

ANALYSIS AND PERFORMANCE ASPECTS OF GYÖRGY LIGETI'S  
*ÉTUDES POUR PIANO: FANFARES AND ARC-EN-CIEL*

D.M.A. DOCUMENT

Presented in Partial Fulfillment of the Requirements for  
the Degree Doctor of Musical Arts in the  
Graduate School of The Ohio State University

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2007

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## ABSTRACT

“Performance Aspects of György Ligeti’s *Études pour Piano: Fanfares* and *Arc-en-ciel*” examines two etudes, *Fanfares* and *Arc-en-ciel*, from Ligeti’s first book of piano etudes. The purpose of this study is to explore these two etudes, by providing analytical aspects that focus on Ligeti’s application of polyrhythm in two hands of pianists. In these two etudes, he combines complex polyrhythm with other components, including triadic harmonies, jazz and the lament motive.

Ligeti states that the three sets of etudes are studies for both performer and composer. *Fanfares* and *Arc-en-ciel* exhibit two contrasting characters: *Fanfares* is built with humor and rhythmical vitality, while *Arc-en-ciel* is an elegant and expressive etude. This document will illustrate his ingenuity in manipulating rhythm, dynamics control and formal structure.

I begin with a general overview of piano etudes and their development over history, including composers Scarlatti, Bach, Czerny, Chopin, Debussy, and representative twentieth century composers. The lineage shows how the genre of etude

has evolved and how etudes mirror the style of each period. Ligeti began to compose his etudes in 1985 and launched a new style of etude at the end of the twentieth century. In addition to the analytical and interpretive aspects of these two etudes, the study also examines Ligeti's compositional styles in general, and some other features that maintained his ongoing preoccupation in his last years.

## ACKNOWLEDGMENTS

I would like to express my thanks to all the professors and colleagues who I worked with during my stay at the Ohio State University. I am especially appreciative of my advisor Dr. Caroline Hong, for her patience and thoughtfulness that have been the greatest gifts to me. Her perceptive and abundant knowledge have made my doctoral studies a wonderful experience. Special thanks must go to Professor James Pyne who always shares the most amazing musical experiences with me, as well as Dr. Kenneth Williams and Dr. Arved Ashby, whose excellence in the academic field has assisted me greatly.

My gratitude goes to my teacher Malcolm Wilson who cultivated my musical thought deeply during my studies in England. I would like to thank my dearest friend Maura Brown, for her generous support and insightful opinions on the process of this document. I owe a great debt to my family, for their understanding and support during all these years of my studies abroad. Finally, I am thankful for Aya, whose endless love has been the most precious thing that has happened in my life.

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## **CHAPTER 1**

### **INTRODUCTION**

The term “etude” in present day implies a highly virtuosic composition such as the etudes of Chopin and Liszt, which are designed as concert pieces. For the teacher of intermediate and intermediate-advanced students, etudes by Carl Czerny (1791-1857), and Johann Cramer (1771-1858), have been instrumental in helping students develop particular aspects of their technique. There exists strong controversy as to whether or not etudes are good for the pianist's playing mechanism. In order to accomplish fluid playing of the etudes of Frédéric Chopin (1810-1849) and Franz Liszt (1811-1886), many hours of practice, even regimented practice is necessary. Some pedagogues feel that the time used to practice etudes takes up a disproportionate amount of time in practice especially since they may last only a few minutes in a performance. They feel that the time that is consumed by etudes takes away from practicing repertoire that would more adequately build a recital program, or have more value in terms of developing musical understanding. Yet, virtually every

international competition (with exceptions, for example, Leeds International Pianoforte Competition) has at one point required the playing of one or several etudes, likewise, graduate program auditions, such as the Ohio State University DMA Entrance Audition, require some form of etude. In the preliminary round of the renowned Ferruccio Busoni International Competition<sup>1</sup>, performance of three etudes is required including one of the twentieth century etudes by Claude Debussy (1862-1918), Béla Bartók (1881-1945), or György Ligeti (1923-2006). Undoubtedly, possessing the ability to play a virtuosic piano etude is essential. It reveals much about a pianist's technical aptitude and accomplishment.

This document examines the history and the evolution of the piano etudes as a genre. The predecessors of this genre include the Baroque works such as the Inventions and Sinfonias by J.S.Bach (1685-1750) and Sonatas by Domenico Scarlatti (1685-1757), and Classical works such as *Gradus ad Parnassum* by Muzio Clementi (1752-1832). The most important ancestor of this genre is Czerny, as his numerous etudes and studies have been widely used for centuries and are still assigned to almost all piano students, teachers, and even concert pianists.

The etudes of the Romantic era developed and flourished as concert etudes that reflect a composer's thought. The great masters who composed in this genre

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<sup>1</sup> Based on the Competitions in 2000 and 2004.

include Chopin, Liszt, and Robert Schumann (1810-1856). Etudes in this period concentrate on portraying the aspect of virtuosic technique that challenges both performer and the instrument's capability.

The best known etudes of the first half of the twentieth century are the etudes by Claude Debussy (1862-1918), Sergei Rachmaninoff (1862-1918), and Alexander Scriabin (1872-1915). The etudes of this period broke away from the concept of the etude in the nineteenth century. The functions of the etudes changed gradually from a display of performer's high virtuosity to a piece that delivers a composer's thought using different tonalities, different rhythms, or depiction of different pictures.

Composers seemed to have lost their interest in composing piano etudes in the second half of the twentieth century. Ligeti's *Études pour Piano* recall this genre after decades. This set of etudes are recognized as the best piano composition written in the last twenty years of the century and have become frequently played recently, giving credit to pianist Pierre-Laurent Aimard's premiere recording. Ligeti revisited this genre and began composing these piano etudes in 1985. He completed the first two sets of etudes in 1994. From 1995 until his death in 2006, composing etudes continued to interest him, as the third set of etudes were written in his last period of



life.

His etudes are full of humor and imagination, and the various elements involved in the compositions include jazz, player piano as used by composer Conlon Nancarrow (1912-1997), Sub-Saharan African culture, and the musical languages of Chopin and Debussy. Complex rhythm is the central idea of Ligeti's etudes, and it stimulates and exhilarates audiences as well as performers. Some of the etudes have fascinated musicologists and theorists tremendously, for example, the chaotic systems in *Désordre* has been analyzed and appeared on Hartmuth Kinzler's article<sup>2</sup> as well as a lecture given by Amy Bauer at the Ohio State University<sup>3</sup>.

*Désordre* is an etude that calls for the right hand to play white keys and the left hand to play black keys. This piece strikes listeners with its complex rhythm that starts with small incremental change: reducing one eighth note each phrase only in the right hand. This operation leads to the split of the bar line in two hands and results in different accents in two hands. "Disorder" is the central idea of this piece, associated not only with rhythm but also with the pitch, as he alters the regular pitch class set to start the chaos. Another etude *Automne à Varsovie*, on the other hand, demonstrates

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<sup>2</sup> "Kinzler Hartmuth, György Ligeti: Decision and Automatism in Desordre, 1re Etude, Premiere Livre." *Interface* 20, no.2 (1991) 88-124.

<sup>3</sup> Amy Bauer, "Chaotic Systems in the Music of Ligeti". Lecture is given on May 23, 2005.

the “lament motive”<sup>4</sup>, which Ligeti uses as an important device in his late compositions. The lament motive throughout this piece represents extreme emotional grief that Ligeti dedicated to his Polish friends.

This document will concentrate on the etudes *Fanfares* and *Arc-en-ciel*, discussing their context as well as giving a performance guide. *Fanfares* is an etude that is striking in its rhythmic vitality. This piece is a rediscovery of the traditional tonality that Ligeti began to add in his compositions dating from the 1970s. In addition to its attention—grabbing tonality, the use of ostinato is adventurous and intriguing, although the use of ostinato across the entire piece already occurs in the earlier composition *Musica ricercata* and second movement of the Trio for Violin, Horn, and Piano. The ostinato here serves as a background that consists of eight eighth notes divided into 3+2+3 rhythm throughout the piece. One of the most important characteristics of *Fanfares* is the playful and energetic dynamics. The fragments of the melody alternate between the right and left hands, accompanied by unchanging eight-note ostinato, which is like a kitten frolicking with a string.

Along with *Fanfares* and the second etude *Cordes á vides*, *Arc-en-ciel* is another etude that makes frequent use of traditional harmony. This piece shows many completely different characteristics from most of Ligeti’s etudes that are designed

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<sup>4</sup> For the definition of the lament motive, see appendix A.

with rhythmical vitality. *Arc-en-ciel* is an etude that reflects Ligeti's interests in the jazz music of Bill Evans (1929-1980) and use of hemiola, demonstrating tenderness and expressiveness.

In this document, chapter two surveys important piano etudes that have been composed across history, and discusses how this genre was explored as a reflection of the composer and the period. Chapter three aims to explore Ligeti's musical style, especially during the late years. It will investigate Ligeti's etudes by providing analytical aspects of the selected etudes *Fanfares* and *Arc-en-ciel*, as these two etudes represent the basic idea of the etudes in the first book and have not been analyzed and explored widely. Various influences on these etudes, including the most important—African rhythm, and how he applied these elements— will be examined. Other consideration that might affect the performance or enhance the understanding of these pieces includes melodic structure and harmonic approach, and these will also be discussed in the following chapters.

This study is conducted along with the experience of personal performance of these etudes, in order to provide interpretive advice and practical suggestions on pianistic techniques from a performer's perspective, as a DMA solo recital I gave in 2006 included *Fanfares* and two other of Ligeti's etudes. It serves as a guideline to

performers and encourages them to get acquainted with these master piano etudes.

Most of these etudes are extremely difficult to play but worthwhile study, challenging the pianist's limit in many ways. These etudes may represent a point of departure from the traditional training in piano and unfold a new style of the genre etude as well as other genres of the twenty-first century.

## CHAPTER 2

### HISTORICAL DEVELOPMENT OF THE PIANO ETUDE

#### 2.1 Etudes in the early stage

Before the eighteenth century, the genre that is similar to the etude had emerged as a piece intended for some type of study, and that is not necessarily virtuosic playing. J.S. Bach's Inventions BWV 772, for example, were written for his son and meant to teach contrapuntal playing. Since the Inventions are limited to two voices, the ability to focus on playing with hands independently was advantageous to establish skills of playing musically independent layers. The Sinfonias BWV 787 add a third voice, creating the necessity for one of the hands to play two voices, or for both hands to alternate the middle voice. The technique of differentiating independent voices was a skill that Bach intended to develop.

Yet, there were still many pieces written during this time that were not necessarily designed to teach any specific skill, but instead general concepts of pianistic skills. For example, Scarlatti wrote a series of about 550 sonatas that were

first published under the title *Essercizi per Gravicembalo*. Most of these sonatas in binary form are idiomatically written for the harpsichord. Characteristics of these works include fast scalar passages, repeated notes, hand crossing, trills, and leaps. In terms of creating different sound qualities, these sonatas provide good examples of imitating the sound of Spanish guitar and crystalline bell. Moreover, teachers can use these as an exercise to teach how to embellish or differentiate the second statement when the sections are repeated. However, none of the sonatas specify only one type of technique. Regardless of the varying techniques that the pieces include, the character of these aforementioned pieces are somewhat similar to the etudes of Czerny or Chopin composed later on, as they all possess technical difficulty, and the length of the pieces are comparatively short.

An example of the common form of etude in the Classical Period is Clementi's pedagogical work—*Gradus ad Parnassum* that includes three volumes. *Gradus ad Parnassum* is a collection of 100 pieces for keyboard that illustrates Clementi's compositional style and demonstrates numerous types of technical problems. Except for general pianistic exercises (figure 2.1.1), practice of other forms such as preludes and fugues, sonata-like movements, 'character-pieces' of several kinds, and compositions with programmatic titles such as '*Scena patetica*' (no.39),

and 'Bizzarria' (no.95) are also included (figure 2.1.2).



Figure 2.1.1: Clementi *Gradus ad Parnassum* No.72, mm.1-12



Figure 2.1.2: Clementi *Gradus ad Parnassum* No.95 *Bizzarria*, mm.1-7

In the early nineteenth century, the etude developed greatly through the composition of studies that are used specifically for developing a pianist's technique, and not intended for performance. This trend for composition of etudes began in the

late eighteenth century and continued into the early nineteenth century, and these pieces include etudes by Czerny and Cramer. Pianists in the present day keep them in the practice room. Among these composers, Czerny is perhaps the best known in this genre. The studies written by Czerny are meant to teach different types of patterns that occur in Classical music. They have various titles, such as *100 Exercises in Progressive Order* Op.139, *110 Easy and Progressive Etudes*, Op.453, *Etudes Préparatoires et Progressives*, Op.338, or *Preliminary School of Velocity*, Op.636.

As a pupil of Beethoven, Czerny wrote some etudes perhaps for his own practice to overcome the technical difficulty of Beethoven's piano works. For example, Czerny's *Die Kunst der Fingerfertigkeit*, Op.740 No.10 is an exercise of double thirds that is an important technique frequently used by Beethoven (figure 2.2).



Figure 2.2.1: Beethoven Piano concerto No.4, Op.58, first movement, mm.232-235





Figure 2.2.2: Czerny Op.740, No.10, mm.18-20

Most of the etudes in this period were purely written to give performers exercise playing difficult figurations, such as scales, arpeggios, broken chords, leaps, and consecutive octaves. Therefore, these etudes serve as studies that are played only for the sake of practice, rather than the type of etude known in the present day as pieces which combine the aspects of musical thought and melodic lines that are expected to be performed as an artistic work in front of audiences.

## 2.2 The Etudes of Chopin and Liszt

Chopin, Liszt, and Schumann are among the pioneer composers who successfully developed the genre of etude from a practice exercise to an artistic craft that combines idiomatic pianistic figurations and melodic phrases, deepening the genre of etude to a more profoundly musical and virtuosic piano composition. Composing highly virtuosic piano compositions was motivated by the development of keyboard facility and the fascination with virtuosic performance in the nineteenth

century. Among the composers who composed virtuosic etudes during the nineteenth century, Chopin and Liszt's etudes contain lyrical melodies and flamboyant technical features, and are the most remembered and performed. The concept of these composers composing virtuosic keyboard pieces parallels the violin field in the same period, while composer Nicolò Paganini (1782-1840) composed extremely virtuosic violin pieces and drew attention to the fact that virtuosity is a significant element in art.<sup>5</sup>

The innovations in production of tone quality and pianistic technique in Chopin's music are key accomplishments in the history of keyboard playing. During the nineteenth century in France, two piano manufacturers Erard and Pleyel made significant contributions to the development of the piano, and with these newly invented pianos, Chopin was able to create various tone qualities and make use of diverse pianistic techniques.<sup>6</sup> His two sets of Piano Etudes, Op.10 and Op.25, are based on pianistic figures such as broken chords (Op.10 no.1) or double thirds (Op.25 no.6) (see figure 2.3). The etude Op.10 no.1 focuses on broken chords in the fashion of consecutive sixteenth notes. The techniques in this study involve swift movements of the right hand, extended positions, and flexibility in the wrists. Although the

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<sup>5</sup> Oxford University Press. 'Paganini, Nicolò', *Grove Music Online* ed. L. Macy. <http://www.grovemusic.com.proxy.lib.ohio-state.edu>.

<sup>6</sup> Peter Cooper, *Style in Piano Playing*, (London: John Calder, 1975).

character of this etude is rather repetitive and study-like, its completeness as a quasi-ABA ternary form and the refined use of harmonic modulation make the etude musically adequate to be performed in a concert hall.

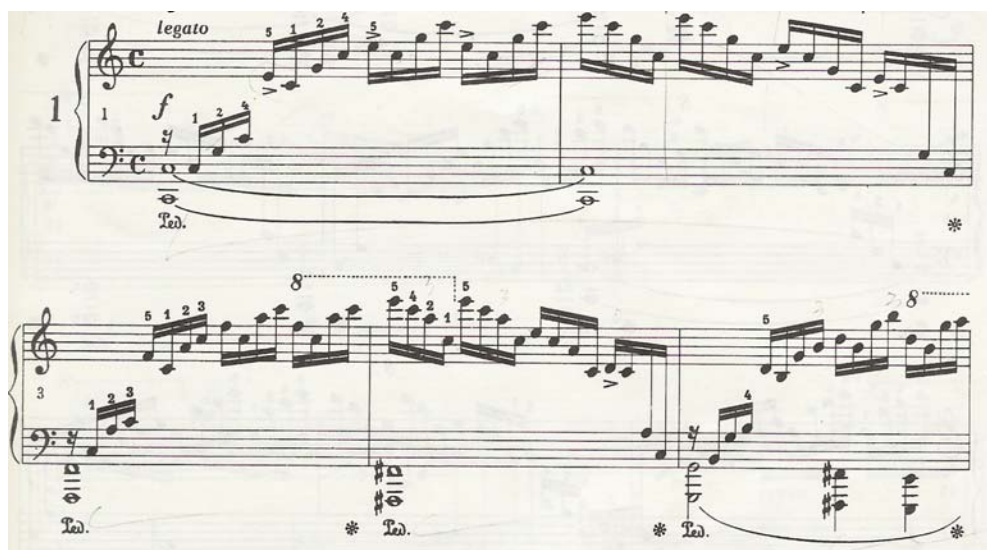


Figure 2.3.1: Chopin Etude Op.10 no.1, mm.1-5



Figure 2.3.2: Chopin Etude Op.25 no.6, mm.1-4

Most of Chopin's etudes are in quasi-ternary form with codas, and feature only one or two pianistic techniques. Some of them have nicknames that allude the specific techniques they include, for example, Double Sixths (Op.25 no.8). Also, some of them are named by the effect that the specific technique creates that make them programmatic works on character pieces, for example, Aeolian harp (Op.25 no.1) (nickname given by Schumann), Winter wind (Op.25 no.12), and Revolutionary (Op.10 no.12).<sup>7</sup>

Liszt's two sets of his etudes *Études d'exécution transcendante* and *Études d'exécution transcendante d'après Paganini*, compared to Chopin's etudes, demonstrate another approach to this genre. Although both sets of the composers'

<sup>7</sup> Stewart Gordon, *A History of Keyboard Literature*. (New York: Schirmer Books, 1996), 284.

etudes are intended to be performed in the concert hall, there are two important aspects that differentiate Liszt's etudes from Chopin's: most of Liszt's etudes are longer and rarely performed as a whole set, and all of Liszt's etudes pursue execution of several technical problems, differing from Chopin's etudes that only focus on one or two technical issues.

The set, *Études d'exécution transcendante* (1852), consists of twelve etudes. The title of each etude gives both performer and audience the idea that these etudes are programmatic, for example, *Mazeppa* is the name of a legendary folk hero, and *Feux follets* imitates the movements of fireflies. The texture is much more intricate, and the inclusion of sophisticated melodies and intricate formal structure puts these etudes far beyond the physical exercise studies of Czerny or Cramer. Take *Mazeppa* as an example, the introduction displays two different types of technique: swift arpeggios and cadenza-like scales (figure 2.4.1). The main section of the etude introduces even more techniques, including double thirds and leaps (figure 2.4.2). Finally, the middle section requires an intimate style and voicing in the top of the left hand on the thumb, and, on the right hand there are constant leaping of double-thirds (figure 2.4.3). This piece presents an overwhelmingly energetic spirit that is based on formidable pianistic technique, and lasts approximately eight minutes, which is longer

than any etude of Chopin.

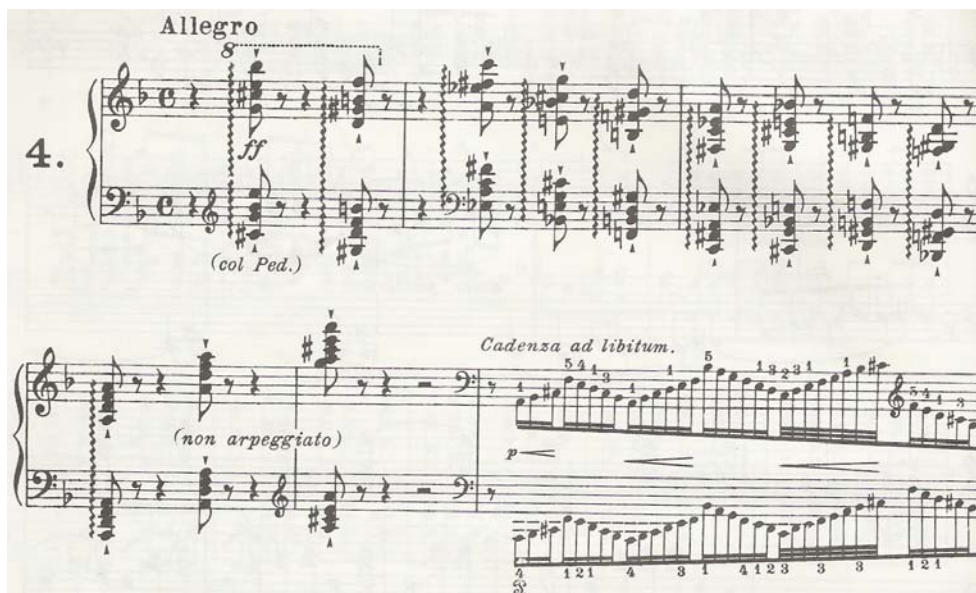


Figure 2.4.1: Liszt *Études d'exécution transcendante* Mazepa, mm.1-6



Figure 2.4.2: Liszt *Études d'exécution transcendante* Mazepa, mm.7-8

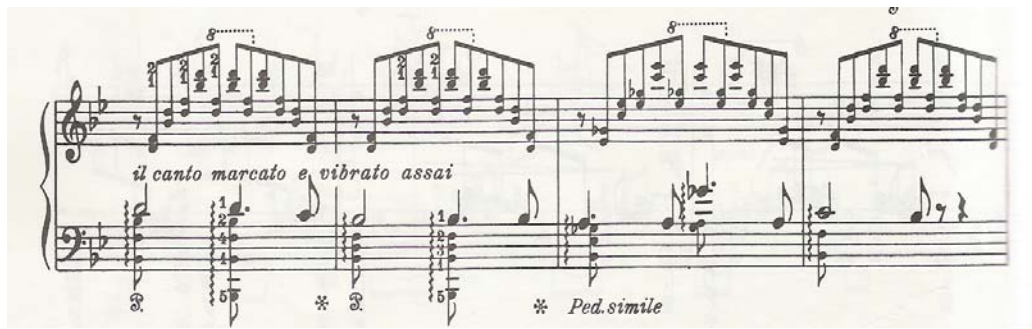


Figure 2.4.3: Liszt *Études d'exécution transcendante* Mazzepa, mm.63-66

Liszt revised his *Études d'exécution transcendante* in 1852 with more cautious writing, for example, the extra double notes are removed (nos. 4, 5, and 12), some passages are simplified so that they are easier to play (nos. 2, 6, 11), textures are thinner (nos.6, 8, and 12), awkward skips are withdrawn (no.10), excessive sections are deleted (no.8), and contrapuntal lines are added (no.2). The latter version shows that in the later years Liszt realized sometimes fewer notes can convey his thoughts more easily, even when reaching a virtuosic climax.<sup>8</sup>

### 2.3 Etudes of other composers in the nineteenth century

Although the etudes of other leading composers in the nineteenth century did not gain as much publicity as Chopin's and Liszt's did, the output that they produced still is significant. Schumann, for example, wrote his Opp.3 and 10, and quotes a

<sup>8</sup> Gordon, *Keyboard Literature*, 309-10.

Paganini Op.1 *Caprice* that shows the imitation of virtuosic violin technique of Paganini. His *Études Symphoniques* is another significant composition of this genre, and was originally titled *Études en Forme de Variations* (Studies in the Form of Variations), Op.13, but is known as *Études Symphoniques* today. This composition differs from the original formula of an etude by its length and layout, as the form of this composition combines both genres of etude and variation, and departs from the style and concept of the etudes composed earlier in the nineteenth century.<sup>9</sup>

Although the Romantic composers attempted to experiment and extend the meaning of the etude, there are some etudes that were written in the form that follows the original concept of the etude, which is for the purpose of exercise, for example, Johannes Brahms (1833-1897)'s 51 exercises WoO 6 are studies that are not intended to be performed in front of an audience (figure 2.5).

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<sup>9</sup> Ibid, 275.



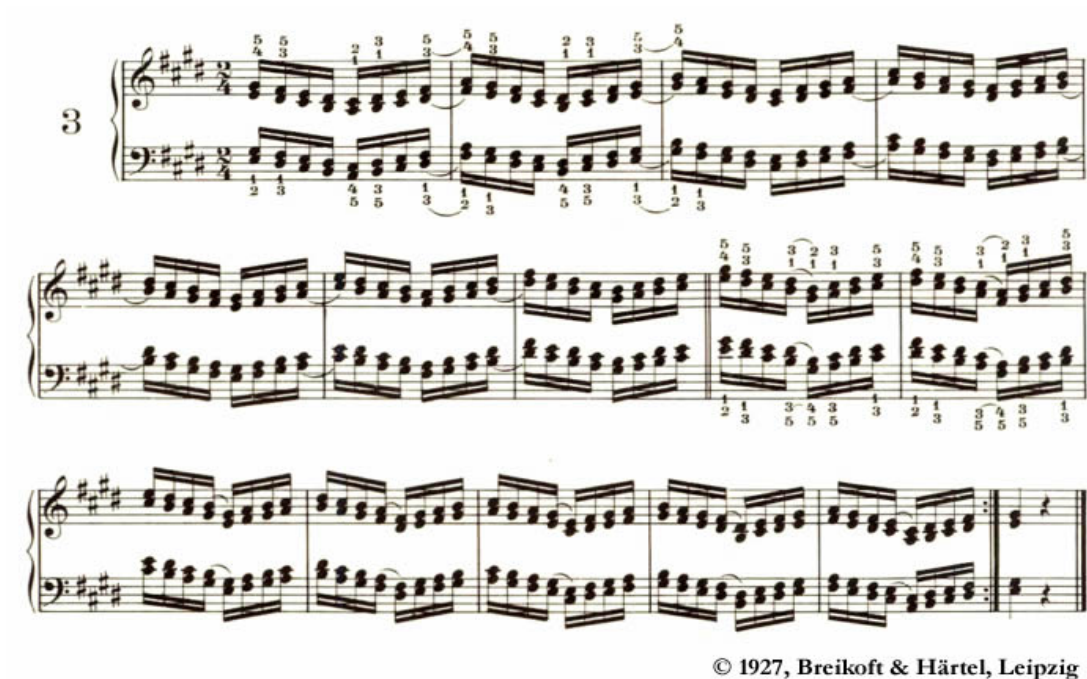


Figure 2.5: Brahms 51 Exercises Woo 6

Composers in the second half of the nineteenth century continued to explore this genre in different ways and developed various styles. The first set of “Six Etudes” of Camille Saint-Saëns (1835-1921), Op.52, integrates the etudes with other genres, for example, Etude no.3 *Prélude et Fugue* (Prelude and Fugue) recalls the difficult technical approach of the Baroque period, and Etude no.6, *En Forme de Valse* (in the Form of Waltz) features the character of a waltz in the etude. Piano Etudes, Op.23, by Anton Rubinstein (1829-94), is an example that maintained the style of Chopin, which follows ternary form with a contrasting middle section, and focuses on specific technical problems. Contrastingly, the length of each piece is longer than the ones of

Chopin.

#### 2.4 Etudes of Impressionism

At the end of the nineteenth century, Impressionist composers Debussy and Maurice Ravel (1875-1937) are two significant composers who developed a different approach and composed extensively for the keyboard. The whole-tone, octatonic, and pentatonic scales are among the pitch collections most frequently used in Debussy's music. The quality of exoticism results from the absence of leading tones in these scales, avoiding the harmonic resolution of traditional Western music. Other features of Debussy's piano music include pentatonic scales and the use of long pedal, which generates the effect of a Balinese gamelan orchestra. The gamelan effect resides more in the polyrhythmic and stratified aspect of some pieces.<sup>10</sup>

The set of Debussy's *Douze Études pour le Piano* was dedicated to Chopin, is one of the most celebrated set of etudes composed in the twentieth century. Written in his last years, this set of etudes inherits the vocabulary of Chopin's music, including the special effect of producing sentimental tone on the piano. The various styles, from ferocious to tender, in these etudes require varying techniques. The concept of these etudes differs from what we know in the present day as the highly

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<sup>10</sup> Gordon, *Keyboard Literature*.

virtuosic etudes of Chopin and Liszt. The etudes intend to practice controlling different touches and tones, for example, the special effect of making the smoothest sound. As an extension of the use of *cantabile* in the nineteenth century, Debussy avoids the percussive effect of the piano that is often heard in Liszt's *Études d'exécution transcendante*, and creates "the illusion that the piano has no hammers".<sup>11</sup>

Like Chopin's etudes, Debussy's etudes focus on only one pianistic technique in each etude. The titles given to each etude indicate the particular technique of the etude that he attempts to focus on, for instance, the second etude, *Pour les Tierces* (For the Thirds), is an exercise for practicing thirds. Although there are similarities between Chopin and Debussy, Debussy's etudes seem to mask the concept of an etude from being a finger exercise to a completely concert piece, thus, in his etudes, the audience can rarely feel the laboring exercise pattern in the pieces. Take *Pour les Arpèges Composés* (For Composite Arpeggios) as an example, the pentatonic scale (see figure 2.6) is used in the right hand pattern to establish a kind of exotic atmosphere, and it is suggested that the pedal should be held to create a distant sound. In terms of pianistic technique, the arpeggios in measure 1 here are based on the pentatonic scale, and extend the hand position from Eb to C, creating the interval of a tenth (the tenth occurs also in the first two beats of left hand, mm.2). This

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<sup>11</sup> Cooper, *Style in Piano Playing*, 139.

extension of the tenth in the hand position recalls Chopin's piano technique of etude Op.25 no.1 (figure 2.7), in which the left hand mostly stays in an interval of the tenth position, with the occasional reach to an eleventh or twelfth..



Figure 2.6.1: Debussy Etude *Pour les Arpèges Composés*, mm.1-2



Figure 2.6.2: Pentatonic Scale

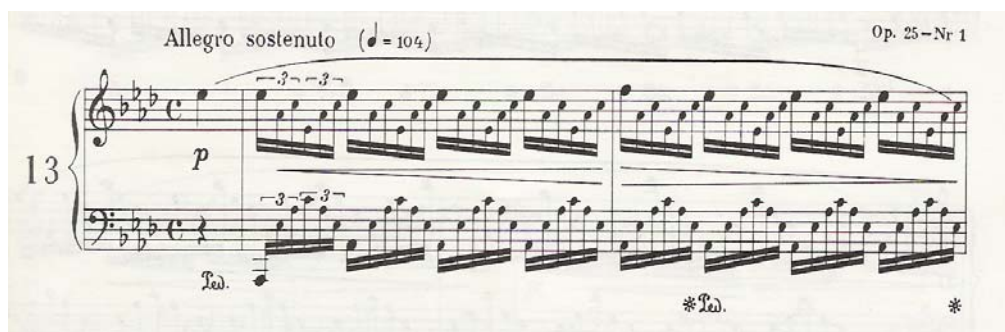


Figure 2.7: Chopin Etude Op.25 no.1, mm.1-2

This piece also includes consecutive harp-like ornamentations from measure 7 that deal with crossing hands, and are based on Lisztian technique (figure 2.8). But rather than Liszt's sound of brilliance, Debussy marks *pianissimo*, and demands that this passage be executed in a very soft and gentle manner. Compared to Chopin's steady pulse, the tempo in Debussy's etude fluctuates with the marking *Rit.*, and the rhythm changes frequently. He often indicated *Rit.* carefully followed by Tempo I, and even marked a three-measure long *Tempo rubato* in measure 46, which is unusually long for a *rubato* passage. The *tempo rubato* here implies a slightly different feeling from Chopin's *rubato*, as Chopin's *rubato* is a response to harmonic tension or resolution, and Debussy intentionally "delays the resolution by excursions into parallelism, whole-tone sonorities, or passages in remote keys".<sup>12</sup> This set of Debussy's etudes seems to completely move away from the concept of the original etudes, becoming a composition that is purely for artistic sake.

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<sup>12</sup> Gordon, *Keyboard Literature*, 359.

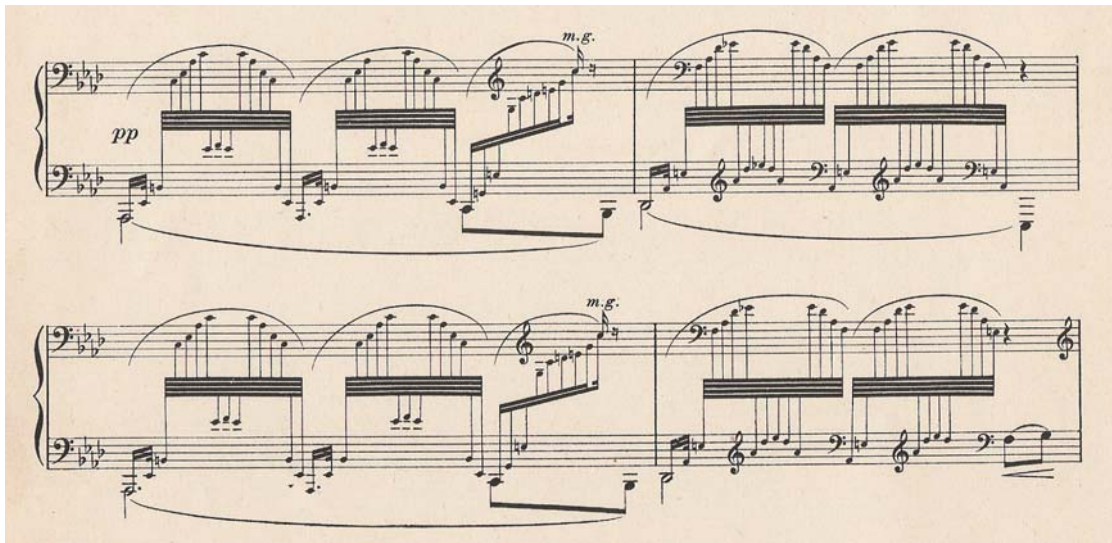


Figure 2.8 Debussy Etude *Pour les Arpèges composés*, mm.7-10

## 2.5 Etudes in the Twentieth Century

As opposed to the first half of the nineteenth century when composers infused their music with virtuosic technique and indulged in expressive melodic writing, the composers of the twentieth century aimed to compose pieces that focused on creating more variety of tone color and distinct forms. The performers of the twentieth century, on the other hand, pursue the sublime perfection of performing technique, and at the same time they perceive different characteristics of composers, in order to interpret their music in more objective ways. Thus, virtuosic playing and captivating concert personality are less important in the concert hall; instead, a good performer is expected to consider the composer's thought and infuse it into his or her

performing. Composition of etudes seemed to divert to several different styles, which did not necessarily retain the virtuosic characteristics of the nineteenth century. The etudes composed in the twentieth century that have won their popularity in performing repertoire include *Études-tableaux* of Rachmaninoff, Etude Op.8 of Scriabin's, and Etude Op.18 of Béla Bartók (1881-1945).

The reason that Rachmaninoff's and Scriabin's piano etudes earned great success is perhaps because both of the composers had moderately successful careers as pianists. Scriabin's early piano compositions resemble Chopin's special language, as they are described,

“The piano pieces up to about 1900 (opp.1-28) are consciously modeled on the work of Chopin. To Chopinesque harmonies, melodies, and textures Scriabin added a personal, characteristically emotional intensity by adding a sense of urgency to harmonic progressions, heightening melodic gestures, and often indulging in great sonorous climaxes.”<sup>13</sup>

The etudes of Scriabin include the characteristics of short length, and of types of technical problems in one single etude, similar to Chopin's etudes. The harmonies present different approach than the Romantic era although they are still centered in traditional tonality. However, rhythmical issues are perhaps the most

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<sup>13</sup> Ibid, 430.

significant issues that Scriabin attempted to emphasize. The following examples illustrate rhythmical variety and complication, as figure 2.9.1 shows a five against three patterns in the first beat and six against three in the second beat,<sup>14</sup> and figure 2.9.2 shows that the not grouping is altered by phrasing across the bar lines. Thus, the rhythmical complexities play an important role in Scriabin's etudes.



Figure 2.9.1: Scriabin Etude Op.8 no.2, mm.1-2



Figure 2.9.2: Scriabin Etude Op.8 no.7, mm.1-3

<sup>14</sup> The rhythm in the right hand is not suggested to be metronomic, but with freedom.



Rachmaninoff was regarded as one of the greatest pianists of his time by his contemporaries. His compositions are full of dark harmonies, mass chords, and strong melodic lines that remain in a nineteenth century Romantic spirit. The *Études-tableaux*, Op.33 (1911) and Op.39 (1916-17), along with his preludes display the special sonority and resplendent figurations that is the trademark of his piano writing. The etudes depict various scenes and demonstrate the style of very emotional and personal writing, and perhaps are practice for sketching in the music. In terms of the pianistic technical approach, Rachmaninoff's *Études-tableaux* reflects the style of all his piano music: extremely virtuosic and requiring extension of hand positions and finger agility. The characteristic of melancholy and fearlessness in his music, plus the mass chords that requires sufficient strength, sometimes recall the piano technique of Liszt.

Other twentieth century etudes worthy of mention that have interested pianists as well as scholars are Etude Op.2 of Sergei Prokofiev (1891-1953), Etude Op.33 of Karol Szymanowski (1882-1937), and Etude Op.7 of Igor Stravinsky (1882-1971). These etudes still keep some of the techniques in traditional studies, for example, Prokofiev's etudes displays the study of broken chords and octaves, ostinato patterns; Stravinsky's etudes shows the influence of Scriabin's style, particularly the

chromatic harmony and extensive use of polyrhythms, along with other traditional study techniques: broken and blocked octaves and chords, voicing, and finger independence.<sup>15</sup>

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<sup>15</sup> Claudia Margaret Kiel, "The Piano Etudes of Prokofiev and Stravinsky: An Interpretive Analysis for Performers." D.M.A. Thesis. University of Miami, 1989.

## CHAPTER 3

### LIGETI'S COMPOSITIONAL DEVICES

Composers seemed to have lost interest in composing virtuosic piano etudes after the beginning of the twentieth century, as traditional tonality was being rethought during the twentieth century. When post-tonal theory began to flourish, some of the existing pianistic technique seems to have lost its function, for example: twelve-tone theory avoids octaves, which contradicts numerous etudes that were composed for practicing playing octave; likewise, the technique of broken chords, scales, arpeggios, or double thirds and sixths are all associated with the traditional tonal system.

As we will discuss later in the paper, an important feature in Ligeti's late years is the application of traditional tonality. Perhaps his use of traditional tonality is one of the reasons that the genre of etude was brought back after 1920 when the genre was obliterated. Before we proceed to explore the details of the etudes, it is worth exploring his musical style in general.

### 3.1 Ligeti's compositional styles through his life and his important works

Ligeti was born in 1923 in Dicsőszentmárton (Romanian Diciosânmartin, now Târnăveni), in the Transylvania region of Romania. Dicsőszentmárton then became part of Hungary, and is now within the boundaries of Romania. He received his musical training in the conservatory at Kolozsvár, and his studies in the conservatory were interrupted by the war, as he was called into a labor corps. After about a year, he returned to his musical studies at the Academy of music in Budapest. After his graduation, due to the cultural situation, he began to compose music in a style of folk music. The communist government cut off the connection between Hungary and the west, and Ligeti had to secretly listen to the radio broadcasts to keep up with the development of Western music. Around this time, Ligeti produced many choral songs in the style that was accepted to the public, and some unexpected music that was not shown to the public, for example, the *Musica ricercata* (1951–3), which includes eleven piano pieces, to which the pitch class theory is applied.

In 1954 the political situation began to relax, and in December 1956 he fled to Vienna, a more adventurous environment. His working experiences in Cologne allowed him to meet the avant-garde composer Karlheinz Stockhausen (b.1928), and to compose electronic music. Although he has little output of electronic music, the

electronic-texture sound infused into his compositional style generally.<sup>16</sup>

Ligeti's music gained more attention and respect from the time when the orchestra piece, *Apparitions* (1958-59), was composed. This work along with the other important orchestra piece, *Atmosphères*, marked his compositional style in its full harmonic and textural density. He called this style 'micropolyphony': dense, chromatic, and polyphonic music, in which melody and rhythm are sometimes lost in shifting blocks of sound. The technique consists of dense weaves of canons at the unison, in which the lines move at different speeds and are not separately identifiable.<sup>17</sup> The style of micropolyphony that he created earned him great success, which can be found in his composition *Atmosphères*. This music acquired public fame in the soundtrack of *Kubrick's 2001: A Space Odyssey*.

In the 1970s, Ligeti's compositional technique of sound mass and chromaticism shifted to another approach, which concentrated on rhythm and involved the element of rapid mechanical activity. He called these two different styles 'Clocks and Clouds' (also the name of a composition of Ligeti, written for twelve singers and orchestra), a phrase borrowed from an essay of Karl Popper, used by Ligeti to describe a duality of styles including mechanical sounds and fuzzy

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<sup>16</sup> "György Ligeti." Answers.com. <http://www.answers.com/topic/gy-rgy-ligeti>.

<sup>17</sup> Paul Griffiths. 'Ligeti, György (Sándor)', *Grove Music Online* ed. L. Macy. <http://www.grovemusic.com.proxy.lib.ohio-state.edu>.

nebulosity.

Ligeti's music of his late years after 1980 continues to concentrate on complex rhythm and use of major and minor triads, which will be discussed later. His most significant composition of this period is his three sets of etudes *Études pour Piano*. Other important works of this period include the Trio for Violin, Horn, and Piano (1982), the Piano Concerto (1985-88), and the Violin Concerto (1992). His interest in non-European traditions continued to influence his compositional style since 1980, among them, African rhythm is particularly important element of his compositions.

### 3.2 The influences on Ligeti's etudes

Ligeti's *Études pour Piano* represent his late style and caught the attention of many. The three volumes of etudes begin with the six etudes of the first book, which demonstrate his fascination with different kinds of rhythms in his late years.

Ligeti's purpose for writing piano music is intriguing, as he did not start piano lessons until he was fourteen years old, and he produced few piano compositions in his life. In the liner notes of Pierre-Larrent Aimard's recording of Ligeti's etudes, one finds Ligeti's writing "the initial impetus of composing highly

virtuosic piano music was, above all, my own inadequate piano technique... I would like to achieve the transformation of inadequacy into professionalism.”<sup>18</sup> The procedure of Ligeti composing the etudes was that he laid his ten fingers on the keyboard and imagines music, then his fingers copy this mental image as he presses the key.<sup>19</sup> He felt that the feedback between idea and tactile execution is very inaccurate, and as a result, pianists sometimes feel awkward executing some passages. As such, his pianistic approach in the etudes he composed generally follows the concepts of composers who he believes thought and composed pianistically. As he claimed, Scarlatti, Chopin, Schumann, and Debussy are the great influences on his piano etudes in terms of tactile concepts.<sup>20</sup>

Similar to every other composer who composed piano etudes in the twentieth century, Ligeti’s piano etudes represent not only the pianistic virtuoso, but also a compositional sense. Ligeti combined various sources in the etudes, and most of them are associated with African rhythm, where he composed for a single player who plays several different rhythms with two hands. The influences on his etudes are categorized as following:

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<sup>18</sup> György Ligeti *Works for Piano*. Pierre-Laurent Aimard, Sony 01-062308-10, 1996, 7-8.

<sup>19</sup> *Ibid*, 8.

<sup>20</sup> *Ibid*, 9.

1. His interests in African rhythm. The material in Ligeti's music of the 1980s and 90s has a strong connection with the music of sub-Saharan African cultures and can be found in the *Études pour Piano* (1984- ), Piano Concerto (1985-88), Violin Concerto (1990-92), and *Nonsense Madrigals* (1988-93). The African music and rhythm involves: "The polyphonic ensemble playing of several musicians on the xylophone – in Uganda, the Central African Republic, Malawi and other places – as well as the playing of a single performer on a lamellophone (mbira, likembe, or sanza) in Zimbabwe, the Cameroon, and many other regions."<sup>21</sup> In the above regions, Ligeti researched the technique and adapted it so he could apply it to the piano keys. He gave his gratitude especially to ethnomusicologist Simha Aron, who developed a kind of rhythm that divides twelve beats into 3:4 ratios, as an extension of hemiola which Simha Arom called "asymmetrical internal structures".<sup>22</sup>
2. Hemiola. The hemiola Ligeti used is an inspiration taken from the Romantic-era piano music of Chopin and Schumann. Ligeti believed that hemiola is one of the most important elements of music from centuries ago: "I have combined two distinct musical thought processes: the meter-dependent hemiola as used by

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<sup>21</sup> Ibid.

<sup>22</sup> Shimha Arom. *African polyphony and polyrhythm : musical structure and methodology*. (New York: Cambridge University Press, 1991).



Schumann and Chopin and the additive pulsation principle of African music.

Stemming from the mensural notation of the late Medieval period, hemiola arises from the metric ambiguity posed by a measure of six beats, which can be divided into three groups of two or two groups of three. Hemiola was amongst the most popular compositional devices in the dance music of the Baroque (in the *Courante*, for example) and above all in the piano music of the 19<sup>th</sup> century.<sup>23</sup> The effect of Chopin's hemiola creates *rubato* and an illusory effect, which was discussed by scientist Douglas R. Hofstadter, a writer whom Ligeti admired. Ligeti adapted African rhythm into a more complex hemiola, which Ligeti called "polytempo". This effect can be observed in the Piano Concerto (third movement) and his piano etude No.12 *Entrelacs*, pushing the hemiola concept much further.

3. Metre and Pulsation. This feature is also associated with hemiola. The bar line in Ligeti's music is only an optical aid for performers and does not give the sense of metre that it would in traditional Western music. This concept of musical lines being "glued" together recalls Medieval and Renaissance music, especially Ligeti's personal inspirations Jean de Ockeghem (ca.1410-1497) and Philippe de Vitry (1291-1361). Ligeti's piano etude, *Désordre* (figure 3.1), shows that the bar lines split up beginning in measure 4 as one eighth note is added in the left hand.

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<sup>23</sup> György Ligeti, *Etudes pour piano (1985), premier livre*, Volker Banfield, Wergo 60134, 9.

The bar lines function as an assistant to the accenting notes.

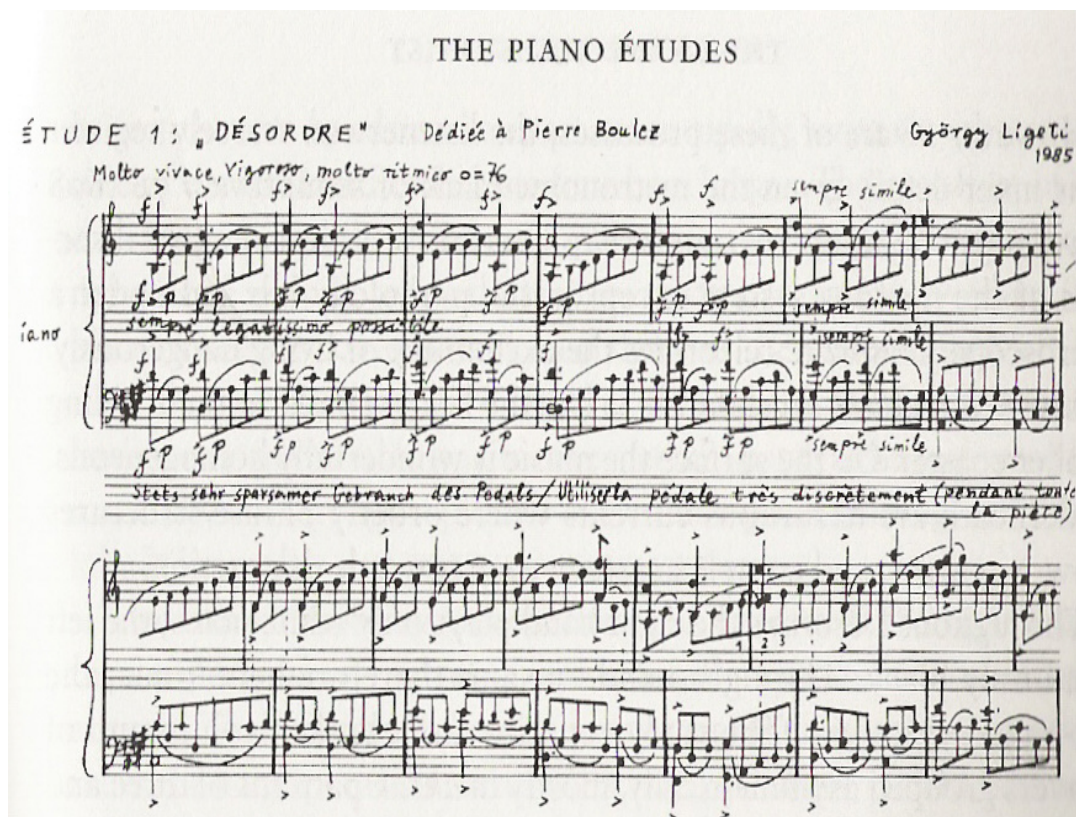


Figure 3.1: Ligeti Etude *Desordre*

4. Modes and Tunings. Etude No.7 *Galamb Borong* demonstrates his interest in gamelan music, where Ligeti uses two whole-tone scales that seem influenced by Debussy's *Cloches à travers les feuilles* from the second book of *Images*. In etude No.1, *Désordre*, the technique in which one hand plays white keys and the other hand plays black keys recalls xylophone technique and the sound of Akadinda music in Uganda. Jazz pianism is another important influence in Ligeti's music, as

he calls for the style of jazz musicians Thelonious Monk (1917-1982) and Bill Evans (1929-1980) in the etude *Arc-en-ciel*.

5. Conlon Nancarrow's influence. The compositions for the player-piano and computer-generated images from chaos theory and fractals are ideas that Ligeti uses in his etudes. Ligeti stated on this subject: "From his Studies for Player Piano I learned rhythmic and metric complexity. He showed that there were entire worlds of rhythmic-melodic subtleties that lay far beyond the limits that we had recognized in modern music until then."<sup>24</sup>
6. Other influences. From the evidence of musical journals, concert programs, and some introductory concert remarks, the etudes are further influenced by various styles, including his own heritage – the traditions of both Western art music and his native Hungary (*Fanfares* is to be compared to Bartók's *Six Dances in Bulgarian Rhythm*); the complex metrics of Balkan music and tuning; and the "Lament motive" of descending scales that is found in many recent works. This lament motive also resembles Transylvanian funeral laments.

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<sup>24</sup> Aimard, Ligeti *Works for Piano*, 11.

## CHAPTER 4

### POLYRHYTHM IN ETUDE *FANFARES*

*Fanfares* is one of the most frequently performed etudes among Ligeti's etudes. The perpetual ostinato, which is repeated 208 times with only octave transpositions, is the most distinct feature of this piece. The perpetual motion throughout the piece is reminiscent of Bartok's *Six Dances in Bulgarian Rhythm* (figure 4.1), in fact, in what appears to be a first sketch dated only two months before the premiere, Ligeti gives it the title *Bartoque*<sup>25</sup>[sic]. The *aksak*<sup>26</sup> character of the ostinato that combines with the melody of another part reveals both Ligeti's Hungarian influence and his obsession with polymetrics.

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<sup>25</sup> Richard Steinitz. *György Ligeti: Music of the Imagination*, (Boston Northeastern University Press, 2003), 288.

<sup>26</sup> For definition of *aksak*, see appendix C.



Figure 4.1: Bartók *Six Dances in Bulgarian Rhythm*, mm.1-8

#### 4.1 Ostinato, 3+2+3 and *pppppppp*

The ostinato in *Fanfares* is perhaps the most intriguing features of this piece.

Richard Steinitz describes the ostinato as follows:

“The ostinato comprises two identical ascending tetrachords (c, d, e, f and f#, g#, a#, b) an augmented fourth apart, whose tritonal axis is matched throughout the study by a balance of diatonic and chromatic ingredients, here favouring the diatonic and consonant.”<sup>27</sup>

The formal structure of triads and other traditional chords that Ligeti uses in his late compositions will be discussed later, however, the accentuation on the ostinato

<sup>27</sup> Steinitz, *Music of the Imagination*, 289.

confuses pianists and raises certain technical difficulties in executing the accented first, fourth, and sixth notes. The accented notes break down the expected grouping of two tetrachords, and the ostinato in the entire piece has a dynamic range from *pppppppp* to *ff*, a pattern which Ligeti indicated as articulated in a 3+2+3 pattern. Further technical difficulty of the ostinato comes in that the ostinato switches hands and is occasionally completed by two hands (for example, measure 158 and 177). Also, all of the ostinato must be played in a fast and machinelike steady tempo.

The composer marked under the ostinato, “*sempre legato, quasi senza pedale*”, suggesting that the ostinato should always be played with a legato touch, but the sound is made as if no pedal is being used. The musical character here requires clarity in sound and clear accentuation that emphasizes the 3+2+3 rhythm, which challenges performers to play legato lines in a swift tempo without any help from the pedal.

Fingering is an important issue, as proper fingering will help pianists to execute the accents and secure consistency. As opposed to the right hand which has only one possible fingering to play the ostinato, two different fingerings can be used in the left hand. Compare the following two fingerings of the left hand ostinato:



Figure 4.2.1: Ligeti Etude *Fanfares*, fingering A



Figure 4.2.2: Ligeti Etude *Fanfares*, fingering B

In figure 4.2.1, the hand shifts twice in one ascending scale and shifts again when connecting with the next scale. The advantage of this fingering is that the three notes (c, f, and g#) that have accents will be accented by the arm weight naturally as the hand shifts. However, the frequent shifting may reduce the speed and rhythmic vitality that the composer calls for.

Fingering B requires only once instance of finger crossing and therefore is beneficial when pursuing a quick speed. Regarding the three accented notes, the first

note c is accented easily with the shifting hand; and the second note f does not raise a problem as it is executed by the thumb. The third note g# is perhaps the most problematic one, as one can easily neglect the accents on this note. This task therefore requires careful concern on the third accented note.

#### 4.2 Dynamics and accentuations between ostinato and melody

There are several indications that the composer marked as footnotes in the score, and most of them are associated with dynamics and accentuations. Excluding the accentuations in the ostinato part, the accents found in the score are located on the initial tones of the phrases, so that the first tone of the phrase is emphasized to give the impression that it is the beginning of a bar (figure 4.4).





Figure 4.3: Ligeti Etude *Fanfares*, mm.1-8

The composer places barlines on the score to help with synchronization of the two hands, yet a problem occurs when pianists are overwhelmed by the complex rhythm and accidentally accent the end of the phrase as they reach the beginning of the bar at the first and the fourth phrases (see above example). To avoid accenting the end of the phrases or other places rather than the first dyad that composer asks for it, it is helpful to omit or replace barlines after the notes are completely learned by the pianist. This method could also apply to other etudes of his where polyrhythm is employed, for example, *Cordes à Vide* and *Automne à Varsovie*. The following version of the example omits all the barlines and clearly illustrates the original

concept that Ligeti had in mind:



Figure 4.4: Ligeti Etude *Fanfares* (without barlines)

Alternatively, it is also helpful to have the barlines replaced according to the right hand phrases:



Figure 4.5: Ligeti Etude *Fanfares* (barlines replaced)

Because the right hand melody is constantly distracted by the left hand

rhythmic pulse (or by the barlines) in the original score, the two above revised examples can serve as a visual aid to performers and also reveal the composer's thought—the first tone of every phrase is emphasized and the right hand dominates the phrases.

#### 4.3 First subject m.m.1—45, with fanfare sound

The first section starts at the beginning and continues until measure 45, where he introduces the sound of fanfare by using dyads with the length of quarter and dotted quarter notes (I call this fanfare melody the first subject). It represents a gentler style of a fanfare and foreshadows the fanfare blast in measure 63. The accentuation issues of the melodic line have been discussed previously, however, to keep the ostinato as steady as possible, it is important to pay attention at the points of switching hands. For example, the switch between m.m.9 and m.m.10 is where one could lose control of the tempo and accelerate.

The length of the phrases grows longer gradually as the phrases go on. Likewise, the dynamics of the melody increase, while the ostinato stays at *pp* for the whole section.

#### 4.4 Second subject m.m.46—62

Compared to the fanfare-like tones of the first subject, the second subject represents a completely different characteristic: it is a mysterious and comical gesture. It contrasts with the first subject in its dynamics, rhythm, and expression. The dynamics of the melody stay at *mp*, and the ostinato stays at *pp* through this whole section. Because of the similarities between the two parts both in dynamics (*mp* and *pp*) and rhythm (eighth notes), the two parts give the impression of competing with each other. In the treble part, the composer uses the interval of fourth and fifths very frequently (including augmented and diminished fifth), which contradicts the scales in the bass part. Two parts are blended with similar accentuation, presenting a quirky running gesture (figure 4.6).



Figure 4.6 Ligeti Etude *Fanfares*, mm.46-48

Measure 51 is a crucial point where the composer starts to use his favorite

ingredient: polyrhythm. Employing the same idea that he used in his first etude, *Désordre*, here Ligeti lengthens one eighth-note to a quarter-note, and the whole rhythmical pulse of the melodic line is altered. Compare the following two examples:



Figure 4.7.1: Ligeti Etude *Fanfares*, mm.51-52



Figure 4.7.2: Ligeti Etude *Fanfares*, mm.51-52

In figure 4.7.1, the rhythmical pulse is continued from the previous measures. On the other hand, in figure 4.7.2 (original score), c# is extended from an eighth-note to a quarter-note; therefore, the accents that follow in the melody are changed to an irregular pulse. It is strongly suggested that this passage be practiced with separate hands in the beginning learning stages. Ligeti plays pranks in measure 57 by marking *espressivo* and *molto espressivo* at measure 59, infusing a singing tone in this

breathless running passage.

#### 4.5 First subject m.m.63—87

This passage starts in measure 63 and returns to the regular rhythm and accentuation of the first subject. Slight changes occur as the melody in the right hand adds one note in each chord; on the other hand, when the melody shifts to the left hand at measure 75, one note is subtracted in each tone. The dynamic indication parallels the density of the tone (*ff* in the right hand melody and *pp* in the left hand melody), and as a result, the contrast between the two hands is made as one represents vigor and the other whispering sound. The dynamic contrasts need to be clearly distinguished between the melodic line (when it is in the right hand) and the ostinato.

#### 4.6 The combination of the two subjects m.m.88-171

Starting from measure 88, the texture gets more complex as the composer combines two subjects. The mixture of the two subjects in this long section (up to measure 171) becomes fully developed, as the composer utilizes various compositional techniques. Aside from the polyrhythm which turns into chaos, the echoing between measure 107 and measure 112 is another funny gesture (figure 4.10).

The composer uses frequent changes in both the register of the keyboard and the soft pedal, and as a result, creates the image of a quarrelling couple.



Figure 4.8: Ligeti Etude *Fanfares*, mm.105-112

Undoubtedly, with the frequent dynamic changes and the polyrhythm, this section requires the most pianistic technique. A pianist might feel clumsy in some passages, for example, the melody between measure 125 and 127 in the left hand. To overcome the difficulties of this passage, careful practice and hands separately are needed in order to ensure that the two hands are completely independent.

#### 4.7 The end section m.m.171—214

This end section is where the chaos and the tension release, and the clear

fanfare sound returns again. Before the end, the fanfare sound gradually extends its length from measure 187 to measure 199 and intensifies its strength by reaching the loudest dynamic of the piece *fffff*. It then connects to the coda section which starts at measure 202. Marked “*da lontano*” (from far away), this passage reaches the highest note of the keyboard and dies out towards the end of the piece.



## CHAPTER 5

### POSTMODERNISM IN *FANFARES* AND *CORDES Á VIDES*

#### 5.1 Ligeti's use of triads in *Fanfares*

This etude is perhaps played more often than other etudes by Ligeti because of its exceptional use of triads and other seventh chords that are more familiar to the listeners, as opposed to the chromatic and atonal styles that had dominated twentieth century Western music. The triads in Ligeti's late music have been discussed: "a remarkable feature of Ligeti's music dating from the late 1970s is the return of triads, seventh chords, and other traditional tertian harmonies."<sup>28</sup> This feature of using traditional harmonies is also seen in his other etudes *Arc-en-ciel* and *Cordes à vide*. Ligeti's softening of the *avant-garde* style from the 1970s onward raised the question of whether he is a postmodern composer. He claimed, "My rejection of *avant-garde* music also lays me open to attacks and accusations of being a postmodern composer. I

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<sup>28</sup> "Eric Drott. The Role of Triadic Harmony in Ligeti's Recent Music." *Music Analysis* 22, no.3 (2003): 283.

don't give a damn.”<sup>29</sup>

The traditional tonality in Ligeti's etudes is an important aspect of his late works, especially *Fanfares*, which includes a large number of triads. His compositional style changed several times, mirroring the background of his life: the early works contain folk material that shows the influence of Bartók and Zoltán Kodály (1882-1967), while the style changed when he fled to Vienna and escaped the restrictions of the communist regime. His relocation in Western Europe coincided with the time when serialism reached its height. Ligeti's compositions dating from the mid 1950s to 1960 reflect the serial method. However, he did not restrict himself to serialism: his composition *Artikulation* is an electronic piece that was written when he arrived at the Electronic Music Studio, Cologne. *Atmosphères* (1961) is an orchestra work in which he developed a style of chromatic cluster chords, oriented to texture and timbre, that he referred to as 'micropolyphony' (discussed in chapter 3).

From his *Requiem* (1963-5) onwards, Ligeti seemed to increase his use of octaves, moving against the musical trend of serialism. The use of octaves in his Cello Concerto (1966) is discussed in his conversation with Péter Várnai. In the conversation, he described his attitude towards serialism, as he looked beyond this

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*György Ligeti in Conversation with Péter Várnai, Josef Häusler, Claude Samuel and himself.* (London: Ernest Eulenburg Ltd 1983), 15.

twelve-tone system and digested the concept of it, and then created a system of his own:

“My general attitude not only in music but in all other areas of life is not to take anything for granted. When something is asserted and it sounds good my immediate reaction is to go below the surface to see what reality I find there.”<sup>30</sup>

Ligeti denied the intention of writing octaves on purpose. He explained that in the Cello Concerto, he was looking for a vast distance of sound at the end of the first movement where the deep notes of the double-bass double the harmonics of the cello. To support this viewpoint, he expounded on Schoenberg’s system:

“Schoenberg’s twelve-note system is such an attractive dogma, it eliminates the octave. According to Schoenberg reinforcing a note in the octave makes it too weighty; a duplicated note gives the impression that it is returning too early in the series of pitches. The Vienna serialists had a horror of major thirds, perfect fifths, of major and minor chords, of diminished sevenths. The reason for their aversion was that they felt these intervals had been worn out, depleted. From a stylistic point of view that is quite understandable. Serialists, Boulez in particular, observe the rule of shunning octaves. But what is that all about, I asked myself at one point; since I do not write twelve-note music, is it sensible for me to avoid octaves?”<sup>31</sup>

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<sup>30</sup> Ibid, 29.

<sup>31</sup> Ibid.

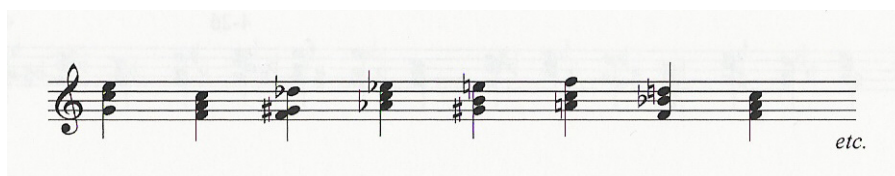
Although his denial of deviating from the trend of serialism or returning to the more traditional fashion is obvious, his recent compositions dating from the 1970s demonstrate a rediscovery of traditional harmonies, especially the use of triadic chords. *Fanfares*, for example, gives clear evidence of using triads and seventh chords. In *Fanfares*, The consistent eight-note ostinato in the left hand is the background of the melodic dyads in the right hand. The ostinato consists of two tetrachords: the first (c, d, e, f) and the transposed second tetrachord (f#, g#, a#, b), which has been discussed in chapter 4.

The melodic line combines with the ostinato part to generate a sequence of triads in the beginning of the piece. In the first phrase, four dyads in the right hand and the accent notes in the left hand coincide, forming trichords that in set theory are the set-class 3-11. The roles of the two hands reverse in the second phrase, while the left hand plays the melodic line and the right hand plays the ostinato, yet the pitch class 3-11 remains to be used in the phrase. Although the two phrases are in the same pitch class, in traditional harmony the first phrase contains only major triads and the second phrase contains only minor triads.

The third phrase starts in measure 23 and the fourth note is added, creating a new 4-26 tetrachord and 4-27 tetrachord at measure 24. Later, 3-10 trichords (measure

31 and 32) in the fourth phrase and 4-20 tetrachords in the fifth (measure 37) are employed. In fact, these chords in the perspective of traditional harmonic practice are only a series of triads and seventh chords: major triads in phrase one and minor triads in phrase two, the tonality switches back to major triads in the phrase three, and then introduces two new tetrachords 4-26 and 4-27, which complicate the tonality. (figure 5.1).

Phrase 1 (all major triads):



Phrase 2 (all minor triads):



Phrase (two seventh chords are added):



Figure 5.1 Ligeti's use of triads in *Fanfares*

In phrase four, the melodic line again moves to the lower part. More chordal variation is added, including 3-10 in measure 31 and 32, and 4-20 in measure 37 and 38. Ligeti developed the beginning section by increasing the harmonic intensity, length, and dynamics. The dynamics increase when the texture gets thicker and more complicated (measure 18, *mf*, and measure 37, *f*). This first subject of these five-phrases is an example of the composer's humor which contrasts an unvarying ostinato in one hand with the intriguing sequence of dyads, triads, and tetrachords in the other hand.

In looking at the melodic stream, one finds that the length expands from the first phrase to the fifth phrase along with the increase of tonal intensity. If we divide phrase one into segments according to the slur, each segment has four dyads. The following table illustrates the progress of the length in phrases. The numbers denote the rhythmic value of each dyad according to the unit of eighth-note (without the value of all the rests):

Phrase 1, m.m.1-8 (RH, <i>mp</i> )	3+2+3+3	3+3+2+3	2+3+3+2	3+2+3+3
Phrase 2, m.m.10-17 (LH, <i>mp</i> )	2+3+3+2	3+2+3+3	3+3+2+3	2+3+3+2+3+3
Phrase 3, m.m.18-26 (RH, <i>mf</i> )	3+3+2+3	2+3+3+2	3+2+3+3+2	3+2+3+3+2+3+3
Phrase 4, m.m.27-36 (LH, <i>mf</i> )	3+2+3+3	3+3+2+3	2+3+3+2+3+3	3+3+2+3+3+2+3+3+2
Phrase 5, m.m.37-46 (RH, <i>f</i> )	2+3+3+2	3+2+3+3	3+3+2+3+3+2	3+2+3+3+2+3+3+2+3

Table 5.1: Comparison of the length of the phrases of Ligeti Etude *Fanfares*

The above table provides an outline of the beginning of the piece and demonstrates Ligeti's thought and strategy. This seemingly uneven melodic stream is in fact built with a regular circle of rhythm if the rests are included. The rhythm of the first melodic unit is 3+2+3+3+2, and the second unit 3+3+2+3+3, the third 2+3+3+2+3, and the fourth unit repeats the first unit 3+2+3+3+2 to begin another circle.

However, the evenness of the repetitive ostinato is impaired by the various lengths of the rests in between segments, and results in a rhythmic/metric dissonance (as described by Eric Drott). Contrasting with the rhythmic conflicts, the tonal

harmonies ease up the disorder. Yet, the harmonies are not entirely consonant, as the ostinato consists of two of the same tetrachords and is not included in any tonal scales of Western traditional harmony. It therefore plays a role of dissonance as a contrast to the tonality of the other part. The essence of this piece is built on the consonance/dissonance conflicts between the two parts that catch the listener's ear. *Fanfares* includes the most obvious signs of Ligeti returning to traditional harmonic practice in his late years. By including some traditional tonality, Ligeti surely made *Fanfares* accessible to his audience and enabled this work to appear in concert programs. Yet he does not lessen the temperament of modernism, and as in *Fanfares*, his special compositional style of complex rhythm and mathematics are found; as an etude, the work challenges the pianist's technique of total independence between two hands.

## 5.2 Ligeti's approach in *Cordes á vides*

Ligeti's second, *Étude Cordes á vides*, is another example that demonstrates his application of traditional harmonies. Composed in 1985, this etude is dedicated to Pierre Boulez. It is marked *Andantino con moto, molto tenero* (Andantino with motion, very tender) and imitates the sound of a string instrument, in which the bow gently



floats on the strings, making an intimate and tender sound. *Cordes á vides* implies the interval of an open fifth which represents the open strings of string instruments. The etude starts with ongoing eighth-notes that are based on the interval of perfect fifth.

*Cordes á vides* employs the same idea that appears in *Fanfares* and *Désordre*, combining different accentuation in the two hands, fashioning the image of rhythmical chaos. In the left hand, each segment is seven eighth-notes long, and this figure happens repeatedly (the rests in the beginning are included in the first segment) until measure 9. The length of these regular segments extends to eight eighth-notes in measure 10, and then again increases to ten eighth notes in measure 11. Contrastingly, the length of the right hand segments has irregular patterns that vary from 4 to 7 eighth-notes (6, 6, 4, 7, 5, 6, 4, 6, 7). Ligeti adjusted the length of the right hand segments in order to generate particular harmonies along with the left hand phrases.

In taking a closer look at the left hand, it becomes apparent that in each of the segments, the arpeggiated notes are all formed in perfect fifth, in which the first six notes descend and the last note leaps up. The last note functions as a bridge to help connect to the next segment smoothly. The right hand also consists of all perfect fifths with a crab-like movement of the hand. The beginning is marked *dolce espress.*, *sempre legatiss.* (tender, expressive, and always very connected) and *con ped.* (with

much pedal) and requires a very intimate and gentle touch. It is reminiscent of the beginning of Debussy's Etude *Pour les Arpèges Composés* (figure 5.2), which also includes a gentle pace and arpeggiated passages throughout the piece in both hands.



Figure 5.2: Debussy Etude *Pour les Arpèges Composés*, mm.1-2

The consistent eighth notes in the beginning of Ligeti's *Cordes à vides* are interrupted in measure 11 by longer dyads. The dyads of the right hand represent the sound of open strings (also occurring in measure 13 and 14). In addition, the eighth-note triplets are added, and as a result, the hemiola effect is generated. Later, the density of the rhythm increases, as the eighth-notes/eighth-note triplets are compressed gradually into sixteenth-note triplets and thirty-second notes towards the end. Ligeti marked *poco a poco stringendo* (accelerate little by little), creating the tension towards the climax in measure 29.

In addition to using the perfect fifth and forming a climax that symbolizes

the vocabulary of traditional Western music, this etude also includes a large number of seventh chords. Analyzed by Eric Drott<sup>32</sup>, the following example illustrates the harmonies in the first four measure of this etude, in which two voices are formed by a series of imbricated seventh chords. The harmonic consonance of *Cordes á vides* enables the pianist to convey the character of intimacy which the composer calls for. Likewise, in *Fanfares* the harmonies make it easier for the pianist to imitate the sound of trumpet.

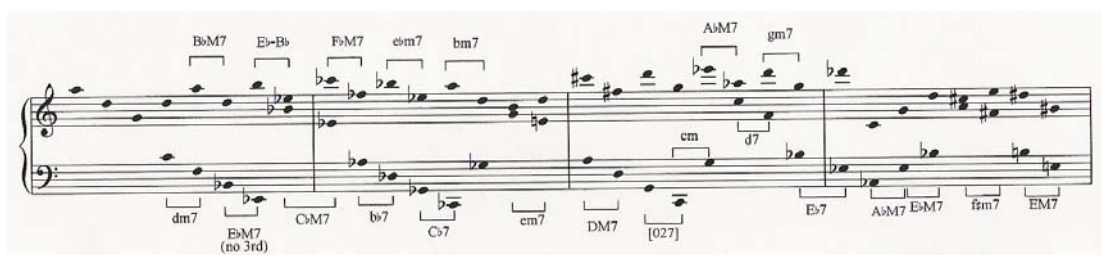


Figure 5.3 Seventh Chords of Ligeti Etude *Cordes á vides*

<sup>32</sup> Drott, The Role of Triadic Harmony.

## CHAPTER 6

### *ARC-EN-CIEL* AND BILL EVANS

The most distinctive character of Ligeti's fifth etude *Arc-en-ciel* is its jazz character. Ligeti marked "*Andante con eleganza, with swing*" at the beginning of the piece and suggests that this etude be played in a relaxed tempo and with a gentle touch, like the music of jazz pianist Bill Evans.

Because of Ligeti's reference to the style of Evans, some pianists included pieces by Evans in their program along with *Arc-en-ciel*, for example, pianists Michael Arnowitt and Andrew Zolinsky both gave recitals of Ligeti's etudes, and both included Evans's music. In fact, Evans studied classical piano when he was young, and his classical music background enhanced his pianistic technique and other aspects in his jazz improvisation that will be discussed in the following paragraph. He brought an unusual harmonic idiom to jazz, among them, his distinctive voicing and rootless chords.

## 6.1 Evan's voicing, harmonic approach, and other features

Evans's innovative voicing creates exquisite sounds and has influenced many jazz pianists. He did not say much about jazz theory, but expressed his thought simply through his playing. He employed innovative voicings based on his classical training. This includes his sensitivity in differentiating tone qualities between voices, controlling the phrases of contrapuntal lines, and his experiments in altering melodies. Most important, his voicing, tone quality, and harmonies are reminiscent of several classical composers including Debussy and Ravel, with something like Brahms's melodic lines on the left hand, and an infusion of bird sounds similar to Olivier Messiaen (1908-1992)'s music.

The following figures illustrate simplified voicing of Evans that is mentioned in Mehegan's book. Figure 6.1.1 shows his voicing with left-hand bass for a C major II-V-I progression. Contrastingly, in figure 6.1.2 the roots are removed, and the third note from the bottom is moved to the top (taking the first chord as an example, the A is moved one octave higher in figure 6.1.2). This new configuration eliminates the use of the middle finger, and creates an open sound which was new to jazz music.

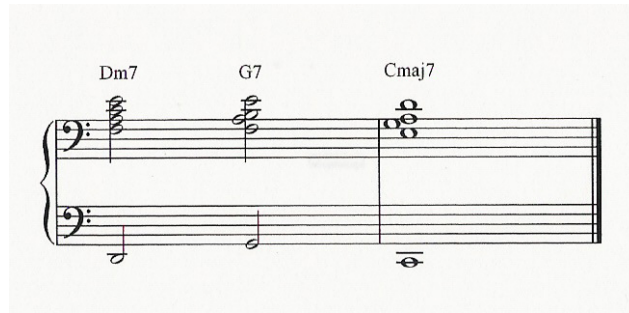


Figure 6.1.1: Evans's harmonic progression

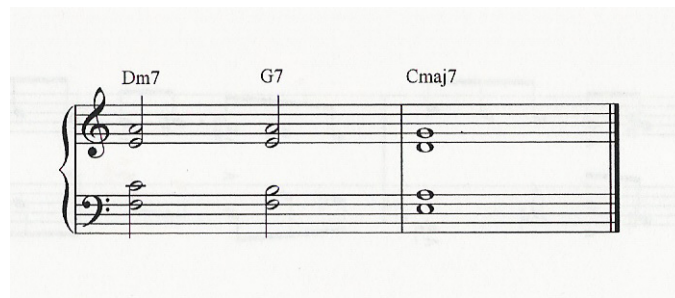


Figure 6.1.2: Evans's harmonic progression (root notes moved to top)

Although the rootless sound is not obvious in *Arc-en-ciel*, the harmonies in *Arc-en-ciel* still reflect Evans's other aspect, since most of the time Ligeti stays in a higher position and suggests elegant gestures. Also, four contrapuntal lines are laid out clearly. However, like the other Ligeti etudes that have been mentioned, the ingredient of polyrhythm is also applied in this etude and generates greater complexity of the texture than in Evans's music, which however makes greater demands in executing *swing* rhythms. Although Evans occasionally adds polyrhythm in his music, it is less complicated than Ligeti's.

The other important feature of Evans's music is that he aims for simplicity, as opposed to most other jazz musicians of his time who write with heavier textures. In the classic album *Kind of Blue*, which he recorded in New York (1959), as a member of Miles Davis's quartet, Evans wrote the liner notes: "This is a Japanese visual art in which the artist is forced to be spontaneous. He must paint on a thin stretched parchment with a special brush and black water paint in such a way that an unnatural or interrupted stroke will destroy the line or break through the parchment. Erasures or changes are impossible. These artists must practice a particular discipline that of allowing the idea to express itself in communication with their hands in such a direct way that deliberation cannot interfere. The resulting pictures lack the complex composition and textures of ordinary painting..."<sup>33</sup>.

## 6.2 Arc-en-ciel and jazz

Although some quasi-jazz harmonies can be found in the piece, the jazz element is mainly in the rhythm. Ligeti marked "*fluctuating freely around the average tempo, as in jazz*" in the beginning. This etude streams with consecutive sixteenth notes in four different types of rhythm, two in the right hand and two in the left hand. Subdivision is provided that divides a measure in the treble part into three while the

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<sup>33</sup> Miles Davis. *Kind of Blue*. Columbia CK 64935, 1997.

bass part is divided into two (figure 6.2). This element of the twelve-beat groups divided into 3:4 patterns is taken from the African polyrhythm that Arom called “asymmetrical internal structures” (also see chapter 3).



Figure 6.2: Ligeti Etude *Arc-en-ciel*, mm.1-2

### 6.3 Lament motive

The other component of this etude is the lament motive that also occurs in the etude *Automne à Varsovie*. The lament motive consists of descending chromatic lines that are often associated with expressions of grief and sadness (also see appendix A). The following figure illustrates the first three phrases in the top voice of *Arc-en-ciel*.





Figure 6.3 Lament motive in Ligeti Etude *Arc-en-ciel*

#### 6.4 Swing vs. rubato

Compared to other classical compositions with jazz elements, Ligeti's *Arc-en-ciel*, seems to cover some of the jazz character with non-jazz elements, for example the complex polyrhythm. Therefore, the jazz or swing features are often not conveyed by classical pianists, who often interpret the rhythm in terms of “*rubato*” instead of “swing”. Compared to most of Ligeti's etudes, however, this piece contrasts other etudes as it requires a gentler tempo; therefore, it challenges pianists in a different approach of polyrhythm along with the swing rhythm of Evans.

To understand the structure of this etude, I divide it into three sections mainly according to the rhythm and intensity. The A section begins this piece with elegance. Of the four voices, the inner voices provide steady beats while the outer voices are accented and represent the “melody”. The broken chords in the right hand consist of large numbers of minor chords, while the ones in the right hand contain

some major chords (figure 6.4).

A	mm.1-6
B	mm.9-15
C	mm.16-24

Table 6.1: 3 Sections of Ligeti Etude *Arc-en-ciel*

Figure 6.4: Ligeti Etude *Arc-en-ciel*, mm.1-2

As in the etude *Cordes à vide*, the rhythm grows gradually in intensity. The piece begins with consistent sixteenth-notes. Starting from measure 5, quintuplets are added, sextuplets are added in measure 7 and 8, and then section A fades out with a quick descending chromatic scale. Not too long after the B section starts, the tension increases drastically, leading to the climax of the entire etude at measure 11. The

climax here is marked by a *fff*, the loudest sound of this piece. The dynamics here combine with the dissonance of the cluster chords to completely contrast with the elegance of the beginning.

Section C starts with a *subito p* with a *meno mosso* marking, the rhythm is simpler and the temperament seems to recall the swing feeling of the beginning. The piece is constructed in a quasi-ternary form, like a sketch of a rainbow in the sky. In the end, the sound ceases with an ascending chromatic scale, which parallels the descending lament motive of the beginning. The piece concludes in a resigned manner, with one measure of silence.

#### 6.5 Rhythmical practice of *Arc-en-ciel*

This etude does not require agility of finger movement like most of Ligeti's other etudes. However, it still involves complicated polyrhythm and therefore leaves itself open to analysis. Compared to Ligeti's etudes in fast tempos, it is difficult to hear the polyrhythm in this slow movement piece. As in other etudes, Ligeti carefully indicates the accents. The following figure offers a close look at the rhythm.

The image displays musical notation for the first eight measures of Ligeti's Etude Arc-en-ciel. It is divided into two sections: 'R.H. rhythm' (Right Hand) and 'L.H. rhythm' (Left Hand).

**R.H. rhythm:** This section consists of three staves of music in treble clef, 3/4 time. The first staff shows measures 1-3 with fingerings 9, 11, 5, 9, 1, 7, 9, 12 and accents (>) above notes 2, 4, 6, 8, 10, 12, 2, 4, 6, 8, 10, 12. The second staff shows measures 4-6 with fingerings 3, 6, 9, 12, 3, 5, 7, 9, 1, 3, 5, 7, 9, 11 and accents (>) above notes 2, 4, 6, 8, 10, 12, 2, 4, 6, 8, 10, 12. The third staff shows measures 7-8 with fingerings 1, 5, 6, 6, 6, 3 and accents (>) above notes 2, 4, 6, 8, 10, 12, 2, 4, 6, 8, 10, 12.

**L.H. rhythm:** This section consists of one staff of music in bass clef, 6/8 time. It shows measures 1-4 with fingerings 1, 7, 1, 7 and accents (>) above notes 2, 4, 6, 8, 10, 12, 2, 4, 6, 8, 10, 12. The notation ends with 'etc.'.

Figure 6.5: Accentuation in Ligeti Etude *Arc-en-ciel*, mm.1-8

The accentuation in the left hand part continues the same accentuation, and explains the role of the bass: providing steady beats throughout the piece (with few exceptions) as two per measure. Contrastingly, the right hand part begins with accents in different locations and builds the intensity by adding more accents. The intensity of the accents decreases towards the end and fades out in a tender and elegant gesture.

Ligeti includes sub-barlines to help in accenting the notes (figure 6.4). As

can be seen in table 6.2, most of the accents are located on beat 1, beat 5, and beat 9;

none of the accents are on beat 2 or 10:

beat of accent (treble part)	quantity
1	14
2	0
3	8
4	0
5	13
6	5
7	7
8	1
9	19
10	0
11	7
12	5

Table 6.2: Quantity of accents on each beat

Beats 1, 5, and 9 are emphasized throughout the piece, and this steady rhythm in the right hand divides the measures into three. The absence of accents on beat 2 and 10 reduces confusion over the swing or hemiola rhythm. In order to execute the composer's swing rhythm, the pianist should always have this basic rhythm in mind and not be confused or too emphatic on the accents which are not on beats 1, 5, or 9. It is helpful to practice accenting only beats 1, 5, and 9 in the

beginning stages. When the foundation of the pulse is established, add other accents with caution. Also, practicing at a faster tempo may help to feel the swing and polyrhythm.

## CHAPTER 7

### CONCLUSION

Since the set of Bartók's piano etudes Op.18 (1920), the genre etude seems to have dropped from sight, although there are still composers who attempted to explore this genre. They composed etudes by including other characteristics, for example the H.308 Etude and Polka (1945) of Bohuslav Martinu (1890-1959) and Etude Fantasy (1976) of John Corigliano (b.1938). Some composers explore this genre by extending composing technique, for example, Mirror Etudes Op.143 by Vincent Persichetti (1915-1987) consist of studies in which two hands are reflective, like a mirror. However, none of these etudes have drawn as much attention as Ligeti's piano etudes have.

Most of Ligeti's etudes embody the spirit of rhythmic vitality. They are innovative, humorous, and challenging to the pianist both physically and mentally. *Fanfares* offers a good example of these characteristics. Combining them with triadic harmony, this etude deserves to be popular with audiences. *Arc-en-ciel*, on the other

hand, presents an image by sketching a rainbow through an ingenious musical structure. Ingredients of this etude include jazz, hemiola effect, and the lament motive. Both etudes apply the most important material: polyrhythm, which has been examined in this document.

In order to achieve a sublime performance of these etudes, mental practice is as important as physical one. The main pianistic technique of these etudes is to combine these seemingly disparate voices and rhythms into one, yet in a way that the layers still maintain their individuality. These three sets of etudes have unfolded a new style of piano etudes and established a sound on the piano that has never been imagined before.



## APPENDIX A

### LAMENT MOTIVE IN LIGETI'S MUSIC

The lament motive appears in Ligeti's late compositions including Trio for Violin, Horn and Piano, Piano Concerto and Piano Etudes. "Lament motive" is an expression of grief that elaborates upon the most ancient of musical gestures, the descending second or "sigh motive" of the Baroque *Affektenlehre*. Steinitz described that the basic characteristics of Lament motive in Ligeti's recent music includes:

1. It is a three-phrase melody of which the third is longer in duration.
2. Each phrase mainly descends in semitones, but with occasional upward leaps.
3. Each phrase ends lower and/or starts higher than its predecessor.
4. Notes of greater expressive significance are often intensified harmonically by major sevenths.
5. Rhythmically, the phrases present a basic value which is doubled or tripled at important points.

## APPENDIX B

### DEFINITION OF AKSAK

*Aksak*, defined by Encyclopædia Britannica, is Bulgarian Rhythm, a variety of musical metre characterized by combinations of unequal units of beats, such as 2 plus 3 or 3 plus 2 and their extensions. Thus 3 + 3 + 2, or 2 + 3 + 3, produces 8/8 units quite unlike the 4/4 common to Western music. As non-Western music, as well as Eastern European folk music, began to exert influence in the West, *aksak* rhythms found their way into the works of a number of 20th-century composers of Western art music, Bartók and Stravinsky foremost among them. The word *aksak* was borrowed from Turkish musical theory to replace the phrase “Bulgarian rhythms” that had been applied earlier to such rhythms by Bartók and by the Romanian ethnomusicologist Constantin Brailoiu.

## APPENDIX C

### LIST OF LIGETI'S *ÉTUDES POUR PIANO*

#### Premier livre, 1986

- Étude 1: Désordre
- Étude 2: Cordes à vide
- Étude 3: Touches bloquées
- Étude 4: Fanfares
- Étude 5: Arc-en-ciel
- Étude 6: Automne à Varsovie

#### Deuxième livre, 1989-94

- Étude 7: Galamb borong
- Étude 8: Fém
- Étude 9: Vertige
- Étude 10: Der Zauberlehring
- Étude 11: En suspens
- Étude 12: Entrelacs
- Étude 13: L'escalier du diable
- Étude 14: Coloana infinita

#### Troisième livre, 1996–2001

- Étude 15: White on White
- Étude 16: Pour Irina
- Étude 17: A bout de soufflé
- Étude 18: Canon

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