Schenkerian Theory, Neo-Riemannian Theory and Late Schubert: A Lesson from Tovey

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When Donald Francis Tovey penned 'Tonality in Schubert' for the centennial anniversary of the composer's death, one of his main goals was to expand the concept of key-relation through mixture in an effort to rationalize Schubert's remote harmonic excursions.[1] In proclaiming that 'Schubert's tonality is as wonderful as star clusters', Tovey demonstrated how a simple shift in mode—from major to minor or vice versa—allowed the composer to access secondary key-relations one step removed from the diatonic set of major and minor triads.[2]

While Tovey's writings have been valued for their musical sensibility, wit and colourful metaphors, his perspective on key-relations has surprisingly received less attention in recent Schubert scholarship. Indeed, analytical studies on Schubert's tonality have tended to favour either Schenkerian theory or neo-Riemannian theory to explain the composer's signature harmonic progressions. Just as Schenkerian theory can inform our understanding of Schubert's tonal procedures under the precepts of diatony or extensions thereof,[3] so can neo-Riemannian theory allow us to rationalize Schubert's

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[1]   Donald Francis Tovey, 'Tonality', in A. H. Strangways (ed.), 'Schubert Number', a special issue of *Music and Letters*, 9 (1928), 341–63. Reprinted as 'Tonality in Schubert' in Tovey's *Essays and Lectures on Music* (London: Oxford University Press, 1949), 139–59. All quotations in this article conform to the reprint.

[2]   Tovey, 159.

[3]   See especially Harald Krebs's 'Some Early Examples of Tonal Pairing: Schubert's "Meeres Stille" and "Der Wanderer"', in William Kinderman and Harald Krebs (eds), *The Second Practice of Nineteenth-Century Tonality* (Lincoln and London: University of Nebraska Press, 1996), 17–33; Krebs, 'The Background Level in Some Tonally Deviating Works of Franz Schubert', *In Theory Only*, 8/8 (1985), 5–18; Krebs, 'Tonart und Text in Schuberts Liedern mit abweichenden Schlüssen', *Archiv für Musikwissenschaft*, 47 (1990), 264–71; Thomas Denny, 'Directional Tonality in Schubert's Lieder', in Erich Wolfgang Partsch (ed.), *Franz Schubert–Der Fortschrittliche? Analysen–Perspektiven–Fakten* (Tutzing: Hans Schneider, 1989), 37–53; and, more recently, David Damschroder, *Harmony in Schubert* (New York: Cambridge University Press, 2010).

harmonic progressions through a series of transformations that promote voice-leading efficiency along a grid of equally distributed interval classes otherwise known as the *Tonnetz*.[4] Both theories have generated new conceptions of Schubert's harmonic practices, which have motivated changes in the reception history of his music; progressions that were once viewed as both 'sufficiently hideous' and strangely notated can become comprehensible when analysed through the lens of both theories.[5]

What remains unclear with respect to these two prevailing analytical purviews is the extent to which one may relate to the other. As Steven Rings succinctly questions of Schenkerian theory and neo-Riemannian theory:

> Does neo-Riemannian theory represent an 'alternative' to such theories or an adjunct to them? Put more pointedly, are neo-Riemannian and Schenkerian methods in competition with one another, or are they potentially complementary? If they are complementary, how might they best interact in analytical praxis? More generally, can the *Ps*, *Ls*, and *Rs* of neo-Riemannian theory be integrated more persuasively with traditional models of tonal syntax (Schenkerian or otherwise), or must they remain isolated from tonal discourse, as a means for providing 'tonally agnostic' accounts of chromatic passages?[6]

Given that Tovey's own conception of Schubert's tonality demonstrates how mixture—commensurate with neo-Riemannian theory's *P* (parallel) operation—can generate a chromatic set of key-relations within a diatonic framework, is it possible that he may have already provided us with one potential answer to the relationship between a Schenkerian and neo-Riemannian perspective of Schubert's tonality?

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[4]   Some important studies on the utility of neo-Riemannian theory for analysing Schubert's music are Richard Cohn, 'As Wonderful as Star Clusters: Instruments for Gazing at Tonality in Schubert', *19th-Century Music*, 22/3 (Spring 1999), 213–32; Cohn, *Audacious Euphony: Chromaticism and the Consonant Triad's Second Nature* (New York: Oxford University Press, 2012); Steven Rings, 'Perspectives on Tonality and Transformation in Schubert's Impromptu in E-flat, D. 899, no. 2', *Journal of Schenkerian Studies*, 2 (2007), 33–64; Rings, *Tonality and Transformation* (New York: Oxford University Press, 2011); Yosef Goldenberg, 'Schenkerian Voice-leading and Neo-Riemannian Operations: Analytical Integration without Theoretical Reconciliation', *Journal of Schenkerian Studies*, 2 (2007), 65–84; David Kopp, *Chromatic Transformations in Nineteenth-Century Music* (New York and Cambridge: Cambridge University Press, 2002); Suzannah Clark, *Analyzing Schubert* (New York and Cambridge: Cambridge University Press, 2011).

[5]   G. W. Fink, 'Review of Opp. 22–24', in Otto Erich Deutsch (ed.), *The Schubert Reader: A Life in Letters and Documents*, trans. Eric Blom (New York: Norton, 1947), 353–55. The quotation is on p. 354.

[6]   Rings, 'Perspectives on Tonality and Transformation', 33. *P*, *L* and *R* refer to the parsimonious voice-leading transformations parallel (C major to C minor, or vice versa), *Leittonwechsel* (C major to E minor, or C minor to A♭ major) and relative (C major to A minor, or C minor to E♭ major) respectively, all of which preserve two common tones.

Drawing from Tovey's concept of key-relations, this article offers a new way of understanding how a Schenkerian and neo-Riemannian view of Schubert's late tonal practices may be complementary. As I suggest, Tovey's concept of key-relations can function as a bridge between these two theories because it approximates parsimonious voice-leading operations while preserving chord function within a tonal hierarchy. Tovey's key-relations will not be read as an ideal solution to some of the ways in which Schubert's music can appear to resist a Schenkerian or neo-Riemannian analysis; rather, they will be used to help clarify each theory's strengths. My discussion begins by considering Schenker's own graph of an excerpt from the last movement of Schubert's Sonata in C minor, D958, an analysis that has surprisingly received little attention in Schubert-Schenker scholarship though nonetheless raises questions about the utility of Schenkerian analysis for musical passages that are diatonically indeterminate.[7] I will then position Schenker's reading of this excerpt in dialogue with both my neo-Riemannian analysis and 'Toveyian' analysis of the same musical passage. I conclude that, in forming an intermediate pathway between Schenkerian diatony and neo-Riemannian parsimony, Tovey's key-relations highlight the important contributions that Schenkerian theory and neo-Riemannian theory offer to our understanding of Schubert's tonality.

Schenker's analysis of the fourth movement of D958

Among Schenker's graphs of Schubert's late works, his reading, in *Der freie Satz*, of the finale from the Sonata in C minor, D958 (bars 1–242), seems exemplary of how one might conceptualize within the principles of diatony harmonic relationships that cross the enharmonic seam. The passage in question includes the ritornello (bars 1–92), transition (bars 93–112) and first episode (bars 113–242) of the sonata-rondo form, and features enharmonicism (bar 113), several modal shifts and a sequential passage that modulates by minor thirds.[8] The C-minor finale is the last of nine examples that Schenker offers in section '§282. Fifth-relationships which lack the significance of harmonic degrees' and stands apart from the preceding eight, not only because of the

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7   On diatonic indeterminacy, see Richard Cohn, 'Maximally Smooth Cycles, Hexatonic Systems, and the Analysis of Late-Romantic Triadic Progressions', *Music Analysis*, 15/1 (March 1996), 9–40.

8   The form of this movement is as follows: A (bars 1–112) – B (113–242) – C (243–428) – A (429–498) – B (499–660) – A (661–717). Carl Dahlhaus places this movement between two formal types—rondo and sonata-rondo—and considers it 'a special case of sonata-rondo'. See 'Schubert: Piano Sonata in C-minor, Opus Posthumum', in Carl Dahlhaus, *Analysis and Value Judgement* (New York: Pendragon Press, 1983), 71–75.

text insert that physically separates it from the other examples but also because it contains the most interpolations.[9]

Figure 1 reproduces Schenker's graph of the C-minor finale (bars 1–242), his description of fifth relationships that do not achieve the status of scale-steps, and his commentary on the excerpt:[10]

Figure 1:

Earlier, in connection with the presentation of prolongations at the various levels as well as other events in the foreground, examples were given in which the vertical was subordinate to the horizontal to the extent that its various fifth-relationships did not achieve the significance of actual harmonic degrees. … (115)

Finally, here is the exceptionally bold example of a bass succession which through many interpolations expresses only a neighboring-note harmony, that is, VII. (116)

In Schenker's reading of this passage, Schubert's modulations are organized around the tonic (I) and mediant (III) scale-steps (*Stufen*), bars 1 and 213, respectively, the latter of which serves as the harmonic goal of the first episode. The entire passage can thus be summarized as I–(VII)–III, where VII functions as a lower neighbouring harmony to the tonic.

While a modulation to III, the relative major of C minor, is typical of minor-mode works, the way in which Schubert approaches this scale-step seems unusual. After

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9   Heinrich Schenker, *Free Composition (Der freie Satz)*, trans. and ed. Ernst Oster (New York: Schirmer, 1979), 115. The other eight examples in this section range from J. S. Bach's 'Brich entzwei, mein armes Herze' from the 69 songs, no. 24 after Georg Christian Schemelli's *Musicalisches Gesangbuch* (1736), to the fourth movement of Beethoven's 'Eroica' Symphony. Schenker's text insert between examples 1–8 and 9 reads (p. 115): 'Fifth-interpolations of various kinds are to be found also in connection with authentic linear progressions, such as those shown in Figs. 123,5 and 124, 6b, as well as with all other types of prolongation.'

10   Schenker, 'Supplemental volume of musical examples', in *Free Composition,* Fig. 134, no. 9.

modulating to the Neapolitan (D♭ major) in the transition (bar 93), the music enharmonically shifts to the Neapolitan's parallel minor mode (C♯ minor) at the onset of the first episode (bar 113). The successive alternation between a chord's parallel mode and its resultant chord's relative mode (thus, A major/A minor → C major/C minor → E♭ major/E♭ minor, bars 145–169) produces a sequence of modulations by minor thirds that culminate on III at the end of the first episode. For Schenker, the modulations that lead to the major mediant—D♭ major, C♯ minor, A minor, C minor, and E♭ minor (bars 93–169)—are to be understood as bass interpolations that do not achieve the status of harmonic steps. These interpolations are indicated by the empty parenthesis in Schenker's first level of roman numeral analysis.

A neo-Riemannian analysis of the fourth movement of D958

The extent to which Schenkerian theory can adequately rationalize Schubert's harmonic progressions continues to be questioned in contemporary scholarship.[11] Two general concerns are: (1) whether Schenkerian theory domesticates Schubert's tonality within the prolongation of a unified contrapuntal and harmonic structure;[12] and (2) whether the theory can adequately account for chromatic phenomena that resist tonal unity, such as equal divisions of the octave and enharmonic equivalence.[13]

Schenker's analysis of the fourth movement of the C-minor sonata seems exemplary of the second type of reservation cited in neo-Riemannian scholarship. Here the passage crosses the enharmonic seam when it shifts to the minor version of the Neapolitan harmony (from D♭ major to C♯ minor), allowing access to A major, which lies outside of the C-minor tonality. In his graph, Schenker reads the C♯ as an enharmonic substitution for D♭, yet also interprets the A-minor triad as ♮IV that belongs to an auxiliary cadence in III. This dual substitution of harmonic roots—D♭=C♯ (enharmonic substitution) and A♮=A♭ (modal substitution)—may be perceived as problematic, since

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11 See Gregory Proctor, *Technical Bases of Nineteenth-Century Chromatic Tonality: A Study in Chromaticism* (PhD diss., Princeton University, 1978); Cohn, 'Maximally Smooth Cycles'; Kopp, *Chromatic Transformations*; Clark, *Analyzing Schubert*.

12 With respect to Schenker's reading of Schubert's 'Auf dem Flusse' from *Winterreise*, Suzannah Clark states: 'There is no hint that Schenker's analytical maneuvers are in any way prompted by the text of the song. That being the case, it is clear that the direction of responsibility in Schenker's analysis is towards his theory and not the text. The choices represented in his graph of "Auf dem Flusse" are aimed at containing Schubert's harmony. Schenker domesticates Schubert.' Clark, 86.

13 On tonal disunity, see Cohn, 'Maximally Smooth Cycles'. Here Cohn explains that an equal division of the octave by major thirds presents a conundrum to 'classical methods of analysis' in that 'either the divisions are unequal or they are not divisions of the octave' (10–11).

the diatonic scale does not appear to permit both. If C♯ functions as the enharmonic-equivalent root of the D♭ harmony, A♮ would need to be read as the modal substitute for V in E♭ major (A♮ = B♭♭), as opposed to IV. Conversely, if A♮ is understood as mixture on the IV-step in E♭ major, C♯ cannot function as an enharmonic substitute for D♭. This is illustrated in Figure 2:

Figure 2: Enharmonic substitutions between C minor, D♭ major and C♯ minor.

E♭-major scale-steps:	VI	VII	I	II	III	IV	V
C-minor scale-steps:	I	II	III	IV	V	VI	VII
C minor:	C	D	E♭	F	G	A♭	B♭
D♭ major:	C	D♭	E♭	F	G♭	A♭	B♭ ?
C♯ minor:	B ?	C♯	D♯	E	F♯	G♯	A
C♯ minor:	C♯	D♯	E	F♯	G♯	A	B

That the chromaticism in Schubert's C-minor finale can appear to resist tonal unity may raise the question as to whether the composer's tonality might be governed by a different logic. Since the tonal areas between each successive modulation in the excerpt share two common tones, one might instead use the parsimonious voice-leading operations *P*, *L* and *R* to explain the rationale behind Schubert's harmonic practice.[14] Figure 3 aligns the transformations directly underneath Schenker's graph, and Figures 4a and 4b show, respectively, these transformations on an equal-tempered *Tonnetz* and on the *PL* and *PR* cycles:[15]

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[14] See note 6.

[15] With respect to Figure 4a, the numerals represent the mod-12 pitch classes and are arranged according to the intervals of a minor third on the horizontal axis, a major third across the vertical axis and a perfect fifth across the diagonal axis from left to right. Since this *Tonnetz* assumes equal temperament, the isomorphic pitch classes (e.g. 6 = 6) between the top and bottom, as well as the left and right, can be brought together to form a three-dimensional torus. Major and minor triads, identified by their root, are also mapped on the *Tonnetz* according to specific relationships. Relative triads (e.g. C major, A minor) cross the vertical axis (operation R), leading-tone exchange triads (e.g. C major, E minor) cross the horizontal axis (operation L) and parallel triads (e.g. C major, C minor) cross the

Figure 3: Comparison between Schenker's graph and a neo-Riemannian analysis

Here the *Stufen* and bass interpolations identified in Schenker's bass line sketch can be explained instead by the transformation operations *P–S+P–P–LP–RP–RP–P*.[16] Since each minor triad throughout the excerpt is preceded by its major form, the *P* transformations have been notated in the analysis, though placed in parentheses to align the neo-Riemannian analysis more readily with Schenker's graph. Figure 4a maps these operations on the *Tonnetz*, and Figure 4b (a variant of 4a) extracts the *PL* and *PR* cycles from the *Tonnetz*. The move from D♭ major (bar 93) to A minor (bar 145) is understood as a motion through the hexatonic *PL* cycle, which favours root relations by major thirds. The arrival on the A-minor triad at bar 145—the hexatonic pole of D♭ major—serves as a 'pivot' chord that enables a 'modulation' from the *PL* cycle to the

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diagonal axis (operation P). For further discussion, see Richard Cohn, 'Neo-Riemannian Operations, Parsimonious Trichords, and Their "Tonnetz" Representations', *Journal of Music Theory*, 41/1 (Spring 1997), 1–66.

16 'S' indicates the slide operation that allows C-major to transform into C♯-minor, and presents an alternative to the compound operation *LPR*. In the slide transformation, the third is retained as a common tone and both the root and fifth 'slide' a half-step up. Thus, S(C-major) → C♯-minor, and P(C♯-minor) → C♯-major/D♭-major. Compared to the *P, L* and *R* parsimonious voice-leading operations, which preserve two common tones, the *S* transformation preserves only one.

octatonic *PR* cycle, which favours root relations by minor thirds. This modulation between the *PL* and *PR* cycle is visually illustrated by the swerve to the right on the *Tonnetz* in Figure 4a; the same modulation is also indicated by the shared A-minor triad between the *PL* and *PR* cycle in Figure 4b. The series of modulations by minor thirds on the *PR* cycle moves from A minor to the cycle's octatonic pole E♭ minor, before swinging back to E♭ major through *P*. Compared to diatonic space, where a modal shift leads the series of foreground modulations outside of C-minor tonality and consequently back in C-minor tonality, the neo-Riemannian space is fully chromatic and thus does not make this distinction between inside and outside. Moreover, A minor (♮IV of E♭ major in Schenker's graph) is understood not as a substitution for its diatonic counterpart (IV) but rather as the tipping point at which the harmonic progression switches from the *PL* to the *PR* cycle.

Figure 4: Mapping of *P*, *L* and *R* operations (D958, fourth movement, bars 93–242).
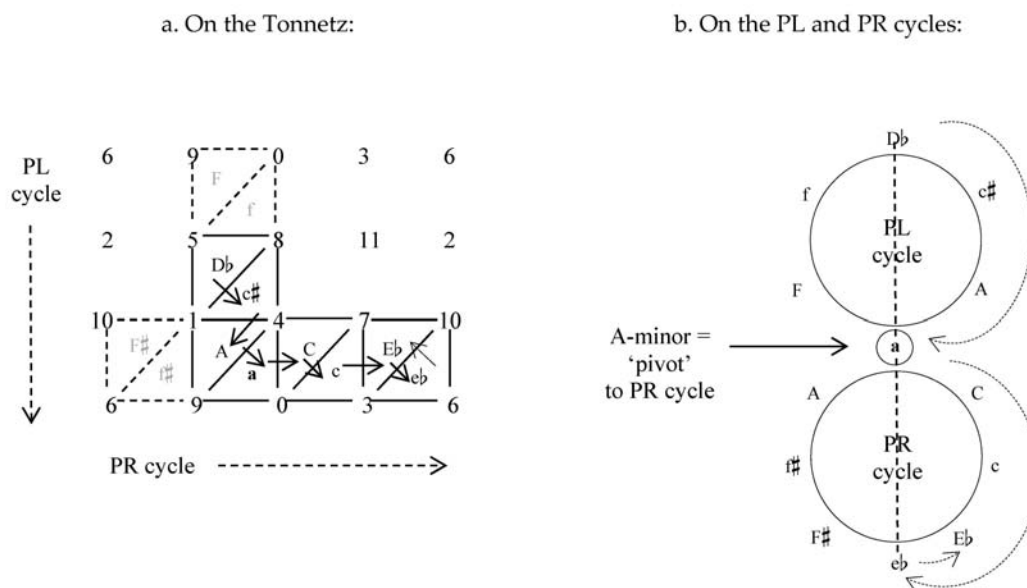
From the analysis above, we might conclude that the neo-Riemannian perspective attempts to address the supposed disadvantages in Schenker's reading of the same passage. The theory's mod-12 pitch-class space seeks to surpass the constraints created by the diatonic scale's non-symmetrical properties, enabling one to rationalize chromatic phenomena that resist tonal unity. Yet, at the same time, the theory's mod-12 space tends to restrict the kind of conclusions that parsimonious voice-leading can make about tonal hierarchy. An equal-tempered *Tonnetz*, comprised of intersecting

chains of evenly distributed interval classes (ics 3, 4, and 5), renders each trichord—all of which belong to the (037) set class—as non-distinct from the other trichords on the grid. This particular property of the *Tonnetz* not only frustrates the potential for a tonal hierarchy to emerge; it also construes trichords that contain the same pitch-class content as identical (compare, for instance, both analyses' reading of the C-minor chords in bars 1 and 157), regardless of their structural function or contrapuntal origin—a point to which I will return. Thus, although the neo-Riemannian analysis highlights the transformations that take place between (037) trichords on the *Tonnetz* and shows the ways in which such resulting patterns can relate to the change of design on the musical surface, it is not clear how one might differentiate between the structural function of each (037) trichord, especially when harmony is used as a formal marker in the expression of the sonata-rondo form.

Tovey's natural key-relations as a bridge between Schenkerian theory and neo-Riemannian theory

At this point, we might consider whether there is a middleground option, so to speak, between Schenkerian and neo-Riemannian perspectives of Schubert's C-minor passage. Is there a way to address the question of tonal disunity without sacrificing tonal function? Tovey's concept of key-relations presents one possible option, and a 'Toveyian' analysis of the same passage may enable us to come closer to understanding how a Schenkerian analysis and a neo-Riemannian one can be complementary. Before diving into this, however, I will briefly summarize Tovey's concept of key-relations as a means of clarifying how it may function as a bridge between Schenkerian theory and neo-Riemannian theory.

In order to rationalize Schubert's modulatory techniques, Tovey stretches the boundaries of what constitutes a key-relation by redefining its concept. He explains that, with the exception of keys that are a whole tone apart (due to the notion that one key may sound like a secondary dominant to another—for instance I–II, where II = V/V), the modulation from the tonic key to another key that lies outside of its diatonic system is possible when one key undergoes a change in mode.[17] Put differently, a simple change in mode—from the major to minor or the reverse—allows for a remote key-relation:

> Two keys are related when *some form of* the tonic chord of one is identical with *some form of* one of the common chords of the other; with the exception of keys a whole tone apart, which are related

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[17] See René Rusch, *Imagining Tonal Spaces: Conceptions of Hierarchy, Chromaticism, and Social Constructs in Schubert's Music* (PhD diss., University of Michigan, 2007), 19–23.

only when their common chords are unaltered. In other words, a change of mode on either or both sides leaves the key-relation still traceable, so long as the keys are not a tone apart.[18]

In the case of C major, for example, a modal change applied to iii, IV, V and vi yields the secondary relations III, iv, v and VI.[19] Similarly, in C minor, ♭III, iv, v and ♭VI yield the secondary relations ♭iii, IV, V and ♭vi (Figure 5):

Figure 5: Tovey's direct and secondary key-relations.

As Figure 5 illustrates, secondary third-related chords from the tonic (mediant and submediant) offer the most contrast within the composite set of major and minor key-relations, compared to secondary subdominant and dominant relations. The secondary relations IV and V in minor are less remote than ♭iii and ♭vi, because they reproduce the same direct relations found in the major mode.[20] The reverse also holds, wherein the secondary relations iv and v in major are equivalent to the direct relations in minor.

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[18]   Tovey, 147.

[19]   Here the distinction between an upper-case and a lower-case roman numeral (indicating major and minor chord quality, respectively), as well as any accidentals to the left of the roman numeral (which mirror the accidentals in the key signature), reflect Tovey's own notation. This notation differs from Schenker's, wherein upper-case roman numerals indicate diatonic chords and accidentals to the left of the roman numeral signify an altered harmonic root.

[20]   Tovey, 144.

Tovey further adds that a tonic's change in mode (from C major to C minor, for example) allows one to access the direct and secondary relations in the opposite mode.

Figure 6a: Tovey's chart of 'natural steps of remote key-relations'.[21]

In the chart reproduced in Figure 6a, Tovey indicates the intermediate steps to a remote key-relation from a major and minor tonic. Unlike the intermediate steps in the subdominant and dominant key-relations, those in the mediant and submediant key-relations share two common tones between each adjacent chord.

Tovey also explains how the Neapolitan ♭II in minor can generate a class of key-relations that are separate from those created by the diatonic scale:

Figure 6b: Tovey's chart of 'Neapolitan relations' from a major and minor tonic.[22]

Here there are two additional direct key-relations if the major tonic is reinterpreted as the Neapolitan and the subtonic as the tonic (I–♯VII becomes ♭II–I).

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21   Tovey, 144: Ex. 8.

22   Tovey, 149: Ex. 13.

That Tovey's theory may form a bridge between Schenkerian theory and neo-Riemannian theory is manifest in its ability to both preserve tonal function and assimilate parsimonious voice-leading for all chromatic third-related triads:

Figure 7: Comparison between Tovey's key-relations and parsimonious voice-leading operations.

As Figure 7 shows, Tovey's key-relations and neo-Riemannian parsimonious transformations have in common the same intermediate steps with respect to the generation of chromatic-third relationships; both theories preserve the same number of common tones and rely on mixture/operation *P* to generate the same triads.

A 'Toveyian' analysis of the fourth movement of D958

Returning to the C-minor finale, the passage in question may be analysed according to Tovey's key-relations:[23]

Figure 8: Toveyian analysis (D958, fourth movement, bars 1–242).

With the exception of the modal shift between D♭ major and C♯ minor in bar 113, all of the modulations in the passage are prepared by their own dominants, which are included in the reduction shown in Figure 8.[24] The passage can be summarized as modulations from C minor (i) to D♭ major (♭II) between the ritornello and the transition, from D♭ major (♭II) to D♭ minor (♭ii)—enharmonically notated as C♯ minor—between the transition and first episode, and from C♯ minor (= D♭ minor, ♭ii) to E♭ major (♭III) over the course of the first episode. All three modulations are interpreted as key-relations to the piece's C-minor tonality. C minor and D♭ major form a direct key-relation, and C♯ minor—the key-area that begins the first episode—forms an indirect key-relation that arises out of mixture. The modulation to E♭ major at the end of the first episode is diatonic to C minor, and thus forms a direct relation. Although the whole-step between ♭ii and ♭III between the boundary points of the first episode may at first appear to violate

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[24]   Notably, the neo-Riemannian reading above (see again Figures 3 and 4) does not view these dominants as structural to the tonal relationships in the passage, and therefore omits them from the analysis.

Tovey's definition of key-relation, the sequence of modulations by minor thirds from bar 141 to bar 169 (♯vi–i–♭iii) annuls this whole-step relationship.[25]

While the Toveyian analysis offers an intermediary view of the C-minor excerpt, it concomitantly emphasizes the strengths of the Schenkerian and neo-Riemannian analyses of the same passage. As with neo-Riemannian theory's parsimonious voice-leading operations, Tovey's key-relations tend to place less emphasis on counterpoint, compared to a Schenkerian perspective.[26] That a key-relation or chord could be interpreted instead as arising from a contrapuntal shift seems especially foreign to Tovey's concept of key-relations. A more detailed Schenkerian reading of the ascending minor-thirds sequence (bars 145–213), for example, would show how the chords within the sequence are a result of the counterpoint between the outer voices:

Figure 9: Voice-leading analysis of bars 145–242.

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[25] It seems plausible that Tovey would have assigned the roman numerals ♯vi–i–♭iii to the modulations within the sequence of minor thirds, since each modulation is prepared by its respective dominant, which occurs at a cadential moment in each phrase.

[26] On this point, see Carl Schachter's discussion of Tovey's analysis of the Presto section from J. S. Bach's Prelude in E minor (WTC, I) in 'Analysis by Key: Another Look at Modulation', *Music Analysis*, 6/3 (1987), 289–318, reprinted in Carl Schachter, *Unfoldings: Essays in Schenkerian Theory and Analysis*, ed. Joseph Straus (New York and Oxford: Oxford University Press, 1999), 134–60. See especially 137–9. Whereas Tovey interprets a return to the tonic harmony in bar 32 of the Prelude, Schachter suggests that the tonic harmony does not enter until the final bar of the piece. For Schachter, the tonic chord in bar 32 provides consonant support for a dissonant passing motion in an upper voice.

From a Schenkerian perspective, the 'key-areas' of C minor and E♭ minor in the Toveyian analysis would be understood as arising from a 5–8 linear intervallic pattern that connects the ♮IV- and V-step in E♭ major. Recalling Schenker's graph in Figure 1, C minor and E♭ minor are interpreted as interpolations and are thus not assigned a roman numeral.

Besides underplaying the role of counterpoint, the Toveyian analysis above may, in the end, leave open the question of whether the passage is tonally unified. The enharmonic shift between D♭ major and C♯ minor appears to be a true enharmonic shift, as opposed to a notational one, because the first episode ends in E♭ major instead of F♭♭ major. While we may be convinced that we have indeed arrived in E♭ major at the end of the first episode instead of F♭♭ major, Schubert's modulation to B major (or C♭ major?) at the beginning of the second episode (bar 243) casts doubt on the diatonic relationships that unfold within these two episodes. That the neo-Riemannian analysis of the same passage takes as its background an enharmonic and equal-tempered pitch-class space, as opposed to the diatonic scale, not only allows it to avoid seemingly odd harmonic interpretations[27] but also enables it to bypass the requirement of relating these chords to a referential tonic.[28]

Reconciling Schenkerian diatony with neo-Riemannian parsimony?

From our discussion, we may conclude that Schenkerian theory and neo-Riemannian theory are 'inversions' of each other, and that Tovey's concept of key-relations, which appears to present a hybrid of both theories, emphasizes their strengths. While each of the three theories offers an unique way to conceptualize Schubert's tonality, they collectively point towards the ways in which modal shifts—in tandem with third-relationships—can affect a musical work's tonal centricity, inviting us to contemplate the background space that we use to navigate the work's musical surface. Put differently, these progressions can cast doubt on the vanishing point that we use to conceptualize the proximity between harmonic entities.

Perhaps the most pressing question in this dialectical representation of Schubert's C-minor passage, then, concerns the listening perspective that we should adopt. As

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[27] Suzannah Clark makes a similar point in *Analyzing Schubert*, stating 'Attempts to describe such songs in terms of a single tonic invariably lead to unwieldy harmonic descriptions' (95). While the point is raised within the context of Schenkerian approaches to Schubert's works that exhibit directional tonality (pieces that begin in one key, but end in another), it seems equally applicable to the Toveyian analysis above.

[28] On this last point, see Cohn, 'Maximally Smooth Cycles', 12.

Charles Fisk perceptively comments in his response to Richard Cohn's parsimonious voice-leading analysis of the first movement of the Sonata in B-flat major, D960:

> But some may find this gain in economy to be more than offset by what is lost. Cohn's abandonment of a diatonic framework for Schubert's more unusual progressions and even more his eventual subsumption of these progressions, under their new definitions, into a new and radically simplified diatonic framework threaten to obscure any sense of tonal tension or drama in the passages he discusses.[29]

Taking our cue from Fisk, do we prefer to hear the tonal drama created between Schubert's modal shifts and chromatic third progressions, or do we prefer, as Peter Westergaard puts it, to cruise around the curves of an enharmonically conformed torus?[30] Or do we instead prefer to combine these two perspectives?[31] An example of the latter listening perspective might attempt to conjoin a Schenkerian perspective with a neo-Riemannian one by situating one inside the other:

Figure 10: Hybrid analysis (D958, fourth movement, bars 1–242).

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[29] Charles Fisk and Richard Cohn, 'Comment and Chronicle', *19th-Century Music*, 23/3 (Spring 2000), 301–4.

[30] Peter Westergaard, 'Geometries of Sounds in Time', *Music Theory Spectrum*, 18/1 (Spring 1996), 1–21. See especially 16. See also Daniel Harrison's discussion of the torus in 'Nonconformist Notions of Nineteenth-Century Enharmonicism', *Music Analysis*, 21/2 (2002), 115–60.

[31] In 'Technical Bases of Nineteenth-Century Chromatic Tonality', Gregory Proctor has explored the possibility that two distinct tonal spaces exist in nineteenth-century music: classical diatonic tonality and nineteenth-century chromatic tonality. The first is based on contrapuntal practices explained by Schenkerian theory, while the second comprises of 'the equally-tempered twelve pitch-class collection as the source of all tonal material' (iv). Patrick McCreless makes a similar point in differentiating between diatonic and chromatic background space. See his 'An Evolutionary Perspective on Nineteenth-Century Semitonal Relations', in Kinderman and Krebs, *The Second Practice of Nineteenth-Century Tonality*, 87–113.

Here the transformations are notated above Schenker's reading of the passage. Since the shifts between C minor–D♭ major and D♭ major–D♭ minor (C♯ minor) can still be heard as a motion from the tonic to the minor Neapolitan within C-minor tonality, the first transformation *P* is placed in parenthesis. That Schubert appears to move away from the C-minor tonality when he approaches the sequence of modulations by minor thirds may encourage us to include the neo-Riemannian transformations *LP, RP* and *RP* over bars 137–169.

While this hybrid solution may appear to reconcile a Schenkerian perspective of the C-minor passage with a neo-Riemannian one, the conflict between these two views seems most apparent in their conception of voice-leading: do the chords arise out of contrapuntal voice-leading, or parsimonious voice-leading? Conventional use of the term voice-leading refers to the movement of free or bound consonances and dissonances between two or more voices in counterpoint. New triads formed through operations *P*, *L* and *R*, however, are all measured from the root:

Figure 11: Contrapuntal voice-leading vs. parsimonious voice-leading.[32]

The tension between these different conceptions of voice-leading seems to render the two theories as incompatible. A more plausible option to the hybrid solution offered in Figure 10 might be the twin views shown in Figure 4 above. Here we can still alternate between both analyses and their respective background spaces so as to gain a dialectical view of the passage. Essentially, the analyses would remain distinct yet complementary.

In closing, if Tovey's concept of key-relations brings us closer to understanding the value of a Schenkerian and neo-Riemannian perspective of Schubert's tonality, his figurative expression—'Schubert's tonality is as wonderful as star clusters'—also seems revealing: just as star clusters allow us to approximate distance in the universe, so do the composer's harmonic progressions help us to approximate the distance

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32   See Rusch, 62–3.

between diatonic space and chromatic space. That Schubert's music continuously encourages us to contemplate the tools we use to measure this distance is undoubtedly a testament to the abundant riches that his harmonic practices have to offer.[33]

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