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A DIMINISHED-SEVENTH BASSBRECHUNG: TONAL AMBIGUITY AND THE PROLONGATION OF FUNCTION IN EDWARD ELGAR'S STRING QUARTET, 1ST MOVEMENT

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A Diminished-Seventh *Bassbrechung*: Tonal Ambiguity and the Prolongation of Function in Edward Elgar's String Quartet, 1st movement

Oliver Chandler

Analysis of the Allegro moderato from Edward Elgar's String Quartet op. 83 gives rise to a number of interpretative ambiguities, typical of late-romantic repertoire. Essential to these are the sophisticated interactions which the movement effects between its diatonic and chromatic voice-leading processes. Viewed abstractly, the result of this syntactic mixture on the movement's overall tonality can be interpreted in three ways:

1. The Allegro moderato is monotonal; chromaticism is ultimately an attractive surface distraction from its deeper-level diatonic structure. One can produce a traditional Schenkerian analysis of the movement's middleground from which chromatic discrepancies can be responsibly erased.
2. The movement is monotonal, but chromaticism is essential to its articulation of a single, global triad. While best analyzed in Schenkerian terms, its middleground only makes sense if dissonant prolongations are accommodated, which can be shown to contribute to the composing-out of a background cadence.
3. The movement is split between two harmonic syntaxes: one, predicated both on structural root-motion by fifth and shared membership of a diatonic collection; and the other, chromatic, dependent on parsimonious voice-leading transformations between major and minor triads, the fundamental roots of which are purely incidental. On this view, different

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> parts of the movement might still be meaningfully associated (either in terms of motive, harmony, or voice leading), but their effect is not cumulative: i.e., they do not compose-out a nested hierarchy of diminutions which emanate from a single tonic. While by no means incoherent, the piece is tonally and syntactically disunified. (Broadly speaking, this is the kind of position often taken by analysts of a neo-Riemannian bent [see Cohn 2012].)

Now that the general interpretative possibilities for this movement have been outlined, I can begin to sketch analytically particular responses to it. While the Allegro moderato can be parsed traditionally as exposition: i–III–V; development: V/V/V–V/V–v–I (Interpretation 1), such an enterprise ultimately requires us to "correct" and/or distort the music: that is, to disregard the chromatic tonal quale of structurally significant "diatonic" harmonies; to invest chords, dissonant both in-and-of-themselves and in relation to their immediate voice-leading contexts, with structural importance on the basis of their root notes alone; and to play-down the relative durations and/or prolongational strength of key chromatic harmonies (particularly ♭V and ♭VII).

To make better sense of such features, I propose a second, more radical reading: the exposition and the development can be understood to articulate a diminished-seventh *Bassbrechung* (e–G–B♭–D♭–e), which resolves, as a pre-dominant, to a structural V in the recapitulation as part of a background auxiliary *Ursatz* (e: vii$^{o4}_{3}$/V–V–I); its harmonic import is thus ultimately tonal and functional (Interpretation 2), as opposed to "non-tonal" and "octatonic" (Interpretation 3). Local detail speaks in support of this abstract middleground view: the *Ursatz* is mirrored exactly by the movement's closing cadence; and while the relevant *Stufen* of the *Bassbrechung* are not always conventionally tonicized, their local tonal charge is invariably significant.

This reading raises an interesting methodological question. Though I represent my argument in Schenkerian-graphic terms, some of its conceptual details might appear to contradict fundamental Schenkerian tenets: how can a consonant, vertical E minor triad be composed out by a horizontal, diminished tetrachord (e^{o7}), for example, when their respective pitch contents are so different?[1] Despite the resultant contradiction between structural levels, both chords can radiate subdominant function in a B-major context;[2] it is this *function* (as opposed to any particular chord) which is being prolonged (Interpretation 2).

While I do provide neo-Riemannian-style readings of relevant passages, which can be taken to highlight an apparent syntactic disjunction between the music's diatonic and chromatic progressions (Interpretation 3), I argue that this analytical method ultimately implies equal formal weight both for those harmonies which are essential to the unfolding of the movement as a whole and those which are merely incidental to such a process. Put metaphorically: neo-Riemannian analysis produces a graphically attractive inventory of the chromatic objects interior to the Quartet's tonal structure, albeit without providing any indication of the specific shape or dimensions of that structure, nor the particular placement of the relevant chromatic objects within it.[3]

In the analyses which follow, my argument is built from the ground up. I begin with local detail before considering deeper levels of musical structure. This is to ensure that judgments about the movement's background are generated through the careful compilation of moment-to-

[1] There is precedent for graphing progressions such as these in Schenker's own *practice*: see his analysis of Hugo Wolf's "Das Ständchen," for example, in which the tonic is prolonged by an arpeggiation of chromatic major thirds in the bass (2001 [1935], Figure 100/6). However, it is difficult to see how this makes sense in terms of Schenker's *theory*: "there is no clear process of diminution embellishing I… [and, as such,] the harmonic progression truly departs from the tonic and returns to it rather than keeping it alive during the process" (Kopp 2002, 230).

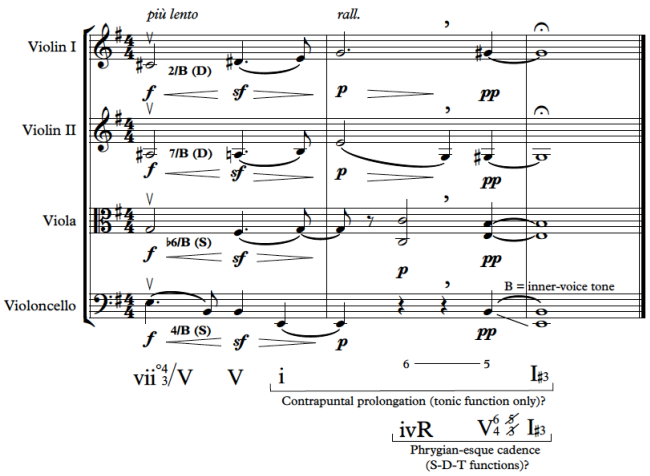
[2] Harmonic functions of this kind were first generated by the triadic relationships immanent in any given diatonic set, but they are not irrevocably linked to such sets; various harmonies can produce similar functional effects, even in a chromatically saturated language (Harrison 1994).

[3] I thank J. P. E. Harper-Scott both for the bare bones of this metaphor and for the many analytical insights he has shared with me over the years (often in the pub).

moment impressions, rather than by means of the imposition of an abstract voice-leading template from without.

There is also an important historical question to be considered: namely, is it essential or incidental to our understanding of this movement's musical language that the Quartet was completed both post-First World War and post-emancipation of dissonance, late in December 1918? Elgar's continued commitment to monotonality, both here and elsewhere in his late chamber music (Chandler 2019), suggests a conservative reaction to his historical moment; an indifference to the aesthetic trajectories of modernism. However, my analyses attempt to show how the various technical idiosyncrasies of this movement might be thought to bear modernism's residual imprint. While apparently nineteenth-century in style, Elgar's Quartet is – in ways more profound than mere chronology – manifestly an early-twentieth-century composition.[4]

§1 The Closing Cadence



EXAMPLE 1: Elgar, String Quartet, Op. 83, 1st movement, 17:9–11

[4] For full-length analyses of the String Quartet's finale and the Violin Sonata's middle movement, and discussion of their complex relationship to modernism, see Chandler 2020a and 2020b.

To understand the tonality of the Allegro moderato, it is useful to begin with its final auxiliary cadence (see Example 1), which follows the liquidation of the movement's introductory two-bar idea between rehearsal figures 17:5 and 8 (compare with 0:1 to 2). It emerges as if from another world, thickly scored, *più lento*, and *forte*, after both a *piano* hush and a textural reduction to a single B in the first violin part. It is seemingly composed of a hitherto unheard cadential idea. V is tonicized by a pre-dominant diminished seventh chord which blends together subdominant and dominant functions: the two violins emphasize V/V-ness by intoning $\hat{7}$ and $\hat{2}$ of B major's diatonic collection, while the $\flat\hat{6}$ and $\hat{4}$ sounded respectively in the viola and the cello express iv/V-ness (Harrison 1994, 64–70). As Daniel Harrison has observed, which of these chord functions wins out as the most keenly experienced by a listener is often dependent on the ways in which a composer chooses to voice and to resolve the relevant chords, although "the sense of mixture and of competition is never really lost" (70). In this instance, the leading tone of the dominant's scale (i.e., A♯) in violin two resolves downwards, to A♮, instead of upwards, to B. While this still counts as a chord tone of V7 in the key of E minor, the resultant slippage negates the upwardly resolving kinetic energy immanent in strong dominant function. The subdominant leading tone in the viola ($\flat\hat{6}$, G), by contrast, discharges itself normatively to $\hat{5}$ (F♯), and the subdominant root in the cello falls a plagal-sounding fourth to the root of V (E to B). Subdominant function seems to predominate.

V then moves to i. Although the dominant's seventh (i.e., A♮) resolves upwards (rather than downwards) in the second violin, the quality of its resolution is otherwise normative. The slight out-of-phase-ness of the bass with the remaining voices in this cadence does little to cloud its tonal import, despite the resultant mirage-like shimmer, which implies a sense of distance.

As part of what seems like an afterthought, E minor is transformed into C major through a $\hat{5}$–$\hat{6}$ voice-leading motion on the second beat of the penultimate bar. The latter chord proceeds to resolve back to E *major* via an lP transformation, thereby producing a hexatonic Tierce-de-Picardie effect.[5] There is a sense in which the movement's final two bars might be heard to express nothing but tonic function and therefore to be quite straightforward: E minor yields almost seamlessly to C major through having its fifth displaced upwards by a semitone; the latter chord is merely a substitute for the former. However, other hearings are possible. C major can be thought to relate to the preceding E minor chord as a iv^6_3 harmony, modified by a relative transformation (i.e., A–G♮). Subdominant-functioning entities can either prolong a tonic themselves or suggest a movement away from it as part of the pre-dominant portion of a cadence. In this case, C major might be heard not only as a substitute for the tonic, but also as an altered subdominant that is *on its way* to a dominant. Despite its ostensible simplicity, it can be made to yield different tonal significations.

The moment of harmonic arrival on E major is itself subtly sabotaged. Firstly, the pseudo-tonicizations implied by the semitonal resolutions from G♮ to G♯ in both violins and from C to B in the viola are separated out from one another by a short silence, indicated in the score by commas in all four parts. This diminishes the feeling of resolution. Secondly, the tonic is voiced in second inversion. For a brief moment, it can be heard as a V^6_4 chord to which the preceding C major relates as ♭VI (i.e., as a voice-leading substitute for a iv^6_3 pre-dominant in E *major*), but $\hat{5}$ soon falls to $\hat{1}$ in the cello, which confirms the chord's fundamental tonicity. This descending bass motion might be heard to function as a synecdoche for another cadential close.

[5] I follow the original Riemannian practice of indicating transformations with either lower- or upper-case letters, depending on whether they map on to a minor or a major triad, but I use modern, neo-Riemannian labels to describe the voice leading of the transformations themselves.

However, it is also possible to argue that the relevant B is ultimately an inner-voice tone: it is sustained as part of a double-stopped chord in the cello in the final bar, which means that there is no actual descent from $\hat{5}$ to $\hat{1}$ in the bass. It is as if the volume of the chord's acoustic root is momentarily turned down to nothing in the mix until the very last bar, while its upper partials are retained throughout.

In the space of only three bars, then, we are presented with three separate resolutions: one auxiliary, one chromatic–tertiary, and the other synecdochic. The latter two are ambiguous. Elgar seems to imply that, post-emancipation of dissonance and post-war, the affirmation signified by a perfect cadence must be isolated from the musical argument which gave rise to it, almost as if it were in inverted commas, and its message clarified and repeated by other means. Each proceeding close comes to seem more cryptic and more provisional. Are such gestures genuinely functional or are they mere vestiges of a system which cannot be made to sound natural, whole, or inevitable any longer? The unmotivated and seemingly archaic switch to the movement's only major-mode tonic at its end – an allusion to the Baroque Tierce di Picardie – suggests that such resolutions are possible now only in a past that is quite different both from Elgar's 1918 present and from our own time. Elgar described the movement as beginning "in rather a phantom-like way" (Moore 1990, 457); it might be said to end in much the same vein.

§2 Foregrounds

The auxiliary cadence presented in §1 encapsulates the tonality of the Allegro moderato in a nutshell. In order to demonstrate that both this local event and the movement's *Ursatz* compose out the same cadential idea (albeit at different structural levels) it is necessary to examine each of the movement's principal tonicizations in turn.

Figure 1 presents a middleground reduction of the opening four-bar introduction and of P. The introduction's opening tonic is juxtaposed with chord ♭VII at 0:1. The root of the latter is taken down the octave as part of a bass arpeggiation, which produces a half-cadential close to a minor-mode dominant $^{6}_{3}$ chord at 0:2. Daniel Grimley interprets this as "a curiously formal and archaic threshold" (2004, 132). While this particular modal D♮ is quickly revealed to function as a chromatic neighbor to the dominant's "real" major third in an inner voice at 0:3, the ♭7 scale degree, which it instantiates, soon penetrates to a deeper level of structure. It negates the ♯$\hat{7}$ established at 1:1 in the upper voice, for example, and similarly disrupts the expectation of strong dominant arrival at 2:7 after the substantial prolongation of $II_{♯3}7$ from 2:1. However, these three closes – namely, a i: HC, a V: IAC and a contrapuntal F♯–G resolution to i^{6}_{3} at 0:2, 1:1, and 3:1, respectively – serve to compose out a third progression in the bass (counterpointed with an $\hat{8}$–♭$\hat{7}$–$\hat{8}$ motion in the upper voice) which sets up the perfect-authentic cadential progression between 3:1 and 6. Archaic coloration is merely a surface-level feature; it does nothing to undermine P's straightforwardly articulated E minor tonality.

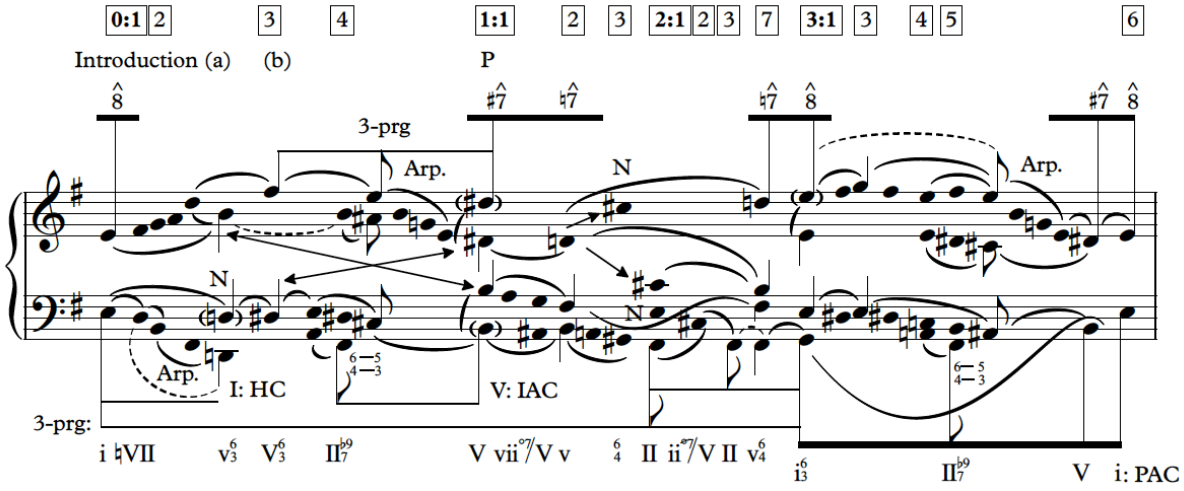


FIGURE 1: voice-leading reduction, 0:1–3:6

S is far less straightforward (see Figure 2). The introductory two bars from the beginning of the movement are cyclically repeated at 3:6 to 7. However, rather than the bass D♮ functioning as a lower-neighbor to the tonic, which is then taken down the octave as part of a tonic half cadence (as between 0:1 and 3), E now resolves as a neighbor to the fifth of a G major arpeggiation. Despite the resultant harmonic arrival on what initially appears to be a III *Stufe* at 4:1, an E is retained as a dissonant sixth in the first violin (the product of a reaching-over motion from an inner voice); the tonic refuses completely to sink below the horizon.[6] No further tonicization of this major-mediant key occurs and the music gives over to a linear intervallic pattern of consecutive, descending sixths. The resultant harmonies (namely D major, C major, and B minor) seem to suggest E minor more than they do G major; an assumption that P and S will follow a conventional i–III key trajectory is undermined from the beginning of rehearsal figure 4, on account of the persistence of i-ness into S-space.

A voice exchange between 4:5 and 8 prolongs a local G major tonic, which is then converted (on the third beat of 4:8) into a leading-tone diminished-seventh chord of C7. The latter harmony clearly functions as a pre-dominant in a putative B♭ cadence between 5:1 and 5 (i.e., vii$^{\circ 7}$/V/V/B♭). Its close voice-leading relationship to the G^6_5 sonority that preceded it allows us (retrospectively) to interpret this earlier dissonant sixth chord, not as an ultimately "stable" III/e, whose harmonic content is subtly blended with that of the movement's global tonic, but rather as an onwards-driving dominant function in B♭ (V^6_5/V/V).

While the reduction to a *pianissimo* dynamic at 5:1 seems to stress that we have entered a supposedly distant harmonic area, the suggested tonicization of B♭ in this passage is more convincing than the earlier attempt to establish G major. Because of the lucidity of the $II_{\sharp 3}7$–V7–I contrapuntal framework in which it takes place, the substitution of a B♭ tonic root for a

[6] I borrow the metaphor from Donald F. Tovey (1981, 12).

replacement B♮ at 5:5 does not totally undermine the anticipated cadence: b°[7] still projects tonic function, albeit weakly. Ironically, this dissonant emphasis serves to mark out the absent B♭ as a nearly achieved harmonic goal: without it, the A♭ in the viola would have made it sound like yet another dominant-seventh in a free-falling chain of descending fifths.

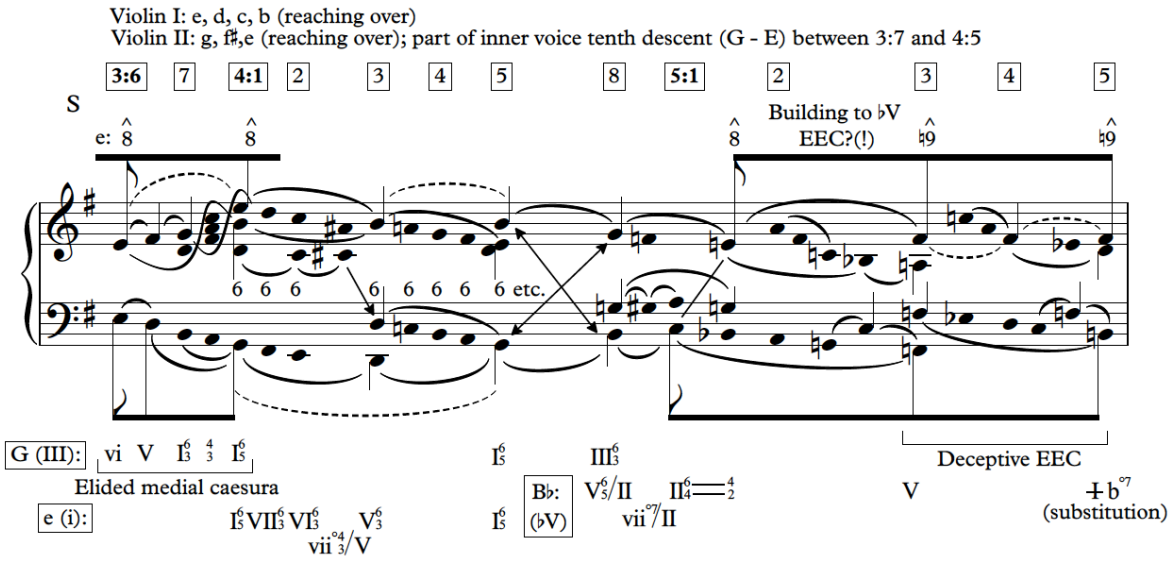


FIGURE 2: voice-leading reduction, 3:6–5:5

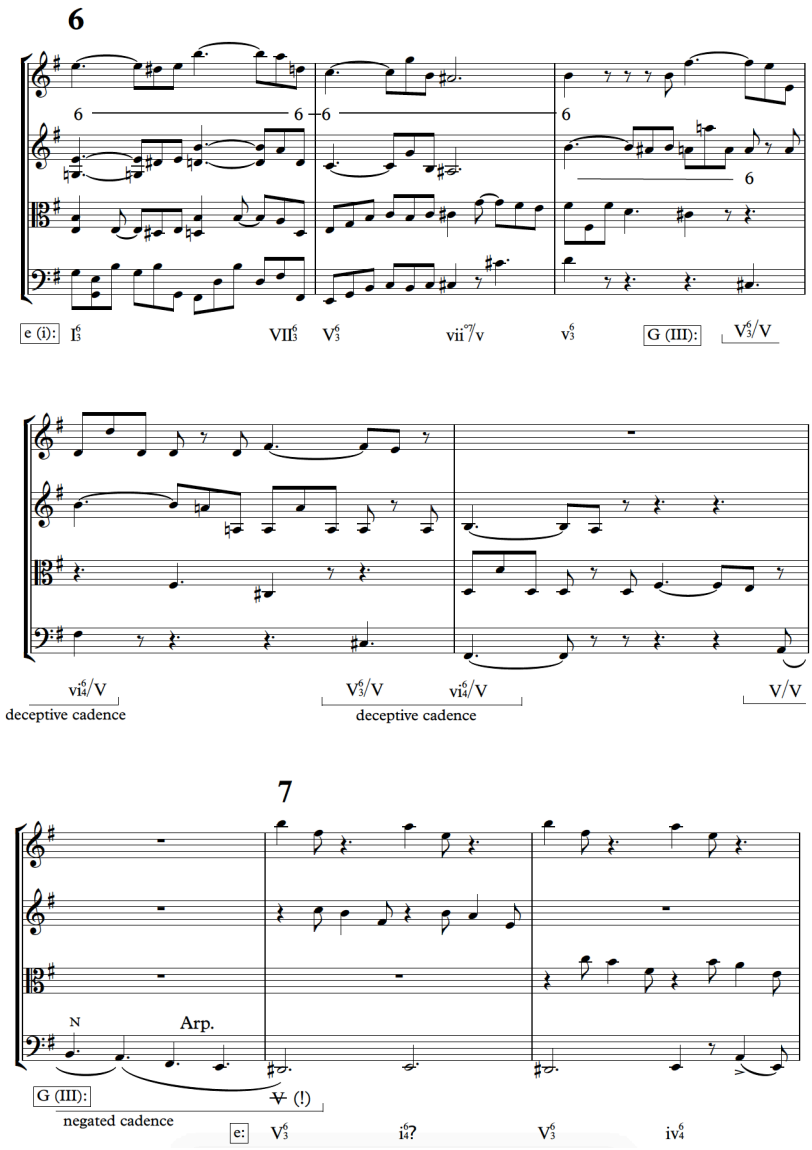
Despite its ultimately deceptive quality, this resolution is so far the only reasonable candidate for the essential expositional cadence (EEC); the earlier close in G major at 4:1 is elided with the beginning of S, which would entail that the entirety of the secondary theme area would be a closing zone (if one were to adopt Hepokoski's and Darcy's parlance).[7] A potential harmonic problem is thus established: an almost-achieved tonicization of ♭V is presented in place of a more conventional V: EEC, which would have completed the middleground arpeggiation initially suggested by the exposition's implied P (i) → S (III) trajectory; the B♮ in the bass at 5:5

[7] It might be interpreted more profitably as an elided medial caesura.

even provides an allusion to the key to which the music *should* have gone. Perhaps the remainder of the exposition will right this tonal wrong.

A repetition of the first part of S between 6:1 and 3 might be thought to suggest a return to more conventional harmony (see Example 2). Violin one's E is a genuine upper voice tone, which is harmonized by a stable E minor $^{6}_{3}$ chord; it is no longer a dissonant by-product of reaching over from an inner voice. A descending fourth progression in the bass takes this tonic (at long last) to its minor-mode dominant on the first beat of 6:3; the latter chord eventually becomes major as a result of the middleground semitonal ascent to D♯ in the bass at 7:1. This marks the (seemingly normative) beginning of the development on an active dominant.[8]

[8] One might also consider the music between 7:1 and 8:1 to be a P-based closing zone, which prepares the development proper at 8:1. However, the attenuation of instrumental texture in the bar before rehearsal figure 7, the deeply unsettled nature of the harmonic material that follows on from it, as well as the absence of an established cadence from which the music at 7:1 proceeds, suggest that this P-based passage is ultimately more developmental in character.



EXAMPLE 2: rehearsal figures 6:1–7:1

However, such a reading requires us to bracket out important surface details. For example, the proposed middleground connection between the two respective V chords at 6:3 (beat 1) and 7:1 is complicated by the interpolation of G major material between 6:3 (beat 3) and 6, which serves to make the harmonic function of the latter dominant ambiguous. A series of descending, consecutive sixths, beginning at 6:1, culminates in a first-inversion A major chord

on the final beat of 6:3, which sounds like a secondary dominant in G. After numerous deceptive resolutions (see the first beats of 6:4 and 5), it appears finally to resolve to a descending arpeggiation of D major at 6:6, as V/III, but the expected resolution to D's fundamental at 7:1 is thwarted by an arrival on B major $^{6}_{3}$; D♮ is replaced by D♯ in the bass, just as B♭ was replaced by B♮ at 5:5.

While the deceptive cadence in B♭ left behind a strong sense of the key that was being evaded, the move from D major to B major appears to shut down the possibility of resolution to both E minor *and* G major, despite the suggestive and sustained quasi-cadential build-up throughout rehearsal figure 6. This is for two interconnected reasons: 1) Diatonically speaking, B major is distantly related both to the expected D major sonority it replaces at 7:1 and to the G major tonal center which that anticipated D major chord had implied;[9] and 2) the projected D major chord at 6:6 makes the subsequent B major sound like an aberrant V/G, as opposed to a dominant of the global tonic. As if in acknowledgment of this functional ambiguity, the apparent [e: V^{6}_{3} –i^{6}_{4}] progression at 7:1 comes to sound more like a weak [vi/G: V^{6}_{3} –iv^{6}_{4}] or even [G: III^{6}_{3}–ii^{6}_{4}] motion. This is not only on account of its unorthodox harmonic preparation, but of both its form-functionally redundant repetition at 7:2 and of the failure of violins one and two to resolve their As to the third of E. If the triads of E minor and G major are blended together effortlessly by the $^{6}_{5}$ chord at 4:1, then the music at 7:1 highlights the manner in which their most closely associated harmonies (i.e., their respective dominants) can disrupt one another's projected resolutions.

If one chose not to worry so much about tonal implication, then one could map this change from D-major expectation to B-major reality, as well as the unsettled musical progression

[9] The former chord displaces two of the latter's constituent notes by a major second and a minor second, respectively (A to B and D♮ to D♯), while retaining only its third (F♯). B♭7 and b°^{7}, by contrast, are related by the displacement of a single semitone (B♭ to B♮): smooth voice leading helps to ameliorate diatonic distance.

which follows on from it, on to a neo-Riemannian *Tonnetz* (see Figure 3). The quartet traverse an octatonic corridor in a north-westerly direction between 6:6 and 7:7; F major is then used as a pivot to change voice-leading lane so that a hexatonic alley might be explored via pL transformations before parking on C♯ at 8:9.

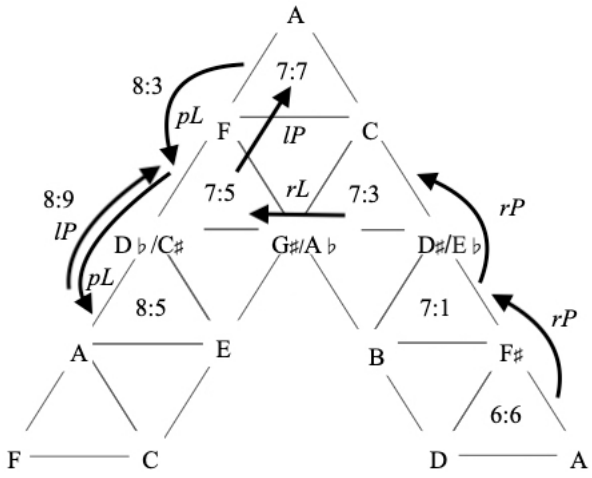


FIGURE 3: Octatonic Corridor, Hexatonic Alley, 6:6–8:9

Perhaps this passage is non-tonal: it does not prolong any particular harmony, but rather explores the harmonic possibilities opened up by smooth voice leading. If one were to think about the passage in more explicitly tonal terms, however, the bass G♮ at 6:1 can be interpreted not as a $^{6}_{3}$ tonic *Stufe*, but rather as a lower neighbor to the G♯ chord at 7:3 (see Figure 4), to which the unexpected B major chord at 7:1 relates as ♮III. Crucially, G♯, F, and C♯ all receive tonicizations as well as appearing as part of a broader middleground arpeggiation of C♯ major, whereas G major and B major are merely contrapuntal and ephemeral. The neo-Riemannian *Tonnetz* implies a structural weight for the latter chords which they do not possess.

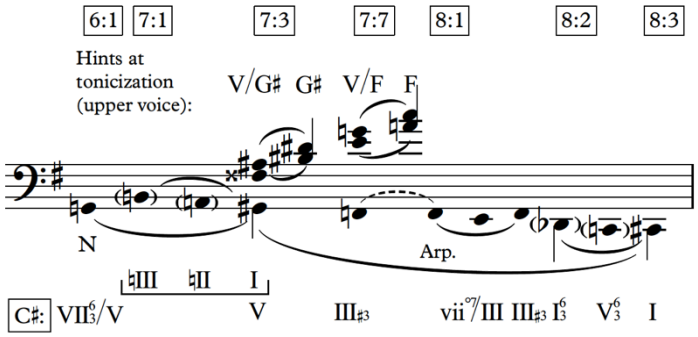


FIGURE 4: voice-leading reduction, 6:1–8:2

That said, the neo-Riemannian reading of the music between 8:3 and 9 in Figure 3 does not appear to be in tension with the surface-level voice leading sketched in Figure 5. Whether or not transformations of this kind have tonal function is not at issue; for now, it is sufficient merely to note that it is C♯ which appears to be the most important middleground pillar: it is supported by a relatively deep-level arpeggiation and it is the harmony which is most often returned to at both the beginning and the end points of the development's various thematic processes. The tonal meaning of this C♯ *Stufe* will be discussed later, after I have demonstrated its central role in the remainder of the development.

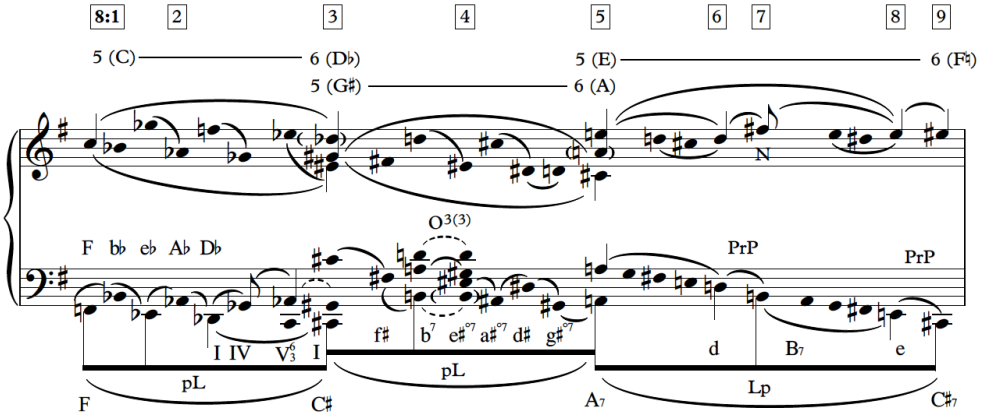


FIGURE 5: voice-leading reduction, 8:1–9

At 8:8 (beat 3), for example, Elgar engages in a sequence of alternating $O^{4(3)}$ and $O^{3(4)}$ voice-leading transformations,[10] beginning on C♯ and culminating on F major at 9:1 (see Figure 6). He passes back to D♭ (i.e., an enharmonically modified version of C♯) at 9:2 by means of a third progression in the bass, which is articulated by a cycle of fifths (see Figure 7). Harmonic arrival on the development's local tonic is quickly undermined, however, as a slip of a third in the bass produces D♭'s relative – appended with a minor seventh – which is then transformed into a fully diminished tetrachord. The root of this dissonant harmony is then transposed upwards through an ascending series of minor seconds until D♭ is once more regained at 10:1.

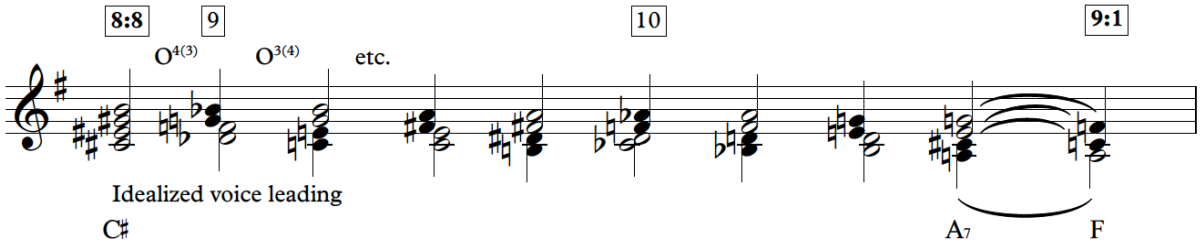


FIGURE 6: voice-leading reduction, 8:8–9:1

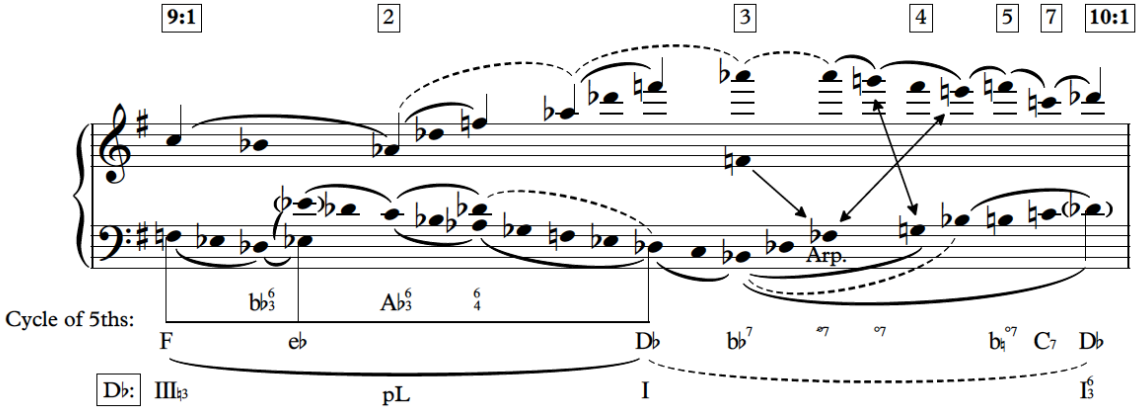


FIGURE 7: voice-leading reduction, 9:1–10:1

[10] O stands for oblique motion (two voices move in parallel motion while the other two voices remain static); the first superscript number denotes the interval created by the stationary voices, while the second (in brackets) indicates that produced by the active dyad (Cohn 2012, 155–156, although Cohn uses the designation 'S,' meaning 'slide'; I think the idea of oblique voice leading captures this motion better). For a detailed analysis of tetrachordal voice leading in the finale of the String Quartet, see Chandler 2020a.

The root of a D♭$^{6}_{3}$ chord is coupled down an octave from 10:1 to 4 (see Figure 8) before another slip of a minor third produces B♭$^{4}_{2}$, which instigates a cycle of fifths, once again culminating in an arrival on D♭ at 10:8. At this point, the enharmonic seam is breached once more and D♭ becomes a C♯7 chord, which resolves to II$_{♯3}$7/e. Being prolonged for some bars by an alternation between its stable chord form and its tritone substitute C7 (otherwise known as a German augmented sixth of V), this harmony finally resolves to V at 12:1. After such extended chromaticism and the lack of a properly tonicized dominant *Stufe* in the exposition, one might expect the assertion of the global dominant here to be emphatic, but it is instead articulated in second inversion and in its minor mode. A question familiar to Schubert scholarship emerges: can this harmony, so fleetingly and weakly articulated, really be the structural locus of the movement's form? The bass F♯ of this V$^{6}_{4}$ resolves upwards to the third of the tonic. Both because the quality of this cadence is weak and contrapuntal, and because of the disproportionate durations of F♯7 and E minor, we might even hear the arrival on the supposed global tonic at 12:2 as an arrival on the subdominant of V.[11]

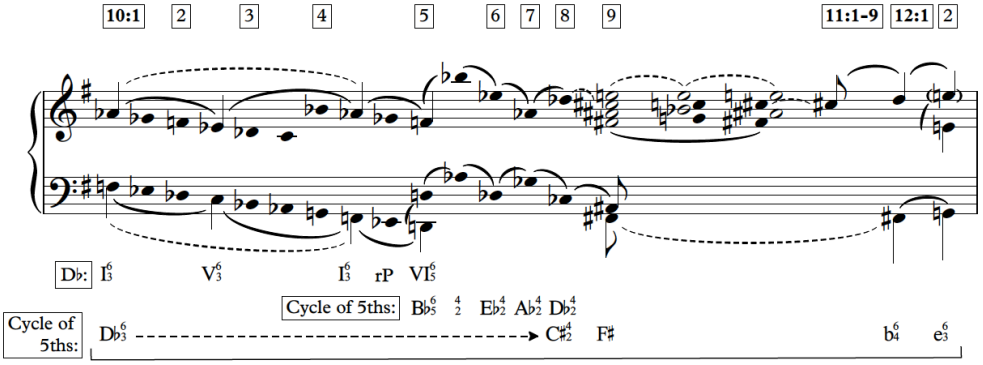


FIGURE 8: voice-leading reduction, 10:1–12:2

[11] Schubert also colors a recapitulatory tonic as a non-tonic chord in the first movement of his Piano Sonata in B♭, D. 960 (see Marston 2000, 248-270). While this harmonic ploy is both local and temporary in Schubert's case, I will later demonstrate that Elgar's subdominant-sounding E minor is of great structural significance.

An interpretative conundrum presents itself at this point in the form: should the development's "prolongation" of C♯ be read in relation to the expostion's seat-of-the-pants "orthodox" prolongation of E minor in the exposition (i–III–V); or to its nearly achieved "wrong" prolongation of B♭ (II–V–~~I~~)? Read as V/V/V, C♯ seems like a perfectly conventional harmony for a development key in an E minor sonata form and in practice, it *does* begin a cycle of fifths which closes to (an admittedly) weak tonic chord between 10:8 and 12:2. However, as the foregoing analysis of the exposition has shown, a conventionally orthodox middleground gesture, from which C♯ might draw its meaning, is absent: the suggested possibility of a i–III–V arpeggiation is intimated only weakly on the surface. In terms of middleground strength, the putative cadence in B♭ at 5:5 is far stronger, even despite the ultimate evasion of its final local tonic chord. Furthermore, C♯ is related to B♭ by a root motion of a minor third, thus invoking and building on the chain of minor-third related harmonies established earlier in the movement (i.e., E minor, G major, B♭ major). The latter reading is more radical than the former and might therefore appear to be unlikely in prospect. It is left to the remainder of the movement (and the final auxiliary cadence with which this analysis began, in particular) either to confirm or to deny such suspicions. Let us continue to work up to this moment in sequence.

The recapitulation sets about solving a problem that persisted throughout the exposition and the development: namely, whenever the dominant is tonicized, its mode is quickly changed to minor and the $\hat{\sharp 7}$ leading tone (so essential to the articulation of an E minor tonality) is thus negated. At 12:6, it appears that this pattern is going to repeat itself (see the indicated parallel transformation in Figure 9). However, a whole-tone sequence carries the bass up a third to E♭ at 13:1 as part of a chromatic composing out of the dominant's missing major third. As if to convince us of the structural importance of this progression, Elgar repeats this B–C♯–E♭

progression at a deeper middleground level by means of a series of tonicizations between 12:6 and 14:6; its E♭ portion is marked *ppp* – the quietest dynamic marking in the whole piece – giving it special emphasis. From a structural voice-leading perspective, at least, it is strange that Robert Anderson regarded the E♭ *Stufe*, articulated between 14:5 and 6, as being so *distant* from the tonic triad (no doubt both because of its enharmonic spelling and introspective dynamic, as well as the whole-tone progression which produces it), given that it is in fact responsible for restoring the dominant's potency (1993, 384).

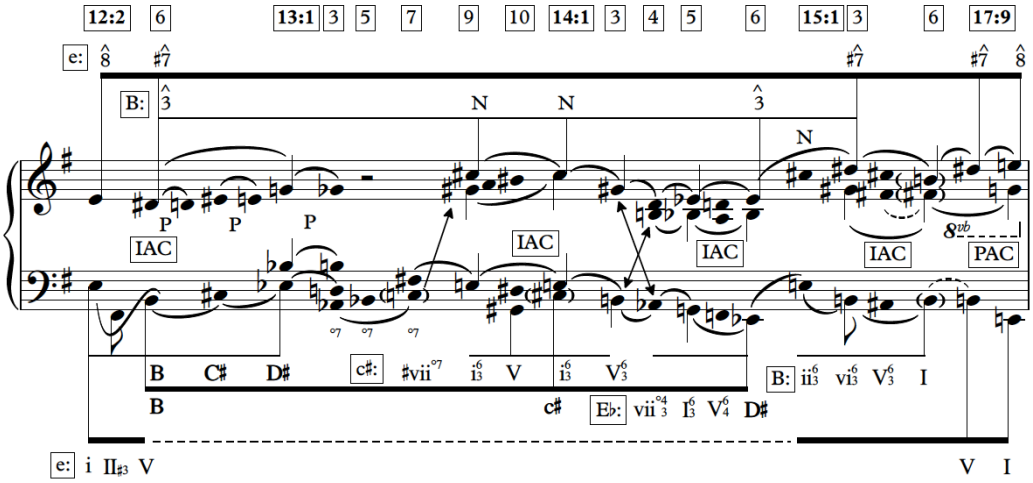


FIGURE 9: middleground graph, 12:2–17:9

At 15:6, what sounds like a descending arpeggiation in the dominant is played by the cello, but harmonic arrival on this *Stufe* is delayed until 16:4 (not shown in the graph); once again it is voiced in a weak $^{6}_{4}$ inversion that resolves upwards to i^{6}_{3}. The tonic-prolonging music from 16:5 to 17:4 is based on the two progressions graphed in Figure 10. Both offset the tonic principally through neighbor-note motions and there is no signal in either of an *Urlinie* descent in the upper voice, which remains static on $\hat{8}$. Despite the belligerent *ff* and *con fuoco* tone, a

satisfactory resolution cannot be manifested; indeed, both the loud dynamics and the thickness of the texture here might be intended to compensate for exactly this failing. In the entirety of the recapitulation, there is only one strong cadential bass motion to a root-position tonic: namely, the auxiliary cadence at 17:9, with which this analysis began.

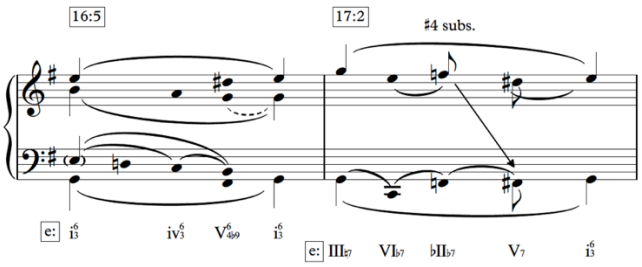


FIGURE 10: voice-leading reduction, 16:5 & 17:2

§3 Structural Parallelisms: Auxiliary Cadence and *Ursatz*

In addition to closing the movement at a local level, I argue that the Allegro moderato's final three bars (refer back to Example 1) help to solve the interpretative problem sketched above in §2, which centres on the two contradictory analytical positions detailed below:

1. The tonality of the movement is relatively conventional: the exposition is scaffolded by a weak middleground arpeggiation (i–III–V); the development then prolongs C♯ as V/V/V, which returns us (via a cycle of fifths) to the tonic for the beginning of the recapitulation; the recapitulation composes out a structural V–I motion.
2. The tonality of the movement is decidedly unconventional: the exposition and the development compose out a chain of minor-third-related *Stufen* (namely, E minor, G

major, B♭ major, C♯/D♭ major, E minor) at a middleground level; the recapitulation composes out a structural V–I motion.

The auxiliary cadence, I will claim, provides evidence in support of the second view; although if one were temporarily to ignore its intricacies, then one might be tempted to graph the exposition and the development as follows (see Figure 11 below). Beginning with a relatively normative middleground i–III progression between 0:1 and 4:1, the movement veers off unexpectedly and gestures toward a tonicisation of ♭V between 5:1 and 5. The dominant-rooted diminished-seventh chord established at 5:5 ($v_{\flat 5}$) averts this potential tonal wrong turn and completes the tonic middleground arpeggiation implied by P and S; it resolves to a first-inversion tonic at 6:1, after which a root-position tonic is established at 7:2. A cycle of fifths underpins the development, which ultimately produces the resolution back to the tonic at 12:2.

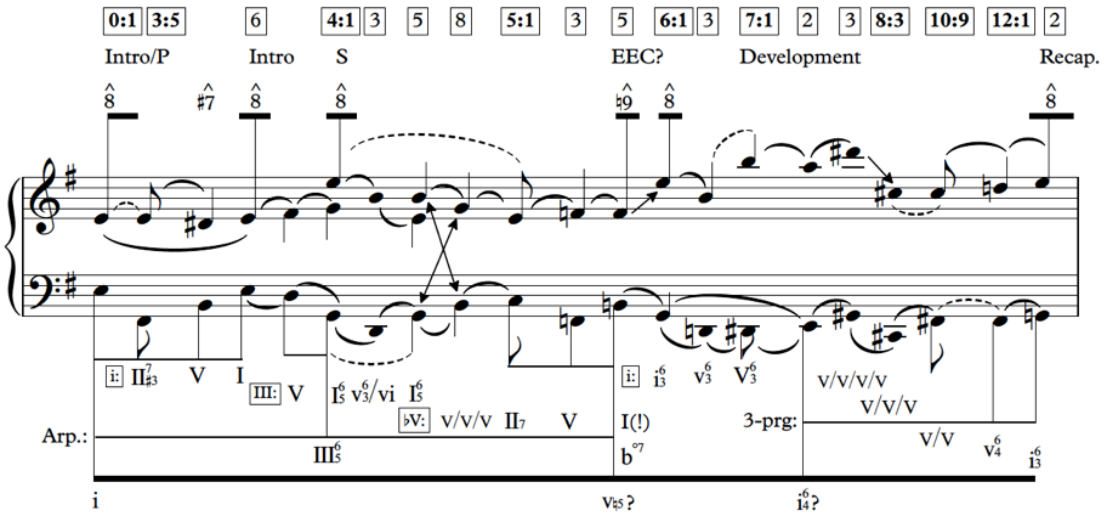


FIGURE 11: middleground graph, 0:1–12:2 (conventional)[12]

[12] The $\hat{8}$-$\hat{7}$-$\hat{8}$-$\hat{2}$-$\hat{3}$ motion in the upper voice, highlighted at the beginning of this middleground voice-leading graph, is a structural parallelism of Violin 1's opening melody in measures 1-2. My thanks go to Daniel Grimley for this observation.

However, as demonstrated in §2 this conventional reading distorts a number of the music's features. Firstly, the stable III chord at 4:1 is appended with a dissonant sixth: from a voice-leading point of view, it is not a goal in itself but rather a pre-dominant in an extended passage on B♭. Secondly, it is difficult to hear the b°^{7} chord at 5:5 as the dominant of E minor: in context, it sounds like a weakened version of a tonic B♭. Thirdly, the build-up to this deceptive cadence is more suggestive of an EEC effect than any other event in the exposition: the music from 6:1 to 7:2 cannot easily be heard to compose out a cadence in E minor, as the B major $^{6}_{3}$ chord at 7:1 disrupts an expected cadence in G major (it cannot realistically be heard to relate to the first-inversion B minor chord at 6:3). Similarly, the resolution of B major $^{6}_{3}$ to E minor between 7:1 and 2, which is implied by Figure 11, is ultimately illusory: the "appoggiaturas" in question never resolve; through repetition, the "tonic" comes to sound like a weak A minor $^{6}_{4}$ chord. Fourthly, while the cycle-of-fifths argument for the development is compelling, it does not take into account the relative durational and prolongational weights of the harmonies between 7:3 and 12:2: C♯/D♭ is returned to and departed from more often than any other center in the development; the other harmonies (particularly the final minor-mode dominant $^{6}_{4}$ chord) are far weaker.

The apparent inadequacies of this conventional middleground interpretation, revealed by detailed analysis of surface events, make it necessary to search for an alternate reading, which makes more sense of the movement's idiosyncrasies. Despite its pronounced rhetorical separation, it can be argued that the Allegro moderato's final auxiliary cadence articulates the structure of the whole movement in miniature. Its final three chords (namely, vii$^{\circ 4}_{3}$/V–V–i) present a telescoped version of the Allegro moderato's *Ursatz* (see Figure 12). The movement begins with a complete middleground arpeggiation of vii$^{\circ 4}_{3}$/V (E–G–B♭–D♭–E), which resolves to

the dominant at 12:6; the tonic is finally secured at 17:9. (Although there is no literal B♭, *Stufe* at 5:5, it is the most stably implied harmony in the exposition, besides the opening E minor; its status is far less ambiguous than the G^6_5 harmony at 4:1, which I have shown to function as a pre-dominant rather than as a stable harmonic center.)

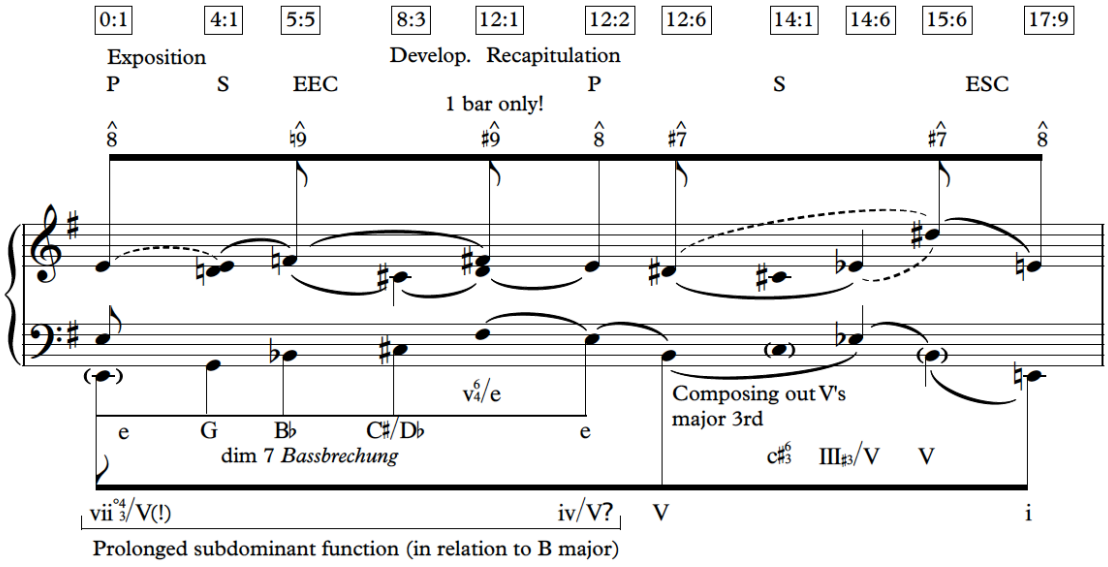


FIGURE 12: background graph, 0:1–17:9

A few words on the oddness of this graph are necessary. Rather than there being a structural descending line in the upper voice, $\hat{8}$ is prolonged by upper- and lower-neighbor notes; the movement's *Kopfton* is static.[13] For Heinrich Schenker, tonality is typically instantiated by a *Bassbrechung* and an *Urlinie* in conjunction with one another; in the Allegro moderato, only the

[13] J. P. E. Harper-Scott argued that the static *Kopfton* is an Elgarian fingerprint (2006, 94) although he has since come to recognize it as an "unmistakably twentieth-century element," present in a broader range of repertoire (2010, 183).

former is present. The refusal of the fundamental line to descend indicates that the form is left open despite its ending.[14]

More troubling, however, is the strange tension between structural levels which appears to be immanent in the graph. At a horizontal, middleground level, the bass Es at 0:1 and 12:2 mark the beginning and end points of the arpeggiation of a dissonant a♯ diminished seventh. At the level of the surface, by contrast, they function as roots of triadic, consonant entities. Of course, it is not unusual for the relative cardinalities of the foreground and the middleground not to match one another. A foreground V7 can happily prolong a middleground I, for example. However, such discrepancies are almost invariably *interior* to the prolongation of a *Stufe*: we are presented with an initial Chord I, which is followed by a string of other harmonies that are not themselves tonics and indeed might not even be triads, but which can still be said to prolong the tonic in some way, and we then return to another Chord I some hypothetical number of bars later. In Figure 12, however, it is the harmonies at both the beginning and the end points of the prolongation which yield different meanings when read horizontally or vertically.

It is difficult to resolve such a contradiction without loss. If one dispenses with the diminished-seventh *Bassbrechung* altogether, then one ignores the voice-leading structure established by the principal tonicizations (or, in the absence of such events, significant *attempts* at tonicization) of the exposition and the development (see Figure 13) as well as the parallelism (registered in retrospect) that exists between the *Ursatz* and the movement's final auxiliary cadence.[15] If one suggests that the E minor harmonies at 0:1 and 12:2 *are* part of a larger dissonant formation, however, then one is in danger of occluding their straightforwardly triadic and consonant quality when they are heard in prospect. How can a diminished-seventh bass

[14] As Kofi Agawu puts it, "an ending refers to local elements in the musical structure, whereas closure denotes a global mechanism [e.g. the composing out of an *Ursatz*]" (1987, 4).
[15] Brian Trowell misses these subtleties: he considers the modulations to be merely "incidental" (2014, 373).

arpeggiation be said to compose out an E minor *Stufe* when it places so much emphasis on B♭, its most diatonically distant scale degree? That said, it is important to note that both harmonies have strong subdominant functions in relation to B major (i.e., the movement's structural dominant). In a novel adaptation of Schenker's theory, then, the diminished-seventh *Bassbrechung* might be said not to prolong a specific chord but rather a specific *harmonic function*.

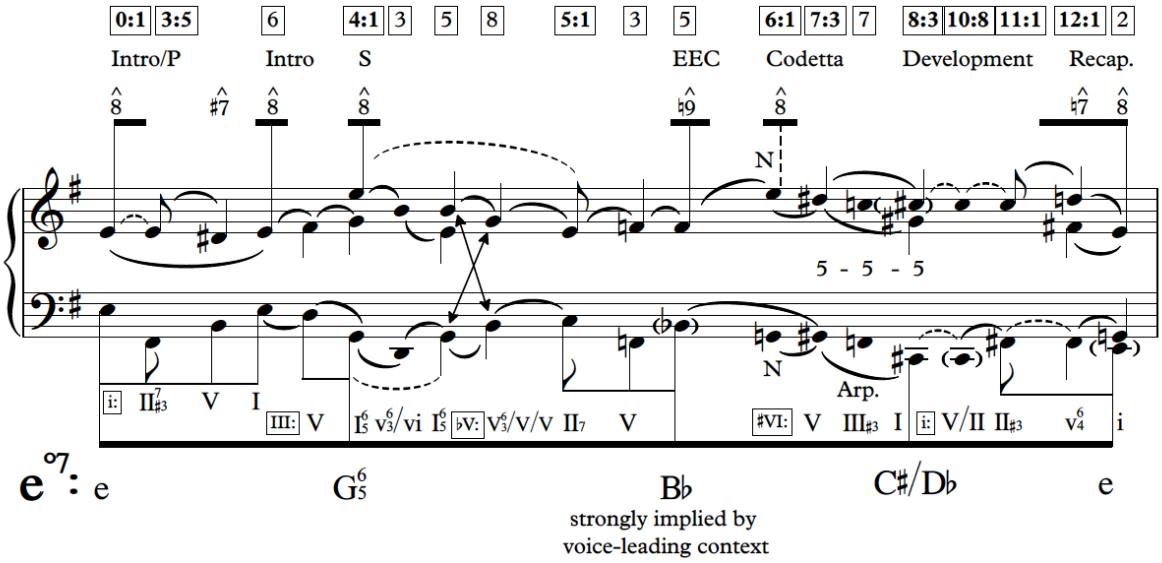


FIGURE 13: middleground graph, 0:1–12:2 (radical)

One further option not yet considered is to interpret the middleground harmonic succession of E minor, G major, B♭ major, and D♭ major in a neo-Riemannian manner: that is, as an octatonic cycle (see Figure 14). I refrain from doing so, however, because the voice-leading transformations indicated in the graph below are mostly of different cardinalities (namely, R, pR, and pRp). As David Kopp has argued, transformations between minor-third related chords are felt as unary because of "their similar aural profile"; they are not heard to be composed of a series of "diatonically based compound operations," such as pRp (2002, 167). In consequence, I

maintain that my concept of a diminished-seventh *Bassbrechung*, which prolongs a single function rather than a single chord, can be said to capture the simplicity of this minor-third-based middleground gesture in a more convincing way.

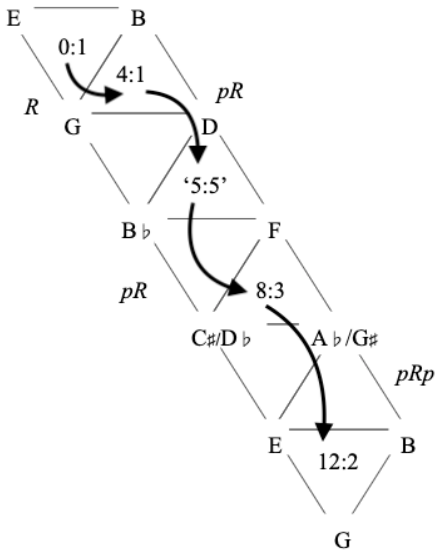


FIGURE 14: octatonic corridor, 0:1–12:2

§4 Conclusions

Despite the Allegro moderato's complexity, W. H. Reed and Brian Trowell have respectively described the overall tonal plan of the movement as being "more or less […] orthodox" and "clear enough," despite their acknowledgement of its modulatory novelty (1963, 374; 2014, 373). In other words, they invest the work's deep structure with an assumption of diatonic cadential coherence. I have attempted to account for this conviction analytically by means of two separate readings. The first was relatively conventional; the second, more radical. After extensive deliberation, I showed a fundamental preference for the latter, as it captures best the ways in which the movement's *Ursatz* mirrors exactly the movement's final local cadence.

However, while both the middle- and foreground elements of this parallelism imply resolution strongly through their association with the common-practice tradition (i.e., they are ostensibly "conservative"), it is clear that the quality of closure implied in either case is by no means absolute. The post-cadential closes that comment on the final auxiliary cadence can induce one into doubting its strength, while the potentially divergent tonal significations of the horizontal and vertical dimensions of the middleground imply that the tonic chord is both a consonant triad and a dissonant seventh simultaneously.

As Harper-Scott argues, "it is the nature of modernist tonal music to move perpetually between the poles of integration and disintegration and to settle in each case on an individual accommodation which is more or less 'conservative' or 'radical'" (2014, 399). Of course, Elgar's accommodation of disintegration in this movement is subtle and arguably conservative. The basic materials of which the movement is composed are all essentially nineteenth-century in nature: the Allegro moderato not only begins and ends in the same key, but it retains the use both of consonant major and minor triads as the staples of its harmonic syntax, and of cadences as a means of formal articulation. Furthermore, the succession of thematic groups clearly implies a textbook sonata-form design. However, its pretense at organic integration, so characteristic of the nineteenth-century chamber style typified by Brahms, belies the subtle disintegrations which define some of its most important moments. Elgar had an ear open to the tensions immanent in the combination of some of tonality's most basic materials, which were so often hidden away and, through a process of habituation, forgotten.

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