I.B. Extended Essay

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[MUSIC]
Dissertation on Dmitry Shostakovich’s Harmonic Language

Subject: The Arts -- Music

Research Question: How does Dmitry Shostakovich’s harmonic language develop toward Atonalism throughout his compositional lifetime?

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Abstract

Musicologists have divided western music into distinct musical eras spanning from the secular music of the Renaissance to the avant garde music of the 21st century. The result when composers live during the end of one and beginning of another is endless debate and inevitable debacle to determine which era they belonged to. I have therefore determined to investigate the development of Shostakovich’s harmonic language throughout his compositional lifetime, with the intent to discover how he bridged the musical eras of romanticism and 20th century.

My methodology in conducting this investigation is:

1. Gaining an understanding of the social and political context in which Shostakovich’s Symphony No. 5 and other compositions were written as well as becoming knowledgeable of Shostakovich’s life and possible influences by means of reliable biographical resources both secondary and primary.
2. Obtaining an in depth understanding and complete comprehension of the techniques used by Shostakovich throughout various compositions through macro and micro analysis of Shostakovich’s scores of:
   a. Symphony No. 1
   b. Symphony No. 5
   c. Piano Trio No. 2 – Passacaglia
   d. Symphony No. 9
      • Comprehension of Schenkerian and Neo-Riemannian analysis was developed through extensive individual study and music theory lessons with my private teacher.
3. Come to a conclusion based on my investigation.

The results of my investigation conclude that Shostakovich’s harmonic language became increasingly atonal and chromatically oriented throughout his compositional lifetime. The cause of this change in harmonic style was inclusive of both personal expression under the eye of political oppression and the contextual movement toward more symmetrically based music among many composers. Shostakovich’s works exemplify characteristics of both the romantic and 20th century musical era and demonstrate the gradual progression from tonal to atonal music.
**Introduction**

Perhaps the greatest effect society can have on the realm of art is that of ideas. A common pattern that can be found throughout history is that music tends to reflect the morals, ideals, and principles of the given era. In the Classical Era (1730-1820) music embodied the artistic and intellectual principles in the concurrent society. The music was highly ordered and structured into distinct musical forms, similar to the social environment consisting of the same very order: aristocracy, absolute monarchies, the church, and cast systems. The boundaries of society were set and so were those in music. The Romantic Era, soon to follow, reflected a new ideology; musical freedom and artistic expression. Unsurprisingly an effect of the socio-political climate, one where the orders of aristocracy and monarchies fell and the workers and middle class emerged. This pattern of reflection between music and the status of the world does not cease, it has continued to the modern day where politics and culture are inseparable from the field of composition.

The topic I have chosen to investigate is: How does Dmitry Shostakovich’s harmonic language develop through his compositions and specifically his Symphony No.5? My reason for choosing this topic is that I am fascinated by music and specifically by the idea of composition. A composer has control over every note and hence must regard each one with a purpose and reason. I find that understanding music of a certain era or nation is essential in gaining a complete perspective of it since “After silence, that which comes nearest to expressing the inexpressible is music” (Aldous Huxley, *Music at Night and Other Essays*). We cannot experience the silence that occurred in a time when we were not alive; so the closest we can come to understanding that which could not be expressed by words, is understanding that which could be expressed by music.
The Early Life of Dmitry Shostakovich

Dmitry Shostakovich (1906-1975) was born in St. Petersburg, Russia. Shostakovich was revealed as a child prodigy when at the age of nine; his mother gave him piano lessons and discovered that he played the music as he remembered it from the previous lesson only pretending to read the music in front of him. His astonishing musical capabilities were further developed and by the age of thirteen Shostakovich entered into the St. Petersburg Conservatoire. Shostakovich’s studies at the Conservatoire would pay off with the numerous accolades for his first symphony. By this time however, it became apparent that Shostakovich’s life would never be free of political influence. In 1917 the Bolshevik Soviets stormed the Winter Palace and seized power from Tsar Nicholas. Artistic freedom flourished in the newly founded communist regime, but aesthetic ideas were inevitably seen as vehicles of political ideology and propaganda. By 1930 the era of creative liberty came to a halt as the Russian government decreed “anything that promotes the revolution is moral and everything that hinders it is immoral.” Committees were formed to determine what art was politically acceptable, the realm of art became a dangerous occupation as artists, poets, musicians, and composers alike began disappearing. The early life of Shostakovich and his relationship with the Soviet government and his Romantic contemporaries will prove to influence his works throughout his lifetime.
An Understanding of Shostakovich’s Compositional Style

The most prominent resource concerning information about Shostakovich is *Shostakovich Studies*, in which author David Flanning writes “The most crucial lacuna in western understanding of Shostakovich's music concerns harmonic and tonal language." The Western school of music analysts often categorizes composers into one of the harmonic language styles, tonal or atonal; when a composer falls into the ambiguous combination of both, such as Shostakovich being "sometimes tonal, sometimes modal, sometimes somewhere in between, and sometimes outside the bounds of either", complications can arise when employing traditional musical analysis techniques (Fanning, *Shostakovich Studies*).

Shostakovich’s education at the Petrograd Conservatoire embedded the styles of composers Tchaikovsky and Rimsky-Korsakov as strong influences in his music and subsequently their tonal aspect of chromaticisms would transcend to him as well. Shostakovich’s music is not atonal and hence lends itself to be more commonly viewed in a diatonic context, however to call his music tonal is deceptive; a more appropriate description would be chromatic tonality. The triadic quality of Shostakovich’s harmonic language makes it appear seemingly unproblematic to analyze however as “music of this type uses the harmonic structures and, often, the conventional cadences of diatonic tonality, it lures the attentions of analytical models designed for diatonic music. Yet it is also notoriously unresponsive to such attention...” as a result it is imperative that a paradigm shift is taken in understanding the music of Shostakovich; considering the transitory nature of Shostakovich’s era as a conjuncture of Romanticism and 20th Century techniques it is necessary to employ both methods of Schenkerian multi-level analysis and Neo-Riemannian Theory as they are schools of analysis that have been proven to be effective for both concurrent musical styles (Cohn, *Introduction to Neo-Riemannian Theory*).
Analysis of Shostakovich’s Symphony No. 1 in F-minor Op. 10

Figure 1.1: Melodic material from Shostakovich’s Symphony No. 1 mm.58-65

Thematic material from Shostakovich’s Symphony No. 1 is shown in this figure; it is a primary example of Shostakovich’s use of linear chromaticism. Throughout this passage however, Shostakovich does not dissert the key of F-minor, but rather stretches the boundaries of the local tonic, making non-harmonic tones more acceptable to the ear. Shostakovich does this through rhythmic emphasis on the tones which do fall naturally into the key of F-minor and having the chromatic non-harmonic tones being passing without stress on their beat.

Harmonically the accompaniment of this passage exhibits similar behavior; its use of dominant chords establishes and maintains tonality while chromatic alterations of scale degrees within them exist. In mm.61 a dominant-predominant chord progression is established with the use of a diminished 7th chord followed by the secondary-dominant chord of V7, this harmonic device is idiomatic of western tonal music as it provides a strong movement towards the dominant scale degree of the key.
In this case the \( \text{VII}^{4}/V \) chord is sounded on beat one while the subsequent supertonic (predominant) chords’ notes are rhythmically offset from one another. When the harmony resolves to its secondary dominant (G), the bass experiences a chromatic alteration to Gb; likewise the Bb is lowered a half step to Bbb, creating a chromatic descent or cadence to an F minor (i) chord. Shostakovich bypasses the expected V dominant chord of F-minor through this chromatic alteration of scale degrees.

This chromatically altered chord progression is also present in the subsequent measures, mm64-65, where the predominant \( \rightarrow \) dominant \( \rightarrow \) tonic chord progression is realized through all voices of the Neapolitan harmony, chromatically reaching the \( \text{VII}^{7} \) and then again chromatically reaching tonic.
Figure 1.4: Harmonic reduction of Shostakovich’s Symphony No. 1 mm. 58-66

The alteration of both the III and V notes of a triadic chord is a common practice in the western school of tonal music. As Charles Smith, professor of music theory at Buffalo University, states “the dominant is the pivotal function in most tonal music, it is certain transformations of dominant harmony that create the most obvious opportunities for chordal hypostatization” where these chromatically altered fifths functionally operate as leading tones to various harmonies. While Shostakovich chromatically altered the dominant harmonies, their basic operations were not changed. The goal was to maintain tonality and return, in the end, to the tonic established in the beginning of the phrase. Shostakovich achieved this through chromatic step-wise motion from the dominant harmonies resolving to the tonic of F-minor. In accordance with Smith’s view of the semi-tone as a functional dominant, I believe that an even stronger sense of F-minor as the tonal center is created through the half-step approach of voice-leadings to tonic.
Analysis of Shostakovich’s Symphony No. 5 in D-minor Op. 47

In Dmitry Shostakovich’s Symphony No. 5 there is a stronger presence of linear chromatic harmonies and melodic lines that threaten to destabilize the diatonic nature of the passage by stretching the tonal boundaries of its key. The following excerpt’s accompaniment has been analyzed by chord type and root. The most applicable Roman numeral representation is then assigned based on their context within key, typical harmonic progressions, and most applicable function.

Figure 2.1: Harmonic reduction of Shostakovich’s Symphony No. 5 Mov.1 mm.50-70
The chromatic manipulation and the functional use of the semitone as a dominant seen in Shostakovich’s first symphony are also found again in this passage. The $i \rightarrow ii \rightarrow vii^7$ chord progression in the key of Ebm at the beginning of the passage is a traditional method to establish a tonal center by returning to an Ebm (i) chord after the $vii^7$ dominant chord. The expected tonic $\rightarrow$ pre-dominant $\rightarrow$ dominant $\rightarrow$ tonic chord progression can be modeled by:

$\text{Predominants} \rightarrow \text{Dominants}$

$\begin{array}{c}
\text{VII} \rightarrow \text{III} \rightarrow \text{VI} \rightarrow \begin{bmatrix} \text{ii}^\circ \\
\text{iv} \end{bmatrix} \rightarrow \begin{bmatrix} \text{V} \\
\text{vii}^\circ \end{bmatrix} \rightarrow \text{i} \rightarrow \text{ANY}
\end{array}$

$\begin{array}{c}
\text{Predominants} \rightarrow \text{Dominants}
\end{array}$

$\begin{array}{c}
\text{iii} \rightarrow \text{vi} \rightarrow \begin{bmatrix} \text{ii} \\
\text{IV} \end{bmatrix} \rightarrow \begin{bmatrix} \text{V} \\
\text{vii}^\circ \end{bmatrix} \rightarrow \text{I} \rightarrow \text{ANY}
\end{array}$
While this traditional progression is expected to occur, it is not realized. In the two beats prior to mm. 58, where the Ebm chord is expected, the D\(^{07}\) dominant harmony is chromatically manipulated into a D\(^{7}\) chord with an added minor 7th; by doing so Shostakovich creates a harmonic pull to Gm as D\(^{7}\) acts as a functional dominant chord in the Gm context which is realized in mm. 58. Concerning the combination of both chromatic and dominant techniques and its effects on the transition between Ebm and Gm in mm.56-58 it is particularly important to understand the motion of the bass voices. As stated, the D\(^{07}\) chord is chromatically manipulated except for its root note D the newly formed dominant chord moves through mm. 57 and then reaches the Gm chord through an ascending dominant root in the bass (P4 interval) and by a semitone in the upper voices. This modulation through chromatics would not have been able to function properly without the ascending fourth of D \(\rightarrow\) G, as it is this traditional dominant technique that supports the dominant function of the half-step; without which the chromatic ascent in the treble voices would only have caused a sense of dissonance in the context of Ebm rather than establishing a modulation to Gm.

Figure 2.3: Harmonic outline of Symphony No. 5 Mov.1 mm.56-58
Figure 2.4: Phrygian mode of G-minor

The Ab\textsuperscript{11add-6} harmony at measure 60 establishes a Phrygian modality in respect to Gm where the Phrygian mode has a semi-tone between the first and second scale degrees. The Phrygian mode occurs in many guises throughout Symphony No.5. Its function is to further weaken the strength of tonic; in the context of a minor scale the sense of tonic is already weakened by the lacking of leading tone and by diminishing the second scale degree the structure of the scale is further obscured. The use of other modes also occurs in this phrase; in mm. 54 the tertian Fm7 chord creates a Dorian mode tonality (Natural minor with augmented sixth scale degree) in relation to the previous Ebm chord as they share the notes of F, Ab, C, and Eb. The melodic lines in the exposition of the first subject also exhibit modal tendencies in the keys of D-minor (mm.6-8) and A-minor (mm.32).

Figure 2.5: Dorian mode of Eb-minor
Continuing through the phase, Shostakovich employs more chromatic alterations that present a greater threat to tonal stability. In mm.67-69 there is an altered version of an authentic cadence of what would be a v → EM. Shostakovich presents the Bm (v) harmony in mm.67 but chromatically manipulates it in mm.68 so that the B still is the root of the chord but the tonality is of a G11 chord with a minor seventh. Shostakovich, in accordance with his previous use of the semitone, does this so that the voice-leadings approach the tonic by a semitone. The G11 chord functions as an even stronger dominant cadence than the Bm (v) chord as it reaches tonic through a combination of both a descending fifth and a semitone in the upper voices.
The harmonic progression rendered in Figure 2.7 exemplifies the chromatic nature of the accompaniment voice leadings. The most eminent tonal centers found in the excerpt are represented by stemmed notes: Eb in mm. 58, G in mm. 58, F# in mm 64, B in mm. 67, and lastly E in mm. 69. Taking a macro-analytic perspective, the revolvelency of the bass on the notes Eb-G-B can be understood as an augmented triad being functionally arpeggiated. Enharmonically, the Eb can be also be interpreted as a D# and hence the triad, now G-B-D#, forms V\(^{\text{+}}\) of E. With this assumption of the triad as a V\(^{\text{+}}\) to E, the note D#, although missing from the inverted dominant chord with an added 9\(^{\text{th}}\) (C) in mm. 68, serves functionally as a leading tone to E in mm. 69.

Figure 2.7: Harmonic Projection of Symphony No. 5 Mov.1 mm.50-69

Concluding the Schenkerian analysis of Figure 2.1, it is apparent that chromatic movement in both the accompaniment and melodic lines is both strong and purposeful; its intent being to distort the sense of tonality. However in this phrase exists three points at which traditional techniques are used by Shostakovich to tonicize the key.

1. The use of an Authentic cadence in mm.58 \{D(V) \rightarrow \text{ascending} \rightarrow G (i)\}

2. The use of a submediant (Ab) \rightarrow \text{subtonic (Bb)} \rightarrow \text{tonic (B)} progression to center the harmony on B-minor.

3. The concluding Dominant \rightarrow \text{Tonic (authentic cadence) function of G11 \rightarrow EM}

While traditional analysis proves insightful concerning microanalysis it becomes unmitigated as we attempt to understand the harmonic progression that this passage follows. The projection of an inverted augmented triad ignores certain foundations of Schenkerian analysis, such as maintaining the base note as the center of tonality, this disregard for the basic principles
of western music theory is an attempt to understand a symmetrically based passage through a system which is founded on the asymmetric nature of tonal music. The more modernly developed school of music analytics known as Neo-Riemannian Theory presents a more effective system in understanding symmetrical progressions. Neo-Riemannian Theory is a comprehensive collection of speculative and methodical studies that discern the mathematical properties of tonal structures.

The concepts present in neo-Riemannian theory are summarized as follows:

1. Symmetry
   a. Dualist music theorist Hugo Riemann and his colleagues Moritz Hauptmann and Arthur von Oettingen formulated ideas on symmetrical patterns that exist in music; these ideas would later become the premise for Neo-Riemannian theory. Riemann’s conjectures were built upon the idea that both a major and minor chord are upside down versions of one another and hence are inversely equal or symmetrical.

   ![Figure 2.8: Minor as Upside down Major](image)

2. Maximally parsimonious voice-leadings
   a.Neo-Riemannian theory contains three transformations that chords can experience.
      1. The **P** (Parallel) transformation moves a triad to its corresponding parallel. In a major triad the third moves down a half-step (C major to C minor), in a minor triad the third is augmented (C minor to C Major).
      2. The **R** (Relative) transformation exchanges a triad for its Relative. In a Major Triad the fifth up a tone (C major to A minor), in a Minor Triad move the root down a tone (A minor to C Major).
      3. The **LT** transformation exchanges a triad for its Leading-Tone Exchange. In a Major Triad the root moves down by a semitone (C major to E minor), in a Minor Triad the fifth moves up by a semitone (A minor to F Major).
   b. These alterations are unique in their diatonic nature as all three retain two tones from the chord they were derived from, leaving the transformed notes only one or two semi-tones from its origin. These transformations interact in a distinctly parsimonious relationship creating smooth progressions. The possibilities in both a diatonic and chromatic setting that these transformations provide are legion.
3. Geometrical observed relationships

a. Spatial and graphical representations of the relationships observe unique geometrical qualities. These diagrams can help significantly when attempting to understand both the diatonic and mathematical relationships the transformations share. The Tonnetz is specifically a unique structure that portrays the infinite continuation of these transformations.

Figure 2.9: Key and Triad Matrix/Lattice Structure of L.R.P. Transformations (Tonnetz)
Figure 2.10: Hexatonic System and its Geometric Relationship to the Circle of Fifths

Figure 2.11: Toroidal View of L.P.R. Tonnetz
The hexatonic system presents a method of understanding that accommodates both the asymmetrical diatonic space and the atonal chromatic space that exists in Shostakovich’s music. Using the constructs of the hexatonic system in analyzing the passage from Symphony No. 5, the use of Eb-minor, G-minor, and B-minor as tonal centers can be understood as a hexatonic progression. In a true maximally smooth transformation sequence triads would alternate between major and minor, in this passage however these major versions are excluded through Shostakovich’s use of two transformations between each minor harmonic pillar. Although he bypasses the major triads, all of the notes in this hexatonic system are still present; thus maintaining chromatic tendencies. The resolution to E major is prepared in a typical diatonic manner with a cadence from the minor dominant (B-) to tonic (E).

Figure 2.12: Neo-Riemannian Analysis of Symphony No. 5 Chord Progression

The overarching modulation from Eb to E is seen as unprecedented in the context of traditional musical analysis however from the perspective of neo-Riemannian analysis this progression can simply be seen as a means to maintain chromatic symmetry. The development of this movement begins in F, and the exposition in D; so, the chromatic ascent of the four notes D-Eb-E-F are understood as a structural pattern that emphasize the key points in the movement.
Analysis of Shostakovich’s Piano Trio No. 2 in E-minor Op. 67

Figure 3.1: Harmonic Reduction of Piano Trio No. 2 Mov. III (Passacaglia) mm.1-9

Shostakovich takes passacaglia form, traditionally utilizing chromatic bass ostinatos and a triple meter, and presents in his version modern characteristics whilst maintaining the basic elements making it a passacaglia. Shostakovich’s passacaglia is unique because the chromatic ostinato pattern occurs in the upper voices opposed to the bass; the bass still exhibits chromatic qualities being based on tetrachords a tri-tone apart. The first four measures operate in a typical diatonic manner as a progression through Tonic (i) → (Dominant) V → Pre-dominant (V⁶/V) → Dominant (vii⁰). The expected resolution to i after the vii⁰ is not realized but the harmony travels to distant seemingly unrelated triads, creating an aurally unsettling passage. When the Am harmony arrives, the GM⁷ → Gm⁷ chords develop functional clarity as chromatically descending to the iv of E (the tri-tone of Bb). The whole-step movement to Bm from A suggests a modal sub-dominant → dominant function, harmonically moving toward Em. Shostakovich does not resolve to Em, instead ending on Bbm, the tonal center of the next passage.

The seventh chords in mm. 5-6 draw specific attention to themselves as they are the point at which contemporary methods are applied. Relative harmonic stability is achieved at the Am harmony in mm. 7 by means of harmonic contrast. This cadence by contrast is achieved by the
whole step movement from D→C, F#→E in the right hand and G→A in the left. Shostakovich utilizes the aural contrast between a semi-tone and whole tone as a means to create the synonym of a cadence in a non-diatonic setting.

The movement from the Em harmony back to Bb is difficult to explain with either modern or traditional musical analysis. Where a minor triad is harmonically weak, it typically functions as tonic or a pre-dominant. With respect to the seventh chords’ lack of strong dominant properties and the bass’ whole-step movement to B in mm. 8, it can be ascertained that the Am harmony acts as a sub-dominant→dominant function. Traditionally, this progression would signify the coming resolution to the passage’s opening harmony’s tonic; the opening tonic is reached, but is done so in a contemporary manner. Since mm. 8’s harmony is B, the expected resolution would be to E, not Bb. By omitting the fifth of Bm (F) in the first two beats of mm. 8 we aurally assume it to be minor due to the presence of B and D, the sounding of F on beat two alters the quality of the Bm harmony to diminished. The B and D are then lowered by a half step to a Bbm chord. This progression can also be understood in the context of the opening harmony as a Neapolitan chord on the flattened second scale degree of Bb-minor. The dominant effect of the N° chord is achieved by the common tone of F between it and the traditional dominant chord to Bb. Conventionally, the dominant harmony would be constructed up from F in the manner of a typical V chord; instead Shostakovich builds the harmony down from F with the tones D and B, resolving all other voices to Bb by means of a half-step.

Neo-Riemannian theory can explain this passage with reference to the principle that major and minor scales are mirror inverses of one another. Beginning with the Am harmony in mm. 7, the subsequent Bm harmony is now understood as ii°. The movement to Bbm from the ii° is not simply lowering the B and D by a half step as described in the Schenkerian analysis but rather creating the mirror inverse of Bb-major from the common tone F (Bbm).

Figure 3.2: Mirror inverse relationship of A-major and A-minor

![Figure 3.2: Mirror inverse relationship of A-major and A-minor](image)

While neither Schenkerian nor neo-Riemannian analysis can provide complete comprehension as to the techniques Shostakovich used, in conjunction with one another it is apparent that Shostakovich created the dominant function found in traditional music using obscure and post-triad techniques including chromaticism and symmetry.
Analysis of Shostakovich’s Symphony No. 9 in Eb-major Op. 70

Figure 4.1: Harmonic Reduction of Shostakovich’s Symphony No. 9 Mov.II mm.1-30

In this excerpt the accompaniment sounds the three notes of a B-minor triad, outlining the tonal orientation of the passage. The melody exhibits two extended chromatic lines with a descending contour. The chromatic patterns in the melody, although clear and definitive in direction, lack a sense of harmonic motion; this circumstance creates an inconclusive sense as to where the melody is headed tonally. The bass line provides a consistent reference to B-minor but the cadence points occur in the melodic line when it concludes with a whole-step. The
Conclusion

It is critical to understand the circumstances that Shostakovich was under while composing, to gain a contextual understanding of the compositional techniques employed in the analyzed passages. In 1936, Shostakovich’s opera Lady Macbeth of the Mtsensk District was condemned by the Pravda, a Soviet propaganda newspaper, as a work of formalism due to its crude and dissonant nature. Shostakovich responded with the composition of his Symphony No. 5, with its purpose to redeem him as a composer of Soviet virtue. It was received greatly with Shostakovich listener will detect saying “If the demanding in my music a turn toward greater clarity and simplicity, I will be satisfied”. The meaning of this statement is elusive, to the normal individual, it may be taken that Shostakovich meant that he had returned to the acceptable style of consonant and tonal music called for by Soviet Realism; however a demanding listener may also find greater clarity and simplicity in hearing the same chromatic dissonance and harmonic instability that existed in Lady Macbeth and understanding Shostakovich’s artistic choice of hiding it. Shostakovich prevents chromatically modulating passages from sounding aurally unpleasant through the use of hexatonic systems. Shostakovich’s change in harmonic language was a method by which he could discreetly condemn what he viewed as unjust criticism from corrupt political power.

Shostakovich’s harmonic language became increasingly atonal after his fifth symphony, where neo-Riemannian analysis loses its own ability to effectively understand the harmonic patterns in pieces such as his Piano Trio No. 2 in E-minor and later his Symphony No. 15. The development of this is significant and worthy of investigation in that it is a microcosm of the transitory works composed during the move from the Romantic to 20th Century musical eras.
Bibliography


