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Melodic Characterization and Motivic Segmentation in Chopin's Études

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ABSTRACT

A melodic analysis reveals observations that disclose the stylistic features and compositional language of a musical work. Depending on the era, music theory provides different types of analytical approaches to working with melodies. The melodic assessments of Chopin's études unveil unique pianistic approaches, which require performers to enhance technical expertise and create unique interpretations through artistry and musicianship. This research presents analytical and empirical methods to construe the melodies hidden in Chopin's études through an emphasis on the composer's use of musical characterization and motivic expansion.

1 Introduction

Throughout his short life, Frederic Chopin produced an individualistic musical language and influenced many composers in Romantic and post-Romantic eras [1]. Except for a few works, Chopin wrote music predominantly for piano. His works, prominent in both analytical and performative spheres, have a poetic character that produces musical vigour, which motions through the melodies reinforced by the harmonic support. Emphasizing on a set of works in a particular style or genre allows theorists to fully dissect the analytical nature of the entire set of compositions. Chopin composed a total of twenty-seven piano études, consisting of Op. 10, Op. 25, and *Trois Nouvelles Études*. One of the unique features of Chopin's études – with the prime purpose to exercise a technique and enhance technical and artistic elements of one's performances – is the appearance of such works in live concert settings throughout performance practice history. The technical proficiency is merely part of the holistic performance experience that pianists must face when working on these pieces. An analytical perspective of Chopin's études allows one to see the emotional, interpretational, and structural nature of the twenty-seven studies [2]. The études define the unity among pianistic technique, virtuosity, and artistic imagery, all while preserving the sense of Romantic lyricism. Chopin's poetics at the keyboard stretch beyond the genre of études, yet it is in these works that pianists use their technical abilities to define a musical plot.

This study focuses on structuring and understanding the Chopinesque approach to musically depicting a melody. The use of Schenkerian theories along the empirical investigations will involve the practice of interdisciplinary fields of music analysis and mathematics to analyse the motivic nature of Chopin's phrases. The methodologies used in this research outline the melodic structure by focusing primarily on thematic material. This paper will define the occurring analytical phenomena through the examples of Op. 10 Nos. 1, 2, 4, and 12, and Op. 25 No. 2. Each étude offers its own set of musical characteristics, which allow pianists to shape phrases in distinct interpretational manners. The mix of analytical and empirical analyses presents an opportunity to view the form and the constructional approach that Chopin chose for these works. Pedagogically, such a set of analyses will allow students to view Chopinesque melodies as a functioning component of each work's coherence. The motivic analyses will likewise shed light on the compositional choices in regards to primary thematic material.

2 The Fundamental Line and Melody

The subdivision of melodies generates musical building blocks that function in the context of musical form. The expansion of motives develops melodies, which composers proceed to combine with other components of music. Analytical perspectives reveal data based on the applicability of particular theories, often amalgamating the notions of melody, harmony, and counterpoint. At the same time, the stances of performance practice and musicology define the interpretative and historical information of the composers, their works, and stylistic surrounding. Music history is organic in the sense that it contains no borders as to what composers envision, and the numerous sources of influence that composers engulf turn the study of music history into a process rather than a pure academic subject [3].

Schenker's approach to separate a piece of music into three layers – the background, the middleground, and the foreground – allows one to see the skeleton of the composition, focusing on the fundamental lines and harmonic structures that generate voice leadings [4]. The melodic segmentation reveals the contour patterns that characterize the melodies. The *Urlinie*, the melody, indicates musical motion through its endeavour towards the tonic [5]. Chopin develops the lyricism of his melodies through the elaborations of the *Ursatz*, the fundamental structure, which, along with the *Bassbrechung*, generates unity and coherence [6]. Chopin's Étude Op. 10 No. 5 in G♭ major is in A-B-A` form, as every other étude of the set. The *Black Key Étude* is a symmetrical composition, where the middle section is exactly twice as long as the opening section.

Figure 1 presents Schenker's analysis of the work's Urlinie, traveling in a descending ^3-^2-^1 motion, where the work's symmetrical structure is engendered by the double unfolding of the Bassbrechung underneath the fundamental line, and the path that the Urlinie takes resembles the three-part song form, as each of the scale degrees in the fundamental line represents a section [7]. The G♭ major chordal form establishes the ^3 while the descent to ^2 occurs on V of the Bassbrechung at m. 16 and continues until the end of m. 48. Finally, the ^3 in m. 49 descends stepwise towards the ^1. The opening section begins on the ^3, the middle section initiates the ^2, and the final section closes with ^3, ^2, and ^1. In the second graph of Figure 1, Schenker reveals how the neighbouring tone motion embellishes the G♭-major structure:

B♭ – A♭ – B♭;
G♭ – F – G♭;
D♭ – E♭ – D♮.

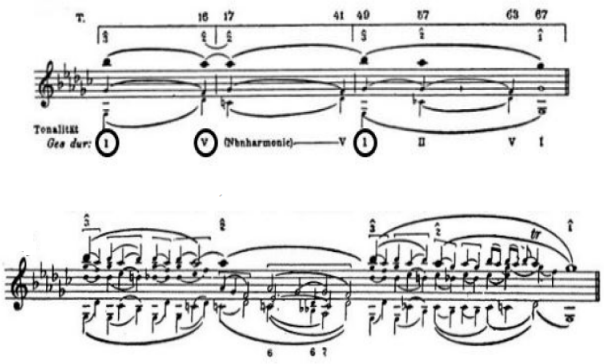

Figure 1. Schenkerian analysis, Chopin, Op. 10 No.

3 Musical Characterization

In Chopin's compositional repertoire, musical characterization – an accompanimental texture that provides the backdrop for the melodic line and the bass of each étude – is a part of a compositional process, encircled by the primary thematic material. The thematic content of the melody expands the structure of the étude. Multiple musical subjects carry the lyrical effect that reflects the song-like approach to Chopin's compositional process. Musical characterization construes the Chopin's progression of poetic description. The three primary techniques that Chopin employs in these pianistic studies are arpeggiation, chromaticism, and linear intervallic patterns, often creating motivic parallelisms that link the musical backdrops to the overall form.

Op. 10 No. 1 focuses on arpeggiation. The steady rhythmic balance, the bright sounds of the arpeggiated themes, and the rapid ascents and descends in the right hand characterize the arpeggiated patterns that support Chopin's compositional strategies. In Figure 2, one can observe the right hand's musical characterization against the bass support in mm. 1-4 [8]. Chopin presents the left hand's bass accompaniment, whole notes, against the right hand's broken arpeggios, sixteenth notes. Substantial wrist control with an appropriate fingering pattern and accurate elbow extension are necessary for the proper execution of the arpeggios [9].

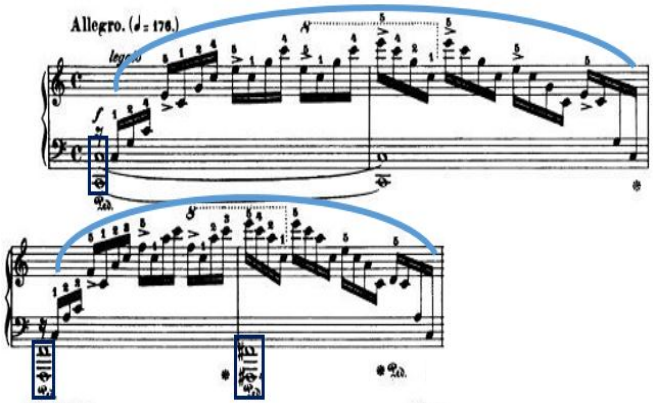

Figure 2. Chopin, Étude Op. 10 No. 1, mm. 1-4.

While the example below shows how the arpeggiation provides a tonal way to fill in and cover the musical subjects, chromaticism presents Chopin with a chance to incorporate dissonance and tension between harmonies, as seen in mm. 1-2 of Étude No. 2. In Figure 3, an ascending characterization in the right hand covers over the left hand's chordal support. Op. 10 No. 2 contains three musical layers: the chromatic melodic line, the left hand's bass and chordal outline, and the auxiliary notes in the right hand, which support the left hand's harmonies. It is possible to derive four primary notes in both measures of the right hand by looking at the first sixteenth note of every beat in the ascending chromatic run. The second beat of the opening measure begins on C♯, which contradicts the A minor tonic key of this étude, hence providing a dissonant harmonic verticality.

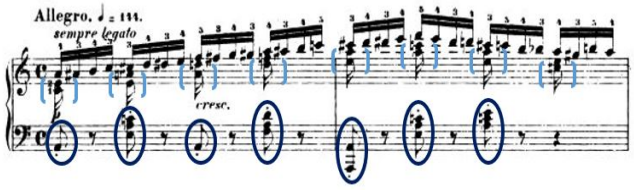

Figure 3. Chopin, Étude Op. 10 No. 2, mm. 1-2.

Figure 4 is another instance of chromaticism and Chopin's abilities to paint a melody musically. The example of hidden chromaticism occurs in mm. 25-26 of the *Revolutionary Étude*, since no direct chromatic runs exist. As seen in the fourth example, the combination of the first sixteenth note of beats one and three in the left hand from mm. 25-26 generates an ascending hidden chromatic scale, resolving to note F in m. 27.

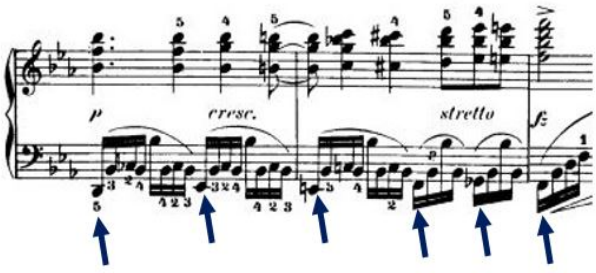

Figure 4. Chopin, Étude Op. 10 No. 12, mm. 25-26.

In linear patterns, the harmonies follow a particular sequential structure. Figure 5 presents an instance of linear patterns in mm. 1-4 of Chopin's Étude No. 4. The opening four measures of the étude contain a total of three patterns. In m. 1, the first four sixteenth notes in the right hand serve as the initial subgroup of the linear pattern. The next three groups in the first measure follow the identical structure and ascend upward. A similar concept applies to the characterization in the right hand of m. 2, although Chopin only incorporates three of the four notes; in every instance, the fourth note of each group is a C♯. The linear pattern in m. 3 contains two significant qualities. First, an interval of a second is created from the second and the fourth notes of each of the four groups in the right hand. Second, the third note of each group is a part of the descent from E to B♯, before resolving to the tonic in m. 4.

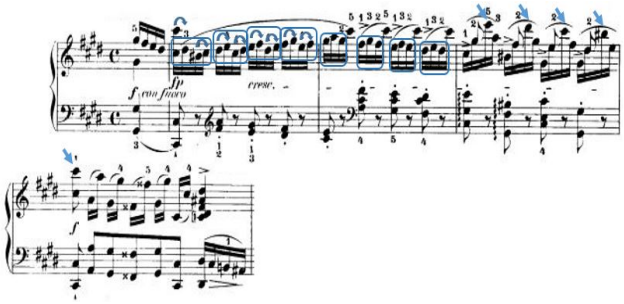

Figure 5. Chopin, Étude Op. 10 No. 4, mm. 1-4.

For Chopin, musical characterization is essential in order to provide a poetic metaphor, a unique quality that turns the études into concert performance music. Chopin, being proclaimed as a musical poet, uses three main techniques of musical characterization. Musical characterization is a type of ornamentation that decorates and embellishes the subjects – a trait that allows Chopin's études to stand out from other works of a similar genre. Arpeggiation, chromaticism, and linear patterns all serve a significant role in illustrating and distinguishing the subjects – the building blocks of étude's melodies.

4 Defining the Melody

Previous examples showed direct instances of musical characterization in the context of segmenting the melodies. In previous examples, there were prolonged instances of arpeggiation, chromaticism, or linear patterns. Melodic analysis reveals the type of technique that Chopin intended for the pianist to practice in each étude. In some of the works, however, the composer uses an indirect combination of the three techniques. Furthermore, computation analysis is a more suitable alternative for the melodic understanding of particular works, as in the case of Chopin's Op. 25 No. 2. There are three unique features of Op. 25 No. 2. First, Chopin applies *perpetuum mobile* for right and left hands. As shown in Figure 6, there is a continuous stream of notes in both hands, presenting technical challenges for the performer.

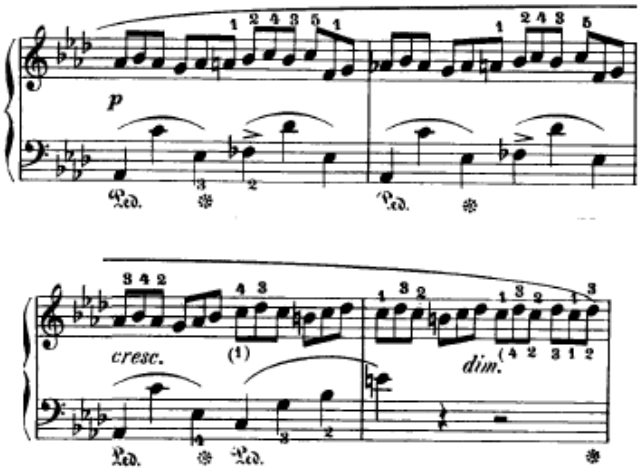

Figure 6. Chopin, Étude Op. 25 No. 2, mm. 16-19.

Second, Chopin uses the triplets to create a particular rhythmic structure, where the right hand, the melody, contains four sets of eighth-note triplets in each measure, while the left hand, the harmony, contains two sets of quarter-note triplets in each measure. While such a phenomenon is evident from an analytical standpoint, it is in the pianist's best interests to avoid revealing it in order to carry a smooth and elegant performance.

Third, Chopin shapes the curvature of the melody's harmonic support through the use of short slurs. Figure 7 shows the anacrusis and the opening three measures of the work with the initial melody in the right hand and a series of short musical segments in the left hand, amalgamating the right hand's primary thematic material with the left hand's harmonic support, a pattern that continues throughout the entire composition [10]. Emphasizing the musically-slurred melody is an instance of both technical and interpretational complexities that a pianist faces during the performance [11].

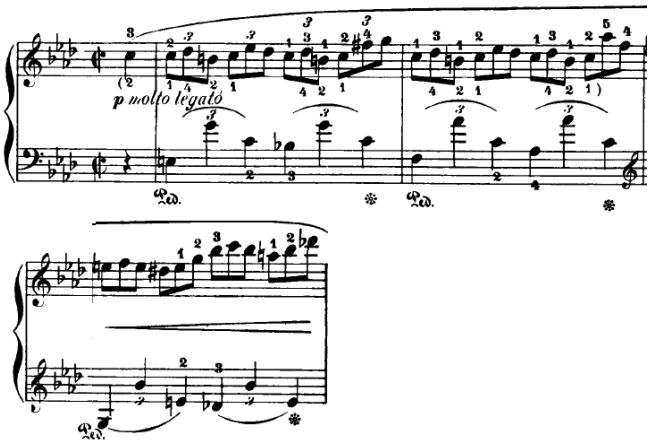

Figure 7. Chopin, Étude Op. 25 No. 2, mm. 1-3.

The use of perpetuum mobile, triplets, and phrasal development through the means of slurs define the melodic component of Op. 25 No. 2. These features are prominent in the construction of the work's melodic skeleton, allowing Chopin to make some of the exclusive compositional choices not seen in his other works. In terms of form, the A-section spans for thirty-six measures, as seen in mm. 1-36, the B-section spans for fourteen measures, as seen in mm. 37-50, and the A`-section spans for nineteen measures, as seen in mm. 51-69. Each measure contains four groups of eighth-note triplets in the right hand against two groups of quarter-note triplets in the left hand. The two sets of triplets in the right hand, combining for a total of six notes and spanning for a half a measure, will be represented as a motive *m*. Therefore, each measure is a combination of 2*m* that generates twelve notes in the melody of each such measure. These can likewise be divided into four partial motives of three notes, where notes #1-3 and #7-9 will be defined as m_1, and notes #4-6 and #10-12 will be defined as m_2, hence $m = m_1 + m_2$. Therefore, m_1 denotes a partial motive occurring on the strong beats of each measure, such as the first and the third beats, while m_2 symbolizes a partial motive occurring on the weak beats of each measure, such as the second and the fourth beats. Figure 8 shows a sample m_x analysis of mm. 4-7, where each m_1 component generates a resolution towards an m_2. Each measure consists of two sets of m_1 and m_2, while each hyper-measure consists of four sets of m_1:m_2 resolutions.

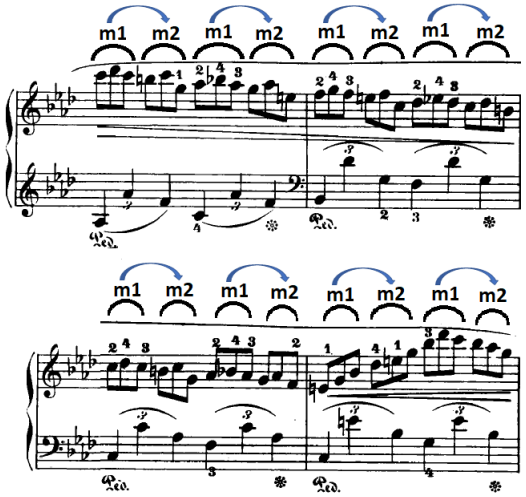

Figure 8. Chopin, Étude Op. 25 No. 2, mm. 4-7.

The finale of Op. 25 No. 2 in mm. 68-69 of the composition does not structure in a tantamount m_1-m_2-based theory and, therefore, is excluded from the analysis, as its function is to conclude the melodic expansion and to arrive at the final cadence. Hence a total of sixty-seven measures of primary melodic material are utilized. The motion from m_1 to m_2 is of most significance in this study. The direction of each partial motive impacts the flow and the construction of the entire work since the compositional tactics outlined by Chopin in the melody are likewise carefully supported by the harmony in the left hand. The $2m_x$ of each measure generates a total of 134(m_1) and 134(m_2), yet this étude merely contains 26 unique m_1 and 42 unique m_2 values due to a high frequency of reinstated m_x. Table 1 presents the data with the four most common m_1, its respective resolutions to m_2, and the exact locations of such occurrences throughout the étude.

Table 1. The four most common resolutions in Chopin's Étude Op. 25 No. 2.

[C-D♭-B]	[C-E♭-D♭]	m. 1; m. 2; m. 9; m. 10; m. 20; m. 21; m. 28; m. 29; m. 51; m. 52; m. 59; m. 60
	[C-F#-G]	m. 1; m. 9; m. 20; m. 28; m. 51; m. 59
	[C-A♭-F]	m. 2; m. 10; m. 21; m. 29; m. 52; m. 60
	[C-A♭-B♭]	m. 64
[C-D♭-C]	[B-C-G]	m. 4; m. 6; m. 23; m. 25; m. 43; m. 54; m. 56
	[B-C-D♭]	m. 18; m. 19; m. 37; m. 49; m. 50
	[D♭-G-A]	m. 38; m. 39; m. 40
	[B♭-C-G]	m. 12; m. 31
	[G-A♭-B♭]	m. 14; m. 33
	[D♭-C-D♭]	m. 19; m. 50
	[D♭-F-E♭]	m. 64
[B♭-C-B♭]	[A-B♭-D♭]	m. 3; m. 22; m. 53; m. 61
	[C-F-G]	m. 16; m. 17; m. 35; m. 36
	[A-B♭-B]	m. 39; m. 40
	[A-B♭-F]	m. 11; m. 30
	[A-B♭-C]	m. 41
[A♭-B♭-A♭]	[G-A♭-E]	m. 4; m. 13; m. 23; m. 32; m. 43; m. 45; m. 54
	[G-A♭-A]	m. 16; m. 17; m. 35; m. 36
	[G-A♭-F]	m. 6; m. 25; m. 56
	[G-A♭-B♭]	m. 18; m. 37

The data generates a total of four observations. First, the most common m_1 is [C-D♭-B]. Such m_1 resolves into an m_2 a total of 25 times, which encompasses over 18% of all m_1-m_2 resolutions. Chopin begins this étude with [C-D♭-B] and turns it into the most common thematic material seen in the right hand. The [C-D♭-B] is particularly prominent in the opening and closing sections of the work. The A-section contains four separate phrases in mm. 1-8, mm. 9-19, mm. 20-27, and mm. 28-36, where each phrase begins with an m_1. The A`-section contains two separate phrases in mm. 51-58 and mm. 59-69. The [C-D♭-B] motive initializes each of these phrases and likewise serves the purpose of sub-phrase initialization and phrasal continuation throughout the étude. Chopin's emphasis on [C-D♭-B] is evident, as he continues to reinstate this m_1 throughout the whole work. In analytical terms, this is merely a reordered subset of a chromatic scale, and Chopin can utilize such a simple motivic element to create a masterpiece. Another reason for its prominence is the need to create a constant sense of dissonance and resolution due to a high level of chromaticism. The third element of the triplet, the B♮, is a raised fourth scale degree in the key of F minor that requires an immediate resolution. The B♮ generates a tritonal melodically-dissonant framework when centred alongside note F, the tonic; Chopin does that to create the necessity for musical tension – a central and an imperative component of the implication-realization (*IR*) model, allowing the B♮ to gravitate towards the note C [12]–[14].

Second, [C-D♭-C] is the m_1 that Chopin utilizes to generate the most variety of resolutions. In this étude, [C-D♭-C] produces a total of 7 unique realizations. In [C-D♭-C], the first and the third elements represent the fifth scale degree – the dominant. Chopin chooses to stay as close as possible to the fifth scale degree by employing a neighbour tone, D♭, that is located a half a step higher, which allows for a smoother transition into the proceeding m_2. A total of 12 out of 22 resolutions resolve to B (as in the first element of m_2) and 6 resolutions resolve to D♭ (as in the first element of m_2). Therefore, 18 out of 22 resolutions generate a motion of a half step. This is an example of Chopinesque chromaticism – a significant module of his musical characterization and a unique stylistic feature of his pianistically-based compositional manner.

Third, the four most commonly used m_1 are [C-D♭-B], [C-D♭-C], [B♭-C-B♭], and [A♭-B♭-A♭], all of which generate a necessity for a resolution 76 times, covering a total of 56.7% of all possible resolutions. Repetition in music indicates musical significance, and Chopin commonly employs [C-D♭-B], [C-D♭-C], [B♭-C-B♭], and [A♭-B♭-A♭] as m_1 to allow the pianist to emphasize on them artistically and creatively – another instance of Chopin's ability to present a simple motivic segment and use it to construct a musical composition [15]. Fourth, the vast majority of the m_1 to m_2 resolutions occur by a half or a whole step. When analysing the intervallic range of the third note of each m_1 and the first note of each m_2, Table 1 reveals that a distance of a semitone or a whole step occurs in all instances, except in the case of [C-D♭-C] to [G-A♭-B♭] motion, which is seen in merely two occurrences in the étude. Such small-scale resolutions disclose a unique outlook that a composer chooses for his melodic contour of the primary thematic material. Such small-scale resolutions likewise present an insight into the analytical organization of pitches in the context of tonality and musical chromaticism.

5 Conclusions

The understanding of the following analytical observations in the context of musical characterization and melodic segmentation allows performers to generate individualistic views and interpretations of the melodies. The use of arpeggiation, chromaticism, and linear patterns produce harmonies, allowing the composer to develop and expand thematic content of the motives. Chopin's études underwent a great deal of artistic evolution when looking from the perspective of performance practice, and the application of musical contrast to the motivic segments that Chopin emphasizes will make one's view of this piece unique and

exclusive [16]. Theoretical and empirical musical comprehensions of Chopin's études will shed light on the performance practice perspective of artistic choices that pianists can make while tackling these technical studies.

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