmonize the melodies shows that he walks a fine line between tonal reference and percussive cacophony. His solution adds volume and resonance without obscuring the melodic contour.

**Counterpoint**

The counterpoint in this first etude is fairly straightforward. *Désordre* consists of four layers: the upper melody, lower melody, and scalar background figures in each hand. For each
layer, stepwise motion is the norm rather than the exception, and leaps are usually balanced by a change in direction. The scalar background never comes to the forefront except in the final measure, where both hands run off the top of the keyboard in a dramatic crescendo (Example 1.1).

Example 1.1: *Désordre*, mm. 144-145

**Performance Guidelines**

More than any other piece in Book I, this etude requires that one practice hands separately in the learning stages. This step is essential for understanding and comfort. The left hand, playing exclusively on the thinner black notes, will require considerably more practice. Having changed fingerings several times, I suggest a fingering that most gives the illusion of “play[ing] the melody legato in both hands” (Ligeti 1986, 2nd ed, 6). This would require crossing the thumb under in the right hand (or crossing over in the left hand) even when not necessary, and holding the melodic notes as long as possible. An exception is the climax in mm. 91-96, where I suggest that in order to achieve a triple-*forte* in single notes in the left hand, one use the hand formation in Illustration 1.1 for the accents in bars 91-94. This allows the second finger to play the unaccented notes. For bars 95 and 96, I use a closed fist for more volume (Illustration 1.2). With practice this unusual “fingering” can be quick, accurate, and powerful enough to be used effectively in performance.
Each melody should be played expressively, independently, and vigorously. There should be a very clear dynamic difference between the melody (marked *forte*) and scalar eighth notes (marked *piano*). In order to leave room to grow, the background layer should sound like murmuring in the beginning, energetic but contained. Even when the melody is harmonized as trichords and tetrachords in the third and final section, I suggest voicing the upper note in both hands as much as possible to preserve the primacy of the melodic layer. The melodic contour can be further defined by allowing the dynamics of each hand to follow the rise and fall of each
Due to the progressive asynchronization of the hands, these swells most often occur in a staggered fashion. For this reason, practicing the melodies (whether in octaves or chords) together in time without scalar accompaniment, though tedious, is essential for complete mastery. Once this exercise is comfortable, one can easily reintroduce the accompanying eighth notes without interfering with the rhythmic and dynamic independence of the two melodic layers.

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CHAPTER 2

CORDES A VIDE

General Characteristics

*Cordes à vide* is characterized by a nuanced rhythmic crescendo from beginning to end. This terraced or metered acceleration starts with eighth notes and transitions through eighth-note triplets to sixteenth notes, to sixteenth triplets, and finally to thirty-second notes.

As one would assume from the title (“Open Strings”), Ligeti’s second etude is based on the perfect fifth, the interval by which the strings of the violin, viola, and cello are tuned. The delicate shades of piano required for much of the piece, the extended harmonies, and generous use of pedal all recall the music of Debussy. The etude starts with ten measures of slow eighth notes in both hands, after which the etude becomes increasingly rhythmically complex, featuring fragmented hemiolas and a dramatically thickening texture that seems to instantly evaporate upon reaching the limits of the keyboard.

There are two climaxes at measures 26 and 29 (Examples 2.1, 2.2). The first is louder and has a longer preparation. The music seems to disappear over the top of the keyboard and reappear in the bass, as if the keyboard were a continuum. The second is aurally more fulfilling to the listener due to the fuller texture (it is supported by the bass), faster motion (this is the point at which thirty-second notes are introduced), and longer-lasting dynamic crest (the music is allowed to blossom for a full three eighth notes before a sudden drop in volume). It seems that this is the true climax of the piece, for all the music before measure 29 gradually increases in tension while one experiences an almost palpable release of tension from measure 29 to the end.
Example 2.1: *Cordes à vide*, m. 26

Example 2.2: *Cordes à vide*, m. 29

**Harmony**

All the notes of the second etude are connected to one another by fifth, either horizontally or vertically. Variety and stepwise melody are accomplished through chromatic shifting, usually one half-step up or down at a time. In this way the *lamento* motive⁹ is, in some sense, at work as a background element. This becomes clearest when the rhythm of chromatic shifting increases dramatically. Comparison between bar 28 of *Cordes à vide* and bars 7-8 of *Arc-en-ciel* reveal striking similarities and telling differences (see Examples 2.1 and 2.2). While the harmonic

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⁹ The *lamento* motive is a modified chromatic descent, usually in three parts, which appears in all of Ligeti’s multi-movement works after 1982 (Bauer 2011, 3). It is the fugue subject of *Automne à Varsovie*.
language is much the same (both feature triads, seventh chords, and ninth chords), the root
tmotion is less predictable in *Cordes à vide*. This is because, in general, the chromatic shifting is
itself unpredictable, metrically and directionally. Additionally, the chromatic shifts ascend more
often than descend (most clearly seen in the opening measures of the left hand), giving this etude
a very different harmonic syntax from that of *Arc-en-ciel*.

Example 2.3: *Cordes à vide*, m. 28

Example 2.4: *Arc-en-ciel*, mm. 7-8

Although all harmonies in *Cordes à vide* are constructed by the intersection of perfect
fifths, the harmonic palette is not quintal in nature. If two fifths are played together, there are six
unique tetrachord possibilities. All of these harmonic options occur at least once in *Cordes à
vide*, if only fleetingly. However, the fifths are separated by thirds and sixths far more often than
by other intervals, yielding a majority of major and minor seventh harmonies. One way of demonstrating this objectively is to examine the frequency of dyads in the first eleven measures (see Figure 2.1). Clearly thirds and sixths predominate, with tritones, seconds, and sevenths comparably rare.

![Figure 2.1: Dyads in Cordes à vide, mm. 1-11](image)

There is a certain amount of harmonic ambiguity inherent in this etude, not only through the use of hemiola and polyrhythms, but also simply due to the likelihood that intersecting fifths will create recognizable harmonies. This is borne out by Eric Drott’s analysis (2003, 299), which suggests imbricated (or overlapping) chords to account for all the possible chordal possibilities for the first eleven measures. I believe the interpretation of harmonic motion could be simplified to one chord per quarter note for several reasons: (1) most phrases, along with the vast majority of chromatic shifts in the first eleven bars, coincide with quarter pulses, (2) chords gained from analysis “on the beat,” as opposed to “off the beat,” are consistently simpler and

---

10 Because of the polyphonic nature of the piece, chords are often implied rather than clearly delineated. Beyond the first page, the two hands never play exactly the same rhythm.
more easily recognizable, (3) harmonies “on the beat” are more consistent with the title, composed entirely of perfect fifths. This does not negate the very likely probability that the listener will hear some of these imbricated chords, but the subtle emphasis on quarter pulses via melodic contour in much of this first section seems to support the idea that this interpretation is more reflective of Ligeti’s intention and the listener’s experience.

**Counterpoint**

The occasional double-stemmed note and measure 28 notwithstanding, there only two clearly defined and consistent voices throughout *Cordes à vide*: the left hand and the right hand. The double-stemmed notes are so registrally disjunct and temporally protracted that they fail to give the impression of a coherent melody.\(^{11}\) The chromatic shifting, however, often implies compound melody. In fact, measures 18-25 establish a short three-note motive based on this very principle (Ex. 2.3). Ligeti even places accents on the upper notes of several occurrences of this motive, implying that these are to be heard as short melodic fragments. Measure 28 can therefore be understood as another way of notating the same aural effect. This principle can be applied retrospectively to the entire etude, providing many opportunities to bring out chromatic melodic fragments from the outset. This structural voice-leading does not imply another voice, in the same way that the subject of a Bach two-part invention with compound melody does not have more than two voices. However, this provides a method by which the performer can decide which voice to emphasize, just as voices in counterpoint alternate between thematic presentation and accompanimental figures.

\(^{11}\) For more on the psychological influences of melodic perception, see Deutsch (2013, 183-248) and Huron (2001).
Example 2.5: *Cordes à vide*, mm. 23-24

**Performance Guidelines**

This etude requires sensitive attention to pedal and a nuanced dynamic palette. One of the interpretive challenges of this piece is the question of how to reconcile the accents of the first two pages with dynamic swells, which often do not coincide. If the accents are too prominent, the effect of the crescendos and diminuendos is compromised, the opportunities for subtle voicing are severely diminished, and the ability to convey a “*molto tenero*” and “*dolce [espressivo]*” atmosphere (Ligeti 1986, 2nd ed., 14) is put into question. The accents, at least for the first thirteen bars, always coincide with the start of a phrase, indicating that their purpose is not to provide melody but simply to indicate the start of a new phrase. I suggest that the crescendo and diminuendo indications take precedence over the accents. In order to emphasize the notes in question, the performer can employ agogic accents (emphasis via subtle temporal elongation), “reverse accents” (emphasis via sudden drop of dynamic level, often used with an agogic accent), or even skillful changes in pedal, in addition to subtle dynamic accents. This renders it possible to convey the beginning of a phrase despite a node in the dynamic undulations. It is also helpful in encouraging meaningful *rubato*. 
Strings of fifths are difficult to connect melodically in a convincing way for the performer; furthermore, the mental acceptance of expressive melody replete with such stark leaps requires significant suspension of engrained cultural norms of melodic contour. Therefore, it would behoove the performer to emphasize the short chromatic melodies and to approach the strings of fifths as arpeggiations, still expressive but subsidiary to the chromatic motion of the etude. The two contrasting elements of quintal and chromatic motion are thus brought into relief by confining each to a specific purpose.
CHAPTER 3
TOUCHES BLOQUÉES

General Characteristics

In Touches bloquées ("Blocked Keys"), Ligeti returned to a technique he had used earlier in Selbstportrait, the second movement of his Three Pieces for Two Pianos (1976). In both pieces, one hand depresses certain notes while the other hand plays a rapid constant stream of eighth notes intersecting these blocked keys. The stuttering technique results in quick, often asymmetric rhythms that would be difficult to reproduce otherwise. The similarities end there, though. The earlier work features a minimalistic phase-shifting texture due to the presence of two performers repeating these gapped ostinatos. In the case of Touches bloquées, there is only one performer, so polyphony is more difficult when one hand is occupied with the purpose of keeping notes from sounding. However, instead of resorting to monody, Ligeti increases the physical demands of each hand: the left hand frequently plays notes while depressing others, and the right hand plays not only streams of single notes, but also occasional chords. This increases the melodic and textural possibilities of this blocked key technique.

This etude is essentially tripartite in form, with the central episode occurring in measures 72-91 (see Table 3.1). The first section starts with the left hand blocking keys for the right hand, which plays at a piano dynamic level in the center of the keyboard. Subsequently the hands reverse roles three times as the range becomes lower. The dynamic level also increases until bar 52 (A-4 in Table 3.1), which starts with a subito piano. This functions as a transition, accelerating the descent to the bottom of the keyboard, whereupon the music suddenly reappears at the top, as if the keyboard were a continuous loop. This central section consists of short melodic fragments, increasingly doubled in octaves, with added seconds and sevenths that sound
as if the performer has missed his target. Ligeti likens this passage to a clown’s performance of a simple task, pretending to be incompetent for comic effect (Steinitz 2003, 287). The last section returns to the opening blocked key technique with increasing silences between notes.

**Table 3.1: Form of Touches bloquées**

<table>
<thead>
<tr>
<th>Section</th>
<th>Measures</th>
<th>Hand blocking keys</th>
<th>Dynamics</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>1-23</td>
<td>L</td>
<td>p</td>
<td></td>
</tr>
<tr>
<td>A-2</td>
<td>24-40</td>
<td>R</td>
<td>f</td>
<td>Slightly lower, more dyads</td>
</tr>
<tr>
<td>A-3</td>
<td>41-51</td>
<td>L</td>
<td>ff</td>
<td>Added chords</td>
</tr>
<tr>
<td>A-4 (transition)</td>
<td>52-71</td>
<td>R/L</td>
<td>p</td>
<td>Accelerated descent</td>
</tr>
<tr>
<td>B</td>
<td>72-91</td>
<td>(none)</td>
<td>ppp-fff</td>
<td>“Clumsy” octaves</td>
</tr>
<tr>
<td>A'</td>
<td>92-115</td>
<td>R</td>
<td>p-ff-pppp</td>
<td>Wider gaps</td>
</tr>
</tbody>
</table>

**Harmony**

Each section of Touches bloquées has its own harmonic signature. In A-1 (mm. 1-23), intervals that can be derived from a whole-tone scale are most common, specifically major seconds, major thirds, tritones, and minor sevenths (Figure 3.1). They also happen to be the melodic intervals that occur most often in the opening section due to the intersection of the chromatic scale with blocked keys. In section A-2, we find a wider selection of dyads that is suspiciously devoid of thirds and sixths (Figure 3.2). The next section, A-3, fills this vacuum with a clear penchant for thirds and sixths (Figure 3.3). In section A-3, Ligeti also starts adding trichords, which are all clearly triadic in nature with the exception of one that is quartal. Major, minor, seventh, and added second chords all appear in this short section, typical of the harmonic vocabulary of Ligeti’s late works (Figure 3.4).
Figure 3.1: Dyads in mm. 1-23 (section A-1) of Touches bloquées

Figure 3.2: Dyads in mm. 24-40 (section A-2) of Touches bloquées

Figure 3.3: Dyads in mm. 41-50 (section A-3) of Touches bloquées
Although the occasional dyad appears in A-4 and B is littered with minor seconds, harmony takes a back seat to the linear aspect of these sections. The final section, A', is the most dissonant. The dyads in this section are mostly tritones, seconds, and sevenths (Figure 3.5).

There are also many compact chords that do not readily lend themselves to traditional analysis. Figure 3.6 lists all the chords in section A' and compares their frequency. It is significant to note that Ligeti chooses the more dissonant trichords in this section, namely [012], [013], [014], [015], [016], [024], and [026], and avoids those trichords which would make reference to tertian harmony. These highly contrasting patterns of harmony between sections of Touches bloquées serve to highlight a musical narrative: as the etude starts, the performer begins with a scalar/modal melodic and harmonic vocabulary (section A-1) which gradually becomes more chromatic (A-2) and thicker (A-3). The presence of random major and minor triads stripped of any functional meaning and rhythmic regularity conveys a sense of irony and playfulness. The last section’s harsh dissonance seems to emphasize the increasing “incompetence” of the performer, who is working harder for what seem to be consistently wrong notes!
Counterpoint

There are three voices at the beginning of this etude (Figure 3.7). Besides the stuttering chromatic scale, there is a lower voice and upper voice, both of which move much more slowly and within a much more confined range than the stuttering eighth-note pattern. In fact, the lower
voice functions almost as if it were a quirky staccato pedal point, for its range is so narrow as to be almost static. The upper voice often echoes the stuttering voice’s upper notes, or even its own notes (Figures 3.8 and 3.9). The separation between voices can be nearly obscured in places by the intersecting ranges and hand distribution. Furthermore, *Touches bloquées* does not exhibit strict counterpoint, for occasionally a voice will briefly split into two or more notes. However, this contrapuntal reading is corroborated by the use of dynamic markings to differentiate the voices (Figure 3.10).

![Figure 3.7: Voices in Touches bloquées, mm. 1-5](image)

![Figure 3.8: V3 echoes V1 in Touches bloquées, mm. 6-9](image)

![Figure 3.9: V3 echoes itself in Touches bloquées, mm. 23-25](image)
Performance Guidelines

Careful attention to dynamics in *Touches bloquées* makes clear both the sectional and contrapuntal nature of this etude. The first four sections (A-1 through A-4) differentiate themselves clearly through dynamics, even more than through range or texture. The terraced dynamic arc of the first four sections should therefore be carefully observed, if not exaggerated, in order to preserve each section’s sound world as distinct. Often, the stuttering voice is indicated at a slightly louder dynamic level than the other two voices. This can be applied throughout the piece: by allowing the other voices to be very slightly in the background, the ear is drawn to the gradual rising and falling of the ever-changing gapped scale.

Within these constraints lies the possibility of even greater dynamic nuance. The stuttering line may also slightly rise and fall in intensity, in accordance with its contour. Also, there are a number of echoes throughout the piece, usually no more than two notes long, where the echo is either within the bar or immediately after. I would suggest playing the echo slightly softer.

Finally, although Ligeti is careful to provide fingering for the blocked notes, most of which are efficient and well thought out, I find it much more comfortable to play the last blocked
note, the G3 in bar 105, with the third finger (Illustration 3.1) instead of the first (Illustration 3.2). This makes it easier to accommodate the left-hand stuttering voice.

Illustration 3.1: Right-hand formation in *Touches bloquées*, m. 105ff, suggested by author.

Illustration 3.2: Right-hand formation in *Touches bloquées*, m. 105ff, suggested by score.
CHAPTER 4

FANFARES

General Characteristics

In Fanfares ("Fanfares"), a seven-note ascending scalar ostinato in aksak\textsuperscript{12} rhythm is repeated 208 times from beginning to end, accompanying short bebop-like phrases with which it is generally consonant. Like many Ligeti etudes, Fanfares is sectional, yet displays elements of continuous development. In addition, the first major section (mm. 1-86) is characterized by the contrast of two themes and two voices. In this way it bears a likeness to Classical sonata-allegro form, in which dichotomous themes are juxtaposed in the exposition, creating thematic tension that is further explored in the development and resolved in the recapitulation.

The first theme ("Theme A") appears in mm. 1-45 and mm. 63-86 (Example 4.1). Theme A coincides with the accents of the ostinato and is usually chordal. It has a melodic, expressive character (even if somewhat ironic) and has phrases that extend across two, three, or four bars. These combine to make "sentences"\textsuperscript{13} which range from seven to twelve bars long. Both the phrases and sentences tend to begin with a tension-laden ascent and end with a descent that implies resolution. Dynamics reinforce this notion, with swells emphasizing the highest note of the phrase.

\textsuperscript{12}Aksak (lit. “limping”) is a Turkish term that refers to additive asymmetric rhythms often found in Eastern European folk music, such as the 2+2+2+3 and 2+2+3 meters in Bartók’s \textit{Six Dances in Bulgarian Rhythm}, or the 3+2+3 rhythm of the ostinato in \textit{Fanfares}. These additive rhythms could range from two to seven or more units long (Fracile, 2003)

\textsuperscript{13}In this etude I make a somewhat subjective distinction between “phrases,” “sentences,” and “subphrases.” Phrases are usually short, from one to four bars in length, ending with a longer note length (“rhythmic period”) and/or indicated with a phrase mark. Sentences are comprised of four or more phrases, and their beginnings and endings usually correspond with a change of register, texture, dynamic level, or theme. Subphrases are short fragments, usually indicated with a phrase mark. Two to four subphrases combine to make a phrase, e.g. mm. 51-53, 106-108, etc.
Example 4.1: Fanfares, mm. 1-4, Theme A

The second theme (“Theme B”) appears in mm. 46-62 (Example 4.2). It is considerably faster than Theme A, consisting of mostly eighth notes in varying *aksak* rhythms. Though the first note of each phrase always coincides with an ostinato accent, Theme B’s accents in general do not coincide with the ostinato. The melodic contour is disjunct and apparently erratic, and dyads are rare. Phrases and sentences are of comparable length, but the fragmentation into subphrases (indicated by slurs) nearly obfuscates the longer line. Theme B also loosely follows the rules of musical gravity, but the typical range is heightened. This combines with the faster rhythm to make Theme B’s character less singing and more digital. This does not mean that it is not expressive; in fact, the only *molto espressivo* indication in the piece occurs in mm. 59-60, suggesting that Theme B is not cold and mechanical, but rather ebullient and playful.

Example 4.2: Fanfares, mm. 45-48, Theme B

Within each theme in the first section, the left and right hands alternate in articulating complete “sentences.” This stark contrast of register implies that there are two voices in conversation with each other, a distinction that is further borne out in the harmony, as will be discussed in the following section.
The second major section, starting in bar 88, is akin to a development section: phrases become increasingly fragmented yet sentences become longer. Elements of both Theme A and B appear amalgamated in a new language that almost deserves its own designation. In fact, the first appearance of this new language is sufficiently differentiated from previous material as to warrant a new title or label: “Theme C,” as shown in Example 4.3 at measure 88.

Example 4.3: *Fanfares*, mm. 85-92, Theme C

Theme C appears in its purest form (unadulterated with extra dissonance and occasional monads) in measures 88-95. It consists completely of dyads, with phrases of no more than two measures. The first three notes of each phrase are essentially horn calls in eighth notes, making Theme C sound, of all motives so far, most like a fanfare in its imitation of the natural harmonics of a brass instrument. This horn-call motive is followed by a suffix of two to three longer dyads. These dyads are quarters or dotted quarters, much like Theme A, except without being consistently synchronized with the ostinato accents. This section thus combines the activity and rhythmic independence of Theme B with the harmonic richness and lyrical potential of Theme A. The considerably abbreviated phrase lengths, however, are a new feature, signaling greater restlessness and breathless excitement.
The rest of the section, until measure 171, could be seen as variations of Theme C. Ligeti replaces the horn call with single eighths reminiscent of Theme B (mm. 96-104), extends the suffix (mm. 104-108), abbreviates the motive further, and adds an echo (mm. 109-114). What follows is an extended cross-rhythm juxtaposing the ostinato’s 8/8 measures (3+2+3) against 7/8 phrases in the melody (3+2+2), as shown in Example 4.4. Two full cycles are completed (14 measures of ostinato and 16 melodic phrases divided between the right and left hands) before the melody descends into the bass in fragmented rhythm as if losing steam and trailing off the keyboard.

**Example 4.4: Fanfares, mm. 113-120**

From measure 110 on, phrases are rarely uniform in texture. Single notes and the occasional triad are interspersed within the melody’s primarily dyadic texture. The remainder of this second section (mm. 139-171) further explores dynamic contrast, almost schizophrenic in its sudden swings to extreme intensities. Phrases are further curtailed to two bars or less, contributing to the frantic effect. At this point the music is most frenzied.

At measure 171, a sudden change of dynamics (from *pppp* to *sub. ff*) coincides with the return of Theme A (Example 4.5). Although the note lengths range from two to three eighths as
at the beginning, they do not coincide with the ostinato accents. The last phrase (mm. 188-199) is a measured *rallentando*, in which the note lengths increase incrementally from three to ten eighth notes in a descent to the lowest octave of the piano. This is the true climax of the piece, where the performer must convey a dynamic marking of *ffff* in the left hand while the ostinato remains largely aloof. The ostinato is “*completely in the background*” [emphasis in original] until the climactic moment, whereupon the left hand doubles the right to support a dramatic crescendo that suddenly disappears. Like vapors from an explosion, Theme C enters one last time *pianissimo*, full of altered and implied horn calls, an aptly ironic ending to a quirky piece. Table 4.1 summarizes the appearance of themes in this etude.

Table 4.1: Thematic outline of *Fanfares*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Measures</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Exposition”</td>
<td>A</td>
<td>1-45</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>46-62</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>63-85</td>
</tr>
<tr>
<td>“Development”</td>
<td>C</td>
<td>88-95</td>
</tr>
<tr>
<td></td>
<td>B/C</td>
<td>96-114</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>116-129</td>
</tr>
<tr>
<td></td>
<td>B/C</td>
<td>130-171</td>
</tr>
<tr>
<td>“Recapitulation”</td>
<td>A</td>
<td>171-199</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>202-212</td>
</tr>
</tbody>
</table>

Example 4.5: *Fanfares*, mm. 169-172
Harmony

In this etude, Ligeti is meticulously systematic in his expansion of harmonic options. The first sentence (mm.1-9), played by the right hand, forms exclusively major triads with the ostinato, while the second sentence (mm. 10-17), played by the left hand, forms only minor triads. For the remainder of the exposition the right hand continues to have a clear preference for major harmony, and the left minor. For example, the third sentence (mm. 18-26), played by the right hand, adds dominant seventh chords and minor seventh chords to the harmonic palette. These new chords can also be described as major triads embellished with either a major sixth or minor seventh above the root. One can also obtain the same results by embellishing a major triad with a minor third at the top or bottom. Thus it appears that Ligeti recognizes the minor seventh chord as belonging to the family of major chords phenomenologically, treating it like an added sixth chord. The fourth sentence (mm. 28-36), played by the left hand, adds half-diminished and fully-diminished chords to the minor chords. The harmony of the fifth sentence (mm. 37-45), played by the right hand, is composed of major chords, minor seventh chords, and major seventh chords.

The introduction of Theme B continues this pattern of harmonic contrast between the hands. The right hand only plays major thirds and minor sixths above the ostinato, while the left hand plays only minor thirds, tritones, and major sixths below the ostinato, with the occasional minor or diminished chord. Major thirds and their inversions are relegated to the right hand, while the left hand features minor thirds, their inversions, and harmonies derived from minor thirds. This harmonic identity continues in the next two sentences of Theme A (mm. 63-85), where the right hand plays only major-triad-derived tetrachords while the thinly-textured left hand maintains the minor-third-prevalent harmony introduced in Theme B.
The horn call of Theme C functions as a harmonically destabilizing motive, which, though major in character, results in brief dissonances when combined with the ostinato. In its unadulterated form (mm. 88-95) Theme C introduces the bare fifth, added second chord [027], and the Viennese trichord [016] as passing chords. These do not detract from the major quality of this sentence because of their rhythmically unstressed position. All dissonances occur as the second note of the horn call.

In general, the lexicon of harmony in the “development” section (mm. 88-171) expands progressively to include more and more dissonances. This is especially apparent when one considers only the dyads in this etude, i.e. the intervals generated from the ostinato and monads of the melody (see Table 4.2). After establishing the two harmonic polarities in Theme B (mm. 46-62), Ligeti introduces fourths and fifths, followed by seconds and sevenths. Just before the reappearance of Theme A, when the music is most frantic and unpredictable (mm. 155-171), the harmony supports this appearance of chaos through the inclusion of almost every interval in the gamut. Notice that at two points in the development, the harmony simplifies where the melody is more monadic, recalling Theme B (mm. 96-104 and mm. 130-136). In the first passage, the right hand plays only major harmony, while in the second passage the left hand plays only minor harmony, recalling the harmonic duality of the exposition. Ligeti gradually transitions from one sound world to the other by allowing additional intervals between these two key points in the development.
Table 4.2: Occurrence of dyads in *Fanfares*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Measures</th>
<th>Hand</th>
<th>Dyads</th>
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</thead>
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<tr>
<td>“Exposition”</td>
<td>A</td>
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</tr>
<tr>
<td></td>
<td>1-45</td>
<td>both</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>46-53</td>
<td>R</td>
<td>4 8</td>
</tr>
<tr>
<td></td>
<td>54-62</td>
<td>L</td>
<td>3 6 9</td>
</tr>
<tr>
<td>A</td>
<td>63-73</td>
<td>R</td>
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</tr>
<tr>
<td></td>
<td>75-85</td>
<td>L</td>
<td>3 6 9</td>
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<td>“Development”</td>
<td>C</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>88-95</td>
<td>L</td>
<td>4 7 8</td>
</tr>
<tr>
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<td>3 5 6 7 8</td>
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<td>145-154</td>
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<td></td>
<td>155-171</td>
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<td>2 3 4 5 6 7 8 9 10 11</td>
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<td>“Recapitulation”</td>
<td>A</td>
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<td></td>
<td>171-197</td>
<td>both</td>
<td>3 6 7 8</td>
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<tr>
<td>C</td>
<td>202-212</td>
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**Key**

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<td>11</td>
<td>major seventh</td>
</tr>
</tbody>
</table>

Ligeti’s choice of triads and tetrachords in *Fanfares* corroborates these observations in the development (see Table 4.3). Whenever Theme A or B is played by one hand only, the right hand features harmony from a family of chords and intervals associated with the major tonality (major thirds, minor sixths, major triads, major seventh chords, etc.), while the left hand features harmony from a family of chords and intervals closely associated with the minor third (minor thirds, major sixths, tritones, minor triads, diminished triads, diminished seventh chords, etc.). Theme C is harmonically destabilizing, coinciding with a freer choice of harmony and increased dissonance.
Table 4.3: Harmonic outline of Fanfares

<table>
<thead>
<tr>
<th>Theme</th>
<th>Measures</th>
<th>Hand</th>
<th>Dyads</th>
<th>Trichords</th>
<th>Seventh chords</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1-9</td>
<td>R</td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10-17</td>
<td>L</td>
<td>m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18-26</td>
<td>R</td>
<td>M</td>
<td>Mm7</td>
<td>mm7</td>
</tr>
<tr>
<td></td>
<td>28-36</td>
<td>L</td>
<td>m</td>
<td></td>
<td>dm7 dd7</td>
</tr>
<tr>
<td></td>
<td>37-45</td>
<td>R</td>
<td>M</td>
<td>MM7</td>
<td>mm7</td>
</tr>
<tr>
<td>B</td>
<td>46-53</td>
<td>R</td>
<td>4, 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>54-62</td>
<td>L</td>
<td>3, 6, 9</td>
<td>m d</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>63-73</td>
<td>R</td>
<td></td>
<td>MM7</td>
<td>Mm7 mm7</td>
</tr>
<tr>
<td></td>
<td>75-85</td>
<td>L</td>
<td>3, 6, 9</td>
<td>m d</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>88-95</td>
<td>L</td>
<td>4, 7, 8 M m [016]</td>
<td>+2</td>
<td>MM7 Mm7</td>
</tr>
<tr>
<td></td>
<td>96-104</td>
<td>R</td>
<td>4, 8</td>
<td>M</td>
<td>Mm7</td>
</tr>
<tr>
<td>C</td>
<td>104-114</td>
<td>R</td>
<td>4, 5, 6, 7, 8 M m +2</td>
<td>MM7 Mm7 mm7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>116-122</td>
<td>R</td>
<td>3, 4, 5, 6, 7, 8</td>
<td>M m +2</td>
<td>MM7 Mm7</td>
</tr>
<tr>
<td></td>
<td>123-129</td>
<td>both</td>
<td>3, 4, 6, 7, 9</td>
<td>M m d +2</td>
<td>Mm7 dm7</td>
</tr>
<tr>
<td>B</td>
<td>130-136</td>
<td>L</td>
<td>0, 3, 6, 9 m d</td>
<td>MM7 dm7</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>138-144</td>
<td>R</td>
<td>3, 5, 6, 7, 8</td>
<td>M m d</td>
<td>Mm7 mm7</td>
</tr>
<tr>
<td></td>
<td>145-154</td>
<td>both</td>
<td>0, 3, 4, 5, 7, 8</td>
<td>M m d A +2</td>
<td>MM7 Mm7 mm7</td>
</tr>
<tr>
<td></td>
<td>155-171</td>
<td>both</td>
<td>2, 3, 4, 5, 6, 7, 8, 9, 10, 11</td>
<td>M m d +2</td>
<td>Mm7 mm7 mm7 dm7</td>
</tr>
<tr>
<td>A</td>
<td>171-197</td>
<td>both</td>
<td>3, 6, 7, 8</td>
<td>M m d [016]</td>
<td>MM7 Mm7 mm7 dd7</td>
</tr>
<tr>
<td>C</td>
<td>202-212</td>
<td>both</td>
<td>2, 3, 4, 5, 6, 7, 8, 11</td>
<td>M m d A +2 [016] [014]</td>
<td>MM7 Mm7 mm7 dm7</td>
</tr>
</tbody>
</table>

Key

Dyads: 0 = unison/octave, 1 = minor second, 2 = major second, 3 = minor third, etc.

Trichords:
- M = major chord
- m = minor chord
- d = diminished chord
- A = augmented chord
- +2 = added second chord, [027]

Tetrachords: The first letter refers to the quality of the lower triad in root position, while the second letter refers to the quality of the seventh, e.g. {B, D, F, A} = dm7

- MM7 = major seventh chord
- Mm7 = dominant seventh chord
- mm7 = minor seventh chord (more correctly, added sixth chord in Ligeti’s harmonic vocabulary)
- dm7 = half-diminished seventh chord
- dd = fully diminished seventh chord

Note: Seventh chords with missing thirds or fifths are included as implied tetrachords, e.g. {C, E, B} = MM7
In conclusion, Ligeti carefully and consistently regulates his choice of harmony in *Fanfares* for musical purposes. The exposition shows a drastic difference between the left and right hands not only in register but also in harmonic language. This sets up a harmonic tension that is further explored in the development, where Ligeti expands the harmonic language to move between the harmonic duality set up in the exposition. Additional intervallic vocabulary and dissonance also serve to add to the feeling of excitement, disarray and cataclysm towards the end of the development and recapitulation. The only chords of non-triadic harmony are \([014]\) and \([016]\), the second of which appears with relative frequency in Ligeti’s late works. The last phrase contains more of these dissonances than any other phrase. This might lead an analyst to extrapolate a narrative of journey from consonance to freedom of dissonance. One might even interpret this journey as a Hegelian dialectic, whereby major and minor tendencies are combined and synthesized into a freer harmonic language. This is in accordance with Ligeti’s tendency to end pieces in a way that gives the impression of following an unstable process to an inevitable conclusion.

**Counterpoint**

In a footnote Ligeti makes reference to the “two-part motif” (*zweistimmige Motiv*) as being louder than the ostinato (1986, 2nd ed., 26). It would appear he is referring to the primarily dyadic nature of the opening melody, and one might assume that Ligeti conceived of the melody throughout as having two voices in its essence. There are a few problems with this assumption. Although Themes A and C are mostly in dyads, this is not true throughout the piece, and there is little to indicate that the lower notes of chords are any more than subsidiary harmonic support for the upper voice. Theme B may show superficial signs of having compound melody, but frequent octave displacement and a very loose definition of stepwise motion is often necessary to extricate
two voices. The harmonic parameters of the melody seem to be a stronger cause of Theme B’s disjunct character than any contrapuntal considerations. Therefore, the only concurrent, continuous, and independent lines in Fanfares are the ostinato and the melody, regardless of octave displacement or range.

These two voices stand in contradistinction to each other in several ways, including melodic contour. The melody is characterized by frequent leaps, while the ostinato is constantly ascending in stepwise motion. Dynamic contrast also serves to differentiate the two voices. The ostinato is always at least two dynamic levels softer than the melody, placing it unequivocally in the background. Finally, rhythmic independence further preserves the identity of both voices. Except for the first two appearances of Theme A, the melody rarely coincides with the ostinato’s continual 3+2+3 accents.

**Performance Guidelines**

These contrapuntal considerations have considerable ramifications for the performer. If there are only two true voices and they are meant to be independent of one another, the depiction of this independence may prove to be the greatest challenge of the conscientious performer.

One can assume that the upper notes of chords and dyads are meant to be voiced most prominently, since the dynamic indications follow the contour of the upper notes in general. Voicing the upper notes prominently allows the performer to give a more singing tone to Theme A and more easily highlight the melodic contour of each phrase.

In order to master the awkward hand positions, legato touch, and fast tempo while playing double notes, one may find it helpful to practice the melody without the ostinato while concentrating on relaxation and minimal finger movement. By keeping the fingers in contact
with the key surface as much as possible, economy of motion is optimized, allowing for a faster
tempo and greater control.

Successful preservation of rhythmic independence between the ostinato and melody is a
defining feature of the most impressive performances of this etude. It may be helpful to practice
hands together with exaggerated accents in the ostinato in order to ensure that they are “clearly
accentuated…throughout” (Ligeti, 1986, 2nd ed., 26). In this way, when the etude is up to speed,
the fingers will have learned to observe the ostinato’s accents independent of the melody’s own
accents.

Ligeti uses the tenuto marking in his etudes not necessarily to indicate that a note should
be held out for its full length, but rather, to denote a softer or subordinate accent, and it usually
appears in the context of softer dynamics. Frequently tenuto markings transition to accents in the
same voice as the overall dynamic level increases, or the reverse.¹⁴ The tenuto markings in
Fanfares are thus likely intended to be secondary accents, the primary ones being placed on the
first note of each phrase. This should give the impression that every phrase is the start of a new
phrase, in accordance with the third footnote in the score (Ligeti, 1986, 2nd ed., 26).

For reasons outlined in the previous section, I believe Theme B does not exhibit true
compound melody. Even if it did, the speed at which the theme should be played in performance
would make it extremely difficult, if not impossible, for the listener to hear this nuance.
Therefore I do not recommend overlapping in order to bring out upper or lower voices (as one
might while playing certain figures in Baroque music), but just the opposite. Although the score
indicates a legato touch, any more overlapping than necessary may sound muddy and rob a
performance of the sparkle and energy that come from virtuosic clarity.

¹⁴ See, for example, Automne à Varsovie, mm. 44-55, 62-75ff, 87-98, etc.; Galamb Borong mm. 19-29; and Vertige
mm. 132-140.
One might also be inclined to label the left hand and right hand as separate characters—especially considering their mutually exclusive harmonic identity in the exposition—with a desire to bring out this distinction in performance. However, this distinction is blurred later in the piece. Furthermore, even if one wanted to bring out the difference between these two voices, the performer would find the tools of rubato, dynamics, and touch largely out of his/her grasp due to Ligeti’s very specific indications.

Ligeti tends to use accidentals in his piano etudes in a way slightly different from classical convention. For him, as with many modern composers, the accidental applies only to the note it precedes rather than all other notes of that pitch in the same measure. With the preponderance of courtesy accidentals in *Fanfares*, it appears the same principle is at work here. Therefore, the chord of the right hand in bar 98 is likely a G♯3 rather than a G♯3 (Figure 4.1). Similarly, the fifth eighth-note in the right hand in bar 148 is more probably an A♭4 than an A♯4 (Figure 4.2). In fact, the alternative in each case yields a chord with the ostinato that is uncharacteristic of the harmonic trend within the phrase.

![Figure 4.1: Fanfares, mm. 97-99](image)

15 Examples abound of redundant accidentals within the same measure, especially in etudes that do not have a key signature, e.g. *Touches bloquées, Arc-en-ciel, Fém, L’escalier du diable*, and *Columna infinita*. The only exceptions are *Cordes à vide* and *Automne à Varsovie*, and for the latter, Ligeti finds it worthwhile to provide a footnote explaining the departure from his own convention. Although there are many courtesy accidentals *Cordes à vide*, they are absent when the same note is repeated immediately or very soon thereafter. In these cases the pitch is patently obvious to the performer due to the consistently quintal language of the etude.
Figure 4.2: Fanfares, mm. 144-148
CHAPTER 5

ARC-EN-CIEL

General Characteristics

Arc-en-ciel ("Rainbow"), the fifth etude, is the most clearly triadic piece of the set, and the one that most clearly demonstrates the influence of jazz on Ligeti’s late style. The piece has a floating quality due to the slow tempo, moderate harmonic rhythm, almost static melody, and high register. There is a general impression of ternary form: the outer sections display a stable range, undulating dynamics, and generally steady tempo, albeit with considerable rubato, \(^\text{16}\) while the central section (mm. 9-15) is characterized by violent registral and dynamic outbursts and frequent hyper-expressive variations of tempo. The slow chromatic descent of the opening melody contrasts with the chromatic ascent of the final two bars, suggesting a general arc-like contour throughout the piece. The ethereal ascent with gradual diminuendo perhaps connotes the evaporation of mist as a rainbow slowly disappears.

Morresi (2002, 112-115) observes a periodic reappearance of the opening motive every seventy-six sixteenth notes, at measures 1, 7, 13, and 20. These appearances, along with a loose reference at measure 16, all coincide with a similar harmonic progression that is as thematic as any other musical element in this piece. This progression, and the way in which Ligeti elaborates this harmonic germ motive throughout the entire piece, is outlined in the next section.

Harmony

The harmony in Arc-en-ciel can be most easily explained as jazz-like extended harmony. Major seventh chords abound, with scattered minor seventh, dominant seventh, and fully diminished seventh chords. It is significant that in Fanfares, the minor seventh chords are

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\(^{16}\) Ligeti indicates “with swing” and “Varying tempo” (1986, 2\textsuperscript{nd} ed., 37)
associated with major harmonies, indicating that Ligeti views the minor seventh chord as a major triad with an added sixth, rather than a minor triad with an added seventh. This becomes significant when analyzing root motion in *Arc-en-ciel*.

As the piece progresses, the harmonic language becomes slightly more complex, as major ninths, sharped elevenths and major thirteenths appear more frequently in the central section. The Lydian fourth (sharp 11th) appears as an intensifier, more frequent in the turbulent middle section of *Arc-en-ciel*. Inversions are common, and chords appear not only in first through third inversions, but also with any note in the bass.

There are three major root motions in this etude (see Figure 5.1). In order of frequency, they are: ascent by minor third (T₃), ascent by perfect fifth (T₇), and ascent by minor seventh (T₁₀), the last of which is a combination of the first two translations. This recalls Joseph Schillinger’s (1946, 361-375) observations that Western Classical music, especially that of the Common Practice Era, favors root motion descent by diatonic third, fifth, and seventh. Besides the obvious change of direction, the major difference is that Ligeti creates a distinct harmonic syntax by allowing a narrower range of possibilities. Whereas Schillinger describes general trends rather than strict rules, it seems Ligeti has restricted himself only to these progressions for vast sections of the etude, without any allowance for diatonic adjustment. In this way he achieves harmonic unity through faithful adherence to intervallic parameters despite a lack of tonal center.

The rare deviations from this model can each be explained in one of two ways. Occasionally the melodic chromatic descent (e.g. mm. 9-10) or ascent (mm. 21-23) overshadows and influences harmonic decisions. Other times, Ligeti appears to skip intermediate steps. Thus,

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17 This notation refers to transposition in pitch class space by ascending half-step. Octave displacement is not a determining factor.
root motion of a tritone can be explained as the abbreviation of two minor third translations \( T_6 = T_3 + T_3 \). Similar truncations explain the rare ascent by major second \( T_2 = T_7 + T_7 \) and minor second \( T_1 = T_3 + T_{10} \).

There is also a primary harmonic motive throughout this etude. The opening dotted motive in the first measure is accompanied by the following chords: a C major seventh chord, an E-flat major thirteenth chord, a B-flat major seventh chord, and a D-flat major seventh chord. Expressed in terms of root motion this is \( T_3, T_7, T_3 \). The next three times the melodic theme reappears (mm. 7, 13, and 16), it is accompanied by the same harmonic progression, transposed. Only for the final appearance in bar 20 is the progression is slightly altered. There it is harmonized by a \( T_3, T_3, T_3 \) progression, tellingly preceded by \( T_7 \) to avoid monotony.
Counterpoint

There are no fewer than four distinct voices at the start of *Arc-en-ciel*, made clear via stemming and accents to differentiate the voices in each hand. As in *Touches bloquées*, the counterpoint is not strict, for voices sometimes split briefly or disappear entirely. Still, Ligeti preserves this four-part writing for the majority of the etude, indicating that lower voices form an integral part of the etude, despite the primacy of the soprano line.
Example 5.1: *Arc-en-ciel*, mm. 1-2

**Performance Guidelines**

This etude requires careful attention to voicing and a sensitive sense of *rubato*. There are several performance indications regarding the freedom of expression and tempo: “*con eleganza, with swing*,” “*Varying tempo*,” and “*con tenerezza...molto espressivo*” (Ligeti 1986, 2nd ed, 37).

Slight *notes inégales*, at least in the opening, can be used to evoke the vernacular of swing.

Careful attention to inner voices and accents will help preserve the polymetric indication retained throughout the majority of *Arc-en-ciel*. Also, slightly emphasizing the root and third of each block chord can help clarify the aural identity of the harmonies, which can be obscured due to the inversion of extended chords.
CHAPTER 6

AUTOMNE A VARSOVIE

General Characteristics

The last etude of Book I, Automne à Varsovie (“Autumn in Warsaw”) is a tempo fugue, in which a three-phrase subject appears in various rhythmic diminutions and augmentations. All phrases of the subject descend in stepwise chromatic motion. The second phrase starts from the same pitch but descends marginally further. The third phrase starts from a higher pitch and descends significantly lower than the previous two, making a pattern of short-short-long. This pattern of starting progressively higher yet descending lower finds its inevitable conclusion in a mighty descent from the highest register of the keyboard to the lowest note in the final bars. The fugue’s subject, which appears in many of Ligeti’s late works, is commonly referred to as the lamento motive, named for the title of the last movement of Ligeti’s Horn Trio (1982). Besides the characteristics outlined above, this lamento motive generally does not repeat notes within a phrase. The phrases typically fill in a slice of the pitch spectrum efficiently (Townsend 1997, 45-65).

A steady of stream of ostinato sixteenths, in the form of either repeated notes or various arpeggiation, accompanies the subject and provides the underlying driving force and energy of this piece. As many as four voices play the lamento subject concurrently, at different speeds and entry points. As more voices enter the fray, the music goes through cycles of increasing activity, each one leading to a sudden drop of tension and texture. There are three major climaxes, which divide Automne à Varsovie into three sections: mm. 1-55, 55-98, and 98-122.
Harmony

*Automne à Varsovie* contains an abundance of triadic and extended chords without any reference to tonality or harmonic progressions of the common practice era. Many of the chords are flavored with a Lydian fourth, and the pitch class set [016] is very common. These two facts are of course related, considering that the Viennese trichord can be expressed as the first, fourth, and fifth degrees of a Lydian scale. While the presence of a drone-like ostinato throughout much of the piece might normally imply a temporary tonal center, the chromaticism of the subject and variableness of the drone (it covers all twelve pitch-classes in the first fifty measures) prevent this impression.

Counterpoint

This last etude is the most clearly contrapuntal of the set. There are no more than four voices at one time above the ostinato accompaniment, making five voices in all, which are differentiated by their speed and register. A way to describe the speed of each voice would be to reference the greatest common factor (GCF) of the voice’s component parts. For example, the voice that moves in quarter-note lengths would have a GCF of four sixteenths, for every note in that voice would be divisible by four, i.e. every note in the voice is a multiple of a quarter note. The GCF of the accompanimental ostinato is one, while the other four voices have a GCF of three, four, five, and seven. This remains rigidly consistent in *Automne* with a few exceptions. At the end of the second and third sections, starting at mm. 95 and 116, the etude undergoes a rhythmic accelerando, in which the GCF of one or more voices is gradually shortened until it reaches one (Example 6.1). Also, in measures 105-106, a voice of 4+3 sixteenths curiously appears before going through a similar acceleration (Example 6.2). As with all previous etudes, Ligeti does not restrict the voices to one note, as in a traditional fugue. In order to provide
harmonic interest, dynamic emphasis, and textural variety, the voices often include chords of two to five notes.

Example 6.1: Automne à Varsovie, mm. 96-97

Example 6.2: Automne à Varsovie, mm. 104-107

Voices either display the three-phrase structure of the opening theme, or else are isolated extended descents. The unrelenting gravity of the *lamento* motive is balanced by several factors:
(1) occasional upward leaps break up the monotony of chromatic descent in the theme, (2) the accompanimental voice most often remains in a state of pitch stasis, but in passages of increasing tension shows dramatic rising motion, and 3) towards the end of the movement Ligeti starts inverting the *lamento* theme starting in the GCF:7 voice in bar 99. This coincides with a return to the opening E♭ ostinato, this time enharmonically spelled as D♯ and in the bass instead of the treble, thus conveying an upside-down “recapitulation” (Taylor 1994, 86) of sorts (Example 6.3).

Example 6.3: *Automne à Varsovie*, mm. 98-101

**Performance Guidelines**

In order to achieve performance tempo, I would recommend avoiding repeated fingers whenever possible, especially in the ostinato voice. This voice should also be completely in the background in proportion to the general dynamic level, except where accents would indicate a subsidiary melody, as in measures 68 and following (see Example 6.4).
Example 6.4: Automne à Varsovie, mm. 68-69

In order to convey the “cantabile” and “flessibile” (Ligeti 1986, 2nd ed, 41) character of the etude, a slight agogic accent on the first note of each phrase before descending is an expressive option. Despite the busy texture, the affect of this piece is closer to Arc-en-ciel and Cordes à vide than it is to Désordre and Touches bloquées. In other words, Automne à Varsovie is more Romantic in character and overtly expressive rather than meccanico. Each phrase, starting higher and lasting longer, increases in expressiveness, just as a more expressive wail or sob will start at a higher pitch and last longer.

As mentioned earlier, Ligeti has a hierarchy of accents, with tenuto markings being less emphatic than accent markings, which are less important than double accents, caret accents, and sforzandi. Looking at measure 45 and following, we find that Ligeti chooses to bring out the slower moving voice (GCF:7) above the other voices (GCF:3 and GCF:5) from the very beginning (Example 6.5). From this one can extrapolate a general rule that longer note values should be emphasized more. This makes sense from a phenomenological point of view, for the ear is naturally drawn to busier lines in the absence of other differentiation such as timbre, register, or dynamics.
Example 6.5: *Automne à Varsovie*, mm. 43-46

In the opening exposition, the primary voice (GCF:5) is expressed at first in octaves, then progressing to sevenths, tritones, and more complicated harmonies. The gradual introduction of dissonance gives significance to certain notes within the subject. These notes are interruptions to the theme’s gradual descent, often further emphasized by a sforzando. Normally the upper line is the most chromatic, and should be voiced prominently over the chords for its fidelity to the contour of the *lamento* motive. For the same reason, it would be reasonable to favor the middle note in the chords of the GCF:3 voice starting in measure 30: the middle voice is more chromatic, while the upper notes repeat pitches (see Figure 6.1). In a similar manner, the lower GCF:5 voice is harmonized by upper notes starting in measure 34. In order to preserve the integrity of the *lamento* motive, the performer should continue to bring out the lower note in
these chords also. Similar voicing considerations occur in the GCF:4 voice in mm. 110-112.

Figure 6.1: Automne à Varsovie, mm. 29-31, voicing in GCF:3
CONCLUSION

In each of Ligeti’s first six etudes, one notices that harmonic considerations are subservient to the goal of expressivity. In Désordre, Ligeti tempers his use of dissonant intervals until the middle section, in order to lead effectively to a roaring climax; the third section adds chords thick enough to amplify the melodic voices, yet consonant enough to preserve the melodic contour. In Cordes à vide, an ambiguous and aimless yet familiar harmonic language helps convey a sense of serenity and other-worldliness. Touches bloquées is ironic in character: the more consonant scherzo-like chords in a non-sequitur style lead to the depiction of the performer’s increasing incompetence through sevenths that sound like wrong notes and an even more dissonant recapitulation. Fanfares also shows a logical harmonic progression: the dualistic juxtaposition of major and minor tendencies leads to synthesis and expansion of harmonic vocabulary. The limited root movement in Arc-en-ciel helps achieve tight motivic and harmonic unity in an otherwise untethered piece. And finally, Automne à Varsovie reveals a nuanced treatment of harmony, with tritones and sevenths balancing the stabilizing pull of the ostinato. In this etude Ligeti uses dissonance as an expressive element, a means to add tension and direction.

This sensitivity to dissonance is consistent with Ligeti’s late style of composing, which he described as “non-atonal” (Szitha, 1992) Using the building blocks of tonality in non-tonal ways, Ligeti’s late works often contain triads, seventh chords and other traditionally recognizable harmonic entities that paradoxically rarely evoke a tonal association due to context. Ligeti’s affirmation of consonance contrasts with his earlier micropolyphonic style. Starting in the late 1970s, he started using the triadic building blocks of tonal harmony in a carefully controlled manner alongside more caustic elements in order to evoke tension, calm, irony, and other musical goals. Thus, similar analysis could be applied to other works of Ligeti’s late period,
including the second and third book of etudes, Piano Concerto (1980-88), Horn Trio, and latter two works for harpsichord—Passacaglia ungherese (1976) and Hungarian Rock (Chaconne) (1978). It is my hope that this treatise will inspire further in-depth analysis of Ligeti’s late works.

Each of the first six etudes also shows a different approach to counterpoint. Désordre has four voices, comprised of a pair of primary melodies and a pair of accompanimental voices. Cordes à vide is much like a neo-Impressionistic two-part invention, with quintal and chromatic motion alternating between the hands. Touches bloquées alternates between a web of three voices and a middle section of (intended) monody. The two voices of Fanfares are markedly different, with an unchanging ostinato and schizophrenic melody. Arc-en-ciel has four clearly-defined independent parts, but the upper soprano voice is clearly the primary melody. Automne à Varsovie is a contrapuntal tour de force, a four-voice tempo fugue with an additional droning accompanimental voice.

A mature understanding of these etudes’ harmonic and contrapuntal characteristics has very relevant implications for the performer. Harmony can and must heavily influence the performer’s choices regarding pedaling, rubato, voicing, and overall character. Furthermore, an understanding of each line’s place and purpose can inspire an underlying narrative and/or help determine when it is appropriate to bring out inner voices. This is something that high-level pianists learn to do almost instinctively with traditional repertoire, but achieving the same result in much twentieth-century repertoire often requires a more conscious and analytical approach.

As of 2014, Ligeti is the only composer to win the Grawemeyer award for a solo piece. In a field where operatic, orchestral, and chamber literature are more often lauded, Ligeti’s Études pour piano, premier livre was deemed significant enough to garner worldwide notoriety.
I believe these insights regarding the inner workings of these pieces may help explain why they remain fresh and popular twenty years later, with no foreseeable signs of decline. Besides exhibiting masterful polyrhythmic innovation and stretching the limits of piano technique, Ligeti’s first six études also successfully incorporate a novel approach to harmony and a skillful and varied approach to melodic polyphony. The nontraditional use of traditional elements, such as tertian consonance and contrapuntal syntax, create a compelling balance of relevance and immediacy.
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http://www.mtosmt.org/issues/mto.97.3.3/mto.97.3.3.taylor_frames.html.


BIOGRAPHICAL SKETCH

Lawrence Quinnett was born in Plymouth, Montserrat, and has lived in the United States since 1989. He is an active concert pianist who has played solo and chamber music in the United Kingdom, the Caribbean, and the United States. He has also judged competitions and given master classes as part of the 2011 and 2012 Fayetteville Piano Festival and 2012 Fayetteville Chopin Festival in North Carolina. In 2012, he was a featured performer at the Music at Main Series at the Jacksonville Public Library. Quinnett has several competition successes to his credit, including the FSU 2013 Doctoral Concerto Competition, 2011 FSU Chapman Competition, the 2008 South Carolina Music Teachers’ Association Young Artist Piano Competition, and the 2006 Southeastern College Piano Competition.

An inquisitive musician, Quinnett’s interests include chamber music, harpsichord, new music, and research. He was a participant in the 2012 New Music Festival and John Cage Festival at FSU and both performer and lecturer at the 2013 Ligeti Symposium and Festival hosted by FSU. He has maintained an avid interest in music theory, having taken theory courses whenever possible as a student. Lawrence Quinnett received his Bachelor of Music in Piano Performance from Methodist University, his Master of Music in Piano Performance from Converse College, and his Doctor of Music in Piano Performance from Florida State University.