Intersections
CANADIAN JOURNAL OF MUSIC
REVUE CANADIENNE DE MUSIQUE

SLIDE in a Leading Role: Pitch Structure in Barrie Cabena's *Sonata Festiva*

Mark Sallmen

Citer cet article

Sallmen, M. (2020). SLIDE in a Leading Role: Pitch Structure in Barrie Cabena's *Sonata Festiva*. *Intersections*, *40*(2), 59–82. https://doi.org/10.7202/1105863ar

Résumé de l'article

La Sonata Festiva (1971) de Barrie Cabena met en lumière SLIDE, une progression d'accords connue des littératures musicales théoriques néo-riemanniennes et russes du XXe siècle. Les expressions diverses de SLIDE impliquent notamment des paires d'accords, des accords simples et des lignes mélodiques dans des contextes texturaux, tonals et formels, conduisant à des effets contemplatifs, énergiques, comiques et triomphants. Certains aspects de la théorie des ensembles aident à relier SLIDE à d'autres phénomènes harmoniques dans l'oeuvre.

SLIDE IN A LEADING ROLE: PITCH STRUCTURE IN BARRIE CABENA'S *SONATA FESTIVA*

Mark Sallmen

Born in Australia and educated in England, Barrie Cabena has been an organist, choir director, teacher, and composer in Canada since 1957. Although many of Cabena's several hundred compositions are well known in organ and choral circles in Canada and elsewhere, other musical communities are less familiar with this impressive body of work. Detailed analytic studies and other scholarly writings are scarce indeed.[1] This article begins to address this lacuna by focusing on harmonic structure in *Sonata Festiva* (1971), one of Cabena's more than forty sonatas for solo organ. The primary harmonic feature of this three-movement concert piece is SLIDE, which denotes the juxtaposition of major and minor triads that share a chordal third and whose roots and fifths "slide" chromatically (Lewin [1987] 2007, 178, 227). In the SLIDE labels I use here, parentheses enclose the shared note, as with, for example, SLIDE(E), which identifies C major and C♯ minor triads that share the note E.[2] In SLIDE's leading role it acts in many harmonic, textural, expressive, and formal contexts. SLIDE interacts with the diverse harmonic resources of the work, which include quartal and (extended) tertian structures in modal, pentatonic, whole-tone, octatonic, and other scalar contexts. SLIDE also dons numerous textural guises, appearing as side-by-side triads, as single poly-chords, and as linear strings of pitch classes within melodies, two-voice counterpoint, and series of chordal roots. SLIDE spans the emotional gamut—meditative, humorous, lively, and triumphant—and arises in an array of formal situations—thematic statement, development, sequence, transition, and cadence.

SLIDE research can be grouped into two basic categories. In the first, SLIDE is related to the neo-Riemannian operators—the three ways to connect consonant triads that share *two* pitches: L (*Leittonwechsel*), P (*Parallel*), and R (*Relativ*)—which, for example, transform a C major triad into minor triads

---

[1]   Jan Overduin, a Cabena student at the University of Western Ontario and later colleague at Wilfrid Laurier University, has produced two works. One surveys aspects of style (rhythm, melody, harmony, canon, ostinato, pedal point) and form (theme and variation, toccata, fugue) in Cabena's early works, while the other offers a brief introduction to Cabena's *Sonata IX* for organ (Overduin 1978, 1985).

[2]   The label SLIDE(E) corresponds to Honarmand's (2019) S_4, in which the subscript 4 indicates the shared pitch class.

on E, C, and A, respectively. For example, SLIDE is latent within LPR loops (Cohn 1997, 43–5), as with SLIDE(E) within the LPR loop CM–Em–EM–C#m–AM–Am–CM. In general, LPR connects SLIDE-related triads, as does RPL. SLIDE bubbles closer to the surface in Cohn's 2000 discussion of Weitzmann's regions, which group together major and minor triads related to a particular augmented triad by single semitonal displacement. For example, the triads related to C–E–G# by single-semitonal displacement can be arranged into three major-third-related SLIDE pairs, A♭M–Am, CM–C#m, and EM–Fm, which articulate SLIDE(C), SLIDE(E), and SLIDE (G#), respectively. Robert Morris (1998) defines the "obverses" of neo-Riemannian operations: L′, P′ (Morris's label for SLIDE), and R′. For example, P holds the chordal root and fifth invariant while moving the chordal third by semitone, whereas its obverse, P′, holds the chordal third invariant while moving the chordal root and fifth by semitone.[3] During a discussion of triadic post-tonality Joseph Straus (2016, 161) lists P, L, R, and their obverses and, although not identified by name, SLIDE progressions arise in sets of triadic progressions in the music-theoretic work of Dmitri Tymoczko (2011).[4] Christopher Segall employs SLIDE, called S, along with P and M (e.g., C major–E♭ minor) to create a PSM framework that "constitutes an integral aspect of Schnittke's style" (Segall 2017, 243). S appears in PS and SM chains, as well as in S-polychords, which are five-voice chords that articulate the pitch classes of S all at once and in a vertical arrangement that makes S's component triads clear.[5] Frank Lehman's large-scale neo-Riemannian study of harmony in film music identifies S as "a common (if still expressively potent) 'word' in the vocabulary of contemporary film composers" (Lehman 2018, 17).[6]

The other category addresses SLIDE-related triads in tonal contexts, what Lehman (2014, 82) calls "SLIDE mixture"—a notion that has a particularly robust history in Russian music theory. Segall's survey of the work of Mazel' (1957, 1982), Orfeyev (1970), Tiftikidi (1970), and Kholopov (2003) notes that each of these theorists "recognizes that common-third-related triads can substitute functionally for one another" (Segall 2013, 84). A familiar example from the

---

   3   Morris provides graphic representations of L/L′, P/P′, and R/R′ on the *Tonnetz* and on the "Riemann Wreath" (Morris 1998, 187, 194). Guy Capuzzo uses the neo-Riemannian operators and their obverses in a study of triadic progression in pop/rock music, including a sequential passage involving P′ in Frank Zappa's "Easy Meat" (Capuzzo 2004, 183–5). Another pop music study, by David Forrest and David Sears (2019), identifies SLIDE as uncommon in popular music in general but as the sole harmonic component of the tune "Dirty Water" by Rock and Hyde, where E minor and E♭ major triads alternate throughout.

   4   In Tymoczko's introduction to understanding music geometrically SLIDE is one of seven progressions that articulates two-semitone voice leading among major, minor, diminished, and augmented triads (Tymoczko 2011, 20–1). In the discussion of uniform inversion, SLIDE appears within the semitonal voice-leadings between major and minor triads (47). See also figures elucidating three-dimensional chord space (88) and major third substitution (283).

   5   Another Schnittke study, by Amin Honarmand (2019), addresses instances of S within aggregates and quasi-aggregates.

   6   Julian Hook provides a summary of the numerous names that triadic progressions have had in the (neo-)Riemannian literature over the years (Hook 2002, 80–1). For example, in various contexts SLIDE has been called $< -, 1, 11>$, W_1, W_8, *Gegenterzwechsel*, QP, PQ^{11} $(LR)^3L$, *LPR*, *RPL*, D^6LRP, P′, SLIDE, and S.

topic of modal mixture, which is a staple of North American undergraduate music theory curricula, involves ♭VI substituting functionally for its SLIDE relative, vi, with the tonic note of the key being the common chordal third (e.g., C major and C♯ minor triads in the key of E major). But the Russian theorists take the notion further—much further—allowing, for example, functional substitution for primary triads involving lowered roots (i/♭I, iv/♭IV, v/♭V) and raised ones (I/♯i, IV/♯iv, V/♯v). Gabe Fankhauser takes up the notion of flatted primary triads, including ♭I, a "'refracted' tonic" (Fankhauser 2008, 207), and Konrad Harley (2014) devotes a chapter to semitonal relations in Prokofiev, with a particular focus on I/♯i (and I/♭ii). Frank Lehman (2014) is more circumspect, grappling with important issues such as enharmonic reinterpretability. For example, in the key of A minor, is an A♭ major triad flatted tonic (♭I) or, enharmonically reinterpreted as G♯ major, an altered leading tone chord (♯VII)? And how can two chords with such different functional connotations be enharmonically equal?[7] SLIDE's difficult relationship with common-practice tonality manifests itself in the terms authors often use to describe SLIDE mixture, such as "strange" (Lewin [1987] 2007, 225), "sudden and out of context" (Rifkin 2004, 265), "disturbing" (Fankhauser 2008, 206), and "exotic" (Lehman 2014, 64).
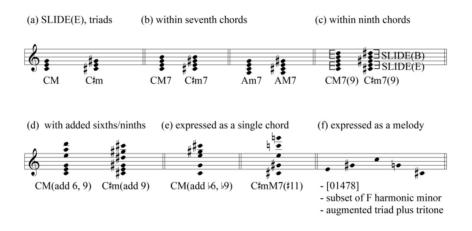
This article extends SLIDE research in several ways. First, in the context of Cabena's piece, SLIDE is neither "strange" nor "exotic." It is a normal, pervasive, and characteristic feature of the composition, appearing at least at some point within each of the principal themes of each movement. The first movement is an Overture, whose A and A' sections recall the majestic dotted homophony of the French Baroque (complete with instructions for double-dotting in performance) and whose B section is a comic waltz. The second and third movements each feature five-part form (ABA'B'A''). In Intermezzo the *Andante* A section's contemplative modal melody contrasts with the B section's vivacious two-voice counterpoint. The A sections of the Rondo feature syncopated quartal chordal fanfares and the B sections three sorts of material: a homophonic theme that moves mostly in quarters, energetic and often syncopated eighths that develop into a fugue, and quartal arpeggios.

Second, the article demonstrates a greater number of ways that SLIDE is expressed in the musical texture. SLIDE appears in customary fashion, as side-by-side chords and single five-note poly-chords, but its component pitch classes also structure melodies, two-voice counterpoint, and series of chordal roots. Third, the presence of SLIDE on multiple structural levels engages music-theoretic notions of the relationship between detail and larger-scale structure, such as transpositional combination (Cohn 1988), Boulezian pitch-class multiplication (Koblyakov 1990; Heinemann 1998; Losada 2014, 2017, 2019), motivic enlargement (Alegant and McLean 2001), and post-tonal composing-out (Straus 2004, 2016, 159–63). Further, while others have included SLIDE in various

---

7   See the discussion of Schubert's "Gesang der Geister über den Wassern" and the three types of SLIDE mixture: function-preserving (e.g., iii and ♭III), function-altering (e.g., I and ♭ii), and function-shadowing (e.g., V and ♯v) (Lehman 2014, 66–9 and 82–3).

groups of chord progressions, I argue that SLIDE has one particularly close voice-leading relative, MAJ3RD (e.g., Am–C#m), that interacts with SLIDE in significant ways in the piece. Finally, I also invoke several concepts from pitch-class set theory to make SLIDE more vivid and to relate it to other pitch structures. The article is in three sections. Part 1 introduces various SLIDE realizations and relatives, part 2 identifies SLIDE within each movement, and part 3 makes a second pass through the piece, identifying SLIDE interacting with its relatives and in a number of cadences.

Part 1. Introducing Realizations and Relatives of SLIDE
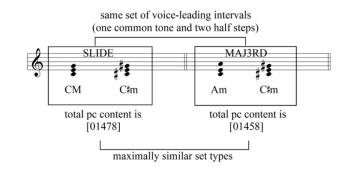
Example 1. Various realizations of SLIDE(E).

As an introduction to *Sonata Festiva*'s various manifestations of SLIDE, consider example 1. Example 1(a) presents SLIDE(E), unadorned C major and C# minor triads that share E. Examples 1(b)–1(d) embed SLIDE(E)—and in one case also SLIDE(B)—within various progressions involving seventh chords, ninth chords, and other added-note sonorities. Each chord in example 1(e) superimposes the C major and C# minor triads, providing two ways to express the pitch classes of SLIDE(E) as a single sonority.

In example 1(f) these same pitch classes appear melodically in an ordering that *conceals* rather than emphasizes the major and minor triads. When its triadic components are not emphasized, it will be helpful to think of the pitch classes in SLIDE as an unordered set. That is, the pitch classes of SLIDE(E) articulate [01478], which suggests invoking set-theoretic notions such as subset/superset relations, similarity, and pitch-class complementation in order to relate SLIDE to other features of the piece. [01478] is a subset of the harmonic minor scale, another collection found in the piece, and [01478] is the only pentachordal set type that embeds each of the four principal triad types (major, minor, diminished, and augmented), making it uniquely suited to serve

as a nexus for the disparate triadic/tonal resources of the piece. Moreover, as Robert Morris points out, [01478] has the Complement Union Property (CUP) because it can be formed by the union of a given augmented triad and *any* non-intersecting tritone (Morris 1990, 184). Morris's interpretation highlights the augmented-triad-plus-tritone linear expressions of SLIDE that appear in example 1(f) and often throughout Cabena's piece.[8]

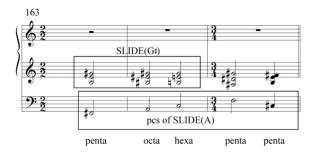**Example 2.** SLIDE and its closest relative, MAJ3RD

SLIDE is central to the piece, not only because it appears so frequently and in so many ways, but also because its closely related pitch structures play a secondary role in the work. Most significantly, minor triads that articulate transposition by major third are both closely related to SLIDE and important to the structure of the piece. I argue that, as shown in example 2, MAJ3RD is SLIDE's *closest* relative.[9] Not only does it have the same set of voice-leading intervals as SLIDE (one common tone and two half-steps), but its total pitch-class content is [01458], a set that is maximally similar to SLIDE's [01478] (Morris 2001, 79). Part 3 of the article shows that MAJ3RD and SLIDE appear side-by-side in each movement and that MAJ3RD relates to the largest tonal level of the composition, the tonal centres of the three movements. Also, the analysis occasionally invokes both [0147], which is a subset of [01478], and [0125689], which is the pitch-class complement of [01478]. [0125689] is the septachord whose

---

[8]   The F harmonic minor scale interpretation involves enharmonic respelling (G#/A♭ and C#/D♭). The four triads in SLIDE(E) are C major, C# minor, C# diminished, and C augmented. To illustrate the complement union property, consider the augmented triad C–E–G#, which forms [01478] with each of its three non-intersecting tritones, C#–G, F–B, and A–E♭, creating the pitch classes of SLIDE(E), SLIDE(G#), and SLIDE(C), respectively.

[9]   I use the symbol MAJ3RD to denote any pair of triads of the same type that articulate transposition by ascending *or* descending major third; for example, each of the following articulates a MAJ3RD: C#m–Am, Am–C#m, C#m–Fm, Fm–C#m, CM–EM, EM–CM, CM–A♭M, and A♭M–CM. For a list of approaches/notations that *differentiate* between ascending and descending major-third transposition, consult Hook (2002, 80–1). Major-third relations between triads of the same type have a distinguished history, as detailed, for example, in Matthew Bribitzer-Stull's study of the A♭–C–E Complex (Bribitzer-Stull 2006). The Cabena piece far prefers major-third-related *minor* triads.

intervallic content most closely parallels that of [01478] and the only septa-chord that embeds two instances of [01478].[10]

Example 3. SLIDE interacting with other harmonic resources: Barrie Cabena, *Sonata Festiva,* III, "Rondo," section B', homophonic theme. © Copyright 2007 by. E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

Example 3 provides an introductory excerpt from Cabena's piece to illustrate that SLIDE can have contrasting presentations and that it can interact with a variety of other pitch structures. The third movement's homophonic theme opens with a bi-triadic articulation of SLIDE(G#)—E major and E# minor triads in the manuals—above a linear articulation of SLIDE(A), F#–A–C–F–C# in the pedal part. These contrasting SLIDE presentations combine to produce various four-voice pentatonic, octatonic, and hexatonic subsets. This excerpt is typical of those that follow, in that SLIDE is an important component of the passage, but that other sonorities also arise. The analysis features seventeen further excerpts, many of which are much longer than this one, that embed fifty further instances of SLIDE. Since many of these excerpts are thematic, the repetition and development of these themes mean that SLIDE accounts for an even larger portion of the work. Although most articulations of SLIDE are clear, as they are here, a few are somewhat hidden by the musical surface—and so we need to forgive an extra note here or there, or perhaps hear from one downbeat to the next to sense them. Most SLIDEs are local phenomena and so exist at the forefront of the listening experience, but some SLIDEs require longer-range thinking and hearing. As the analysis proceeds, it should

---

10 I will illustrate the relationships between [01478] and [0125689] with examples. First, the set of pitch classes within SLIDE(E) is {C, C#, E, G, G#}, which articulates [01478]; the *complementary* set includes the other seven pitch classes, {A, B♭, B, D, E♭, F, F#}, which articulates [0125689]. Second, interval-class vectors count the interval-class content of a set; the interval-class vectors for [01478] and [0125689] are 202321 and 424542, respectively. Vector entries differ by exactly two for interval classes 1–5 and by one for the concluding interval class 6. This relationship is a direct consequence of the complement relationship (Straus 2016, 117–18). (Colloquially, the vectors show, for example, that both sets feature a relatively low number of interval class 2, shown by "0" in 202321 and "2" in 424542, and a relatively high number of interval class 4, with entries of "3" in 202321 and "5" in 424542.) Third, {A, B♭, B, D, E♭, F, F#}, which articulates [0125689], embeds two instances of [01478]: {B♭, B, D, F, F#} and {D, E♭, F#, A, B♭}.

become clear that sensing this unity fosters a deep understanding of the work's pitch structure and expands our sense of SLIDE's musical capabilities.
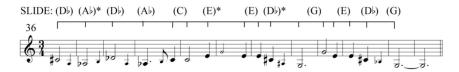
PART 2. SLIDE IN EACH MOVEMENT

Example 4. SLIDE in movement I, "Overture," section B. © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

Example 4. continued

(b) SLIDE index pitch classes in the left-hand melody from Example 4(a)

The Overture's comic-waltz style B section is organized by a series of SLIDE progressions in which the *legato* left-hand melody articulates the shared chordal third, the pedal part articulates chordal roots and fifths, and the right hand adds three-note chords that include one or more chordal extensions. Chordal sevenths and ninths predominate, while elevenths and thirteenths (or sixths) are secondary. Nine SLIDE progressions are identified by solid-line boxes on Example 4(a): three instances of SLIDE(D♭), one each of SLIDE(A♭) and SLIDE(C), and two each of SLIDE(E) and SLIDE(G).

The presence of P-related triad pairs preceding this string of SLIDEs calls to mind Morris (1998), where P and P′ (Morris's name for SLIDE) are obverses of one another, as well as Segall (2017), where P and S (Segall's name for SLIDE) often appear in the same network.
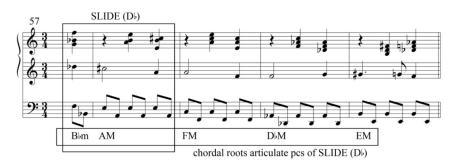
Further, dotted boxes and "*" appended to SLIDE labels indicate three intervening passages that can be viewed as *near*-SLIDEs. My near-SLIDEs are a slight adjustment of Straus's 2003 near-transposition, in which all but one note (usually out of a total of three) need to be a crisp transposition.[11] Each near-SLIDE is subsequently "corrected" to create its exact SLIDE counterpart. First, Fm–GM in SLIDE(A♭)* is corrected to Fm–EM in SLIDE(A♭) two measures later. Since both the near and exact SLIDE(A♭)s follow a SLIDE(D♭), we can hear the entire four-measure phrase as two SLIDE *pairs*, SLIDE(D♭)–SLIDE(A♭)* followed by SLIDE(D♭)–SLIDE(A♭). Similarly, the C♯m–Em in SLIDE(E)* becomes C♯m–CM in the precise SLIDE(E) that immediately follows, and the anomalous AM–F♯M of SLIDE(D♭)* becomes AM–B♭m in SLIDE(D♭) three measures later. The final seven SLIDEs create a recurring pattern that organizes the final eight measures of the excerpt: the quartet SLIDE(E)*–SLIDE(E)–SLIDE(D♭)*–SLIDE(G) is answered by a trio with the same indices, SLIDE(E)–SLIDE(D♭)–SLIDE(G).

Overall, there is an unbroken chain of twelve SLIDEs based on an underlying ordered series of six: SLIDE(D♭)–SLIDE(A♭)–SLIDE(C)–SLIDE(E)–SLIDE(D♭)–SLIDE(G). In addition to saturating the musical surface with

---

[11] SLIDE(E)* differs from SLIDE(E) by one note out of five, as does SLIDE(D♭)* from SLIDE(D♭). SLIDE(A♭)* differs from SLIDE(A♭) by two notes, but the surface context and proximity make the relation convincing nonetheless. I include these near-SLIDEs because of the SLIDE-rich context of the passage, the proximity of near and exact versions of the same SLIDE, and the resulting interpretation that embraces every chord in the passage. This is the only place in the article that is so flexible in pitch-class content.

SLIDE, this chain also projects SLIDE horizontally. That is, the indices D♭, A♭, C, E, and G are precisely the pitch classes of SLIDE(E)! This is particularly clear musically because of the consistent pedal/manual layout of various chord members. Every SLIDE in the passage features its index pitch class in the left-hand melody, and in nine of the twelve SLIDEs the left-hand melody's index pitch class appears *on a measure downbeat*, where it is also emphasized by long duration.[12] To clarify this, example 4(b) isolates the left-hand melody, with non-index notes appearing in smaller noteheads. The presence of SLIDE in both the melodic and harmonic realms of the passage engages the many studies cited earlier that discuss transpositional combination, multiplication, projection, enlargement, and composing-out. For example, following Straus (2004), one could say that the initial SLIDE(D♭) of example 4 is composed out over the next twelve measures, or that the situation in example 4 articulates [01478] * [01478], or even SLIDE * SLIDE, where the asterisk denotes transpositional combination in the manner of Cohn (1988).

Example 5. Chordal roots articulate SLIDE: I, "Overture," section B. © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

chordal roots articulate pcs of SLIDE (D♭)

Subsequent re-composition of this material features another enlargement, one in which SLIDE(D♭) initiates a series of chords whose roots project precisely the pitch classes of SLIDE(D♭) (see example 5). And as shown in example 6, another later passage features an ascending fourth sequence featuring SLIDE(G)–SLIDE(C)–SLIDE(F), which is adorned by several P progressions and more varied realizations of SLIDE: SLIDE(B♭) in the upper voices in the first system, fifth-related SLIDEs unfolding simultaneously within the double boxes in the middle and lower systems—SLIDE(C/G) and SLIDE(F/C)—and the expression of SLIDE(B) as a single chord.[13]

---

[12] The only exceptions are mild: the melodic D♭s of SLIDE(D♭)* and SLIDE(D♭) appear on beat two spelled as C♯s and the melodic E at SLIDE(E)* appears on beat three, leading to a downbeat G, which, though not the index of SLIDE(E), *is* the index of another link in the chain, SLIDE(G).
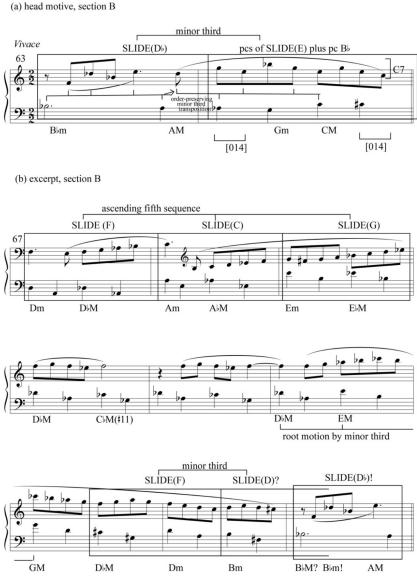
[13] SLIDE(B) expressed as a single chord has two distinct layers, the pedal and left hand's A♭ minor triad and the right hand's G major triad. SLIDE(F/C) also has two distinct layers, with SLIDE(F) in pedal and left hand and SLIDE(C) in the right hand. SLIDE(C/G) is a bit more concealed by the surface texture: SLIDE(C) appears clearly in the pedal and left hand, but SLIDE(G) draws three notes from within the right-hand chords (G, B, B♭) and two notes from within the pedal oscillations (E, E♭).

Example 6. Additional SLIDE development in movement I, "Overture," section B. © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

The B and B' sections of the Intermezzo provide marked textural and harmonic contrast with the B section of the Overture, featuring two-part counterpoint and triadic harmony instead of a comic texture and extended tertian harmony, but offer striking similarities in the use of SLIDE. SLIDE(D♭) organizes the head motive, which returns no fewer than seven times during the movement (example 7[a]). The subsequent articulation of SLIDE(E) has several interesting features. The addition of B♭ of the Intermezzo creates C^7 harmony in the right hand, the initial and final quarter-note beats each state [014], and the middle beats a quasi ii–V progression, Gm–CM. Perhaps most ingenious is

the correspondence with the realization of SLIDE(D♭) shown by mid-system brackets. That is, D♭–A♭–E–G–C is an order-preserving minor third transposition of B♭–F–D♭–E–A.

Example 7. SLIDE in movement II, "Intermezzo." © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.
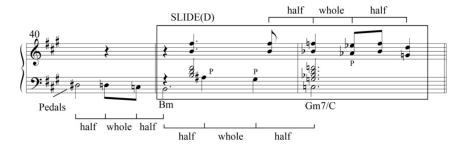

(a) head motive, section B

(b) excerpt, section B

Example 7. continued

(c) beginning of section A"
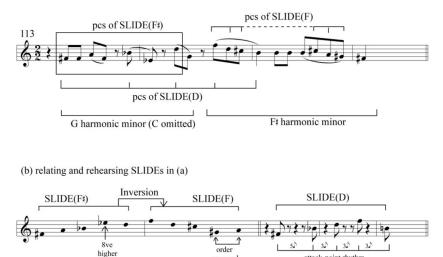

(d) transition to section B

Subsequent development of this material, shown in example 7(b), articulates SLIDE(F)–SLIDE(C)–SLIDE(G), an ascending fifths sequence that complements movement I's ascending fourths. The ensuing minor third root motion and juxtaposition of SLIDE(F) and SLIDE(D) also recall the first movement. Further, SLIDE(F) and its component triads seem to anchor the passage as a whole, in something vaguely resembling a harmonic prolongation. That is, the passage begins with SLIDE(F)'s articulation of Dm–D♭M (m. 67). The subsequent ascending fifths sequence leads to a recapturing of D♭M, the left hand's D♭–A♭ *one* octave higher and the right hand's F *two* octaves higher. D♭ is further extended, first by its lower neighbour C♭, and then by the progression D♭M–EM–GM–D♭M, which is octatonic. The ensuing SLIDE(F) articulates D♭M–Dm, an order reversal of the original. The structural emphasis on the notes D and D♭ now moves to the upper voice during the SLIDE(D)? that elides with the return of the head motive's SLIDE(D♭). Although the note D is not struck above B♭–F, SLIDE(D)? remains completely convincing to me for three reasons: SLIDE(D)? is surrounded by ultra-clear SLIDEs, D *has* been struck on each of the previous four quarter-note beats and so continues to ring through, and one might "expect" to hear D–E–D–C#–**D!** as a copy of the neighbour figure, F–G–F–E♭–F, which appears twice a few measures earlier.

But movement II's use of SLIDE is not limited to its B and B' sections. As shown in example 7(c), the perfect fifth {B♭, F} intrudes upon the otherwise

diatonic modal environment of Section A″—accented chromatic passing tones that create yet another appearance of SLIDE(D♭). This is a smooth compositional move in two ways. First, this SLIDE appears in the midst of a *series* of perfect fifths descending by a mixture of half and whole steps, and second, since this excerpt immediately follows B′, one hears B″'s emphasis on SLIDE "spill over" into section A″. Moreover, as shown in example 7(d), an excerpt from the movement's transition embeds Bm and B♭M triads, an articulation of SLIDE(D) that connects this thicker-textured excerpt to its leaner relatives. As in example 7(c), the half-step melodic motions in SLIDE are incorporated smoothly into the surrounding stepwise melodic material, in this case into patterns involving half-steps and whole steps that provide local continuity.

Example 8. SLIDE in movement III, "Rondo." © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

(a) section B″, fugue subject

(b) relating and rehearsing SLIDEs in (a)

Like the first two movements, the B and B′ sections of the Rondo feature SLIDE prominently. The fugue subject of B′, shown in example 8(a), is in two halves. The first ascends, mostly by leap, in syncopated fits and starts, while the second descends, mostly by step, in a continuous line that conforms to the 2/2 metre. The presence of F#–A at the subject's beginning and its retrograde, A–F#, at the end, creates overall tonal closure on F#. The first half articulates an incomplete G harmonic minor collection and the second a complete F# harmonic minor collection. SLIDE infuses this structure in three ways. First, the subject begins with a linear statement of the pitch classes of SLIDE(F#), F#–A–F#–B♭–E♭–D. Second, rests divide the subject into four segments whose beginning notes (F#, B♭, D, and F), along with the longest note of the subject (B), articulate the pitch classes of SLIDE(D) in an augmented-triad-plus-tri-tone ordering. This segment, which is hidden just below the musical surface, is

nonetheless easy to hear because the initial note (F#) is repeated and because the final four notes (Bb–D–F–B) unfold in an even-note rhythm, with three eighths from the attack of one note to the attack of the next. Finally, SLIDE(F) is articulated by the two sets of descending eighth notes in the second half, F–D–C#–…–C#–A–G#, which skip over only the lengthy B. The presence of C# at the end of the first set *and* at the beginning of the second further clarifies the connection.

Example 8(b) helps to clarify the SLIDE relationships of 8(a). It shows that, save an octave transfer and an order reversal, SLIDE(F#) and SLIDE(F) are order-preserving inversions of one another.[14] It also extracts SLIDE(D) from the texture and shows its rhythmic layout. Playing/thinking back and forth between example 8(b) and 8(a) can help to make these SLIDE interpretations vivid. The fugal writing based on this subject dominates section B', and the freer writing of section B uses the first half of the subject as a head motif so that SLIDE affects a significant portion of the third movement.

Example 9. Ostinati feature {Bb, Db, Eb, Fb}, a subset of SLIDE(Db). © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

(a) II, "Intermezzo," end of section B'

(b) III, "Rondo," middle of section B'

---

[14] Since the set type [01478] is inversionally symmetrical, any two sets of that type can be related by transposition or inversion; it is the particular *orderings* here that suggest hearing inversion rather than transposition.

Finally, there is a clear connection between the B′ sections of the second and third movements. Each is composed of manuals-only counterpoint in 2/2 metre that mixes eighth notes and quarters. More specifically, each B′ section culminates with *ostinato* treatment of its primary thematic material. Example 9(a) identifies the five-fold repetition of the Intermezzo's head motive played against sequential motion by major third. Example 9(b) points out repetitions of the Rondo's fugue subject incipit, whose downbeat repeated B♭s appear below parallel fourths moving chromatically (SLIDE-like voice leading) and then diverging chromatic motion (MAJ3RD-like voice leading). Linked by more than developmental device, the *ostinati*, F–D♭–B♭–E and C♯–E–C♯–F–B♭, articulate the same set of pitch classes, an instance of [0147] and a subset of SLIDE(D♭).
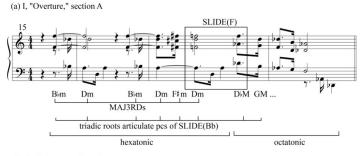
Part 3. SLIDE–MAJ3RD Interaction and Four SLIDE Cadences

The tonal centres of the sonata's three movements outline descending major thirds, creating an augmented triad, B♭–F♯–D, a root progression that is also articulated locally by minor triads within each movement, where it interacts with even more instances of SLIDE. Example 10(a)'s excerpt builds a series of minor triads on B♭, F♯, and D, creating a series of MAJ3RDs and a hexatonic collection. SLIDE(F) connects this to octatonic material composed of tritone-related major triads. Taken as a whole, the chordal roots of the passage articulate SLIDE(B♭) in an augmented-triad-plus-tritone ordering: B♭–D–F♯, D♭–G. In example 10(b) a pair of SLIDEs leads from B♭m to F♯m and then a hexatonic sequence outlining the same augmented triad connects F♯ to the final D. So MAJ3RD unfolds at two rates, in half notes during the sequence and at two-measure intervals over the passage as a whole.

The augmented triad scheme also penetrates the tonal structure of both parts of the Rondo. During a toccata-like development of quartal material from the movement's opening, example 10(c) features an upper line that arpeggiates B♭m, Dm, and F♯m triads. Each note in this sequence tops a pentatonic collection whose realizations create a playful 3 + 3 + 2 grouping within each measure. As in example 10(a), there follow tritone-related major triads (here A major and E♭ major in the second system's ascending arpeggio) and a SLIDE reference, which in this case is a longer-range connection involving pitches of SLIDE(D♭) articulated in the upper voice on measure downbeats. (See the asterisks on the example.)
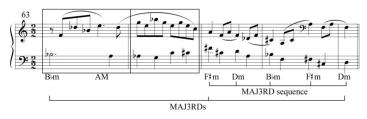
In example 10(d), it is fugue subject incipits, rather than triads, that create a major third sequence; incipits on F♯ and B♭ lead to a complete subject statement on D. Since we know that each statement of the fugue subject begins with an articulation of SLIDE, it is not surprising that the F♯ and B♭ incipits each articulate a SLIDE subset, [0147]. But what is more interesting here is that the incipits *taken as a pair* articulate [0125689], precisely the pitch-class complement of SLIDE's [01478]. Moreover, the incipit passage embeds most of a complete subject on F♯, as shown in example 10(e). The effect is of a subject on F♯ gradually fading into the background as the line progresses. The

F#–F#–A–F#–Bb–Eb incipit is clear, the D–G fragment appears in its characteristic eighth-note rhythm and descending fifth contour but delayed a bit by the opening notes of the incipit on Bb, and the F–D–(C#)–B follows but with F# and a rest instead of C#.

Example 10. SLIDE and MAJ3RD in each movement. © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.
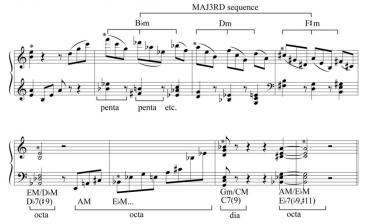

(a) I, "Overture," section A
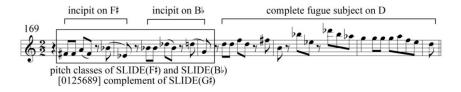
(b) II, "Intermezzo," section B

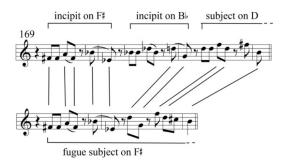(c) III, "Rondo," section B, quartal arpeggios

* asterisks indicate highest note at each downbeat, which are the pitch classes of SLIDE(Db)

Example 10. continued

(d) III, "Rondo," section B', fugue

incipit on F♯   incipit on B♭   complete fugue subject on D

169

pitch classes of SLIDE(F♯) and SLIDE(B♭)
[0125689] complement of SLIDE(G♯)

(e) incipits from (d) embed most of fugue subject

incipit on F♯   incipit on B♭   subject on D

169

fugue subject on F♯

The remainder of this section of the article studies SLIDE's role in four cadences from the third movement, each of which engages roman numeral theory. The first shows how SLIDE concludes the fugal exposition and summarizes its entrances, the next two demonstrate SLIDE mixture, and the final one sees SLIDE's role in the triumphant final dominant-to-tonic cadence.

Example 11(a) shows the cadence that closes the Rondo's fugal exposition, where SLIDE(A) is clearly implied—an enharmonically spelled FM/E♯M triad followed by an open fifth chord on F♯, with an intervening passing tone, G♯. Given the well-defined F♯ tonal centre of the fugal exposition, it makes sense to hear the incomplete F♯m triad as tonic. Since the E♯M/FM triad seems to lead to, rather than replace, the tonic, I hear it as ♯VII, not ♭I. The resulting ♯VII–i progression is a "function-altering" SLIDE (Lehman 2014, 83). A closely related interpretation of the cadence considers the A to be an *appoggiatura* and the G♯ that follows it to be harmonic, creating a correctly spelled E♯m triad, ♯vii, which resolves to i. The resemblance of this cadence to the double leading-tone cadence (Bent 2002, 86) is too striking to go unmentioned—and it seems to be a plausible interpretation, not only because of Cabena's encyclopedic knowledge of musical styles, but also because such a comically fleeting, anachronistic interpretation might engage Cabena's trademark quick wit.[15] Overall, the

---

[15] Cabena's sense of humour manifests itself musically in various ways, such as in witty titles like *A Bevy of Brevities* (1991), in playful works such as the *Sonata for Pedals Only—Four Feet!* (1977/81),

dual interpretation of #VII–i and #vii–i accounts for both A *and* G# near the end of the bass line's fugue subject.
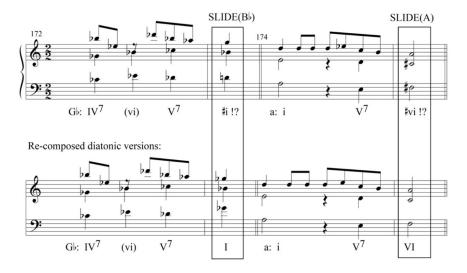
Example 11. SLIDE mixture cadences: III, "Rondo," section B', fugue. © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

(a) end of fugal exposition

SLIDE(A)   SLIDE(A)

passing   appoggiatura

f#: #VII   i   f#:   #vii   i

(b) cadences near end of fugue

SLIDE(B♭)   SLIDE(A)

G♭: IV⁷   (vi)   V⁷   #i !?   a: i   V⁷   #vi !?

Re-composed diatonic versions:

G♭: IV⁷   (vi)   V⁷   I   a: i   V⁷   VI

This cadence encapsulates the tonal structure of the entire fugal exposition in a powerful and SLIDE-centred way. The upper-voice E#–F# summarizes, in retrograde, the relationship between SLIDE(F#) and SLIDE(F), which occurs not only within the initial fugue subject, shown previously in example 8, but also within the bass-voice subject entry on F# that leads to this cadence. Similarly, as the reader can imagine, the middle voice's B#–C# summarizes the SLIDE(C#) and SLIDE(C) articulated by the real fugal answer, which lies the expected interval of a perfect fifth above the initial subject. And the lower

and in several satirical movements from what is perhaps his most famous piece, *Cabena's Homage: "Ten Portraits"* (1967), a series of portrayals of prominent Canadian organists.

voice's note A corresponds to the statement of SLIDE(A) within the real answer. Stated another way, the exposition's fugal entries embed six SLIDEs: SLIDE(F#), SLIDE(F), SLIDE(D), SLIDE(C#), SLIDE(C), and SLIDE(A). The five of these other than SLIDE(D) articulate an enlargement of SLIDE because their indices form the pitch classes of SLIDE(A), precisely the progression that appears at the musical surface at the conclusion of the exposition. This SLIDE * SLIDE situation recalls, in retrograde, the one in the Overture's B section, where SLIDE(D♭) *began* a series of SLIDEs whose indices articulate SLIDE(D♭)'s pitch classes.

Example 12. SLIDE as ultimate cadential dominant: III, "Rondo," section A″, end. © Copyright 2007 by E. C. Schirmer Music Company, a division of ECS Publishing. All rights reserved. Used by permission.

The end of the fugue features two cadences that imply SLIDE mixture. These cadences further engage the F# tonal centre. Example 11(b) provides the two brief excerpts, each paired with a hypothetical diatonic re-composition.[16] The

---

[16] These diatonic re-compositions suggest a connection to diagrams within Richard Bass's (1988) analyses of twentieth-century Russian works, in which larger stretches of music are viewed as chromatic displacements of diatonic models.

diatonic re-compositions feature an authentic V^7–I cadence in G♭ major and a deceptive V^7–VI cadence in A minor. The actual first cadence replaces G♭M (I) with Gm (#i), and the actual second cadence replaces FM (VI) with F#m (#vi), examples of "function shadowing" and "function preserving" SLIDE mixture, respectively (Lehman 2014, 83). These cadences work in an interesting way together because the first avoids the triadic root G♭, precisely the triadic root on which the second concludes, respelled as F#. To be clear, by including the diatonic re-compositions I am *not* suggesting that we "expect" the diatonic version and then are "surprised" by the SLIDE mixture version, as would be the case in a piece by, for example, Schubert, where conventional diatonic cadences abound and where SLIDE is rare. In the Cabena context we would be more surprised (and likely disappointed) to hear the fully diatonic cadences because they are not characteristic of the tonal language of the piece. But I *do* think that these particular cadential approaches are diatonic enough and that the entire work is often enough tonal and diatonic, that these SLIDE-mixture cadences can be heard as such.

Finally, SLIDE's most overtly triumphant moment occurs at the very end of the sonata. As shown in example 12, there is a return of the D pentatonic material that begins the movement, doubled in octaves, leading to a lengthy chord that superimposes SLIDE(D♭)'s component triads (B♭ minor and A major) over a G pedal. The choice of SLIDE(D♭) is compelling, not only because of its salient use in the other movements, but also because, along with the pedal G, it creates A^7(♭9, ♭13)—albeit in an unusual registral layout—which subsequently resolves to the final D harmony, a strong dominant-to-tonic motion to complete the sonata. In this context the superimposition of AM and B♭m could reasonably be interpreted as the superposition of V (AM) and its function-shadowing SLIDE-mixture relative #v (A#m/B♭m). The climactic chord can also be construed as a D harmonic minor collection that omits D. In any case there is a clear resolution to a D major tonic, where the concluding pedal flourish articulates the rhythm and contour of the fugue subject, tonally altered to conform to the A theme's pentatonic harmony.

SLIDE has come a long way—from cameo appearances that create Schubertian tonal surprise, to being a more regular member of the ensemble cast of harmonic characters in Russian music of the early twentieth century, to this virtuoso leading role in Cabena's *Sonata Festiva*. As we have seen here, SLIDE dominates each movement's B section(s). The Overture's comic waltz features a SLIDE * SLIDE, chordal roots articulating SLIDE, stacked perfect-fifth-related SLIDES moving in sequence by perfect fourth and SLIDE expressed as a single chord. The Intermezzo's lively two-voice counterpoint showcases minor-third-related SLIDEs in its recurring head motive and perfect-fifth-related and other SLIDEs in later development. In the Rondo's more thematically complex B sections, the fugal subject includes an intricate web of SLIDEs, the fugal exposition creates SLIDE * SLIDE, a series of quartal arpeggios articulates a downbeat-to-downbeat SLIDE, and the homophonic theme embeds bi-chordal and melodic SLIDEs. SLIDE is also integrated into each movement's A thematic material, organizing root motion within the Overture's double-dotted

homophony, infiltrating the otherwise modal atmosphere of the Intermezzo's A theme, and, in the Rondo, creating an expressive highpoint within the fanfare's triumphant final cadence.

The composition is not a harmonic mono-drama. SLIDE is not the *sole* important harmonic character but it *is* the most important one, often dominating but otherwise interacting with the many and diverse other harmonic actors, such as triadic, extended tertian and quartal harmonies, hexatonic, octatonic, and diatonic collections, and SLIDE's close transformational relative, MAJ3RD. In these many appearances SLIDE demonstrates great dramatic and expressive range: it is variously comic, serious, energetic, climactic, and pensive, of local and larger-scale import, and clearly apparent on the musical surface, mildly adorned and in the background. The analysis of SLIDE-related phenomena engages roman numeral theory, neo-Riemannian theory, and pitch-class set similarity and complementation.

There are at least two clear directions for future research. First, further study of SLIDE in the English cathedral music tradition seems warranted, perhaps especially in the music of Herbert Howells. Howells was a student of Benjamin Britten and a teacher of Barrie Cabena. I have shown Cabena's fascination with SLIDE here, and others have identified SLIDE in Britten's music. Rupprecht's study of Benjamin Britten's *Billy Budd* states that SLIDE is "the syntactic basis for Claggart's Act 1 deceit of Billy, and his Act 2 challenge to Vere" (Rupprecht 2001, 92). Citing Mazel' (1982, 182–3), who in turn credits Deryck Cooke with the insight, Christopher Segall shows that the Prologue of *Peter Grimes* features different versions of a single melody, Ellen's in E major and Peter's in F minor, with the common third A♭/G♯ melodically emphasized in both versions (Segall 2013, 88). For example, a glance at Howells's *Rhapsody IV: Bene Psallite in Vociferatione* (1958), an organ work composed only a year after Cabena studied with him, reveals that mono- and bi-chordal instances of SLIDE appear at climactic moments, adding chromatic spice to an otherwise diatonic piece.

Second, Cabena's own works deserve more scholarly treatment. His lifelong service to (church) music as composer, performer, conductor, and teacher has earned him many accolades, such as a lifetime membership in the North American Musicians Union, an honorary doctorate of divinity from the Atlantic School of Theology, and the Silver Medal from the Académie française. Moreover, in 2006 Barrie Cabena won *both* of the American Guild of Organists' composition competitions: the AGO/ECS Publishing Award in Choral Composition for his *The Day of Pentecost* and the AGO/Holtkamp Award for the organ work *Six Sketches on Children's Hymns.* The inspiring quality of Cabena's many compositions ensures that further research into his music will be richly rewarded.

REFERENCES

Alegant, Brian, and Donald McLean. 2001. "On the Nature of Enlargement." *Journal of Music Theory* 45 (1): 31–72.

Bass, Richard. 1988. "Prokofiev's Technique of Chromatic Displacement." *Music Analysis* 7 (2): 197–214.

Bent, Margaret. 2002. *Counterpoint, Composition and* Musica Ficta. New York: Routledge.

Bribitzer-Stull, Matthew. 2006. "The A♭–C–E Complex: The Origin and Function of Chromatic Major Third Collections in Nineteenth-Century Music." *Music Theory Spectrum* 28 (2): 167–90.

Cabena, Barrie. (1971) 2007. *Sonata Festiva*. St. Louis: E.C. Schirmer Music.

Capuzzo, Guy. 2004. "Neo-Riemannian Theory and Analysis of Pop-Rock Music." *Music Theory Spectrum* 26 (2): 177–99.

Cohn, Richard L. 1988. "Inversional Symmetry and Transpositional Combination in Bartok." *Music Theory Spectrum* 10: 23–38.

———. 1997. "Neo-Riemannian Operations, Parsimonious Trichords, and Their Tonnetz Representations." *Journal of Music Theory* 41 (1): 1–66.

———. 2000. "Weitzmann's Regions, My Cycles, and Douthett's Dancing Cubes." *Music Theory Spectrum* 22 (1): 89–103.

Fankhauser, Gabe. 2008. "Flat Primary Triads, Harmonic Refraction, and the Harmonic Idiom of Shostakovich and Prokofiev." In *Musical Currents from the Left Coast*, edited by Jack Boss and Bruce Quaglia, 202–15. Middlesex: Cambridge Scholars.

Forrest, David, and David Sears. 2019. "Rock Slides and Other Uncommon Progressions in Popular Music Harmony." Paper presented at the Society for Music Theory Conference, Columbus, OH, 6–10 November.

Harley, Konrad. 2014. "Harmonic Function in the Music of Sergei Prokofiev." PhD diss., University of Toronto.

Heinemann, Stephen. 1998. "Pitch-Class Set Multiplication in Theory and Practice." *Music Theory Spectrum* 20 (1): 72–96.

Honarmand, Amin. 2019. "Aggregates and Quasi-Aggregates: A Study of Dodecaphony in Schnittke's Music." *Music Theory Spectrum* 41 (2): 305–22.

Hook, Julian. 2002. "Uniform Triadic Transformations." *Journal of Music Theory* 46 (1–2): 57–126.

Kholopov, Yuriy. 2003. *Garmoniya: Teoretischeskiy kurs* [Harmony: A theoretical course]. 2nd ed. Saint Petersburg: Lan'.

Koblyakov, Lev. 1990. *Pierre Boulez: A World of Harmony*. Chur: Harwood Academic.

Lehman, Frank. 2014. "Schubert's SLIDEs: Tonal (Non-) Integration of a Paradoxical Transformation." *Music Theory and Analysis* 1 (1–2): 61–100.

———. 2018. *Hollywood Harmony: Musical Wonder and the Sound of Cinema*. New York: Oxford University Press.

Lewin, David. (1987) 2007. *Generalized Musical Intervals and Transformations*. New York: Oxford University Press. Originally published by Yale University Press.

Losada, Catherine. 2014. "Complex Multiplication, Structure and Process: Harmony and Form in Boulez's Structures II." *Music Theory Spectrum* 36 (1): 86–120.

———. 2017. "Between Freedom and Control: Composing Out, Compositional Process, and Structure in the Music of Boulez." *Journal of Music Theory* 61 (2): 201–42.

———. 2019. "Middleground Structure in the Cadenza to Boulez's Éclat." *Music Theory Online* 25 (1).

Mazel', Lev. 1957. "O r asshireniiponyatiya odnoimyonnoy tonal'nosti." *Sovetskaya muzïka* 2:141–45.

———. 1982. *Stat'i po teorii i analizu muzïki.* Moscow: Sovetskiy kompozitor.

Morris, Robert D. 1990. "Pitch-Class Complementation and Its Generalizations." *Journal of Music Theory* 34 (2):175–246.

———. 1998. "Voice-Leading Spaces." *Music Theory Spectrum* 20 (2): 175–208.

———. 2001. *Class Notes for Advanced Atonal Music Theory.* Lebanon, NH: Frog Peak Music.

Orfeyev, Serafim. 1970. "Odnovïsotnïye trezvuchiya i tonal'nosti." In *Voprosï teorii muzïki*, vol. 2, edited by Yuriy Tyulin, 54–85. Moscow: Muzïka.

Overduin, Jan. 1978. "The Published Organ Works of Barrie Cabena." M.Mus. thesis, University of Western Ontario.

———. 1985. "Sonata IX by Barrie Cabena." *American Organist* 19 (5): 66–67.

Rifkin, Deborah. 2004. "A Theory of Motives for Prokofiev's Music." *Music Theory Spectrum* 26 (2): 265–89.

Rupprecht, Philip. 2001. *Britten's Musical Language.* New York: Cambridge University Press.

Segall, Christopher. 2013. "Triadic Music in Twentieth-Century Russia." PhD diss., City University of New York. Chapter on SLIDE is 80–117.

———. 2017. "Alfred Schnittke's Triadic Practice." *Journal of Music Theory* 61 (2): 243–87.

Straus, Joseph N. 2003. "Uniformity, Balance and Smoothness in Atonal Voice Leading." *Music Theory Spectrum* 25 (2): 305–52.

———. 2004. "Atonal Composing Out." In *Order and Disorder: Music-Theoretical Strategies in 20th-Century Music*, 31–51. Leuven: Leuven University Press.

———. 2016. *Introduction to Post-Tonal Theory.* 4th ed. New York: W. W. Norton.

Tiftikidi, Nikolay. 1970. "Teoriya odnotertsovoy i tonal'noy khromaticheskoy sistem." In *Voprosï teorii muzïki*, vol. 2, edited by Yuriy Tyulin, 22–53. Moscow: Muzïka.

Tymoczko, Dmitri. 2011. *A Geometry of Music: Harmony and Counterpoint in the Extended Common Practice.* New York: Oxford University Press.

ABSTRACT

Barrie Cabena's *Sonata Festiva* (1971) highlights SLIDE, a chord progression familiar from the neo-Riemannian and twentieth-century Russian music-theoretic literatures. Diverse expressions of SLIDE involve chord pairs, single chords, and melodic lines in textural, tonal, and formal contexts, leading to contemplative, energetic, comedic, and triumphant effects. Aspects of pitch-class set theory help to relate SLIDE to other harmonic phenomena in the work.

RÉSUME

La Sonata Festiva (1971) de Barrie Cabena met en lumière SLIDE, une progression
d'accords connue des littératures musicales théoriques néo-riemanniennes et russes
du XXe siècle. Les expressions diverses de SLIDE impliquent notamment des paires
d'accords, des accords simples et des lignes mélodiques dans des contextes texturaux,
tonals et formels, conduisant à des effets contemplatifs, énergiques, comiques et triom-
phants. Certains aspects de la théorie des ensembles aident à relier SLIDE à d'autres
phénomènes harmoniques dans l'œuvre.

   Mots clés : Barrie Cabena, Sonata Festiva, SLIDE, théorie néo-riemannienne,
théorie des ensembles

BIOGRAPHY

Mark Sallmen is an Associate Professor (teaching stream) of music theory in the Fac-
ulty of Music at the University of Toronto. He teaches music theory and musical skills
courses in the undergraduate core curriculum, as well as upper-level undergraduate
and graduate seminars in post-tonal music topics. Other published work involves the
music of Schoenberg, Webern, and Carter, and the pedagogy of twentieth-century
music.