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Axis Tonality and Submediant in the  
Music of Shostakovich

KEYWORDS: Shostakovich, third relations, tonal pairing, tonal axis, submediant

ABSTRACT: This essay explores third relations and tonal pairing in Shostakovich's music by investigating several works through the lens of axis tonality, a concept developed by Joseph Straus for the music of Stravinsky. In addition, it argues that a conspicuous emphasis on the submediant, evident in all the analyses, forms a thread of continuity that links Shostakovich back to the nineteenth-century Russian tradition.

*Received January 2009*

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[1] Shostakovich's music often features third relations in various forms and at various levels of structure. On a local level, for example, a passage might blend a pair of third-related keys, such as a major key merged with its relative minor. On a larger scale, Shostakovich conveys a strong preference for modulating to the mediant or submediant. For instance, **Figure 1** lists all of the string quartets in which Shostakovich begins by modulating up or down by third from the original key—a total of eight out of fifteen, or just over half. On an even larger level, Shostakovich occasionally uses third relations to link pieces written years apart from each other. To take another example from the string quartets, **Figure 2** shows that among the first six works, each new one is in a chromatic submediant key compared to the previous one, whereas among the last six quartets, each new one is now in the *diatonic* submediant key of the previous one.<sup>(1)</sup>

**Figure 1.** Opening modulations in several of  
Shostakovich's fifteen string quartets

**Figure 2.** Ir  
first six

No. 1: C major to E $\flat$  major  
No. 2: A major to C $\sharp$  minor  
No. 4: D major to B minor  
No. 5: B $\flat$  major to G major

No. 7: F $\sharp$  minor to E $\flat$  major  
No. 9: E $\flat$  major to B minor  
No. 14: F $\sharp$  major to E $\flat$  major  
No. 15: E $\flat$  minor to C major

First six quartets (193

C major - A major - F

Last six quartets (196

A $\flat$  major - F minor - I

(click to enlarge)

[2] Despite its significance for Shostakovich's tonal thinking, no one has focused in depth on the question of third relations in his music.<sup>(2)</sup> The following study pursues this topic by investigating a specific aspect of this phenomenon—in particular, by exploring several works that each embody in different ways the principle of axis tonality developed by Joseph Straus for the music of Stravinsky (Straus 1982). Following a brief review of Straus's concept, the first (and main) part of this essay employs it in discussing the first movement of the First Cello Concerto (1959) and the second movement of the Third String Quartet (1946), then culminates with a more detailed axis reading of the E major Prelude from the *Twenty-Four Preludes and Fugues* (1950–51). The second (shorter) section rounds out the discussion by considering some historical precedents for this facet of Shostakovich's harmonic practice. In particular, it argues that a conspicuous emphasis on the submediant, evident in all three analyses, forms a thread of continuity linking Shostakovich's music back to the nineteenth-century Russian tradition.

### Axis Tonality in Shostakovich: Three Examples

[3] Straus's model of axis tonality can be understood as a specific formulation of the more general concept of tonal pairing (or the double-tonic complex), introduced by Robert Bailey in his work on Wagner.<sup>(3)</sup> According to Straus's model, a tonal axis comprises a pair of third-related triads, one major and one minor. These triads overlap in such a way that they share two common tones, and therefore combine to form a major or minor seventh chord. For example, for the first movement of Stravinsky's *Symphony of*

**Figure 3.** Straus's  
Stravinsky, 1

*Psalms*, Straus posits an axis comprising the notes E-G-B-D (in other words, an E minor triad overlapping with a G major triad). As **Figure 3** illustrates, this axis underlies the movement’s large-scale tonal trajectory, which leads from the lower portion of the axis (the E minor triad) to the upper portion (the G major triad).

[4] Along with describing the basic form of an axis, Straus specifies several further requirements that an axis must satisfy: first, it must play a central, generative role within the harmonic structure of the piece in question; second, it must appear explicitly at some point in the music (as a “discrete harmony,” in Straus’s words); and third, it must “embody a conflict or polarity between its two constituent triads” (Straus 1982, 265). Straus’s axis for the *Symphony of Psalms* meets these conditions: it plays a central role in the movement by encompassing its overall tonal motion; this motion composes out a polarity between the two triads of the axis; and finally, the axis itself does appear explicitly (albeit fleetingly) as an arpeggiated E minor seventh chord in the middle of the movement, as shown in **Figure 4**.

[5] A similar tonal axis underpins the first movement of Shostakovich’s First Cello Concerto. As shown in **Figure 5**, the keys of this clear-cut, sonata-form movement convey an axis in the form of the minor-seventh chord C-E $\flat$ -G-B $\flat$ . Within the exposition, the primary theme zone is rooted in E $\flat$  major (the upper part of the axis), while the secondary theme centers on C minor (the lower part of the axis). Keeping with tradition, the recapitulation restates the primary theme in E $\flat$ . However, the reprise of the secondary theme does not appear in the home key, but instead remains in C minor. Adopting



**Figure 4.** *Sy*  
piano part  
explicit



**Figure 5.** Shostakov  
la  
Primary theme

**Figure 6.** Sl  
first

Straus's mode of interpretation, one might say that Shostakovich contradicts traditional sonata practice in order to heighten the polarity between the upper and lower parts of the axis.

[6] Several smaller details support this axis reading. For example, **Figure 6** shows the opening phrase of the movement (the antecedent of a compound period). During this initial span of music, the bass line descends through the tetrachord  $E^{\flat}-D-C-B^{\natural}$ . As a result, the music drifts from  $E^{\flat}$  major down to C minor, briefly foreshadowing the key of the secondary theme zone. Thus the lower part of the axis exerts a subtle, looming presence just as the piece gets underway.

[7] In this connection, we should note that the opening bass line constitutes a reordering of Shostakovich's musical motto,  $D-E^{\flat}-C-B$  (a significant source of motives for the movement).<sup>(4)</sup> Therefore, a variant of Shostakovich's musical signature helps to initiate the tonal polarity underlying the movement, as illustrated in **Figure 7**. In fact, another form of Shostakovich's tetrachord, at the same transposition level, occurs prominently at the beginning of the secondary theme zone (see **Figure 8**). By restating his tetrachord now within a clear C minor context, Shostakovich solidifies its role as a link between the two main key areas of the movement, cinching its connection to the movement's axis tonality.<sup>(5)</sup>

[8] Further details support this axis reading. For instance, shortly after the primary theme, the solo cello plays the main motive of the movement ( $G-F^{\flat}-C^{\flat}-B^{\flat}$ ) in counterpoint with the rising chromatic scale segment  $C-C^{\sharp}-D-E^{\flat}$  (see **Figure 9**). This two-part gesture recurs frequently in the movement, and as the figure shows, its framing vertical dyads combine to form a small-scale version of the



**Figure 7.** A sc

( $D-E^{\flat}-C-$

**Figure 8.** Sh

first mover



axis. As a final example, **Figure 10** presents a passage directly preceding the secondary theme zone of the exposition. Here, the orchestra builds up a chord whose notes form an explicit statement of the axis: first G and E $\flat$  (the two notes common to both triads of the axis) then C and B $\flat$ . One could therefore hear this passage as a moment of flux during which the two main tonal areas of the movement briefly overlap, right before E $\flat$  gives way to C minor.<sup>(6)</sup>

[9] In comparison with Straus's Stravinsky examples—which often feature considerable tension and uncertainty between the two triads of the axis—the tonal design of the Cello Concerto's first movement is fairly straightforward, in that the primacy of E $\flat$  major is never seriously called into question. Yet we can find greater tonal ambiguity in another piece by Shostakovich: the second movement of his Third String Quartet (1946). As shown in **Figure 11**, the viola begins the movement with a repeated E minor triad: an emphatic assertion of E as tonic. In measure 3, however, the first violin enters with a prominent downbeat C, undermining E's tonic role and suggesting a potential conflict between E and C as pitch centers. Over the course of the movement, variations of this opening phrase return several times, yet always feature the initial downbeat C against an E minor accompaniment.<sup>(7)</sup> Finally, near the end of the movement, Shostakovich regains E minor (see **Figure 12**). However, the final chord of the movement—E-G-C-E $\flat$ , spelling upward—suggests a blending of E minor, C major, and C minor: a very Stravinskian instance of axis-related harmonic ambiguity that both recalls and heightens the original tonal conflict of the movement.<sup>(8)</sup>

**Figure 11.** Shostakovich: String Quartet No. 3, second movement, opening

**Figure 9.** A : the ax

**Figure 10.** S first 1



**Figure 12.** S se



(click to enlarge)

[10] For a final and more detailed example of axis tonality in Shostakovich, we can turn to Prelude No. 9 from his *Twenty-Four Preludes and Fugues*. Like the opening movement of the First Cello Concerto, this work features an axis in the form of a minor seventh chord (in this case, C $\sharp$ -E-G $\sharp$ -B). And once again, the prelude's main tonality resides in the upper part of this axis, given that its overall key is E major. Unlike the Cello Concerto, however, the prelude features a more complex axis design, one that includes multiple transpositions of the original axis and that extends the axis to form longer chains of thirds. The axis therefore serves not merely as a tonal scaffold for the piece, but also as an initial seed spawning a more elaborate structure.

[11] Before exploring this structure, let us briefly consider the form of the prelude. As illustrated below in Figures 13 through 18, the piece divides into two parts of nearly equal length, both of which depart from E major and then return to it. The first part unfolds a series of three similar phrases, each comprising a low-register melody answered by a second, higher one (see Figures 13 through 15). The second part begins with another, similar phrase, followed by a retransition leading to a reprise and conclusion (Figures 16 through 18).

[12] Phrase 1 of the prelude establishes the main axis, C $\sharp$ -E-G $\sharp$ -B, by emphasizing its two constituent triads (**Figure 13**). The opening melody initially conveys E major (note the first three half-note downbeats: E-G $\sharp$ -B), but ultimately leads to a C $\sharp$  pedal starting in measure 4. Building on this bass note, the answering melody first suggests C $\sharp$  minor (again, note the first three half-note beats: C $\sharp$

**Figure 13.** Shostak (1950–51), Prelude 1



-E-G $\sharp$ ), then gravitates back toward E major (measure 7) before finally settling on C $\sharp$  once again (measures 8–9). In sum, the opening phrase introduces the prelude’s main axis not only by moving from one component to the other, but also by intermingling them, to the point where they actually blend together in measure 7, thanks to the E major arpeggiation in the melody combined with the C $\sharp$  pedal in the bass.<sup>(9)</sup>

[13] After presenting the axis in this fashion, Shostakovich wastes no time in elaborating and extending it (**Figure 14**). Starting in measure 11, Phrase 2 unfolds a rising chain of thirds conveyed by melodically-expressed chords rooted first on C $\sharp$  (measure 11), then E (measure 12), then G $\sharp$  (measures 13–14), finally arriving on an implied B major chord in measure 16. This passage therefore composes out the axis underlying the first phrase, along with suggesting further upward motion (beyond the opening E major and C $\sharp$  minor harmonies). Starting in measure 16, the second half of Phrase 2 explores this higher tertian territory by mingling harmonies rooted on G $\sharp$  and B, as marked on the score. We should note that the B harmony projected here (starting at the upbeat to measure 19) is not merely a B major triad but rather a B dominant seventh chord. Thanks to the A of this chord—the melodic climax of the phrase—Phrase 2 sets forth the prelude’s opening E major collection as a complete chain of thirds: C $\sharp$ -E-G $\sharp$ -B-D $\sharp$ -F $\sharp$ -A, conveyed by the circled notes on the score. Phrase 2 thus culminates tertian processes embodied in the initial axis of Phrase 1.

[14] Having established the E major collection so clearly and deliberately, it would seem only natural for Shostakovich to move beyond it at this point. And indeed

**Figure**



**Figure**



Shostakovich does so in Phrase 3, moving flatwise into the white-key diatonic collection (**Figure 15**). This collection is now buttressed by a new axis comprising the notes D-F-A-C (i.e., an axis that is  $T_1$  of the original). As marked with the beams on the score, this  $T_1$  axis is expressed by the quarter-note downbeats starting on beat 2 of measure 27 (except for the E on beat 2 of measure 29, which functions as a passing tone connecting D and F). The bass pedal  $F^{\flat}$ —a half step higher than the prelude’s overall tonic—reinforces the sense of being in a  $T_1$ -related tonal area. From here, Shostakovich moves through the diminished-seventh chord B-D-F-A $^{\flat}$  (conveyed by the second set of beamed pitches, in measures 30–32) and regains E major harmony in measure 33.<sup>(10)</sup>

[15] Phrase 4 of the prelude revolves around another local axis, one that counterbalances that of the previous phrase. Following a brief suggestion of D minor in measures 38–39 (which could be heard as a holdover from the  $T_1$  axis), the music continues to press flatward, conveying  $E^{\flat}$  Mixolydian from measure 41 through the first part of measure 46 (**Figure 16**). The  $E^{\flat}$  harmony underlying these measures forms the upper part of this new axis comprising the notes C-E $^{\flat}$ -G-B $^{\flat}$  (i.e., a  $T_{11}$  axis). The lower, C minor portion of this axis is briefly suggested by the melodic gesture C-D-E $^{\flat}$  in measures 40–41, and then emerges more strongly when this gesture repeats twice more in measures 46–49, during the first part of the retransition (**Figure 17**). As in the previous phrase, the bass pedal—now  $E^{\flat}$ , a half step *lower* than the overall tonic—confirms the new harmonic location.<sup>(11)</sup>

[16] In the retransition, Shostakovich performs a simple maneuver to regain the home key of E major, and the original,  $T_0$  axis (**Figure 17**). After emphasizing C and  $E^{\flat}$  in measures 46–50, he leads C

**Figure**



**Figure 17**



**Figure 18. Rep**



down to B (from measure 50 into measure 51) and respells  $E\flat$  as  $D\sharp$ , thus creating the dyad  $B/D\sharp$ , which functions as V in E major.<sup>(12)</sup> This dyad underpins measures 51–55 before resolving to E major at the reprise in measure 56. We should also note that this retransition affords Shostakovich an opportunity to highlight a scalar version of his motto (in the form of the descending line  $E\flat$ -D-C-B in measures 49–51). Shostakovich’s characteristic tetrachord therefore participates in a crucial moment of transition in the prelude, and connects with its axis design, as it does in the first movement of the Cello Concerto. Moreover, in a piece that mostly confines itself to diatonic collections, a scale segment spanning a diminished fourth conveys a distinctly “marked” quality; in fact, Shostakovich himself marks the gesture *espressivo* in the score, the only such indication in the prelude.



**Figure 19.** Large-s



[17] Following the return to E major at measure 56, the remainder of the prelude completes the tonal design with two more references to the original,  $T_0$  axis (see **Figure 18**). First, the two components of the axis occur in immediate succession in measures 62–64: the E major triad is expressed as a chord, while the  $C\sharp$  minor triad unfolds as a melody; and in fact both of those harmonies intersect momentarily on beat 3 of measure 62. Then in measure 68, the bass line reaches down to a  $C\sharp$  low point, which combines with the E major triad above it to form an explicit, vertical statement of the axis, just as the prelude is coming to a close.

[18] With the reappearance of the original axis, the prelude’s large-scale harmonic structure assumes the balanced form shown in **Figure 19**. In this design, the original axis (or at least the upper, E major part of it) occurs at the beginning, middle, and end of the piece, and is flanked by axes a half step above and below it. The symmetry of this interpretation resonates with Mark Mazullo’s recent discussion of the prelude,

which traces a narrative involving the balanced opposition of contrasting elements: a dialectical “quest for wholeness” (Mazullo 2006, 94–99). In addition, the axis design of Figure 19 is reminiscent of Straus’s model for the last movement of the *Symphony of Psalms*, which also involves multiple transpositions of an axis in a symmetrical arrangement (Straus 1982, 279).

### Sources of Influence and Submediant Emphasis

[19] It is no secret that Shostakovich deeply admired and was intimately acquainted with Stravinsky’s music. As Shostakovich himself wrote, “the work of Stravinsky influenced me greatly. Each new work created a powerful impression on me, and stimulated an enormous interest” (Shostakovich 1973, 7–8). Thus it is quite possible that Stravinsky’s music had some impact on Shostakovich in the domain of tonal relations addressed by the axis concept. At the same time, we should bear in mind that the tonal pairing of third-related keys also occurs in many works by earlier composers—composers who were also important to Shostakovich. For instance, Shostakovich is known to have had a high regard for Schumann, and the latter’s music often features this phenomenon; perhaps the best-known example is the opening song of *Dichterliebe*, which hovers between A major and F $\sharp$  minor.<sup>(13)</sup> And Mahler—whose influence on Shostakovich is better known—also pairs third-related keys in his music; for example, Christopher Lewis has discussed the interaction of D major and B minor in the first movement of his Ninth Symphony.<sup>(14)</sup> Given such examples, it could be that Straus’s axis concept models a harmonic practice that Shostakovich gleaned from composers prior to Stravinsky.

[20] This question aside, if we stand back to consider our previous analyses collectively, we can discern a unifying principle that links Shostakovich back to his Russian predecessors. Namely, all three pieces we have discussed involve a main key combined with a strongly emphasized submediant. In the first movement of the First Cello Concerto, for example, the submediant emerges as a lurking presence in the very beginning, underlies the exposition’s secondary theme, then stubbornly persists in the reprise of the secondary theme as well. In the Ninth Prelude of the *Preludes and*

*Fugues*, the main key of E major combines with its submediant, C $\sharp$  minor, to form a tonal axis that later appears at different transposition levels before returning to its original, tonic level. And in the second movement of the Third String Quartet, a recurring emphasis on pitch class C within an E minor context ultimately leads to a final cadential chord that simultaneously suggests E minor, C major, and C minor.<sup>(15)</sup>

[21] In fact, an emphasis on the submediant forms part of the nineteenth-century Russian tradition. As Mark DeVoto argues in a recent article, “Russian harmony [in the nineteenth century] significantly increases the importance of the submediant function in a major-mode context, by emphasizing the sixth degree as an adjunct harmonic factor to the tonic triad, and by promoting the submediant as an alternative tonal focus to the tonic function, even by merging the relative major and minor into a single superkey with two tonics” (DeVoto 1995, 48). DeVoto further notes that this harmonic practice relates to the Russian folk song tradition, which, in turn, was interpreted in the harmonizations of composers such as Tchaikovsky and Rimsky-Korsakov.<sup>(16)</sup> Though DeVoto does not quote specific instances, the collections of both composers taken together contain a number of examples in which the submediant plays a heightened role, even to the point of being on an equal footing with the tonic—in which case it would be more accurate to invoke the concept of tonal pairing. For example, **Figure 20** shows the first phrase of “The Abbot” in Tchaikovsky’s arrangement for piano four hands. (In the figure, each player’s part is collapsed into a single staff.) Tchaikovsky’s arrangement comprises four versions of this short phrase, each of which initially establishes F $\sharp$  major but ultimately gravitates to D $\sharp$  minor. The song could thus be said to convey a “superkey” combining F $\sharp$  major and D $\sharp$  minor, to use DeVoto’s term.

**Figure 20.** Measures 1–2 of “The Abbot,” as arranged by Tchaikovsky (No. 32 from *50 Russian Folk Songs*)

**Figure 21.** “Past the Swift Ri  
Rimsky-Korsakov (No



(click to enlarge)



[22] The last song from Rinsky-Korsakov’s collection presents a more intriguing example. Shown in **Figure 21**, this short song initially conveys F major but then cadences in D minor. In between, the tonic chords of these two keys actually fuse together, first in the form of an F major, added-sixth chord (on beat 3 of measure 1), then as a root-position D minor seventh chord (on the following downbeat). With its balanced interpenetration of F major and D minor, Rinsky’s setting offers us a concise illustration of Straus’s axis principle, several decades before Stravinsky employed it.

[23] The central contribution of DeVoto’s study lies in his identification of a specific idiom that he dubs the “Russian sixth,” in which a prominent, often tonicized submediant occurs over scale degree  $\hat{1}$  in the bass. DeVoto provides numerous, vivid examples of this “stylistic mannerism” (as he calls it), of which two are quoted in **Figure 22**. The first, from *Scheherazade*, starts on the tonic chord of G major, tonicizes E minor while maintaining G in the bass, then returns to tonic harmony. The second example, from near the opening of *Polovetsian Dances*, begins with a three-chord progression tonicizing A major (the overall key of the piece), but ends by tonicizing F $\sharp$  minor, once again over a tonic pedal in the bass.

**Figure 22a.** Rinsky-Korsakov: *Scheherazade*, third movement, opening

**Figure 22b.** Boroc





(click to enlarge)

**Figure 23.** Mussorgsky:  
blending of *A*



[24] According to DeVoto, this idiom fades away by the early years of the twentieth century (DeVoto 1995, 73). And certainly the Shostakovich works discussed here evoke sound worlds far removed from the wistful commingling of major and minor in the Borodin and Rimsky-Korsakov excerpts. Yet the music of Mussorgsky appears to bridge this aesthetic divide. For example, his *Boris Godunov* ends in the key of *A* minor, yet settles on a first-inversion *F* major chord for its final harmony (see **Figure 23**). The opera thus concludes with an unresolved, minor-mode instance of the Russian sixth, within a musical atmosphere much closer to Shostakovich's own expressive realm.<sup>(17)</sup> As Laurel Fay has discussed, Mussorgsky was a significant influence for Shostakovich. For example, Shostakovich reorchestrated *Boris Godunov* and declared in a 1940 interview that Mussorgsky was his favorite composer.<sup>(18)</sup> Thus Mussorgsky may well have had some impact on Shostakovich in the area of third relations (and on his handling of the submediant in particular). The question of Mussorgsky's influence aside, the axis readings presented here reveal Shostakovich breathing new life into a longstanding and characteristically Russian harmonic procedure.