DEVELOPING OGOLEVETS'S DOUBLY AUGMENTED PRIME: SEMITONAL VOICE LEADING IN THE MUSIC OF SHOSTAKOVICH

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In this dissertation, I develop and apply an original voice-leading method to the music of Shostakovich. Between the years of 1926 and 1948, his music involved extreme chromaticism that required analytical views from both Russia and the West. In the mid-twentieth century, Russian theorists such as Lev Mazel' and Alexandr Dolzhansky wrote about the modal language of Shostakovich's works, but their writings lacked how to identify them within extremely chromatic passages. In the West, scholars describe his music as both tonal and atonal, sometimes combined within one work. I unify these two views with my voice-leading system consisting of an intervallic resolution of the doubly augmented prime (DAP), which appears seemingly random on the musical surface, but occurs for specific compositional reasons. First mentioned by name in Aleksei Ogolevets' 1946 "An Introduction into Contemporary Musical Thought," the DAP served no harmonic or modal purpose. While Ogolevets mentions and includes examples that show this interval, he does not discuss its resolutions nor how it functions in musical contexts. This structure, however, has broader conceptual and analytical implications. Therefore, I develop a method based on the voice leading and semitonal resolutions of the DAP, which I apply to the music of Shostakovich. The DAP contributes to his compositional style by functioning in three ways: 1) identifying one mode or two simultaneous modes, 2) completing traditional triadic harmonies, and 3) facilitating both tonal and modal modulations.

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CHAPTER 1

INTRODUCTION

Following the death of Vladimir Lenin in 1924, the emerging composer Dmitri Shostakovich (1906–1975)—who previously studied with Rimsky-Korsakov (1844–1908) and Maximillian Steinberg (1884–1946) at the Petrograd Conservatory—met Russian music theorist Boleslav Yavorsky (1877–1942) in 1925, where they remained in contact through letter exchange until Yavorsky's death.[1] The young composer, under pressure from family financial struggles and from the Soviet government, encountered many obstacles during much of his career, including Socialist Realism (1932–1988), *Pravda* denunciations of *Lady MacBeth of the Mtsensk District*, op. 29 (1930–1932) in 1936, and Andrey Zhdanov's Anti-Formalism Campaign (*Ждановщина*) in 1948.[2] Eric Roseberry notes that, during this period of Shostakovich's life, "the conflict-ridden burden of responsibility he carried towards his genius, his public and, as a professional artist, the Soviet cultural bureaucracy" greatly impacted his compositions.[3] With the political pressure in mind, Francis Maes detailed three specific stylistic periods in Shostakovich's music: 1) From *Two Fables of Krilov* (1922) to *From Jewish Folk Poetry*, op. 79 (1948), 2) 1948 to 1966, and 3) 1966 to his death in 1975.[4] These divisions are

[1] I.A. Bobykina, ed. 2000, *Дмитрий Шостакович: в письмах и документах* [Dmitri Shostakovich: In letters and documents]. Antikva.

[2] The Anti-Formalism Campaign involved criticism and persecution for "writing 'hermetic' music and misusing dissonance" (Braudel 1993, 565). See Judith Kuhn, 2010, *Shostakovich in Dialogue: Form, Imagery, and Ideas in Quartets 1–7*, Burlington, VA, Ashgate Publishing, 1–14; Joachim Braun, 1984, "Shostakovich's Song Cycle *From Jewish Folk Poetry*: Aspects of Style and Meaning," From *Russian and Soviet Music: Essays for Boris Schwarz*, Ann Arbor, MI, UMI Research Press, 259–81; Laurel Fay, 2000, *Shostakovich: A Life*. Oxford University Press, New York, NY, 33–167.

[3] Eric Roseberry, 2008, "Personal Integrity and Public Service: The Voice of the Symphonist," From *The Cambridge Companion to Shostakovich*, Ed. by Pauline Fairclough and David Fanning, Cambridge University Press, Cambridge, United Kingdom, 9.

[4] Frances Maes, 2008, "Shostakovich's Songs," From *The Cambridge Companion to Shostakovich*, Ed. by Pauline Fairclough and David Fanning, Cambridge University Press, Cambridge, United Kingdom, 234–35.

mostly politically related, as the events listed above and Stalin's death in 1953, which invoked "The Thaw," occurred during this second period. I infer that, when Shostakovich was under the most political pressure to compose a particular way, his music was highly chromatic. However, I adjust the stylistic dates to begin with Piano Sonata No. 1 (1926) and end with *From Jewish Folk Poetry*. During this twenty-two year period (1926–1948), his use of chromaticism within tonal and modal frameworks produced non-traditional intervals, to be explained in depth throughout the course of this dissertation.

Semitonal motion, in the context of this extreme chromaticism, characterizes Shostakovich's style, a characteristic that is reflected in both Western and Russian theories of voice-leading, octatonicism, and modality. For example, the song cycle *From Jewish Folk Poetry*, op. 79, presents "advanced chromaticism" as well as a sense of dominant-tonic relationships that may occur in an expected or unexpected key.[5] While Shostakovich's music preserves some elements of functional tonality, some progressions and cadence points function untraditionally. Chromatic behaviors of this kind are explained by voice-leading systems offered by Russian theorists such as Boleslav Yavorsky's (1877–1942) Symmetrical Systems and Aleksei Ogolevets's (1891–1967) augmented and doubly augmented primes (DAPs). Whereas Yavorsky's systems utilized resolutions of all pitches within scale, Ogolevets emphasized resolution of augmented primes over the resolutions of DAPs.

In this dissertation, I provide a voice-leading archetype for the DAP using the music of Shostakovich. To achieve this, I outline the ways in which certain methods and techniques of Ogolevets—view of diminished and augmented seventh-chords, orders of connection, and

[5] William Hussey, 2003, "Triadic Post-Tonality and Linear Chromaticism in the Music of Dmitri Shostakovich," *Music Theory Online 9*, no. 1.

hierarchy of system connections—help explain the use of mode, doubly augmented primes, and ambiguity among key centers in the music of Shostakovich.[6] In his 1946 text, *Введение в современное музыкальное мышление* [An introduction into contemporary musical thought] (1946), Ogolevets strives to explain chromaticism in music by expanding his original "line of fifths" into a "spiral of fifths."[7] This spiral provided endless possibilities for traveling from one pitch to another within a twelve-tone system, with flexibility of enharmonicism.[8] This figure reflects not only what we know as the circle of fifths in the West, but a method of transformation similar to Neo-Riemannian theory as well as "twelve-toneness."[9] With attention to orthography, one may move around the spiral to any of the twelve-tones.[10] Central and most fundamental to each of these methods of analyses are resolutions that move by semitone. Along with semitonal motion, Ogolevets speaks at length on intervallic structures within both Western and Russian-composed music; however, he does not explain the use of the DAP.[11] In my project, I examine Ogolevets's acknowledgement of this interval and develop a method of analysis for Shostakovich's music, in which the DAP functions as an established voice-leading structure. I argue that the DAP functions as an important voice-leading structure because it 1) allows for the joining of two modes simultaneously, 2) assists in completing traditional triadic harmonies by resolving by semitones into a major third, similar to the augmented prime's resolution to a minor

[6] Ogolevets does not explicitly draw attention to DAPs in his prose, but they do appear in his diagrams.

[7] Aleksei Ogolevets, 1946, *Введение в современное музыкальное мышление* [Introduction to contemporary musical thought], Moscow-Leningrad: Musgiz.

[8] In this chapter, Figure 2.3 presents the spiral of fifths. I discuss Ogolevets's methods in the following chapter.

[9] Christopher Segall, 2020, "Yuri Kholopov and Twelve-Toneness," Music and Politics 14, no. 2; and Christopher Segall, 2013, "Triadic Music in Twentieth-Century Russia," PhD Diss., Graduate Center, City University of New York.

[10] In Western twelve-tone theory, attention to orthography is more relaxed than in Russian theories, where a particular tone or accidental relates to a specific mode.

[11] The listing of intervals and how many semitones each contain are very similar in style to music treatises in the *Ars Nova* such as Prosdocimus and Tinctoris.

third, and 3) it occurs frequently in the music of Shostakovich between the years of 1926–1948 to facilitate harmonic and modulatory shifts. Shostakovich's music contains many chromatic inflections that are embedded within the mode(s) of the work. The augmented and doubly augmented primes not only reveal immediate and longer-range structural resolutions, but help find innovative strategies for modal identification. Western theories, such as the theory of octatonicism, do not explain two pitches of the DAP. Ogolevets, on the other hand, provides a much better ground of explaining this interval and its voice-leading behavior. Specific to the modes of Ogolevets, or families of modes, the DAPs that arise within any given passage of music resolve to pitches of the modal center that may otherwise be hidden within the chromaticism. I use excerpts from Piano Sonata No. 1, op. 12 (1926), String Quartet No. 1, op. 49 (1938), String Quartet No. 2, op. 68 (1944), and String Quartet No. 3, op. 73 (1946) to describe the two types of DAPs: normal and abnormal. Normal DAPs resolve according to an established voice-leading archetype, while abnormal DAPs resolve partially or not at all like the voice-leading archetype. Later, I analyze larger passages from Piano Sonata No. 2, op. 64, second movement (1944), *Lady MacBeth of the Mtsensk District*, "Katerina's Aria," opp. 29/114 (1930–32/1955–63), *From Jewish Folk Poetry*, No. 1 (1948), and *Four Verses of Captain Lebyadkin*, op. 146 (1974).

Western music theorists have often approached music written by Russian-born composers, such as Stravinsky, with scalar methods including the concept of octatonicism and both diatonic and jazz modes.[12] Even though theories of voice leading have been important for English-language scholarship about music in general, these ideas have not been fully applied to

[12] Dmitri Tymoczko, Dmitri, 2002, "Stravinsky and the Octatonic: A Reconsideration," *Music Theory Spectrum* 24, no. 1: 68–102; Pieter C. Van Den Toorn, 1975–77, "Some Characteristics of Stravinsky's Diatonic Music," *Perspectives of New Music* 14, no. 1: 104–38; no. 15: 58–95; and Pieter C. Van Den Toorn, and Dmitri Tymoczko, 2003, "Stravinsky and the Octatonic: The Sounds of Stravinsky," *Music Theory Spectrum* 25, no. 1: 167–202.

Russian music yet. In contrast, Russian theorists from the twentieth century—Boleslav Yavorsky, Aleksei Ogolevets, Sergei Protopopov, Lev Mazel', Miroslav Skorik, and Yuri Kholopov—analyzed the works of Shostakovich from a voice-leading-oriented perspective. Their various theories of modes and tonal systems reflect this tendency.[13] Yavorsky, for example, created a theory of symmetrical systems that could apply to all music, at least according to his original intention. From the 1980s to present day, scholars have translated some of these texts into English and added commentary in order to bring these important methods to the attention of Western readership. Ellon D. Carpenter (1988), Philip Ewell (2013), Christopher Segall (2020), and Inessa Bazayev (2014) include translations along with commentary on many of the theoretical materials listed above.[14]

Among these theorists, important methodologies for analyzing Russian music emerge. While theorists such as Yavorsky and Kholopov have been translated into the English language, the majority of Ogolevets's treatises, namely his 1946 text, remains untranslated.[15] Carpenter's (1988) dissertation does discuss the 1946 treatise, but as a summary of its contents. My research,

[13] Boleslav Yavorsky, 1908, *Строение музыкальной речи* [The structure of musical speech: materials and notes], Moscow; Boleslav Yavorsky, 1915, *Упражнения в образовании ладового ритма* [Exercises in the formation of schemes of modal rhythm], Moscow: Gos. Iz-vo; Aleksei Ogolevets, 1941, *Основы гармонического языка* [Foundations of harmonic language], Moscow-Leningrad: Государственное музыкальное издательство; Sergei Protopopov, 1930, *Элементы строения музыкальной речи* [The elements of the structure of musical speech], 2 vols, Moscow: Государственное издательство, Музыкальный Сектор; Lev Mazel', 1960, *Симфонии Д.Д. Шостаковича* [Shostakovich's symphonies], Moscow: Советский композитор; Miroslav Skorik, 1969, *Ладоваиа система С. Прокофьева* [S. Prokofiev's Modal System], Kiev: Музична Украина; and Yuri Kholopov, 1988/2003, *Гармония* [Harmony], Moscow: Музыка, Reprint, Moscow: Лань.

[14] Gordon McQuere, 1983, "The Theories of Boleslav Yavorsky," In *Russian Theoretical Thought in Music*, ed. by Gordon McQuere, University of Rochester Press: 109–64; Ellon D. Carpenter, 1988, "The Theory of Music in Russia and the Soviet Union, ca. 1650–1950." PhD diss., University of Pennsylvania; Phillip Ewell, 2013, "On the System of Stravinsky's Harmony" by Yuri Kholopov" Translation and Commentary," *Music Theory Online* 19, no. 2; Christopher Segall, 2020, "Yuri Kholopov and Twelve-Toneness," *Music and Politics* 14, no. 2; Inessa Bazayev, 2014, "The Expansion of the Concept of Mode in Twentieth-Century Russian Music Theory," *Music Theory Online* 20, no. 3; and Ellen Bakulina, 2014, "The Concept of Mutability in Russian Theory," *Music Theory Online* 20, no. 3.

[15] Carpenter (1988) and Bazayev (2014) have translated some passages from Ogolevets 1941 text.

instead, is focused on specific descriptions of the DAP interval and its derivations from other collections and harmonies.

In the following few paragraphs, I introduce some central problems of Ogolevets's theory (which are discussed in more detail in later chapters), including his "line of fifths," his theory of modes, and the augmented prime (*увеличенная прима*).[16] An overview of these concepts lays a theoretical basis, which existing literature, as well as my analyses of Shostakovich's music, help to clarify the voice leading structure of the DAP. This summary of concepts also shows the necessity of my original voice-leading contribution—the doubly augmented prime (*дважды увеличенная прима*). Ogolevets's theories appropriately explain how Russian music, specifically that of Shostakovich, can include chromatic inflections that do not seem to belong in one of the diatonic modes.[17] His combination of diatonic modes into hybrid modes and approach to them through the line of fifths produce strikingly original answers to this music. Example 1.1 presents the original line of fifths with a Roman alphabet translation of solfege.[18] C represents *do* (1) in the fixed *do* system with sharps and flats raising and lowering pitches, respectively.

Example 1.1: Ogolevets's line of fifths in its original Russian. From "Foundations of Harmonic Language" (1941, 34).

4в.	7	3	6	2	5	1	4н.	7н.	3н.	6н.	2н.
фа♯	си	ми	ля	ре	соль	до	фа	си♭	ми♭	ля♭	ре♭
fa#	si	mi	la	re	sol	do	fa	si*b*	mi*b*	la*b*	re*b*

The numbers above the solfege syllables range from 1 to 7 (representing pitch classes of

[16] See Bazayev 2014 for more examples of line of fifths. Also see Appendix A for her translation of the Four Families of Modes.

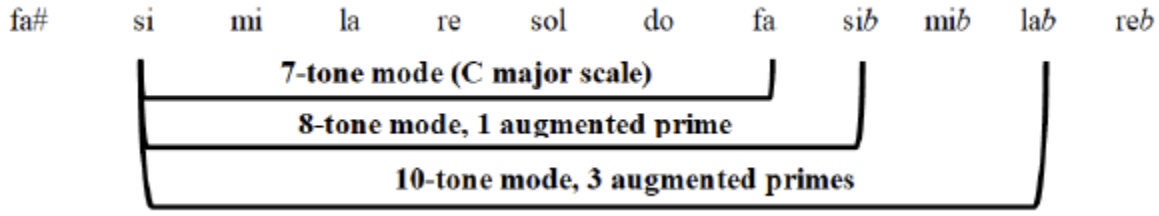
[17] These modes (i.e. Dorian, Aeolian, etc…) are often referred to as "church modes" in scholarship, however, I address them as "diatonic modes" throughout this dissertation.

[18] The translation of solfege symbols from Russian to the Roman alphabet system in the lower line of the example is my own.

the C major scale), with chromatic alteration labels “B” or “H” to indicate raised or lowered versions of the whole numbers 1-7. Through the line of fifths, any diatonic mode may be produced by using seven consecutive syllables on the line. In this system, it is possible to have more than seven pitches in a mode, such as eight or more. Based on this line, eight consecutive pitches yields one augmented prime. For example, adding *si*b (next in line following *fa*) to the seven-tone mode of C major creates an augmented prime between *si* and *si*b, or B and Bb.

Carpenter begins her discussion of Ogolevets’s augmented primes starting with his views of attraction and repulsion (*отталкивания*) within modes.[19] While many theories, such as those of Yavorsky, highlight resolutions of tendency tones (i.e. tritone resolving to a major third), Ogolevets focuses on the tendencies themselves, or the repulsive tones. Repulsions are created when the line of fifths extends past a seven-tone mode to include an altered pitch. Modes may involve seven, eight, nine, ten, or twelve tones. Example 1.2 presents the line of fifths in the fixed–do system with selections of seven, eight, and ten tones along with the number of augmented primes they include.[20]

Example 1.2: Interpretation of Ogolevets’s line of fifths with seven, eight, and ten-tone mode brackets.



[19] Carpenter (1988), 1195–96.

[20] While Ogolevets’s line of fifths uses a traditional fixed *do* system, it is equivalent to the English-language use of letter names. For example, *#fa* is F#. Sharps and flats before a syllable indicated raised and lowered letter names (i.e. *fa#* and *fa* are F# and F-natural). Any occurrence of two similar syllables (*fa#* and *fa*) results in an augmented prime. Additionally, use of the fixed system implies that *do* is the pitch C. Therefore, each syllable from the original text translates exactly to letter names.

The bracket for the seven-tone mode represents C major (*si–fa*; B–F). A seven-tone mode does not have any repeating solfege syllables, but an eight-tone mode contains one augmented prime: *si* and *si*^{b}, or B and B^{b}. With this system, any mode over seven tones will include one or more augmented primes, which creates repulsion between the two pitches (i.e. B and Bb). Ogolevets's system presents not only augmented primes, but possible use of two modes simultaneously. Ogolevets claims five eight-tone modes within his system: 1) Lydian/Ionian (*fa–fa#*), 2) Ionian/Mixolydian (*si–si*b), 3) Mixolydian/Dorian (*mi–mi*b), 4) Dorian/Aeolian (*la–la*b), and 5) Aeolian/Phrygian (*re–re*b).[21] With eight, instead of seven tones in C major, one can view the duality as C major (Ionian) and C Mixolydian.

While Ogolevets's approach to augmented prime is well represented in the line of fifths and further explained by combinations of diatonic modes, the method does not explain individual accounts of doubly augmented primes in the music of Shostakovich. In my dissertation, I aim to examine and describe how doubly augmented primes function as a voice-leading archetype within the works of Shostakovich, through its resolutions into a major third that presents the tonic harmony or modulation into another key area.

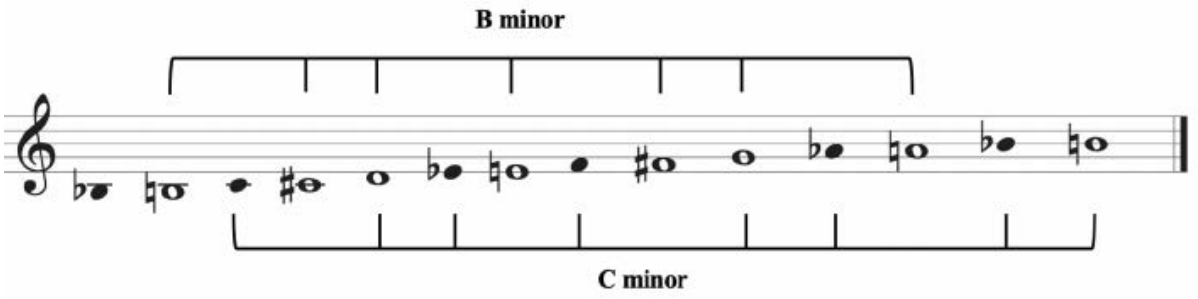
1.1 Augmented and Doubly Augmented Primes

Shostakovich's *Dva Romansa*, op. 84, I. "Ballada" (1950) begins in the key of B minor with the chromatic inflection, Eb. While the bass line gravitates towards B-natural, the melody continues to avoid E-natural and adds another altered pitch, Ab (m. 3). It is not until m. 8 that Bb appears, suggesting that we are not only in B minor, but also C minor. While a definite key change occurs at m. 35 with a C pedal in the bass, I argue that C minor was present before this

[21] The solfege ranges provided are also in association with the translation of Ogolevets's text.

point, though less pronounced. The movement unequivocally begins in B minor, as shown in the key signature and starting pedal B in the bass, but Shostakovich highlights Eb, or scale degree b4. Once the mode changes to C minor, along with the time signature and rhythmic patterns (now triplets), Shostakovich leaves F# from B minor, now raised scale-degree 4. The consistent use of altered scale-degree 4 between the two modes proves that both are present simultaneously. This simultaneity is evident through the use of B-natural and Bb, the first occurrence of an augmented prime, allowing for two modes at one time. Example 1.3 presents the overall pitch structure of this movement.[22] While not all of these pitches are used, Ogolevets assumes the diatonic completion for each scale in question.[23] For example, E-natural never appears in this movement, but it is an expected pitch member of B minor.

Example 1.3: Pitches from B minor (upper bracket) and C minor (lower bracket) in Shostakovich's *Dva Romansa*, op. 84, I. "Ballada."



Ogolevets declares that seven-tone modes do not produce any augmented primes, however, the fusion of two seven-tone modes, B natural minor and C natural minor, produces five possible augmented primes.[24] I maintain that the augmented primes C/C#, Eb/E-natural,

[22] Shostakovich uses enharmonic pitches such as A# and Bb within this movement. Therefore, Bb should not be interpreted as a leading tone to B minor, rather scale degree b7 in C minor. Orthography will continue to be of importance in this music as well as Ogolevets's theory. According to Bazayev (2014, [2.1]), "Any given key can be expanded with inflected (lowered or raised) scale degrees to include neighboring and more distant keys on the line of fifths. Even within twelve-tone tonality, orthography is important, for each scale degree functions within the given key."

[23] Ogolevets (1941), 341.

[24] Ibid., 342.

F/F#, Ab/A-natural, Bb/B-natural are a strong indication of modal duality—the idea that two different modes, with different tonics, coexist in this song. Many analytical methods, at least those that rely on the idea of tonal center, tend to focus on resolutions of tendency tones, and, while augmented primes do resolve, they also serve as modal indications because they occur consistently rather than a one-time chromatic inflection. We finally encounter the fusion of these two keys in mm. 126–28 when augmented primes F and F# occur (Example 1.4A). In this example, the augmented prime is marked with circles around F/F#. Solid arrows trace their resolutions: F to E and F# to G. This resolution functions just as Ogolevets describes by resolving to a minor third. The pitches in triangles highlight another type of augmented prime, which I call doubly augmented prime (DAP), between Ab and A#. This interval is doubly augmented because the two tones share the same letter name, but contain accidentals two semitones apart.

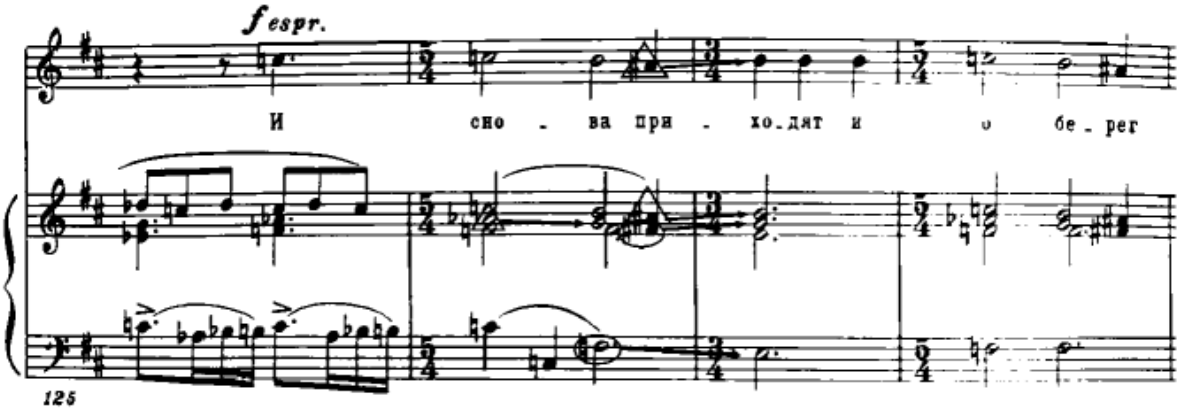
While Ogolevets uses this term in his text, he refutes the notion that it contains a repulsion.[25] I build my own approach, however, in which the concept of repulsion is crucial: I assert that, following the same principle, every DAP resolves into major thirds, in addition to Ogolevets's theory that the single augmented primes resolve into minor thirds. Therefore, I argue that the resolution of DAPs participates in the construction of important harmonies. Additionally, I find that the DAP provides a stronger resolution between two modes, in comparison to traditional harmonic procedures, that would classify chords on an individual basis (i.e. Ab belongs to an F minor triad and A# belongs to an F# major triad). Example 1.4A, circled pitches F#/F resolve to E/G (minor third), while A#/Ab (triangles) resolve to G/B, a major third. Example 1.4B presents the concurrent resolutions of both the augmented and doubly augmented

[25] Carpenter (1988), 1196.

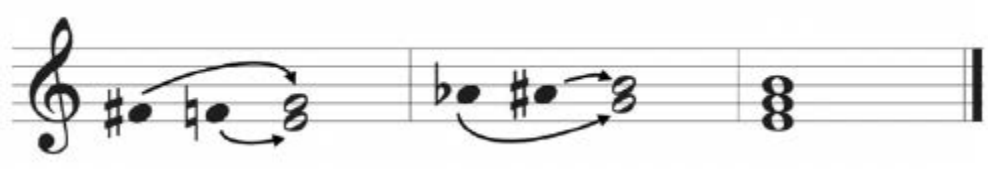
primes, which result in an E minor triad (m. 127), a traditional harmony relevant to B minor.[26] As noted above, the DAP resolves to members of one triad (E minor) instead of appearing as members of two separate harmonies (F–Ab–C and F#–A#–C#).

Example 1.4: Shostakovich, *Dva Romansa*, op. 84, I. "Ballada," mm. 125–28.

(A) Augmented primes



(B) Reduction of augmented and doubly augmented primes

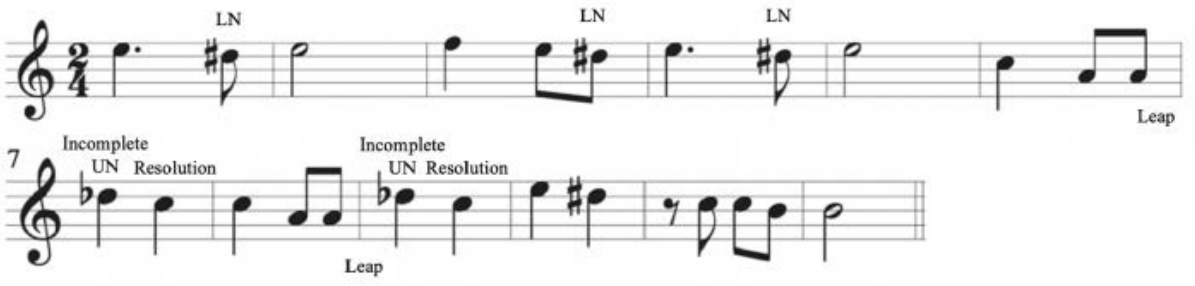


Another instance of DAP occurs in Shostakovich's song cycle *From Jewish Folk Poetry*, op. 79, no. 4 (1948). Example 1.5 presents the opening melody of the soprano voice. This passage includes both a D# and Db, each instance resolving instantly to E and C, respectively. Compared to the previous musical example, this doubly augmented prime occurs within one melodic line and approached in two ways: 1) D# as a lower neighbor resolving back to E and, 2) Db approached by leap from A (interval of a diminished fourth), resolving down by step to C. In mm. 9-10, both primes occur more closely in range with the D# left unresolved. Instead, it

[26] For a discussion of triadic harmony in Shostakovich see Hussey, 2003. I also discuss the combination of augmented and doubly augmented primes to produce complete triads in Chapter 4.

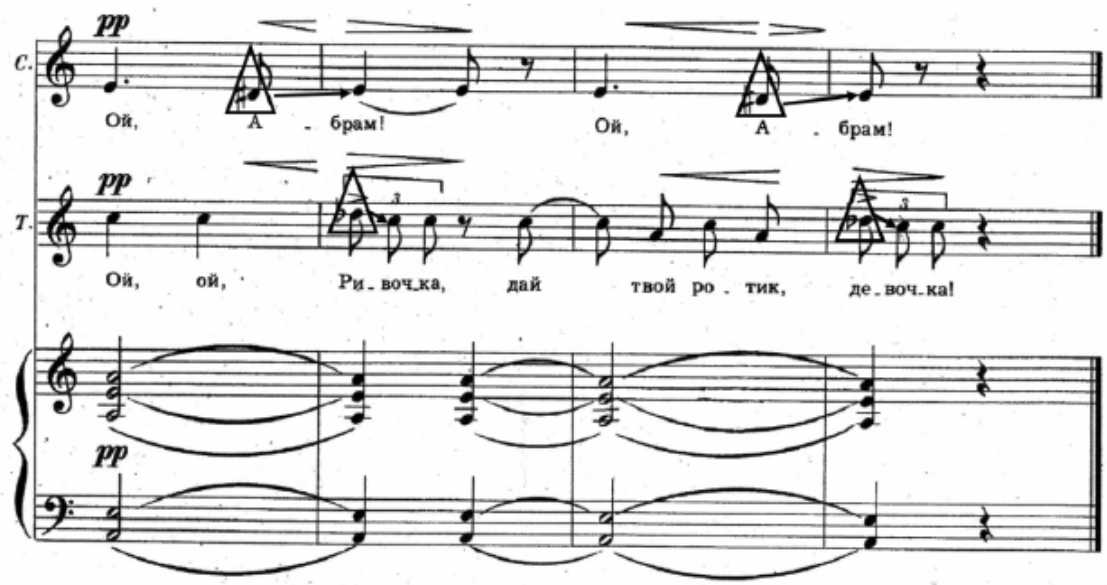
appears to function like its Db counterpart: it resolves down to C.[27] Finally, in the last four measures of the movement (mm. 81–84), the two D#/Db fragments return, almost simultaneously (Examples 1.6A and 1.6B).[28]

Example 1.5: Shostakovich, *From Jewish Folk Poetry*, op. 79, no. 4, mm. 1–12, soprano melody.

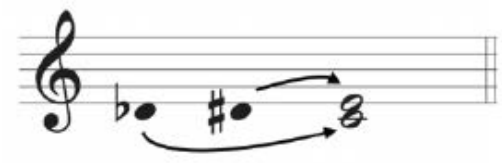


Example 1.6: Shostakovich, *From Jewish Folk Poetry*, op. 79, no. 4, mm. 81–84.

(A) DAP resolutions



(B) Reduction of doubly augmented prime resolutions



[27] This is not to say that D# does not resolve on a larger structural scale.

[28] Though the example provided shows a diminished octave, the resolution is intervalically inverted to an augmented prime (i.e. resolving to a minor sixth instead of a major third).

This is a clear example of a doubly augmented prime and how they can resolve in a specific musical situation. Here, the DAP, as an interval, may be seen to express a textual element, the dialogue between two protagonists. Throughout the movement, the soprano voice tries to convince the tenor voice to stay and not go off to war. The opening with the soprano voice carrying both D# and Db in their melody could be seen as an inner struggle with the tenor's destiny to leave. In the last measures of the music, the composer makes it clear that the struggle still continues, and no consensus—musical or emotional—has been reached.[29]

1.2 Overview of Dissertation

The remainder of this dissertation includes a more in-depth theoretical study followed by an analytical exploration of the issues involved. I begin with an extended critical review of existing literature, by both Russian and Western theorists who have analyzed the music of twentieth-century Russia and specifically Shostakovich (Chapter 2). In particular, I revisit the theories of Yavorsky and Protopopov (which have recently been studied by Philip Ewell and Daniil Zavlunov, among others) to underscore certain elements of Ogolevets's system. Chapter 3 summarizes the theories of Ogolevets in greater detail, more specifically, his "families of modes," attraction and repulsion, and augmented primes, as well as his mention of doubly augmented primes (DAP). In the chapters that follow, I formulate an original voice-leading method using the DAP, which resolves to the tonic of a given passage (or to the new tonic of a modulating passage) found in the music of Shostakovich. The aim of these analyses is to demonstrate how the method works, as well as to explain specific, hard-to-understand musical situations in Shostakovich. Chapter 7 features longer analyses that show how the DAP may

[29] The remainder of this dissertation strictly adheres to methodology and voice leading. This example of meaning may be explored in a future project.

function on a larger structural scale. Additionally, I provide a look past the timeframe when the DAP was common in the composer's music; specifically, I show how Shostakovich removed DAPs in his later revision of *Lady MacBeth of the Mtsenk District*. The conclusion (Chapter 8) summarizes these theories as well as my commentaries for future research.

CHAPTER 2

SHOSTAKOVICH AND TWENTIETH-CENTURY MUSIC THEORY IN RUSSIA AND THE WEST: A REVIEW OF LITERATURE

2.1 Introduction

In this chapter, I contextualize Ogolevets's theories through the music theory used in Russia and the West. Additionally, I examine theories used for Shostakovich's music through voice-leading methods, Western theories, and Russian views of mode. I achieve these connections in three ways: First, I trace the historical development of music theory in twentieth-century Russia leading up to Ogolevets. This process involves recognizing both Russian and some Western influences on Ogolevets. Second, I trace the development of harmonic theory and specific voice-leading procedures—Russian theorists Yavorsky's and Protopopov's methods that directly relate to my voice-leading theory derived from Ogolevets—as well as the general Russian treatment of twelve-tone systems. Finally, I provide a brief explanation of how Shostakovich's music is described by English-language analysts and conclude with a survey of methods used to analyze the music of Shostakovich, both Western and Russian.

2.2 Theoretical Studies in Early Twentieth-Century Russia

The nineteenth-century study of music in Russia was based mostly around a theory of composition, in which it was viewed as practical and pedagogical. Leading into the twentieth century, composers and musicians became more interested in the "scientific" side of music and began to move towards a more speculative theory. They were more involved with "its structure, its perceptions, and its underlying laws."[30] To understand the theories of Ogolevets, I have

[30] Ellon D. Carpenter, 1983, "Russian Music Theory: A Conspectus," from *Russian Theoretical Thought in Music*, ed. By Gordon D. McQuere, Rochester, NY: UMI Research Press, 33.

provided a diagram of influences including German theories that lay a foundation for Russian music theory (Figure 2.1).[31]

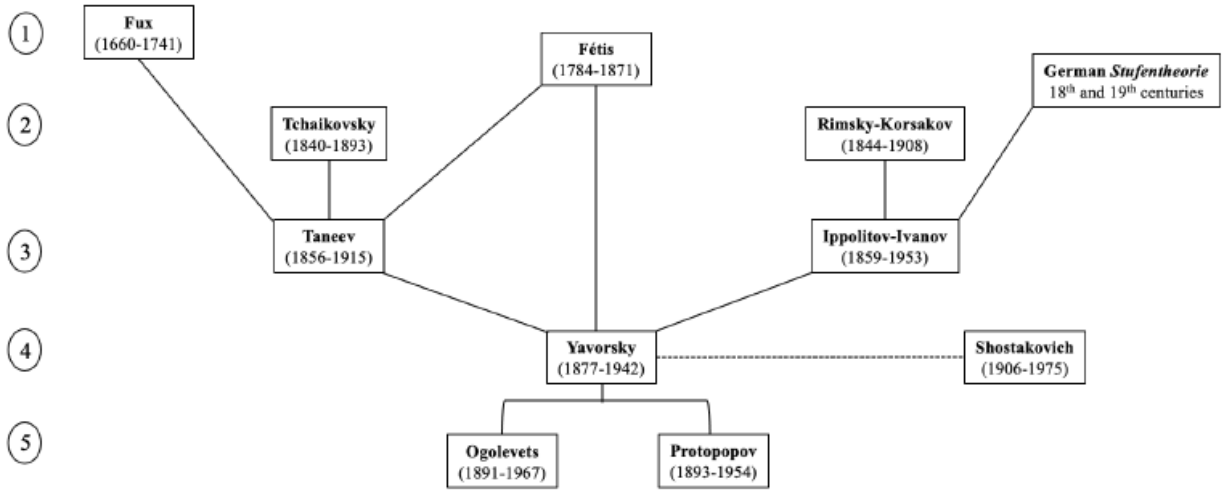


Figure 2.1: Lineage of influences between Russian theorists and composers, as well as Western European influences on them.

Lines 1 and 2 represent the earliest Western and Russian influences. The three boxes across the highest point of the diagram represent the outside influence of Western theory—Fux, Fétis, and German *Stufentheorie*—predating the two composers a line below: Pyotr Tchaikovsky (1840–1893) and Nikolai Rimsky-Korsakov (1844–1908). Both composers wrote their own harmony treatises—*Руководство к практическому изучению гармонии* [Guide to the practical study of harmony] and *Практический учебник гармонии* [Practical manual of harmony], respectively—which individually influenced the Russian theorists Sergei Taneev (1856–1915) and Mikhail Ippolitov-Ivanov (1859–1935).[32] These two theorists created tighter connections between Russian and Western-European music scholarship. Taneev, known as the "founder of

[31] I have complied this chart based on Ewell (2018) and Carpenter (1983).

[32] Pytor Tchaikovsky, 1871, *Руководство к практическому изучению гармонии* [Guide to the practical study of harmony], Moscow; and Nikolai Rimsky-Kosakov, 1886, *Практический учебник гармонии* [Practical manual of harmony], St. Petersburg.

music theory in Russia," was heavily influenced by Fuxian counterpoint and the writings of Fétis.[33] One of the first books published in Russia was his *Подвижной контрапункт строгого письма* [Moveable counterpoint in the strict style] (1909).[34] Ippolitov-Ivanov, on the other hand, followed German *Stufentheorie* of the century beforehand. Both theorists taught one of the most well-known and innovative theorists, Boleslav Yavorsky, whose most influential work *Строение музыкальной речи* [The construction of musical speech] (1908) added many new elements to the analysis of Russian composed music.[35] As a student, Yavorsky absorbed a combination of Fuxian counterpoint and *Stufentheorie*, but Taneev had the greatest influence on him.[36] Taneev believed that "if in two adjacent chords each contains one note of a given tritone, then these chords achieve a gravitation toward the tonic."[37] Taneev's perception of the gravitation to tonic, a theory he derived from Fétis, was foundational to Yavorsky's music theory in Russia.[38] He created larger systems from the most basic musical structure: the tritone. He felt the tritone was the strongest structure in tonal music, and "that something other than the T–S–D–T formula was necessary to account for structure in music."[39] The "seven-step system of functional tonality had been replaced by a twelve-step system" in the twentieth century, and a new angle was needed to analyze this kind of music.[40] Because Russian theoretical works

[33] Carpenter (1983), 33–34.

[34] Ibid., 36; and Sergei Taneev, [1909] 1959, *Подвижной контрапункт строгого письма* [Movable counterpoint in the strict style], Moscow: Jurgenson, Reprint, Gos. Muz. Izdatel'stvo.

[35] Yavorsky (1908).

[36] Phillip A. Ewell, 2018, "On the Concept of *Lad*: 1830–1945." *Music Theory Online* 25, no. 4, [2.1, 3.6–3.7, 3.11].

[37] Sergei Taneev, 1952, *С. И. Танеев: материалы и документы*. *Том 1: переписка и воспоминания* [Sergei Taneev: Materials and documents. Vol. 1: Correspondence and recollections], Izdatel'stvo akademii nauk SSSR, 230-31; translation from Ewell (2018), [4.7].

[38] Ewell (2018), [4.4]; Carpenter (1988), 452–53.

[39] Phillip A. Ewell, 2012, "Rethinking Octatonicism: Views from Stravinsky's Homeland," *Music Theory Online* 18, no. 4, [2.4].

[40] Ibid., [2.4].

"lagged behind their compositional counterparts" such as Italy, Germany, and France, most musical terms transferred from those languages into Russian.[41] For example, ordinal numbers used to describe interval size are taken from Latin-based languages: The word "second" in Russian Cyrillic is translated from *secunda* [*секунда*]. Yavorsky added many musical terms to the Russian lexicon, most important for this research, the word "augmented" [*увеличенный*].[42] Another word, *лад* [lad]—first translated into Russian from German by Modest Rezvoi (1807–1853) in 1830—was an "independent and important topic" of mode that Yavorsky shed light on and has been widely discussed by Western music theorists as it does not translate easily to English.[43] The closest translation is the term "mode."[44]

Yavorsky's work deserves a lengthy discussion because of its direct influence on Ogolevets and Russian music theory in general. Like Taneev's theory of gravitation to tonic, Yavorsky focused on what he termed *теория слухового тяготения* [the theory of auditory gravitation] starting with a Single Symmetrical System (SSS) to more complex modal chains resulted in the generation of augmented sixth chords and modal collections.[45] Symmetry "in a symmetrical system manifests itself in the opposite directions of the gravitation and the resolution of unstable tones into stable ones," of which either may contribute to the collections themselves.[46] Example 2.1 shows the most basic musical resolution. In Example 2.1a, the tritone,

[41] Ewell (2018), [2.2].

[42] Ibid., [3.2]. This passage in Ewell's article includes many other examples of words Yavorsky added to the Russia's musical terminology.

[43] Ellon D. Carpenter, 1995, "Russian Theorists on Modality in Shostakovich's Music," From *Shostakovich Studies*. Ed. by David Fanning, Cambridge University Press, 79.

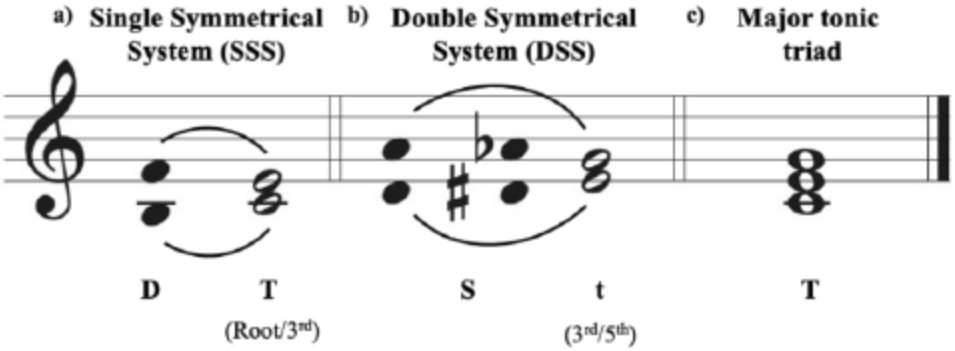
[44] Yavorsky was not the first to speak on *lād*, but was one of the leading theorists to develop a fundamental theory. For a thorough discussion on *lād*, see Ewell (2018).

[45] Gordon McQuere, 1983, "The Theories of Boleslav Yavorsky," In *Russian Theoretical Thought in Music*, ed. by Gordon McQuere, University of Rochester Press, 113; Ewell (2018), [4.3]

[46] Gordon McQuere, 1979, "'The Elements of the Structure of Musical Speech' by S.V. Protopopov: A Translation and Commentary," PhD Diss., The University of Iowa, 23.

labeled as a dominant function, converges towards a major third, labeled with a capital 'T.' Example 2.1b begins with a perfect fifth, labeled with an 'S,' also resolving inward, but this system resolves once more to a minor third, labeled with a lower case 't.' The combination of 'T' and 't' results in a complete major tonic triad (Example 2.1c).

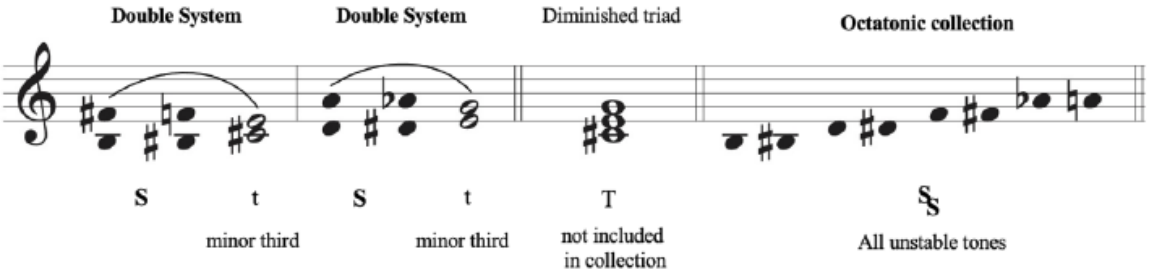
Example 2.1: Yavorsky's Single and Double Symmetrical Systems.



Different combinations of these two systems result in other choral harmonies and modes. One well-known mode to the West, the octatonic scale, is included in Yavorsky's system as well: It is the collection of all unstable tones within his diminished mode (*уменьшённый лад*). Example 2.2 presents this process. Unstable tones, labeled with darkened noteheads, occur in two sets of Double Symmetrical Systems. These systems begin with perfect fifths and move inward by one semitone to the next dyad (labeled 'S'), then once more to a minor third dyad (labeled 't'). The combination of these systems produces eight tones that form the octatonic collection.[47] The tonic triad that the unstable tones resolve to is not included in this collection. The resolutions themselves (stable tones) are not the goal of the collection, rather, the process is (unstable tones).

[47] In the West, the octatonic scale centers around C (OCT_{01}), but Yavorsky's begins on B as a product of his system, resulting in OCT_{23}. The same pitches are included but ordered differently.

Example 2.2: Yavorsky's diminished mode (octatonic collection).



Yavorsky's theoretical history, passed down from his teachers, developed into a more cohesive approach in Russian music theory, which he passed along to his two students, Aleksei Ogolevets (1891–1967) and Alexander Protopopov (1893–1954). Both students were vastly different in their approaches to theory following their studies.

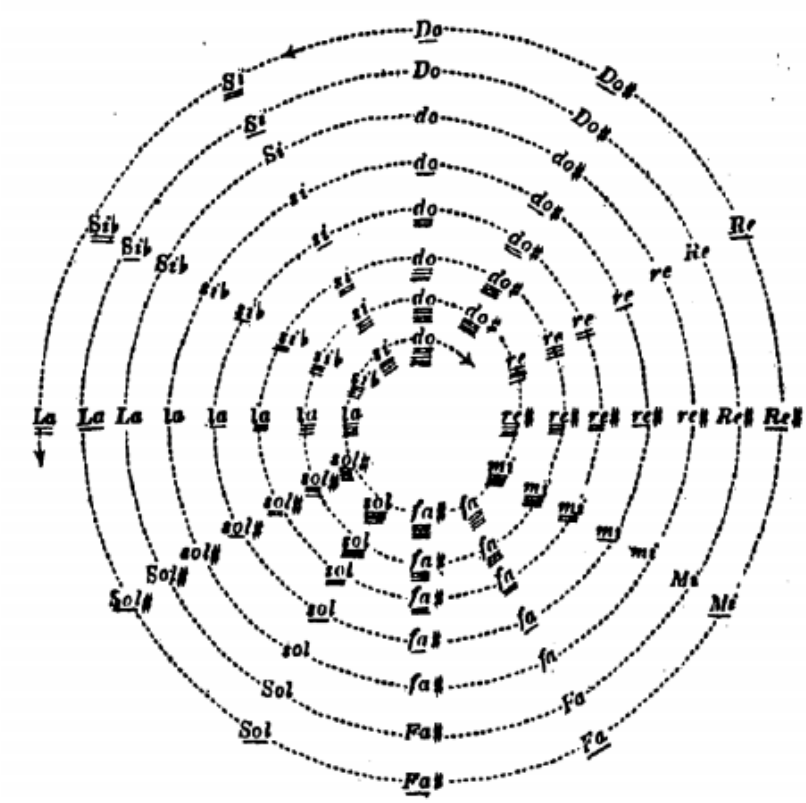


Figure 2.2: Yavorsky and Protopopov's spiral of tritone relationships. From Yavorsky (1908, Example 1.7); Protopopov (1930, Example 1.19).

Protopopov remained a faithful follower of Yavorsky and continued to develop his

theories. His only work, *Элементы строения музыкальной речи* [The elements of the structure of musical speech] (1930), edited by Yavorsky, builds upon Yavorsky's *Structure of Musical Speech*. With continued focus on tritones and their gravitation towards tonic, they crafted a graph of tritone relationships on a continuum of time and space, shown as a spiral (Figure 2.2).[48] The arrows pointing at the beginning and end of the spiral represent an infinity of pitch. This graph was meant to provide a clear visual of tritone resolutions. In "contrary converging motion, [the tritone] receives [its resolution] in the same turn of the spiral; the augmented fourth, seeking resolution in contrary diverging motion, receives it in different turns of the spiral."[49]

Tritone relationships were important to Yavorsky's and Protopopov's theories between the Single Symmetrical System (SSS), the Double Symmetrical System (DSS), and the spiral of tritone relationships. The concept of tritone resolutions led to a method of "Duplex Modes." These modes provide the original tritone of the SSS with an added enharmonic tritone the octave above. Duplex modes are an important development towards Ogolevets's theories because, not only do they provide another view of voice-leading procedures, but they further indicate Russian theorists' attention to orthography: a fundamental concept to the DAP interval in this project. Each enharmonic tritone pair resolves differently based on their accidental, just as the DAPs resolution to a major third only occurs if the interval is notated a particular way. To understand the process of the duplex mode, Protopopov provided a graph of tritones present in the equal-tempered twelve-tone system, each of which resolve in two ways.[50] Example 2.3 presents my recreation of his example.[51]

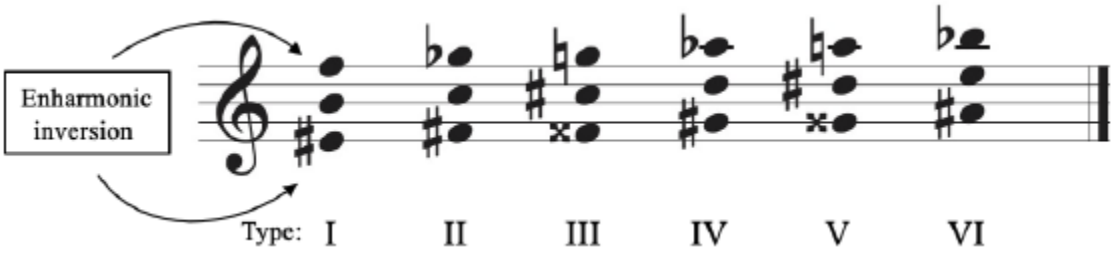
[48] Yavorsky (1908), 1.7; Protopopov (1930), 1.19.

[49] McQuere (1979), 28–29.

[50] Ewell (2018), [4.19].

[51] McQuere (1983), 118.

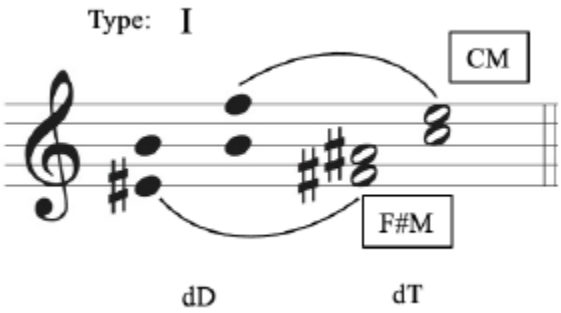
Example 2.3: Protopopov's six possible types of tritones.



The middle note head is one tritone member while the outside notes are the enharmonic inversions of its tritone relation. The roman numerals below the staff do not represent harmonic function, as they are all unstable tones. Instead, they label the types, one through six. Each type has two resolutions, which equates to one tritone for each of the twelve diatonic collections. The purpose of this graph is to present the two ways each tritone resolves, through converging and diverging resolutions.

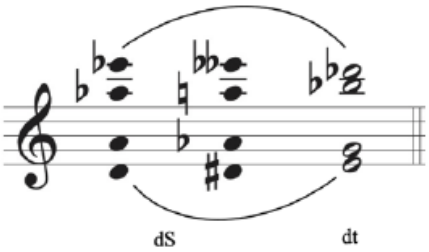
Example 2.4 shows the resolution of type I. Type I is split into two tritones, sharing the common tone B. Both are labeled with a 'dD' below the staff. Lowercase 'd' represents "duplex" and uppercase 'D' for dominant. E#-B resolves to F#-A#, a major third and duplex tonic of F# major. B-F resolves to C-E, a major third and duplex tonic of C major. The resolution of one type, including two tritones, related by enharmonicism, is called a "duplex single system." This is the closest to the DAP model of resolution. Whereas the duplex single system converges towards the major third, the DAP diverges into the same interval.

Example 2.4: Converging duplex single system (Type I).



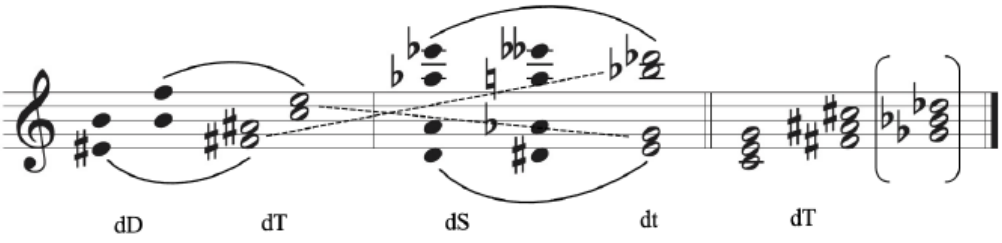
Like Yavorsky's symmetrical systems, the duplex systems also include single and double systems. Example 2.5 presents the duplex double system. Below the staff, 'dS' represents a duplex subdominant and 'dt' as duplex tonic, but with a lowercase 't' because it refers to minor thirds.[52] Notice that the bottom dyads, starting with D–A, copies exactly from the DSS. The dyads above relate to the bottom dyads by a tritone.

Example 2.5: Converging duplex double system.



The duplex single and double systems combine to form two complete triads. Example 2.6 provides this visual. The duplex single system appears first and the double system second, with their function labels below the staff. The dashed lines connect the opposite pairs of tonic chord members (dT) and appear in the last measure in triadic form. The single and double duplex system results in two triads related by a tritone: C major and F# major. Because the double system included a Bb–Db dyad, I have enharmonically interpreted the full Gb major triad in parentheses adjacent to F# major.

Example 2.6: Duplex single and double systems.



[52] McQuere's text shows this tonic as a 'dT,' but following the process of Yavorsky's symmetrical systems, this should be labeled as 'dt' with a lowercase 't.' Ewell (2018) [4.19] also corrects this tonic to a lowercase.

In contrast to Protopopov, Ogolevets was said to not be influenced by anything he had learned; he created his own theoretical material. He studied composition with Yavorsky at the Moscow Conservatory from 1912–1916 and taught music theory at the Conservatory and other schools in 1915–1923.[53] While he claimed not to have followed the theories of functionalism (Riemann), multi-based modes (Garbuzov), modal rhythm (Yavorsky), linearity (Kurth), or the modal approach of Tulin, Ogolevets aimed to develop a theory of folk music, or "global music."[54] With a universal method in mind, he aimed to build a "collective, all-embracing, sociological, and practical aspect[…] of research, particularly of contemporary musical society."[55] This ideal is prevalent in both of his treatises—*Основы гармонического языка* [The foundations of harmonic language] (1941) and *Введение в современное музыкальное мышление* [An introduction into contemporary musical thought] (1946)—as universal theories that could apply to many cultures of music.[56] Because he "touched on nearly every topic connected with harmony" and elaborated more on tonal systems for this "global music," it is not surprising, then, that he "accept[ed] the twelve-tone chromatic scale as diatonic," a system in which every note is of equal importance.[57] As many theorists in Russia were divided between two schools of thought—Yavorskian or Riemannian theory—Ogolevets claimed neither.[58] This is not to say that his work does not reflect much of what he had learned. Similarities among

[53] Carpenter (1988), 1171.

[54] Ibid., 1175.

[55] Ibid., 48.

[56] His published 1941 work was completed in 1938 and the 1946 work in 1944, both while working building his own seventeen-toned keyboard instrument and as a research assistant at the Leningrad Institute of Theater and Music (Ibid., 1172).

[57] Carpenter (1983), 55–56. The word "harmony" in Russian is closely related to the term "tonality" in English, or music that has a center (tonal or modal). For a longer discussion on this topic, see Ewell (2018).

[58] Ewell (2018), [9.3].

Yavorsky's and Protopopov's work do emerge in Ogolevets's. For example, the spiral of tritones in Figure 2.2 is a similar concept to Ogolevets's spiral of fifths, seen in Figure 2.3.[59] While similar in concept, there are two differences: 1) Ogolevets's spiral includes adjacent fifths instead of a stepwise, chromatic ascent, and 2) their labeling system differs, namely between accidental labels. Yavorsky and Protopopov labeled pitches with fixed "do" (standard to Russian theory), but Ogolevets chose to label with letter names.[60] They are also divided within the spiral to draw attention to enharmonic pitches. For example, B, on the top right side of the vertical line falls between "aisis" (Ax) and "ces" (Cb). His approach to tonal and twelve-tone systems were based on the circle of fifths, which he in turn developed a "line of fifths" as opposed to that of Yavorsky and Protopopov's systems of chromaticism. All three, however, focused on an equal-tempered twelve-tone system.

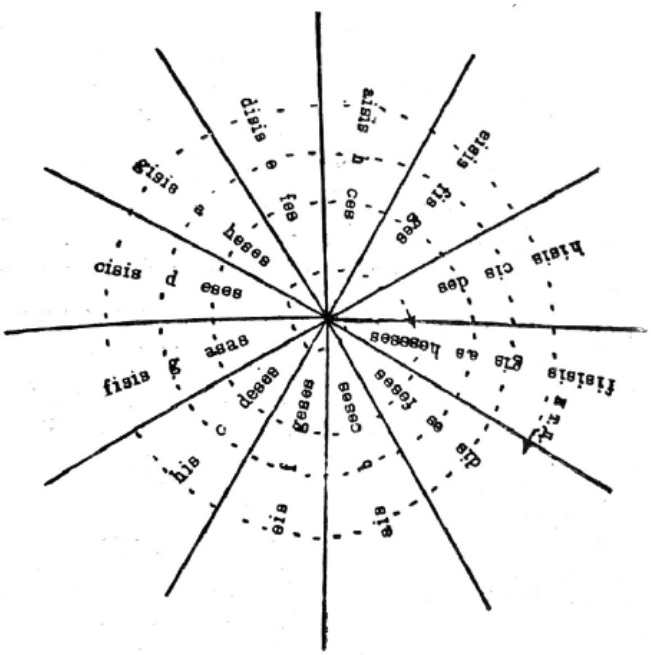


Figure 2.3: Ogolevets's spiral of fifths. From Ogolevets (1946, p. 171, Example 12).

[59] Ogolevets (1946), 171. This concept is discussed at length in my chapter on Ogolevets's methodologies.

[60] His 1941 and parts of 1946 texts include solfege labels, but the majority of 1946 uses German letter names ("b" for Bb and "h" for B-natural). Because this text is more about contemporary music, letter names were more appropriate for showing enharmonicism in the twelve-tone system.

One important way in which they differ—and this is the motivation behind the present focus on Ogolevets—is through identification of certain specific intervals. Both Protopopov's *Elements* and Ogolevets's *Introduction to contemporary thought* list and display intervallic structures. In *Elements,* Protopopov describes the major second as "the second name at a distance of two (2) semitones," followed by the next interval, a minor third, with three semitones. [61] In contrast, Ogolevets states, "the connection of a double-augmented unison [prime], [. . .] is replaced by a major second."[62] While Protopopov does not mention any other possible interval with two semitones, Ogolevets does, but notes that they are enharmonically equivalent.

2.3 Methods Used to Analyze the Music of Shostakovich in the West and Russia

Analysts from the West and from Russia approach Shostakovich's music in terms of both mode and style. In the West, there have been more approaches beyond these two including tonality, serialism/twelve-tone, form, semitonal motion, narrative, and rhetoric. Shostakovich analysts articulate that the composer deserves recognition of his own characteristic sound, therefore, an individualized approach to his music. David Haas summarizes the questions of many Shostakovich scholars:[63]

> What theoretical approach best serves a compositional idiom in which significant modulations from or alternations to the keys implied by the key signatures occur rapidly, sometimes inconclusively, and often within a single line [. . .]? [. . .] Are modifications to an initial tonality used with enough frequency and in a sufficiently circumscribed manner as to allow the pitches of a mode to be named, that mode itself labelled, and some degree of function or hierarchy harmonic practice? [. . .] Do the traditional tendency notes [. . .] and intervals [. . .] maintain their implications in passages where Shostakovich has deviated from the traditional diatonic modes? [. . .] Are there other composers whose

[61] McQuere (1979), 16.

[62] Ogolevets (1946), 338. Original text: связь дважды увеличенного унисона, которая вытеснит большою секунду.

[63] David Haas, 2008, "The Rough Guide to Shostakovich's Harmonic Language," *The Cambridge Companion to Shostakovich*, Ed. by Pauline Fairclough and David Fanning, United Kingdom, Cambridge University Press, 308–09.

> music may have been a shaping force on Shostakovich's harmonic practice and therefore relevant to the formation of an analytical approach? Finally, when certain harmonic ambiguities or contradictory implications cannot be resolved, is it still possible to delimit or restrict *most* of a passage's pitch content in some analytically significant way?

In the remainder of this chapter and dissertation, including the chapters on my own methodology, I attempt to survey many approaches to Shostakovich's music. Each approach brings scholars closer to understanding his "harmonic language" and his individual style. I begin this section with the Western approaches of Shostakovich's music followed by a comparison of modal analysis between the West and Russia's music theorists.

2.3.1 Tonal, Dodecaphonic, and Semitonal Approaches to Shostakovich in the West

The two broadest categories—tonal and atonal—cover the entirety of Shostakovich's *oeuvre*, sometimes combined within one work. While Shostakovich used many tonal elements in his music, scholars cannot write about his music without discussing chromaticism, dodecaphony, and serialism. Scholars such as William Hussey, Stephen C. Brown, David Fanning, Laurel Fay, Christopher Segall, and Peter Child, discuss his music in a tonal sense based on triads, intervallic relationships, Schenkerian (linear) analysis, harmonic progressions, and modulation as well as dodecaphony from Shostakovich's unique chromatic inflections. Additionally, Patrick McCreless and Gabe Fankhauser discuss semitonal motion within these structures. I first focus on these scholars' views of triadic harmony.

Using a harmonic approach, Hussey's analysis focuses on Shostakovich's triadic harmonies used in a post-tonal and chromatic way. Hussey's principal claim is that Shostakovich's music lies "somewhere in between" tonal and atonal music.[64] Hussey's

[64] William Hussey, 2003, "Triadic Post-Tonality and Linear Chromaticism in the Music of Dmitri Shostakovich," *Music Theory Online 9*, no. 1, [1].

discussion of triadic harmonies includes linear, stepwise chromatic motion as well as "chromaticized dominants."[65] In his analysis of the first movement of Symphony No. 5, Hussey labels both chord names and Roman numerals to highlight a passage that begins with a T–S–D progression (mm. 50–57). At this point, D half-diminished seventh chord moves to a D7, the new dominant for G minor. D7 interjects semitonal motion among upper voices between the D half-diminished seventh of the G minor triad. For example, C in the bass clef ascends to the C# of the D7 and to D in the G minor triad. The bassline, however, keeps a D pedal throughout mm. 56–57 and leaps up by a fourth to G in m. 58, confirming a dominant-tonic motion. His research confirms Shostakovich's use of dominant-tonic motion through both Western and Russian voice-leading structures.

Shostakovich's music may be viewed from both the tonal and atonal spectrum. While Hussey viewed the chordal progressions of Symphony No. 5 in his analysis, Brown used an "axis tonality" concept developed by Joseph Straus from his analysis of Stravinsky's music, another composer with a unique style and approach to composition.[66] A tonal axis "comprises a pair of third-related triads, one major and one minor" in which they overlap and share two common tones. In Shostakovich's First Cello Concerto, Brown examines an axis on C–Eb–G–Bb (minor seventh-chord) within the large-scale tonal structure where the primary theme centers around Eb major and the secondary theme around C minor: A minor third between centers.[67] Brown finds that the opening passage of the first movement also reflects this overarching structure. The bass line descends through a tetrachord Eb–D–C–B, showing again the passage from Eb major to C

[65] Hussey (2009), [12].

[66] Stephen C. Brown, 2009, "Axis Tonality and Submediant in the Music of Shostakovich," *Music Theory Online* 15, no. 2; Joseph N. Straus, 1982, "Stravinsky's Tonal Axis," *Journal of Music Theory* 26, no. 2, 261–90.

[67] Ibid., [3]; [5–6].

minor.[68] The focus of this axis and the descending tetrachord highlights Shostakovich's use of semitonal motion and two modal centers at once.

In addition to tonal axes, Brown also discusses post-tonal techniques of interval class 1/interval class 5 (ic1/ic5) in the late music of Shostakovich.[69] The ic1/ic5 are semitones and perfect fourths that occur melodically or harmonically. Brown provides an example from Piano Sonata No. 1 (1926) of a descending scalar gesture from F–F#, or ic1. Following the F#, the bass descends again to a quarter-note G below the staff, another ic1. This again highlights Shostakovich's use of semitonal motion and resolution of tendency tones (F#–G). The G leaps up to C, a perfect fourth, or ic5.[70]

Ic5 is also the focus of Peter Child in his work on structured tetrachords.[71] The basis of his research, like that of many other scholars, is the combination of diatonic and chromatic elements and how to approach this style of music. Like Brown, the focus on the tetrachord comes from Shostakovich's four-note motto: D–Eb–C–B.[72] One stylistic feature, twelve-note themes, occurs through triadic passages in many of Shostakovich's late works. For example, he describes the brass and cello textures in Symphony No. 15:[73]

> The excerpt consists of two contrasting textures: homophonic brass segments alternating with a thinly accompanied melodic line projected chiefly by a solo cello. The brass segments are tonal and for the most part harmonically straightforward. The cello line consists mainly of successive twelve-note structures. These structures are typical of all

[68] Note that these notes are all included in Shostakovich's motto (D–Eb–C–B), but the first two notes are switched, Eb and D. For more about his motto and its transformations, see Stephen C. Brown, 2006, "Tracing the Origins of Shostakovich's Musical Motto," *Intégral* 20: 69–103.

[69] Stephen C. Brown, 2011, "ic1/ic5 Interaction in the Music of Shostakovich," *Music Analysis* 28, nos. 2–3: 185–220.

[70] Ibid., 185–86.

[71] Peter Child, 1993, "Voice-Leading Patterns and Interval Collections in Late Shostakovich: Symphony No. 15," *Music Analysis* 12, no. 1, 71–88.

[72] Ibid., 72.

[73] For the full reduction, see Child (1993), 75–77.

> the twelve-note themes that Shostakovich uses in this symphony in that each is either predominantly 'harmonic' or 'linear' in design. The melodic process that characterizes the 'harmonic' twelve-note themes is arpeggiation, the presentation of structurally significant disjunct pitch collections. A 'linear' theme, by contrast, features conjunct motion, both among consecutive pitches and in the way that the underlying skeletal melodic structure is formed.[74]

Child highlights resolutions of scale-degree 6 (Db) to scale degree 5 (C) in the brass, one measure after rehearsal 10, and in the cello, two measures before rehearsal 20. This resolution from Db to C unites the two different textures with one similar voice-leading element, semitonal motion. The texture he illustrates, though initially specific to Symphony No. 15, is a trait that Child generalizes for much of Shostakovich's late works.

Much of Shostakovich's music involves a blank slate of C major, in which he makes use of any accidental needed for one or more modes. One author, David Fanning, takes a musicological approach to Shostakovich's music. Specifically, he discusses the use of C major throughout many of Shostakovich's works.[75] His ultimate premise was that of Nicolas Nabokov who, in 1951, sarcastically stated that Shostakovich was "the present-day master of the C major key" in an effort to draw attention to the Soviet's view of the arts; that their "policies could reduce even as fine a composer as Shostakovich to the level of children's talk."[76] Fanning, instead, sought out to present more symbolic meaning behind Shostakovich's use of the key. Beginning with a general review of C major in Shostakovich and other twentieth-century works, Fanning's symbolistic perspective of C major consists of three main types: Authority, childlike

[74] Child (1993), 74.

[75] In a later publication, McCreless describes the opening movement of the First String Quartet in C major as a "pale (or joyous?) key and "the key with which to 'wipe the slate clean.' See Patrick McCreless 2009, "Dmitri Shostakovich: The String Quartets," From *Intimate Voices: The Twentieth-Century String Quartet, Volume 2: Shostakovich to Avante-Garde*, Ed. by Evan Jones, 5.

[76] David Fanning, 2001, "Shostakovich: 'The Present-Day Master of the C Major Key,'" *Acta Musicologica* 73, no. 2, 139.

simplicity, and classicism.[77] He claimed that Shostakovich was an "experienced navigator in the seas of stylistic allusion" and could "encode hidden messages" due to the political climate of the 1930s.[78] His use of C major also came from sources such as his own youth piano exercises, favorite score excerpts (Stravinsky's *Petrushka* and Berg's *Wozzeck*), and as a blank canvas for a "maelstrom of atonality."[79]

Because of his use of C major, Shostakovich could write less restrictively using all twelve tones. Laurel Fay—who covers a multitude of Shostakovich's unique elements in his late works within melody, harmony, rhythm, form, and sound—highlights his use of twelve-tone rows in one voice and without the construction around one single row; there are no prime rows.[80] Instead they are "linear constructions [. . .] articulated at dramatic climaxes, rather than chord progressions or series of simultaneities constituting a composite twelve-tone row." She discusses the third movement of the Violin Sonata as an example of "fusion" between tonal and dodecaphonic elements. Within the secondary theme, thirty-six pitches divide into three twelve-tone rows, with a tonal hierarchy of a tonic G# and dominant D#. On Shostakovich's contrapuntal style, Fay also observed an "overlapping or contradiction" of tonal functions, "perceived on a linear level."[81]

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[77] Fanning (2001), 104–08.

[78] Ibid., 108. Fanning refers to the political climate during that period based on the understanding that Shostakovich was under a great deal of pressure from Socialist Realism; see pp. 113–17. For more about this political pressure as well as its impact on Shostakovich's music, see Richard Taruskin, 2020, *Defining Russia Musically: Historical and Hermeneutical Essays*, Princeton University Press, 468–97; Judith Kuhn, 2010, "Introduction," from *Shostakovich in Dialogue: Form, Imagery, and Ideas in Quartets 1–7*. Burlington, VA, Ashgate Publishing, 1–14; and Pauline Fairclough, 2002, "The 'Perestroyka' of Soviet Symphonism: Shostakovich in 1935," *Music & Letters* 83, no. 2: 259–73.

[79] Ibid., 119.

[80] Laurel Fay, 1978, The Last Quartets of Dmitri Shostakovich: A Stylistic Investigation, PhD diss., Cornell University, 67–68; 71.

[81] Ibid., 93.

In addition to these linear melodic processes, Patrick McCreless has recently explored parallel contrapuntal motion in string quartets between two voices, which he termed the "1+2+1 texture."[82] This texture groups two accompanimental voices, in which they move by parallel major or minor thirds, alongside a bass line and solo first violin. McCreless highlights major or minor thirds are most common within these string quartets, but occasionally parallel tenths, fourths, fifths, and sixths may arise. A particular period is associated with this style of writing, which does not precede the composition of *Lady MacBeth of the Mtsensk District*, op. 29 (1930-32), yet does not go beyond *String Quartet No. 5*, op. 92 (1952). This span of twenty years is also the focus of my work on DAPs, but I expand this range to include *Piano Sonata No. 1* (1926), a highly chromatic work involving many DAPs. Beyond the Fourth String Quartet, the occurrence of these devices dissipates.

The use of parallel major and minor thirds is explored further in analyses of common-third relations. In his dissertation, Segall discusses SLIDE transformations in Russian music theory, a type of chord relation where two triads of opposite modality share their chordal third.[83] He compares the "common-third relation" between English-language and Russian music theory scholarship, where English-language scholars—David Lewin and Richard Cohn—develop neo-Riemannian theory to describe this and many other triadic relationships. Instead, Russian-language theorists—Mazel, Tiftikidi, Orfeyev, and Kholopov—focus on the tonal contexts and musical expression of the common-third relations, which they term *однотерцовые*

[82] Patrick McCreless, 2021, "A Curiosity in the Early String Quartets of Shostakovich, and its Precedents in Previous Works," from *Analytical Approaches to Twentieth-Century Russian Music: Tonality, Modernism, Serialism*, ed. by Inessa Bazayev and Christopher Segall, New York: Routledge, 71–90.

[83] The term SLIDE was first coined by David Lewin in his 1987 book.

соотношение.[84] Segall uncovers four general features that unite this Russian approach to common-third relations: 1) Theorists "interpret the context" of the third-relation within tonal functional harmony, 2) they expand from only major and minor triads to other chord types, scales, melodies, and scale degrees, 3) they do not need to be adjacent to one another, and 4) the third-relation has an "expressive implication."[85] He combines the Western and Russian analysis in an analysis of one Shostakovich excerpt (shown in Example 2.7).[86] Along the top, mm. 52–54 participate in a SLIDE transformation from G minor to Gb major, holding Bb, scale degree 3, as the common-third relation. Below the staff, Tiftikidi's function symbols appear.[87] The G minor harmony, labeled "os" functions as a subdominant like the Gb Major chord that follows because they share the Bb.[88] Segall states that "the two triads constitute the subdominant phase of a complete cadential progression (T–S–D–T)."[89] The raised scale degrees above the staff highlight pitches that also belong to a Db major/minor common third scale within the common third system. Segall's explanation of third-relations in Shostakovich's music helps explain the multitude of triadic, non-functional harmonies that arise. The SLIDE relationship, for example, highlights an instance in which Shostakovich achieves semitonal motion, or a more direct explanation of creating an augmented prime between two harmonies.

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[84] Christopher Segall, 2013, "Triadic Music in Twentieth-Century Russia," PhD Diss., Graduate Center, City University of New York, 79–83.

[85] Ibid., 83–84.

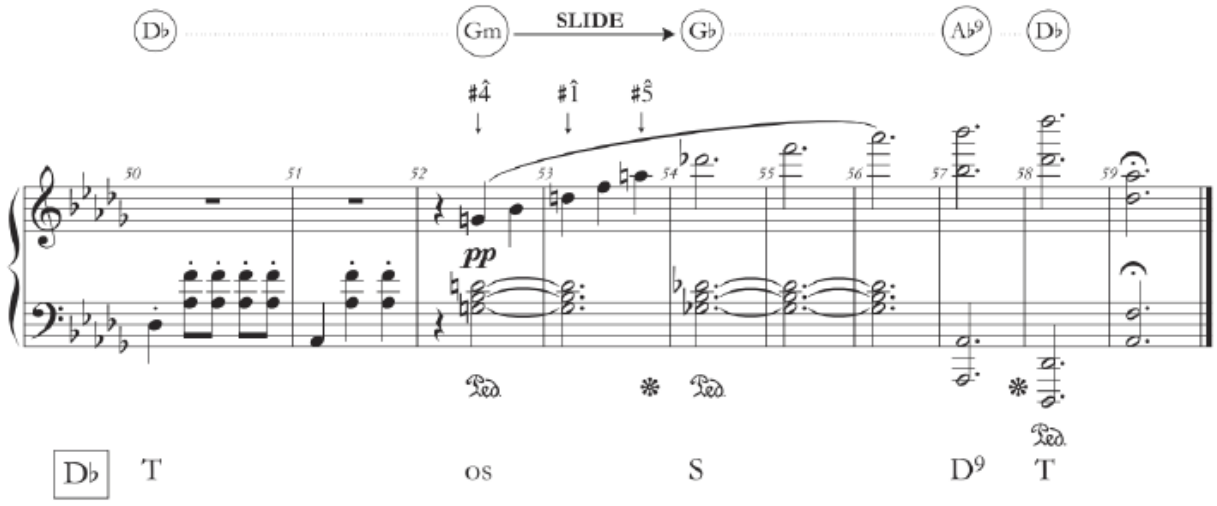
[86] Ibid., 205.

[87] Segall uses Tiftikidi's function system because it was designed for the music of Shostakovich and Prokofiev. Tiftikidi also argues that third-related harmonies can substitute for chord functions. In this example, G minor substitutes as a subdominant prior to the subdominant Gb major harmony. For more about Tiftikidi's system, see Segall (2013), 89–93.

[88] The "o" stands for *однотерцовая* [common-third], therefore, "os" in the example stands for common-third subdominant relation. Segall also uses "ot" and "od" for other common-related thirds in major keys (tonic and dominant) and "oT," "oD," and "oS" in minor keys (common-third tonic, dominant, and subdominant) (Ibid., 89–90).

[89] Ibid., 105.

Example 2.7: SLIDE and Tiftikidi function symbols in Shostakovich's Prelude in D-flat Major, op. 34, no. 15, mm. 50–58. From Segall (2013, p. 205, Example 3.3.1).



The common-third relation between Shostakovich's harmonies allowed for SLIDE functions between chords, but also explained abrupt shifts between key areas. Another shift in harmony occurs as a "semitonal slide." Patrick McCreless focuses on a period from 1931–1949 in Shostakovich's compositions in which he used a semitonal pair—D and C#—as a tonal trope.[90] The tonal trope, or a semitonal "slide" between pairs, represents passages with a new, unexpected key area. His first example of this trope begins with a symmetrical tetrachord in the Passacaglia of *Lady MacBeth* where the initial tetrachord (C#–D–E–F) creates "tonal ambiguity between the two minor keys in question:" C# minor and D minor. This trope's ambiguity stems from tonic third dyads of these two keys: C#/E or D/F. He then asserts that D minor was associated with its semitonal neighbors with three claims: 1) Between the compositions of *Lady MacBeth* and String Quartet No. 4, D minor was the most prominent key and had been used sparingly before and after this time period, 2) all works in D minor between 1931–1949 shift up or down by semitone, and 3) the shift from D minor to C# minor (or less common Eb) is

[90] Patrick McCreless, 2010, "Shostakovich's Politics of D Minor and its Neighbours, 1931–1949," in *Shostakovich Studies 2*, 121–23.

"hermeneutically charged" in its musical meaning.[91]

Fankhauser discusses the use of hermeneutics by Western scholars, using McCreless's interpretation as an example of "special meaning" between semitonal shifts, but finds that a Schenkerian approach to Shostakovich's music poses a great challenge because of his variety of harmonic language.[92] Schenkerian analysis, which involves a "hierarchy of tonal harmony and voice leading," is a rare methodology for Shostakovich's music. Because of his "general avoidance of conventional musical structures," his music is marked for any traditional features it exhumes. Fankhauser, then, uses Schenkerian analysis as a tool for deriving "underlying tonal processes" most directly related to cadential material. In my project, specifically, musical reductions, such as the ones Fankhauser produces, illuminates voice-leading structures with and around the DAP.

In Shostakovich's Prelude in C# Minor, op. 34, no. 10, Fankhauser reveals a parenthetical insertion and cadential intervention in a C# minor passage that includes local areas of C major. Between mm. 38–39 and mm. 43–44, of which the latter is called a "Parenthetical Insertion," Fankhauser draws attention to a three-note motive—C#–D#–E—that occurs again as F–G–G#. The motive, occurring in the parenthetical insertion beginning on F, suggests a flat-subdominant relationship to the original key of C# minor. Fankhauser provides a voice-leading graph to display this relationship. Through this reduction, Fankhauser highlights a short-term period of bV–bIV–bI; a tonicization interrupting a cadence in the original key.[93] While voice-leading

[91] McCreless (2010), 124–25.

[92] Gabriel Fankhauser, 2013, "Cadential Intervention in Shostakovich's Piano Trio in E Minor, op. 67," *Music Analysis* 32, no. 2, 222–26.

[93] This "copy and paste" technique is reminiscent of Gretchen Horlacher's research on Stravinsky's "blocks" of layering in his music as well as Edward T. Cone's three-phased Stravinskian technique: stratification, interlock, and synthesis. The Shostakovich example most directly represents stratification, in which a separation of music occurs by changes in register, clef, and rhythm. For more on these techniques, see Horlacher (2011); and Cone (1962).

graphs provide a descending *Urline*, chordal representation, and structural voice-leading features for many seventeenth- and eighteenth-century European works, this tool unearths unique stylistic tendencies in twentieth century music, particularly that of Shostakovich's voice leading.

2.3.2 Analysis of Form, Narrative, and Rhetoric in Shostakovich's Music in English-Language Scholarship

Closely related to tonal and voice-leading structures in the previous section, form analysis of Shostakovich's music has proven challenging, yet it reveals important aspects of his specific compositional style. In this section, I highlight scholars' work on form, narrative, and rhetoric in the music of Shostakovich. First, I discuss David Castro's and Charity Lofthouse's views on Shostakovich's intricacies in his use of sonata form. Next, I show how scholars, such as Miriam Brack Webber and Richard Burke, draw upon the narrative Shostakovich's music. Last, I summarize Esti Sheinberg's work on irony, parody, and rhetoric in his music. While these types of analyses are not at the forefront of my research, these features are worth exploring for the purpose of his specific style.

Though Shostakovich's harmonic choices were unique to his style, his use of form was mostly traditional; however, he deviated away from the normal standards of eighteenth-century sonata form.[94] To find these discrepancies, Castro uses the sonata theory of Hepokoski and Darcy to the music of Shostakovich; a method shaped for the Austro-German tradition.[95] He traces a connection from Beethoven to Shostakovich through a philosophical route. He poses that Shostakovich's political indoctrination in his study of music was based on the philosophy of Adolf Bernhard Marx, who, like Beethoven, was involved with a Hegelian dialectic. Therefore, it

[94] I am referring to the sonata theories developed by Hepokoski, Darcy, and Caplin based on eighteenth-century sonatas.

[95] David Castro, 2005, "Sonata Form in the Music of Dmitri Shostakovich," PhD Diss., University of Oregon, 2–7.

is not indecorous to analyze Shostakovich's music using a Western form theory. Castro uses his findings in Shostakovich's three biggest genres of music—the string quartet, the symphony, and the concerto—to mold a method of sonata theory. The author outlines five ways in which Shostakovich approaches sonata form: 1) Through a "rounded" structure where he uses the same theme at the beginning and end of a section, 2) through "retrograde recapitulation," or "sonata-arch" form, in which the P-theme ends the movement, 3) placement of the climax in the development section instead of the recapitulation, 4) attention to Classical norms with the recapitulation's S-theme returning in the original key, and 5) his addition of a "Closing Event" where short contrasting material occurs at the end of the movement between the last statement of recycled melodic material and final cadence, to which the cadence is delayed.[96]

Lofthouse's work also uses Hepokoski and Darcy's sonata theory model to examine the three "rotational strategies" of Shostakovian sonata form: 1) double- and triple- rotational structures, which create a mixture of Type 2 and Type 3 sonatas, 2) Shostakovich's use of thematic, tonal, and rhetorical "goalposts" through sonata deformations, and 3) use of intra-sectional rotations within a theme zone.[97] She concludes that "the structural and hermeneutic space Shostakovich carves out between 'sonata' and 'not sonata' [. . .] becomes a rich middle ground in which to explore ideas of congruence, boundaries, deformation, temporality, circularity, and hybridity."[98]

Because of the political climate around Shostakovich most of his compositional career, many Western scholars take a hermeneutic or narrative approach. More specifically, Charity

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[96] Castro (2005), 21–22.

[97] Charity Lofthouse, "Dialogues and Dialects: Rotation and Sonata Form in Shostakovich's Symphonies," *Theory & Practice* 41, 114; see also James Hepokoski, and Warren Darcy, 2006, *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata*, Oxford and New York, Oxford University Press.

[98] Ibid., 137.

Lofthouse links sonata form with hermeneutics and, Miriam Brack-Webber and Richard Burke tie narrative to his music. Using a narrative approach, Webber connects current analysis of Shostakovich's music to the narrative theory of Mikhail Bakhtin.[99] She addresses five major elements of his music: pitch organization, rhythm, form, topical content, and emotional valence.[100] While Webber ties Shostakovich's music to a Russian narrative theorist, Burke's approach to narrative demonstrates Shostakovich's interest in film and shows film-making devices in his string quartets and symphonies, specifically between movements. He highlights three techniques Shostakovich used to narrate his music: 1) one image fades out as another fades in; the existence of the original key and modulated keys simultaneously, 2) one scene continues into the next where you hear dialogue but see no characters; a single pitch sustains into the next movement, and 3) a "cut," where there's an "abrupt shift in content."[101] Burke makes an intriguing connection between a flashback technique and movement order in the Fifteenth String Quartet. The order of movements—Elegy, Serenade, Intermezzo, Nocturne, Funeral March, and Epilogue—set a narrative of events. Without the Elegy, the order from Serenade to Funeral March tells a story of love to darkness and death; however, the Elegy occurring at the beginning sets not only the tone for the music, but a present-day view followed by flashbacks.[102] The listener is brought back to a sense of present-day in the Epilogue where musical material from the Elegy occurs. Burke emphasizes the transition from the Elegy to the Serenade as "one of the strangest passages in Shostakovich's work," where pizzicato, twelve-note block chords are

[99] Miriam Brack Webber, 2021, *Analysis as Dialogue: Bakhtinian Narrative Theory in the Music of Dmitri Shostakovich*, PhD Diss., University of Kansas.

[100] Ibid., 5.

[101] Richard N. Burke, 1999, "Film, Narrative, and Shostakovich's Last Quartet," *The Musical Quarterly* 83, no. 3, 419.

[102] Ibid., 422–23; 425. Burke calls this an analepsis, or flashback.

played between two textures: The Elegy's long and staggered tones and the Serenade's solo cello, as if to signify a temporal division used in a "film montage [. . .] to show accelerated time."[103]

Along with Shostakovich's interest in film, his music also conveys a sense of irony and parody. Sheinberg links parody to Shostakovich's modal layers as part of his musical style. There are four layers: tonal, relations of thirds, relations of seconds, and "manifestations" of the Phrygian mode.[104] Each of the four layers represents a style associated with a period of music. The tonal layer includes harmonic progressions and relationships of the Classic period. The relations of thirds reminisce the Schubert and Chopin harmonic style. The relations of seconds refer to the "parallel progressions of consecutive chords" like that of Mussorgsky as well as the whole-tone style of Debussy. The last layer, Phrygian mode, "parodies" Rimsky-Korsakov's 'Spanish' style through specific melodic gestures.[105]

This survey of recent Western analytical writings of Shostakovich's music provides a variety of views ranging from tonal to atonal, voice-leading to overarching form, and historical to narrative. Though I divide this chapter into Western and Russian methods, Russian composers and theorists were influenced by the music and theories of the West in the early twentieth century. Much of the basis of their training was of German or French origin and many compositions included in their treatises were Bach, Beethoven, Schubert, Schumann, and Chopin. The observations noted among Shostakovich's works, like his admiration of Beethoven, interest in filmmaking, and discussions with philosophers and music theorists played a big role in

[103] Burke (1999), 423.

[104] Esti Sheinberg, 2000, *Irony, Parody, Satire and the Grotesque in the Music of Shostakovich: A Theory of Musical Incongruities*, Aldershot: Ashgate, 177.

[105] Ibid., 177–78.

the Shostakovian sound.[106] One cannot pinpoint just a single style in Shostakovich's music. As Sheinberg demonstrates, there are many layers to his music, therefore, attention to a variety of methods is useful to understanding his music. Additionally, one method, modal analysis, transpires among both the West and Russia as an important concept in Shostakovich's music.

2.3.3 The Western and Russian Modal Analysis in the Music of Shostakovich

Like the music of other Russian composers in the twentieth-century, Shostakovich's music uses a "chromatic language [. . .] [best] explained in terms of functional diatonicism."[107] While Western theorists use a multitude of methods to understand Shostakovich's music, Russian theorists—Mazel, Dolzhansky, and Kholopov—focused on his "modal language."[108] Between Western and Russian analysis, many modes and variations of modes have been used to explain passages of Shostakovich's music. What both groups of analysts share, though, is that not one mode can accommodate a single work. Shostakovich alters traditional church modes while shifting to other modes through simple voice-leading techniques and common tone modulations; the same type of shift the DAP involves, which I introduce in future chapters. Therefore, scholars from the West and Russia aptly highlight sections that contain both the traditional collections of modes as well as ones specific to the Shostakovian sound.

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[106] Shostakovich and Yavorsky wrote letters to each other for almost two decades in the early twentieth-century and, on one such occasion (November 22, 1925), Shostakovich mentioned how he admired the power of Beethoven's Ninth Symphony, describing it as an "exceptional, unrivaled symphony." See Bobykina (2000), 45.

[107] Carpenter (1995), 81.

[108] Alexandr Dolzhansky, 1947, "О ладовой основе сочинений Шостаковича" [On modal premise in the works of Shostakovich], *Sovetskaia muzyka* no. 4, 65–74; Lev Mazel', 1977, "О некоторых чертах творчества и личности Д.Д. Шостаковича" [On some features of creativity and personality of D.D. Shostakovich], *Музыкальная Академия* 9, Moscow, 104–05. https://mus.academy/articles/o-nekotorykh-chertakh-tvorchestva-i-lichnosti-d-d-shostakovicha; Yuriy Kholopov, 1997, "Лады Шостаковича. Структура и систематика" [Shostakovich's Modes. Theory and Systematisation], *Dedicated to Shostakovich: Collection of Articles*, Moscow, 62–77, http://www.kholopov.ru/hol-shost-modes.pdf.

Carpenter emphasizes that the concept of mode in Russian is incomparable to Western ideas of mode, or *лад*. According to Kholopov, there are three main elements of mode in Russia:[109]

> 1) Scale, or the melodic motif, the primary form of the embodiment of mode (the Western idea); 2) function, revealed through the stable and unstable notes in the mode, their relationships and interconnections, resulting in a hierarchy of pitch connections; and 3) intonation (*интонация*), a complex Soviet musico-theoretical idea that represents the manifestation in mode of its emotional, social and historical connections.

Western analysts tend to focus on the first characteristic of the mode, but Russian theorists like Yavorsky, explored the "stable and unstable" tones. Additionally, Kholopov continued to speak on Shostakovich's "intonation" as his stylistic sound: Using traditional forms and structures in a non-traditional way; "being old in a new way."[110]

Before discussing the modal language of Shostakovich through a Russian theory lens, I briefly highlight one example of the Western modal approach. Mentioned previously, the Western concept of mode in Russian compositions is limited to Greek and diatonic modes (Dorian, Phrygian, etc...).[111] Nathan L. Lam, for example, highlights Shostakovich's use of flat scale-degree 5 as part of his discussion on Locrian modes in common practice music of the twentieth century.[112] He finds the Locrian mode in six Shostakovich excerpts and, in one particular example of String Quartet No. 10, exclaims that, while Shostakovich descends through an E Locrian scale from *do-do* ("Joy to the World" motive), the accompaniment includes only the tonic and minor third above (E–G) without the lowered fifth (Bb). In his analysis, Lam

[109] Carpenter (1995), 77.

[110] Yuriy Kholopov, 1995, "Form in Shostakovich's Instrumental Works," From *Shostakovich Studies*, ed. by David Fanning, Cambridge University Press, 57–75.

[111] Carpenter (1995), 77.

[112] Nathan L. Lam 2019, "Relative Diatonic Modality in Extended Common-practice Music," PhD Diss., Indiana University, 186–87.

references scholars such as Mazel and Dolzhansky, who studied the modes of Shostakovich during his lifetime.

Mazel began studying and writing about the modes of Shostakovich in the 1930s and 40s. The music he described in "note-to-note analytical detail" were labeled as tetrachordal fragments. He concluded that Shostakovich did not depart from the traditional major-minor system, but altered it to fit his own compositional style. Shostakovich's lowering of scale degrees 2 and 4 were identified by Mazel as an "intensified Phrygian."[113]

While he attempted to initiate a "systematic theory" of Shostakovich's music, Dolzhansky's study of mode produced concepts that may be applied to sections of his music.[114] The first concept, "three common-tonics," summarized by Inessa Bazayev in the example below (Example 2.8).[115] Vertical lines between staves represent common tones among collections. Bazayev explains that the doubly-raised B-major key includes a raised scale-degree 2 and 5, resulting in two common tones with the doubly-lowered B-minor key, or its parallel minor. In turn, there are seven common tones among the doubly-lowered B-minor and doubly-raised Bb-major scales. This technique of three common-tonics transfers to Shostakovich's music as he "created new modes by altering scale degrees from the traditional church modes."[116] These alterations appear in Dolzhansky's lowered- and doubly-lowered/raised and doubly-raised mode models (I continue to refer to Dolzhansky's three common tonics as well as other modes that he attributes to Shostakovich in later chapters of this dissertation).

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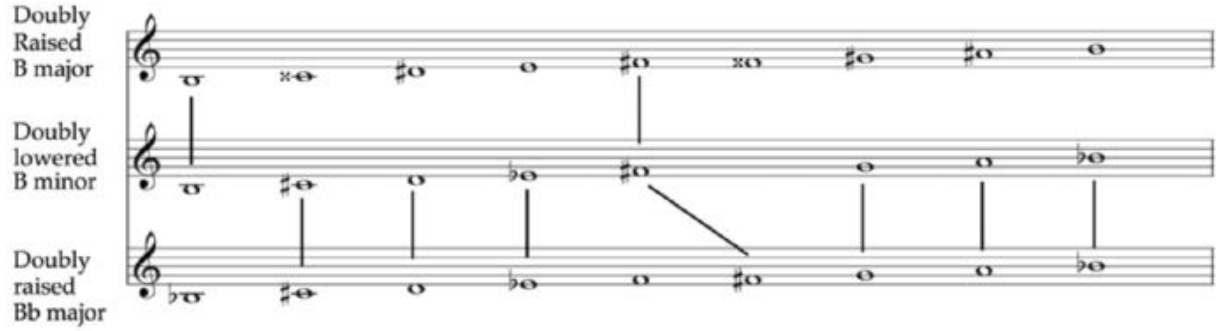
[113] Haas (2008), 309–10; Lev Mazel', 1967, "Заметки о музыкальном языке Шостаковича" [Observations on Shostakovich's musical language], in *Dmitriy Shostakovich*, edited by Givi Ordzhonikidze, Moscow, Sovetskiy kompoziotor, 321.

[114] Ibid., 311.

[115] Inessa Bazayev, 2014, "The Expansion of the Concept of Mode in Twentieth-Century Russian Music Theory," *Music Theory Online* 20, no. 3, [2.8].

[116] Ibid., [2.4].

Example 2.8: Dolzhansky's Three Common-Tonics recreated by Bazayev (2014, Example 9).



The second modal concept Dolzhansky developed keeps a three-staved comparison among scales, but explores the major-third key relationships, in which the tonics of three scalar collections form an augmented triad aligned through enharmonic relationships. The result is a "three-tonic mode" shown in Example 2.9A.[117] He describes this mode based on three scales as "enharmonically parallel" to each other.[118] While the distance between each tonic is a major third, the individual scales are also symmetrical. He provides a formula of whole tones and semitones to build these collections (shown in Example 2.9B). I have labeled "W" and "H" above his original "1" and "1/2" tone labels.[119] Because the pattern repeats exactly twice more, the scale is transposable. For example, G–A–Bb–Cb transposes to Cb–Db–D–Eb by three semitones, or a diminished fourth.[120] Additionally, the scale consists of two tritones, labeled as "d5" below the diagram. This is not what Dolzhansky means as "symmetrical," but it is important to note the intervallic relationships involved. He claims that "in Shostakovich's system

[117] Alexandr Dolzhansky, 1947, "О ладовой основе сочинений ШостаковичаЪ" [On modal premise in the works of Shostakovich], *Sovetskaia muzyka* no. 4, 72.

[118] Ibid., 71.

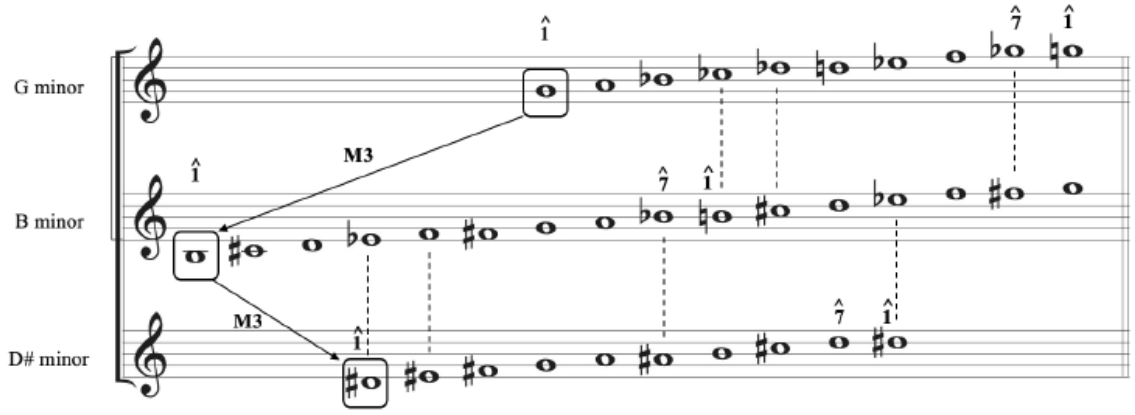
[119] I use "W" and "H" because English-language textbooks introduce scalar patterns of major and minor in this familiar way.

[120] The intervallic pattern divides these modes into tetrachordal sections, similar to that of Ancient Greek tetrachords, which were also transposable while keeping the same intervallic patterns.

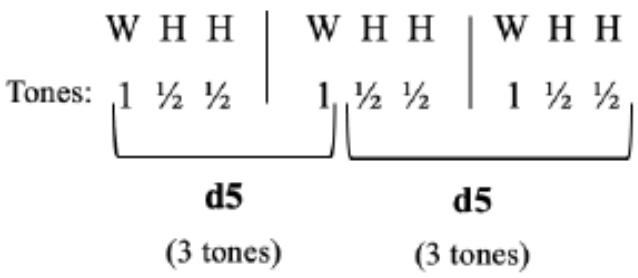
of modes, this mode combines the properties of several types of modes, like the "full," or natural and melodic minor collections in the major-minor system. This collection is called the Aeolian doubly-lowered melodic mode."[121]

Example 2.9: Dolzhansky's Three-Tonic Mode.[122]

(A) Original



(B) Dolzhansky's Intervallic Formula (annotated)



Dolzhansky derives this three-tonic mode using an example from the first movement of Shostakovich's Symphony No. 6. Example 2.10A recreates this example.[123] I have highlighted the B–C–D–Eb tetrachord with a box and label of "d4," as the interval from B to Eb is a diminished fourth. In his text, Dolzhansky compares the interval from Eb to F#, or scale degrees

[121] Dolzhansky (1947), 71. Original text: В системе ладов Шостаковича лад этот объединяет свойства нескольких ладовых разновидностей, подобно полному минору в мажоро-минорной системе. Он может быть назван эолийским дважды пониженным мелодическим ладом.

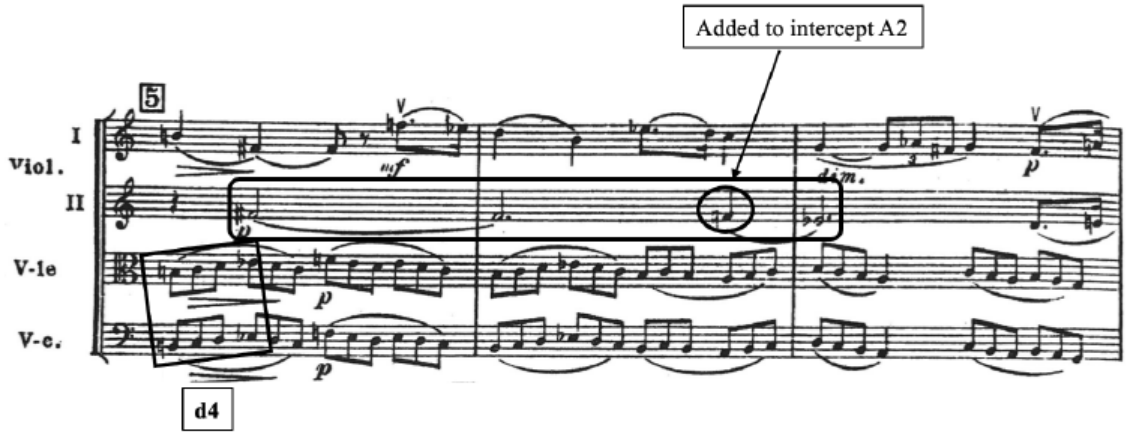
[122] Ibid., 71.

[123] Annotations are my own.

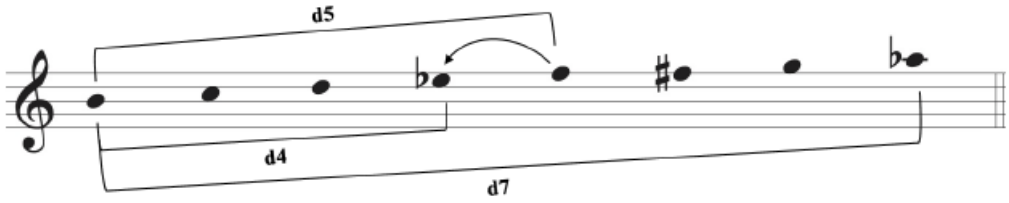
4 and 5, to the end of a harmonic minor scale between scale degrees 6 and 7, where an augmented second occurs. To alleviate the problematic augmented second between Eb and F#, Dolzhansky explains that Shostakovich adds the F-natural.[124] The intervals from B to Eb and B to F-natural, then, is a diminished fourth and a diminished fifth, respectively. The lowered notes create the doubly-lowered Aeolian mode.[125] Example 2.10B recreates his scalar example. The process for avoiding certain intervals in his music, like the augmented second, contributes to his unique choice of modal collections and orthography within them.

Example 2.10: Shostakovich, Symphony No. 6, movement I, mm. 26–28, from Dolzhansky.[126]

(A) Original



(B) B-centered Collection



[124] Dolzhansky (1947, 71). Original text: Стремясь уничтожить увеличенную секунду между четвертой и пятой ступенями его лада (так же как в гармоническом миноре уничтожается увеличенная секунда между шестой ступенями), Шостакович вводит между ними промежуточный звук. При таком заполнении увеличенной секунды в эолийском дважды пониженном ладе образуется новый лад.

[125] The lowered notes he's referring to are Eb and Ab. The lowering of Eb caused Shostakovich to add a bridge to F# through F-natural. Therefore, scale-degree 5 is represented twice.

[126] Dolzhansky (1947), 71.

While theorists such as Dolzhansky and Ogolevets grappled with modes greater than seven tones, Dolzhansky also observed that Shostakovich used smaller modes, specifically consisting of six pitches, or what he called the "Alexandrian Pentachord."[127] This pentachord does not exceed a perfect fifth, or three and a half semitones.[128] The five intervals between the six pitches result in ten different combinations of tones and semitones.[129] Dolzhansky also provides an extension of this pentachord into a "Shostakovich mode," in which two Alexandrian Pentachords overlap.[130] This extension results in an eleven-note scale that spans a major ninth.

2.4 Ogolevets's Contributions to Russian Music Theory

Western and Russian scholars have approached Shostakovich's music in a multitude of ways. The West, through harmonic and twelve-tone analyses as well as formal, narrative, and rhetorical analyses, have proven to describe his music; however not one single approach can attempt to explain his entire style. Russian scholars tended to avoid the hermeneutic views to focus on modal language. Each approach is important to understanding the Shostakovian style.

The following chapter highlights some specific methods of Ogolevets. While he claimed not to have followed the theoretical tradition of his teacher, Yavorsky, I present ways in which he did follow this tradition through his methods of mode, the process of generating diminished and augmented seventh-chords, and a hierarchical system called "orders of connection." The purpose for this examination is to set the stage for my own approach that derives from his.

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[127] Haas (2008), 314. Alexandrian Pentachord abbreviates to "AP" in Haas and other texts, but I refrain from this to avoid confusion among augmented prime and doubly augmented prime (DAP).

[128] The boundaries of the pentachord compared to that of the Greek tetrachord, which was a perfect fourth or two and a half semitones from the first to the last pitch.

[129] Jada Watson, 2008, "Aspects of the "Jewish" Folk Idiom in Dmitri Shostakovich's String Quartet No. 4, op. 83 (1949)," Master's Thesis, University of Ottawa.

[130] Haas (2008), 312.

Through these methods, I can identify the DAP in more collections. Compared to the methods mentioned in the present chapter, the DAP voice-leading device I develop in this dissertation—an interval mentioned in passing by Ogolevets—reveals Shostakovich's attention to contrapuntal traditions and use of various modes within a larger musical context.

CHAPTER 3

THE METHODOLOGIES OF ALEKSEI OGOLEVETS (1894-1967)

3.1 Introduction

Aleksei Ogolevets (1894–1967) contributed two important texts to Russian music theory: *Основы гармонического языка* [The foundations of harmonic language] (1941) and *Введение в современное музыкальное мышление* [An introduction to contemporary musical thought] (1946). Methodical highlights among the two books include the "line of fifths," augmented primes (*увеличенная прима*), and "families of mode", as well as his view of twelve-tone tonality.[131] In this chapter, I overview Ogolevets's theories with an emphasis on the augmented and doubly-augmented primes (*дважды увеличенная прима*).[132] Although the doubly-augmented prime (DAP) figures only modestly in his writings, my aim is to systematize his approach to it, in order to then apply this theoretical material in analysis. To fully understand my method of the DAP (Chapter 4), one must reminisce on the history of Russian theorists (Chapter 2) and trace the impact on Ogolevets, the theorist who coined the term.

3.2 Line of Fifths and the Derivation of Modes Greater than Seven Tones

In her summary of Ogolevets's theories, Carpenter presents his vision of a method for "global music" as well as his approach of "hierarchical models."[133] Ogolevets's theories appropriately explain how Russian music (and other twentieth-century music), and for the purpose of this dissertation, how Shostakovich can include chromatic inflections that do not

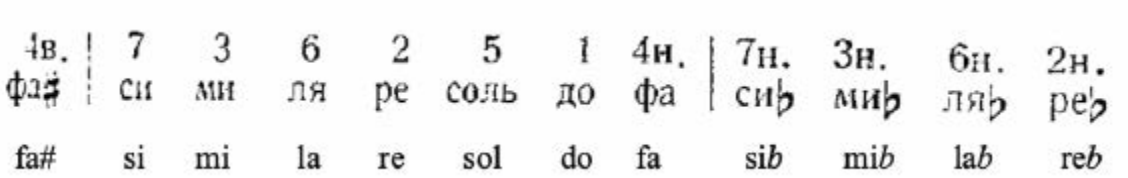
[131] See Bazayev 2014 for more examples of line of fifths. Also see Appendix A for the original table and her translations of the Four Families of Modes.

[132] Throughout the text, Ogolevets refers to doubly augmented prime as a "doubly-augmented unison," which results in two different versions of Cyrillic: *унисона* (unison) or *прима* (prime).

[133] Carpenter (1988), 1175–76.

seem to belong in one of the diatonic modes or in Classical tonality.[134] Though Western twentieth-century composers and music thinkers, such as Schoenberg and his followers, promoted and composed works based on a twelve-tone system, Ogolevets's theories allowed for this system while simultaneously recognizing traditional harmonic functions. Modern-day scholars continue this line of inquiry specifically in the works of Shostakovich.[135] Twelve-tone tonality also extends into Ogolevets's combination of diatonic modes. These modes, also known as "families of modes," include hybrid modes (i.e. harmonic major), which he presents through the line of fifths.[136] Example 3.1 presents the original line of fifths with a Roman alphabet translation of solfege.[137] C represents *do* (1) in the fixed *do* system with sharps and flats raising and lowering pitches, respectively.[138]

Example 3.1: Ogolevets's line of fifths. From Ogolevets (1941, 34).



The numbers above the solfege syllables range from 1 to 7 (representing pitch classes of the C major scale), with Ogolevets's chromatic alteration labels "B" (sharp) or "H" (flat) to

[134] In his texts, I did not observe excerpts from Shostakovich. He used mostly examples from Western composers such as Bach and Schumann.

[135] See Patrick McCreless, 2010, "Shostakovich and the Politics of D Minor and Its Neighbours, 1931–1949," In *Shostakovich Studies 2*, ed. Pauline Fairclough, Cambridge: Cambridge University Press, 2010, 121–89.

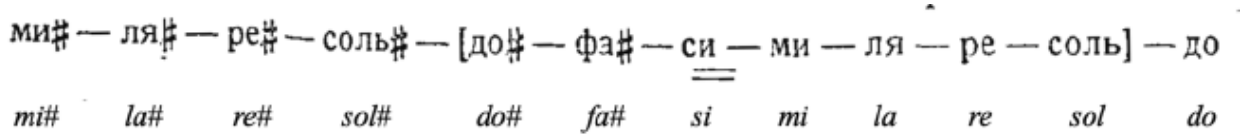
[136] The line of fifths is related to the circle of fifths. The line is infinite compared to the circle of fifths, as I discuss later in this chapter.

[137] I have added solfege symbols in Roman letters to the original line. While Ogolevets's line of fifths uses a traditional fixed *do* system, it is equivalent to the American use of letter names. For example, #*fa* is F#. Sharps and flats before a syllable indicated raised and lowered letter names (i.e. *fa#* and *fa* are F# and F-natural). Any occurrence of two similar syllables (*fa#* and *fa*) results in an augmented prime. Additionally, use of the fixed system implies that *do* is the pitch C. Therefore, each syllable from the original text translates exactly to letter names.

[138] Ogolevets (1941), 34; Ogolevets (1946), 338.

indicate raised or lowered versions of the whole numbers 1–7.[139] Through the line of fifths, any diatonic mode may be produced by using seven consecutive syllables (equivalent to letter names) on the line. The line expands indefinitely in both directions to accommodate other modal centers. In the following illustration (Example 3.2), Ogolevets analyzes J.S. Bach excerpts and adjusts the line of fifths to present the keys represented in various sections.[140] On the far right side, the line begins with Do and descends to Fa*#*, replicating a part of the line previously in Example 3.1; however, the left-hand side continues towards sharped pitches not represented in the previous graph. This graph provides insight into the flexibility of the line for musical analysis.[141]

Example 3.2: Ogolevets's Expansion of the line of fifths. From Ogolevets (1941, 592).



In Ogolevets's system, augmented primes occur in a total of fourteen diatonic modes: five eight-tone modes (hybrid diatonic modes), four nine-tone modes, three ten-tone modes, and two eleven-tone modes. Carpenter begins her discussion of Ogolevets's augmented primes starting with his views of attraction and repulsion (*отталкивания*) within modes.[142] While many theories, such as those of Yavorsky, highlight resolutions of tendency tones (i.e. tritone resolving to a major third), Ogolevets focuses on the tendencies themselves, or the repulsive

[139] See Bazayev (2014) for more explanation on Ogolevets's "alpha" and "beta" for flats and sharps, which is not represented in this graph.

[140] Ogolevets (1941), 592. See Chapter 1 for a summary of the line of fifths..

[141] The "moving window" concept is similar to the derivation of scales within the Ancient Greek Greater Perfect System, where one could highlight different scales (lower, middle, and higher) by selecting seven adjacent tones within a fixed system. Ogolevets's system includes many more fixed tones because he uses a twelve-tone system, but the concept of moving up and down in a system to include a certain number of tones is similar. See Thomas J. Mathiesen, *Apollo's Lyre*. University of Nebraska Press, 1999, 382.

[142] Carpenter (1988), 1195–96.

tones. Repulsions are created when the line of fifths extends past a seven-tone mode to eight or more tones, which includes at least one augmented prime. Because the seven-tone mode does not contain any repulsions, he deems larger modes as "artificial" modes.[143] Modes may involve seven, eight, nine, ten, or twelve tones. The line of fifths in the traditional fixed do system with selections of seven, eight, and ten tones along with the number of augmented primes they include (See Example 1.2). The bracket for the seven-tone mode represents C major (*si–fa*; B–F).[144] A seven-tone mode does not have any repeating note names, but an eight-tone mode contains one augmented prime: *si* and *si*b, or B and Bb. With this system, any mode over seven tones will include one or more augmented primes, which creates repulsion between the two pitches (i.e. B and B-flat). Ogolevets's system presents not only augmented primes in a single eight-tone mode, but the possible use of two diatonic modes simultaneously. Through combinations of two diatonic modes each, Ogolevets claims five eight-tone modes within his system: 1) Lydian/Ionian (*fa–fa#*), 2) Ionian/Mixolydian (*si–si*b), 3) Mixolydian/Dorian (*mi–mi*b), 4) Dorian/Aeolian (*la–la*b), and 5) Aeolian/Phrygian (*re–re*b).[145] With eight, instead of seven tones in C major, one can see the duality as C major and C Mixolydian. The two modes always refer to a single tonal center, in this case C. (Whether or not each eight-tone mode actually has only one center is a question worth further exploration.) I have recreated these modes in Example 3.3.[146]

Each pair of modes occurs one adjacent fifth apart on the line of fifths. Ogolevets creates the larger modes (ten to twelve tones) by combining non-adjacent diatonic modes; however, all

[143] Carpenter (1988), 1200.

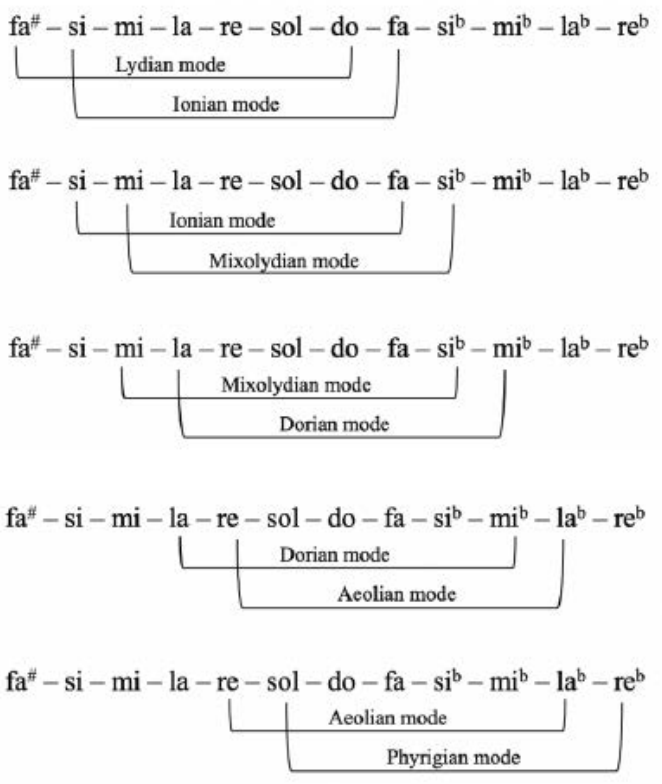
[144] Though this system groups all pitches from the C Major collection, it does not specify any tonal center. I refer to them as C Major purely based on the traditional Western harmonic system of all natural pitches.

[145] Carpenter (1988), 1198. The solfege ranges provided are also in association with the translation of Ogolevets's text.

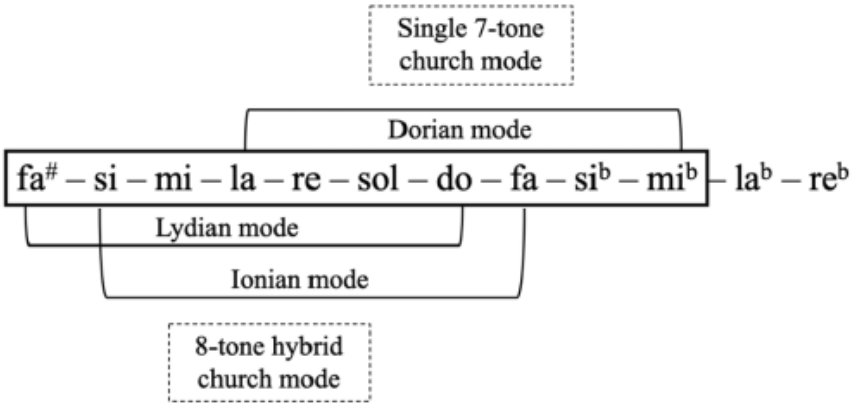
[146] Ogolevets (1941), 344.

the tones within the overall collection should be adjacent. For example, by combining the hybrid Lydian/Ionian with the Dorian mode, Ogolevets yields a ten-tone mode from fa#–mib.[147] Example 3.4 presents this combination.

Example 3.3: Five eight-tone modes from Ogolevets (1941, 344) that represent combinations of diatonic modes.



Example 3.4: Modal combinations for a ten-tone mode.



[147] Ogolevets (1941), 346.

While Ogolevets's approach to augmented prime is well represented in the line of fifths and further explained by combinations of diatonic modes, the method does not explain individual accounts of doubly augmented primes, to which the remainder of the present chapter is devoted. Specifically, the diatonic mode combinations, as explained in his first major text (1941), only describe augmented primes.

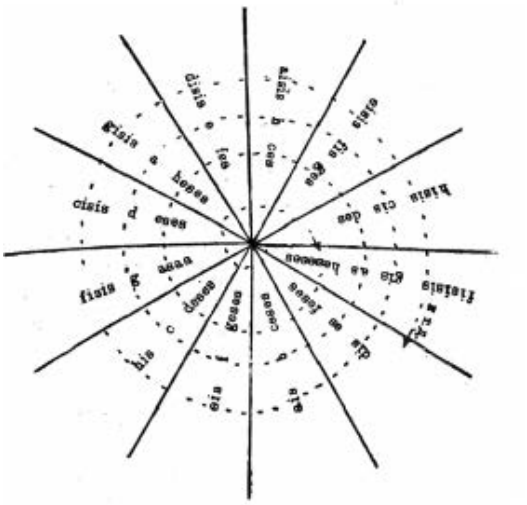
3.3 The Generation of Doubly Augmented Primes

In a shorter book on contemporary music, five years after *The Foundation of Harmonic Language*, Ogolevets explored the idea of the doubly augmented prime (DAP) (*дважды увеличенная прима*). Though the line of fifths was already indefinitely expanded, the DAP was made possible by a reconfiguration of the line of fifths (*fa*#–*re*b) into a "spiral" of fifths, which included alignment of enharmonic tones.[148] I have included the original figure as well as my own interpretation below (Example 3.5).

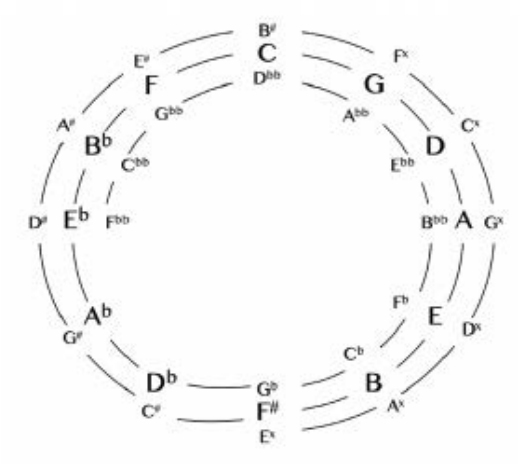
In this figure, Ogolevets expanded his original concept of a line to include more tones from *fa*bb (Fbb) to *mi*x (Ex), and therefore providing a wider range of modes. This expansion yields the ability to derive more combinations of modes that are not adjacent on the line, but rather a tritone apart, for example. In contrast to *The Principles of Harmonic Language*, *Introduction to Contemporary Musical Thought* speaks less on diatonic modes, and more about combinations of collections. While the original line was infinite, the reorganization into a spiral makes tones with double-flats or double-sharps more accessible to modal collections. This also creates a special emphasis on the specific spelling of notes (orthography) in his theory.

[148] Ogolevets (1946), 171.

Example 3.5: Original and re-interpretation of the spiral of fifths. From Ogolevets (1946, 171, Example 12).



Ogolevets's original figure



Re-interpretation of the spiral of fifths

Because Ogolevets shifts focus from more traditional harmonies in his 1941 text to more contemporary ideas in the 1946 book, the music for analysis becomes more complex and requires more explanation beyond the line of fifths. The DAP, therefore, occurs more often in the analysis of contemporary, twentieth-century music. In theory, DAPs generate in three distinct ways: 1) Through formation within structures related to diminished and augmented seventh-chords, 2) derivation from complex mode combinations ("Order of Connection"), and 3) tritone-oriented combinations of twelve-tone collections ("Hierarchy of System Connections"). First, I explain the way DAPs generate from diminished and augmented seventh-chords.

3.3.1 Diminished and Augmented Seventh-Chords

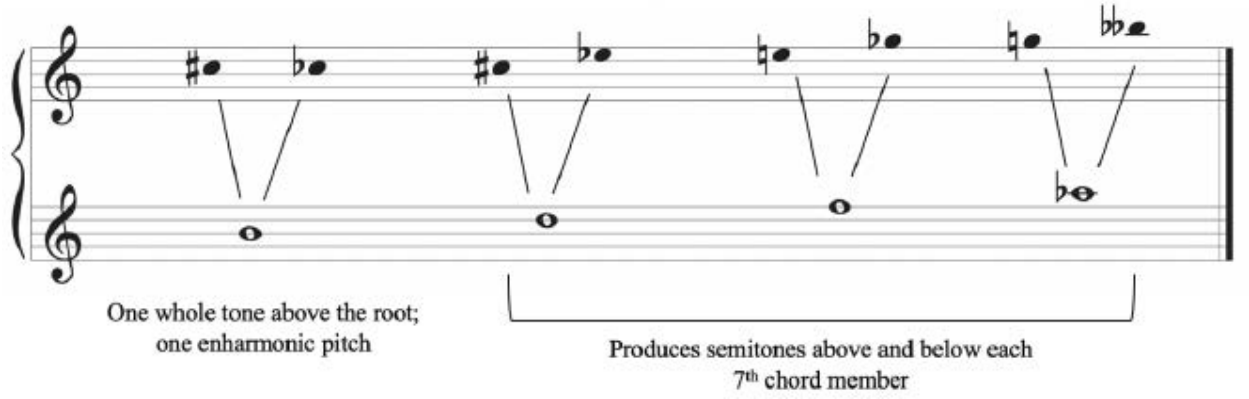
The first of these generations appears in a discussion of what American theorists would call octatonicism.[149] When the octatonic collection is spelled with specific enharmonicism, it can

[149] For more discussion about Russian theory views of octatonicism, see Philip Ewell, 2013, "'On the System of Stravinsky's Harmony' by Yuri Kholopov" Translation and Commentary," *Music Theory Online* 19, no. 2.

yield a DAP. For example, in OCT_{01}, the fragment C–C#–D#–E may be written as C–Db–D#–E, in which Db and D# are doubly augmented primes. While this collection was explored by Yavorsky through all unstable tones derived from two Double Symmetrical Systems (Example 2.2), Ogolevets derives octatonic collections from fully-diminished seventh-chords (*уменьшенный септаккорд*). Example 3.6A recreates Ogolevets's original example. The C Major collection's fully-diminished seventh-chord is B–D–F–Ab, which produces the octatonic scale (гамма тон-полутон, or tone-semitone scale); however, the first derivation from B (bottom stave) conveys an error when compared to the derivations of the other three members of the seventh chord and the anticipated members of this octatonic scale. In his example, notice the first instance of a DAP—C# and Cb—derived from the root of the chord, B. C# repeats in the next pair of semitone derivations from D, but Cb is an enharmonic pitch to the root from which it stems. Rather than C# and Cb, the pitches should be A# and C: A semitone above and below B. This reinterpreted version appears in Example 3.6B.

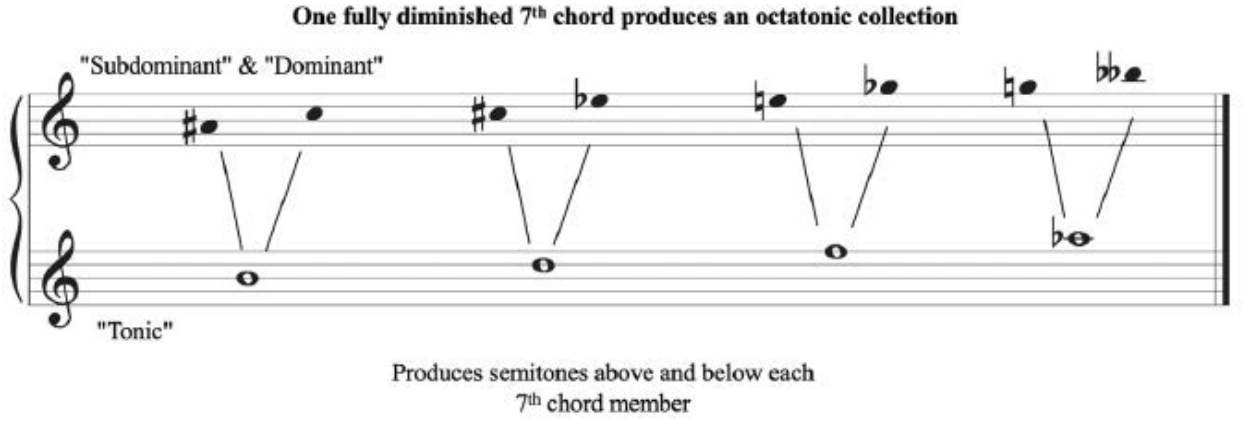
Example 3.6: Ogolevets's octatonic collection derivation from a fully-diminished seventh-chord.[150]

(A) Original



[150] Ogolevets (1946), 318–19. The phrase *gamma ton-poluton* roughly translates to "tone, half-tone gamma [scale]," which represents the American label of an octatonic scale.

(B) Corrected



These corrections lead to the loss of the initial DAP between C# and Cb in the original version, and his discussion around this example eliminates the seventh-chord from inclusion within the collection. Ogolevets states:[151]

> The origin of the mode "tone-halftone" is provided by the intonational processes that are formed around first-order complexes [. . .] As this time of modal thinking developed, an especially important aspect is the juxtaposition of two seventh-chords, S [subdominant] and D [dominant]. Together they form an eight-tone scale, where the diminished seventh-chord of the T [tonic] is excluded.[152]

In this statement, Ogolevets describes a "tonic" diminished seventh-chord that generates two other diminished seventh-chords, named "subdominant" and "dominant."[153] The "subdominant" and "dominant" combine into one collection, the octatonic collection (specifically OCT_{01}), or the "tone-semitone" mode. According to his claim of "tonic" being excluded from the collection, the creation of DAPs between A#/Ab and B/Bbb would also be invalid.

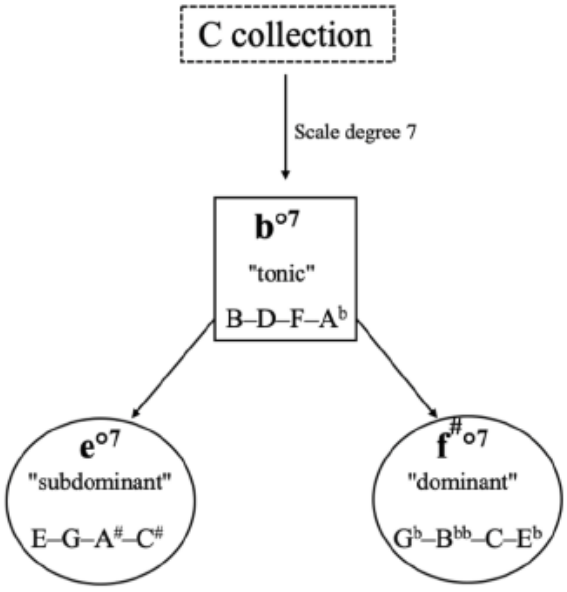
[151] Ogolevets (1946), 318–19.

[152] Original text: Происхождение тоново-полутонового лада обеспечено интонационными процессами вокруг первичных комплексов и не нуждалось бы в схоластически хитроумных построениях спекулятивного мышления. Особое значение в ходе развития этой стороны ладового мышления получит сопоставление двух септаккордов -> Д и -> С. Они вместе дадут 8-тоновою гамму (за вычетом звуков ум. септаккорда -> Т). In the text, the symbol "->" stands for вводный, or leading-tone chord.

[153] I continue to put these iterations of tonic, subdominant, and dominant in quotations because they are not the typical harmonic versions, rather, a psuedo- tonic, subdominant, and dominant.

In traditional harmony, a fully-diminished seventh-chord falls on the seventh scale degree of any diatonic scale (vii°7). If C is the tonal center (based solely on Example 3.6), one would generate a B diminished seventh chord, as shown in Ogolevets's example. Ogolevets, however, views the B diminished seventh as a "tonic" (bottom stave of Example 3.6B) from which a "subdominant" and "dominant" derive (top stave), both as fully diminished seventh chords. These two chords form the octatonic collection. Thinking in terms of traditional functions, the "subdominant" of B spells E–G–Bb (A#)–Db (C#) and the "dominant" is F# (Gb)–A (Bbb)–C–Eb. (The spelling discrepancy is addressed shortly.) Altogether, the "tonic", "subdominant", and "dominant" complete a twelve-tone system.[154] See Example 3.7 for a graphic representation.

Example 3.7: My own graphic representation of Ogolevets's fully-diminished seventh-chord derivations.



Notice the example shows the pitches as used in the scale from Example 3.6B, rather than their enharmonic equivalents. The discrepancy results from the derivation by diatonic semitone (such as B to C#), resulting in the "upper" semitone seventh-chord C–Eb–Gb–Bbb being literally vii°7

[154] I explain more about this system in a future section of this chapter.

of bII (the right side of each pair of pitches; "dominant"), and the "lower" one vii^{o7} of "tonic" (the left side pairs; "subdominant"). A normalized spelling of the vii^{o7} of V, the most traditional understanding of "dominant" diminished seventh-chord, would require transferring the chordal root from C to F# (resulting in two enharmonic respellings), and in the "subdominant" seventh-chord from A# to E (also requiring two respellings). The "tonic," "subdominant," and "dominant" all sound like fully-diminished seventh-chords, but they are represented in the collection with specific orthography. Therefore, a DAP remains between the extreme points of "tonic" and "dominant" chords (B and Bbb), as well as the extreme points of tonic and subdominant (Ab and A#). The Bbb must remain in the collection for two reasons: 1) The consistency of letter name changes from the "tonic" chord members and 2) from the "tonic" generations of each pitch (B–D–F–Ab), one can follow the left side generations per chord member (A#–C#–E–G) and the right side generations (C–E–Gb–Bbb) as fully-diminished seventh-chords.[155] While Ogolevets claims the "tonic" is excluded from the octatonic collection itself, that does not mean it will not occur in musical contexts. Therefore, if one includes the "tonic" chord from which the abstract derivations are drawn, one of its tones forms a DAP with a note in the derived collection. (These DAPs always include the extremes of the line, as represented, since orthography (spelling) of each tone hinges upon the diatonic, as opposed to chromatic, relations between the "tonic" seventh-chord and its derivatives. Hence, Bbb—and not A natural—in the top right corner of Example 3.6B.)[156]

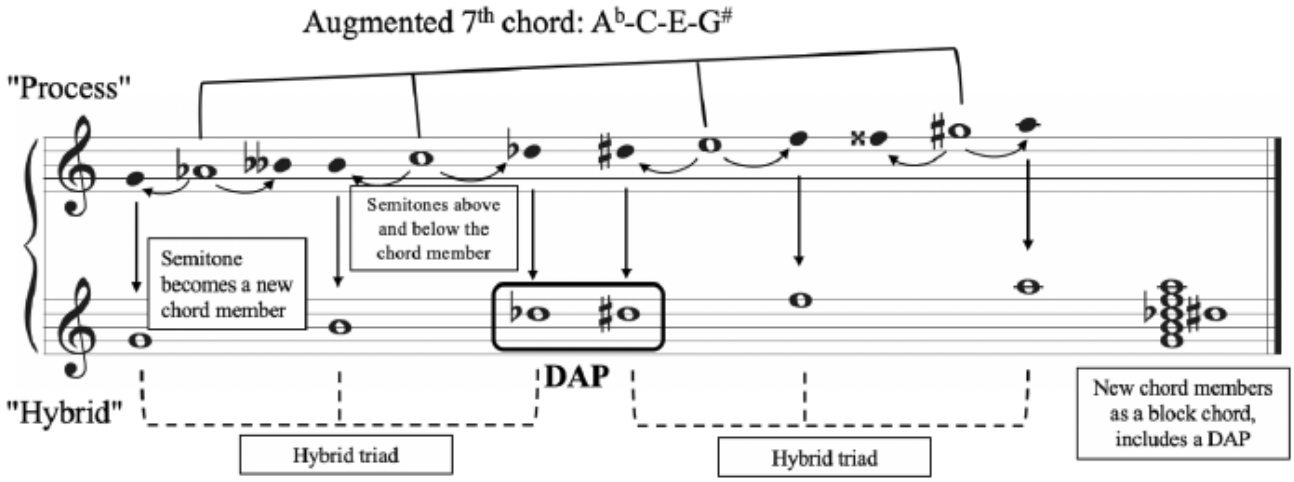
Ogolevets continued to develop collections from seventh chords, such as augmented

[155] These are different chords from the "subdominant" and "dominant" chords, which relate to an entire system (described later in this paper) versus these chords which only represent this particular "tone-halftone" (octatonic) scale.

[156] Orthography is important to the musical context in twentieth-century Russian music, however, because D# or Eb is not represented in the example, it is unclear which pitch would occur in the octatonic collection.

seventh-chords, through his analysis of Lizst's *Faust* Symphony.[157] The combination of two augmented triads, one major third apart, results in an augmented seventh-chord in which the root and the seventh were enharmonic pitches. For example, Ab–C–E and C–E–G# combine into the seventh chord Ab–C–E–G#, where Ab and G# have an enharmonic relationship. This is, of course, different from the usual understanding of an augmented seventh-chord such as Ab-C-E-G. I have reinterpreted Ogolevets's original figure in Example 3.8.[158]

Example 3.8: My reinterpretation of Ogolevets's derivations of the augmented seventh-chord.



The bracket above the top stave highlights the augmented seventh-chord, Ab-C-E-G#, in open noteheads. The short, curved arrows, stemming from each member of the seventh-chord, link to a semitone above and below each of these members (shown as darkened noteheads). From the first half of the augmented seventh-chord, Ab and C, Ogolevets derives the semitones below (to the left side)—G and B—into a new "hybrid" collection on the stave below. Downward pointing arrows illustrate this derivation. From C on the top stave, however, he includes both of the semitones above and below (B and Db) to produce first hybrid triad (outlined with a dashed

[157] Ogolevets (1946), 327.

[158] The original example is identical, but I have added the top and bottom brackets as well as the box around the DAP.

bracket below the staff): G–B–Db. The second half of the augmented seventh-chord follows a similar pattern, though like the pitch C, E also exports both of its semitonal members into the second hybrid triad below (D# and F). The last member of the augmented seventh-chord, G#, derives A for the final pitch of the second hybrid triad. Notice that, because C and E derive two pitches each, they create a DAP between Db and D#. This is shown harmonically at the end of the bottom stave as a block chord. Essentially, two derived triads—G–B–Db and D#–F–A—combine into one hybrid ninth-chord.[159] The augmented seventh-chord, then, is the most clear and acceptable generation of the DAP compared to that of the fully-diminished seventh.

3.3.2 Orders of Connection

The derivations of diminished and augmented seventh-chords result in various scalar collections, one being the octatonic scale. This interpretation of chromaticism in contemporary music not only produces a variety of collections that otherwise have unclear origins, but also expands upon his use of the line of fifths. Developing upon his first book (1941), Ogolevets established a realm of chromaticism that builds on traditional tonal elements. He describes a system based on intervals:[160]

> First of all, we must accurately systematize musical sounds, depending on the degree of complexity of their connections in this tonal system and beyond. Sounds with only diatonic connections [. . .] are called sounds with connections of the first kind. The following tones, with the presence - as the highest level- of the connection of the chromatic halftone [. . .] - sounds with bonds of the second kind. Further, the kinds of relations are established depending on the highest connection in this row. Therefore, the presence of the diminished third [. . .] is a sign of the third kind (5#, 5b, 6#, 7b), the presence of enharmonicism is a sign of the fourth kind (1st and 2nd external sounds), the presence of [the] doubly-augmented unison is a sign of the fifth kind (3rd, 4th 5th internal sounds), the presence of doubly-diminished third - a sign of the sixth kind (6th, 7th internal sounds), the presence of doubly-augmented second - a sign of the seventh kind (8th, 9th, 10th internal sounds), sounds of the 8th kind (the 11th and 12th internal sounds)

[159] In the text, Ogolevets refers to this harmony as a "Debussy-Scriabin 9th chord." See Ogolevets (1946), 327.

[160] Ibid., 340.

> with the presence of triply-diminished fourth with their lowest connection in the form of enharmonicism (modern type), i.e. the indicator +12 (!) is already a product of especially refined harmonic thinking of the coming centuries in the fourth cycle of music development. [161]

The use of structures that originate in tonal concept—including seventh chords and enharmonicism—are called "first order complexes" (*первичные комплексы*); those pitches that are diatonic and standard to diatonic modes. The "second order complexes" (*вторичные комплексы*) includes the pitch derivations from the 1st order. In the text, Ogolevets lists the eight orders of connection within the tonal system (in order from simple to complex), where "tonal system" is understood very broadly: 1) Diatonic semitone (i.e. A–Bb; most simple), 2) chromatic semitone (i.e. A–A#),[162] 3) diminished thirds, 4) enharmonicism, 5) doubly augmented unisons (*дважды увеличенный унисон*) (DAP), 6) doubly diminished thirds (*дважды уменьшенная терция*), 7) doubly augmented seconds (*дважды увеличенная секунда*), and 8) triply diminished fourth (*трижды уменьшенная кварты*) (enharmonically spelled; most complex).[163] Through this explanation, he acknowledges the DAP, but only as a single detail within the orders of connection. Based on their orderings in the list, one can assume that nos. 5–8 (complex) derive from nos. 1–4 (simple). In Example 3.7B, the "tonic" B fully-

[161] Original text: Прежде всего мы должны точно систематизировать музыкальные звуки в зависимости от степени сложности их связей в данной тональной системе и за ее пределами. Звуки только с диатоническими связями (см. выше п п. "а" и "б") назовем звуками со связями первого рода. Следующие, с наличием - в качестве высшей - связи хроматического полутона (п.п . "б" и "В") - звуками со связями второго рода. Далее роды связей устанавливаются в зависимости от высшей связи в данном ряду. Таким образом, присутствие ум. терции образует признак третьего рода (5#, 5b, 6#, 7b), наличие энгармонизма - признак четвертого рода (1-й и 2-й внешние звуки), наличие дважды ув. унисона - признак пятого рода (3-й , 4-й, 5-й вн. звуки), наличие дважды ум. терции - признак шестого года (6-й , 7-й вн звуки), наличие дважды ув. секунды - признак седьмого рода (8-й , 9-й , 10-й вн звуки), звуки 8-го рода (11-й и 12-й вн. звуки с наличием трижды ум. кварты) с их н и з ш е й связью в виде энгармонизма (нынешнего), т.-е показателя +12 (!) - это уже продукт особо рафинированного гармонического мышления предстоящих столетии в четвертом цикле развития музыки. (Ogolevets 1946, 340)

[162] The chromatic semitone also represents an augmented prime.

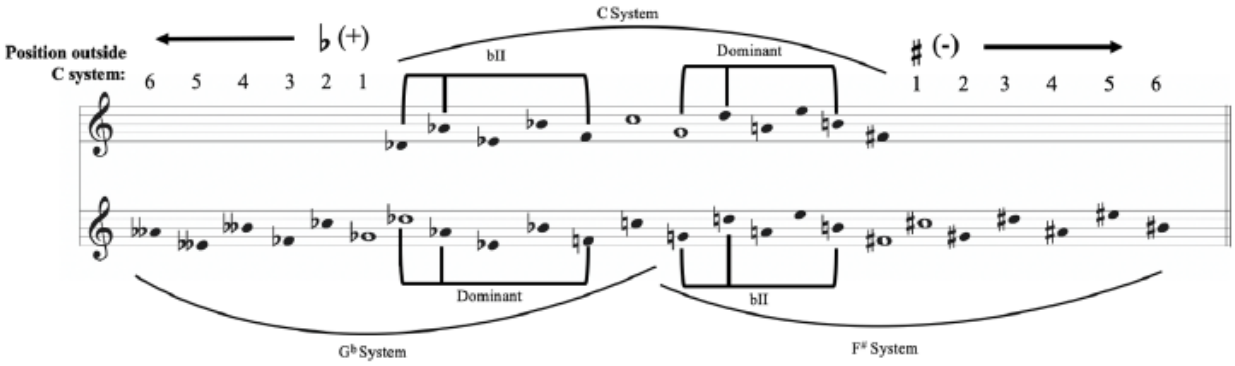
[163] Ogolevets (1946), 338.

diminished seventh-chord is of the second order (built on diatonic scale degree 7 from a C collection, with a lowered scale degree 6). The "subdominant" and "dominant" fully-diminished seventh-chords that derive from it and project the octatonic collection are also of the second order. Notice that the DAP as well as the doubly diminished third, the complex types of the second order, both occur in the system of octatonic scale derivation.

3.3.3 Hierarchy of System Connections

Following the discussion of orders of connection, Ogolevets promptly ties them to a larger hierarchical system. This system accommodates for smooth "modulations into the keys related by tritone."[164] Ogolevets combines the line of fifths with the expansion of the 1st and 2nd orders into a greater tonal system, but does not directly connect this system with the octatonic derivations from Example 3.7B. This system contains three subsystems, all related by a tritone: Gb, C, and F#. I have recreated his figure of the entire system in Example 3.9.[165]

Example 3.9: Ogolevets's "Hierarchy of System Connections" (1946, 341).



The C System, highlighted by a long slur in the top stave, is central to its tritone-related systems—Gb and F#—and includes hierarchical positions outwards (shown by arrows on both

[164] Ogolevets (1946), 340.

[165] Ibid., 341. For further clarification, I have added the position numbers and +/- above the staff as well as the two large arrows to convey the deviation from the C system on both ends of the graph.

sides above the staff). For example, on the left side of the C system, the pitch Gb is one position away (bottom stave, open notehead), Cb is two positions away, etc… This positioning is replicated on the right side within the F# System.[166]

In the graph, two important relationships emerge: the perfect fifth and the tritone. Whole notes illuminate tonic-dominant relationships (i.e. perfect fifth) among systems and the two outer systems relate to the C system by enharmonic tritones (i.e. C–F#; C–Gb). The C System includes brackets that outline its dominant triad as well as flat major II (bII), while the Gb System only highlights, with stems and brackets, its dominant and the F# System has only its bII (although the other chords are present too, of course; they are just not highlighted.). By only outlining one harmonic relationship in each Gb and F# system, the graph emphasizes their relationships to the C System, therefore proving C's centrality to the hierarchical system.

While bII is not a typical harmony chosen for key reference in Western harmony, Ogolevets's inclusion of this harmony allows for remote modulation through the line of fifths into collections with flats and sharps; it also emphasizes tritone relations once more. Because combinations of different subsystems include augmented primes, the modulation or simultaneity among systems produces DAPs. Rather than D# and Db appearing to be completely unrelated in our traditional tonal systems, they are more closely related by only two systems, C and F# (see Example 3.9). Ogolevets thereby simplifies the most complex intervals and 2nd-order members into relative systems. While it seems rather abrupt to shift from describing intervals (order of connection) to a hierarchical system involving keys and modulation, he appears to illuminate how all of these complex intervals function together within a musical context. Additionally, it is worth noting that the C system, in particular, includes all twelve of the pitches represented as

[166] The + and – symbols are his secondary labels for referring to flats and sharps.

"tonic," "subdominant," and "dominant" from the octatonic derivation (see Example 3.6B).[167] Therefore, the twelve toned system acts as both 1st order—highlighting 1st order harmonies Dominant—and 2nd order (including bII, all twelve tones from the octatonic collection, and the fully-diminished seventh-chord). Because the $F^{\#}$ and G^{b} systems overlap with C, more opportunities arise for DAPs among them.

In this chapter, I have discussed Ogolevets's approach to "universal tonality" through the line of fifths, families of modes, and augmented primes. As he continued to build upon these techniques through a systematic twelve-tone derivation of fully-diminished seventh-chords, augmented seventh-chords, orders of connection, and a hierarchical system of connections, one concept, that occurred consistently throughout, remained barely touched: The doubly-augmented prime (DAP). Since it appears in many of his examples and occurs in several of Shostakovich's works, I summarized Ogolevets's discussion and traced his methodology, in which the DAP occurs, to shed light on the importance of the DAP as a method, rather than an overlooked order of connection. These summarizations of general concepts were important to understand the derivations of the DAP and how it might occur theoretically; however, my methodology in the following chapters focuses on mode combinations as well as scale degree alterations within a key. This focus leads to my development of the DAP into a voice-leading archetype for which it functions within Shostakovich's music.

[167] I'm using the C System only to tie into Example 3.7B, but if reworked, the derivations from E# and F fully-diminished seventh-chords would also work for the F# and Gb Systems, respectively.

CHAPTER 4

METHODOLOGY OF THE DAP AND ITS RESOLUTIONS

4.1 Introduction

As detailed in Chapter 2, scholars have described Shostakovich's compositional techniques such as modal alterations, non-traditional voice leading procedures, and signature devices that were unique to him. David Fanning expresses Shostakovich's style as "sometimes tonal, sometimes modal, sometimes somewhere in between, and sometimes outside the bounds of either [. . .] the stumbling block here usually concerns the question of mode."[168] This style described by Fanning creates a complex situation for analysis in which many techniques must be used to explain Shostakovich's music. The ambiguity of mode is attributed to his use of chromaticism within any given key signature. Chromaticism, then, is used by Shostakovich as an endless line of pitches and harmonies with no restriction to one mode or scale (though it is often useful to understand his chromatic language within some kind of tonal context). William Hussey explains:

> Symmetrical chromatic space in Shostakovich's music is not limited to his triadic harmonic progressions, but also includes linear material commonly constructed of stepwise chromatic motion [. . .] Shostakovich's linear exploration of chromatic space was often very straightforward, for a chromatic scale is symmetrical, realized through a recurring pattern that does not define a key [. . .] Depending upon rhythmic emphasis, the same chromatic scale can fit in a tonal context without disrupting the tonality, or it can be used to push the boundaries of that tonal context. The tonal disruption of chromatic pitches outside of the key becomes more acceptable to the ear when presented withing a coherent linear pattern.[169]

The discrepancy between modes and chromaticism, sometimes intertwined in Shostakovich's

[168] David Fanning, 2006, "Introduction, Talking About Eggs: Musicology and Shostakovich," from *Shostakovich Studies*, Ed. by David Fanning, Cambridge University Press, 8.

[169] William Hussey, 2003, "Triadic Post-Tonality and Linear Chromaticism in the Music of Dmitri Shostakovich," *Music Theory Online 9*, no. 1, [5].

music, allows for many analytical angles. Scholars have approached his music through triadic harmonies, chromaticism and twelve-tone analysis, linear modal analysis, as well as several musicological approaches to his stylistic use of Jewishness and political influences.[170]

Closely associated with both the parallel motion of McCreless's "1+2+1 texture" and the DAPs, Stephen C. Brown references that Shostakovich's motto arose from three categories based on the [0134] tetrachord: 1) modal lowering, 2) modal clash, and 3) scalar tightening.[171] Modal lowering is the lowering of scale-degree 4 within a Phrygian mode. Modal clashes "occur[s] when a passage incorporates two forms of the same scale degree simultaneously or in close juxtaposition." For example, a B major and B minor scale includes scale-degree 3 and b3, forming an augmented prime. Brown urges that each pitch "functions as a distinct scale degree," which once again calls attention to the importance of orthography in Shostakovich's music.[172] Without this strict attention, there would be no modal lowering or modal clash.

Scalar tightening is important to the other two types because it lays the foundation for the scale itself. Shostakovich does not provide every member of a scalar collection, lacks centric tones much of the time, and quickly moves through several chromatic, scalar figures in a short stretch of time.[173] Example 4.1 shows five measures in which six scalar segments are present. The bass line, centered on D, presents three types of scalar collections: Dorian, natural, and

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[170] For reading on Shostakovich's use of Jewish style, see Joachim Braun, 1984, "Shostakovich's Song Cycle *From Jewish Folk Poetry*: Aspects of Style and Meaning," From *Russian and Soviet Music: Essays for Boris Schwarz*, Ann Arbor, MI: UMI Research Press, 259-81; and Judith Kuhn, 2010, *Shostakovich in Dialogue: Form, Imagery, and Ideas in Quartets 1–7*, Burlington, VA, Ashgate Publishing, 44-56. For reading on Shostakovich's influence of politics, see Kuhn (2010), 3–9; and Patrick McCreless, 2010, "Shostakovich's Politics of D Minor and its Neighbours, 1931–49." *Shostakovich Studies 2*: 121–89.

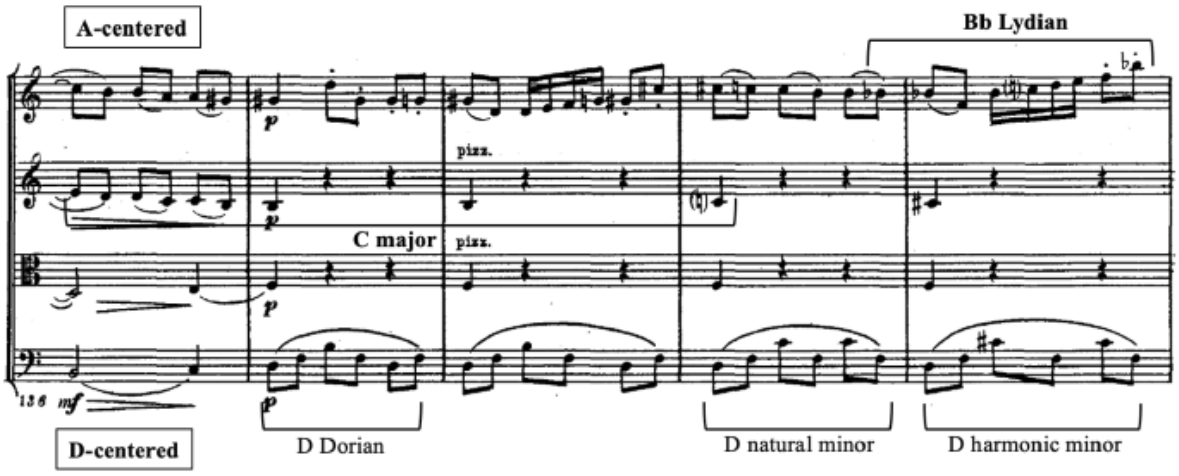
[171] Stephen C. Brown, 2006, "Tracing the Origins of Shostakovich's Musical Motto," *Intégral* 20, 69–103. See Section 2.3.1 for McCreless's method.

[172] Ibid., 79–80.

[173] These are my own observations, but Brown also supports the case for no clear pitch center (p. 81) and Mazel recognizes Shostakovich's use of scalar segments. According to Haas, Mazel "maintains that a single pitch [. . .] can be deployed in such a way to communicate multiple contradictory harmonic implications." (see Haas 2008, 310).

harmonic. Violin II projects C major with four pitches in four measures. Violin I begins with an A-center, implied by its leading tone G# and the alternation between C and C#, alluding to a modal clash. This passage ends with a Bb Lydian scalar fragment in m. 140, with five pitches from this collection.

Example 4.1: Scalar segments in Shostakovich's String Quartet No. 2, I, mm. 136–40.



Based on this example, individual lines are important; however, McCreless's attention to parallel thirds and the "1+2+1 texture" provides evidence for compositional techniques that combine parts as one moving unit. [174] These "musical tics", including 1+2+1, parallel motion, modal lowering and clash, and scalar tightening coincide with my device, the DAP. Because the DAP is a voice-leading device, it may result from or contribute to these techniques. Example 4.2A presents an excerpt of *From Jewish Folk Poetry*, op. 79, No. 4 (1948). Shostakovich separates the two voices through use of scalar segments, which yields a modal clash between E minor in the soprano line against a segment of doubly lowered A minor in the tenor voice and accompaniment. [175] Example 4.2B provides the complete "three common-tonics" based around

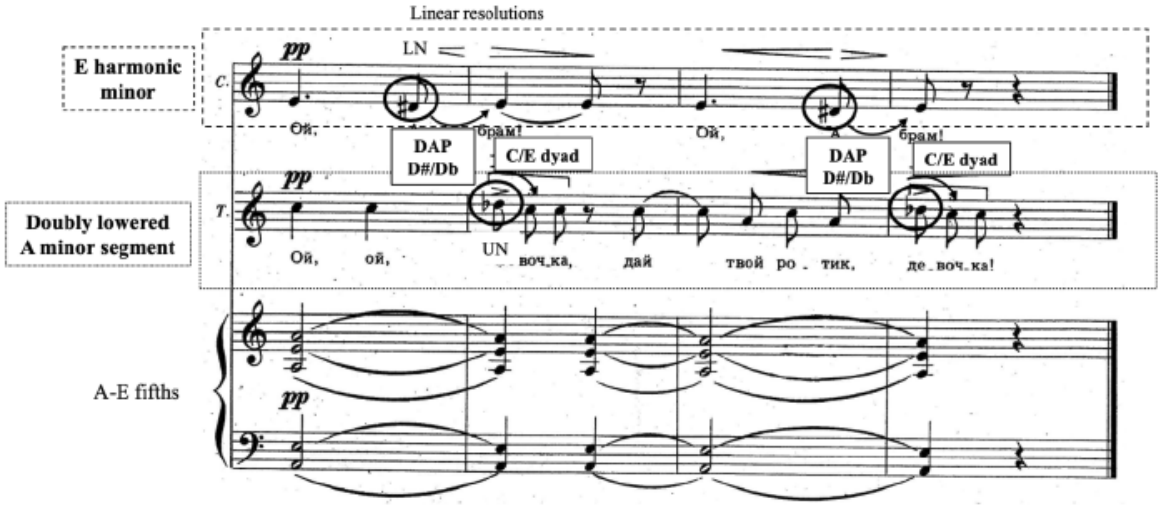
[174] McCreless (2021), 75.

[175] The doubly lowered A minor segment is derived from Dolzhansky's "three common-tonics." For more about this collection, see Chapter 2, Example 2.8 from this dissertation.

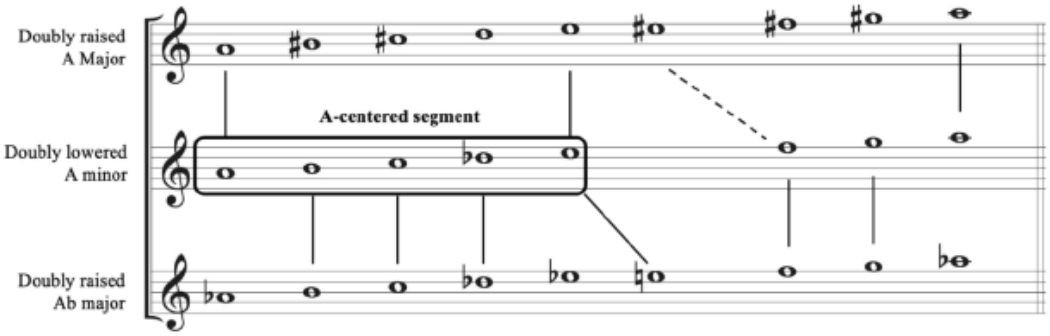
A.[176] The middle stave, labeled doubly lowered A minor, includes a box around the pitches used in the tenor and accompaniment, with the exception of B.[177] The two scalar collections, a perfect fifth apart, involves neighbor motion between D#, the lower neighbor of E, and Db, the upper neighbor to C. This DAP, transpiring two separate, but related modes, unites the passage as one conversation between voices, a trait characteristic of this entire song cycle.

Example 4.2: Shostakovich's *From Jewish Folk Poetry*, op. 79, no. 4, mm. 80–83.

(A) Mode duality



(B) Three Common-Tonics



The remainder of this chapter devotes attention to the voice leading functions the DAP

[176] Ogolevets's families of modes does not have a collection with lowered scale-degree 4 (*fa*), but Dolzhansky's three-common tonic includes this lowering.

[177] B is implied, though not shown in any voice in this passage.

provides, such as its resolutions into one or two simultaneous modes (Example 4.2A), as a transitory device, and parallel/neighbor motion within excerpts. To begin, I illuminate Yavorsky's Symmetrical Systems, once again, as a voice-leading model that provides a theoretical precedent to the DAP, in a general way, to explain the principle of the DAP. His most basic method for resolving a tritone to a major third closely relates to the resolution of a DAP. Both move in contrary motion, but instead of resolving inward to the major third, the DAP resolves outward. Additionally, the resolutions of both the DAP along with the augmented prime create a full triad, much like the process of Yavorsky's Double Symmetrical System. The DAP, like the tritone in any music that resolves it according to Yavorsky's description, is Shostakovich's method for building tension and releasing it into one or more modal collections. The DAP stands as either a key confirming entity (like a dominant chord reinforces tonic) or a modulatory device to move towards the next. Next, I discuss the differences between normal and abnormal resolutions, followed by their specific types and combinations of abnormal resolutions. Basic DAP parameters must be set in order to recognize 1) if the pitches follow the basic requirements of a DAP and, 2) how their resolutions reflect what type of DAP it qualifies for: aligned or unaligned, normal or abnormal; if abnormal, whether it is a half resolution, pre-resolution, or direct. I discuss all types of DAPs using examples from Piano Sonata No. 1, op. 12 (1926), String Quartet No. 1, op. 49 (1938), String Quartet No. 2, op. 68 (1944), and String Quartet No. 3, op. 73 (1946), all of which together span twenty years.

4.2 DAP as a Voice-Leading Method

Ogolevets mentions the DAP within an intervallic list pertaining to the "order of connection." He emphasizes that chromaticism may be used within traditional tonal elements, much like I show in Shostakovich's compositional style. He also describes the generation of

DAPs from diminished and augmented seventh-chords and a larger, tritone-oriented system called the "Hierarchy of System Connection." What Ogolevets's work lacks is a fully developed model for showing these intervals and their resolutions. In this dissertation, I aim to develop such a model for the DAP and its resolutions. Much of my system entails chromaticism and the combination of modes. One particular mode that Ogolevets referenced often when discussing his systems is the octatonic collection (*тоново-полутонового*, or "tone-semitone").[178] This collection easily allows for augmented primes as well as DAPs. His teacher, Yavorsky, introduced a system with intervallic tension and resolution, eventually combining into an octatonic collection. While I do not speak directly to octatonic collections in my method, it is important to note that both of their systems resulted in the same collection. Because Shostakovich's works are highly chromatic, it is best to focus on modal confirmations and shifts, like tonal tonicizations. In traditional tonal voice leading, the leading tone provides the most basic resolution to tonic as it implies a dominant function moving to its tonic chord. Discussed at length in Chapter 2, Yavorsky's theory of basic musical structure consists of a tritone resolution, which includes the leading tone and scale-degree 4 in a major mode, resolving inward to a tonic major third (see Example 2.1). In summary, my original method brings together Yavorsky's voice-leading principles and Ogolevets's intervallic and modal structures.

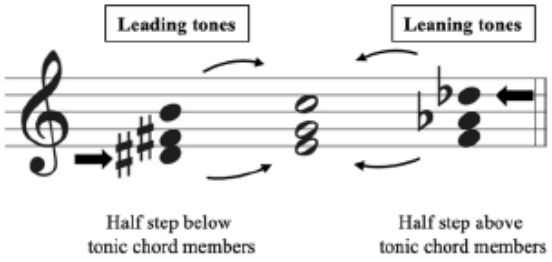
4.3 Tendency Tones Within a DAP

Like Yavorsky's voice leading in symmetrical systems, the DAP requires similar semitonal motion. Tendency tones and orthography are most important when encountering a DAP. Example 4.3 provides a graph of these tendency tones (closed note heads) as they resolve

[178] Ogolevets (1946), 318.

to and from a C major triad (open note heads). The stacked tendency tones themselves must not be taken as representatives of triadic harmonies, rather as individual tones that shadow the tones of the tonic triad. The tones to the left of the tonic triad resolve upwards and the tones to the right resolve downward. For example, E has two tendency tones: D# (leading tone) and F (leaning tone). One must adopt this general viewpoint to fully understand the voice-leading function of the DAP. Notice the DAP, shown with thick arrows, that occurs because of these two groups of tendency tones: Db/D#. In the music of Shostakovich, one might see several block chords that alternate between all sharps to having all flats. Instances such as this produce the DAP, which resolves to a tonic member dyad, a current or new tonic, or two separate modes.

Example 4.3: Tendency tones of a C major tonic triad.



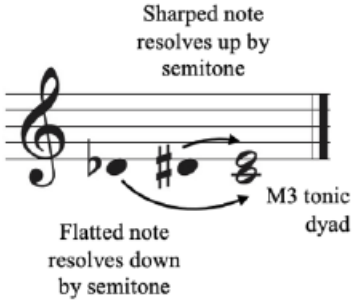
There are two parts to a DAP: First, the pitches in question, and second, their resolutions. The pitch members of a DAP involve one "leading" tone and one "leaning" tone. I first discuss the pitches within a DAP. The pitch members of a DAP must have the two important distinctions: 1) The two pitches must share the same white-key letter name (i.e. C, D, E, etc…) because each such letter name refers to a single, individual scale degree in a seven-step scale or mode, and 2) the pitches must be two accidentals apart, either a) one natural and one double sharp or flat (i.e. C and Cx), or b) one flat and one sharp (i.e. C# and Cb).[179] The resolution of the DAP requires a leading tone (a note one semitone below the diatonic version of the scale

[179] Orthography is very important for the DAP because enharmonicism does not qualify.

degree) and a leaning tone (a note one semitone above).[180]

The voice-leading archetype of the DAP resolution includes one member ascending by one semitone and one member descending by one semitone. William Rothstein describes an archetype as "a fundamental principle." In relation to contrapuntal dissonance within functional tonality, he states, "dissonance is always a dependent element, deriving its meaning from surrounding consonances; all dissonance stems from consonance and resolves to consonance."[181] Similar to Rothstein's archetype, the DAP also supplies an established, conceptually unchangeable voice-leading pattern that can be directly obvious or implied. The DAP's voice-leading archetype involves dissonance resolving to consonance in semitonal, contrary motion. In Example 4.4, Db and D# are members of the DAP, each resolving by semitone by their tendency. The flatted pitch, Db, resolves down by step to C, the diatonic scale-degree below D. The sharped pitch, D#, resolves up by semitone to E, the scale degree above D. The resolution of a DAP results in a major third, which makes up either the root and third of a triad (bottom dyad) or its third and fifth (top dyad). If the triad is major, the dyad will be at the bottom and if the triad is minor, it will be at the top. The example provided is without a musical context, therefore, the dyadic positioning is unknown.

Example 4.4: Voice-Leading Archetype of a DAP.



[180] Note that the reference to "leading tone" means how it resolves (up by step). It is not necessarily implying scale-degree 7.

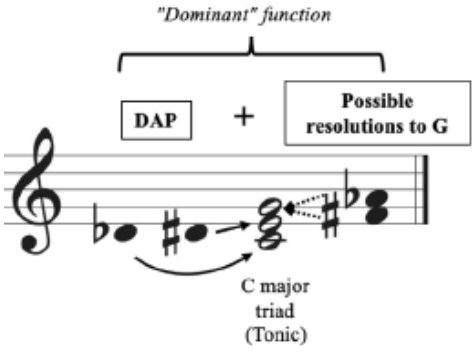
[181] Rothstein (1991), 302.

Though Shostakovich invokes traditional tonality with triadic harmonies, its mixture with atonality and modality elevates his use of dissonance beyond functional tonality. In modal (as opposed to tonal) contexts, this triadic understanding of the resolution dyad is, of course, not necessary, since modal thinking often relies on a tone collection more than it does on triads.

The DAP occurs in predominantly diatonic and in chromatic passages, during which it accentuates one to two modes simultaneously or acts as a transitory bridge between two modes, like a tonal modulation.

To summarize, the DAP occurs in both functional tonal contexts (triadic) or in modal contexts. In functional tonal contexts, the resolution dyad makes up either the base of a major triad or the top of a minor triad, and depending on its function within a passage, it may also act as a "dominant" function leading to a tonic. Example 4.5 visualizes this dominant motion. In modal contexts, modes may be simultaneous, but one mode is more prominent than the other. The DAP helps to confirm which mode is hierarchically important, usually the underlying mode given at the beginning of the work.

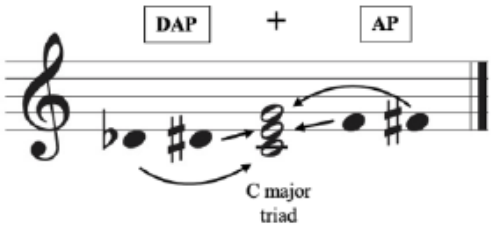
Example 4.5: Dominant motion to the tonic using a DAP.



Like the previous example, Db/D# resolves to C–E as the base of the C major triad because the resolution is a major third. There are many ways in which the music may move to the tone G (scale-degree 5) and complete the triad, depending on the musical context. In this

example, I have provided two single pitches that could semitonally resolve to G: F# or Ab. Each could be paired within a harmony containing Db and D# (Db with Ab and D# with F#). Because E to G is a minor third, there are no circumstances where two DAPs would resolve to one major or minor triad, instead, the two DAPs would resolve to an augmented triad. It is possible, though, to have one DAP and one augmented prime in a musical passage (see Example 4.6). The DAP resolves to the major third (root and third of a major tonic triad), and the AP resolves to the minor third (third and fifth of a major tonic triad). Notice that, as previously mentioned, two tones resolve to E: D# and F. The overlapping resolution is necessary to complete the resolution of both the DAP and AP into any triad.

Example 4.6: DAP and AP resolutions to a C major triad.



DAPs resolve their tendency tones stepwise by semitone. While it is possible to find DAPs and their resolutions vertically aligned and sounded simultaneously in the music of Shostakovich, there are many instances in which they are not—in other words, where the interval is horizontalized. My research on DAPs focuses on instances where the DAP occurs in the same measure or within four beats in proximity, whether vertically or horizontally. DAPs adjacent to one another highlight Shostakovich's style of ornamentation, in which more than one pitch may be illuminated simultaneously, either to resolve to a tonic or present a dual modality.

In summary, my project builds on Ogolevets's mention of the DAP in four ways: 1) by developing a voice-leading archetype with specific resolutions, 2) assigning the DAP a quasi-harmonic function based on the tendency tones it possesses, 3) how the DAP behaves in relation

to triads as well as various modes, and 4) providing musical evidence and consistency of this method in a period of Shostakovich's compositions. I justify these processes by retaining Yavorsky's and Ogolevets's focus on voice leading procedures and using similar models of resolution.

To conclude this methodological introduction, I now lay out a typology of DAPs in reference to their resolution; a typology that will help grapple with concrete musical situations in Shostakovich's music. Those DAPs within the parameters of basic voice-leading function, shown above, are "normal" DAP resolutions. Those with exceptions to their resolutions are "abnormal" DAP resolutions. There are three types of abnormal resolutions: 1) pre-resolution, 2) half resolution, and 3) direct resolution. The following two chapters provide more characteristics and analytical examples for both normal and abnormal resolutions.

CHAPTER 5

NORMAL DAP RESOLUTIONS: METHOD AND ANALYSIS

5.1 Introduction

As explained in the preceding chapter, normal resolutions refer to a DAP that resolves stepwise in contrary motion. For example, Gb resolves down by semitone to F and G# resolves up by semitone to A, creating a major third dyad, or a minor sixth. Typically, this major third is relevant to the mode or key area surrounding it, either as the root and third or third and fifth of the triad. Normal resolutions may align and resolve immediately, but not all DAPs need to vertically align or resolve to the pitch adjacent to it; rather, they can resolve over a span of time, like prolonged harmonies in a functional tonal context. In this chapter, I explore musical examples from Shostakovich's music between 1926–1948, in which he uses the DAP as either an indicator of one or two modes, or a modulatory device from one mode to another. In the first section of this chapter, I show examples of normal aligned DAPs and their resolutions. The second section presents examples of unaligned normal resolutions.

5.2 Normal DAP Resolutions—Aligned DAPs: Method and Analysis

Examples 5.1 and 5.2 provide two instances of aligned DAPs from the single-movement Piano Sonata No. 1, op. 12 (1926). Example 5.1A provides a normal and abnormal DAP for comparative purposes.[182] Two separate lines drive towards the normal DAP, D#/Db (labeled "DAP") with harmonic support of their resolution to C major. Horizontally, the melody in the top voice of the right hand descends, somewhat chromatically, leaping downward from G to Bb in beats two and three of m. 115. From this point, Bb leaps up to Db (the DAP member) and

[182] I define and present examples of abnormal resolutions in Chapter 6, including this example.

resolves to C in an inner voice. Like this voice, the bassline is also rather disjunct. Leading up to its DAP member, D#, the same C#–D#–E ascending figure (shown in horizontal boxes in Example 5.1A) also occurs in m. 114 but does not align with a Db in the melody. Vertically, mm. 114-15 presents two subdominant harmonies (iv^4_2 and ii^6_4), of which the latter is the result of an abnormal DAP (discussed thoroughly in the next chapter). Example 5.1B shows a chordal reduction of the labeled chords. The abnormal DAP, Gb/G#, in darkened note heads, does not resolve to an expected F/A dyad, rather it resolves to G/A (open noteheads), a major second. Had the Gb resolved to F, it would have completed the D minor triad. Instead, the harmony is implied by both the abnormal resolution and the fifth, D–A. Additionally, the ii^6_4 does not align vertically like the other chords highlighted. The DAP's resolution is weakened from not only its unexpected resolution from Gb to G-natural, but its unaligned, subdominant harmony. A normal DAP resolves to a major third dyad, a member of the tonic chord. Therefore, the Db/D# DAP is normal because it resolves to the major third, C/E of C major and G#/Gb is abnormal because of its resolution to a major second, breaking the voice-leading archetype.[183]

The texture mainly consists of flats in the right hand and sharps in the left hand (with a few exceptions in m. 115).[184] While no other collections are examined in this passage, this C major scale fragment occurs directly after the I chord to reinforce C as tonic, both harmonically and melodically. Occasionally, the voices act as independent lines in their own modes and the occurrence of the DAP will result from those lines; however, it is important to note that in this

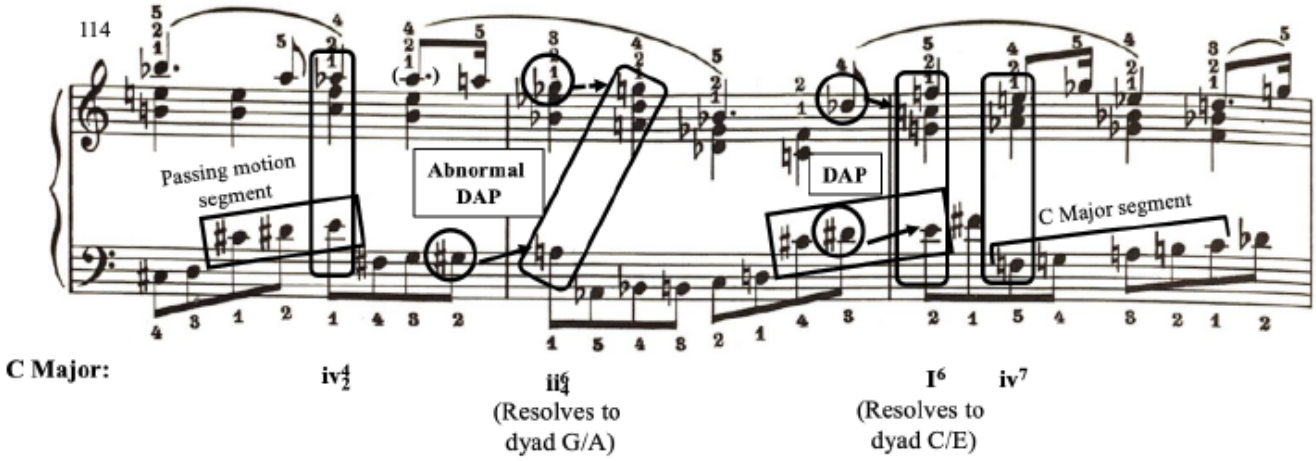
[183] In this example, E is in the bass, so this resolution results in a minor sixth rather than a major third. The placement of the Db/D# in the voicing causes this complementary resolution, which does not affect the full effect of a DAP resolution.

[184] The separation of flats and sharps between voices results in another DAP between G# and Gb between both voices from mm. 114–15. I do not discuss this example in this chapter because it is not a typical resolution: Gb resolves to G-natural instead of F.

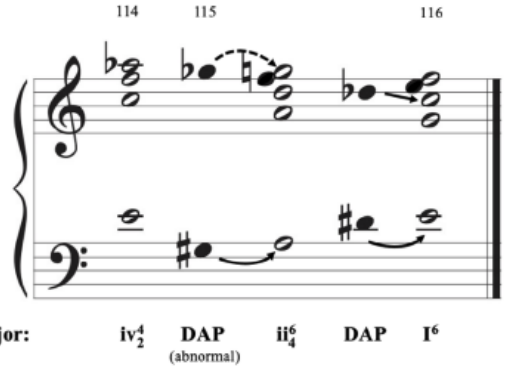
instance they are aligned and resolved together, into a vertical tonic harmony. The combination of vertical and horizontal chromatic lines allows the listener to aurally interpret the DAP sonority, typical of Shostakovich's style.[185]

Example 5.1: Piano Sonata No. 1, mm. 114–16.

(A) Aligned DAP



(B) Chordal reduction



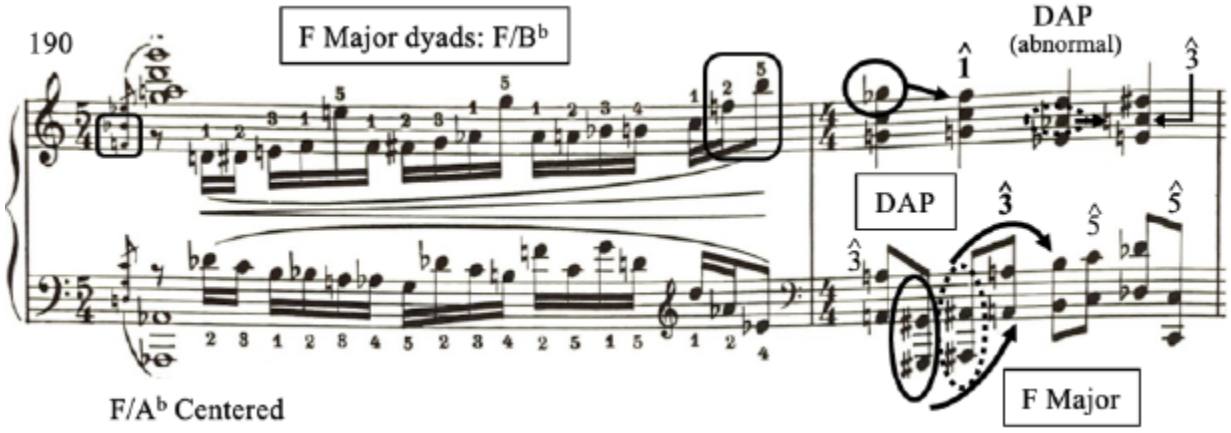
Also from Piano Sonata No. 1, another DAP aligns in the second eighth-note of m. 191 (Example 5.2A). While the key of the passage is ultimately F major, it begins with ambiguous key centers between whole note octave Ab's in the left hand and a grace note F in the right. It appears Ab is more prominent as a key center in this measure, but the F–Bb (shown in boxes)

[185] Because this piece is highly chromatic, it is very difficult to pinpoint a centric tone to give any passage a mode labeling. The lack of mode(s) does not affect the use of DAP in this passage.

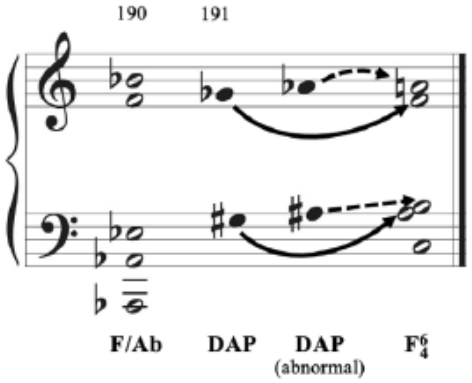
bookends the measure. The next measure confirms F major with a DAP resolution. The Gb in the top voice plays on the downbeat, while the G# enters as octaves on the second eighth note of the first beat, therefore aligning at that moment. It is important to note that the F major triad, while decorated with chromaticism, involves all of m. 191. Scale degrees of the F major triad are shown in various voicings and beats within this measure (notice the tonic chord scale-degrees labeled on the score). The resolution from G^{b} to F in the right hand is direct, but the left hand is slightly delayed. Instead, Shostakovich inserts a neighboring A# between the G# and its resolution, A-natural.

Example 5.2: Piano Sonata No. 1, mm. 190–91.

(A) Aligned DAP



(B) Chordal reduction



The placement of the A# is important, though, because it creates another DAP with Ab in

the right hand, beat three of the same measure. This overlap of DAPs is unique: one resolves normally (G#/Gb) and the other does not (A#/Ab). Instead, $A^{\#}/A^{b}$ both resolve to A-natural, scale degree 3 in the key of F major (see Example 5.2B).[186] Therefore, both the normal and abnormal resolutions confirm the key of F.

A passage from String Quartet No. 2, op. 68 (1944), movement I (Example 5.3A) begins in Eb major and ends in D minor. The aligned DAP in m. 204, again aligning on the second eighth-note of beat one, aids in this modulation. The Cb in Violin I is an upper neighbor to Bb, part of a repeating pattern: Bb–Cb–Bb–A. Cb aligns with the cello's C# in m. 204, which resolves to D an octave lower. While this is a normal DAP resolution, it occurs disjunctly an octave away, thus replacing the structural semitone (that lies in the basis of this motion) by an apparent major seventh. This resolution does eventually happen in m. 205 as shown in the chordal reduction in Example 5.3B.

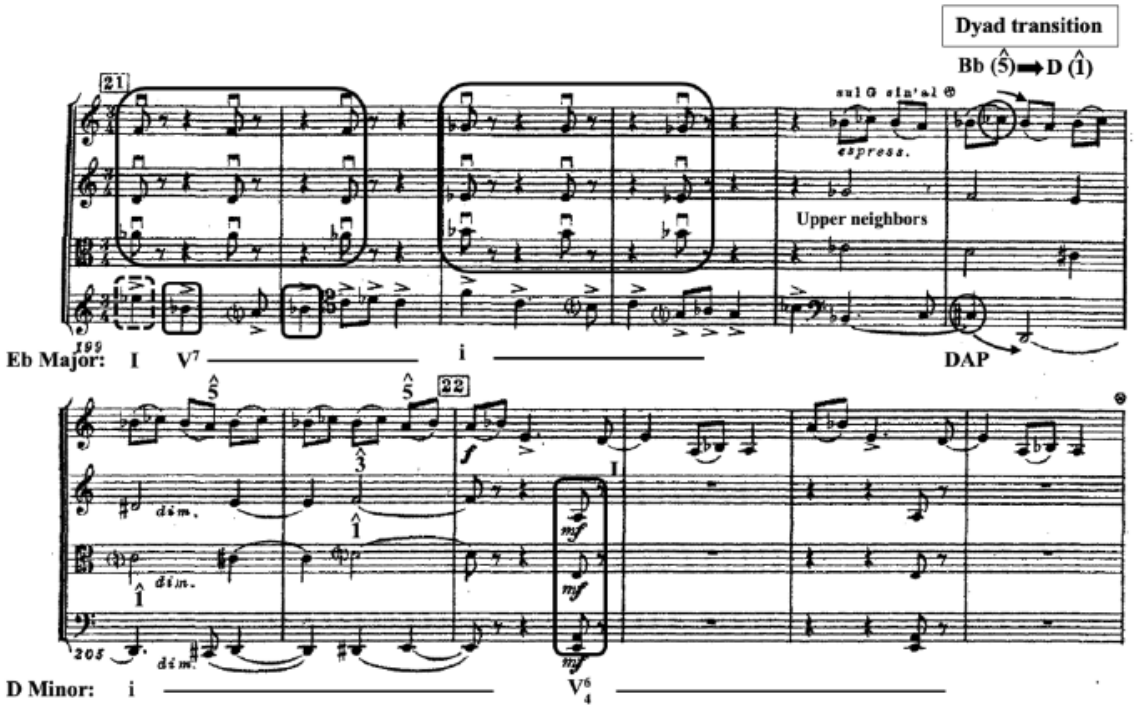
Leading to this DAP, the passage begins in Eb major with a I chord that quickly moves to a V^7 with Bb in the bass on beat two in m. 199. This V^7 is prolonged through m. 200 until a mode shift occurs in m. 201 with an Eb minor harmony. This modal shift is the beginning of the modulatory process that the DAP supports. Shostakovich crafts the DAP by including upper neighbor motion between the second violin and viola. The first violin includes Bb, the dominant pitch of Eb major/minor (labeled as scale-degree 5), moving to Cb, while the bassline's Bb in m. 203 moves to C and then C# to align with the first violin's Cb. The DAP acts as a modulatory device to resolve to a dyad containing the dominant of the first key and the tonic of the second key, Bb and D, respectively. M. 205 continues in D minor with lower-neighbor motion to C#. Like Example 5.2, members of the new tonic triad emerge among chromatic passing tones for

[186] This is not the first time A#/Ab does not resolve properly, but I discuss this in the next chapter.

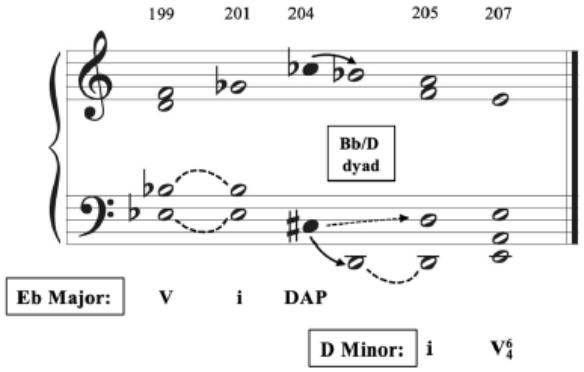
the duration of mm. 205 and 206 (labeled with scale degrees on the score). M. 207 includes a shift to the new dominant, A major, with an E in the bass. The new key reiterates the events that were first stated in the old key with similar tonic-dominant motion.

Example 5.3: String Quartet No. 2, I, mm. 199–210.

(A) Aligned DAP



(B) Chordal reduction

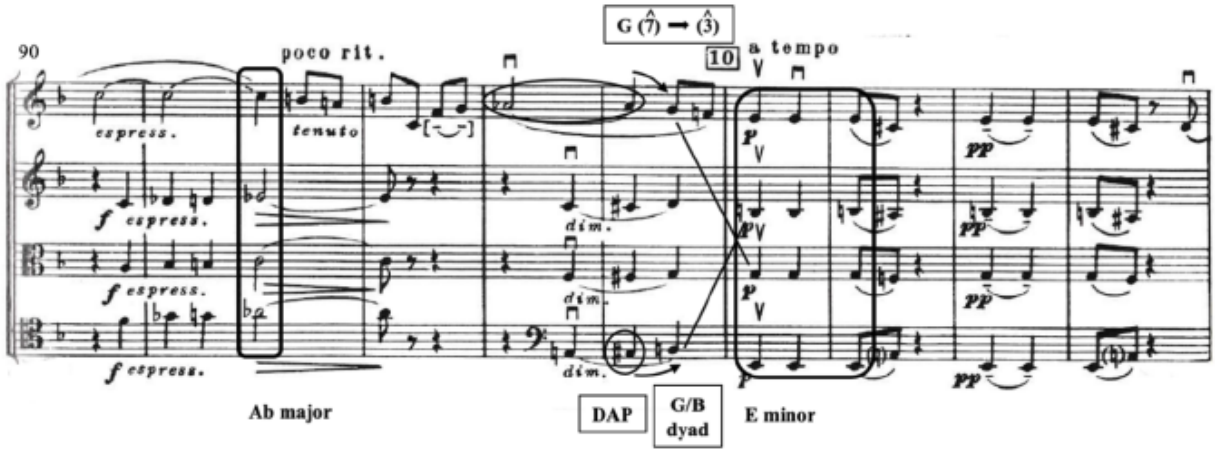


The next two examples come from the first movement of String Quartet No. 3, op. 73 (1946). This movement begins in F major, reflected in the key signature, later moves to Ab

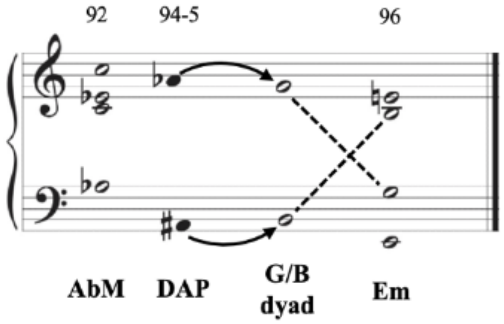
major, and uses a DAP to transition between Ab major and E minor triads (see Example 5.4A). Like the third relationship between F and Ab, E is enharmonically equivalent to Fb; also a sounding third from Ab. This relationship is much like that of the Romantic modulation: i–bvi. While the modulation sounds like this traditional modulation, it is represented by his own style in theory. The cello's A# resolves up to B and Violin I's sustained Ab, carried over from the Ab major triad in m. 93, resolves down to G. While the line continues to F and then finally to E in m. 96, the resolution of this DAP is important to the transition because of its resulting dyad: G/B. This dyad belongs to the E minor triad, the harmonic goal of m. 96, and G specifically shifts roles from scale degree 7 in Ab to scale-degree 3 in E minor. The DAP, then, produces a pivot point between Ab major and E minor triads through its resolution to G/B.

Example 5.4: String Quartet No. 3, I, mm. 90–99.

(A) Aligned DAP



(B) Chordal reduction



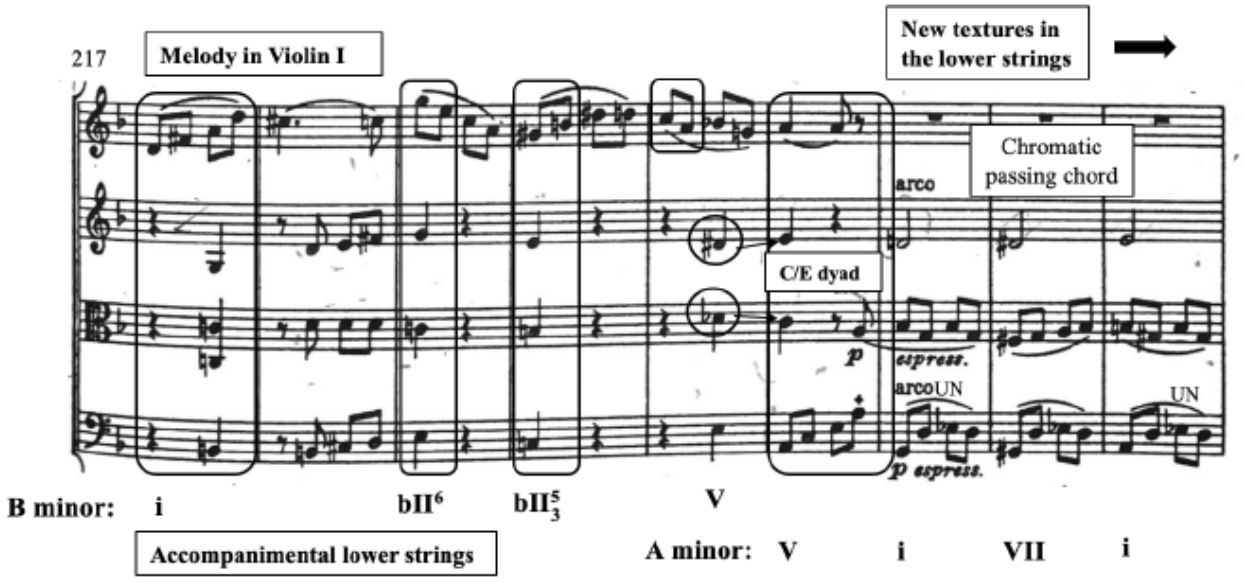
Furthermore, Example 5.4B presents a voice exchange that occurs from the resolved dyad to the full E minor triad in m. 96. This exchange was necessary for Violin I to possess both Ab and E tonics, as Ab resolved to G in m. 95. In order to play E in m. 96, Violin I must switch with the viola, hence creating a similar effect between the cello and second violin. Cello passes the B to Violin II to play E as well. This voice exchange, then, is crucial to allow the outer voices to engage with the DAP, its resolution, and confirm the new tonic, E. Shostakovich's voice-leading strategy is incredible for modulating between two keys; one that might have been G# instead of Ab, but had that orthography been changed, G would not have been the pitch used in the dyad to shift between the two keys.

Later in the first movement, a clearly aligned DAP occurs in m. 221 between Db/D# in the second violin and viola (Example 5.5A). This example not only provides a modulatory DAP, but a texture change as well. Mm. 217–21 include a violin solo over accompanimental strings, which shifts to an active, lower string part without the lead violin in mm. 223–25. The texture change also brings a key change from B minor to A minor. The DAP interjects between both the texture and key changes, overlapping with A minor. Notice the abrupt shift in key (m. 221) from V in B to V in A. The E in the bass occurs simultaneous to the DAP and creates a *sol–do* motion to the new key, as well as the resolution of Db/D# to a C/E dyad.

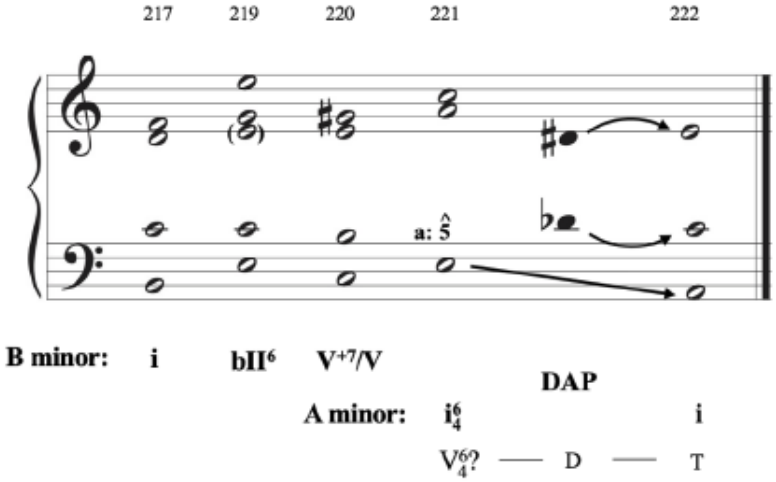
Some of the DAPs we have seen in previous examples align but are offset by half a beat (duration of an eighth note). Here, they articulate on the same beat with the same rhythmic duration (quarter note). Additionally, their resolutions to C/E also align on the same beat with the same duration, which makes this DAP and its resolution more clearly heard in performance. Upon the arrival of the A minor triad, the musical texture also changes. Not only does the DAP aid in producing new harmonies, but it also became a divider between two sections.

Example 5.5: String Quartet No. 3, I, mm. 217–25.

(A) Aligned DAP



(B) Chordal reduction, (mm. 223–25 omitted to highlight DAP resolution in m. 222).



Example 5.5B presents a simplified version of these events. M. 217 begins with a tonic chord in B minor and moves to a bII^6 with E in the bass, which returns two measures later as a pivot note to A minor.[187] An A/C dyad appear prior to the DAP in the upper voices over the E in

[187] I have added parenthesis around an E that is not voiced in that register in the score for the purpose of keeping consecutive thirds among the top voices.

the bass, making it a i^{6}_{4}; however, because it occurs directly before and simultaneous to the DAP (refer to the correct alignment in Example 5.5A), might it function as a cadential $^{6}_{4}$? If so, the DAP would occur between the cadential $^{6}_{4}$ and tonic chord to resemble a dominant function. Could this DAP be a non-traditional use of another traditional method: the cadential $^{6}_{4}$?

5.3 Normal DAP Resolutions—Unaligned DAPs: Method and Analysis

The most common occurrence of normal DAPs in Shostakovich's works are unaligned. Unaligned DAPs appear within the same measure or one to four beats in distance. Additionally, the normal, vertically aligned DAPs presented in the previous section were harmonically aligned. Unaligned DAPs, however, may occur both harmonically and melodically between one or more voices, as long as they are in close proximity to one another, and as long as their tonal context and voice-leading resolution allow us to hear them as true DAPs (rather than just a random pair of notes). The examples in this section present both of the harmonic and melodic types.

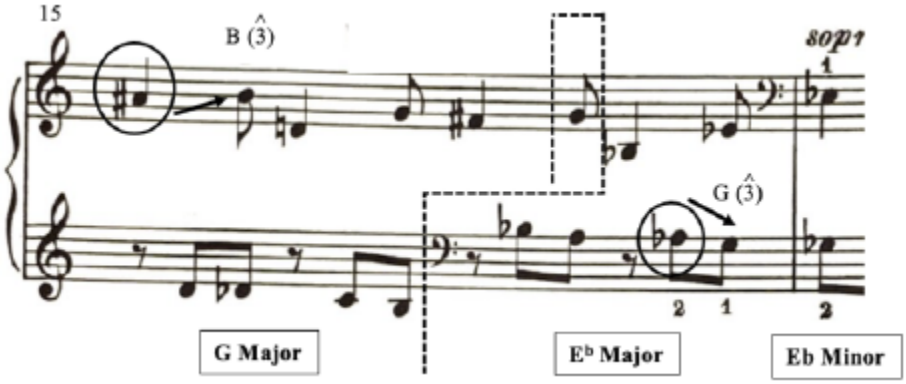
My first example of an unaligned normal resolution comes from Piano Sonata No. 1, where the DAP acts as a modulatory device between G major and Eb major. Shown in Example 5.6A, this DAP includes A# in the first beat of the right hand and Ab in the last beat of the left hand (m. 15). Notice these two differences: 1) the notes appear at the beginning and end of the measure (like bookends), and 2) they happen in opposite hands; the right hand with the sharped note, the left hand with the flatted note. This characteristic will continue to appear throughout this piece. In this excerpt, A# resolves to B (scale-degree 3 in G major) and Ab resolve to G (scale-degree 1 in G major/3 in Eb Major). A dashed line appears to show the separation in both chord and clef changes. A dashed box appears around the third beat G as a pivot point between

chords.[188] Notice that this is not the G resolution from the DAP, rather, it precedes it. Because the left-hand switches to bass clef after beat two and the music involves more flats, this G in the right hand is approached by its leading tone, F#, for the key of G and aligns with the new modal shift in the left hand (soon to follow in the right hand). The unaligned DAP resolves to scale-degree 3 in both the old and new chords, B and G, respectively. It is important, however, that, theoretically, the dyad G/B exists harmonically in one of these chords, G major, and thus this DAP could have potentially resolved to a new chord. The first beat of m. 16 is shown here to provide a musical context for this Ab resolution. From its resolution of G, it continues to descend chromatically to Gb into Eb minor.

Example 5.6B provides the chordal reduction of this measure. Notice the shift between chords corresponds with the change in clefs. One DAP member resolves to the G major triad and the other to the Eb major triad. While many aligned DAPs function as a modulatory device (the dyad becomes the pivot "chord"), this unaligned example conveys the DAP's decorating the two separate chords. No longer is the dyad resolving to one triad, but two.

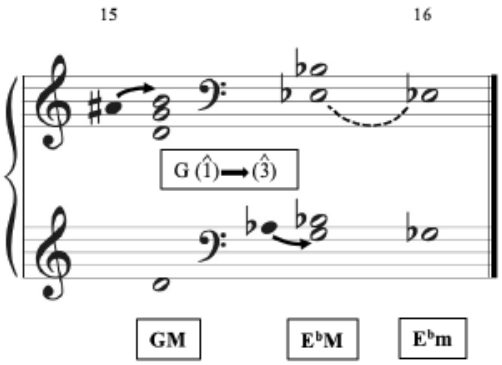
Example 5.6: Piano Sonata No. 1, mm. 15–16.

(A) Unaligned DAP



[188] This edition provides the time signature of 4/4 with parenthesis around 12/8.

(B) Chordal reduction



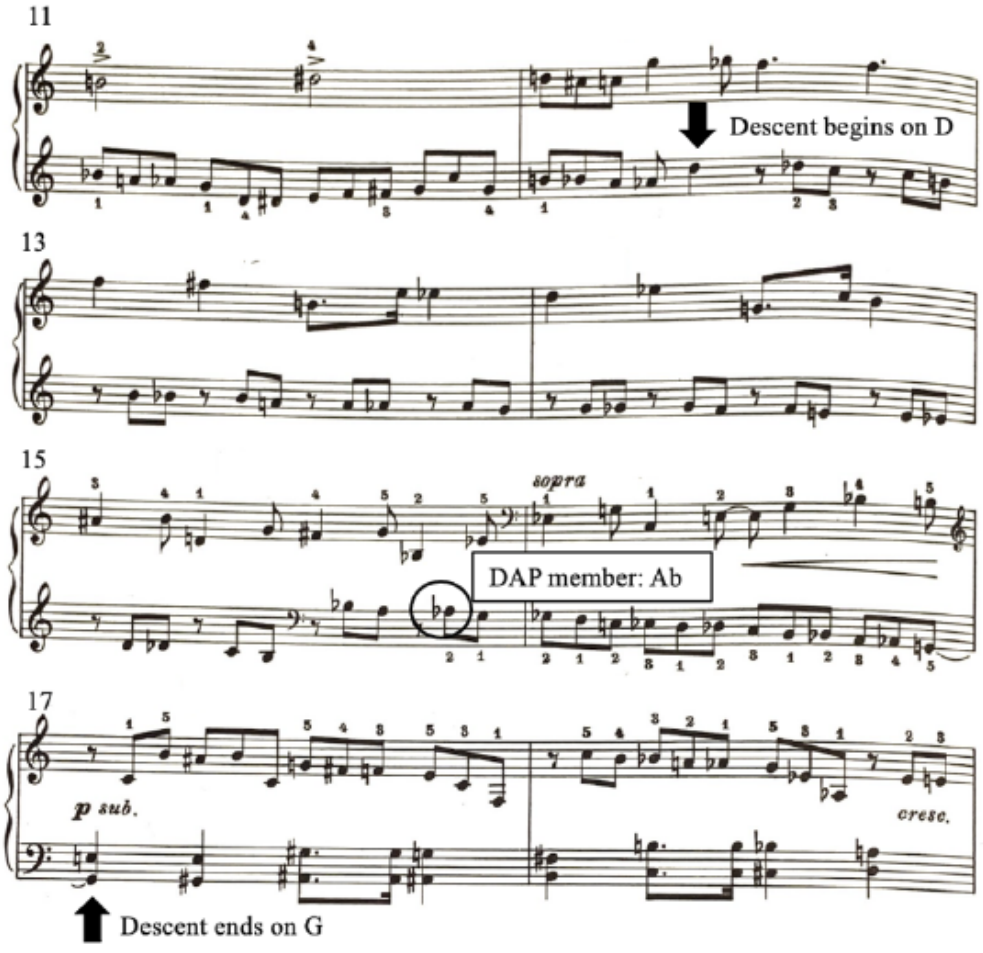
On the surface, the DAP links the two keys, G and Eb Major; however, a larger passage shows a grander chromatic descent (Example 5.7). While the right hand's A# resolution to B immediately leaps down to D, the left hand begins a downward push from D in m. 12 through two octaves and a clef change. The clef change draws the viewer into believing this chromatic descent begins at Bb, while it had begun measures before in m. 12. The eighth rests create a consistent, upbeat rhythm to break up the fluidity of the descent. Therefore, the Ab falls in the middle of the descending bassline. Between the right hand's disjunct melody and the left hand's stepwise descent as well as their consistent meandering between flats and sharps, the voices seem independent of one another, as if more than one mode occurs simultaneously: a theme found often in this work.

Near the end of the piece, m. 257 presents a similar situation as m. 15. Not only is there a clef change during the modal shift, but this measure also uses a sharp in the right hand in the first beat and flatted note in the left hand at the end of the measure (Example 5.8A). Beginning in the key of A Balanced-Major Phrygian, both hands begin in bass clef with a Phrygian voice exchange between tonic and flat scale-degree 2 (A-Bb).[189] Other members of the scale are

[189] Balanced-Major Phrygian includes scale degrees: 1–b2–3–4–5–6–b7–1. See Appendix A for a complete table of Ogolevets's families of modes (Bazayev, 2014).

marked above the stave in beats one and two. Like Example 5.6, a dashed line separates both a clef and mode change. In this example, however, a brief change to treble clef in the left hand includes the boxed, pivot tone members: A, C, and G.[190] The old key and new key are both represented in this box, A and C, respectively. G, however, is again the common tone between the two keys, represented as both scale-degrees 7 and 5. The new key, C Phrygian major, immediately follows the same voice exchange pattern as its predecessor. Both voice exchanges enforce the key, but this instance includes one member of the DAP, Db. The other member, D#, appears in the upper voice's ascending, chromatic passage, tonicizing scale-degree 5 (E).

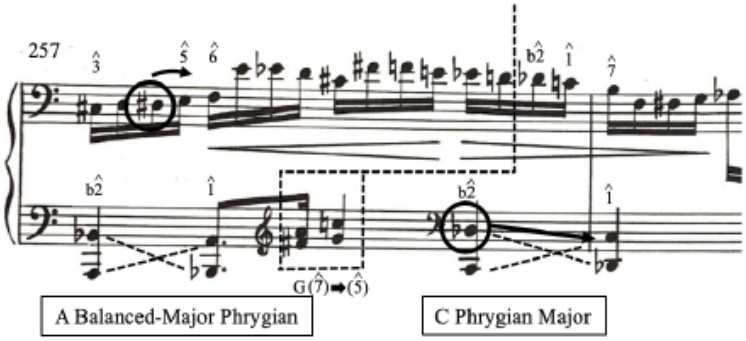
Example 5.7: Bassline Chromatic Descent in Piano Sonata No. 1, mm. 12–17.



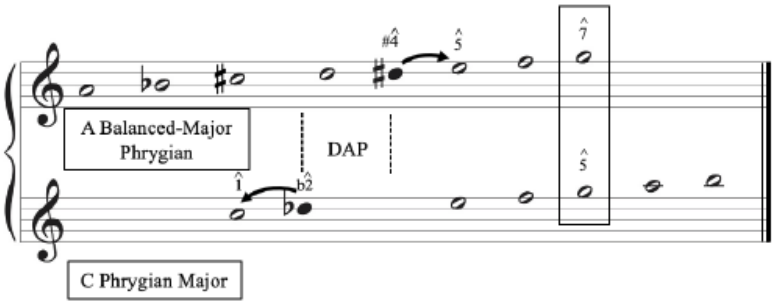
[190] F# is a leading tone to emphasize G at this moment.

Example 5.8: Piano Sonata No. 1, mm. 257–58.

(A) Unaligned DAP



(B) Scalar reduction



Example 5.8B presents both scales, aligned by pitches in common. The DAP is illustrated by vertical dashed lines between staves. Db/D# splits between staves and key areas: D# resolves to E, scale-degree 5 in A, and Db resolves to C, scale-degree 1 in C.[191] The dyad C/E belongs to C major.

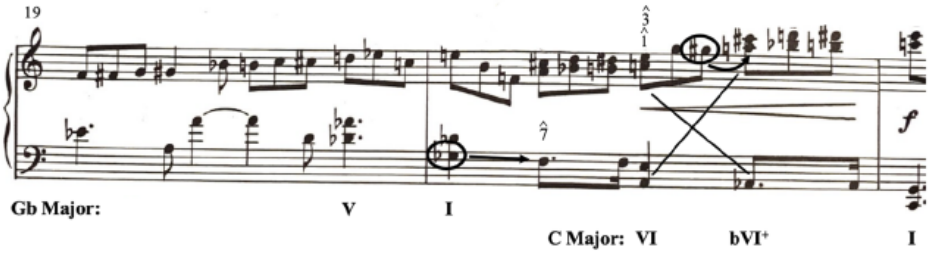
Another instance of an opposing-handed DAP occurs in m. 20 (Example 5.9A). Here, the left hand containing the flatted note (Gb) sounds in beat one, while the right hand containing the sharped note (G#) sounds in beat three. It is not to say the flatted note must occur in the left hand and the sharp in the right hand, but for these three related and normal resolutions, this is true. In this example, however, the flatted member of the DAP happens first; this is different from the previous examples.

[191] In the music, the Db resolves to C normally, this is not to be confused with a future discussion of "abnormal pre-resolution." For purposes of linear scale analysis, it must be notated with a backwards pointing arrow.

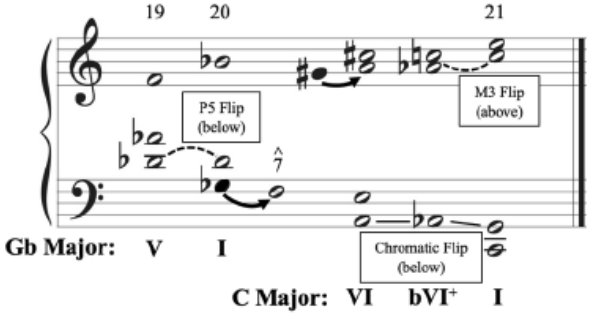
Though this work is highly chromatic, a key area in this passage is distinguishable based on the ending of m. 19, which contains a V–I in Gb major. The Gb, one of the DAP members as well as the tonic pitch, resolves to F, the leading tone of Gb major. It seems odd that a DAP would resolve to a tendency tone, but F is a common tone among both Gb major and the new key that follows, C major. The Gb major triad, though, becomes a transition to the new key of C major, as the Gb DAP member, shown as a darkened notehead, resolves down to F. F is now the transitory harmony with its dyad partner, A, which is prolonged until A becomes the root of the VI chord. F, then, acts as a link between Gb and C major. The new key, which begins with a VI on beat three of m. 20, includes the second member of the DAP, G#. The G# resolves to A, which forms a dyad with C#. The solid line starting at the A/E dyad in the bass connects with the A/C# dyad, and the solid line from the Ab in the bass connects to the C/E dyad in the right hand. The crossing of dyads, when rewritten, creates A and Ab major triads. Example 5.9B shows the alignment of these triads.

Example 5.9: Piano Sonata No. 1, mm. 19–21.

(A) Unaligned DAP



(B) Chordal reduction



The reduction shows not only the DAP and its resolutions, but other supporting characteristics for the key change. Open fifths occur in the left hand in mm. 19–20 between Db/Ab and Gb/Db, with Db as the prolonged tone. The Db becomes the "mirror," an axis of intervallic inversion which reflects the perfect fifth above (Ab) to the perfect fifth below it (Gb; tonic and DAP member). This happens again between Ab/C and C/E in mm. 20–21. C is the point of intervallic inversion in which the major third reflects below and then above. These flips are important for describing Shostakovich's approach to modulation in this passage. The first flip goes directly to the DAP, which steps to F. The second flip occurs simultaneously with a "chromatic flip" in which the perfect fifth dyad A-E in m. 20 descends to Ab (in one voice only), then to G, where the perfect fifth appears below (C). This unaligned DAP was involved in a complex modulation, but the approach to articulate the DAP member Gb was different from other examples. While the DAP typically occurs out of passing or neighbor motion, this was approached by a technique using open fifths.[192]

I have just discussed three instances of DAP in which the pitch members occur at the beginning and end of one measure in opposing hands. In these examples, the sharp appeared in the right hand and the flat in the left. Unaligned DAPs in other genres, such as string quartets, involve two different instruments approaching and resolving from the DAP.

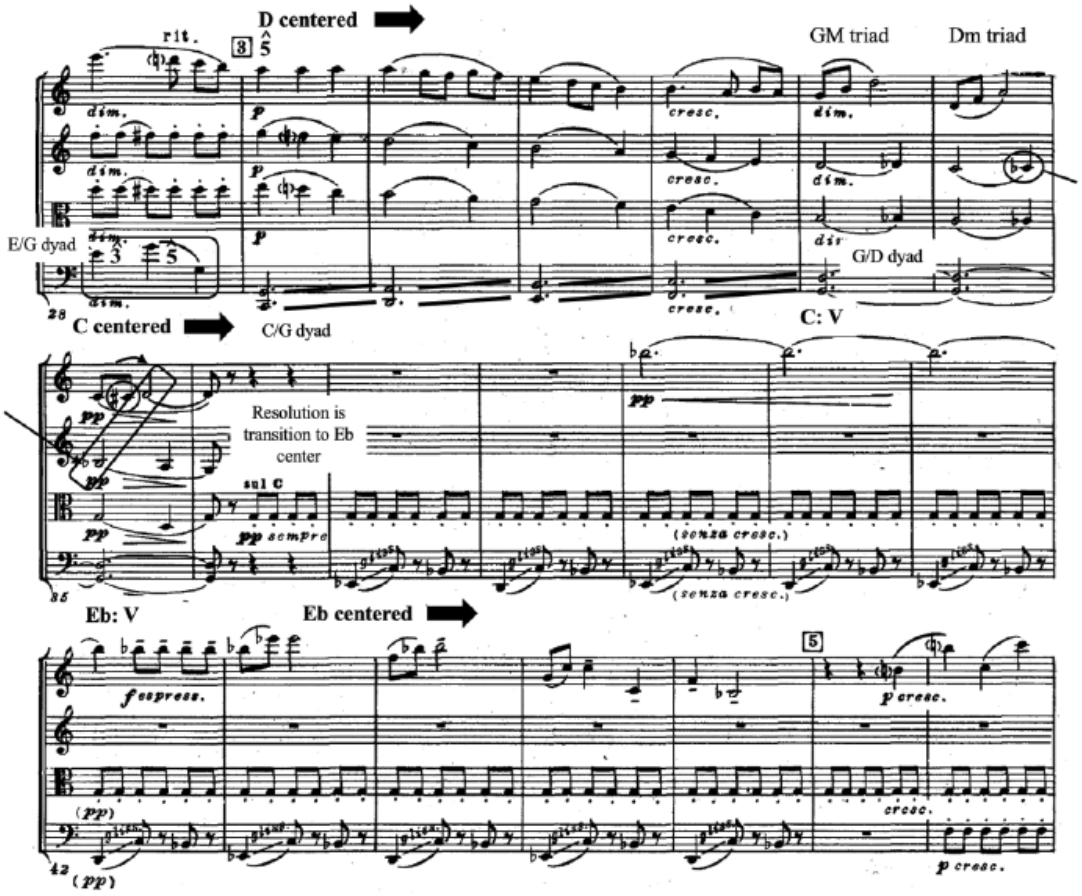
The entire first movement of String Quartet No. 1 is written with a C major key signature; however, this is not to say that Shostakovich does not change mode at certain points. Example 5.10A presents the DAP, Cb/C#, which spans two measures in both violins (mm. 34–35). Though this DAP is not aligned in the same measure, the Cb in Violin II appears as a half note in beat three of m. 34 with the Violin I's C# closely following in m. 35, aligning with the

[192] For a discussion on parallel motion in Shostakovich's First String Quartet, see McCreless, 2021.

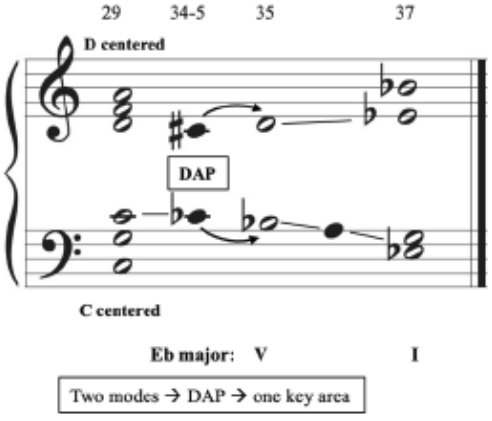
Cb's resolution, Bb. Prior to the DAP, the cello hovers around a C center beginning with m. 28's E-G-G quarter notes. Immediately, the cello leaps down to a C/G dyad and continues upward in parallel motion to G and D, which is held through the DAP in m. 35.

Example 5.10: String Quartet No. 1, I, mm. 28–48.

(A) Unaligned DAP



(B) Chordal reduction



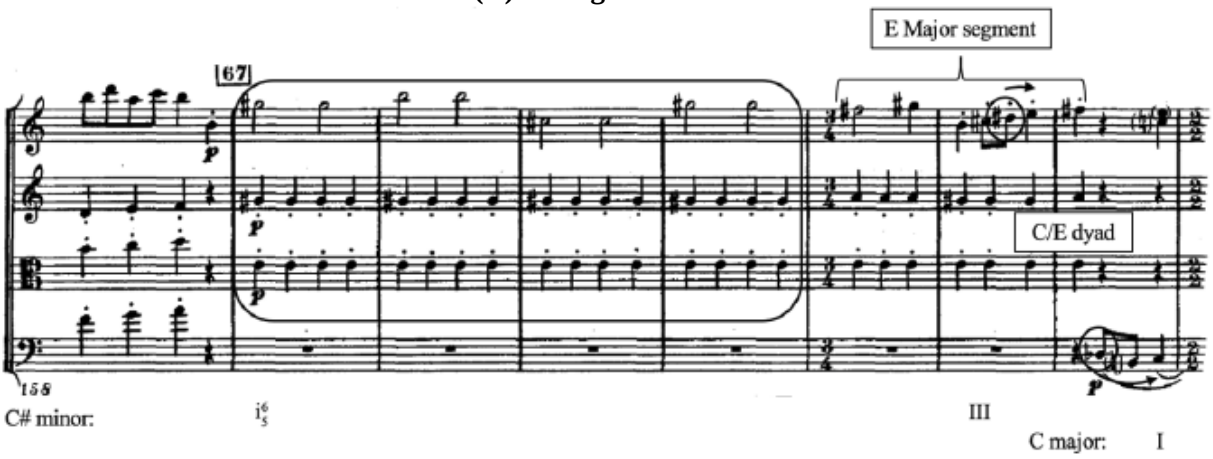
The upper strings hover around A, however; I believe the center to be D because, like the cello where G had been prominent as scale degree five to C, A is the fifth of D. M. 33 arpeggiates a G major triad, ending with D and m. 34 arpeggiates a D minor triad, ending with A. It seems there is a connection between root and fifth highlighted from the C major, G major, and D-minor triads. The roots are all related by fifths and reiterated by the bass line's open fifths. Additionally, the other DAP member, C#, resolves to D in that same Violin I line. D is also important because it is the third of the Bb/D dyad, which is a link to the next mode, Eb. Again, fifths are important as the Bb/D dyad represents a "V" chord to Eb (shown in Example 5.10B). This dyad holds two functions: the third and fifth of the G minor triad (C: v) and the root and third of a Bb major triad (E^b: V). Because of the dual modality, each DAP member belongs to its respective modes. In the graph, C# belongs to D minor and Cb links C to Bb. Bb continues to descend through A to G, the third of the Eb major triad. To summarize, the upper strings' D-centered material coincides with the lower strings' C-centered material at the DAP interval, Cb/C#. The DAP, then, narrows the ambiguity of the two centers down in m. 29 to a single new key area, Eb major.

Though the DAP just discussed involves Cb/C#, there is a constant pitch-center battle between C and C# throughout the entire First String Quartet. While the first movement begins in C with an empty key signature, the music transitions to A minor in movement two, which brings an influx of C#-centered harmonies. The third movement's key signature of four sharps begins the quest for a C# center through its G# pedal tone in the viola. This movement ends with a B#–C# eighth-note figure in the cello. The last movement begins in C major but continues to yearn for C#. It's not until the appearance of one final DAP to confirm that C will be the final center in the entire work. Example 5.11A presents this moment. Before the DAP occurs, the C#-minor

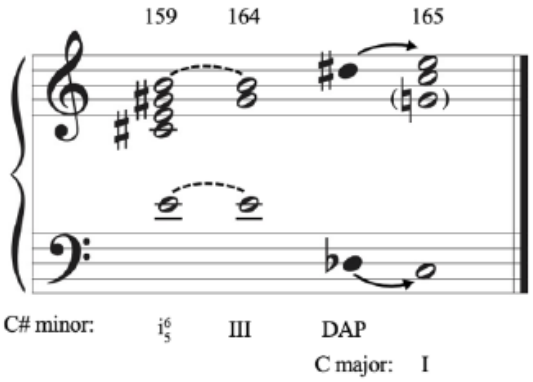
triad is stated several times (mm. 159–62).

Example 5.11: String Quartet No. 1, IV, mm. 158–65.

(A) Unaligned DAP



(B) Chordal reduction



Because of the battle between C# and C throughout this work, m. 159 is labeled as a first inversion, while also containing two B-naturals in the first violin (m. 160). B-natural, the seventh of the C#-minor chord, highlights the anticipation of the upcoming E-major harmony in m. 164.[193] E major is also emphasized by a scalar segment played in the first violin in mm. 163-64. The C# minor harmony, then, is weakened by this anticipation of B as well as the E pedal tone in the viola. Example 5.11B provides a chordal reduction of this event.

[193] A "i^6_5" is not a typical harmony, but Shostakovich uses it to include an extra common tone (B) between C# minor and E major.

Following these harmonies, m. 164 presents the first member of the DAP (D#), which resolves directly to E on its way to F#. The second member of the DAP (Db) resolves to C in m. 165, both in the cello and the first violin. The DAP occurs from passing motion in the upper voice (D#), but the second member appears as if from nowhere. The eighth-note figure Db, leaps to B, which steps up to C for greater emphasis. M. 165, then, ends on octave C's implying a C major triad.[194] The E from m. 164 prolongs into the resolution of C in the following measure.[195] This is the final use of the DAP in the entire string quartet and the first time it resolves indirectly to a C/E, a major third that supports the case for the C-centered ending.

The second movement of String Quartet No. 2 begins with a violin recitative and soft accompanimental block chords, which play a complete F7 with Eb in the bass. This harmony suggests a V_2^4 in Bb major, in which Shostakovich continues to explore fifth motion in the bass (Eb and F both have fifths relationships with Bb).[196] Eventually, in mm. 8–10 (Example 5.12), the cello containing Eb steps up to F and then leaps to a Bb/D dyad. At this moment, the key is finally confirmed for Bb Major. M. 15 begins with pedal Bb's in the bass while middle strings articulate beat two against the bass in waltz style. These block chords confirm the key area with more Bb/D dyads. The end of the example shows motion to the parallel minor with the appearance of Db, Gb, and Ab.

The first DAP of this movement occurs between Gb/G# in mm. 36–37, shown in Example 5.13A. The bassline descends slowly from Db to D-natural, the octave below. During this descent, Db steps down to D-natural, then Bb to highlight Bb major once more. In m. 36, a

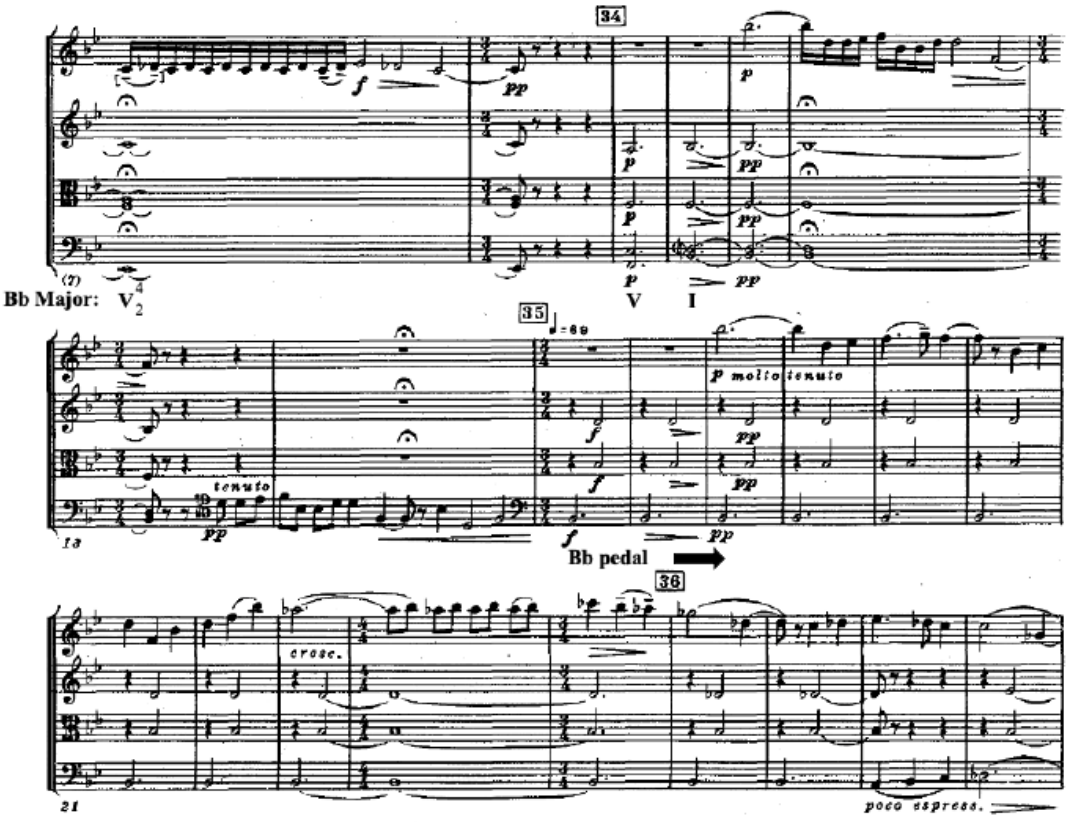
[194] The E in parentheses in the score is implied in m. 165 as prolonging from the E in m. 164. The G appears in parentheses in the reduction to complete the C major triad.

[195] See Rothstein (1991), 289–93 for more about prolongation of implied tones.

[196] This interest in fifths also occurred in Piano Sonata No. 1 (Example 5.9).

D-natural pedal sets the foundation for the DAP, which resolves to an F/A dyad, revealing the new key of D minor.

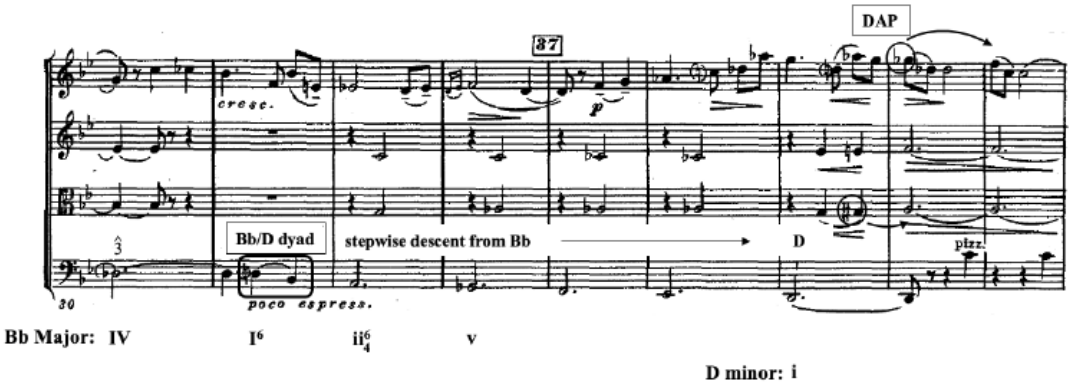
Example 5.12: String Quartet No. 2, II, mm. 7–29.



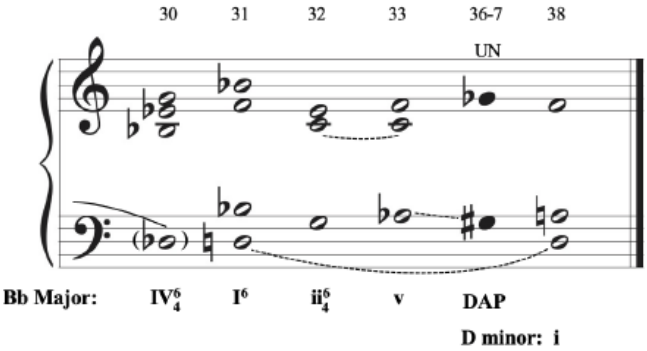
Example 5.13B provides a score reduction. Notice the Db carried over from the previous two measures is not included in the Eb major harmony (IV). It steps up to D-natural and holds as a pedal tone through the key change. The DAP members serve two functions in this passage: 1) Gb as a delayed upper neighbor to F, and 2) G# as an enharmonic tone to Ab. The enharmonic tone has not been used as a modulatory device in DAP situations yet; however, here it allows for smooth voice leading to step up to A. Unlike the Db moving up to D in mm. 30–31, the Ab transforms into G# to correctly lead upwards. Therefore, Shostakovich takes a conventional method of enharmonic modulation from one key to its relative in an unconventional way, through a pedal tone, upper neighbor, and semitonal resolution.

Example 5.13: String Quartet No. 2, II, mm. 30–38.

(A) Unaligned DAP



(B) Chordal resolution

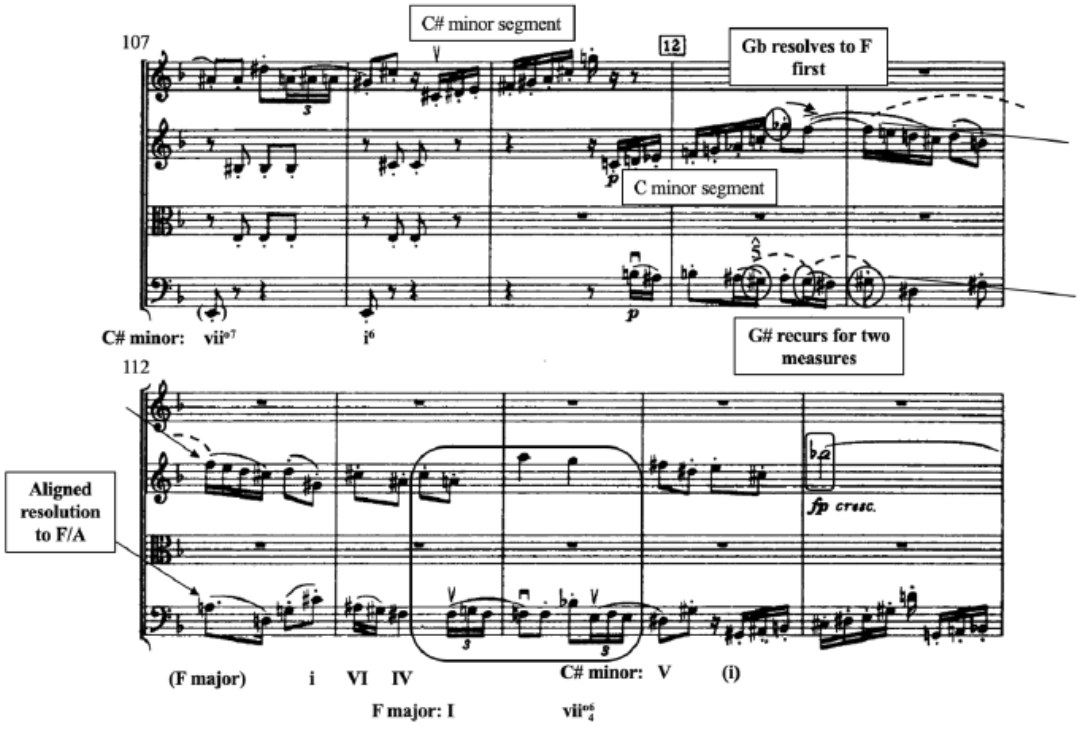


In String Quartet No. 3, I, a DAP between Gb/G# occurs at m. 110 (Example 5.14A). This passage, though in C# minor, offers an unexpected resolution two measures later to F/A, the root and third of F major (the original key of the first movement). Prior to the Gb in m. 110, a C# minor and a C minor scalar-segments ascend in the first and second violins. This second ascent ends with a leap to Gb. This Gb resolves quickly to F, while the cello's G# becomes entangled within a repeated lower neighbor pattern, before finally resolving to A in m. 112. The implied duration of the embellished G# and F are both shown with dashed slurs.[197] Though Gb resolves to F in m. 110, the score also shows parallel lines in m. 111 that point to the aligned F/A dyad in m. 112.

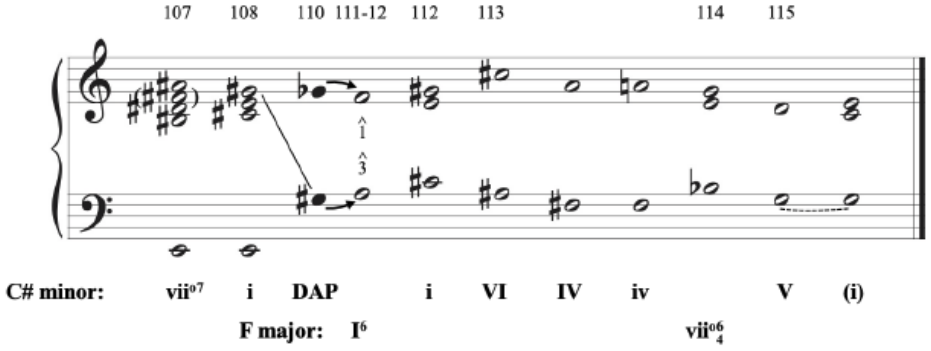
[197] This example's DAP members seem aligned, but they do not line up exactly on the same beat.

Example 5.14: String Quartet No. 3, I, mm. 107–16.

(A) Unaligned DAP



(B) Chordal reduction



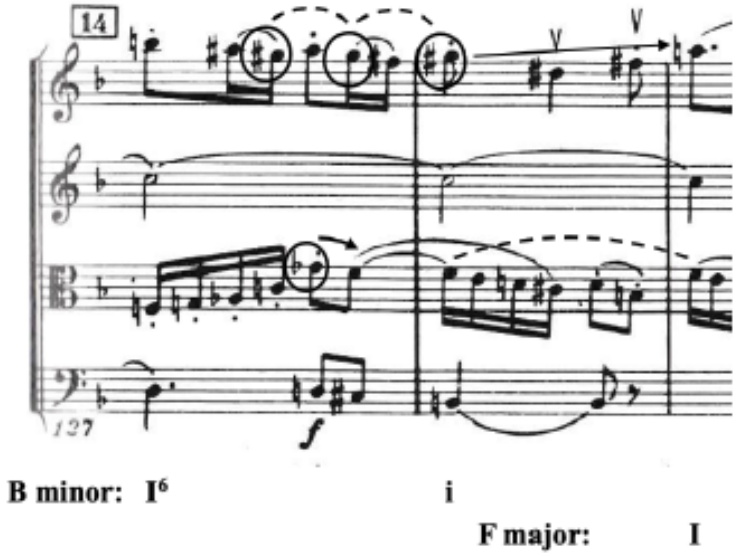
While sharps saturate this passage, patches of F major harmonies emerge in boxes of mm. 113–16. A simplified graph shows the layering of C# minor and F major harmonies (Example 5.14B). The excerpt exhumes many C# minor roman numerals, but the DAP resolves to an F/A dyad, the original key of the movement. This Shostakovian technique of layering other keys or chromaticism over one underlying key applies to this excerpt: F major is the underlying key during this modal episode. Previous examples have confirmed the DAPs functionality of a

transitory method, but in this example, I show how the DAP can emphasize the original key.

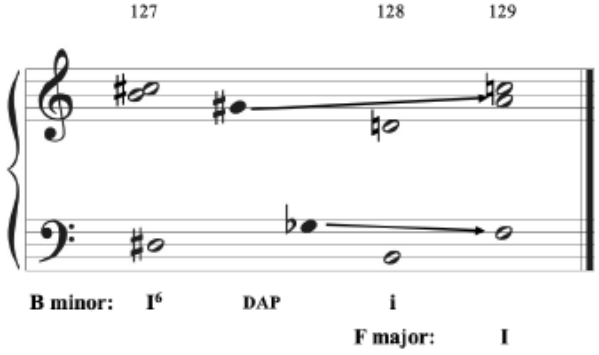
Shostakovich repeats the same DAP at m. 127 but reorganizes the voicing and changes the key from B minor to F major. Example 5.15A presents this revoicing. The neighbor motion that decorates a sustained G# has moved to the first violin, and the viola has the quickly resolved Gb. This pair resolves to an F/A dyad, which again confirms the key of F. Example 5.15B presents the unaligned DAPs and their resolutions following a B minor harmony. Between Example 5.14 and its repetition in Example 5.15, it is more evident now that Shostakovich highlights keys through both the passing and neighbor motion of the DAP.

Example 5.15: String Quartet No. 3, I, mm. 127–29.

(A) Revoiced unaligned DAP



(B) Chordal reduction

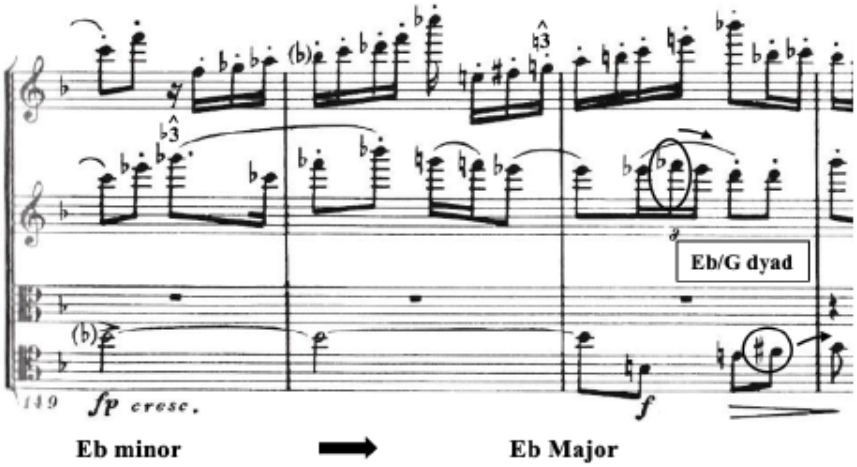


Another great example of use of both neighbor and passing motion that embellish DAPs comes in this same movement in m. 151 (Example 5.16A). The cello sustains a Bb while the upper strings arpeggiate or ascend to members of an Eb major triad. The DAP between Fb/F# further accentuates this harmony with its resolution to Eb/G in m. 151.

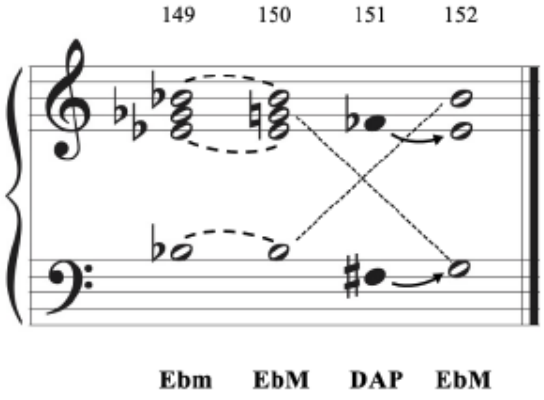
Example 5.16B shows a voice exchange that occurs around the DAP and that prolongs the tonic chord of Eb major. The first violin's G in m. 150 becomes the resolution of F# in the cello (m. 152). The pedal Bb in the cello also exchanges with the first violin during the Eb/G dyad resolution, to sound the entire triad. The DAP, in this instance, serves to accentuate the present key of Eb major rather than transition away from it.

Example 5.16: String Quartet No. 3, I, mm. 149–52.

(A) Unaligned DAP



(B) Chordal reduction



This chapter explored the voice-leading archetype of normal DAP resolutions, including aligned and unaligned DAPs. Though normal resolutions are common throughout this period of Shostakovich's music, his use of chromaticism and modal fragments with attention to specific orthography might result in resolutions that do not fit within the normal voice-leading archetype. This classification of resolutions and their types is described in the following chapter.

CHAPTER 6

ABNORMAL DAP RESOLUTIONS: METHOD AND ANALYSIS

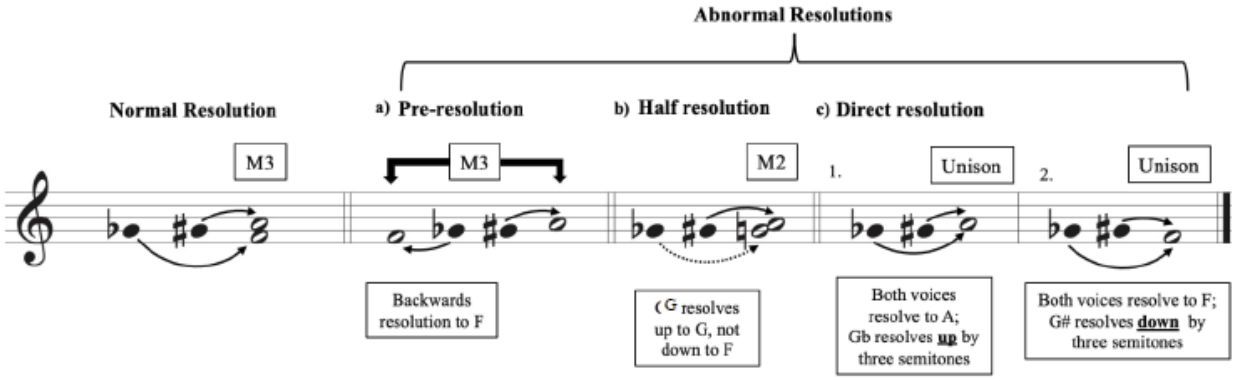
6.1 Introduction

Normal DAPs resolve outward to a major third; however, there are instances where the DAP is present but does not resolve in this manner, while implying a normal resolution according to the principles established in previous chapters. I call these "abnormal DAP resolutions." They meet the qualifications of a DAP based on proximity (aligned or unaligned) and possess the same letter name as well as include accidentals two semitones apart. They are abnormal because of their incomplete or seemingly missing resolutions on the musical surface; thus only implying the voice-leading archetype, rather than articulating it explicitly. The purpose of highlighting abnormalities in addition to normal resolutions is to show more ways in which the DAP functions as a modulatory device. While normal resolutions resolve into the present or new tonic key, the abnormal resolution might add more ambiguity or deception to the dyad for which it resolves.[198] I divide these abnormal resolutions into three groups, which I propose to call as follows: pre-resolution, half-resolution, and direct. Example 6.1 presents the normal and abnormal resolution types using a Gb/G# DAP.

Pre-resolution (Example 6.1a) refers to one pitch member in a DAP that comes *from* its resolutions. For example, F moves to Gb in the music, but Gb does not resolve back to F, instead the line continues in a different direction, or to a pitch other than F. The other member, G#, resolves normally to A.

[198] The ambiguity or dual modality of the abnormal resolution depends on each individual passage of music. A pre-resolution may resolve in an expected way (like that of the normal resolution), but in a different passage, a half resolution may resolve to a new key that was unexpected. The following sections provide different situations for each type.

Example 6.1: Normal and Abnormal Resolutions: Three Types of Abnormal DAP Resolutions.



A half resolution (Example 6.1b) is an abnormal resolution in which one member resolves properly while the other does not. Typically, in a half resolution one member moves by semitone in the "wrong" direction to form a major second. Orthography is very important to this type as it will sound correctly but look wrong in terms of voice-leading principles. For example, the DAP member Gb resolves to up G-natural instead of down to F-natural. Unlike normal resolutions, half resolutions move in parallel motion rather than contrary motion. Had the Gb resolved down to F, it would create a major third with A (G#'s resolution). If the Gb was notated as an F#, the resolution to G would be correct; however, F# and G# would not form a DAP. Instead, the half resolution of G#/Gb creates a major second, G/A. The major second does not represent any one key or harmony like a major third does. Instead, it helps delay resolution to the original or new key (delayed modulation) or it adds ambiguity as the dominant force. It creates further tension between a pair of modes before a resolve is met.

Direct resolutions occur when a DAP resolves to one, unison pitch, completely ignoring traditional voice-leading procedures. The two voices in this type of resolution move in direct motion; one voice must leap by three semitones to reach the unison. This is unnatural in traditional tonal as well as Yavorsky-style contexts, as normal resolutions move by one semitone. For example, the DAP Gb/G# both resolve to A. G# resolves up by semitone, but the

Gb leaps by three semitones to A (Example 6.1c1). Another option would include moving in the other direction to F, where Gb resolves properly, but G# resolves down by three semitones to F (Example 6.1c2).

Along with their resolutions to different intervals, the voice leading in abnormal resolutions also differs from normal resolutions. Table 6.1 provides a guide to the voice leading of all DAP resolutions. Whereas the normal and pre-resolutions yield expected resolutions on the musical surface, the half and direct resolutions do not. For the remainder of the chapter, I provide more insight and examples for each type.

Table 6.1: DAP Resolution Types and their Voice-Leading Motion.

DAP Resolution Type	Voice-leading Motion
Normal (aligned or unaligned) resolution	Contrary
Pre-resolution	Contrary
Half resolution	Parallel
Direct resolution	Direct (similar)

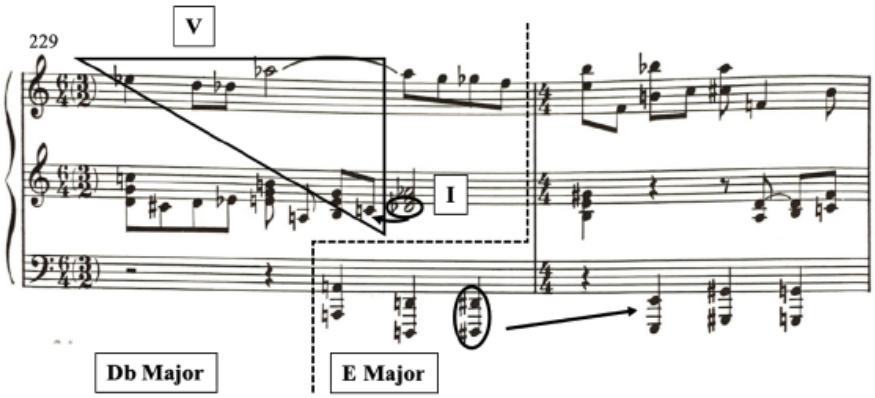
6.2 Type #1: Pre-Resolution

Pre-resolutions may occur with an aligned or unaligned DAP. They keep the same resolution structure as a normal DAP (contrary motion/semitonal motion), but one member's resolution precedes the DAP occurrence. There are a few cases in which both DAP members follow their resolutions.

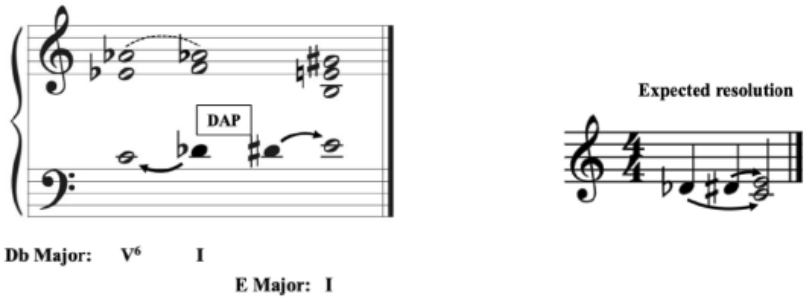
The first example of a pre-resolution is shown in Piano Sonata No. 1, m. 229 (Example 6.2A). A dashed line separates two tonal areas: Db and E major; the DAP occurring in the midst of this shift. Additionally, the lines separate the two upper staves material in Db from the bottom (extra) stave's key of E major. We have thus seen Shostakovich use a time signature or clef change approach when shifting modes, but in this instance, he utilized a third stave.

Example 6.2: Piano Sonata No. 1, mm. 229–30.

(A) Pre-resolution



(B) Chordal reduction



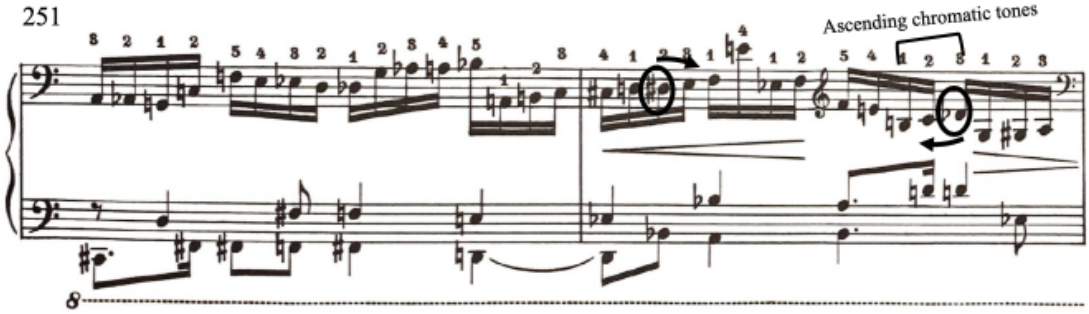
In beat six of m. 229, the bottom stave contains D# octaves resolving to E octaves through a rest on beat one of m. 230. The middle stave, however, contains the DAP's Db member (beat five) which does not move to a resolution, rather the C (which would resolve it) precedes it. One might also call this a direct resolution to the same pitch (E) in a different voicing: the lowest note of the block chord resolving to the middle note of the next block chord (shown with a dashed arrow). In this instance, however, the rhythm highlights a pre-resolution as the C is an eighth-note leading to a half-note Db. It is common to have a short duration note lead to its resolution on a longer duration, so as a pre-resolution, the same guideline takes precedence. Also, the Db becomes destabilized by the impending modulation to E, where neither Db or its enharmonic C# are the tonic. A DAP member such as Db would not be the new tonic pitch in any situation as it is tendency-based. This DAP resolution is especially intriguing because the

DAP member belongs to a tonic chord, resolving to a V chord. While on the surface this is true, Example 6.2B shows a reduction of this event.

While the score presented three staves, this example reduces it to two. Notice the Db tonic pitch has a filled-in notehead to show its pre-resolution to C. The C/E dyad, while it does not fit into either Db or E major at this moment, is a reminder of the overall work's tonal implication, written without a key signature, highly chromatic, and eventually concluding with an A/C dyad. C/E, then, is the third and fifth triad members of A minor. The Db, which is tonic for that moment, is structurally less important than C.

Example 6.3 provides a different situation with the same tones in m. 252 with a highly chromatic, melodic, but not completely conjunct passage. In this example, the DAP occurs within brief chromatic passing motion, D# resolving to E first and Db coming from C. This pre-resolution stems from the B-natural prior, which again, forms a trio of ascending, chromatic tones as shown previously in basslines.

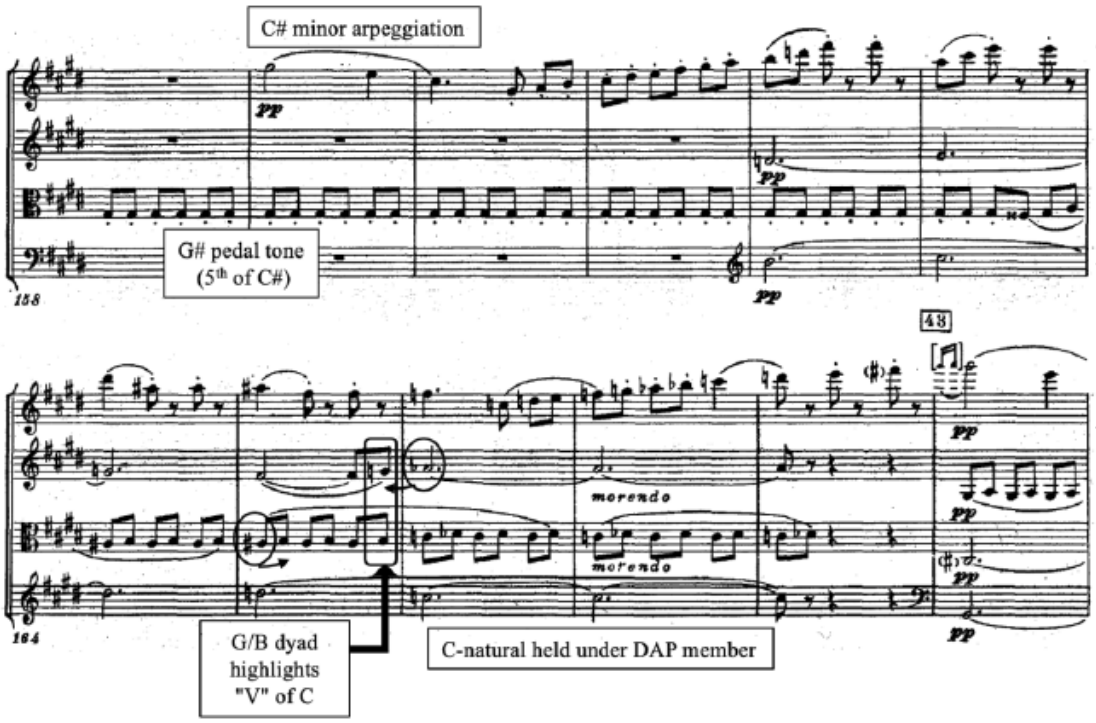
Example 6.3: Pre-resolution in one line from Piano Sonata No. 1, mm. 251–52.



In the bassline below the ascending, chromatic passage with D#, its enharmonic pitch Eb descends from E-natural. While traditional part writing principles are obviously present in Shostakovich's music (though as guidelines rather than strict rules), particularly his piano fugues, the Eb (which theoretically tends down to D) leaps up to a Bb, a note that is present

throughout these two measures. Not once does A# occur, even though he uses A and Ab. This provides evidence for some type of modal reference expressed via the specific orthography. Each accidental in these passages is used for a reason and they tend to be reused no matter the voice leading guidelines. The procedure of ascending with sharps and descending with flats mostly holds true here, but there is also a slight pushback on these "rules" depending on the note, in this case, Eb. Therefore, the orthography used is also an indication of independent lines between right and left hands.

Example 6.4: Pre-resolution in String Quartet No. 1, III, mm. 158–69.



The DAP, either normal or abnormal, befalls transitory passages by acting as a bridge between two modes or keys, that is, as a modulatory device. Shostakovich continued to use these methods throughout the third and fourth movements of String Quartet No. 1. Example 6.4 shows the DAP A#/Ab in a musical context. While this movement has a key signature of four sharps, the "battle" between C# and C-natural continues: A reminder of the first movement's C center

blended with the third.[199]

Prior to the pre-resolution DAP in mm. 165–66, the excerpt begins with a G# pedal tone in m. 158 followed by Violin I's descending C# minor arpeggiation in mm. 159–60. The arpeggiation along with the G# pedal reinforces a C# center, serving a dual purpose as the second inversion of the C# minor arpeggiation or a dominant pedal.[200] The viola's pedal tone breaks into an ascending chromatic figure in m. 163 and oscillates between A# and B (m. 164), the first member of the DAP. The oscillation moves up to C and Db in m. 165 after the DAP to highlight the importance of C-natural. The cello and Violin II begin a slow, stepwise ascent in m. 162, in which Violin II ends on Ab, the second member of the DAP. This Ab is approached by its resolution, which makes this DAP a pre-resolution type. The resolved dyad, G/B reinforces the case for a C center as a "V" chord leading into a long C in the cello. The Ab is held for the same duration above, but when viewed as a pre-resolution DAP, this pitch classifies as a tendency tone. The pre-resolution creates a dominant border around the transitory V in C (A# in m. 165, Ab in m. 166). The DAP is one more stylistic approach and voice-leading archetype in which Shostakovich uses traditional structural principles in non-traditional harmonic contexts.[201]

In mm. 144–45 of String Quartet No. 2, a pre-resolution occurs between Gb/G# (Example 6.5A). In this example, the DAP resolves to an F/A dyad, part of a D minor triad (third and fifth).

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[199] For a reminder of this C/C# "battle," refer to Chapter 5's section on "Normal DAPs: Unaligned," String Quartet No. 1, IV.

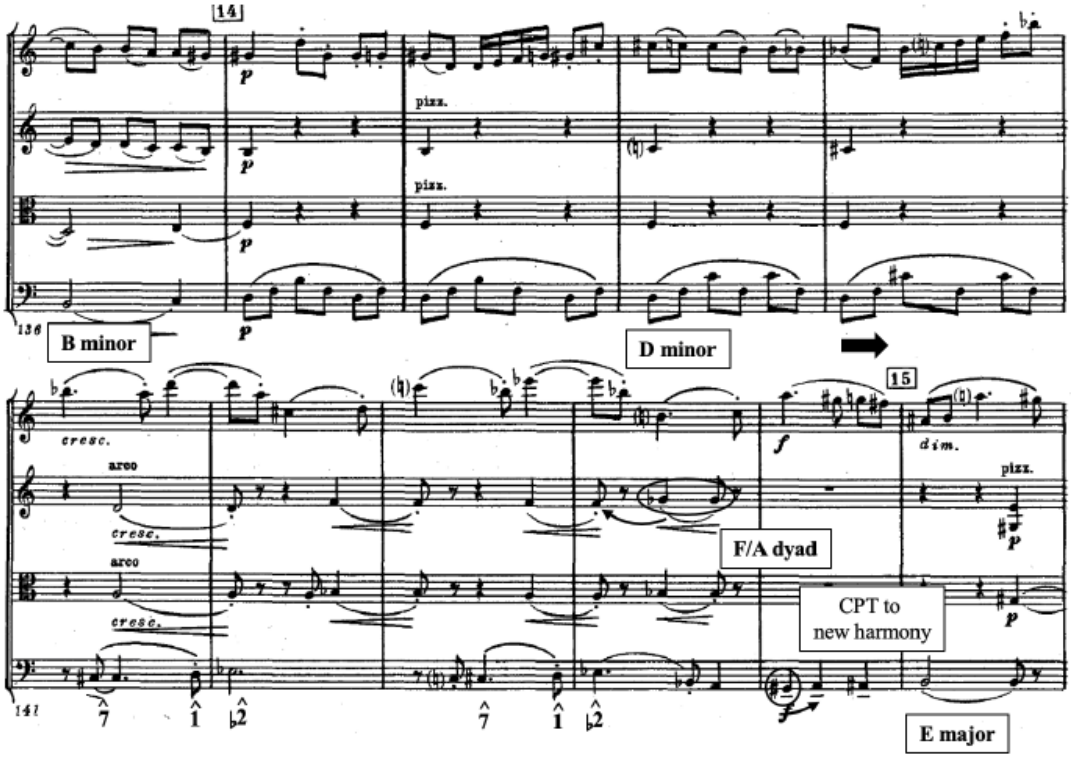
[200] G# is two-fold as either the fifth of C# and a strong dominant pedal, in which Daniel Harrison states, "if chord roots are immune to weakening by inversion while functional bases are note, then there should be cases in which the root is aurally separated from the base [. . .] Those who label [a cadential $\frac{6}{4}$] ([. . .] as entirely Dominant) in truth hear scale degree 5 not as the root of the first chord [. . .] but as the base of a Dominant-functioned entity." See Daniel Harrison, 1994, *Harmonic Function in Chromatic Music: A Renewed Dualist Theory and an Account of its Precedents*, University of Chicago Press, 47.

[201] According to the DAP voice-leading archetype and traditional voice leading, one anticipates Ab resolving to G, though it appears before the Ab. Therefore, G is implied. According to William Rothstein (1991), implied tones are "tones that [. . .] are present in some sense because their existence is indicated by surrounding events." For more about implied tones, see Rothstein (1991), 289–93.

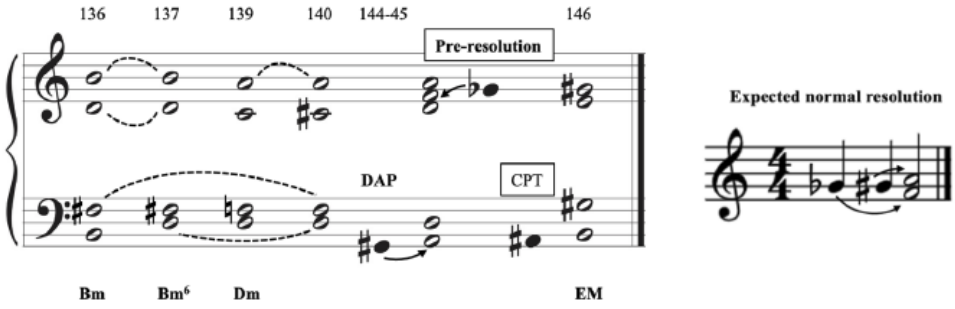
B minor harmonies begin the passage and gradually center around D, beginning with the bass arpeggiations in m. 137; Bb is part of an ascending line Bb–C–C# over the chordal root D. Bb in the first violin (mm. 139-41) also supports a mode in D. The cello iterates scale-degrees 7, 1, and b2 in mm. 141–44, the semitones above and below tonic D. The DAP interjects between occurrences of the D-centered harmony (F/A) as neighbor tones. The Gb, though, is an incomplete neighbor, as it does not move back to F.

Example 6.5: String Quartet No. 2, I, mm. 136–46.

(A) Pre-resolution



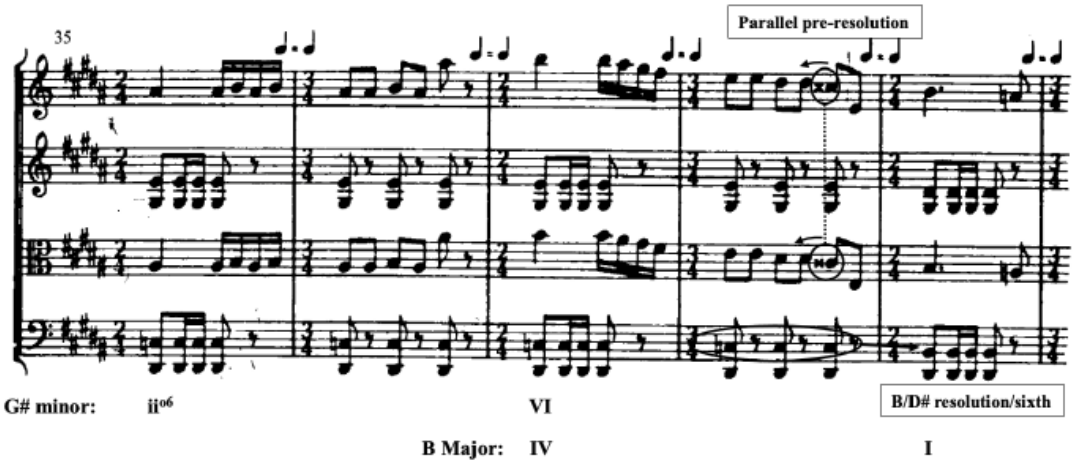
(B) Chordal reduction



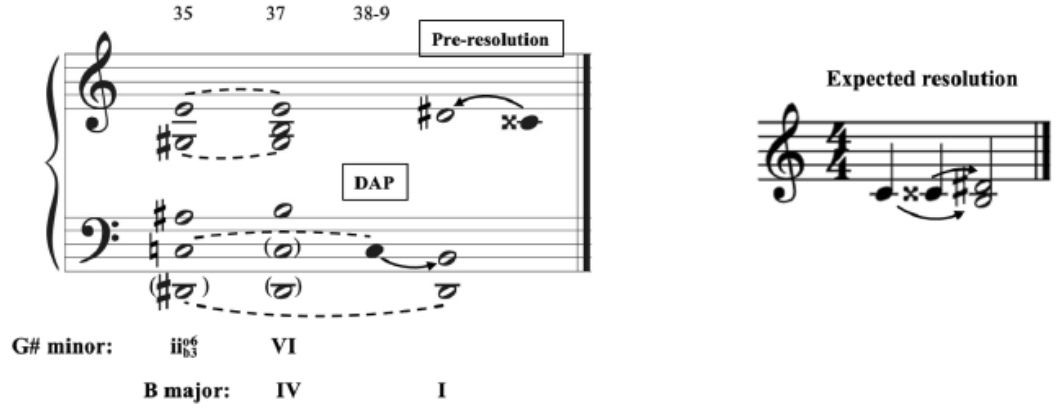
Example 6.5B shows a reduction of this pre-resolution. Notice mm. 136–40 include many common tones among harmonies as they move from B minor to D minor. The G# occurs before the A, however, in the score, this event occurs after the Gb–F. The pre-resolution is written after the D-minor chord to show its backwards relation. The other darkened notehead, A#, is a chromatic passing tone to B, which establishes an E major triad. The instability of the second inversion D-minor chord acts as a link to the E-major harmony that follows.

Example 6.6: String Quartet No. 3, III, mm. 35–39.

(A) Pre-resolution



(B) Chordal reduction



The last example of a pre-resolution comes from the third movement of String Quartet No. 3. This passage contains one aligned DAP in m. 38 between C/Cx (Example 6.6A). The opening of this movement suggests G# minor with B/D# dyads in the bass throughout. The C/Cx

DAP strengthens the resolution dyad as parallel Cxs come from their pre-resolutions, D#, and C-natural in the bass line resolves down to B, therefore returning to the opening dyad (B/D#).[202] The cello's D#–C dyad in mm. 35–38 is consistent and not necessarily accounted for in the roman numeral analysis. For example, ii^{o6} with a lowered third (C-natural) in G# minor does not include the D#, as it functions as a pedal tone throughout the movement. Two measures later, the C-natural becomes a non-chord tone, as it becomes a DAP member in the next measure. These prolonged notes are shown in Example 6.6B with parentheses and dashed slurs.

6.3 Type #2: Half Resolution

The next type of DAP resolution, half resolution, breaks the underlying semitonal motion on the surface and resolves one DAP member in the "wrong" direction into a major second instead of a major third. Orthography is especially important here because the DAP member that breaks these rules will unequivocally look "wrong." This resolution type includes a resolution to one chord tone and one non-chord tone. Unlike normal and pre-resolutions where the resolution results in a tonic-based dyad or modulation into a new tonic dyad, the half resolution only allows one resolving member into the tonic chord. Typically, normal and pre-resolutions aid in clarifying the mode, but the half resolution emits ambiguity to the identification of the mode. The ambiguity of the half resolution is most often used as a deceptive device towards an unexpected chord. Therefore, I describe this half resolution as Shostakovich's "deceptive resolution" in which the "wrong" member of resolution is the deceptive member, which unexpectedly yields a different chord. The deceptive member is a chord-tone in the new chord, while the "correctly" resolving member, where one expects the chord to resolve to, becomes a

[202] D# is also held as a pedal in the bass line from mm. 1–22 and 29–48.

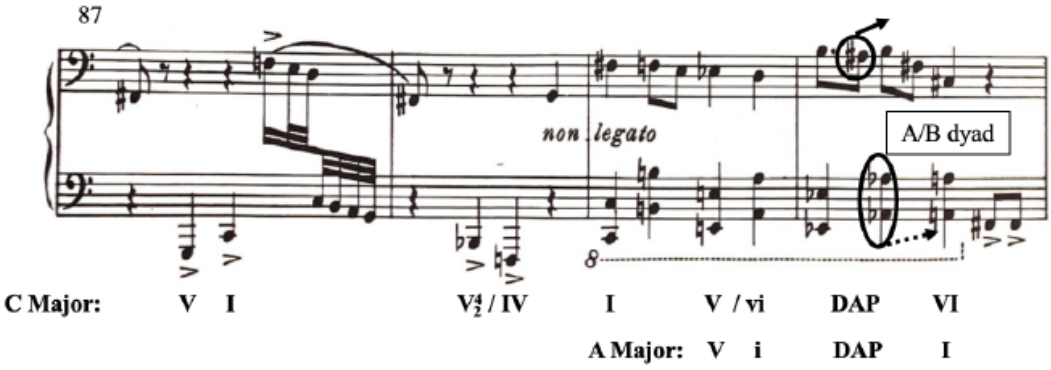
non-chord tone. For example, in DAP Gb/G#, G# resolves to A (correct resolution), but Gb resolves to G (incorrect resolution), but the harmony that follows the DAP is a G major chord. Rather than Gb/G# resolving to the dyad F/A, part of the F major triad, the music acts deceptively and moves to G major instead. Therefore, A, the correct resolution, is a non-chord tone in the resulting harmony, while the incorrect resolution, G, is the new tonic. The following examples provide evidence for this deceptive device; however, the last example in this section includes the deceptive member failing to change the chord that follows, and instead produces a delay in the subdominant harmony before achieving the normal DAP one measure later.

Example 6.7A shows an almost directly aligned DAP of Ab/A#, in which A# in the upper voice resolves to B, but the octave Ab's resolve up a semitone to A-natural, rather than down to G. (G# resolving to A would be completely different and not in keeping with strict orthography.) The half resolution is presented with a dotted lined arrow in both the score and simplified chord progression. Had Ab resolved to G, a G/B dyad would have formed, accentuating the dominant chord of C. Instead, it resolves to A/B and is caught between two keys: C major (B is scale-degree 7; third of the dominant) and A major (A is tonic). Here, the "wrong" resolution to A keeps the passage from staying in C major and instead puts it on track for A major. The correct resolution from A# to B, then, is this passage's last attempt to stay in C major, but results as a non-chord tone.

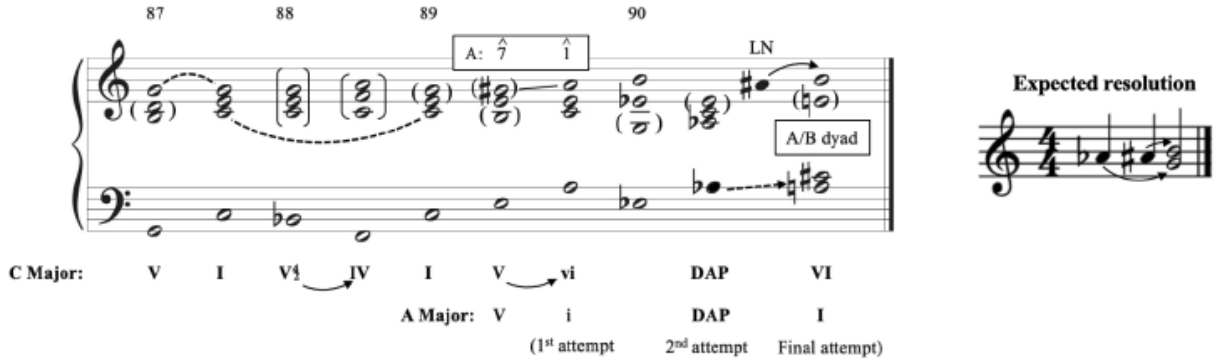
The dominant harmony is also very important to the progression to A major. Starting in m. 87 with the first V–I in C, more accented quarter notes imply a V–I in F major. Once the bass returns with octave C's in m. 89, several V–I progressions occur around A or Ab. First, V–i (A minor), then V–bI (Ab major), immediately followed by an A major triad, including the DAP member, A.

Example 6.7: Piano Sonata No. 1, mm. 87–90.

(A) Half Resolution



(B) Chordal reduction



These relationships and attempts towards A major are shown in Example 6.7B. Many implied triads are filled in with parentheses to show a complete chord over the bass notes. Notice the dashed slur from C (mm.87–89) encompasses C major harmonies such as F major and its dominant seventh. Following the C major tonic in m. 89, the mode shifts towards A major with a duality in mode. I have labeled the Roman numerals in both keys to show their transformations from minor i, to flat major I, then to major I. Neither key truly fits these transitional sonorities (labeled “1st attempt” and 2nd attempt”). Because it appears to be a quest to reach the new A major tonic triad, I have labeled the attempts below the A major roman numerals. The “final attempt” is the most stable attempt for the A major triad, which B still interrupts as a non-chord tone; however, the score supplies a strong A/C# dyad in the third beat of m. 90. The half

resolution member, Ab, also serves a dual purpose: part of a DAP and the tonic of the Ab major harmony. The other member, A#, who resolves properly to B (non-chord tone), acts as a lower neighbor. Therefore, this major second dyad (A/B) supports an unstable key change, perhaps tonicization, for which is only temporary at this moment. The work does end on octave A's, but without any semblance of major or minor mode.

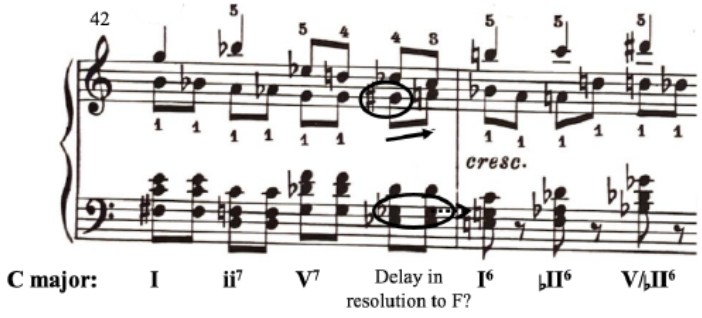
Why would Ab resolve to A-natural? Why was it not notated as G#? These questions take me back to a basic question of this project: How does a flat and sharp of the same letter name occur in the same measure, sometimes simultaneously? This is the reason so many DAPs occur in Shostakovich's music: A result of independent lines with specific modal or orthographical tendencies aligning.

To further expose this theory, I provide more examples of this nature. In mm. 42–43 of Piano Sonata No. 1 (Example 6.8A), $G^{\#}$ resolves to A in an inner voice, while Gb moves to G-natural instead of F. This move to G comes after a brief delay. Though G# resolves to A within beat four of m. 42, the Gb repeats under the A resolution and then resolves to the G. This delay is part of the deceptive device Shostakovich uses to continue this passage in C major with a first-inversion tonic chord. The supposed DAP resolution to F/A would have represented a IV chord in C major, which is in itself unexpected: a subdominant following a dominant chord. While the ear might anticipate an unexpected event, Shostakovich tricks the listener once again, unexpectedly, to resolve to the traditional and typically expected resolution to tonic. Unlike previous examples, the Gb in the middle voice of the left hand remains in the same voice. Again, Gb unnaturally resolves up a chromatic half step to G-natural instead of down to F. The ascending bass chords in m. 43 offer another view of the orthography discussed earlier, all flatted.

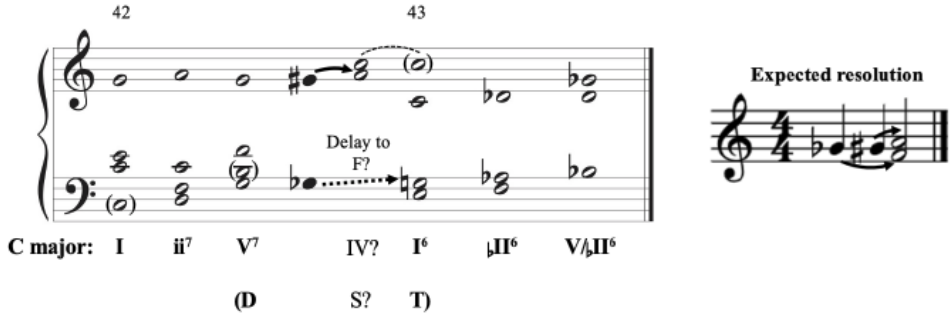
In previous examples, we have seen a DAP member share a dual purpose as an important harmony from which to move. In Example 6.8B, though, the DAP does not represent a harmony and in turn does not help tonicize a new key; rather, it stays in C throughout. I argue that it extends the dominant seventh chord in beat three in m. 42.[203] The purpose of the abnormal DAP here is to not change key but give the anticipation of a possible shift in the chord progression, leading the listener to expect an unexpected Subdominant IV after the Dominant. Instead, it aids in the expected resolution to a I^6. As we saw in Example 6.7, there is a dual modality between A and C centers, especially because of the G#'s resolution to A, but the Gb resolving to G, the dominant, once again shows an effort to stay in C.

Example 6.8: Piano Sonata No. 1, mm. 42–43.

(A) Half Resolution



(B) Reduction



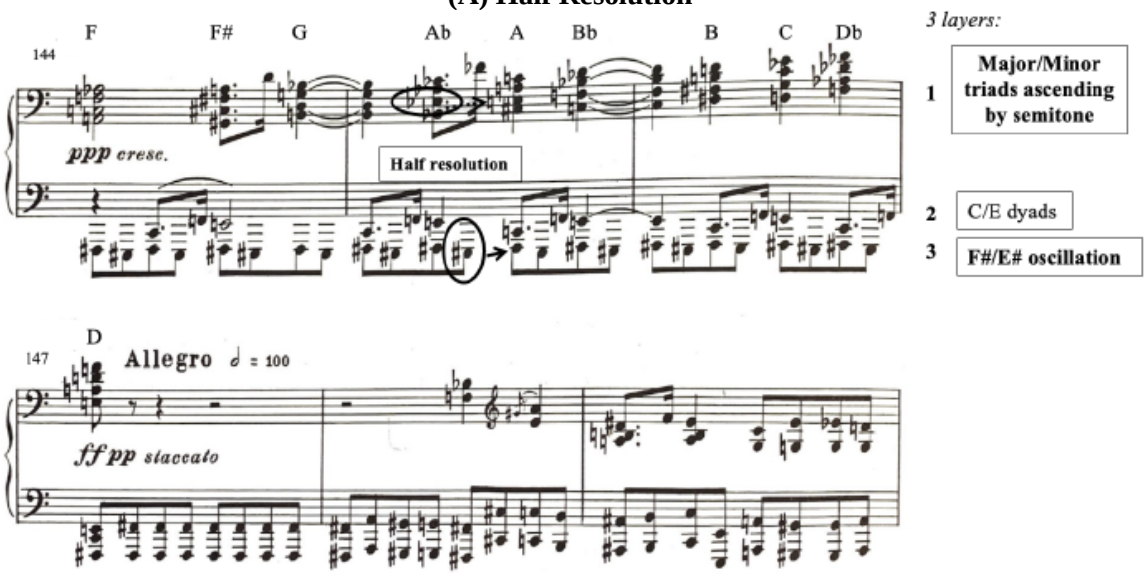
Another example of a half resolution occurs in m. 145 (Example 6.9A). In this example,

[203] Beat four also includes the DAP embedded in Eb minor seventh-chords, but they are not labeled. In my view, they serve no harmonic function within the key of C major between the V^7 and I^6.

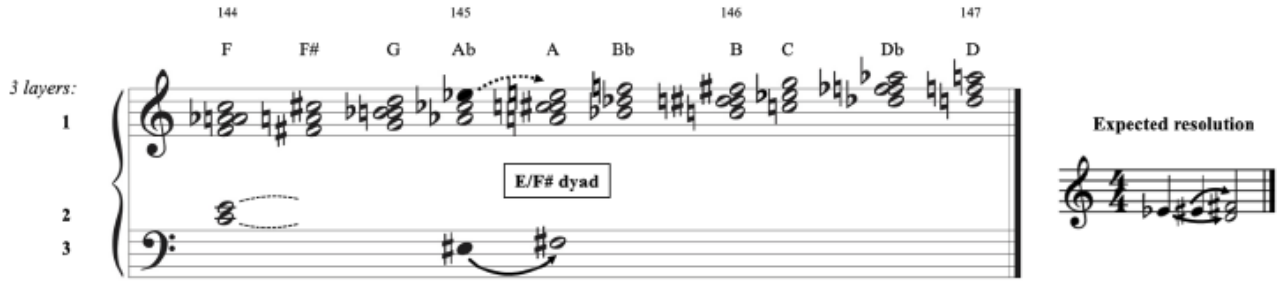
the bassline oscillates between E# and F#, which began at the Adagio section (m. 131). E#, the lower neighbor to F#, resolves normally, but the Eb amid the block chord above moves to E-natural within the same voice, instead of resolving normally to D. Beginning in m. 144 with F (middle voice), block chords ascend by semitone to D-natural in m. 147. This is the first of three layers occurring in this passage. The bass clef contains the other two layers: a C/E dotted rhythm dyad and the E#/F# eighth-note oscillation. The bolded label descriptions indicate their inclusion of the DAP. The C/E dyads, then are not included in the DAP, however, they hold a reminder of the original key, especially during this point with a chromatic ascent above and an E#/F# oscillation below. Example 6.9B shows a reduction of this layering.

Example 6.9: Piano Sonata No. 1, mm. 144–46.

(A) Half Resolution



(B) Chordal reduction



Like Examples 6.7 and 6.8, the DAP member, F#, that resolves normally by semitone is a non-chord tone of the local triad (A major) and the member that resolves abnormally is a chord tone (E-natural). The dotted-rhythm block chords (right hand) in m. 144 contains all sharped notes, most resolving up by a semitone (apart from G# leaping to B-natural). The dotted rhythm containing the half resolution in m. 145, though, resolves its remaining pitches like the resolution of the DAP's Eb: Ab moves to A-natural and Cb to C-natural. One might ask again why not notate this chord in sharps like the previous block chord?[204] This question is explored through comparisons of Shostakovich's revised works.

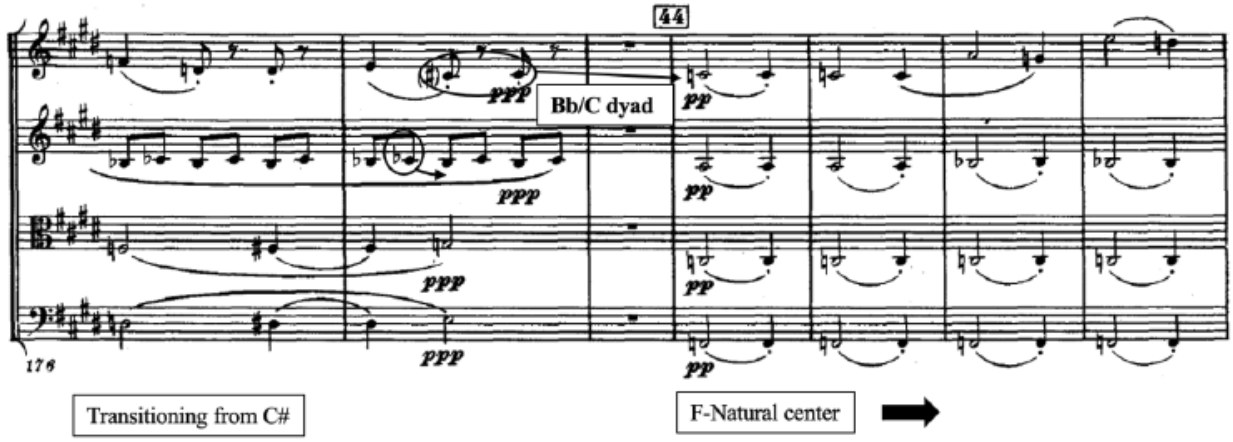
Following a shift to the C center, the music moves back to C# in m. 169. Eight measures later, however, another DAP occurs to shift the mode to F. Example 6.10A provides the modulatory passage. Like the previous section of music (see Example 6.9), another oscillation including a DAP member occurs between Bb and Cb, with the resolution to Bb, in the second violin. The C#'s resolution is blocked by a measure of rests, where it then resolves to C-natural rather than D, and becomes the fifth of an F major triad. Not only is tension built by delaying the DAP resolution, but the resolution itself is not expected. Like other half resolutions, this DAP and its half-resolutions to Bb/C provide ambiguity among the modes. The battle between C-natural and C# has been the focus so far, but this passage resulted in an F major harmony instead (see Example 6.10B). F relates to C by a fifth; a common trend among this string quartet, but it seems that we have been misled once again. The DAP resolved to a major second rather than a major third. If it had resolved normally to D, it would have mirrored the Bb/D dyad resolution from the first movement. Instead, the major second (Bb/C) takes the music to the new center of F

[204] This question is explored further in a discussion of *Lady Macbeth's* opp. 29 and 114, where Shostakovich changed an Eb to a D#, therefore removing the DAP.

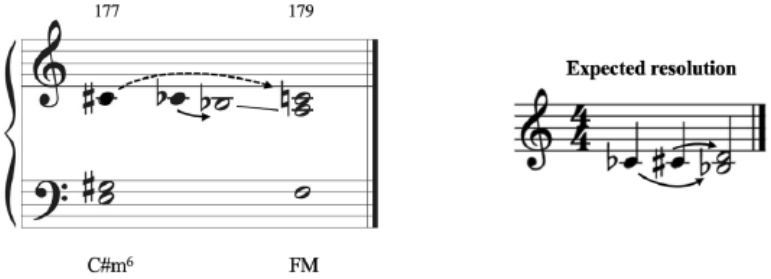
that has not been visited before. This is to say that the string quartet has not been completed and there is still one more movement left. Not long after moving to F, the third movement ends with a B#-C# eighth-note pair in the cello, confirming C# once again. Oddly, the fourth movement begins in C major with no accidentals in the key signature, much like the first movement.

Example 6.10: String Quartet No. 1, III, mm. 176–82.

(A) Half Resolution



(B) Chordal reduction

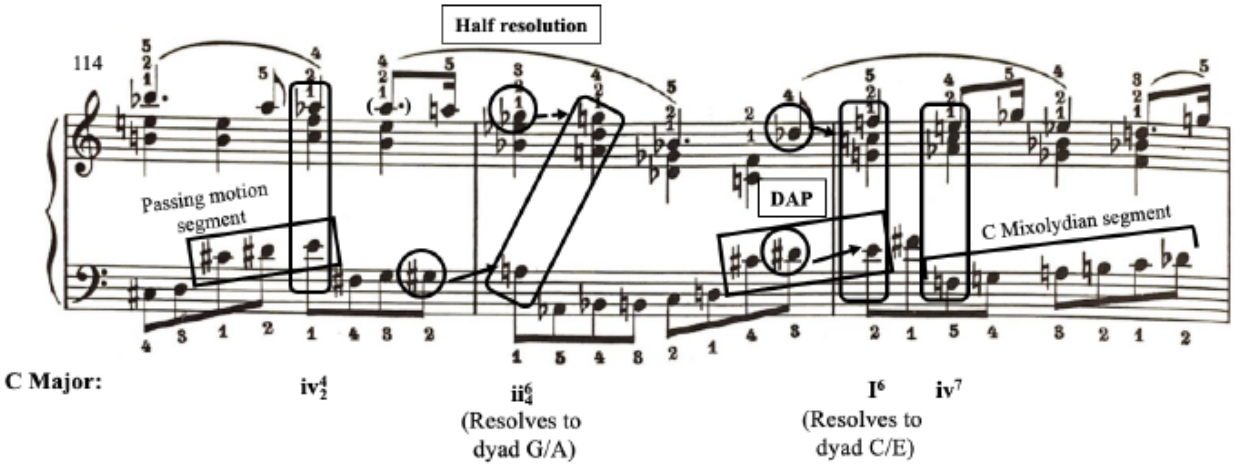


Example 6.11A presents a passage in C major where the "wrong" note of a half resolution is a non-chord tone in the subdominant harmony (ii$^{6}_{4}$). In the previous chapter, Example 5.1 presented an aligned DAP with normal resolutions at the end of m. 115, however, a half resolution DAP appears almost one measure before. G# in the left hand on the upbeat of four resolves to A, but Gb in the upper voice resolves to G-natural. Shostakovich keeps a similar style for the passage as the Ab in the previous measure (shown in parentheses; upper voice) resolves to A-natural. This half resolution DAP follows a pattern, again aligning with the left hand's

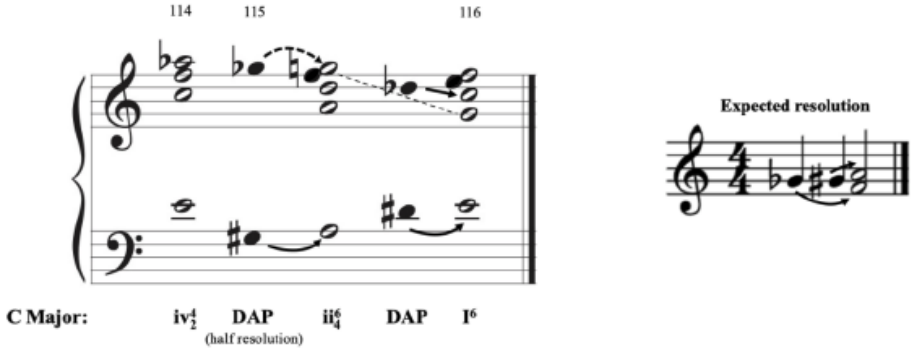
ascending chromatic segment. Harmonically, the half resolution does not result in a C major tonic dyad, rather a subdominant one. The full subdominant chord, in a 4/2 position, is shown in Example 6.11B. The half resolution, in this singular instance, is a bridge between the subdominant and tonic, as if acting like a dominant harmonic function. In particular, the "wrong" resolution member, G, is a non-chord tone at the moment of the subdominant harmony, but acts as a prolongation of C major (shown by a diagonal, dashed line). Therefore, the purpose of G is to provide the guidance of a dominant chord between a subdominant and tonic chord.

Example 6.11: Piano Sonata No. 1, mm. 114–16.

(A) Half Resolution



(B) Chordal reduction



6.4 Type #3: Direct Resolution

The last type, direct resolution, includes one DAP member that resolves properly while

the other resolves in the "wrong" direction by three semitones to a unison with the other voice. Direct resolutions move in similar (or direct) motion, but only one moves by semitone, therefore this resolution is abnormal. In this section, I provide examples of these unison resolutions.

In m. 113 of Piano Sonata No. 1 (Example 6.12A), Ab in the right-hand repeats on beats three and four before moving up to B-natural.[205] The A# in the left-hand resolves to B-natural in beat three, in a similar context to the ascending, bassline eighth notes in Example 5.1 (see Chapter 5). Ab/A# abnormally resolved to the same pitch in two instances: Once to A-natural (Example 5.2) and another time to B-natural (Example 6.12).

Unlike some of the previous examples, this passage is best understood in terms of combinations of modes where they may play simultaneously into the direct DAP resolution. This excerpt includes four scalar segments, formed melodically unlike past examples where harmonic analysis was appropriate for the passage. Not only are the bass and treble clef voices in different modes, but each of them includes two overlapping modes: F Phrygian and B minor in the right hand, and C melodic Phrygian and E major in the left hand. In m. 113, two modes align (C melodic Phrygian and B minor) to form the DAP Ab/A#, both resolving to B. While the Ab to B resolution occurs adjacent to the B minor modal segment, the resolved B also belongs to C melodic Phrygian and a newly generated mode, E major.

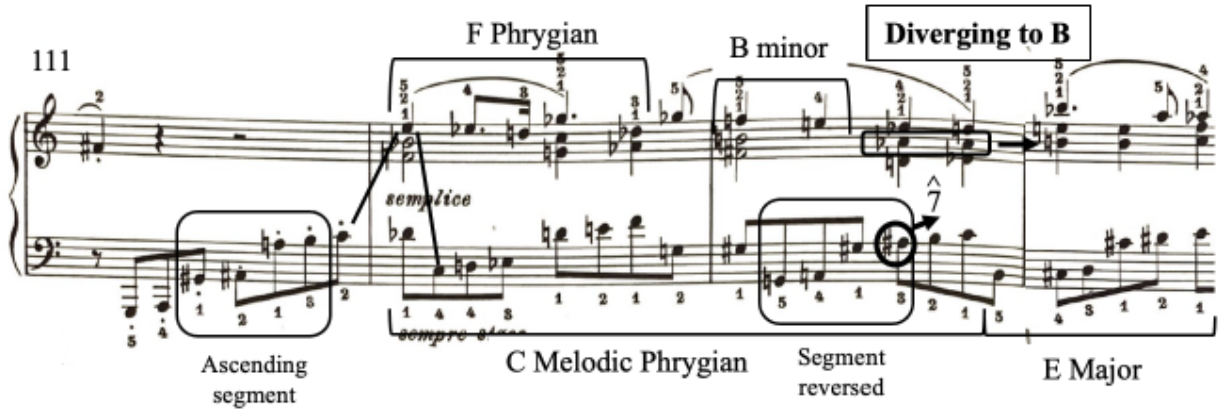
Example 6.12B shows the pitch alignment of modes, with a box around the B's. In this example, enharmonic pitches align to show similarities in sound between modes. The horizontal combinations produce augmented primes, such as Bb and B-natural between F Phrygian and B minor. The pair of modes, simultaneous to another pair of modes creates this instance of DAP.

[205] Like other examples presented, this resolution does not stay within the same voice. Ab is a middle voice in the block chords of beats three and four, which resolves to the B natural in the following measure as the bottom voice of that block chord. They still reside in the same hands like other examples, but do not follow an exact linear line.

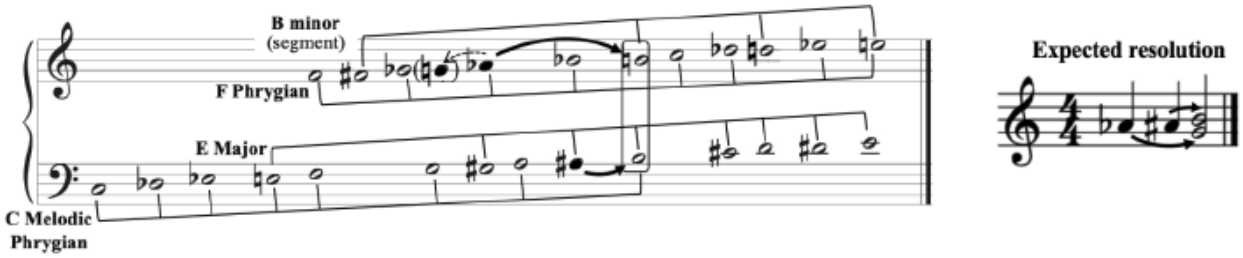
The resolution, however, is important because it links B minor with E major, while holding on to C melodic Phrygian. C takes an inactive role throughout this work, mentioned several times throughout this chapter. The three-mode crossroads of B is the reason Ab from F Phrygian resolves incorrectly. Had Ab resolved to G (shown with a dashed arrow), it would have confirmed the C center, as none of the other three modes includes G. Therefore, the improper resolution of Ab to B continues to misdirect the observer to another mode and not settle on C. There is no reason to inconclusively settle on C at this point as there are still over 150 measures left in the work.

Example 6.12: Piano Sonata No. 1, mm. 111–14.

(A) Direct Resolution



(B) Scalar reduction



Before discussing the direct resolution in String Quartet No. 2, III, one must first understand the instability of its key centers. This movement begins in Eb minor, and, unlike other movements where modes would change but the key signature stayed the same, this

movement contains several changes in key signatures. Beginning with six flats (mm. 1-86), there is a key change to three sharps (mm. 87-119), five flats (mm. 120-50) no sharps or flats (mm. 151-244) and returns to six flats (mm. 245-396). Though Shostakovich uses a variety of key signatures, he continues to inject chromaticism into each section, no matter the key, which changes the mode.[206] Not every new key signature corresponds to an actual, musically projected key; for example, a three sharped key signature could have a musical passage in Bb major. At other times, the key change does in fact point to the right key (three sharps: A or F#), but quite often the key changes act as formal dividers. I have previously discussed his use of conventional techniques in a non-traditional way and parsing through unrelated key signatures acts as musical dividers for form and style. For example, the waltz begins with a traditional bass note followed by the accompaniment on beat two of each measure. The first key change to three sharps comes with rests in the accompaniment and a solo first violin. When the key changes once again to five flats, the accompaniment articulates beat two with no held durations again below a solo violin. During the section with no key signature, the cello adapts the melody with viola's accompanying quarter-notes on beats two and three, while both violins reinforce beat two by reaching to a higher register.

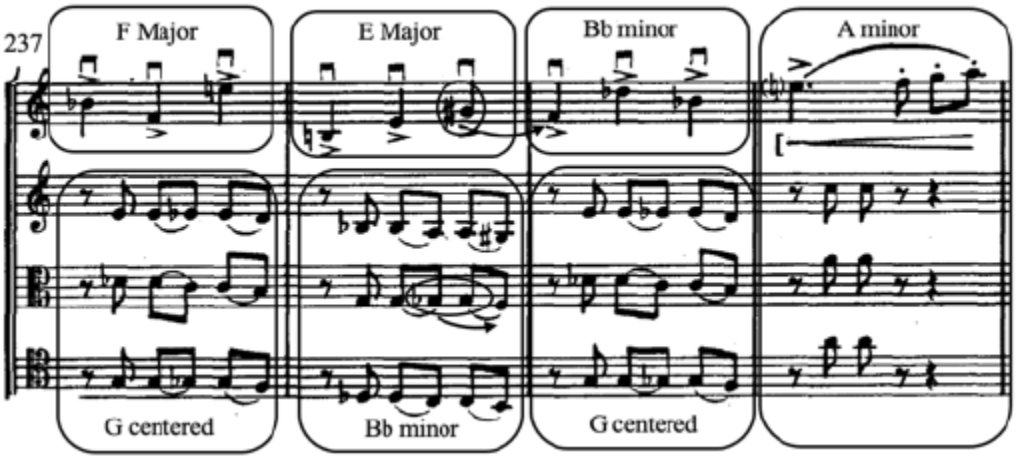
Additionally, in this movement, a DAP involving Gb/G# occurs at m. 238 (Example 6.13A). The DAP resolves abnormally as a direct resolution: The viola's Gb resolves down by semitone to F, but Violin I's G# also moves to F rather than up to A. This DAP aligns during a descending, eighth-note accompanimental pattern (Violin II, viola, and cello). The clear division of the accompanying instruments and the first violin are boxed in the score. Not only do the

[206] The exploration of several modes occur throughout the entirety of Piano Sonata No. 1 with a C major key signature.

textures differ, but the harmonies as well. The first violin moves from F major to E major, then to Bb minor and finally A minor. The accompaniment, however, centers around G in mm. 237 and 239, with a Bb minor interjection in m. 238. The score shows these harmonic alignments. Notice the G# DAP member from E major resolves into the Bb minor triad (F) in Violin I, while the Gb member resolves properly to F within its own Bb minor measure. This instance of resolution points my analysis to a "delay" in expected harmonies. Example 6.13B presents a reduction of the upper chords as inverted block chords and the root of each bass note below.[207] If G# resolved to A (shown with a dashed arrow), A minor might have appeared in m. 239 instead of m. 240. Because of the initial Bb minor delay, A minor is delayed. It's as if the melody and accompaniment are striving to be in one mode together, but the resolution to F causes them to not align and, instead, build tension until its release in m. 240. Therefore, the direct resolution occurs between modal conflict to either divert the mode (like Example 6.12) or to recenter it in all instruments (Example 6.13). M. 239 involves conflict between G, A, and Bb, with A taking precedence in the following measure.

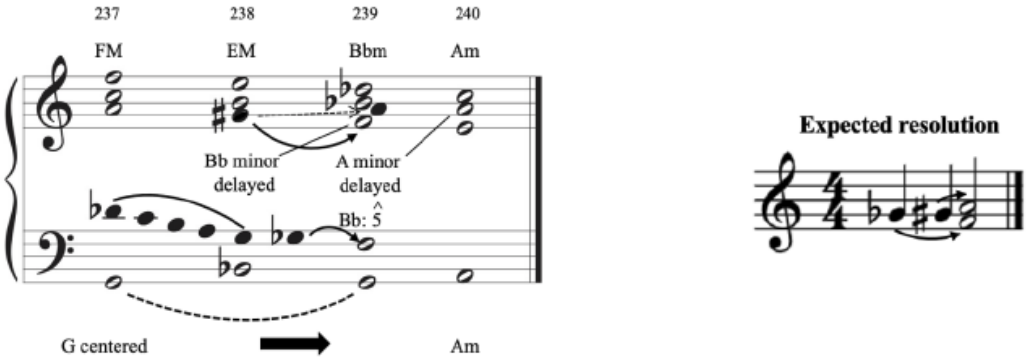
Example 6.13: String Quartet No. 2, III, mm. 237–40.

(A) Direct Resolution



[207] In this chordal reduction, the block chords in the right hand are spelled as first and second inversions for clarity in viewing the individual descending lines.

(B) Chordal reduction



At this point, I have described how abnormal DAPs differ from normal DAPs and formulated three types: pre-resolution, half resolution, and direct resolution. Each type of abnormal DAP functions in a particular musical context as a deceptive device. Additionally, combinations of these types, while rare, do occur. It is also possible, however, to observe what looks like a DAP but fails to resolve at all. In the next section, I demonstrate combined and failed resolutions.

6.5 Combined and Failed Resolutions

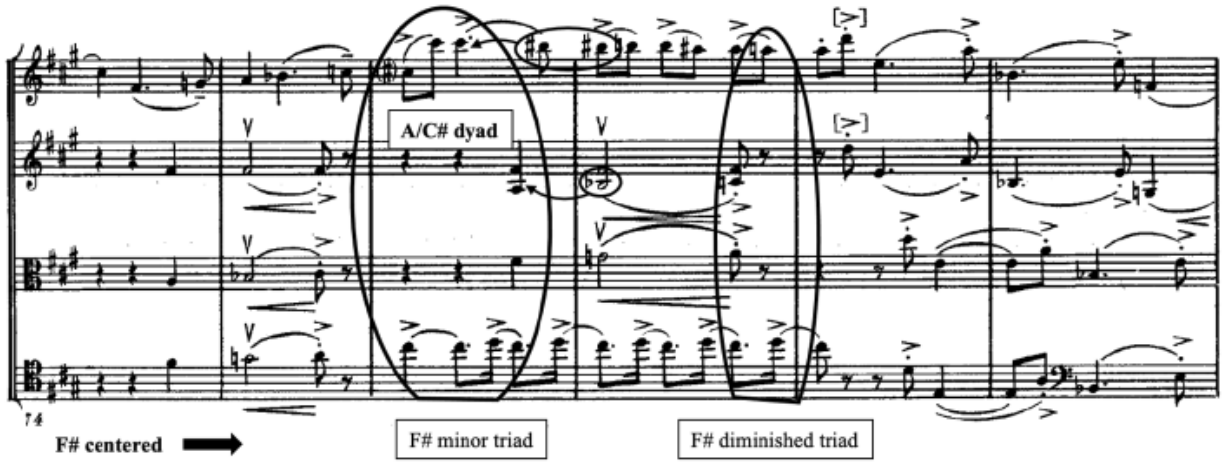
A combined resolution refers to a combination of two of the same or a combination of abnormal resolution types. While basic abnormal resolutions involve one member resolving unnaturally, a combined resolution involves abnormal resolutions for both DAP members. For example, one DAP member resolves as a half resolution, while the other a pre-resolution. Other times, both voices are the same type of abnormality. An example of this comes from String Quartet No. 2.

String Quartet No. 2 opens with an A-major key signature and open fifths among the accompanimental strings. Prior to the repeat signs and now in F# minor (mm. 76–77; Example 6.14A), a DAP between B#/Bb in both violins contains two pre-resolutions. In a typical pre-resolution, one voice resolves by semitone to its natural tendency tone, while another voice

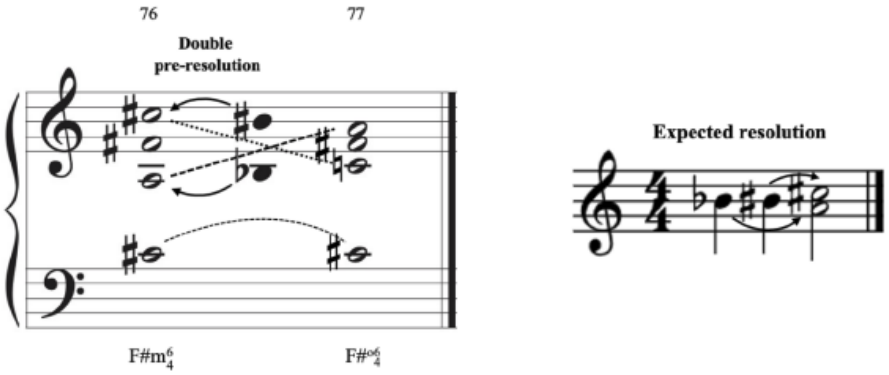
comes from the tone of its normal resolution. In this excerpt, both voices move from their resolution tones towards DAP tendency tones to form a double pre-resolution, indicated by left-pointing arrows. In more standard contrapuntal terms, this DAP functions in terms of passing motion, like a pathway from a minor to a diminished triad. As the DAP resolves to an F# diminished triad, the voicing changes among instruments. The cello stays with the C#, but the first violin transitions from C# in m. 76 to A in m. 77. Violin II's lower pitch has a voice exchange with Violin I's C# and A, but instead rises to C-natural.

Example 6.14: String Quartet No. 2, I, mm. 74–79.

(A) Combined resolution: Double Pre-resolution



(B) Chordal reduction



In the course of this voice exchange, the viola ascends from F# through the DAP to A. The upper strings change voicing past the DAP, but because of Violin II's ascent to C-natural, a chromatic

voice exchange results, which expands the F-sharp harmony. This exchange is shown in Example 6.14B. The chromatic exchange (C# to C-natural) is shown with a dotted line, while the exchange of A's appears with a dashed line. To summarize, this DAP functions as a passing motion between two F# triads.

Later in this movement, an ambiguous combination appears. In Example 6.15A, m. 164 presents a nearly aligned DAP involving Fb/F# in the second violin and viola. The viola's F# resolves to F-natural (instead of G), a half resolution, and the second violin to Eb, however, there are two ways of tracing this implied resolution. The first, Fb is a pre-resolution from the Eb before in the second violin. This is tangible because the Fb leaps down to Bb following this pre-resolution. That would mean the DAP is both a pre-resolution and half resolution combination. The second way to view this resolution is to trace the Fb to the Eb in the beat following, but in a different voice, Violin I. This is not uncommon to see in traditional voice leading procedures, but it is important to note the first violin's line. The Eb acts as an upper neighbor to D the beat before, and "resolves" to E instead of D. Therefore, it's not a complete upper neighbor, but an incomplete neighbor. The incomplete neighbor was previously seen in Example 6.5, where Gb came from F as a pre-resolution, but a rest followed.

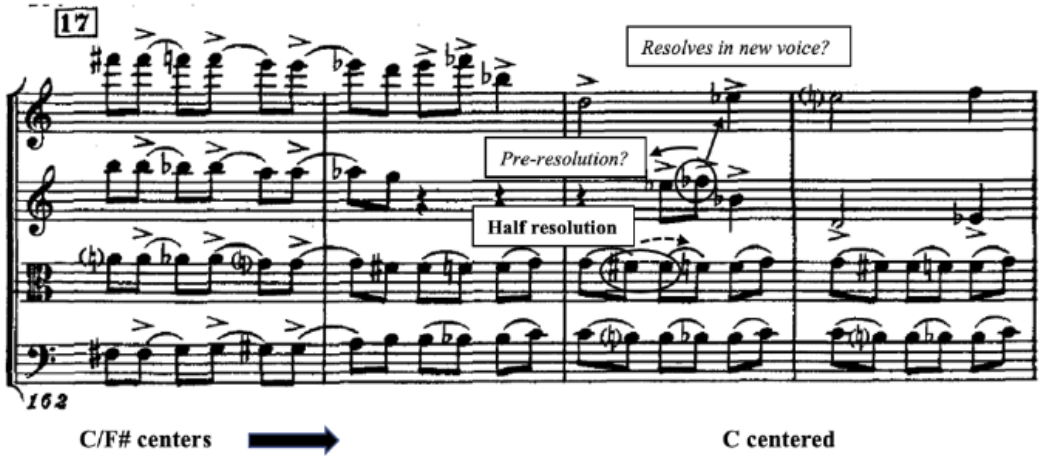
Additionally, the first violin plays D-Eb and E-F, of which the pairs are a semitone apart. Eb, then, is merely a part of a melodic pattern rather than of importance to the voice-leading structure. Fb's resolution either comes from Eb as a pre-resolution or resolves to Eb in another voice, shown by a double-headed arrow in Example 6.15B.

Once again, two simultaneous, tritone-related modal centers surround this DAP: C and F#. Prior to this excerpt, the music conveyed a C center, but as chromaticism appeared more often, the tritone's presence strengthened. Following the DAP's resolution to Eb/F, though, C

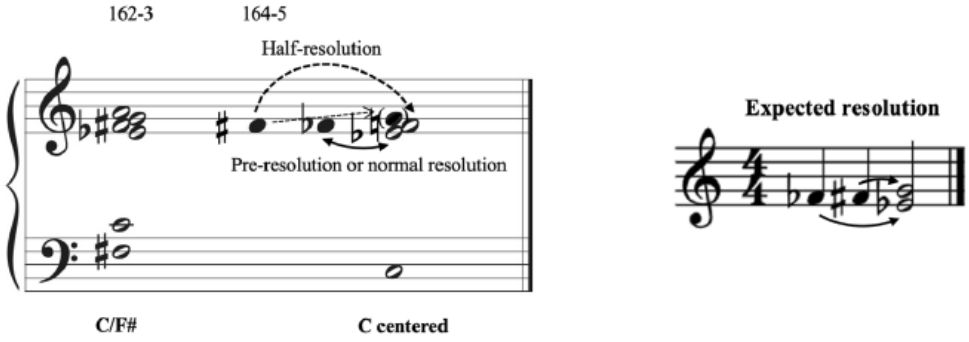
emerges as a clear center. Example 6.15B reproduces the dual modes as one chord in mm. 162-63 and the complex DAP resolution in mm. 164–65. Had F# resolved to G (shown with a dashed, straight arrow), it would complete a C minor triad. Because it resolves to F-natural instead, it is labeled as “C-centered” instead because F is a member of a C collection. This resolution confirms C as the predominant mode in the passage, but weakly. This unique excerpt contains common tones between the first polychord, and the DAP members and their resolutions. The only chromatic non-chord tone is Fb, which acts as an upper neighbor to Eb.

Example 6.15: String Quartet No. 2, I, mm. 162–65.

(A) Combined resolution: Half and Pre-resolution



(B) Chordal reduction



The last example presents an instance where the resolution fails. A failed resolution includes a DAP where both members resolve by anything larger than a semitone. This is

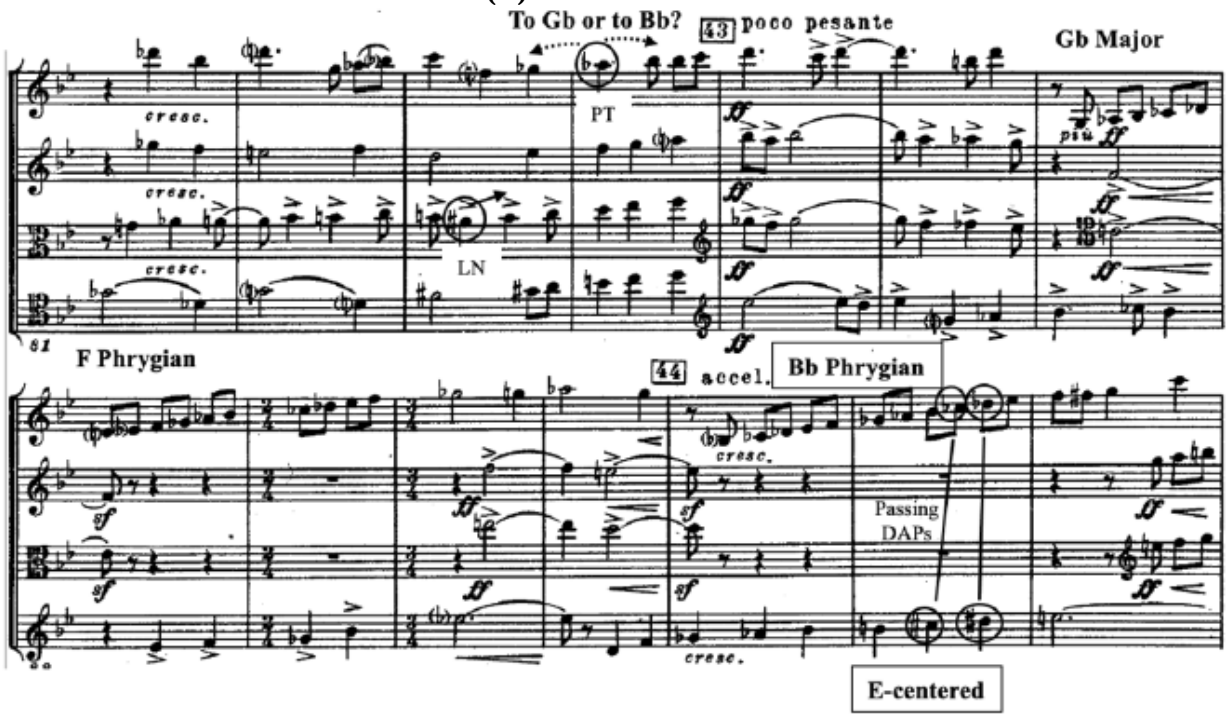
different from the direct resolution because one member resolved by a semitone while the other voice leaps to join at the unison pitch. It is also unlike the half resolution as both of those voices resolve by semitone, but one in an unexpected direction. A failed resolution disregards semitonal resolution in one or both voices and does not resolve to a unison, major second, or major third in a way that supports one or more modes. While we might infer the semitonal resolution of the voice-leading archetype, the music does not follow this process. The following example includes a failed resolution in which the DAP members do not resolve by semitone, rather, by whole tone, if resembling a resolution at all.

Example 6.16A, an excerpt from the Second String Quartet, shows the upper strings and the cello's battle over pitch centricity, Bb and E (again tritone related), respectively. Three DAPs occur during this passage, of which all fail to resolve properly. Beginning with the DAP Ab/A# in mm. 83–84, the viola's A# resolves to B-natural (A# is a lower neighbor, in this case), while the Ab in Violin I functions as a passing tone between two pitches, each two semitones away: Gb and Bb. All normal and abnormal types of DAPs resolve by one semitone and they either help modulate to another key area or confirm one that seems unclear prior to the DAP. If one member does not resolve by one semitone, it is a direct resolution in which the pitch that moves three semitones to join the other member on the unison. While this example contains a DAP in the score and meets the proximity qualifications, it does not resolve properly according to my classification and does not qualify as a DAP according to the voice-leading archetypes established here. Instead, both members function as non-chord tones (passing and neighboring) within a dual modality. While other examples in this project look like non-chord tones on the surface, they are DAPs because of how they resolve and where they resolve to. This particular passage, however, does contain non-chord tones. For one, the two members of the DAP are not

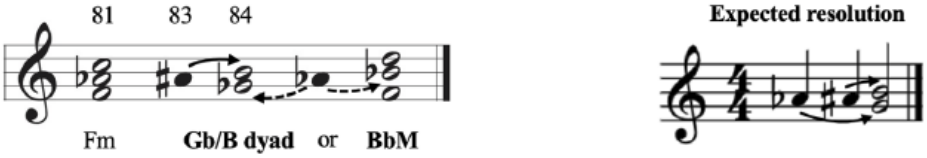
aligned, but most importantly, their would-be resolution, Gb/B is not a major third. One of the resolutions (the lower voice) moves by a “wrong” interval of a whole tone. Therefore, I have provided the chords that would be produced had this DAP been properly resolved in Example 6.16B. Notice the A# resolving to B and if the Ab resolved to Gb, it would not create a major third dyad. Similarly, if the Ab resolves to Bb, not only would it produce two separate harmonies, but it will result in an augmented prime between B and Bb. Augmented primes are not an option for resolution because they themselves are based on tension and need to resolve.

Example 6.16: String Quartet No. 2, II, mm. 81–94.

(A) Failed resolution



(B) Chordal reduction (mm. 85–94 omitted to show DAP resolution)



In m. 92 of the score, the violin’s quick ascent with eighth notes presents a Bb Phrygian

collection. In contrast, the cello's quarter notes indicate an E center based on the long duration of E in m. 94 and the C#-D# prior. The first DAP between Cb/C# are adjacent to the second, Db/D#, and therefore do not resolve. The Cb/C# could come from Bb and B-natural, respectively, but both would be a pre-resolution and need an explanation for its motion from B-natural to C#. It is not a true resolution either way. Similarly, Db/D# only resolves D# to E, while Db steps up by a whole tone to Eb. The resolution by a whole tone is not a valid DAP voice-leading archetype. Thus far, all normal and abnormal resolutions include resolutions by a semitone.[208] Both DAPs do not support a transition to another mode, rather they occur because of simultaneous dual modality.

This chapter explored the alteration of the voice-leading archetype in abnormal resolutions—pre-resolution, half resolution, and direct resolution. Each deviated from normal resolutions, not through the DAPs themselves, but the resolutions that followed. With the exception of the failed resolutions, all DAP resolutions are represented in not only locally, but within larger structures as well. The next chapter investigates this claim further.

[208] The only exception is the DAP member in a direct resolution where it must leap by three semitones to meet the other resolving member at the unison. By meeting at the unison, there is a clear motion towards the following harmony, whereas one or two members resolving by a whole-tone is not a tendency resolution and therefore does not follow the voice-leading archetype set forth by my DAP methodology. Additionally, the whole-tone motion occurs less frequently than the direct resolution.

CHAPTER 7

ANALYSIS OF DAPS IN LARGER MUSICAL CONTEXTS

7.1 Introduction

In the music of Shostakovich, the DAP often resolves to a current or newly achieved tonic (as a modulatory device) and functions through structural voice-leading and contrapuntal motion. The voice-leading archetype is the normal resolution, in which both DAP members resolve in contrary motion to a dyad based around the modal center at that moment in the music. In voice-leading terms, the DAP represents either an upper or lower neighbor tone and resolves to a relevant dyad: either the root/third or third/fifth of the modal center triad (tonic). If it does not resolve normally, the DAP may resolve abnormally through one of three types: pre-resolution, half resolution, and direct resolution. While my methodology of the DAP's close proximity in local contexts is strict, it is worth looking at how it functions within larger structures, much like an *Urline*'s 3–2–1 descent in a voice-leading reduction of an entire work or movement. Similarly, in works of the nineteenth century, analysts often view the form in terms of large-scale key relations, rather than just chord-to-chord motions (e.g. I–bVI–I). This analysis follows the philosophy of such large-picture-oriented models. Additionally, observing the form of these works provides an extra insight into the DAP's function: To aid in the harmonic return of the A sections.

In previous chapters, I have shown how the DAP resolves in local contexts to support the voice-leading archetype. In this chapter, I use my methodology of local DAP resolutions to show how they function in a larger musical structure. When the focus of the DAP is broadened, they may be understood as non-chord tones in relation to the musical background. Therefore, I occasionally refer to them as neighbor or passing tones based on the larger structure. In their

local contexts within each passage, however, they do follow the voice-leading archetype and are thus understood as DAPs harmonically—that is, having a true, individual local function. The purpose of this chapter is to show how they might appear in a large-scale analysis.

Like the musical examples of my previous chapters, I continue to focus on a span of a quarter-century (1926–1948). My longer examples come from Piano Sonata No. 2, op. 64, second movement (1944), *Lady MacBeth of the Mtsensk District* "Katerina's Aria," opp. 29/114 (1930–32/1955–63), and *From Jewish Folk Poetry*, op. 79, no. 1 (1948).[209] I also include an example from *Four Verses of Captain Lebyadkin*, op. 146 (1974). Katerina's Aria includes a later-date revision where an original DAP is deleted from the score and replaced with its enharmonic pitch. This work, along with the later *Four Verses of Captain Lebyadkin* shows how Shostakovich's style changed through the decline of the DAP, which is rarely seen past 1950.

7.2 Analysis of Piano Sonata No. 2, op. 64 (1944), Second Movement.

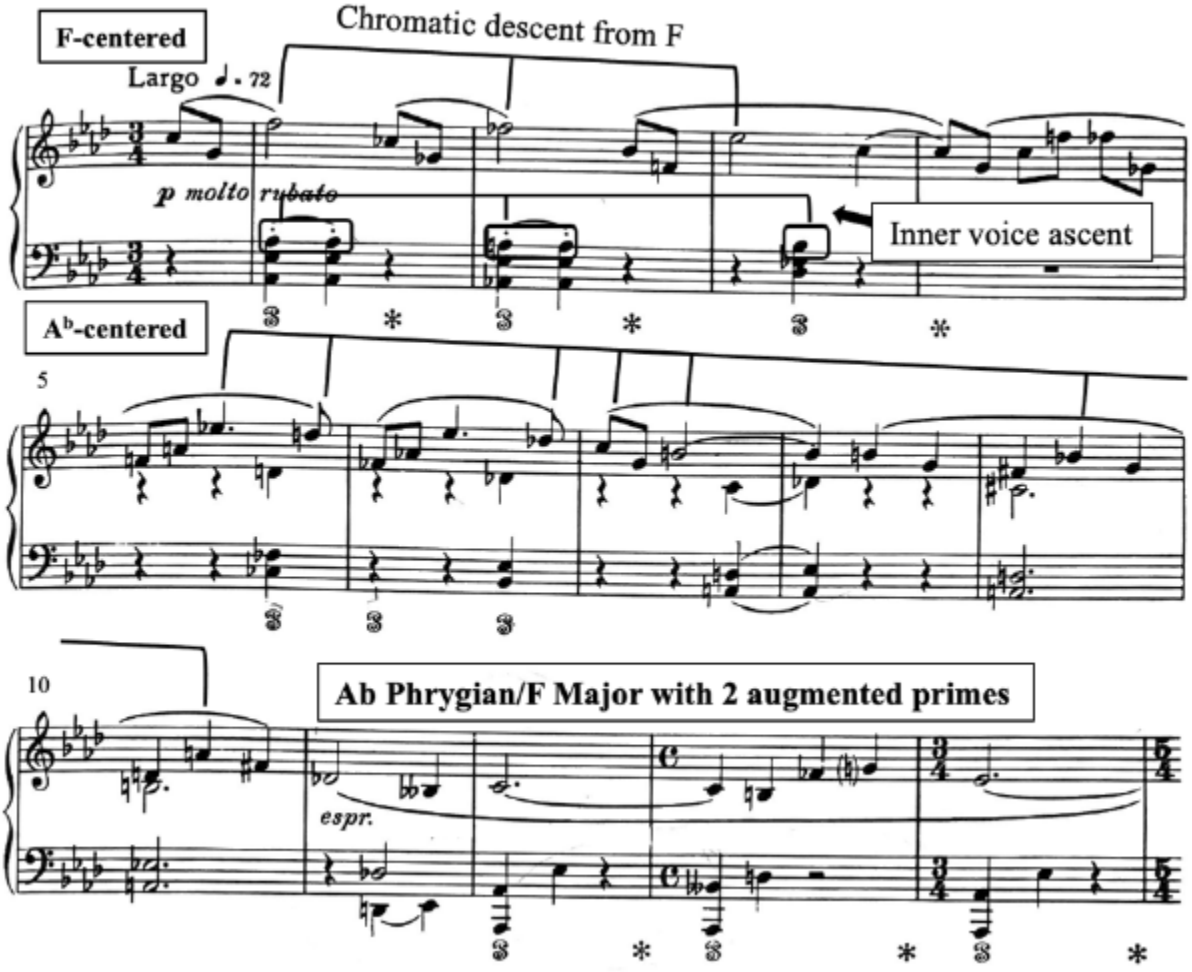
The second movement of Piano Sonata No. 2, op. 64 (1944) provides an example of DAP between B and Bbb. The form of this movement is ternary: A (mm. 1–44) B (mm. 45–79) A' (mm. 80–132).[210] Both sections A and A' contain the Ab major and F minor collections, however the contrasting section differs by key, rhythm, and texture changes, as well as the absence of Bbb. Ambiguity occurs between F and Ab centers, played separately in the right and left hands, respectively (Example 7.1A). Though traditionally related in the major-minor system based on the key signature, the modality of the F and Ab centers is unclear in the first ten measures due to two separate chromatic lines. The upper voice F begins a chromatic descent to Eb (mm. 1–3) and

[209] "Katerina's Aria" op. 114 (1955–1963) falls outside of my proposed timeframe and it does not include DAPs. This issue is addressed later in the chapter.

[210] For the future of this chapter, I refer to the B section as "contrasting section" to avoid confusion among the discussed letter names.

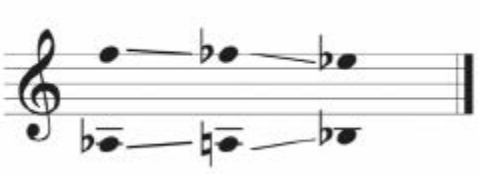
returns in m. 5 to continue downward to A-natural in m. 10. Initially, while F descends to Eb in the upper voice, an inner voice Ab ascends to Bb (mm. 1–3). Example 7.1B simplifies the voice-leading motion between upper and inner voices. In this example, an initial major sixth approaches a perfect fourth through a diminished sixth.[211] The contrapuntal structure of these opening measures, a model like Yavorsky's Double Symmetrical Systems (DSS), sets precedence for the upcoming voice-leading of the DAP.

Example 7.1: Piano Sonata No. 2, op. 64, II, mm. 1–14.
(A) Linear chromatic descent towards Ab and F collections



[211] The music and example show compound intervals, but for consistency among this dissertation, I describe them as simple intervals.

(B) Voice leading



Following the entire descent (mm. 1–10), a melodic Db descends to Bbb (m. 11), thus defining the initial collections of F minor and Ab major. Upon listening to this passage (Example 7.1), the first ten measures sound introductory through its unclear modalities and chromatic lines. Not until m. 11 does the texture change to more melodic material in the right hand with an accompanimental bass in the left. This point also presents the first and reoccurring DAP: Bbb and B-natural.

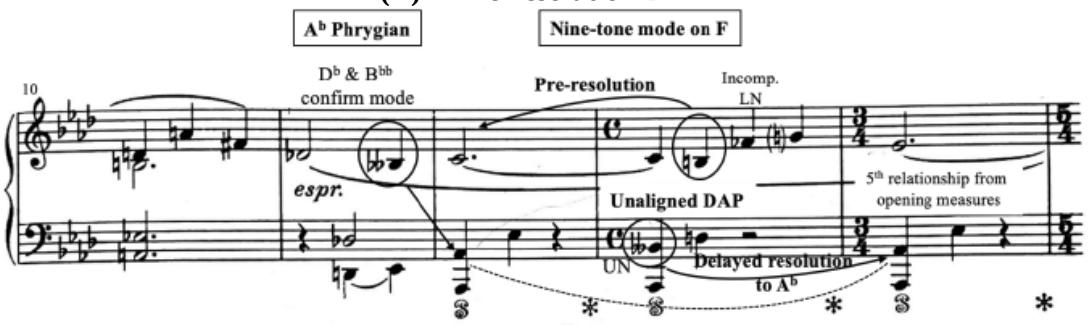
Example 7.2 highlights this passage and its DAP members. Not only does the DAP occur within one melodic line, but the two notes are also in close temporal proximity; vertically in the same measure. The DAP, Bbb, occurs twice—once melodically and once vertically unaligned with B-natural. The DAP's function in this larger structure aims to separate and define the two separate modal collections (to be discussed shortly) as well as resolve to the more prominent dyad (Ab/C) of the two key centers: The Ab collection.[212] The score in Example 7.2A marks two modes occurring simultaneously, Ab Phrygian and a nine-tone mode on F. The first Bbb in the right-hand resolves to the Ab in the left, which becomes the beginning of a three-measure upper neighbor sequence with the next Bbb. Its resolution to Ab is delayed until the next measure, where the music settles on the initial opening's Ab/Eb perfect fifth harmony. The DAP member, B-natural in the right hand, is a pre-resolution to C, which is held for a longer duration of four

[212] This dyad resolution is important to the entire structure as Ab is the more prominent collection of this section and C major (the third of this dyad) is the new key area for the next major section.

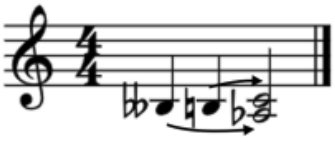
beats, compared to the B-natural's one beat. Example 7.2B shows this unaligned pre-resolution in m. 13.

Example 7.2: Piano Sonata No. 2, II, mm. 10–14.

(A) A Pre-resolution DAP

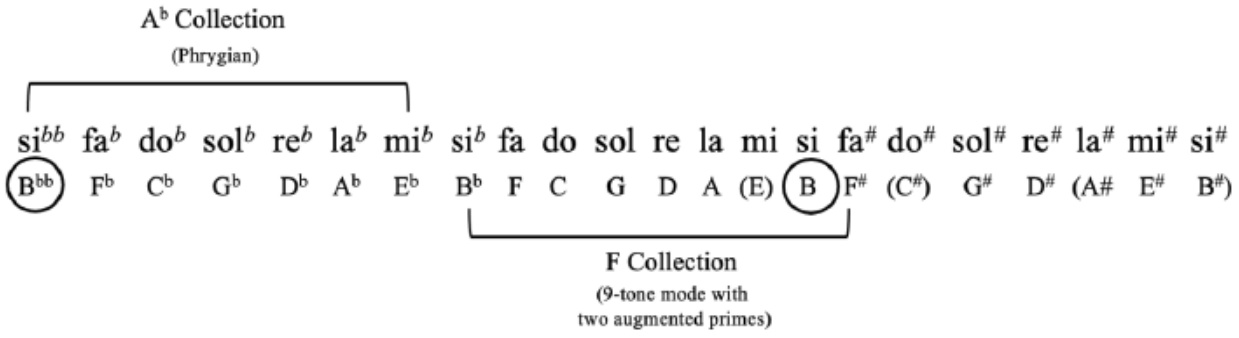


(B) Pre-resolution



Each member of the DAP belongs to their own modal collection: One to an Ab collection (Ab Phrygian) and the other to an F collection (Example 7.3). Through Ogolevets's line of fifths and Shostakovich's voice-leading procedures expressed previously, the Bbb and B-natural–occurring within the same measure–coexist as members of Ab Phrygian and a nine-tone mode on F (containing two augmented primes).

Example 7.3: Modal collections of Piano Sonata No. 2, II.

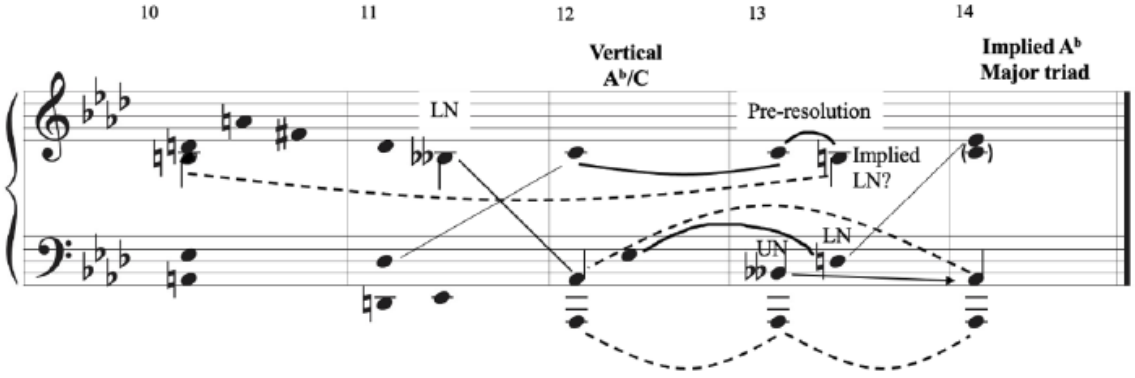


The original line of fifths is provided with letter name interpretations below their line.

Letter names in parentheses do not appear in this movement. The Ab Phrygian collection contains seven tones, without an augmented prime. On the line of fifths, the collection spans from Bbb to Eb and reflects the bassline's initial open fifth (Ab/Eb). The F collection, however, is a nine-tone mode with two augmented primes.[213] In contrast to the Ab collection, the F collection contains natural tones often represented in the music. Because the collection contains nine tones, it includes two augmented primes: Bb/B-natural and F/F#, which creates one DAP with the Ab collection. The first of them, Fb and F#, does not show the same significance throughout this movement as because they occur either in passing (i.e. mm. 1–3) or separately during different passages of clear harmonic shifts, such as mm. 10 and 19. Fb, in particular, is labeled as an incomplete neighbor in Example 7.2A. The Bbb/B pair, though, occurs in the same passages of music as well as the same measures, so their memberships in two closely related modal collections becomes more significant. Bbb belongs in the Ab collection because of its consistent appearances in relation to other pitches (such as Db and Ab). Harmonically, the bass line frequently participates in large intervals such as D–Eb (major seventh; m. 24), D–Db (diminished octave; m. 11), and octave Abs (m. 12). Additionally, Bbb partakes in an interval of a minor ninth with Ab. The use of large intervals among the accompaniment of this movement justifies the inclusion of Bbb within the Ab collection. B-natural, though, is part of a separate collection (F) because of its own tendencies to occur with D-natural. Most importantly, as part of their own dyads, Bbb/B resolve to an Ab major third, the initial implied key of this movement. Example 7.4 shows a voice-leading reduction that shows the tendencies of these dyads.

[213] While the music contains traditional tonal features, such as a key signature that reflects the initial chord, seven diatonic tones, and an open fifth in m. 1, the grouping of tones is referred to as a collection instead of a key. The term scale conveys that the tones fit into the Western tonal system (i.e. major/minor), however, the tones included in this collection do not form the typical scale for F Major.

Example 7.4: The dual voice-leading functions of Bbb from Piano Sonata No. 2, II, mm. 10–14.

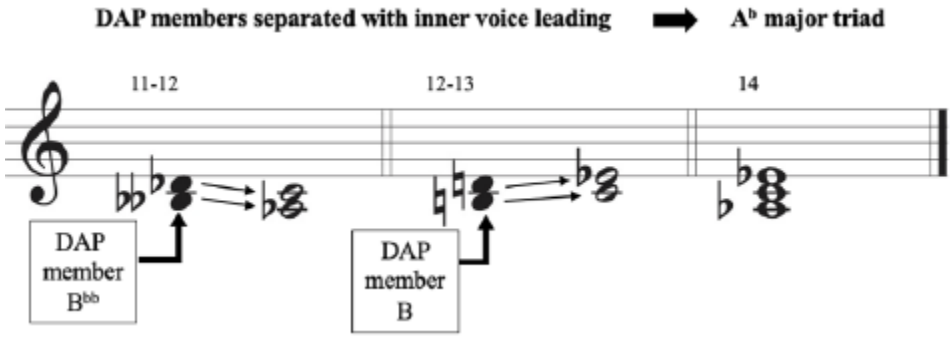


This graph reveals the dual function of the Bbb, once horizontally in m. 11 and once vertically in m. 13. In m. 11: 1) As an underlying, lower neighbor to B-natural, and 2) as a local resolution to Ab. A dotted slur in the right hand (mm. 10–13) reveals that the Bbb functions as a lower neighbor to B-natural. With the B-natural eventually becoming the other DAP member in m. 13, both DAPs intertwine within the dual modalities of Ab and F. In m. 13, the Bbb returns with a new function: as part of the unaligned DAP itself (the m. 11 Bbb established the mode of Ab and accommodated other voice-leading structures). This Bbb acts as an upper neighbor to Ab (shown with a dashed slur between mm. 12–14). It resolves to the bass of the implied Ab major triad in m. 14. The other voices also accommodate the DAP members individually within the underlying structure. The graph presents a voice crossing between hands in mm. 11–12: Db resolves to C and Bbb resolves to Ab, thus creating a vertical A^b/C dyad in m. 12. Similarly, B-natural and D-natural (m. 13) resolve to C/Eb.[214] Both resolutions complete an Ab major triad, which would not be a possible resolution without the DAP.[215] Example 7.5's reduction further examines this exchange.

[214] C in m. 14 is implied by the previous held duration in mm. 12–13. This observation also makes B-natural in m. 13 look like an implied lower neighbor: a dual purpose for the DAP member like the Bbb in m. 11.

[215] Similar to Yavorsky's chain mode resolutions, the resolution to C is doubled from both Db and B-natural. Yavorsky typically represented these doublings in his theoretical works.

Example 7.5: Resolutions from DAP to an Ab major triad in Piano Sonata No. 2, mm. 11–14.



The resolution to an Ab major triad not only confirms the pitch center for the Ab collection, but also confirms the pitch center in the B section. Now with a pitch center of C, the contrasting section affirms the previous resolutions that highlighted both Ab (key of the A sections) and C (key of the contrasting section).

7.3 Analysis of "Katerina's Aria" from *Lady MacBeth of the Mtsensk District*, opp. 29/114 (1930–1932/1955–1963)

Another DAP occurs during a contrasting section of "Katerina's Aria" from *Lady MacBeth of the Mtsensk District.* The form of this aria is AA'BA", with a DAP in the contrasting section (see Table 7.1).

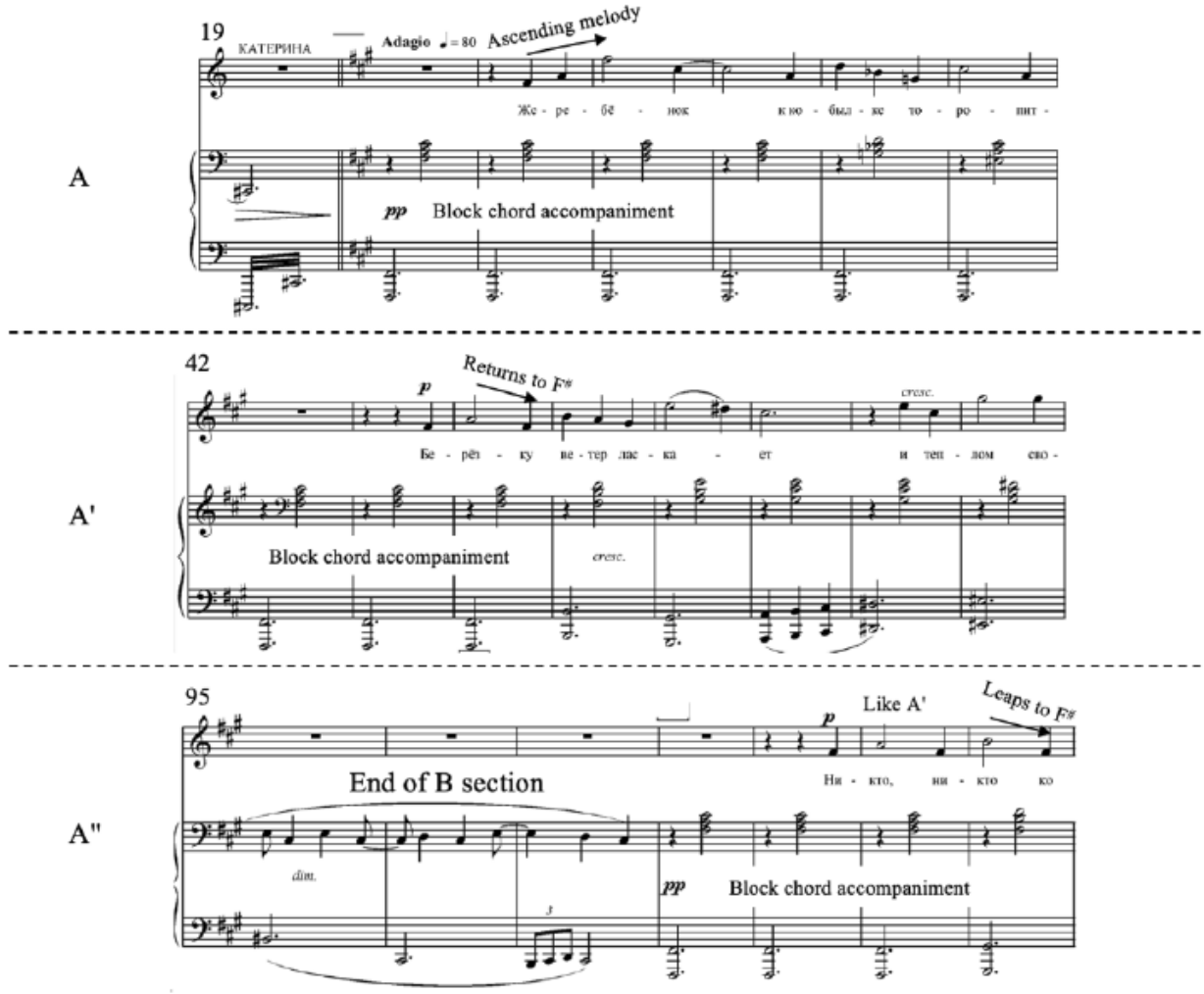
Table 7.1: Form of "Katerina's Aria" from *Lady MacBeth of the Mtsensk District.*

Section:	Introduction	A	A'	B	A"
Measures:	1-19	20-42	43-80	81-97	98-118

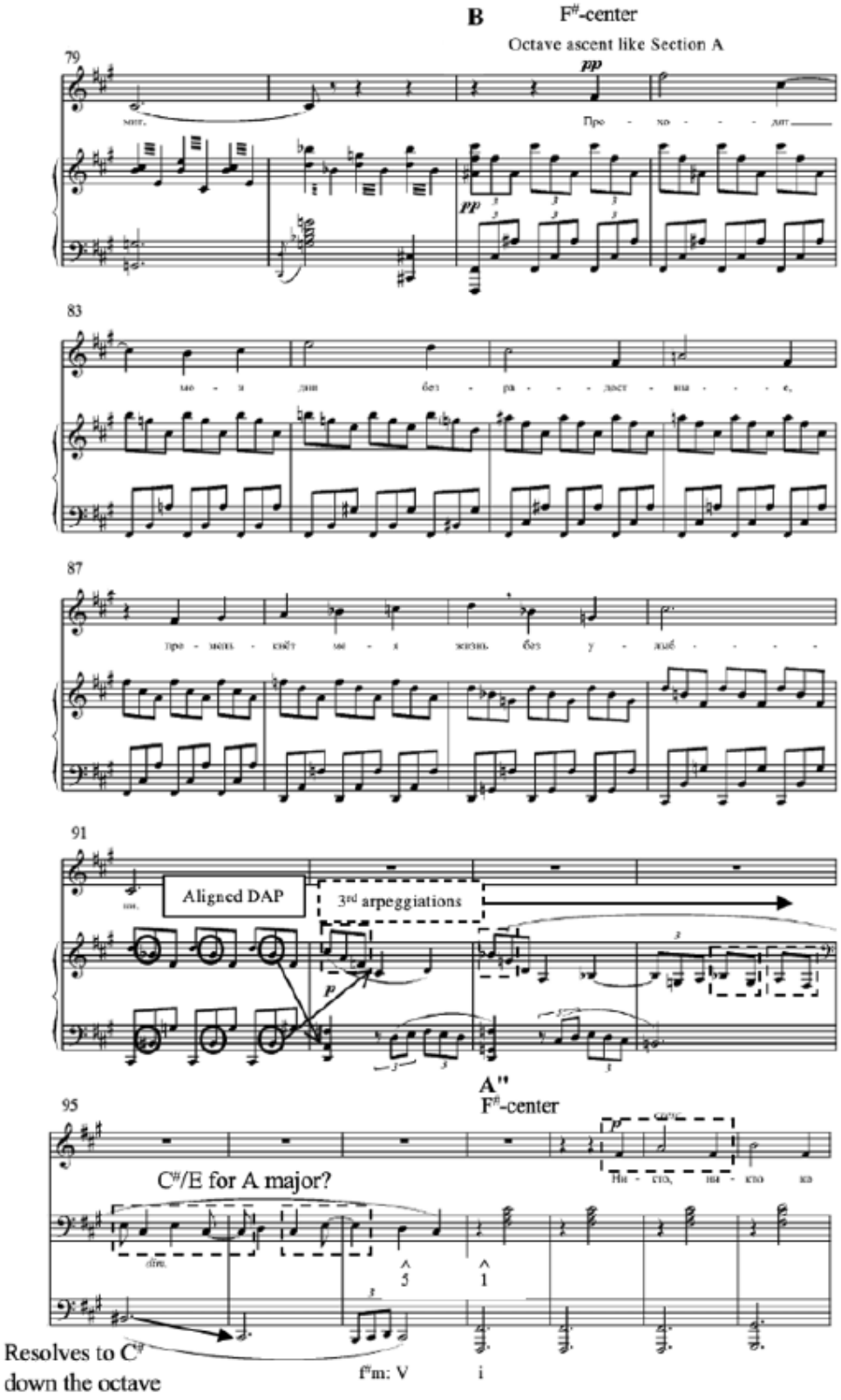
While the DAP occurred consistently within the first section of Piano Sonata No. 2, this aria's DAP happens in its contrasting section (B) when the harmonies, key, and rhythms change. Following the ominous, low register opening, the *Adagio* begins the A section with a melody in the voice. This vocal melody begins on the same pitch, F#, in all of the A sections, but takes a different path in each (shown in Example 7.6). In the A section, starting at m. 20, the melody

ascends by minor third from F# to A and ascends again to F# an octave above. In A' (starting in m. 42), the initial minor third returns, but following the A, the music reverts back to the F# in the same octave. A" opens like A', but leaps back to F# from B in m. 101. Each A section contains almost the same exact block chord accompaniments, with the exception of some harmonies, the texture, however is the same in all three. The passage in which the DAP occurs also contains a melody similar to the A section, but the accompaniment differs from the A section's long tones and duple rhythms, while the contrasting section includes continuous, arpeggiated triplets (see Example 7.7).

Example 7.6: Comparison of the melodies in each A section in Shostakovich's *Lady MacBeth of the Mtsensk District*, op. 29/114 (1932), "Katerina's Aria."

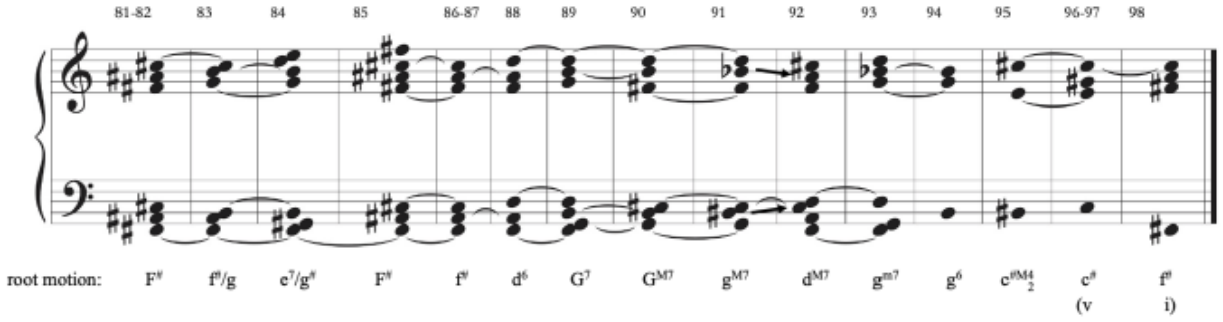


Example 7.7: Contrasting section of "Katerina's Aria" from Shostakovich's Lady MacBeth of the Mtsensk District, op. 29/114 (1932), mm. 79–101.



The DAP aligns in the midst of three accompanimental triplets in the contrasting section (m. 91). Bb in the right-hand resolves to A in the left, while B# in the left-hand resolves to C# in the right, as shown by the arrows in the score. The voice crossing of resolutions is consistent with the arpeggiating directions of both hands (i.e. the right-hand triplets descend towards the A of the left hand, while the left-hand triplets ascend towards the C# of the right hand). M. 92 begins thirds arpeggiations C#–A–F-natural followed by pairs of thirds in mm. 93–97. The thirds serve as a reminder of the F#-A in the A section melodies. At this point, after the transitory and seemingly keyless B section, the thirds bring the music back to a center, but is it going to be A major or F# minor? The DAP resolution to A/C# is ambiguous to both keys, but the repetition of thirds C#/E in mm. 95–97 seem to point to A major. With a B# to the octave below C# in the bass of the same measures, the C# pivots this passage back to F# minor with a V–i progression.

Example 7.8: Reduction of the piano accompaniment in "Katerina's Aria," mm. 81–98.

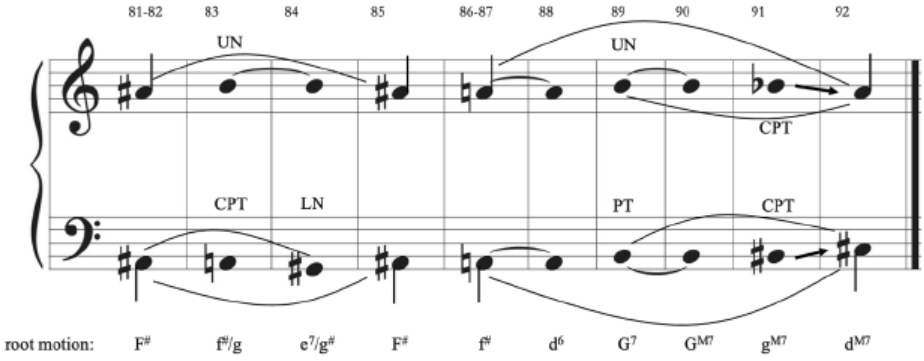


A reduction of this piano accompaniment section appears in Example 7.8. As shown in the reduction, many voices sustain a single tone while inner voices move by step. Eventually, this leads to the DAP in m. 91, highlighted with directional arrows. The reduction from triplets to block chords provides more simplified voice leading. Notice that the arrows drawn from Bb to A in the right-hand and the B# to C# in the left-hand are each within a single voice compared to the score. In other words, my reduction represents pitch-class voice-leading abstracted from the

musical surface. Following the DAP, notice the stepwise bass motion in mm. 94–97, which initiates dominant-tonic motion from C# to F#.

To see the DAP and its resolution more clearly, see Example 7.9 for a two-voice counterpoint reduction.[216] This reduction traces chromaticism among inner voices of the triplets. In the top voice of mm. 81–85, B is a chromatic upper neighbor to A#. Similarly, B becomes a diatonic upper neighbor again to A-natural (mm. 89–90). Therefore, the DAP member Bb in m. 91 acts as a chromatic passing tone between B and A, rather than an enharmonic repeat of the A# from mm. 81–85. The lower voice begins with A#, simultaneous to the upper voice, and moves in contrary motion with the upper voice to arrive again on A# at m. 85.

Example 7.9: Inner voice reduction of "Katerina's Aria," mm. 81–92.



*Root position and inverted chord labels refer to how they appear in the score, not for the two-voice reduction. This reduction traces inner voices.

While the upper voice included B as an upper neighbor, the lower voice is a bit more complex. The initial A# approaches the lower neighbor, G#, through a chromatic passing tone (A-natural). This same process with a chromatic passing and neighbor tone occurs a few measures later in both voices. Following the simultaneous A#s (m. 85), the voices continue to move in contrary motion through m. 92, when the lower voice ascends chromatically to C#. In

[216] Several parallel octaves emerge here as a result of the inner voice motion. In the piano accompaniment, the arpeggiated triplets descend in the upper voice and ascend in the lower voice. Therefore, the middle note of the triplet, representing an inner voice, aligns as octaves in the score.

order to proceed to C#, the lower voice must ascend from A in mm. 86–88 by way of two passing tones: one diatonic and one chromatic. During this ascent, the upper voice–also from A-natural–reaches upwards to B as it did in m. 83, but instead of descending directly to A, Bb interferes as a chromatic passing tone. This process, similar to that of the lower voice (mm. 81–85) allows for the DAP between Bb and B# to occur in the same measure (m. 91). Therefore, the DAP results from inner voice contrapuntal motion in the contrasting section to yield a major 3rd (A/C#), the ambiguous dyad that accompanies other voice-leading devices to transition back to the return of the A section.

7.4 Analysis of *From Jewish Folk Poetry*, op. 79, no. 1

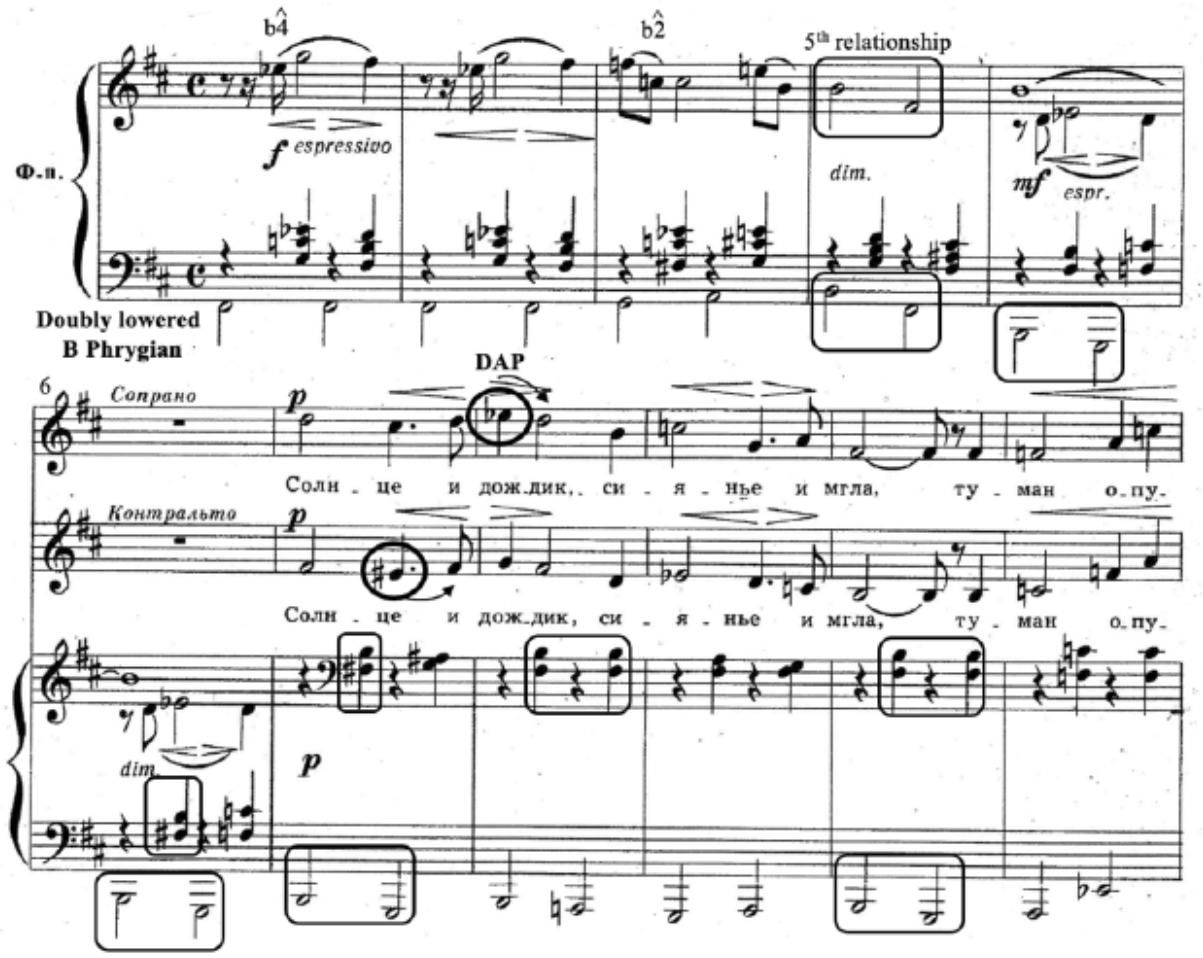
Similar to "Katerina's Aria," Shostakovich's song cycle *From Jewish Folk Poetry*, op. 79, no. 1 (referred to as Song 1) also contains a DAP in its contrasting B section. This DAP (Fb/F#) occurs over the course of the entire movement, but there is also a localized DAP within the A section (Eb/E#) that reoccurs, much like the DAP in Piano Sonata No. 2.

Song 1 begins with a B-center collection, reflected in the given key signature (Example 7.10). The opening bass pedal (F#), B–F# alternating fifths relationship in mm. 4–7, and key signature point to B minor; however, C-natural and Eb are prominent throughout this opening passage (each labeled in the score as scale degrees b2 and b4). Therefore, this collection is in doubly lowered B Phrygian.[217] A visual representation of this scalar collection is shown in Example 7.11. Notice that one DAP member, Eb, belongs to doubly lowered B Phrygian, while E# (shown in parentheses) emphasizes F# (scale degree 5). In the score, circles appear around

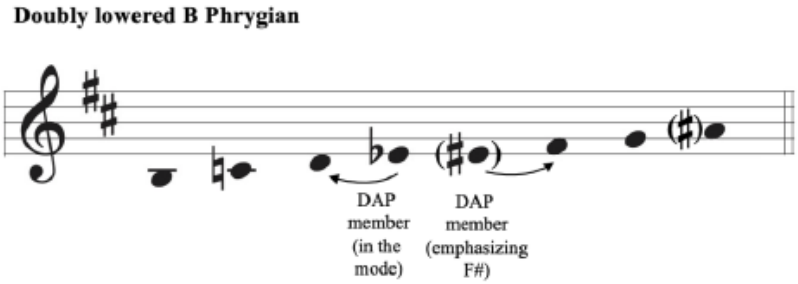
[217] Dolzhansky (1947) presents this term for the collection. Mazel (1967) also identifies this collection in the music of Shostakovich as "intensified Phrygian." Bazayev (2014), [2.6] provides an example from Shostakovich's Symphony No. 5 where a doubly lowered E Phrygian mode occurs in the flute solo of the coda section. The motion from scale-degrees b4–3 is neighboring, like the D and Eb in this example.

the DAP members in mm. 7 and 8. Both resolve immediately and appear to function as neighbor tones in a local context; however, their resolutions to D/F# implies their function as a DAP, where the resolution reflects the given key signature as well as the third and fifth scale degree of the mode on B.

Example 7.10: Opening of *From Jewish Folk Poetry*, op. 79, no. 1.



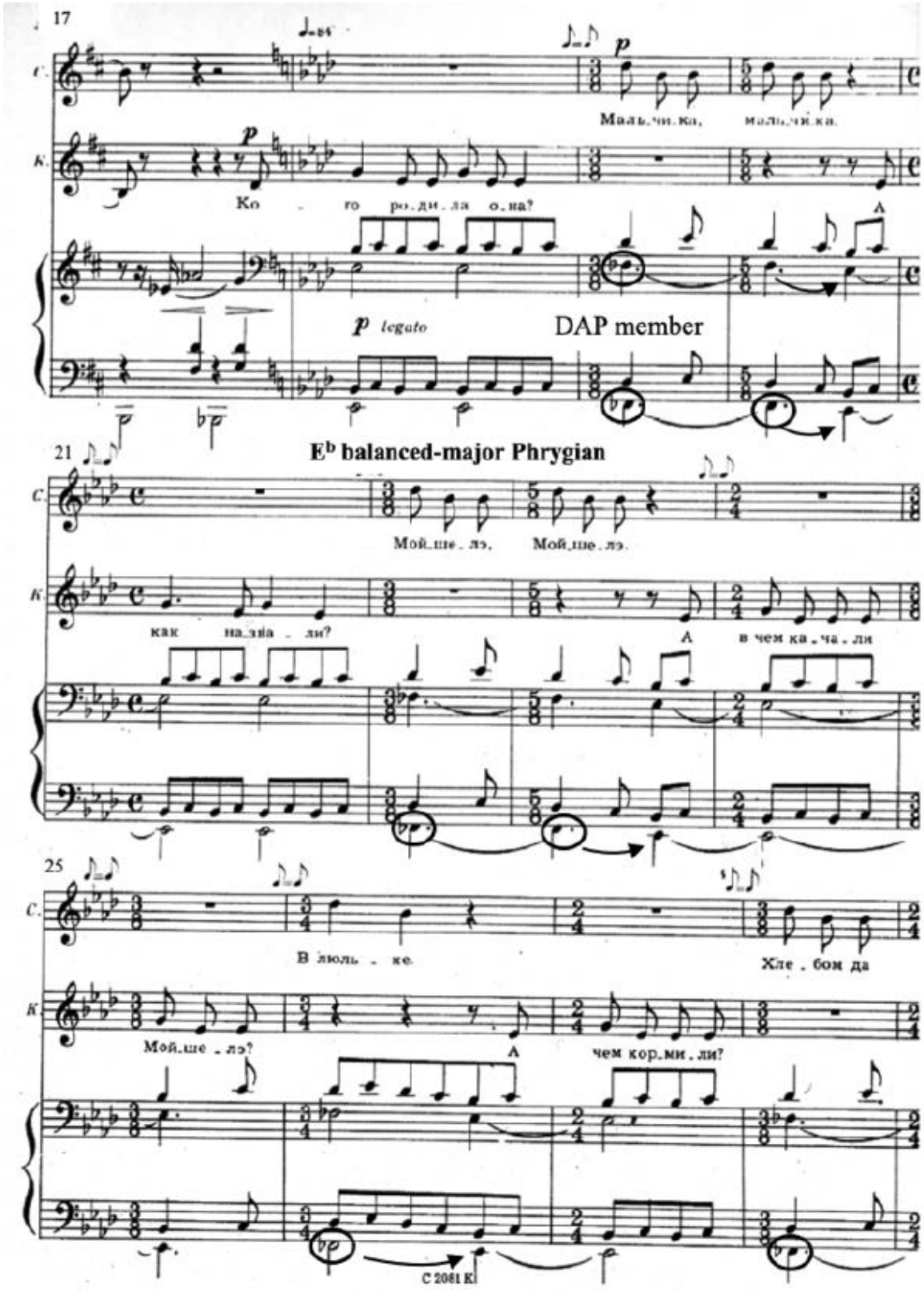
Example 7.11: Mode in the A section of *From Jewish Folk Poetry*, op. 79, no. 1.

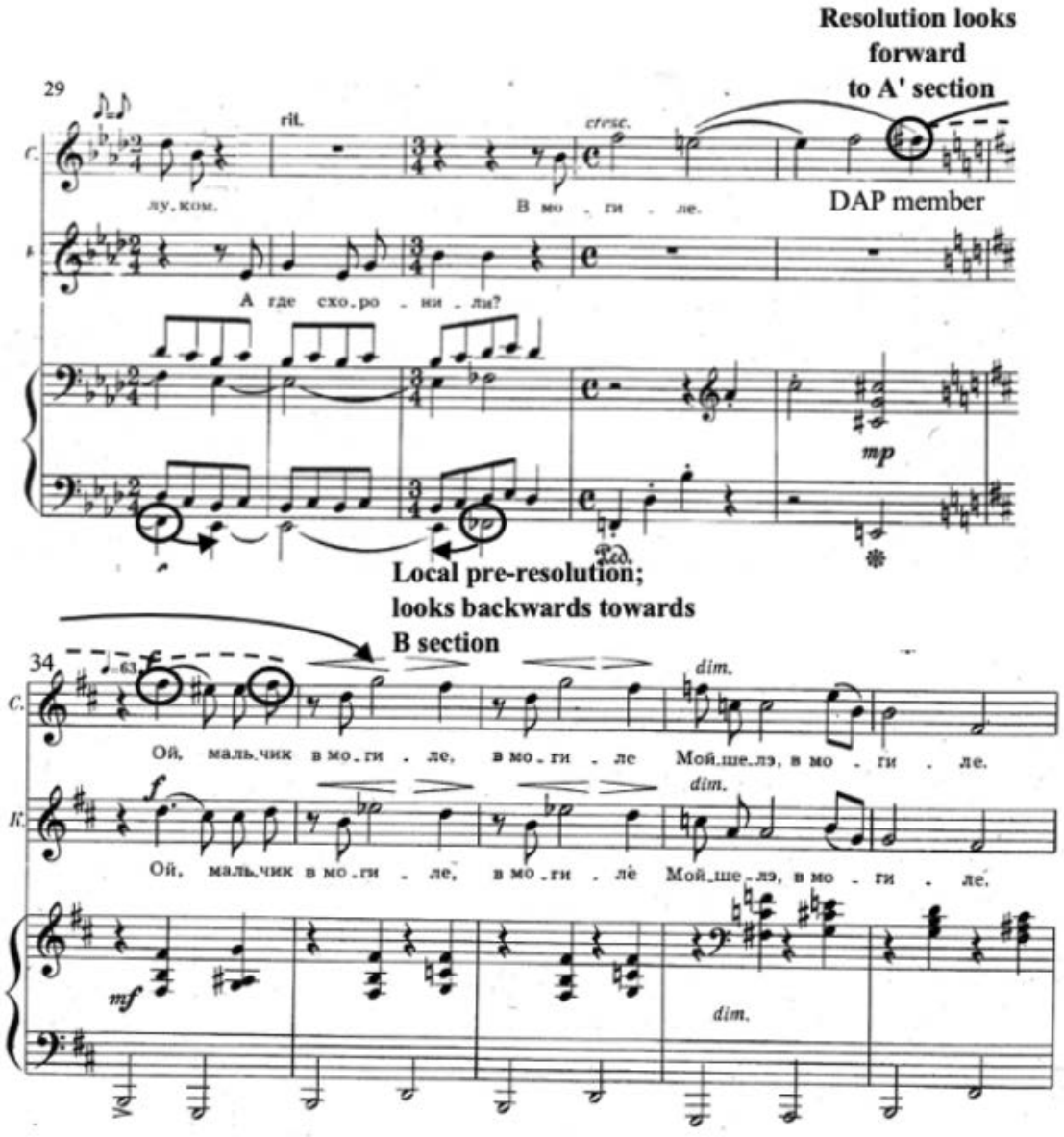


The DAP may occur within a measure or two; however, when other scalar collections arise in other formal sections, a large-scale DAP that encompasses—and that resolves in the course of—the entire movement might appear, similar to other voice-leading archetypes in larger voice-leading analysis. For instance, the form of Song 1 is A (mm. 1–17) –B (mm. 18–33)–A' (mm. 34–43), with a key signature and scalar collection change in the B section (contrasting). The contrasting section is shown in Example 7.12. While the key signature suggests Ab major, there is a consistent emphasis placed on the tone Eb in the bass, as shown by dotted circles in the score. Because of this emphasis, the contrasting section hovers around the Eb major triad. When not on Eb, the bass moves to Fb, a member of Eb balanced major Phrygian and part of this movement's structural DAP.

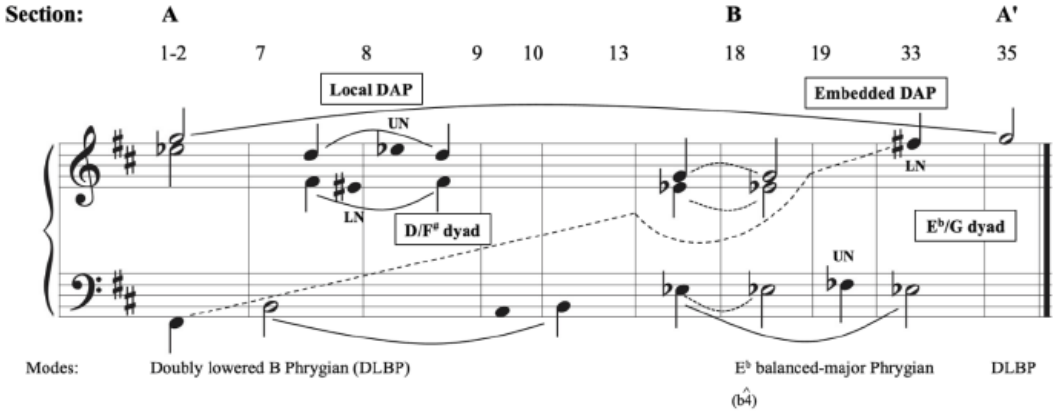
While the Eb/E# occurred in close proximity at the opening of the movement, an embedded DAP–Fb/F#–appears within the contrasting section (shown above with circles). The Fb first appears in m. 19 as an upper neighbor to Eb, the modal center of the B section (scale degree b2 in Eb). Each Fb is held for two measures before it resolves to Eb. I have shown all local resolutions in the score. Locally, m. 31 presents a pre-resolution, as the neighbor motion remains incomplete when Fb does not resolve back to Eb, rather, it ascends to F-natural. While Fb moving to F-natural could also seem like a half resolution, the consistency of the Eb/Fb throughout the B section takes precedence. Also, the pre-resolution conveys a sense of backwards motion towards the B section, from which it came, while the F#'s resolution to G begins in the B section but does not resolve until the A' section. It is not until m. 33 that an F# occurs as the music transitions to A', ultimately resolving to G; however, the initial A section began with F# pedal tones in the bass, which also links the B section to its resolution. Example 7.13 provides a voice-leading reduction of the A and B sections through the beginning of A'.

Example 7.12: ***From Jewish Folk Poetry*****, no. 1, B section (mm. 18-33).**





Example 7.13: Reduction of major sections in *From Jewish Folk Poetry*, no. 1, mm. 1–35.



Notice the locality of Eb/E# (mm. 7–8) compared to the structurally embedded Fb/F# DAP (mm. 19 & 33), which resolves over the course of an entire section. F# from m. 1 in the A section connects to the F# in m. 33 though a diagonal dashed line.[218] Both DAPs, local and embedded, appear on the graph with labels above the staff. Their resolution labels are shown in the middle of the grand staff. Modes also appear below the staff to show the changes between sections. Notice the key relationships of the A and B sections: Eb to B is scale degree b4, which is unique to the doubly-lowered B Phrygian mode.

The most striking observation in this graph is the initial Eb/G (mm.1–2) and how the DAP later resolves with the return of the A section. While Eb is a non-chord tone to D within the A section (mm. 7–8), Fb is needed to resolve back to Eb in the A' section, so it does not appear until the B section. This section incorporates the DAP as a type of tension that resolves when the melody returns in m. 34.[219] Both the local and embedded DAPs provide insight into the modes of the A sections and the B section: D/F# as the third and fifth of doubly lowered B Phrygian; Eb/G as the root and third of Eb balanced-minor Phrygian. Therefore, two DAPs—one in the local context and one in a structural context—confirm the overall key changes between formal sections.

7.5 The DAP after 1950

Following *From Jewish Folk Poetry* in 1948, which was modally oriented, the DAP does not occur as frequently or as often. It was at this point that Shostakovich's style, in regards to orthography, changed. When the DAP did occur, it was not as straightforward. In works prior to 1950, the proximity in which they occurred was suggestive of more than one mode or a

[218] For the purpose of easy viewing, I have added a curve around the Eb/G dyads in m. 18.

[219] The G appears the measure after the return of A (m. 35) because the soprano voice extends the F#.

modulation to a new one. After 1950, enharmonic pitches replace tones that would form a DAP. In this section, I briefly highlight two areas where a DAP occurs, but fails to function normally, according to the voice-leading archetype (*Four Verses of Captain Lebyadkin*, no. 3, op. 146 (1975)) and another instance where orthographies were changed in a later edition, eliminating the original DAPs (*Lady Macbeth*).

7.5.1 Analysis of *Four Verses of Captain Lebyadkin*, no. 3, op. 146

After 1950, instances of DAP gradually disappear, but appear in rather less obvious circumstances. In *Four Verses of Captain Lebyadkin*, no. 3, op. 146, a descending chromatic bassline from G includes both F# and Fb that resolves within four measures (Example 7.14A). This movement opens with a key signature of C major that Shostakovich uses as a blank canvas for chromaticism.[220]

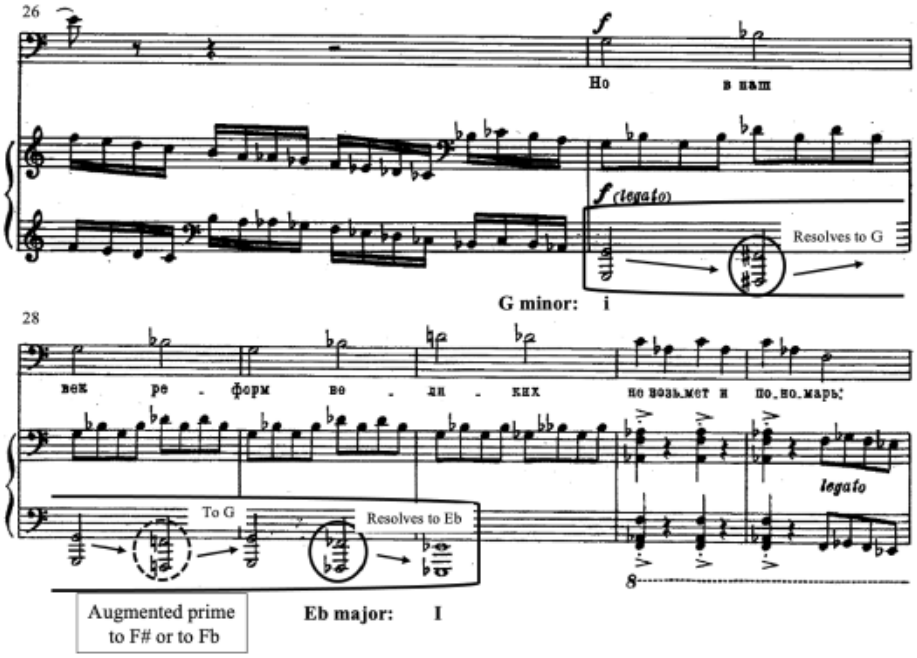
The bassline and upper voices at m. 27 convey the key of G minor. The G in the bassline alternates between different chromatic inflections of F (F#, F-natural, and Fb) before descending to a Eb major harmony in m. 30. F# and F-natural belong to the key of G minor, but Fb acts as a chromatic inflection to Eb. While F# does move to G and Fb resolves down to Eb, the DAP members and their resolutions are spread out among four measures. Example 7.14B shows this expanded resolution with measure numbers along the top. The DAP may occur in a single line (i.e. Piano Sonata No. 1), but its temporal proximity in this instance is larger than the normal measure or four beats distance. Instead, the bass line contains a descending, chromatic pattern in half notes, which elongates because of its motion back to G each time it descends to the next pitch. Therefore, the longer durations and motions back to G explains the expansion of this DAP.

[220] Refer to Fanning (2001).

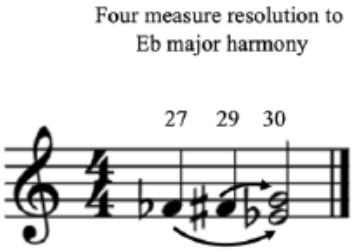
The eventual resolution to Eb major in m. 30 does follow the normal DAP protocol by resolving to a complete Eb major triad. The Fb, then, is necessary for motion to Eb rather than staying in G minor. The bassline pattern provides this transition between keys.

Example 7.14: *Four Verses of Captain Lebyadkin*, no. 3, op. 146, mm. 26–32.

(A) Expanded resolution



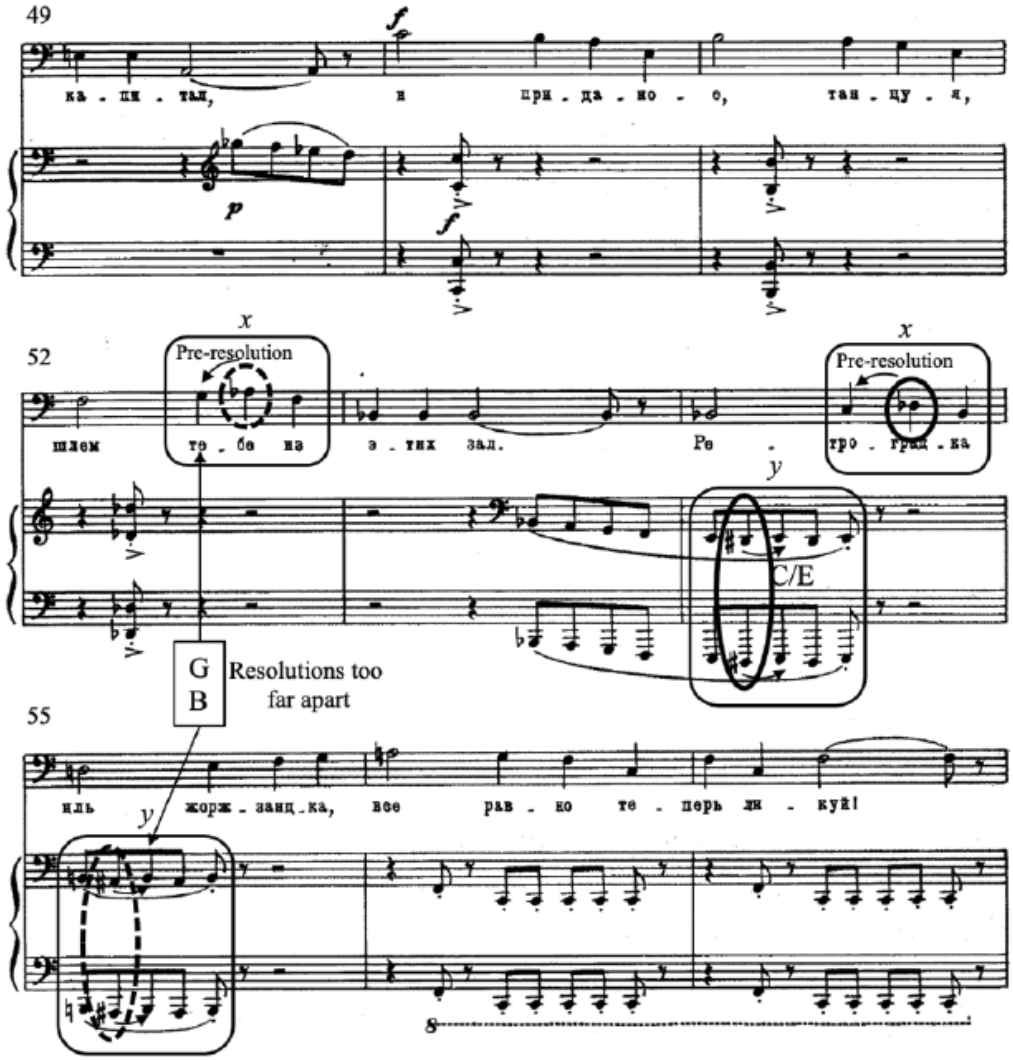
(B) DAP resolution



Several bars later in m. 54, a D# and Db occur in the same measure (see Example 7.15). This unaligned DAP does function normally, resolving to the tonic dyad C/E. Db is a pre-resolution to C and D# resolves normally to E. Both pitches appear on the surface to be neighbor tones, as part of a melodic pattern to strengthen the C major tonic. In the local context, the pitches circled with a dashed line (mm. 52 & 55) are instances of a failed DAP (Ab/A#) resulting

from neighbor motion pattern that occurs adjacent to the measure in question.[221]

Example 7.15: *Four Verses of Captain Lebyadkin*, no. 3, op. 146, mm. 49–57.



In m. 52, this three-note pattern G–Ab–F transposes two measures later to C–Db–B (motive *x*). Similarly, in m. 55, octave neighbor motion B–A#–B is a melodic transposition of m. 54's E–D#–E (motive *y*). Notice the boxes also highlight both sets of DAPs; however, the Ab/A# DAP is temporally disqualified from a normal or abnormal DAP. Had they functioned properly in a proximity of four beats, this dyad would have resulted in a G/B dyad, the dominant of C major.

[221] These patterns are not complete neighbor tones, but instead look neighbor-like in context. In the music, the three-note pattern consists of "up a major second, down a minor third."

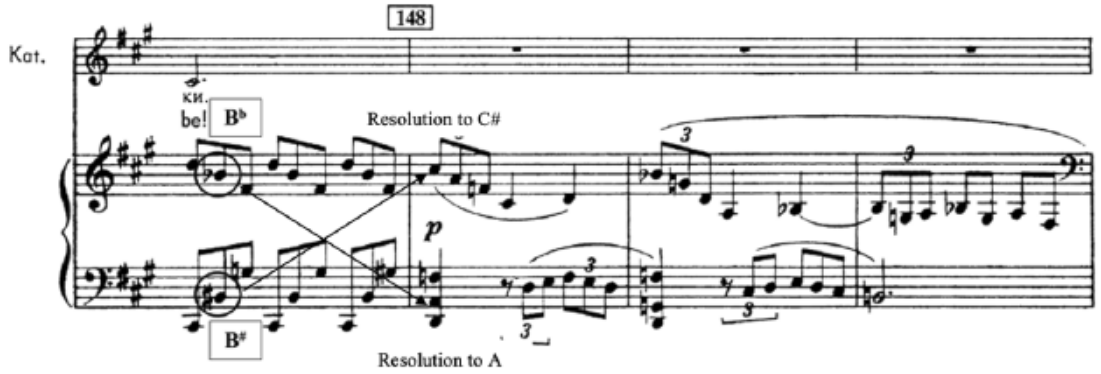
Though the resolution in the previous example was also temporally expanded, this example is much more complex. In addition to the time between the resolutions, other harmonies have occurred, including the D#/Db DAP, which follows the established voice-leading archetype. Simply, the A#/Ab occur because of motivic transposition.

7.5.2 The "Disappearing" DAP in Revisions of *Lady MacBeth of the Mtsensk District*

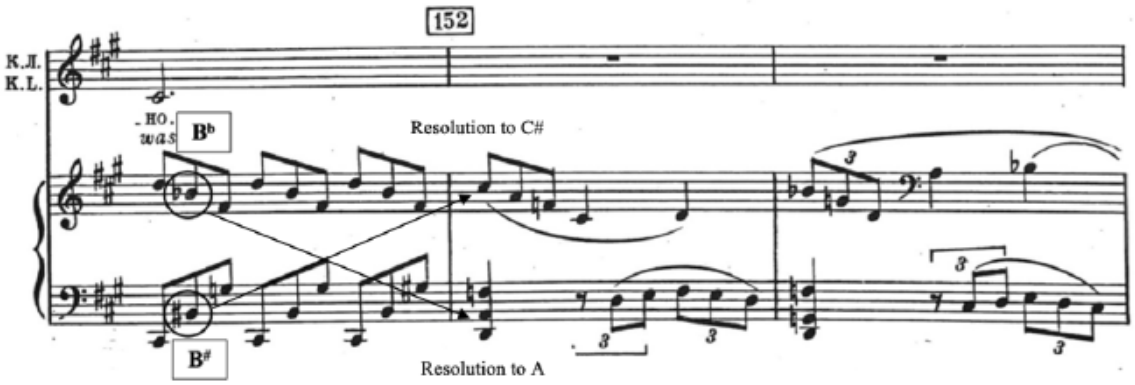
Many composers revise their own works as time passes, but few revise a stylistic characteristic out of the newer version. In the case of *Lady Macbeth*, Shostakovich revised two passages where there was once a DAP to one member's enharmonic pitch. There was one instance, however, where he did not remove the DAP, of which I begin.

Example 7.16: DAP comparison in two editions, "Katerina's Aria."

a. ***Lady Macbeth*, "Katerina's Aria" op. 29 (1930-32), Reh 148**



b. ***Lady Macbeth*, "Katerina's Aria," op. 114 (1955-63), Reh 152**



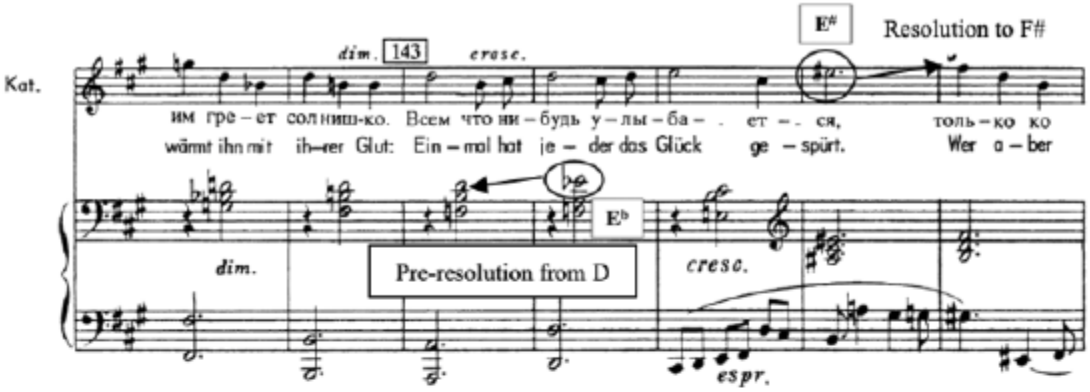
The rehearsal numbers between both editions—op. 29 (1930–1932) and op. 114 (1955–1963)—fluctuate. The first example of this can be found in a familiar excerpt from "Katerina's Aria" (Example 7.16), where the DAP Bb/B# occurs a measure before reh. 148, but in the later version, the same DAP appears one measure prior to reh. 152. Shostakovich keeps the DAP Bb/B# in the later edition. This is the only DAP that he keeps between both versions of this piece.

The next example comes five rehearsal numbers earlier in "Katerina's Room," reh. 143 (Example 7.17). In the op. 29 (Example 7.17a) passage, Eb one measure after reh. 143 appears along with an E# two measures later. This first edition DAP resolves to D/F#, the third and fifth of the B minor triad in the last measure of this passage. In op. 114 (Example 7.17b), where the rehearsal numbers have shifted again to reh. 147, the same E# occurs in the voice, but the Eb has changed to a D#, therefore eliminating the original DAP and its resolution. Instead, based on the voice-leading archetype I have followed thus far, the D# resolves to E, which creates an E/F# dyad. Though a major second occurred within abnormal resolutions, the pitches from which it resolved are not the same letter name nor a DAP. Might the change in the right-hand's clef from bass in op. 29 to treble in op. 114 influenced Shostakovich to "fix" the accidentals? No other accidentals have been altered in this passage. By eliminating the Eb and replacing it with a D#, he creates a harmonic augmented prime in that measure.

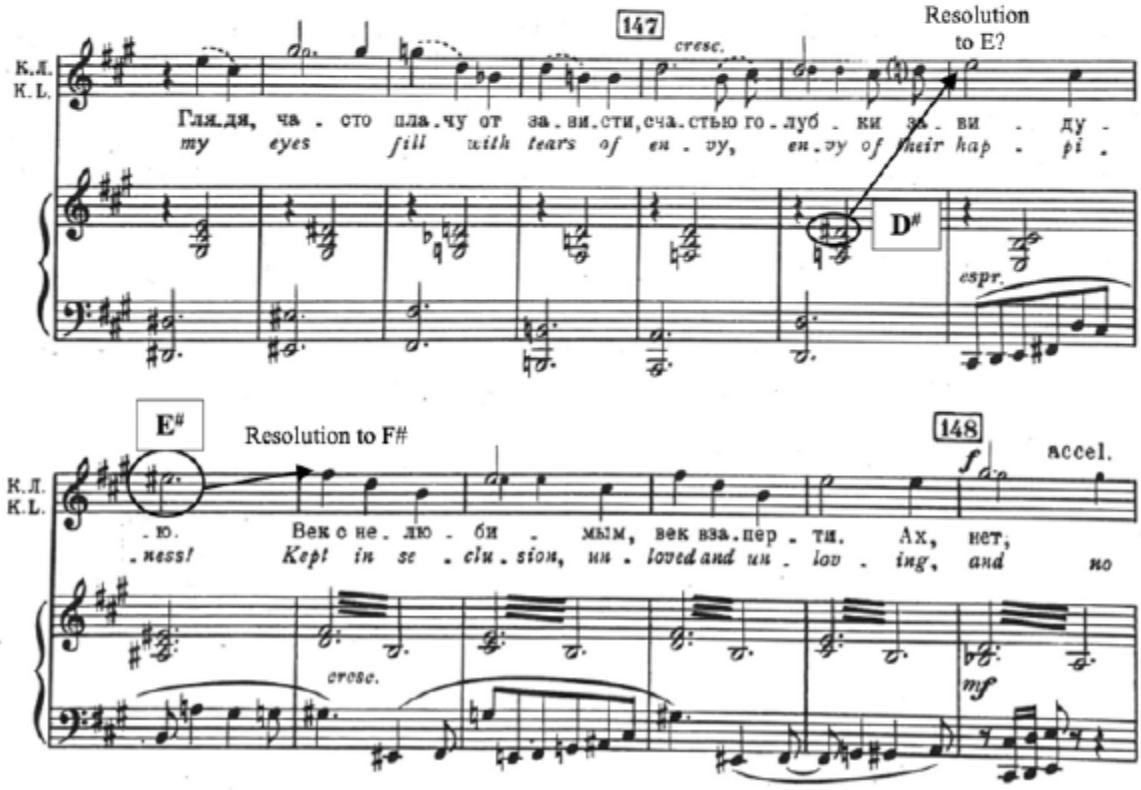
The last example occurs in "The Yard" (Example 7.18). In op. 29, C# creates a DAP with Cb one measure later in the right hand of the accompaniment. In op. 114, though, this Cb is replaced by a B-natural. Again, this replacement creates a harmonic augmented prime with the Bb in the bass.

Example 7.17: DAP comparison in two editions, "Katerina's Room."

a. *Lady Macbeth*, "Katerina's Room" op. 29 (1930-32), Reh 143

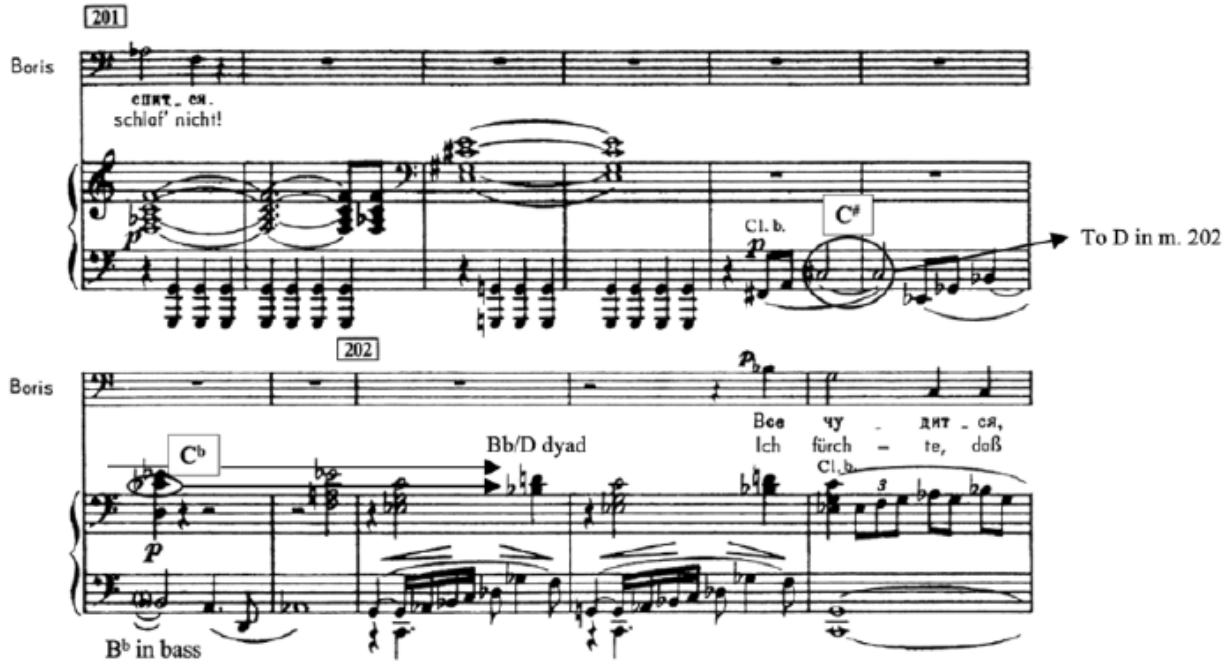


b. *Lady Macbeth*, "Katerina's Room," op. 114 (1955-63), Reh 147-48

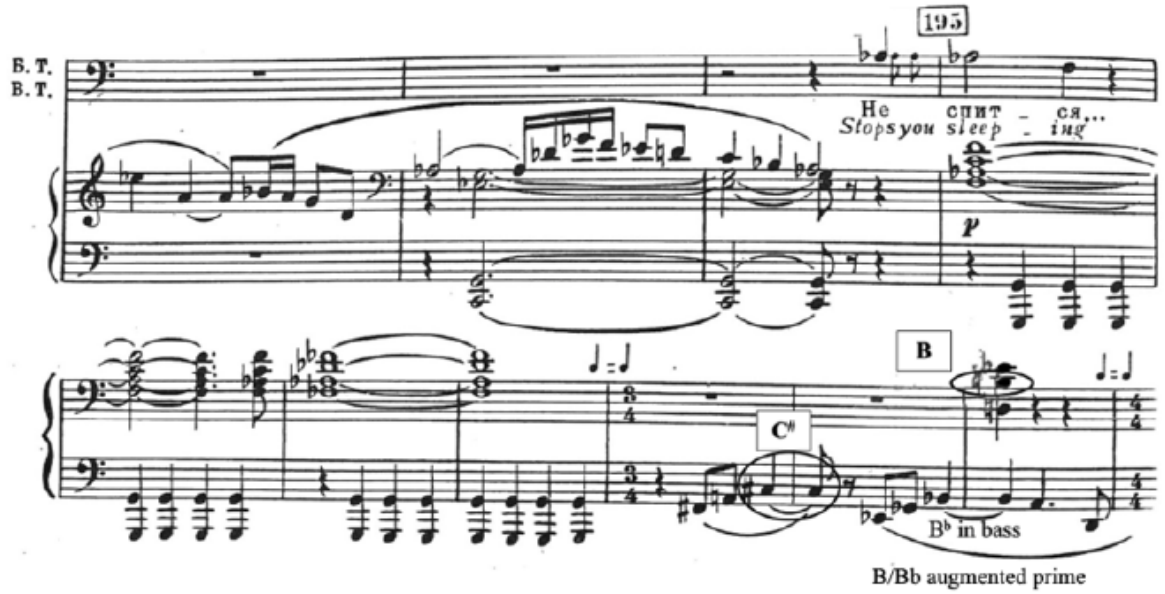


Example 7.18: DAP comparison in two editions, "The Yard."

a. ***Lady Macbeth*, "The Yard," op. 29 (1930-32), Reh 201-202**



b. ***Lady Macbeth,* "The Yard," op. 114 (1955-63), Reh 194-95**



CHAPTER 8

CONCLUSION

Many questions still remain unanswered among Ogolevets's "Foundations of Harmonic Language" (*Основы гармонического языка*). Are "altered" pitches altered with respect to an underlying diatonic mode, or are they merely pitches with accidentals? Why does Ogolevets focus on the resolution of augmented prime but pass over the doubly augmented prime? In some cases, when both types resolve, they may form a major or minor triad. Yavorsky's theory of tritone resolutions and symmetrical systems form complete modes; why shouldn't Ogolevets's be similar? Through an examination of musical examples with augmented prime, my research developed Ogolevets's original theories of mode as well as the musical contexts from which augmented primes occur. As a result, I explained why music by Shostakovich contains various accidentals that do not fit into one complete mode, therefore offering insight into his unique style.

Future research might entail a survey of Ogolevets's other intervals—doubly diminished thirds, doubly augmented seconds, and triply diminished fourths—that, along with the DAP, were mentioned in passing as second order complexes. How might these intervals appear and function within musical contexts? Did Shostakovich also involve these types of intervals? Do they involve their own voice-leading archetypes? Further, aside from Shostakovich, perhaps Prokofiev or other twentieth-century Russian composers used the DAP or the other intervals. If so, might their voice-leading structures and resolutions look different from that of Shostakovich. There are many avenues to follow in order to understand the complexity of Russian compositions as well as their theory counterparts. A deeper look into each of these paths might help bring this evolving field of historical music theory into perspective for future generations of scholars.

APPENDIX

OGOLEVETS'S FAMILIES OF MODE WITH TRANSLATION FROM BAZAYEV (2014, TABLES 1A & 1B)

Лады 1-го семейства		*Лады 3-го семейства*	
Острый мажор *[гармонический, синхронный лад 4α + 6αρ]* *До—ре♭—ми—фа♯—соль—ля♭—си—до* *[Суммарно: 16α + 12β]* *Белое пятно*	***Острый минор*** *[гармонический, синхронный лад 4β + 6αρ]* *До—ре♭—ми♭—фа♯—соль—ля♭—си—до* *[Суммарно: 16β + 12α]* *Белое пятно*	***Мажорированный фригийский гармонический*** *[асинхронный, остро-гармонический минорный лад 4β + αρ]* *До—ре♭—ми—фа—соль—ля♭—си—до* *[Суммарно: 10α + 14β]* *Белое пятно*	***Фригийский гармонический*** *[интенсивный, остро-гармонический лад 12β + αρ]* *До—ре♭—ми♭—фа—соль—ля♭—си—до* *[Суммарно: 6α + 18β]* *Белое пятно*
Остро-спокойный мажор *[гармонический, синхронный лад 4α + 0αρ]* *До—ре♭—ми—фа♯—соль—ля—си♭—до* *[Суммарно: 14α + 10β]* *Белое пятно*	***Остро-спокойный минор*** *[гармонический, синхронный лад 4β + 6αβ]* *До—ре♭—ми♭—фа♯—соль—ля—си♭—до* *[Суммарно: 14β + 10α]* *Белое пятно*	***Мажорированный фригийский уравновешенный*** *[асинхронный, уравновешенно-гармонический минорный лад 4α + αρ]* *До—ре♭—ми—фа—соль—ля—си♭—до* *[Суммарно: 10α + 14β]* *Известен как лад еврейской народной песни*	***Фригийский уравновешенный*** *[интенсивный, уравновешенно-гармонический лад 12β + αρ]* *До—ре♭—ми♭—фа—соль—ля—си♭—до* *[Суммарно: 4α + 16β]* *Белое пятно*
Остро-интенсивный мажор *[синхронно-мелодический прямолинейный лад 4α + 8α]* *До—ре♭—ми—фа♯—соль—ля—си—до* *[Суммарно: 19α + 7β]* *Белое пятно*	***Острый миноро-мажор*** *[синхронно-мелодический противоречивый лад 4β + 8α]* *До—ре♭—ми♭—фа♯—соль—ля♭—си—до* *[Суммарно: 11β + 15α]* *Белое пятно*	***Мажорированный фригийский мелодический*** *[асинхронный, мелодический противоречивый лад 4β + 8α]* *До—ре♭—ми—фа—соль—ля—си—до* *[Суммарно: 13α + 9β]* *Белое пятно*	***Фригийский мелодический*** *[интенсивный, мелодический противоречивый лад 12β + 8α]* *До—ре♭—ми♭—фа—соль—ля—си—до* *[Суммарно: 9α + 13β]* *Белое пятно*
Острый миноро-мажор *[синхронно-мелодический противоречивый лад 4α + 8β]* *До—ре♭—ми—фа♯—соль—ля♭—си♭—до* *[Суммарно: 11α + 15β]* *Белое пятно*	***Остро-интенсивный минор*** *[синхронно-мелодический прямолинейный лад 4β + 8β]* *До—ре♭—ми♭—фа♯—соль—ля♭—си♭—до* *[Суммарно: 19β + 7α]* *Белое пятно*	***Мажорированный фригийский*** *[асинхронный, мелодический прямолинейный мажорный лад 4β + 8α]* *До—ре♭—ми—фа—соль—ля♭—си♭—до* *[Суммарно: 5α + 17β]* *Белое пятно*	***Фригийский*** *[вдвойне интенсивный, минорный натуральный лад 12β + 8β]* *До—ре♭—ми♭—фа—соль—ля♭—си♭—до* *[Суммарно: 21β + 1α]* *Известен как церковный лад*
Лады 2-го семейства		*Лады 4-го семейства*	
Лидийский гармонический *[интенсивный, остро-гармонический противоречивый лад 12α + αρ]* *До—ре—ми—фа♯—соль—ля♭—си—до* *[Суммарно: 18α + 6β]* *Белое пятно*	***Минорированный лидийский гармонический*** *[асинхронный, остро-гармонический лад, мажорный 4α + αρ]* *До—ре—ми♭—фа♯—соль—ля♭—си—до* *[Суммарно: 14α + 10β]* *Известен как лад цыганской народной песни*	***Мажор гармонический*** *[синхронный, остро-гармонический лад 4α + αρ]* *До—ре—ми—фа—соль—ля♭—си—до* *[Суммарно: 12α + 8β]* *Известен со 2-й половины XIX в. Как «гармонический мажор»*	***Минор гармонический*** *[синхронный, остро-гармонический лад 4 + 0]* *До—ре—ми♭—фа—соль—ля♭—си—до* *[Суммарно: 8α + 12β]* *Известен как гармонический минор—основа минорной гармонии*
Лидийский уравновешенный *[интенсивный, уравновешенно-гармонический противоречивый лад 12α + αρ]* *До—ре—ми—фа♯—соль—ля—си♭—до* *[Суммарно: 16α + 4β]* *Известен как применявшийся в «Прометее» Скрябиным*	***Минорированный лидийский уравновешенный*** *[асинхронный, уравновешенно-гармонический, мажорный лад 4α + αρ]* *До—ре—ми♭—фа♯—соль—ля—си♭—до* *[Суммарно: 12α + 8β]* *Известен как лад еврейской народной песни*	***Субмажор*** *[синхронный, уравновешенно-гармонический лад 4α + αρ]* *До—ре—ми—фа—соль—ля—си♭—до* *[Суммарно: 10α + 6β]* *Известен как миксолидийский церковный лад*	***Субминор*** *[синхронный, уравновешенно-гармонический лад 4α + αρ]* *До—ре—ми♭—фа—соль—ля—си♭—до* *[Суммарно: 6α + 10β]* *Известен как дорийский церковный лад*
Лидийский лад [супермажор прежней эпохи] *[вдвойне интенсивный, мажорный натуральный лад 12α + 8α]* *До—ре—ми—фа♯—соль—ля—си—до* *[Суммарно: 21α + 1β]* *Известен как церковный лад*	***Минорированный лидийский мажор*** *[асинхронный, мелодический прямолинейный лад 4α + 8α]* *До—ре—ми♭—фа♯—соль—ля—си—до* *[Суммарно: 17α + 5β]* *Белое пятно*	***Мажор*** *[синхронный, прямолинейный минорный натуральный лад 4α + 8α]* *До—ре—ми—фа—соль—ля—си—до* *[Суммарно: 15α + 3β]* *Известен как основа основ европейской теории и классической музыки «мажор», ионийский церковный лад*	***Минор мелодический [миноро-мажор]*** *[синхронный, мелодический противоречивый лад 4β + 8α]* *До—ре—ми♭—фа—соль—ля—си—до* *[Суммарно: 7β + 11α]* *Известен как «мелодический минор»*
Лидийский мелодический *[интенсивный, мелодический противоречивый лад 12α + 8β]* *До—ре—ми—фа♯—соль—ля♭—си♭—до* *[Суммарно: 13α + 9β]* *Белое пятно*	***Минорированный лидийский мелодический*** *[асинхронный, мелодический противоречивый лад 4α + 8β]* *До—ре—ми♭—фа♯—соль—ля♭—си♭—до* *[Суммарно: 7α + 11β]* *Белое пятно*	***Мажор мелодический*** *[синхронный мелодический противоречивый лад 4α + 8 β]* *До—ре—ми—фа—соль—ля♭—си♭—до* *Допускается как лад некоторыми теоретиками*	***Минор*** *[синхронный, прямолинейный минорный натуральный лад 4β + 8β]* *До—ре—ми♭—фа—соль—ля♭—си♭—до* *[Суммарно: 5α + 15β]* *Известен как натуральный минор, эолийский церковный лад*

Family 1		*Family 3*	
Harsh major *[harmonic, synchronous mode 4α + 6αρ]* *Do—re♭—mi—fa♯—sol—la♭—ti—do* *[Total sum: 16α + 12β]* *No Association*	***Harsh minor*** *[harmonic, synchronous mode 4β + 6αρ]* *Do—re♭—mi♭—fa♯—sol—la♭—ti—do* *[Total sum: 16β + 12α]* *No Association*	***Harmonic-Major Phrygian*** *[synchronous, harsh-harmonic minor mode 4β + αρ]* *Do—re♭—mi—fa—sol—la♭—ti—do* *[Total sum: 10α + 14β]* *No Association*	***Harmonic Phrygian*** *[intense, harsh-harmonic mode 12β + αρ]* *Do—re♭—mi♭—fa♯—sol—la♭—ti—do* *[Total sum: 6α + 18β]* *No Association*
Harsh-tranquil major *[harmonic, synchronous mode 4α + 0αρ]* *Do—re♭—mi—fa♯—sol—la—ti♭—do* *[Total sum: 14α + 10β]* *No Association*	***Harsh-tranquil minor*** *[harmonic, synchronous mode 4β + 6αβ]* *Do—re♭—mi♭—fa♯—sol—la—ti♭—do* *[Total sum: 14β + 10α]* *No Association*	***Balanced-Major Phrygian*** *[synchronous, balanced-harmonic minor mode 4α + αρ]* *Do—re♭—mi—fa—sol—la—ti♭—do* *[Total sum: 10α + 14β]* *Known as Jewish folk mode*	***Balanced Phrygian*** *[intense, balanced-harmonic mode 12β + αρ]* *Do—re♭—mi♭—fa—sol—la—ti♭—do* *[Total sum: 4α + 16β]* *No Association*
Harsh-intense major *[synchronous-melodic, straightforward mode 4α + 8α]* *Do—re♭—mi—fa♯—sol—la—ti—do* *[Total sum: 19α + 7β]* *No Association*	***Harsh minor-major*** *[synchronous-melodic, non-straightforward mode 4β+8α]* *Do—re♭—mi♭—fa♯—sol—la—ti—do* *[Total sum: 11β + 15α]* *No Association*	***Major-Melodic Phrygian*** *[synchronous, melodic non-straightforward mode 4β + 8α]* *Do—re♭—mi—fa—sol—la—ti—do* *[Total sum: 13α + 9β]* *No Association*	***Melodic Phrygian*** *[intense, melodic non-straightforward mode 12β + 8α]* *Do—re♭—mi♭—fa—sol—la—ti—do* *[Total sum: 9α + 13β]* *No Association*
Harsh major-minor *[synchronous-melodic, non-straightforward mode 4α+8β]* *Do—re♭—mi—fa♯—sol—la♭—ti♭—do* *[Total sum: 11α + 15β]* *No Association*	***Harsh-intese minor*** *[synchronous-melodic, straightforward mode 4β + 8β]* *Do—re♭—mi♭—fa♯—sol—la♭—ti♭—do* *[Total sum: 19β + 7α]* *No Association*	***Phrygian Major*** *[synchronous, melodic straightforward major mode 4β + 8α]* *Do—re♭—mi—fa—sol—la♭—ti♭—do* *[Total sum: 5α + 17β]* *No Association*	***Phrygian*** *[double intense, natural minor mode 12β + 8β]* *Do—re♭—mi♭—fa—sol—la♭—ti♭—do* *[Total sum: 21β + 1α]* *Known as church mode*
Family 2		*Family 4*	
Harmonic Lydian *[intense, harsh-harmonic non-straightforward mode 12α + αρ]* *Do—re—mi—fa♯—sol—la♭—ti—do* *[Total sum: 18α + 6β]* *No Association*	***Minor-Harmonic Lydian*** *[asynchronous, harsh-harmonic mode, major 4α + αρ]* *Do—re—mi♭—fa♯—sol—la♭—ti—do* *[Total sum: 14α + 10β]* *Known as Gypsy folk mode*	***Harmonic Major*** *[synchronous, harsh-harmonic mode 4α + αρ]* *Do—re—mi—fa—sol—la♭—ti—do* *[Total sum: 12α + 8β]* *Known from the second half of the 19th century as «harmonic major»*	***Harmonic Minor*** *[synchronous, harsh-harmonic mode 4 + 0]* *Do—re—mi♭—fa—sol—la♭—ti—do* *[Total sum: 8α + 12β]* *Known as harmonic minor: foundation of minor harmony*
Balanced Lydian *[intense, balanced-harmonic non-straightforward mode 12α + αρ]* *Do—re—mi—fa♯—sol—la—ti♭—do* *[Total sum: 16α + 4β]* *Known as Scriabin's «Prometheus» mode*	***Balanced-Minor Lydian*** *[synchronous, balanced-harmonic major mode 4α + αρ]* *Do—re—mi♭—fa♯—sol—la—ti♭—do* *[Total sum: 12α + 8β]* *Known as Jewish folk mode*	***Sub-Major*** *[synchronous, balanced-harmonic mode 4α + αρ]* *Do—re—mi—fa—sol—la—ti♭—do* *[Total sum: 10α + 6β]* *Known as Mixolydian church mode*	***Sub-Minor*** *[synchronous, balanced-harmonic mode 4α + αρ]* *Do—re—mi♭—fa—sol—la—ti♭—do* *[Total sum: 6α + 10β]* *Known as Dorian church mode*
Lydian lad [super-major of past century] *[double intense, natural minor mode 12α + 8α]* *Do—re—mi—fa♯—sol—la—ti—do* *[Total sum: 21α + 1β]* *Known as a church mode*	***Lydian Minor-Major*** *[synchronous, straightfoward melodic mode 4α + 8α]* *Do—re—mi♭—fa♯—sol—la—ti—do* *[Total sum: 17α + 5β]* *No Association*	***Major*** *[synchronous, straightforward natural-minor mode 4α+8α]* *Do—re—mi—fa—sol—la—ti—do* *[Total sum: 15α + 3β]* *Known as the foundation of all Western European music and theory; «major», Ionian church mode*	***Melodic Minor [minor-major]*** *[synchronous, melodic non-straightforward mode 4β + 8α]* *Do—re—mi♭—fa—sol—la—ti—do* *[Total sum: 7β + 11α]* *Known as «melodic minor»*
Melodic Lydian *[intense, non-straightforward melodic mode 12α + 8β]* *Do—re—mi—fa♯—sol—la♭—ti♭—do* *[Total sum: 13α + 9β]* *No Association*	***Minor-Melodic Lydian*** *[synchronous, non-straightforward melodic mode 4α+8β]* *Do—re—mi♭—fa♯—sol—la♭—ti♭—do* *[Total sum: 7α + 11β]* *No Association*	***Melodic Major*** *[synchronous, melodic non-straightforward mode 4α + 8 β]* *Do—re—mi—fa—sol—la♭—ti♭—do* *Known as lad to some theorists*	***Minor*** *[synchronous, straightforward natural-minor mode 4β+8β]* *Do—re—mi♭—fa—sol—la♭—ti♭—do* *[Total sum: 5α + 15β]* *Known as natural minor; Aeolian church mode*

BIBLIOGRAPHY

Agawu, Kofi. 2011. “Taruskin’s Problem(s).” *Music Theory Spectrum* 33, no. 2: 186–90.

Bakulina, Ellen. 2014. “The Concept of Mutability in Russian Theory.” *Music Theory Online* 20, no. 3.

—. 2020. “The ‘Brigade Textbook:’ Disseminating the Riemannian Legacy in the Russian-Soviet Theoretical Tradition.” *Theoria* 26.

—. 2020. “Theories of Harmonic Function in Russia: An Introduction to Three Essays.” *Theoria* 26.

—. 2020. “Tonal Pairing in Two of Rachmaninoff’s Songs.” From *Analytical Approaches to 20th-Century Russian Music: Tonality, Modernism, Serialism*. Ed. by Inessa Bazayev and Christopher Segall. New York: Routledge, 13–31.

Bass, Richard. 1988. “Prokofiev’s Technique of Chromatic Displacement.” *Music Analysis* 7, no. 2: 197–214.

Bazayev, Inessa. 2014. “The Expansion of the Concept of Mode in Twentieth-Century Russian Music Theory.” *Music Theory Online* 20, no. 3.

—. 2018. “An Octatonic History of Prokofiev’s Compositional Oeuvre.” *Music Theory Online* 24, no. 2.

Berger, Arthur. 1963. “Problems of Pitch Organization in Stravinsky.” In *Perceptions on Schoenberg and Stravinsky*. Ed. by Benjamin Boretz and Edward T. Cone. Princeton: Princeton University Press, 11–42.

Bobykina, I. A., ed. 2000. *Дмитрий Шостакович: в письмах и документах* [Dmitri Shostakovich: In letters and documents]. Antikva.

Braudel, Fernand. 1995. *A History of Civilizations*. Translated by Richard Mayne. Penguin Publishing Group.

Braun, Joachim. 1984. “Shostakovich’s Song Cycle *From Jewish Folk Poetry*: Aspects of Style and Meaning.” From *Russian and Soviet Music: Essays for Boris Schwarz*. Ann Arbor, MI, UMI Research Press: 259–81.

Brown, Stephen C. 2006. “Tracing the Origins of Shostakovich’s Musical Motto.” *Intégral* 20: 69–103.

—. 2009. “Axis Tonality and Submediant in the Music of Shostakovich.” *Music Theory Online* 15, no. 2.

—. 2011. “ic1/ic5 Interaction in the Music of Shostakovich.” *Music Analysis* 28, no. 2–3: 185–220.

Burke, Richard N. 1999. “Film, Narrative, and Shostakovich’s Last Quartet.” *The Musical Quarterly* 83, no. 3: 413–29.

Caplin, William. 1998. *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven*. New York: Oxford University Press.

Carpenter, Ellon DeGrief. 1988. “The Theory of Music in Russia and the Soviet Union, ca. 1650–1950.” PhD diss., University of Pennsylvania.

—. 1995. “Russian Theorists on Modality in Shostakovich’s Music.” From *Shostakovich Studies*. Ed. by David Fanning. Cambridge University Press: 76–112.

Castro, David. 2005. “Sonata Form in the Music of Dmitri Shostakovich.” PhD Diss., University of Oregon.

Catoire, Georgy. 1924–1925. *Теоретический курс гармонии* [Theoretical course of harmony]. 2 Vols. Moscow: Gosudarstvennoe izdatel’stvo muzykal’nyi sector.

Child, Peter. 1993. “Voice-Leading Patterns and Interval Collections in Late Shostakovich: Symphony No. 15.” *Music Analysis* 12, no. 1: 71–88.

Cohn, Richard. 1998. “Introduction to Neo-Riemannian Theory: A Survey and a Historical Perspective.” *Journal of Music Theory 42*, no. 2: 167–80.

Cone, Edward T. 1962. “Stravinsky: The Progress of a Method.” *Perspectives of New Music* 1, no. 1: 18–26.

—. 1982. “Schubert’s Promissory Note: An Exercise in Musical Hermeneutics.” *19th Century Music* 5, no. 3: 233–41.

Dobruskin, Yekhezkel, and A. Yuditskii. 1947. *Еврейские народные пенси* [Jewish Folk Songs]. Moscow: Госполитиздат.

Dolzhansky, Alexandr. 1947. “О ладовой основе сочинений Шостаковича” [On modal premise in the works of Shostakovich]. *Sovetskaia muzyka* no. 4: 65–74. Reprinted in *Черты стиля Д. Шостаковича* [Stylistic characteristics in (the music of) D. Shostakovich], ed. Lev Mazel’, 24–42. Moscow: Совеременный композитор, 1962.

Ewell, Philip A. 2012. “Rethinking Octatonicism: Views from Stravinsky’s Homeland.” *Music Theory Online* 18, no. 4.

—. 2013. “‘On the System of Stravinsky’s Harmony’ by Yuri Kholopov” Translation and Commentary.” *Music Theory Online* 19, no. 2.

—. 2018. “On the Concept of *Lad*: 1830-1945.” *Music Theory Online* 25, no. 4.

—. 2020. “Harmonic Functionalism in Russian Music Theory: A Primer.” *Theoria* 26.

Fairclough, Pauline. 2002. “Shostakovich’s Fourth Symphony: Context and Analysis.” PhD Diss., University of Manchester, United Kingdom.

—. 2002. “The ‘Perestroyka’ of Soviet Symphonism: Shostakovich in 1935.” *Music & Letters* 83, no. 2: 259–73.

Fankhauser, Gabriel. 2013. “Cadential Intervention in Shostakovich’s Piano Trio in E Minor, op. 67.” *Music Analysis* 32, no. 2: 210–50.

Fanning, David. 2001. “Shostakovich: ‘The Present-Day Master of the C Major Key.’” *Acta Musicologica* 73, no. 2: 101–40.

—. 2006. “Introduction, Talking About Eggs: Musicology and Shostakovich.” From *Shostakovich Studies*. Ed. by David Fanning. Cambridge University Press: 1–16.

Fay, Laurel. 1978. *The Last Quartets of Dmitri Shostakovich: A Stylistic Investigation*. PhD diss., Cornell University.

—. 2000. *Shostakovich: A Life*. Oxford University Press, New York, NY.

Frolova-Walker, Marina. 2007. *Russian Music and Nationalism: From Glinka to Stalin*. Yale University Press.

Haas, David. 2008. “The Rough Guide to Shostakovich’s Harmonic Language.” *The Cambridge Companion to Shostakovich*. Ed. by Pauline Fairclough and David Fanning. United Kingdom, Cambridge University Press: 298–324.

Harrison, Daniel. 1994. *Harmonic Function in Chromatic Music: A Renewed Dualist Theory and an Account of its Precedents*. University of Chicago Press.

Hepokoski, James, and Warren Darcy. 2006. *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata*. Oxford and New York: Oxford University Press.

Herlinger, Jan, trans. *Contrapuntus* (Prosdocimo de Beldomandi). University of Nebraska Press, 1984.

Ho, Allan B., and Dmitry Feofanov. 1998. “Shostakovich’s *Testimony*: Reply to an Unjust Criticism,” From *Shostakovich Reconsidered*. Ed. by Allan B. Ho and Dmitry Feofanov. Toccata Press: 33-311.

Holtmeier, Ludwig. 2011. “The Reception of Hugo Riemann’s Music Theory.” From *The Oxford Handbook of Neo-Riemannian Music Theories*. Ed. by Edward Gollin and Alexander Rehding. New York: Oxford University Press, 3–54.

Horlacher, Gretchen. 2011. *Building Blocks: Repetition and Continuity in the Music of Stravinsky*. New York: Oxford University Press.

Hulme, Derek C. 2010. *Dmitri Shostakovich Catalogue: The First Hundred Years and Beyond*. Plymouth, UK: Scarecrow Press.

Hussey, William. 2003. “Triadic Post-Tonality and Linear Chromaticism in the Music of Dmitri Shostakovich.” *Music Theory Online 9*, no. 1.

Kholopov, Yuriy. (1988) 2003. *Гармония* [Harmony]. Moscow: Muzyka. Reprint, Moscow: Lan’.

—. 1995. “Form in Shostakovich’s Instrumental Works.” From *Shostakovich Studies*. Ed. by David Fanning. Cambridge University Press: 57–75.

—. 1997. “Лады Шостаковича. Структура и систематика” [Shostakovich’s Modes. Theory and Systematisation], *Dedicated to Shostakovich: Collection of Articles*. Moscow: 62–77. http://www.kholopov.ru/hol-shost-modes.pdf.

Kocharova, Galina Vartanovna. 1977. “Особенности гармонического стиля Д.Д. Шостаковича” [Features of the harmonic style of D.D. Shostakovich]. *Музыкальная Академия* 9. Moscow: 112–16. https://mus.academy/articles/osobennosti-garmonicheskogo-stilya-d-d-shostakovicha.

Kuhn, Judith. 2010. *Shostakovich in Dialogue: Form, Imagery, and Ideas in Quartets 1–7*. Burlington, VA, Ashgate Publishing.

Lam, Nathan L. 2019. “Relative Diatonic Modality in Extended Common-practice Music.” PhD Diss., Indiana University.

Lewin, David. [1987] 2007. *Generalized Musical Intervals and Transformations*. New York: Oxford University Press.

Lofthouse, Charity. 2016. “Dialogues and Dialects: Rotation and Sonata Form in Shostakovich’s Symphonies.” *Theory & Practice* 41: 113–39.

Maes, Francis. 2006. *A History of Russian Music: From Kamarinskaya to Babi Yar*. Berkeley, CA: Univeristy of California Press.

—. 2008. “Shostakovich’s Songs.” From *The Cambridge Companion to Shostakovich*. Ed. by Pauline Fairclough and David Fanning. Cambridge University Press, Cambridge, United Kingdom: 231–258.

Mazel’, Lev. 1960. *Симфонии Д.Д. Шостаковича* [Shostakovich’s symphonies]. Moscow: Советский композитор.

—. 1967. “Заметки о музыкальном языке Шостаковича” [Observations on Shostakovich’s musical language]. In *Dmitriy Shostakovich*. Edited by Givi Ordzhonikidze. Moscow: Советский композитор.

—. 1977. “О некоторых чертах творчества и личности Д.Д. Шостаковича” [On some features of creativity and personality of D.D. Shostakovich]. *Музыкальная Академия* 9. Moscow: 104–05. https://mus.academy/articles/o-nekotorykh-chertakh-tvorchestva-i-lichnosti-d-d-shostakovicha.

McCreless, Patrick. 2009. “Dmitri Shostakovich: The String Quartets.” From *Intimate Voices: The Twentieth-Century String Quartet, Volume 2: Shostakovich to Avante-Garde*. Ed by Evan Jones. 3–40.

—. 2010. “Shostakovich’s Politics of D Minor and its Neighbours, 1931–49.” In *Shostakovich Studies 2*: 121–89.

—. 2021. “A Curiosity in the Early String Quartets of Shostakovich, and Its Precedents in Previous Works.” In *Analytical Approaches to 20th-Century Russian Music: Tonality, Modernism, Serialism*. Ed. by Inessa Bazayev and Christopher Segall. Routledge: 71–90.

McQuere, Gordon. 1979. “‘The Elements of the Structure of Musical Speech’ by S.V. Protopopov: A Translation and Commentary.” PhD Diss. The University of Iowa.

—. 1983. “The Theories of Boleslav Yavorsky.” In *Russian Theoretical Thought in Music*, ed. by Gordon McQuere. University of Rochester Press: 109–64.

Moshevich, Sofia. 2004. *Dmitri Shostakovich, Pianist*. McGill-Queen’s Press.

Ogolevets, Aleksei. 1941. *Основы гармонического языка* [Foundations of harmonic language]. Moscow-Leningrad: Gosudarstvennoe muzykal’noe izdatel’stvo.

—. 1946. *Введение в современное музыкальное мышление* [Introduction to contemporary musical thought]. Moscow-Leningrad: Musgiz.

Protopopov, Sergei. 1930. *Элементы строения музыкальной речи* [The elements of the structure of musical speech], 2 vols. Moscow: Gosudarstvennoe izdatel’stvo. Muzykal’nyii Sektor.

Redepenning, Dorothea. 1995. “‘And Art Made Tongue-tied by Authority’: Shostakovich’s Song-Cycles.” From *Shostakovich Studies*, ed. by David Fanning. Cambridge University Press: 205–228.

Rehding, Alexander. 2011. “Tonality between Rule and Repertory; Or, Riemann’s Functions – Beethoven’s Function.” *Music Theory Spectrum 33*, no. 2: 109–123.

Rifkin, Deborah. 2004. “A Theory of Motives for Prokofiev’s Music.” *Music Theory Spectrum* 26, no. 2: 265–90.

Rimsky-Korsakov, Nikolai. 1886. *Практический учебник гармонии* [Practical manual of harmony]. St. Petersburg.

Roseberry, Eric. 2008. “Personal Integrity and Public Service: The Voice of the Symphonist.” From *The Cambridge Companion to Shostakovich*. Ed. by Pauline Fairclough and David Fanning. Cambridge University Press, Cambridge, United Kingdom: 9–37.

Rothstein, William. 1991. “On Implied Tones.” *Music Analysis,* 10, no. 3, 289–328.

Seay, Albert, trans. The Art of Counterpoint (Tinctoris). American Institute of Musicology, 1961.

Segall, Christopher. 2013. “Triadic Music in Twentieth-Century Russia.” PhD Diss., Graduate Center, City University of New York.

—. 2020. “Expanding Harmonic Function: Yuri Kholopov’s Twelve-Step System.” *Theoria* 26.

—. 2020. “Yuri Kholopov and Twelve-Toneness.” *Music and Politics* 14, no. 2.

Skorik, Miroslav. 1969. *Ладовая система С. Прокофьева* [S. Prokofiev’s modal system]. Kiev: Музична Украина.

Sheinberg, Esti. 2000. *Irony, Parody, Satire and the Grotesque in the Music of Shostakovich: A Theory of Musical Incongruities*. Aldershot: Ashgate.

Straus, Joseph N. 1982. “Stravinsky’s Tonal Axis.” *Journal of Music Theory* 26, no. 2: 261–90.

—. 2016. *Introduction to Post-Tonal Theory*. W.W. Norton.

Taneev, Sergei. [1909] 1959. *Подвижной контрапункт строгого письма* [Movable counterpoint in the strict style]. Moscow: Jurgenson. Reprint, Gos. Muz. Izdatel’stvo.

—. 1952. *С. И. Танеев: материалы и документы. Том 1: переписка и воспоминания* [Sergei Taneev: Materials and documents. Vol. 1: Correspondence and recollections]. Izdatel’stvo akademii nauk SSSR.

Taruskin, Richard. 1985. “Chernomor to Kashchei: Harmonic Sorcery; or, Stravinsky’s “Angle.”“ *Journal of the American Musicological Society* 38, no. 1: 72–142.

—. 1995. “Public Lies and Unspeakable Truth Interpreting Shostakovich’s Fifth Symphony.” From *Shostakovich Studies*, ed. by David Fanning: 17–56.

—. 2011. “Catching Up with Rimsky-Korsakov.” *Music Theory Spectrum* 33, no. 2: 169–85.

—. 2020. *Defining Russia Musically: Historical and Hermeneutical Essays*. Princeton University Press.

Tchaikovsky, Pyotr. 1871. *Руководство к практическому изучению гармонии* [Guide to the practical study of harmony]. Moscow.

Tymoczko, Dmitri. 2002. “Stravinsky and the Octatonic: A Reconsideration.” *Music Theory Spectrum* 24, no. 1: 68–102.

Van Den Toorn, Pieter C. 1975–77. “Some Characteristics of Stravinsky’s Diatonic Music.” *Perspectives of New Music* 14, no. 1: 104–38; no. 15: 58–95.

— and Dmitri Tymoczko. 2003. “Stravinsky and the Octatonic: The Sounds of Stravinsky.” *Music Theory Spectrum* 25, no. 1: 167–202.

Watson, Jada. 2008. “Aspects of the “Jewish” Folk Idiom in Dmitri Shostakovich’s String Quartet No. 4, op. 83 (1949).” Master’s Thesis, University of Ottawa.

Webber, Miriam Brack. 2021. “Analysis as Dialogue: Bakhtinian Narrative Theory in the Music of Dmitri Shostakovich.” PhD Diss., University of Kansas.

Yavorsky, Boleslav. 1908. *Стоение музыкальной речи* [The structure of musical speech: materials and notes]. Moscow.

—. 1915. *Упражнения в образовании ладового ритма* [Exercises in the formation of schemes of modal rhythm]. Moscow: Gosudarstvennoe muzykal’noe izdatel’stvo.

“The Zhdandov Decree, 1948.” 1998. *DSCH Journal*, no. 9, 21–24. Accessed April, 21, 2018: http://dschjournal.com/wordpress/onlinearticles/dsch09_zhdanov.pdf