

T.C.
YAŞAR UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
MASTER OF ARTS AND DESIGN
MASTER'S THESIS

**THE LISZT PIANO SONATA IN B MINOR: A PRECURSOR OF 20TH
CENTURY TONAL PROGRESSION AND COMPOSITIONAL
TECHNIQUES**

Yağmur DAYSALI

Supervisor
Asst. Prof. Paolo SUSANNI

İzmir, 2016

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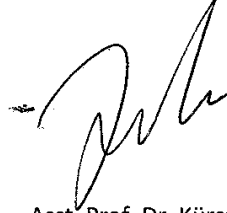
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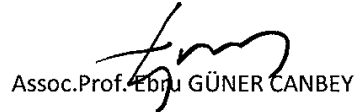
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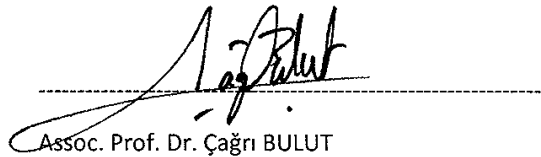


Asst. Prof. Dr. Kürşad TERCİ

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Assoc.Prof. Ebru GÜNER CANBEY



Assoc. Prof. Dr. Çağrı BULUT

Director of the Graduate School

DECLARATION

I hereby declare that this master's thesis titled as "The Liszt Piano Sonata in B Minor: A Precursor of 20th Century Tonal Progression and Compositional Techniques" has been written by myself in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honor.

...../...../.....



Yağmur DAYSALI

ABSTRACT

Master's Thesis

THE LISZT PIANO SONATA IN B MINOR: A PRECURSOR OF 20TH CENTURY TONAL PROGRESSION AND COMPOSITIONAL TECHNIQUES

Yağmur DAYSALI

Yaşar University
Institute of Social Sciences
Master of Arts and Design

This thesis explores the pitch relations in Liszt's B Minor Piano Sonata and how these functioned to create not only the first true cyclical composition but also to introduce novel compositional processes that foreshadowed some used in a much later historical period. This study includes a historical survey of sonata-allegro form, the development of thematic transformation and the changes in musical language which occurred prior to the sonata and for which Liszt is responsible for pioneering. The present study of the musical language and structural form of the B Minor Piano Sonata is based on the concept of melody, modality, its abstract scales (octatonic and whole tone scales) and cyclic formal structure. This study also aims to link the compositional processes used in the sonata to examples of 20th century music.

Keywords: Franz Liszt, B Minor Piano Sonata, Cyclic Forms, Thematic Transformation, Modality, Octatonicism

ÖZET

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Bu tez, Liszt Si Minor Piyano Sonatı'nda kullanılan motiflerin yapısını ve bu motiflerin eserin döngüsel formuna etkilerini inceler. Ayrıca, sonraki yıllarda kullanılmış olan besteleme teknikleri de bu çalışmada yer alan Liszt Piyano Sonatı analizinde incelenmiştir. Bu çalışma, sonata-allegro formunun tarihsel gelişiminin yanı sıra, Liszt'in öncülük ettiği tematik dönüşümün gelişimini ve müzik dilinin değişim aşamalarını inceler. Si Minör Piyano Sonatı'nın müzik dili ve formal yapısı melodik, modal, oktatonik gam, tam ton gamı ve döngüsel formal yapıya dayalı olarak analiz edilmiştir.

Anahtar Kelimeler: Franz Liszt, Si Minor Piyano Sonatı, Tematik Dönüşüm, Modalite, Oktatonisizm.

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1. INTRODUCTION

The Liszt B Minor Sonata is considered to be one of the milestones of western music history given the revolutionary use of its novel formal, tonal, modal and octatonic structures and their transformations. Although the work is titled Sonata in B Minor, the whole work is generated by transformations of the component figures of two themes that are based on modes that contain both diatonic, non-diatonic and octatonic components.

The transformations which generate the musical language are more easily understood by analyzing compositions of various composers such as Beethoven, Schubert, Brahms and Wagner. The music of these composers outlines both its evolutionary and contemporary history. Although the sonata was composed in the middle of the Romantic era (1852-1853), its compositional techniques were perceived and adopted by a host of 20th century composers. The analysis of Liszt's B Minor Piano Sonata explores the transformation of the musical language in terms of both formal and thematic structures from the Romantic era to the 20th century music.

The composition is a one-movement work that consists of four sections. The cyclic structure is generated by the tempi and the order of the figures that are used at the beginning and at the end of the sonata. These formal, melodic, modal and octatonic features were to be further developed and refined in 20th century music. The aim of the thesis is precisely to explain the how the process of transformation generates the novel musical language of this work.

This study details the evolution of both the form and the language of Liszt's B Minor Piano Sonata and explains how this is a work of transition from the Romantic to the 20th century eras.

This study is an original analysis of the Sonata and is based on concepts not yet tackled by the many literary works dedicated to it.

2. FORMAL STRUCTURE OF THE B MINOR PIANO SONATA

Amongst many performers and music theorists, there continues to be many dissenting opinions regarding the formal structure of the sonata. Much of the variation in opinion has to do with the fact that the performer's perspective is often different from that of theorist. The table below shows the range of difference amongst some of the world's leading performers and theorists (Tanner, 2000).

Table 2.1. Liszt B Minor Sonata According to different performers and theorists

AUTHOR & DATE OF PUBLICATION	PROFESSIONAL PIANIST	DOUBLE-FUNCTION THEORY	NO. OF MOTIFS	SINGLE MVT. CONCEPT	3 MVTS.	4 MVTS.	PROGRAMMATIC ASSOCIATIONS		
							FAUST LEGEND	RELIGION	AUTOBIOG.
Sharon Winkhofer (1980)				*					
Alfred Cortot (1953)	*		3	*	*		*		
John Ogdon (1981)	*		4	*			*		*
Alfred Brendel (1995)	*		6	*		*	*		
Paul Egert (1936)			1	*					
Claudio Arrau (1973)	*		1	*					
Louis Kentner (1984)	*			*			*		*
Clifford Curzon (1963)	*	(*)	4	*	*		*		
Emanuel Ax (1993)	*	(*)		*	*				
Bryce Morrison (1991)	*		2	*					
Humphrey Searle (1966)		(*)	4	*	*				
Ronald Taylor (1987)		(*)		*	*				
Rey Longyear (1973/74)		(*)	5	*	*				
Derek Watson (1990)		(*)	5	*		*			
Michael Saffle (1982)		*		*	*				
Paul Merrick (1987)				*				*	
Alan Walker (1970)			3			*	*		*
Charles Rosen (1999)	*	(*)		*		*			
Kenneth Hamilton (1996)	*	(*)	5	*	*		(*)		
William Newman (1972)		(*)		*		*			

For the purposes of present study, aspects not taken into consideration by the performers and the theorists - the modal rotation, the progression of thematic transformations, changes of pitch collections and rhythmic transformations included in this study - the formal structure of the B minor sonata, inclusive of the aforementioned notions, is represented in the table below.

Table 2.2.: Formal Structure of Liszt B Minor Sonata ¹

MEASURES	1	8						105		
TEMPO	Lento Assai	Allegro Energico						Grandioso		
MEASURE NUMBERS OF THE FIGURES	1-7	8-13	13-17	17-23	24-29	30-39	40-82	83-112	113-140	141-160
FIGURES	A	B	C	B+C	B	B+C	B	A	B	C
TIME	4/4							Alla breve		
SECTIONS	1st Section									

MEASURES										
TEMPO	Grandioso									
MEASURE NUMBERS	161-164	165-178	179-186	191-196	205-208	209-211	213-216	217-218	233-254	
FIGURES	B	C	B	C	B	A	B	A	B	
TIME	Alla breve									
SECTIONS	1st Section									

MEASURES				301						
TEMPO	Recitativo									
MEASURE NUMBERS	255-268	278-286	286-305	307-314	315-318	319-327				
FIGURES	C	A	B	B+C	B	B+C				
TIME	Alla Breve									
SECTIONS	1st Section									

MEASURES	331	347	363							
TEMPO	Andante sostenuto	Quasi Adagio								
MEASURE NUMBERS	331-346	349-355	356-395	396-432	433-447	448-452	453-459			
FIGURES	B	C	B	B	C	B+C	A			
TIME	3/4	4/4	3/4							
SECTIONS	2nd Section									

MEASURES	460									
TEMPO	Allegro energico									
MEASURE NUMBERS OF THE FIGURES	460-465	465-469	470-474	474-479	480-484	484-492	493-500	501-508	509-530	531-540
FIGURES	B	C	B	C	B	C	B	B+C	B	B+C
TIME	4/4									
SECTIONS	3rd Section									

¹ A=Theme A / B= Figures 1 and 2 / C= Figure 3

MEASURES							600	616		
TEMPO										
MEASURE NUMBERS OF THE FIGURES	541-554	557-565	569-570	571-581	582-594	595-599	600-615	616-623	624-627	628-639
FIGURES	B	A	B	A+B	B	C	B	C	B	C
TIME							3/2	4/4		
SECTIONS	3rd Section									

MEASURES	650	673	682	700	711	729		750
TEMPO	Stretta quasi presto	Presto	Prestissimo	Andante sostenuto	Allegro moderato	Lento Assai		
MEASURE NUMBERS OF THE FIGURES	650-663	673-676		700-728	729-736	737-749	750-753	
FIGURES	C	A		B	C	B	A	
TIME				3/2	3/4	4/4		
SECTIONS	4th Section							

3. THE EVOLUTION OF SONATA-ALLEGRO FORM UP TO LISZT'S B MINOR PIANO SONATA

In the history of western art music, Liszt's B minor sonata is regarded as the first true cyclic work. Its advent is the result of a long succession of developments in the evolution of the formal structure of the sonata genre.

3.1. The Baroque Era

A sonata-form movement consists of three main sections (exposition, development and recapitulation) and is derived from binary form. Until the Classical era, the movement was usually based on one main idea and its development occurred over a figured bass. The different rhythmic figures of bass line changed mainly at cadential points. Contrasting motives to the principal theme appear in between sections usually marked *solo* and *tutti* or *loud* and *soft*.

Binary form is generated in two parts. The second part of the form lasts longer while the first part demands continuation and generally ends in the dominant of the key. The first and the second parts are harmonically and thematically different from one another, the second part being generally longer than the first and containing both developmental and recapitulation sections.

The return of a main idea in the recapitulation originates from the *da capo aria*, the *Italian opera overture*, the *concerto* and the *simple aria* of the Baroque era. These kinds of compositional genres don't exemplify a real return of the main theme immediately following the development as they contain little in the way of transitional materials that characterize the transitions to and from the principal themes of true sonata form.

3.2. The Classical Era

Sonata Allegro form is the most significant formal type in instrumental music of the Classical era. The form appears in various multi-movement instrumental works such as piano trios, symphonies, quartets and quintets. The form has a special significance since it contains the most complex and workable musical material with which composers could exhibit their compositional skills.

In addition to the exposition, development and recapitulation, the form can be preceded by an introduction and end with a coda. There are two theme types in a typical exposition of a sonata. The main theme of the exposition is generally unfolded by an initial 8- measure or 16-measure theme. The main theme is in the tonic key and ends with a perfect authentic cadence or imperfect authentic cadence in major keys while in minor keys it often ends with a half cadence (Caplin, 2003). The second theme or subordinate theme is generally in the dominant or in the relative major if it is in a minor key.

The development of the sonata form amplifies the materials of the exposition. The amplifications may be rhythmic, motivic or melodic and are subjected to any number of modulations. When the development of these materials is completed, preparation for the recapitulation occurs in the last part of the development.

The recapitulation starts with a repetition of the main theme in the tonic. After the repetition, most of the significant ideas from the exposition are stated again in the tonic key. There are two ways in which the sonata form could be concluded. One can end with the same materials with which the exposition or one could use a combination of the first and the second themes as evidenced in many works of Haydn and Mozart (Webster, n.d.).

3.3. The Romantic Era

Romantic composers' intense desire to express a large palette of emotions gave birth to freer formal structures. The principal compositional techniques used lyrical melodies and creative themes accompanied by a freer harmonic language which was often chromatic. The obsession with intense thematic material is, in large part, responsible for the generation of *the lied* and the *characteristic piano piece*.

In the Romantic era, the second theme of the sonata allegro form became the most significant part. Following a striking, often difficult first theme together with an agitated transition, the lyrical melody of the second theme provides a welcome respite. As opposed to the sonata allegro form of the Classical period, the exposition of the form in the Romantic period is sometimes repeated while the development and the recapitulation are not. The first theme is not repeated and the second group may be left

out altogether. The lack of repetition and occurrence of continuous thematic development decrease the importance of the recapitulation in the Romantic era.

In this period, the coda gains significance because it is the climactic point rather than the return of the main theme of the recapitulation.

Expanded tonal relations are another hallmark of 19th century music. Major and minor modalities are seen as equal in their tonic representations. The development is often divided into two sections: the first consists of a lyrical theme and stands in the remote key while the second occurs in the dominant, generally followed by a developmental transition. In Brahms' music for example, modulation to another key in the second group points to the dominant as a result (Symphony no.2, D-f[#]-A) or it directly modulates to the dominant (Piano Quintet, f-c[#]-D^b; Symphony no.3, F-A-a) In Schubert's developments, the return of the main theme is carefully and systematically planned (Sonata in B^b D960). Mendelsshon's and Brahms's developments resemble the development of classical sonata. All three composers tended to resolve the second group of the recapitulation in the tonic or a 5th below (Schubert, Symphony no.9, C-e-a^b-G becomes C-c-c[#]-C; Brahms, Piano Quintet, f-c[#]-D^b becomes f-f[#]-F). The recapitulation does not resemble that of a typical sonata form because the climax is placed in the coda. This fact constitutes the main distinction between Classical and Romantic sonata forms (Webster, n.d.).

4. LISTZ'S B MINOR PIANO SONATA AND ITS CONTEMPORARY WORKS

To understand the full significance and impact of Liszt's B minor sonata, its place in the evolution of western art music must be addressed.

Liszt was invited to work as Kapellmeister-in-Extraordinary by the Grand Duke of Weimar in 1842. Weimar was an important cultural center where many poets and musicians lived. The two foremost poets that lived there were Goethe and Schiller. The city also possessed both an orchestra and an opera house that were important venues for which Liszt composed and in which he conducted large-scale orchestral works.

Composers in Weimar were struggling with different ideas regarding 19th century music. While Wagner, Berlioz and Liszt were "progressive" - they wanted to create new forms and a new musical language - Brahms, Schumann and Mendelssohn were seen as "conservative". They preferred to keep using established musical forms and employed a more traditional musical language. Liszt staged many compositions of Wagner and Berlioz. Since the conservative composers were associated with Leipzig, it was closed to Liszt and his music. When the Dante Symphony was first performed there in 1857, it was not well received.

The principal problem between the conservatives and the progressives concerned the structure of sonata form. There were two alternatives for composers: either to use the classical model; or to develop and modify it. While Brahms and Mendelssohn chose the traditional route, Liszt chose to develop and modify the structures of the form by using a musical language that was to have a profound effect on the form itself. First, he developed the one-movement cyclic sonata structure with four separate movements. The development of the one-movement sonata found its realization in the symphonic poem which was in deep contrast to the classical symphony. Secondly, he developed the technic of thematic transformation, creating a whole composition using only one or two musical ideas. Lastly, he used the other arts – especially poetry and painting – as extra-musical sources to create a new musical language. He believed that music is a representational art that can describe a picture, a flower, or a storm (Walker, n.d.).

In a national gathering of the *Tonkünstler-Versammlung* (Congress of Musical Artists) in 1859, Franz Brendel named the group of progressive composers (Wagner, Liszt and Berlioz) the “New German School”. Even though neither Wagner nor Berlioz made an effort to foster the identity of the school, they were linked to the most important musical progress of the 1850s. The three composers invented new musical genres such as the programme symphony, the symphonic poem and the musical drama. They innovated harmonic language and orchestral techniques, developed the principle of cyclic unity and applied it to large-scale forms by using the compositional technique of motivic transformation. These innovations were, in part, motivated by the expression of “poetic ideas” and the composers of “New German School” brought a new perspective to the music in a broader intellectual culture (Grey, n. d.).

The ideas of the New German School were supported by Liszt’s students and disciples during his Weimar years: Hans von Bülow, Joachim Raff, Louis Köhler, Felix Dräseke, Richard Pohl, Peter Cornelius, Hans and Ingeborg von Bronsart, and Carl Tausig. Wagner’s artistic revolutions and reforms from 1849 to 1852 and Liszt’s numerous articles were as important as the music for the New German School. By Brendel’s death in 1868, the New German School started to lose its unity. Wagner moved to another city and Berlioz was in a state of virtual retirement, dying soon after. Liszt’s symphonic poem, the innovations and reforms of Wagner’s music drama and the extended chromatic harmony of both genres were adopted in European musical culture from the 1870s and the elements thereof were accepted as the basis of musical modernity by the end of the century (Grey, n. d.).

Liszt and Wagner helped each other to develop their musical languages. Liszt’s learnt from Wagner to develop his ideas of form. His music became more symphonic rather than episodic. Wagner also helped him to write large-scale orchestral works such as *Christus* and *St. Elisabeth* (Searle, 2012).

Liszt’s music enriched Wagner’s musical language. Wagner’s music became more pictorial and dramatic and learned new methods in the use of chromatic harmony. Wagner and Liszt had shared the notion of thematic transformation or *leitmotiv*. A *leitmotiv* can be a theme or a musical idea that represents or symbolize a certain person, object, idea, state of mind, supernatural force, place or any other ingredient in

a dramatic work (Whittall, n. d.). Liszt composed many of his early works based on the idea of thematic transformation. He used these techniques to compose operatic fantasies that consist of introductions, variations and codas all based on the same themes (Searle, 2012). Wagner adopted the idea and developed it to its fullest extent in his musical dramas.

Wagner's most significant work for piano is the *Sonate für das Album von Frau MW* (Sonata for Mathilde Wesendonck), in Ab Major, composed in 1853. The sonata consists of three movements that are integrated into a one-movement work (Millington, n. d.). Although the formal structure of Wagner's Piano Sonata and Liszt's B Minor Piano Sonata are similar (one-movement work integrated from several movements), the harmonic structure of two sonatas is different: Wagner's sonata has a tonal structure with little chromaticism. The opening theme is repeated at the end of the sonata (mm. 213-257) in the same key (Ab Major) with some harmonic changes. The motivic structure of the theme is used as a closing material. Since the theme is unfolded both at the beginning and at the end, the sonata can be considered as a small cyclic one-movement work resembling the Liszt B Minor Sonata.

Example 4.1. : Richard Wagner, *Sonate für das Album von Frau MW*, mm. 1-7



Example 4.2. : Richard Wagner, *Sonate für das Album von Frau MW*, mm. 221-230



The first piano works of Johannes Brahms (opp. 1, 2, 4 and 5) were composed between 1851-1853. Brahms developed techniques of motivic transformation and but adopted large-scale structures similar to those found in the sonatas of composers from Bach to Beethoven. He was influenced by thematic transformation and harmony of Liszt and Chopin as well as the strong poetic language of Schumann. His Piano Sonata in F Minor Op.5 is an example of all the techniques he borrowed from these composers. In this work, the composer employs the traditional classical sonata form. Even though the sonata follows the formal structures of the classical sonata form, it is made up of five movements unlike the sonatas of the classical and the Romantic periods (While the first movement- *Allegro maestoso* is in sonata form, the second movement- *Andante* is a character piece or song without words, the third movement- *Scherzo* is in scherzo and trio, fourth movement- *Intermezzo (Rückblick)* is in binary and the last movement- *Finale* is in rondo). Motivic fragmentation can be found throughout the sonata. Fragmentation or augmentation of the main themes of the movements are used as development musical structures within the sonata form.

Musical progression in the first movement of the F Minor Piano Sonata is generated by the transformation of short motivic structures and the use of extensive modulations. The main theme (mm. 1-7) and the second theme (mm. 39-45)

generate all the structures of the *Allegro Maestoso* (Bozarth and Frisch, n.d.). It is nevertheless the motivic structure of the main theme that generates most of the musical material of the movement.

Example 4.3.: Johannes Brahms, Piano Sonata in F Minor op. 5, mm. 1-11

The image shows a musical score for the first 11 measures of the Piano Sonata in F Minor, op. 5 by Johannes Brahms. The score is in 3/4 time and F minor. It features a main theme in the right hand with a dotted-eighth/sixty-fourth and quarter rhythm group, and a bass line with a similar rhythmic pattern. Dynamics include *f*, *cresc.*, and *ff*. The score is marked with 'Ped.' and '*' symbols.

Transformations of the main theme occur throughout the sonata in both transitional and developmental passages. The motivic augmentation of dotted-eighth/sixty-fourth and quarter rhythm group of the sonata is used as an accompaniment and as a transition material. Although the motive is unfolded in both hands in the main theme, the augmentation (eighth-note/sixteenth-note group) of it (mm. 23-26) accompanies a chordal progression.

Example 4.4.: Johannes Brahms, Piano Sonata in F Minor op. 5, mm. 23-26

The image shows a musical score for measures 23-26 of the Piano Sonata in F Minor, op. 5 by Johannes Brahms. The score is in 3/4 time and F minor. It features a chordal progression in the right hand and a bass line with a dotted-eighth/sixty-fourth and quarter rhythm group. Dynamics include *f*. The score is marked with 'Ped.' and '*' symbols.

The main theme of the second movement, *Andante* (mm. 1-10) is transformed and used as a main theme of the fourth movement (*Intermezzo- Rückblick*). The original version of the theme in the second movement is mainly generated by descending

and ascending eighth-notes with an *alberti* bass in the bass part. While the descending, up-beat eighth-note group at beginning of the *Intermezzo* theme resembles the original, an alteration of the ascending eighth-note group of the original into a dotted eighth/sixteenth-note group and triplets in the bass part are the main feature of this transformation. The tonality of the two movements also aids the process of transformation. While the main theme of the second movement is unfolded in D flat Major, the theme of the *Intermezzo* is generated in B flat minor.

Example 4.5.: Johannes Brahms, Piano Sonata in F Minor op. 5, 2nd Movement, mm.1-10

The image shows a musical score for the first ten measures of the second movement of Johannes Brahms' Piano Sonata in F Minor, Op. 5. The score is in 2/4 time and F minor. It features a piano (*p*) dynamic and a *legato* marking. The right hand plays a melodic line with slurs and ties, while the left hand plays a complex bass line with triplets and dotted rhythms. Fingerings and articulation marks like asterisks are present throughout.

Example 4.6.: Johannes Brahms, Piano Sonata in F Minor op. 5, 4th Movement,
mm. 1-8

The first system of the musical score consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. The key signature is three flats (F minor) and the time signature is 2/4. The first measure of the upper staff is marked *p legato* and contains a half note chord. The lower staff begins with a quarter rest followed by a triplet of eighth notes. The second measure of the upper staff contains a half note chord with a slur over it. The lower staff continues with a triplet of eighth notes. The third measure of the upper staff contains a half note chord. The lower staff continues with a triplet of eighth notes. The fourth measure of the upper staff contains a half note chord. The lower staff continues with a triplet of eighth notes. The fifth measure of the upper staff contains a half note chord. The lower staff continues with a triplet of eighth notes. The sixth measure of the upper staff contains a half note chord. The lower staff continues with a triplet of eighth notes. The seventh measure of the upper staff contains a half note chord. The lower staff continues with a triplet of eighth notes. The eighth measure of the upper staff contains a half note chord. The lower staff continues with a triplet of eighth notes. The score includes various fingering numbers (1, 2, 3, 4, 5) and articulation marks such as slurs and accents.



5. THEMATIC TRANSFORMATION AS DETERMINANT FORM

Unlike any of the previously described sonata forms, the form of Liszt's B Minor Sonata relies on a new compositional process based on the concept of newly derived themes generated by a principal one, a process known as *thematic transformation*. New themes derived from the rhythmic, melodic, motivic elements of the main theme generate the thematic transformations.

Thematic transformation is in part responsible for the generation of various musical forms throughout music history. The process of transforming facets of the principal subject of a fugue are instrumental in deriving most of the materials used to generate fugal sections. This is evident in the great majority of fugues written by any composer of any age.

Significant examples of thematic transformation in the Classical period are Mozart and Haydn (Macdonald, n.d.) but the process found its true outcome in the works of Beethoven. The principal musical genre involved in this advancement was the variation form, particularly in the music of Beethoven. Sets of variations are to be found throughout the compositional life of the composer and one can trace his musical evolution using these works. Earlier sets such as Op. 35. "Eroica Variations" already show Beethoven's desire to develop and transform themes in unusual settings such as canon and fugue. The comprehensive thematic manipulation found in his op. 120 "Diabelli Variations" are the end result of this work. However, both these are cast in the traditional variation format where each variation is set apart from another and transformations are heard as separate events. It is really in the piano sonatas that one can glean the concept of continuous thematic transformation vital to Liszt's transformative concept. In the second movement of Sonata Op.111, Beethoven reaches uninterrupted thematic transformation of the *Arietta* theme after the first two variations which while continuous are sectionalized in the same way as the theme.

Example 5.1.: L. van Beethoven, Piano Sonata No.32 Op.111, 2nd Movement, mm. 1- 8

ARIETTA.
Adagio molto semplice e cantabile.



Already in the second variation the theme is almost unrecognizable because of the extreme rhythmic diminution of the note values and the fragmentation of the thematic components.

Example 5.2.: L. van Beethoven, Piano Sonata No.32 Op.111, 2nd Movement, mm. 49-50



In the final and largest part of the work all that is left of the theme a highly compressed version of the harmonic progression and an ostinato repetition of melodic fragments which are relegated to the role of accompaniment. These are cast in unending streams of sixteenth and thirty second notes.

Example 5.3.: L. van Beethoven, Piano Sonata No.32 Op.111, 2nd Movement, mm. 78-

79



Thematic transformation reached its highest point in the Romantic period. The repeated themes (*idée fixe*) of Berlioz's *Symphony Fantastique*, Wagner's *leitmotif* and Liszt's thematic transformations led the transformative creations of this period. In Liszt's B Minor Sonata, the transformation of the principal themes generates the entire work. Liszt derived the idea of thematic transformation from Schubert's *Wanderer Fantasy* (Searle, 2012).

The theme of the fantasy comes from the song "Der Wanderer". The first theme of the opening movement is main theme of the entire work. The entire Fantasy is governed by the rhythm of this theme as it occurs throughout the composition (Brown, 1951). It is also used as transitional material between the first and second themes and also connects the first and the second movement which moves from C Major to C# Minor.

Example 5.4.: F. Schubert, Wanderer Fantasy Op.15,1st Movement, mm. 1-3



In the first movement a thematic transformation of the opening theme generates an inverted form of itself (mm. 71-74).

Example 5.5: F. Schubert Wanderer Fantasy, 1st Movement, mm. 72-76



The second movement - *Adagio* – is musically closest to the original song "Der Wanderer". In this movement it is in C# Minor, 2/2 and forms the center of the fantasy (Winter, n.d.). In the song, the chordal theme as that of the first movement of the Fantasy is used as an accompaniment to melody.

Example 5.6.: F. Schubert, Der Wanderer, mm. 23-26



Musical score for Example 5.6. The score is in G major (one sharp) and 3/4 time. It consists of a vocal line and a piano accompaniment. The vocal line has the lyrics: "Son - ne dünkt mich hier so — kalt, die Blü - . te welk, das Le - ben alt, und". The piano accompaniment features a *pp* dynamic marking and a melodic line in the right hand that mirrors the vocal melody.

In the second movement thematic fragmentation plays an important part of the transformational process as it continues the thematic fragmentation used to end the first movement. In this movement however, the fragmentation is used not to extend but to break up the natural flow of the melodic content of the original theme.

Example 5.7.: F. Schubert Wanderer Fantasy, 2nd Movement, mm.1-4



Musical score for Example 5.7. The score is in G major (one sharp) and 3/4 time. It consists of a piano accompaniment. The score features a *pp* dynamic marking and a complex texture with many sixteenth notes in both hands, illustrating thematic fragmentation.

The most significant thematic transformation of the *Adagio* is the diminution of the note values where the theme becomes hidden inside the scales and arpeggios of sixty- fourth note groups with arpeggios in the bass part (mm. 40-42). The passage is connected with the same structure (sixty-fourth note arpeggios) to the main theme where the melodic shape of it is altered.

Example 5.8.: F. Schubert, *Wanderer Fantasy*, 2nd Movement, mm. 40-42

The sixteenth note arpeggio of the main theme is newly augmented to eighth note and placed before and after the dotted quarter/eighth note values as the theme in Ab Major, 3/4, of the scherzo or third movement of the work (mm. 1-6).

Example 5.9.: F. Schubert, *Wanderer Fantasy*, 3rd Movement, mm. 1-7

The arpeggio of the theme is used as accompaniment and the dotted quarter/eighth note values are placed as a theme towards the movement (mm. 323-339) and vice versa (mm. 87-94). The variations of this process is unfolded in significant number of passages in the movement.

Example 5.10.: F. Schubert, *Wanderer Fantasy*, 3rd Movement, mm. 323-326



In the final movement, the theme is unfolded as a fugue subject in C Major (in the home key). The formal structure of the fantasy has a cyclic or ‘metamorphic’ process that is considered as an early example and the *Adagio* generates the gravity of the work (Brown, 1951). The uninterrupted sequence of the four movements represents the most significant development in the evolution of the cyclic process that would ultimately lead to Liszt’s B minor sonata. He adopted similar transformational procedures and cyclic idea of the *Wanderer Fantasy* but used an entirely different musical language that had far-reaching implications, even with regards to music of the 20th century.

In order to create new flexible forms, Liszt developed the idea of transformation to express different moods in one composition by balancing materials of the Classical sonata form. The technique set up a substructure for the serial technique of Schoenberg in the 20th century. Schoenberg uses Liszt’s thematic transformation in a different musical language. In this respect, Liszt’s B Minor Piano Sonata is a milestone of music history (Searle, 2012).

In order to understand the kind of tonal progression used in Liszt’s B minor sonata, it is essential to trace the evolution in the use of modes used in different musical eras. The reason is that the modes used in the sonata are the church modes of the modal era. These, however, are used to generate a chromatic musical texture that is similar to that of the late romantic period but is not only a product of chromatic evolution of the tonal system. The chromaticism of the B minor sonata is also generated but the use of the modes themselves. This is yet another anomaly that sets this work up as a precursor of the 20th century.

6. THE MUSICAL LANGUAGE OF LISZT'S B MINOR PIANO SONATA

More than any other works of its time, the musical language of Liszt's B Minor Sonata is based on revolutionary concepts of pitch relations. Tonal progression of the work is rooted in a host of pitch collections that represent a comprehensive summary of scales not only from the tonal system but from the earlier modal system represented by the church modes and a system that he helped to shape and would ultimately be used in much of the music of the 20th century. The sonata's language is based on pentatonic, diatonic and non-diatonic modes as well as symmetrical pitch collections such as the octatonic modes. It also uses compositional techniques, such as modal rotation, that would become commonplace in the works of the 20th century composers such as Debussy and Bartók.

6.1. The Modal System

The word "mode" was derived from the Latin word *modus* that can be described as manner, measure and form. These three words can be associated with the different families of modal scales. Most of European art and folk music is based on these scales. A musical mode is generated by certain number of tones and semitones that arranged in a specific order. For example, the Ionian mode (C-D-E-F-G-A-B-C) is generated by seven notes that are arranged in a specific order (T-T-S-T-T-T-S). The diatonic modal family (Dorian, Phrygian, Lydian, Mixolydian, Aeolian and Locrian) is derived by rotating the Ionian mode. Each mode has the same number of semitones and tones (5 tones and 2 semitones), only the contextual position of these two intervals differs from mode to mode.

Table 6.1.: Diatonic Rotations

The Seven Diatonic Rotations		Intervallic Order
C IONIAN	C-D-E-F-G-A-B-C	W-W-H-W-W-W-H
D DORIAN	D-E-F-G-A-B-C-D	W-H-W-W-W-H-W
E PHRYGIAN	E-F-G-A-B-C-D-E	H-W-W-W-H-W-W
F LYDIAN	F-G-A-B-C-D-E-F	W-W-W-H-W-W-H
G MIXOLYDIAN	G-A-B-C-D-E-F-G	W-W-H-W-W-H-W
A AEOLIAN	A-B-C-D-E-F-G-A	W-H-W-W-H-W-W
B LOCRIAN	B-C-D-E-F-G-A-B	H-W-W-H-W-W-W

The music of this era is marked by the use of modes other than the Ionian mode. These modes whether used in polyphonic, homophonic or monodic textures do not give rise to a hierarchical system in which resolution is required. Tonal function did not exist in this music

6.2.Common Practice Era

The major and minor scales form the basis for all tonal music. However, only the major and harmonic minor mode are used to create functional harmonic progressions. This is because of the semitone between the seventh and eighth degree and to a lesser extent, the semitone between the fourth and third scale degrees.

Traditional tonal music is based on tertian harmonic structures. These harmonic structures follow each other according to harmonic hierarchy and voice leading principles. The only independence granted to composers of tonal music is the decision of the choice of individual chords but not their order.

6.3. Chromatic Harmony

Chromatic harmony was developed by incorporating a host chromatic alterations and enharmonic spellings into the diatonic language that existed in the baroque and classical eras. This resulted in the more chromatic language of the Romantic Period. Diatonicism was weakened by chromatic chords such as the augmented sixth chords (Italian, German and French), Neapolitan as well as diminished, ninth and eleventh chords. For example, Wagner's *Tristan and Isolde* is famous of its Tristan chord (F-B-D#-G#) that is highly chromatic (the generic term is often used as a half diminished seventh chord). The chord was used as a basis for "crisis" in Romantic Harmony and had an important role in the Romantic period and the 20th century music. The effect was that the concept of key was weakened as the chromatic chords began to resolve to new chromatic chords that could imply more than one key. This harmonic ambiguity signaled the dissolution of the hierarchy that governed functionality and foreshadowed the equalization of the twelve tones which was finally achieved in the 20th century.

6.4. Polymodal Chromaticism

While this kind of chromaticism is usually associated with the music of the 20th century, it is necessary to give a short explanation of the concept because, as mentioned earlier, Liszt's chromatic language is also derived from the use of polymodal chromaticism.

Simultaneous bimodal or polymodal combinations began to appear in the 20th century. Bimodal chromaticism may be generated in two different ways. The first is to combine two different modes that share the same tonic while the second consists of the simultaneous use of two modes with different modal tonics. Bimodal combinations of the first type are foreshadowed in Liszt's B Minor Piano Sonata in that the bimodal combinations occur horizontally rather than vertically. Nevertheless, the intervals that generate the bimodal chromaticism occur in direct and immediate sequence, usually in a single part. While this work is usually analyzed from the perspective of Romantic chromaticism i.e., a chromaticism that result from chromatic movement of chord tones, an analysis of this chromaticism based on the notion of polymodality is never considered. However, the idea of having two different modes stated sequentially and

on a common tonic, form the first theme of the work. Here, the two modes are stated individually but are subsequently combined to form bimodal combinations. The Mixolydian and Ionian modes are unfolded from a G common tonic (m. 205 and m. 207). The leading tones of the two modes unfold consecutively in the scale (G-A-B-C-D-E-F-F#-G). It is highly significant that this bimodal combination is on the same tonic (G) as the original version (mm. 1-3).

6.5. Modal Rotation

Polymodal chromaticism and the concept of modal rotation are directly associated with one another. There are two kinds of modal rotation. The first consists of rotating the order of pitch contents of a scale. When it is applied, the pitch content does not change, only the order of the intervallic structure changes. The number of modal rotations is as much as the number of pitch contents of the scale. Another way of modal rotation is generated by rotating the intervallic structure of all the modes to a single tonic. As a result of this procedure all modes can be obtained at the same transpositional level. Polymodal chromaticism is generated by this model of the modal rotation (Susanni and Antokoletz, 2012).

6.6. Twelve Tone Composition Systems

In contrast to traditional tonal music, 20th century compositions are usually based on various types of harmonic structures. These structures involve diatonic, non-diatonic, hybrid modes and interval cycles. The new structures of the 20th century music weaken tonal functions in the music. Harmonic structures are not decided by the principles of the harmonic dictation and voice leading but they are decided by the composer (Susanni and Antokoletz, 2012).

Twelve-tone composition is classified by two different techniques; serial (ordered) and non-serial (unordered). Serial compositional technique was used by the Second Viennese School composers. In ordered twelve-tone technique, complete chromatic scale is used throughout the composition. The composer decides order of the scale. However, no matter in which order the row is used, the complete chromatic scale is obtained. In this technique, all notes have equal importance. This feature removes pitch-class priority (Susanni and Antokoletz, 2012).

Unordered twelve-tone composition technique was and is used by composers as Bartók, Stravinsky, Ligeti. In unordered composition, the primary issue is the content rather than the order of the notes. Compositions in this system use the chromatic scale, complete or incomplete, diatonic and non-diatonic modes, and interval cycles. Various combinations of these collections may occur in the composition. Different tonal centers of this compositional technique are derived from these structures. The collections may also generate symmetrical segments around an axis of symmetry.



7. THE TWO PRINCIPAL THEMES AS SOURCES OF THE THEMATIC TRANSFORMATION

The theme A, *Lento Assai* (mm. 1-7) consists of two parts. The first is a descending G Phrygian mode [G-F-Eb-D-C-Bb-Ab] while the second is a descending G Hungarian Minor Mode [G-F#-Eb-D-C#-Bb-A] that start on the second beats of the respective measures (Example 1). The Hungarian minor mode contains two octatonic segments [D-Eb(-)-F# and A-Bb(-)-C#]. The first belongs to Octatonic-0 while the second belongs to Octatonic-2. This is significant because the octatonicism of the Hungarian minor mode is further developed in theme B which follows immediately.

Example 7.1.: Franz Liszt, *Sonata in B Minor*, mm.1-7



The theme B, *Allegro Energico* (mm. 8-17) is subdivided into three musical gestures or figures (A, B, and C) that are each significant in both their rhythmic and melodic transformations found throughout the sonata. Figure 1 and 2 (mm. 8-13), are much different from the first theme because they are not scalar but rather emphasize intervals bigger than seconds (Example 2). In fact, they emphasize incomplete and complete diminished seventh chords [G-A#- (-) (-), B-D- (-) (-) and E-G-A#-C#]. These incomplete and complete diminished chords generate an incomplete octatonic-2

segment [G- () –A#- B-C#-D-E- ()]. The octatonicism generated in this theme not only confirms the octatonicism of the first theme but also the octatonic sections are found throughout the sonata.

Example 7.2.: Franz Liszt, *Sonata* in B Minor, mm.6-14



Figure 3 (mm. 13-17) is markedly different because it is no longer at the octave but consists of a repeated melodic motive accompanied by definite harmonies. While the chords outline tertian harmonies [F#-B-D], the melodic motive one again generates a new octatonic structure [A#-B-C#-D- ()-E#- ()- ()] with the exception of an F# that belongs to the accompanying harmony. This particular figure is significant because it contains both asymmetrical and symmetrical structures that on the one hand reinforce tonality and on the other weaken tonality. This dualism is the basis of the entire sonata.

Example 7.3.: Franz Liszt, *Sonata* in B Minor, mm.11-17



The reason for the present subdivision of the two main themes is that various elements, whether melodic, harmonic, or rhythmic are transformed either individually or in combination throughout the entire work. This means that individual elements common to both themes can be transformed within the themes themselves and their transformations. This feature creates situations in which simultaneous references to both themes and or their component parts will be inevitable.

The unfolding of the two G modes of theme A, directly contrast not only the tonality implied by the key signature (B minor) but tonality in general because neither of the two modes are Ionian, the only mode that generates functional harmony.

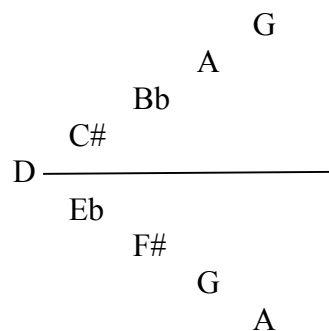
While Longyear claims that the sonata starts in mm. 8 and two scales (Phrygian and Hungarian Minor Mode) (mm.1-7) generates the introduction part, Newman and Winklhofer remark that the sonata doesn't have any introduction and they claim that the sonata has tonal construction (Hamilton, 1996). While the preceding views may directly contrast one another, the fact is that both the Phrygian and the Hungarian minor modes cannot form the basis for any traditional functional harmonic progressions. In the case of the Phrygian mode, the seventh degree is flattened, while in the Hungarian minor mode two different leading tones are implied. The characteristics of these two modes create tonal ambiguity in the traditional sense.

In addition to the modes that generate tonal function, there are also several complete scales (mm. 84-87, mm. 89-93, mm. 457-479, mm. 571-572, mm. 673-674 and mm. 750-751) in the sonata that do not. Augmented seconds in these scales are derived from the Hungarian minor scale of theme A but unlike the Hungarian minor scale, they have one augmented second.

Example 7.4.: Franz Liszt, *Sonata* in B Minor, mm. 89-93



As shown in the example below, the Hungarian minor mode in theme A is a symmetrical scale. The peculiar structure of this scale and its derivatives is the source of much of the octatonic content of the sonata. The octatonic content, in turn, does not really allow for traditional harmonic progressions but creates a completely new kind of tonal progression that relies on new pitch relations.



7.1. Modal and Melodic Transformations

7.1.1. Transformation of Theme A

The two scales of theme A are used in two different transformational processes. While the G Phrygian mode is rotated and transposed, the octatonic possibilities of the Hungarian minor mode are used to generate new octatonic segments throughout the sonata.

The G Phrygian mode of theme A is transformed by rotating the pitch content of the scale itself. Initially, the Phrygian mode is rotated to the same tonic and describes a descending G Dorian mode [G-F-E-D-C-Bb-A] where both the pitch content and the intervallic order change (mm. 93-94). Various rotations of Dorian mode are unfolded shortly after its original appearance. The Dorian mode is further rotated to yield an incomplete D Aeolian [D-C-Bb-A-G-F-()] (mm. 95-96), a G Dorian [G-F-E-D-C-Bb-()] (mm. 97-98) and an incomplete Bb Lydian [Bb-A-G-F-E-D-()] (mm. 99-100).

After these rotations, the Phrygian mode returns in a F# transposition (mm. 454-459) which completes the formal section directly prior to the fugue. The rotation from and the return to the original Phrygian mode supports the formal structure of the Sonata. However, the systematic rotation of the mode continues until the complete family of diatonic modes is generated. It is further rotated to the Mixolydian [A-B-C#-D-E-F#-G] in the measures following the F# Phrygian mode (mm. 575-576).

The process of rotation generates the C Dorian mode [C-D-Eb-F-G-A-Bb] mode (mm. 579-580). A G# Aeolian mode [G#-A#-B-C#-D#-E-F#] unfolds as a new rotation of the D# transposition of the Phrygian mode (mm. 675-676).

A different kind of process is also used to arrive at the diatonic modes. Liszt uses two unnamed scales consecutively. The second of these two modes is a transformation of the first. The diatonic mode which results is the final step in this transformative process. This process represents an early attempt at bimodal combination but falls short of being systematic. In order to have a systematic process, the two modes should combine to create the pitch content from which the final mode is extracted. While this process is not systematic, its validity as a process cannot be discounted because the composer employs it four times in the course of the sonata. Each occurrence happens

before important formal junctures. Oddly enough, the final descending mode of the work is an unnamed non-diatonic scale identical to the first of the three modes used in the aforementioned process.

Table 7.1.: Unnamed scales

EXAMPLE I	
mm. 84-87:	G ^b A B ^b C D ^b E ^b F
mm. 90-93:	G A B ^b C [#] D E F
mm. 93-94:	G A B ^b C D E F (DORIAN)
EXAMPLE II	
mm. 278-282:	G B ^b B C D E ^b F
mm. 284-285:	G B ^b B C D ^b E ^b E F
mm. 454-459:	F [#] G A B C [#] D E (PHRYGIAN)
EXAMPLE III	
mm. 457-459:	F [#] A A [#] B C [#] D [#] F F [#]
mm. 571- 572	G A [#] B C [#] D E F [#]
mm. 575-576	A B C [#] D E F [#] G (MIXOLYDIAN)
EXAMPLE IV	
mm. 579-580	C D E ^b F G A B ^b (DORIAN)
mm. 673-674	G A [#] B C [#] D E F [#]
mm. 675-676	G [#] A [#] B C [#] D [#] E F [#] (AEOLIAN)

There exists one instance of bimodal combination that results in a hybrid mode. One should be weary of labelling the generation of a hybrid mode in this sonata as bimodal chromaticism because the musical language of the work also contains the kind of ultra-chromaticism derived from the ever-expanding manipulation of more traditional chromatic chords (Neapolitan Sixth, and Augmented Sixth chords) present in works of the late Romantic period. Nevertheless, the use of the diatonic modes that do not generate harmonic function is also a fundamental basis of the work. During the course of the sonata (m. 205, m. 207, m. 213 and m. 215), the pitch content of the Mixolydian and Ionian modes are combined to produce hybrid modes.

Example 7.5.: Franz Liszt, *Sonata* in B Minor, m. 205



A complete non-diatonic scale (mm. 751-754) in the closing part is the last example of the modal rotation in the piece [B-A-G-F#-E-D#-C]. Two consecutive unnamed scales resemble the Phrygian and the Hungarian minor modes that are placed in the beginning of the sonata. The two unnamed scales at the end generate a formal symmetry in the sonata.

7.1.2. Transformation of Theme B

Figure 1 (mm. 8-10) G- A#- B- D, creates an incomplete octatonic-2 segment (G- ()- A#- B-()-D). The pure octatonicism of the figure is highlighted by the fact that it is unaccompanied by any harmonic structures while itself forming a purely symmetrical structure.

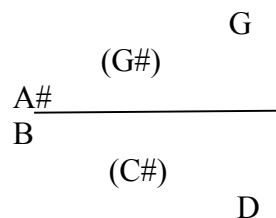


Figure 2 (mm. 10-11) consists of a descending fully diminished chord (A#-C#- E-G). When the pitch content of this diminished chord is combined to that of figure 1, a six-

note segment of octatonic-2 [G- ()- A#- B-C#-D- E- ()] is generated. Figure 2 confirms the octatonicism set out by figure 1.

Example 7.6.: Franz Liszt, *Sonata* in B Minor, mm. 8-11

As can be seen figures 1 and 2 generate the first complete musical gesture of theme B.

Figure 3 (mm. 11-12) consists of an octatonic-1 segment [D#- E-F#- ()- A]. In the same way that figures 1 and 2 were joined to create an octatonic-2 collection, so too does the joining of figure 3 to a rotated version of figure 2 (G-E-C#-A#). This time however, an octatonic-1 collection is generated by the two figures [D#-E-F#-G-A-A#- ()-C#]. As is clearly seen, the diminished chord which makes up figure 2 acts as a common pivot chord between octatonic 1 and 2. The use of a diminished chord as a pivot between two octatonic collections is a common compositional technique used in 20th century music.

Except for the appoggiatura F#, the bass part of figure 3 (mm. 13-15) is exclusively octatonic as it outlines the octatonic-2 segment (A#-B- C#-D-E-E#). When the figure is repeated (mm. 15-17), it outlines a new octatonic-1 segment (B#-C#-D#-E-F#-G-A) with the exception of a D natural passing tone.

Example 7.7.: Franz Liszt, *Sonata in B Minor*, mm. 11-17



The symmetrical properties of the Hungarian minor mode are used to generate all the figures of theme B (mm. 8-11, mm. 40-43, mm.120-124). The Hungarian minor mode is made up of two tetrachords (G A Bb-C# -D Eb-F# G) each of which contain an augmented second. These augmented seconds can be filled to create octatonic segments. In essence, these tetrachords are gapped octatonic segments. [G A Bb (C) C# and D Eb (E) F# G] that when completed, yield both octatonic-1 and octatonic-0 segments. This interpretation is confirmed by the fact that figures 1 and 2 of theme B create an octatonic-2 segment [G- ()- A#-B-C#-D-E- ()] and figures 1 and 3 create and octatonic-1 segment [D#-E-F#-G-A-A#- ()-C#].

Octatonic components of the Hungarian Minor mode can be found (mm. 40-43 and mm. 541-545) in different sections of the sonata. Thirty-second triplets of figure 3 are fragmented and used as incomplete short Octatonic-0 and Octatonic-2 passages. This rhythmic and melodic compression of figures 1 and 2 are made up of pure octatonic segments. While thirty-second triplets generate Octatonic-0 and Octatonic-2 segments, eighth-note triplets of figure 1 is transformed into sixteenth-note diminished chords and give Octatonic-0 and Octatonic-1 segments. The octatonic segments are bound together by a common pivot note.

Example 7.8.: Franz Liszt, *Sonata* in B Minor, mm. 40-43

The extensive use of octatonicism throughout the sonata shows that this symmetrical construction is one of its principal bases. Figure 2 of theme B unfolds another octatonic motive (mm. 27-29) that generates incomplete Octatonic-1 [D#- E- F#- G- A -()- (-)- (C#)] and Octatonic-2 [A#- B- C#- D- E- (-)- (-)- (-)] segments. In the subsequent section transformation of the octatonic segments of theme B is occurs in a different way (mm. 45-50). With the exception of the first pair of dyads the remaining pairs generate octatonic segments. The initial note of each of the groups is made to follow a sequence that itself outlines an octatonic segment.

Table 7.2.: Octatonic Structures of mm. 45-50

Gb Ab Bb Cb	G# A B C	A B C D	B C D Eb	C Db Eb Fb
Gb	G#	A	B	C

Example 7.9.: Franz Liszt, *Sonata* in B Minor, mm. 44-49

The same procedure continues in the very next measures (mm. 50-54), however, the groups are extended to five note groups. While new octatonic segments continue to be generated, a second symmetrical structure is simultaneously unfolded. The top notes of each group chord (mm.51-53) unfolds a complete whole tone scale (A-B-C#-D#-E#-G-A) generated by symmetrical tertian relations. The octatonic segments and the whole tone scale generates the language of that section, the same process is repeated with exactly same pitch content later in sonata (mm. 546- 554). What is significant about this is that this is a true instance of bimodality where two different modes are being used simultaneously. This kind of bimodal usage is a hallmark of much 20th century music.

Example 7.10.: Franz Liszt, *Sonata in B Minor*, mm. 50-54

Further transformations of various motivic segments of these figures occur throughout the sonata (mm. 32-39, mm. 239-242, mm. 247-250, mm. 319-327, mm. 460-505, mm. 506-521 and mm. 524- 540).

The first example of this new kind of motivic transformation occurs where figures 1, 2 and 3 placed in their varied and fragmented motivic forms (mm. 32-39). In the beginning of the section, figure 1 unfolds in the top part while figure 2 is placed in the bass as sixteenth note groups instead of triplets of its original form. Here, figure 2 appears in the top part and a fragmentation of figure 3 is placed in the bass with its original rhythmic values.

Example 7.11.: Franz Liszt, *Sonata* in B minor, mm. 32-34



Figures 2 and 3 of Theme B are interlocked to create a new type of compressed structure (mm. 319- 330). The augmented rhythmic structure of figure 2 and a fragmented version of figure 3 generate a new compressed hybrid. Before both transformations (mm. 32-39 and mm. 319-330), each figure is juxtaposed as a recall of all figures and each is distinguishable in its compressed versions.

Liszt uses another combination that includes the first (mm. 9-10) and second part (mm. 11-12) of theme B. The figures are interlocked and generates a compressed melody in the top part accompanied by the eighth note arpeggios. Here, the triplets become sixteenths while the first figure of theme B is sounded as a background component in the first and last beats.

Example 7.12.: Franz Liszt, Sonata in B Minor, mm. 239-241

7.1.3. Transformation of the *Grandioso*

The *Grandioso* theme is generated by the pentatonic scale (A-B-D-E-G) which is a both a derivative of the diatonic mode and the mode made theme.

The referential order of the Pentatonic scale is normally accepted as C-D-F-G-A-(C). The intervals of the scale are characterized by 2-3-2-2-3 intervallic order. Any of the notes can be accepted as a tonic and the other notes can be rotated according to their tonics (Susanni and Antokoletz, 2012). There are five different rotations:

Rotation 1: C-D-F-G-A-(C)
Rotation 2: D-F-G-A-C-(D)
Rotation 3: F-G-A-C-D-(F)
Rotation 4: G-A-C-D-F-(G)
Rotation 5: A-C-D-F-G-(A)

The Pentatonic scale appears in the music of many ancient cultures such as China, Africa, Polynesia and Scotland. The scale has also been used in many western and eastern European folk and art music from Gregorian chant melodies to 20th century compositions.

The five note structure of the Pentatonic scale creates a more flexible construction for composition. The lack of semitones in the Pentatonic scale generates an ambiguity of modal tonic or center and the diatonic some non-diatonic modes contains three different rotations of the Pentatonic scale. In the 20th century, the Pentatonic scale is used as the referential pitch collection as a nucleus of diatonic and non-diatonic modes (Susanni and Antokoletz, 2012).

In the *Grandioso*, the descending G Phrygian mode of theme A is transformed into an ascending scale with augmented note values in the *Grandioso* (mm. 105-110 and mm. 600-611) of the sonata. The lack of tonic and the major second/minor third structure of this ascending pentatonic scale give the impression that the scale is actually a melody. This theme is perhaps the most significant transformation of the entire work.

Example 7.13.: Franz Liszt, *Sonata* in B Minor, mm. 105-113

The image displays three systems of musical notation for Franz Liszt's Sonata in B Minor, measures 105-113. Each system consists of two staves. The first system is marked 'Grandioso' and 'ff'. The second system is marked 'ff' and 'sf'. The third system is marked 'sf'. The notation includes various musical symbols such as notes, rests, and dynamic markings.

The first transformation of the grandioso itself occurs in diminution (mm. 363- 384) where both the note values and the meter are diminished. Since the note values are halved and the meter is changed to simple meter, the progression of the texture is accelerated.

Example 7.14.: Franz Liszt, *Sonata* in B Minor, mm. 363-364

The image displays two systems of musical notation for Franz Liszt's Sonata in B Minor, measures 363-364. Each system consists of two staves. The first system is marked 'mf' and the second system is marked 'p'. The notation includes various musical symbols such as notes, rests, and dynamic markings.

Fragmentation of the figure unfolds yet another type of transformation (mm. 297- 300 and 302-305). The fragmentation is now literal as the dotted notes of the original rhythm are replaced with rests so that it is silence that fragments the sound.

Example 7.15.: Franz Liszt, *Sonata* in B Minor, mm. 297- 300



If the complete picture of rhythmic transformations is considered i.e., the transformation of the original mode into the Grandioso theme and the consequent transformations of the Grandioso theme itself (of which there are two), it is clear that they help to outline the form of the composition. This is so because they are placed at the end of certain sections (mm. 297-300, mm. 700-707) and at the beginning of others (mm. 105-110, 600-611). In between these sections, the musical texture consists purely of the Grandioso theme and its transformation (mm. 363-384). This transformation has a second outcome in that the material which makes up the climactic grand theme is transformed into transitional material which is used as transitional material. This is the main theme made into bridge passage and vice versa.

Table 7.3.: Locations of the Grandioso theme

Measure Number	Tempo	Location of the Structure	Type of Transformation
105- 110	Grandioso	Beginning of the section	Original
297- 300	Andante Sostenuto	End of the section	Fragmentation
302- 305			
363-384	Quasi Adagio	A section	Diminution
600-611	Allegro Energico (piu mosso)	Beginning of the section	Original
700-707	Presto	End of the section	Original

7.2. Rhythmic Transformation

7.2.1. Rhythmic Changes of Theme A

The first rhythmic transformation of the complete A theme (mm. 83-87 and mm. 89-92) occurs as a rhythmic augmentation in which the note values are doubled. Like the original, this repetition occurs on the weak beat (Example 23). Since the tempo, *Allegro Energico*, is different from the original, *Largo assai*, the augmentation cannot be discerned. This technique allows Liszt to state a rhythmic transformation that sounds much like the original.

Example 7.16.: Franz Liszt, *Sonata in B Minor*, mm.87-92

The image displays a musical score for Example 7.16, showing rhythmic augmentation in Franz Liszt's Sonata in B Minor, mm. 87-92. The score is written for piano (p) and features a bass line with the instruction "Sva bassa" (Sustained Bass). The music is in B minor and 3/4 time. The first system shows the original theme A (mm. 83-87) with a rhythmic augmentation (mm. 89-92) where note values are doubled. The second system shows the original theme A (mm. 93-100) repeated four times in its original rhythm. The score includes a dynamic marking of *p* and a fermata over the final measure of the second system.

Immediately following (mm. 93-100), theme A is repeated four times in its original rhythm which in the *Allegro Energico* tempo makes them sound like rhythmic diminutions without them being so. It is, nevertheless, a return to the original rhythmic design. A second augmentation, of similar proportions happens much later in the sonata (mm. 557-559 and 564-566) where theme A again returns in doubled note values. This is immediately followed (mm. 571-581) by three complete statements of theme A in their original rhythmic configuration. The pattern set up by a rhythmic augmentation and the return to rhythmic original is in both cases used directly before the entrance of the melodically transformed principle theme. This confirms the notion that rhythmic transformation plays a vital role in the formal scheme of the sonata.

The next rhythmic transformation of the first principal theme (mm. 209-212) unfolds in contrary motion where the bottom part is syncopated. Because of the syncopation, the note of the original scale is subdivided into two (Example 24). These are two different rhythmic transformations that occur simultaneously. The same process occurs shortly after (mm.217-220) so that the original sequence of scales is maintained.

Example 7.17.: Franz Liszt, *Sonata* in B Minor, mm. 208-212

The image displays a musical score for Franz Liszt's *Sonata* in B Minor, measures 208-212. It consists of two staves: a treble clef staff on top and a bass clef staff on the bottom. The key signature is B minor (two sharps). The top staff begins with a melodic line in measure 208, marked with an accent (^) and a slur. The bottom staff features a syncopated bass line starting in measure 209. The music is marked with *mf* (mezzo-forte) and *cresc.* (crescendo). A large, faint watermark is visible in the background of the page.

7.2.2. Rhythmic Changes of Theme B

This theme is made up of three different elements that are each rhythmically transformed. Figure 1, Figure 2 and Figure 3.

Example 7.18.: Franz Liszt, *Sonata in B Minor*, mm. 6-17

The image displays a musical score for Franz Liszt's *Sonata in B Minor*, measures 6-17. The score is in B minor and 3/4 time, marked "Allegro energico". It features three distinct rhythmic figures highlighted with boxes:

- Figure 1:** A piano introduction in the right hand, marked "f".
- Figure 2:** A piano introduction in the left hand, marked "f marcato".
- Figure 3:** A piano introduction in the right hand, marked "f".

In the first transformation (mm. 24-26) of figure 2, the original rhythmic configuration of the dotted half note and the first set of descending eighth-note triplets are replaced by a dotted tied quarter-note and descending sixteenth/thirty-second notes. This first rhythmic diminution is both used and developed in many musical textures found throughout the piece (mm. 33-50, mm. 205-261, mm. 524-581 and mm.642-649) further rhythmic diminution is applied to the sixteenth-note transformation of this figure when the first four descending sixteenth notes are replaced by thirty-second notes.

Example 7.19.: Franz Liszt, *Sonata* in B Minor, m. 386



This figure is also found in the recitativo sections where it is in its rhythmically most compressed model i.e., it takes the form of ornamental melismas (mm. 301, mm. 306, mm. 362).

Example 7.20.: Franz Liszt, *Sonata* in B Minor, m. 301



The second rhythmic transformation of the descending triplets is a rhythmic augmentation where the triplets become descending eighth-note groups which through repetition generate entire formal sections (mm.58-81, mm. 290-296, and mm.682-695)

Example 7.21.: Franz Liszt, *Sonata in B Minor*, mm. 58-61



7.2.2.1. Rhythmic Changes of Figure 3

The main rhythmic transformation of the bass part of figure 3 is in augmentation and occurs ten times. (mm. 153-155, mm. 157-159, mm. 165-167, mm. 191-196, mm. 255-268, mm. 349-350, mm. 353-354, mm. 360-361, mm. 433-445, mm. 616-639, mm. 650- 663). By means of augmented rhythm and slow tempo, figure 3 becomes more melodic and appears in the top part unlike the original. Even though the rhythmic augmentation, the rhythm is slowed (mm. 191- 196, mm. 255-268, mm. 650-663).

The most significant augmentation of this figure is outstanding (mm.153-154) because before this augmentation and its repetition (mm. 157-158), the original rhythm of figure 3 appears in fast tempo.

The transformations of figure 3 are placed at the end of sections throughout the sonata much like the original. These transformations occur at the end of sections remaining in fast (mm. 191-196, mm. 255-268) –slow (mm. 349-354, mm. 360-361, mm. 433-445, mm. 616- 639)-fast (mm. 650-663) tempos. This again supports the outlining of the sonata's formal structure.

Example 7.22.: Franz Liszt, *Sonata in B Minor*, mm. 191-199

The transformation of both ascending and descending triplets (mm. 233- 254), is derived from triplets in the original second theme. These triplet fragments are used in a kind of transformation that creates a streaming textures based exclusively on these.

Rhythmic fragmentation of the Grandioso (m.105) is used as an introduction to *Recitativo* in mm. 297-300 and *Recitativo* (m.301) and is made up of second motive of the theme. This procedure occurs one more time (mm. 302-306) but in this latter occurrence, the rhythmic fragment can be seen as a transition between two *Recitativos*.

Example 7.23.: Franz Liszt, *Sonata in B Minor*, mm. 296-301

8. CONCLUSION

Liszt's inspiration, Schubert's *Wanderer Fantasy*, led him to use different kinds of transformation in his B Minor Piano Sonata. While the techniques of transformation are sometimes similar to one another, the musical language of Liszt is completely different to that of Schubert. Liszt developed and perfected the transformations found in the *Wanderer Fantasy*.

The development of cyclic formal structure is another important characteristics of the B Minor Sonata. While Beethoven used the thematic transformation only in one movement, Schubert's thematic transformation happens over the span of a whole work which nevertheless still consists of four separate movements. Liszt used the idea of thematic transformation to generate a cyclic one-movement work.

Perhaps one of the most significant features of the work is its chromatic language that is partly derived from the chromatic practices of the day but also from the revolutionary use of modes, octatonic and whole tone scales that make the sonata a bridge between the music of the 19th and 20th centuries. The compositional techniques of modal rotations and polymodal combination were to become standard procedure in the music of composers such as Bartók and Stravinsky. These two compositional processes are, for example, brought together in the *Hymne* from Stravinsky's *Sérénade en La* where the initial bimodal combination of the Aeolian and Phrygian modes are systematically rotated through the course of the work giving the complete family of modes in combinations (Susanni and Antokoletz, 2012). Besides this specific example there exists a vast array of such procedures in the music of many more 20th century composers.

The Liszt B Minor Piano Sonata is not only a summary of its musical past but points, in many regards, to the direction and manner in which the evolution of Western art music was to unfold.

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