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Résumé de l'article

Les scherzos composés par Brahms que l'on retrouve dans son Quintette pour piano en fa mineur, Op. 34 (1862; révisé en 1864) et la sonate pour violon F-A-E Dietrich-Schumann-Brahms (1853) constituent de dramatiques pièces en do mineur faisant référence au Beethoven de la période intermédiaire. Les deux scherzos commencent avec une dissonance à la fois tonale et rythmique-métrique et se terminent avec une consonance tonale et rythmique-métrique. Toutefois, il faut mettre en évidence les raffinements d'importance apportés par Brahms dans l'échafaudage des progressions générales dans le scherzo du Quintette pour piano, qui utilise un plus petit réseau de dissonances inter reliées, les amplifiant à travers le mouvement et se dirigeant vers une résolution convaincante près de sa conclusion.

Tonal and Rhythmic-Metric Process in Brahms's Early C-Minor Scherzos

Ryan McClelland

That Brahms was powerfully influenced by Beethoven is well-established. In a famous outburst of frustration to the conductor Hermann Levi about composing a first symphony, Brahms confessed to hearing "the giant" marching continually behind him (Kalbeck 1904, 171–72). References to works by Beethoven are overt in several of Brahms's early compositions, including the C-major piano sonata (cf. *Hammerklavier* sonata), the D-minor piano concerto (cf. Ninth Symphony and C-minor piano concerto), and the C-minor symphony (cf. Fifth Symphony and Ninth Symphony).[1] In these compositions, the shadow of Beethoven casts longest over first and last movements. Two of Brahms's early scherzos also have thematic connections to Beethoven, especially to the Fifth Symphony and the *Appassionata* sonata. These two scherzos, both in C minor and 6/8 metre, are the scherzo of the F-minor piano quintet (Op. 34) and Brahms's contribution to the F-A-E violin sonata of 1853.[2]

A kinship between the scherzo of Brahms's piano quintet and the scherzo of Beethoven's Fifth was observed at least as early as Tovey's overstated claim that the "thunderous scherzo in its main body follows the form and modulations of that in Beethoven's C minor Symphony more closely than Brahms ever elsewhere followed a single example" (Tovey 1949, 244). In contrast, the F-A-E scherzo, which was first published only in 1906, has received little critical scrutiny from this point of view; it is dominated from the outset by reiterations of the four-note rhythmic motive from Beethoven's Fifth. The scherzo's relationship to the sonata's other movements (by Albert Dietrich and Robert Schumann) strengthens the reference to Beethoven. Brahms's C-minor scherzo is part of a sonata with first, second, and fourth movements in the keys of A minor, D minor, and A minor; in these three movements, themes emphasize the pitches F, A and E, musically encoding the "*Frei aber Einsam*" motto of Joseph Joachim, for whom the sonata was composed. Brahms's movement scarcely seems to fit with the other movements, despite a transposed recall of one thematic idea from the sonata's first movement (Musgrave 1980, 256). In moving from C minor to C major, both scherzos enact the tonal journey traversed over the entirety of Beethoven's Fifth Symphony (and the path subsequently taken in Brahms's

[1] For discussion of these and other references to Beethoven's music see Rosen (1980), Brinkmann (1995), Brodbeck (1997), and Knapp (1998).

[2] The analyses of the F-A-E scherzo and the piano quintet scherzo in this article derive from chapter 3 of my dissertation (McClelland 2004b). I wish to acknowledge the role of my dissertation advisor, Frank Samarotto, in refining these analyses.

First Symphony). More significantly, both scherzos—though the F-A-E scherzo more fully than the piano quintet scherzo—follow a progression of expressive states that recalls the trajectory of Beethoven's Fifth, a plot archetype with considerable resonance throughout the nineteenth century. Yet, the F-A-E movement sounds like a composition by a twenty-year-old pianist-composer—albeit a gifted one—whereas the quintet movement merits its central position in what Tovey called Brahms's first maturity.[3] Locating structural bases for the more satisfying aesthetic effect of the piano quintet scherzo sheds light on Brahms's compositional development during the 1850s.

The difference in aesthetic effect between the F-A-E movement and the scherzo from the piano quintet has much to do with developments in Brahms's handling of tonal and rhythmic-metric dissonances.[4] Both movements begin with tonal and rhythmic-metric dissonances and end with tonal resolution and rhythmic-metric consonance, but there are significant refinements in the piano quintet scherzo. First, in the F-A-E scherzo, Brahms presents many different types of rhythmic-metric dissonance in the opening bars; in the piano quintet scherzo, the rhythmic-metric dissonances are fewer in type and are interrelated. Second, in the F-A-E scherzo, the opening material returns exactly and in contexts that weaken its rhythmic-metric dissonances; in the piano quintet scherzo, returns of the opening material are placed in contexts that renew its conflicts. Third, tonal resolution and rhythmic consonance are never brought to the main thematic material of the F-A-E scherzo; instead, thematic material derived from the trio provides the movement's victorious conclusion. In the piano quintet scherzo, the opening thematic material is itself transformed in a coordinated release of tonal and rhythmic-metric tension. A detailed exploration of these elements, first in the F-A-E scherzo and then in the piano quintet scherzo, reveals changes in Brahms's compositional approach and complements recent scholarship on rhythmic-metric dissonance in Brahms's music.

Three recent articles give rhythmic-metric structure a role in analysis of Brahms's music approaching the scope accorded to rhythmic-metric events in

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[3] Michael Musgrave has a different assessment of Brahms's achievement in the F-A-E scherzo. He contends that Brahms did not publish this movement only because it was part of a multi-composer sonata whose "varied stylistic content would have precluded its use other than as a curiosity." Musgrave continues, "There can be no musical reason, since this is a fine example of the genre he had so convincingly employed in the piano sonatas" (Musgrave 1985, 29–30). My analysis of the F-A-E scherzo will reveal aspects of the piece that reduce the work's musical and dramatic cohesiveness, and I believe these features make the movement less effective than Brahms's other early (extant) scherzos. Peter Smith's book *Expressive Forms in Brahms's Instrumental Music*, which appeared while the present article was in the review process, offers an assessment of the F-A-E scherzo that is identical to mine. About the coda of the F-A-E scherzo, Smith concludes that "it projects a victory that is willed rather than earned and thus fails to provide a convincing close to the movement" (Smith 2005, 250). The analytic observations that support Smith's claim involve key structure, tonal design, and expressive character; his analysis does not consider rhythmic-metric aspects of the F-A-E scherzo.

[4] I find it productive to extend the consonance-dissonance distinction into the realm of rhythm and metre. One must remember that this is a metaphoric use of these descriptors, and the stylistic constraints on rhythmic-metric consonance and dissonance are different from those on tonal consonance and dissonance in the common-practice period. A relevant application of consonance and dissonance to rhythmic events is Harald Krebs's book on Schumann's music, and Krebs's study also includes a valuable summary of previous writers who employ this metaphor (Krebs 1999, esp. 15–18 and 30–38).

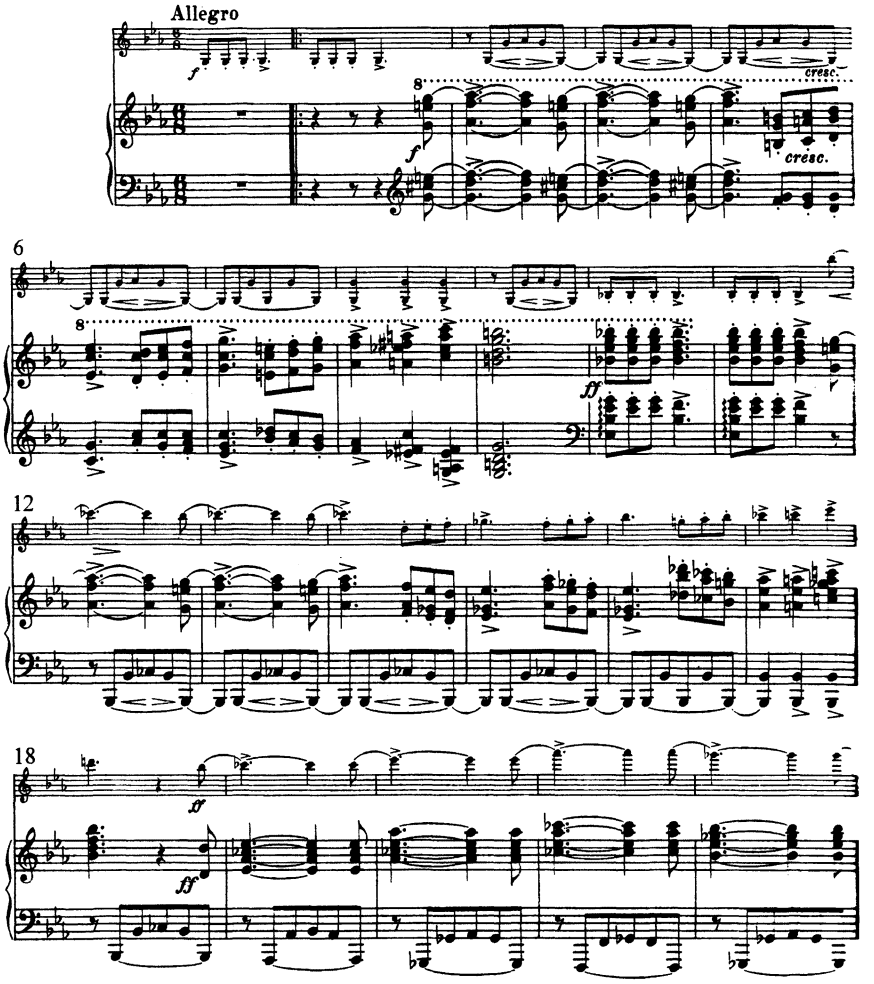
the discussion of the F-A-E and piano quintet scherzos below. Peter Smith finds correlations between tonal and rhythmic-metric structures in the first movements of the horn trio (Op. 40) and the clarinet trio (Op. 114), and these processes include long-range deferral and resolution of dissonances (Smith 2001). In an analysis of Brahms's Capriccio Op. 76, No. 8, I develop a narrative involving an opposition between 3/2 and 6/4 metres (McClelland 2004a), relating fluctuations in the strengths of these metres to musical meaning and performance. Although there is generally less rhythmic-metric dissonance in Brahms's lieder than in his instrumental music, Richard Cohn convincingly studies "*Von ewiger Liebe*" (Op. 43, No. 1) and concludes, "To a considerable degree, the song's sense of musical motion, journey and narrative is displaced onto rhythmic events" (Cohn 2001, 312). My analysis of the piano quintet scherzo presents further evidence of the importance of global rhythmic-metric processes in Brahms's music—but in a *scherzo* movement and from a work essentially composed by 1862 (though not adapted for piano quintet until 1864).

F-A-E Scherzo

A striking tonal aspect of the F-A-E scherzo is its emphasis on dominant, rather than tonic, harmonies. The first reprise, in fact, modulates away from C minor without ever prolonging a harmony built on C (score in example 1).[5] As example 2 indicates, the first background prolongation of C arrives only at the end of the scherzo proper. The conflict between key and prolonged harmony in the opening bars destabilizes the tonal structure each time that material returns. In bar 10, the tonal center shifts to E♭ major, but the violin remains fixed on B♭; two bars later the piano's bass line also shifts to B♭, initiating a seven-bar stasis on the dominant. When E♭ again becomes the prolonged harmony, the mode shifts to minor and leads the movement off of the normative course for a binary form in C minor, though onto a path Brahms would later explore in the C minor symphony (and one already taken by Beethoven in the F minor-A♭ major-A♭ minor design of the exposition of the first movement of the *Appassionata*).

Rhythmic-metric factors further destabilize the movement's opening (refer again to the score in example 1). In bars 1 and 2, the violin's durational accents, which are reinforced by dynamic accents, do not align with the notated downbeats. Since this is the beginning of the movement and the harmony is static, one infers metric accents at these points of dynamic and durational emphasis (and this inference, of course, fits with one's recollection of Beethoven's Fifth). When the piano enters, its durational and dynamic accents also coincide, but they reinforce the notated downbeats. Tonal developments fuel the metric competition between the violin and piano. The piano places its durational and dynamic emphases on a new pitch, A♭. Immediately after the piano's entrance, the violin's ostinato changes and coordinates its accents with A♭ rather than G. The coordination of tonally unstable pitches with all of the metric accents defers resolution of the competing violin and piano downbeats. The piano's downbeats seem stronger since they

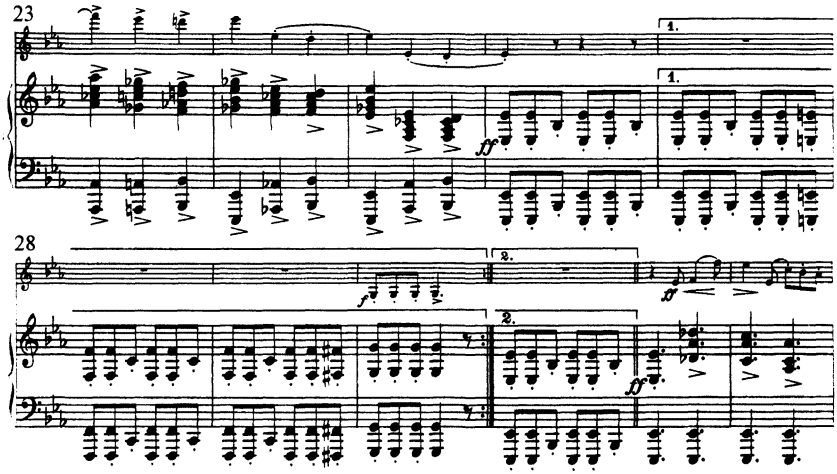
[5] Score examples for the F-A-E scherzo and the Op. 34 scherzo are from Brahms (1926) and Brahms (1927).



Example 1. F-A-E scherzo, bars 1–32

initiate the passage's longest durations and thickest sonorities, but the movement's metric structure does not come into focus until bars 5–6.

By bars 5–6, the perceived downbeats coincide with the notated ones. Three factors contribute to this reorientation. First, bars 1–4 are melodically static; directed melodic motion begins in the piano in bar 5. During bars 3–4, the listener comes to expect the A♭ in the piano to last five eighth notes; in bar 5, the A♭ lasts only three eighth notes. Because of its shorter duration, the A♭ on the downbeat of bar 5 groups with the following notes, and thus is the first pitch in the directed melodic motion. Second, starting in bar 5, the piano incorporates the rhythmic motive of the opening, but now positioned to reinforce the notated downbeats. Third, the downbeat of bar 6 provides a significant harmonic change. Even though it functions as part of a dominant prolongation, the C-minor sonority at the start of bar 6 contrasts with the dissonant dominant ninth sonorities of



Example 1 (continued)

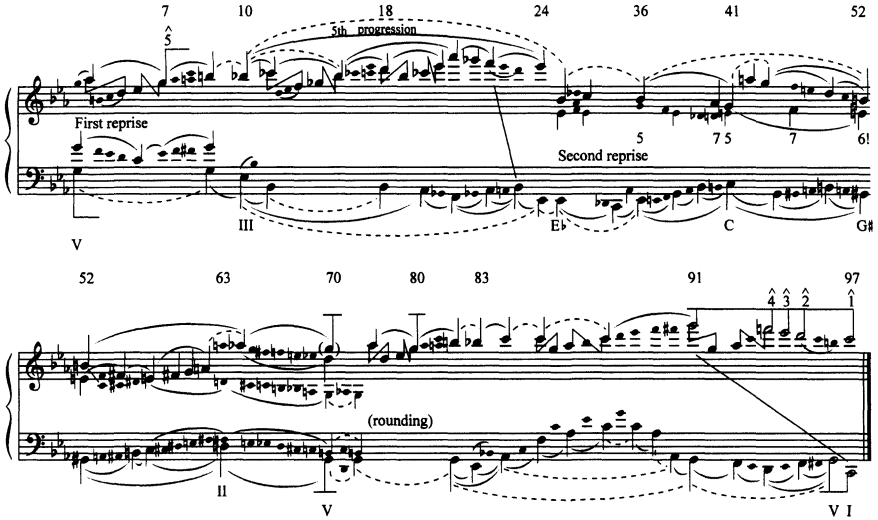
the previous bars and accentuates the notated downbeat. The metric supremacy of notated downbeats is confirmed in bar 7 as the violin removes its mid-bar A♭ and dynamic accent. Just as the rhythmic-metric structure is settling into a less conflicted state, a hemiola shocks the phrase to a conclusion. The rhythm of bars 8–9—three quarter notes leading to a dotted half note—is an augmentation of the violin's initial rhythmic motive, but this hemiola is a disruptive event. Its jarring effect comes not only from its dissonance against 6/8 metre but also from its relationship to the emerging hypermetre.[6]

The interpretation of hypermetre depends on the precise location of the moment when the notated downbeats begin to be heard as downbeats. If the apparent tonic at the downbeat of bar 6 were to function as the moment when metric reorientation takes place, then the augmentation in bars 8–9 would reinforce the emergence of two- and four-bar hypermetre. In the less conservative—and more likely—hearing, the start of directed melodic motion in bar 5 places a hyperdownbeat at bar 5, which means that the augmentation disrupts the surface hypermetre.[7]

The sequential repetition of bars 1–9 in bars 10–18 confirms the less conservative hearing and its hypermetric disruption. In bars 10–11, the violin's

[6] Hypermetre refers to metre above the level of the notated bar. Three terms that appear below are hyperbeat, hyperdownbeat and hypermetric reinterpretation. A hyperbeat is a beat in the hypermetre (Kramer 1988, 86). In all of the examples in this article, a hyperbeat corresponds to a notated downbeat. A hyperdownbeat is a downbeat in the hypermetre; I prefer hyperdownbeat rather than the synonymous first hyperbeat. Hypermetric reinterpretation refers to a beat in the hypermetre that functions simultaneously in two ways; the most common hypermetric reinterpretation is a fourth hyperbeat that also functions as a hyperdownbeat (due to a phrase ending that is also a phrase beginning—an elision). Hypermetric reinterpretation is equivalent to William Rothstein's "metrical reinterpretation" and Fred Lerdahl and Ray Jackendoff's "metrical deletion" (Rothstein 1989, 52; Lerdahl and Jackendoff 1983, 101).

[7] By "conservative" hearing, I mean a metric orientation that is slow to change in response to contradictory cues (such as dynamic, tonal, or durational accents). The distinction between conservative and radical hearings comes from Imbrie (1973).



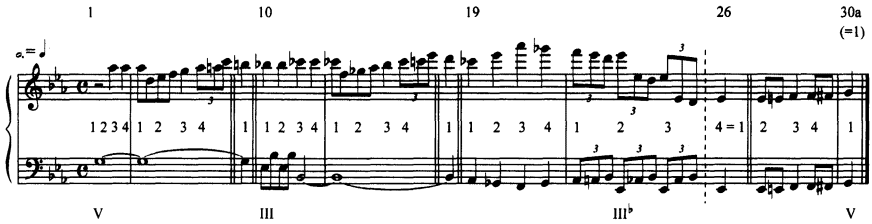
Example 2. Voice-leading sketch of Allegro (bars 1–102 = bars 140–237)

repeated-note figure is harmonized in the piano. The thick chords on the notated downbeats, as well as the entrainment of the downbeat location in bars 5–9, support the notated downbeats in bars 10–11. Since these bars express the local tonic (rather than the local dominant), the shift to the dominant of E♭ at bar 12 strongly reinforces duple hypermetre. The duple hypermetre is again reinforced at bar 14, the moment analogous to bar 5 and the initiation of directed melodic motion. In this context of accumulating two- and four-bar hypermetre, the repetition of the augmentation in bars 17–18 can only be heard as a disruptive element. Either one understands the augmentation as the source of an expansion that defers the next hyperdownbeat by one bar (i.e., until bar 19), or one hears consecutive hyperdownbeats in bars 18 and 19. In general, hypermetric expansion from a motivic augmentation is more frequent than consecutive hyperdownbeats, but the jagged disjointedness of the scherzo's turbulent opening section provides an expressive context that is appropriate for consecutive hyperdownbeats.

The last phrase of the first reprise (bars 19–26) provides a provisional, but unsatisfactory, resolution of the hemiola element. Metrically, the phrase begins with the piano and violin reinforcing each other's durational accents, the mid-bar emphases of the ostinato now submerged in the left-hand of the piano part. At the fifth bar, the 3/4 material surfaces and receives its own four-bar group. No longer does the 3/4 material distort an underlying four-bar prototype, but in the context of the entire reprise, it has a dissonant function, since it expresses a metre other than the piece's primary metre.

Example 3 summarizes the hypermetric structure of the first reprise in a durational reduction.[8] The reduction shows consecutive hyperdownbeats in bars

[8] Durational reduction is explained in Schachter (1980). The durational reductions in this article give only one level of reduction and do not include more abstract durational reductions that correspond



Example 3. Durational reduction of F-A-E scherzo, bars 1–30a

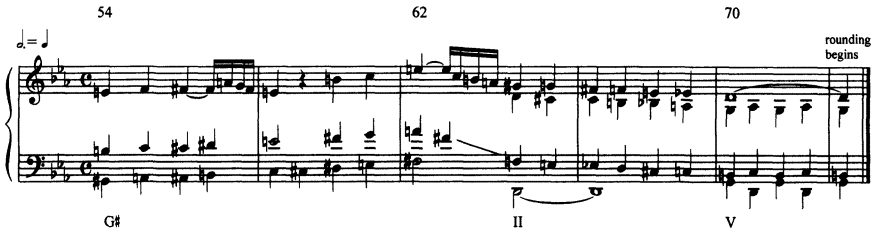
9–10 and 18–19; as mentioned previously, an alternate reading of the hemiola is an expansion of the fourth hyperbeat by motivic augmentation (in other words, "4—" across bars 8–9 and 17–18). The reduction includes hypermetric scansion from bar 1, even though the first perceived hyperdownbeat occurs only at bar 5. When the reprise is repeated, however, the downbeat of bar 1 does sound hypermetrically strong; after the elision and hypermetric reinterpretation at bar 26, the first ending provides the exact length to place the return of the dominant of C minor on the downbeat of the next four-bar hypermeasure. Thus, on its repeat, bars 1–9 are heard in the same metric and hypermetric orientation as were bars 10–18 on their initial hearing. By maintaining periodic hypermetre with the first ending, Brahms reduces some of the conflict in the opening when it is repeated.

Like the repeat of the first reprise, the thematic rounding in the second reprise comes in the midst of periodic hypermetre. My durational reduction of the twenty bars preceding the rounding (example 4) shows periodic four-bar hypermetre even though the violin's melodic phrases are six bars long. The reduction claims that it is possible to hear the phrase structure as a counterpoint to this hypermetre, but one may question whether hypermetre goes above the two-bar level given the lack of reinforcement of four-bar units by the phrase structure. When the violin's melodic phrases fragment in bars 65–74, though, four-bar hypermetre is more strongly reinforced. Either way, bars 54–74 lessen the instability in the opening material when it returns at bar 74 by preceding it with strongly projected notated downbeats and two-bar, if not four-bar, hypermetre. In the rounding, only the second phrase undergoes substantive recomposition; instead of staying in the mediant, it modulates from the mediant back to the home dominant. The rounding's final phrase is simply transposed into the tonic, and thus retains its unsettling intrusion of 3/4 elements.

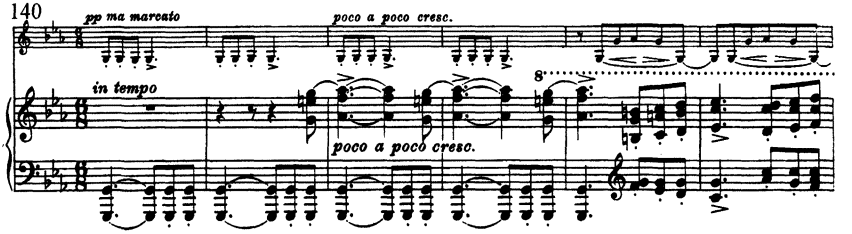
When the scherzo returns after the trio, its only significant change occurs at the beginning (score in example 5). The initial rhythmic idea is presented in imitation between the violin and the left hand of the piano. The piano counteracts the violin's durational accents right from the outset; given the entrainment of the metric framework and the placement of the piano's durational accents in octaves in a low register, the metric ambiguities are greatly reduced at the scherzo's return.

Brahms brings this movement to a resounding close through a coda not based on the scherzo but on an imposing augmentation of the trio placed in the

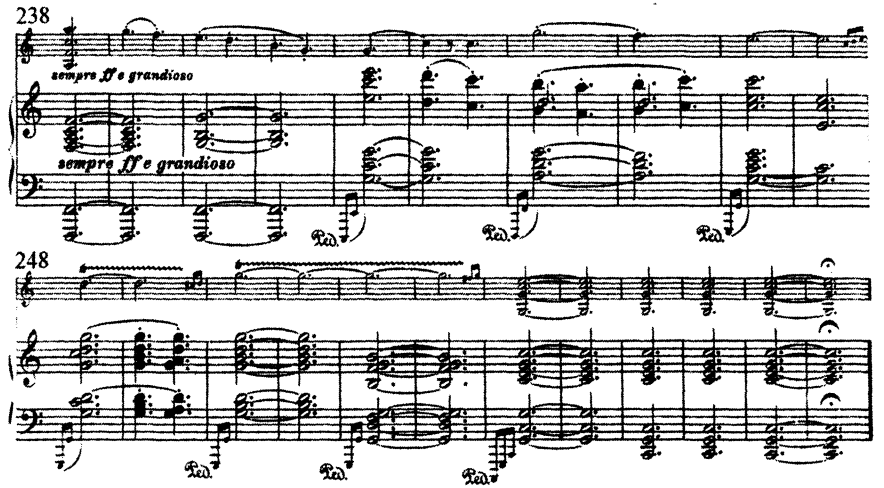
to middleground voice leading.



Example 4. Durational reduction of F-A-E scherzo, bars 54–74



Example 5. F-A-E scherzo, return of scherzo (bars 140–45)

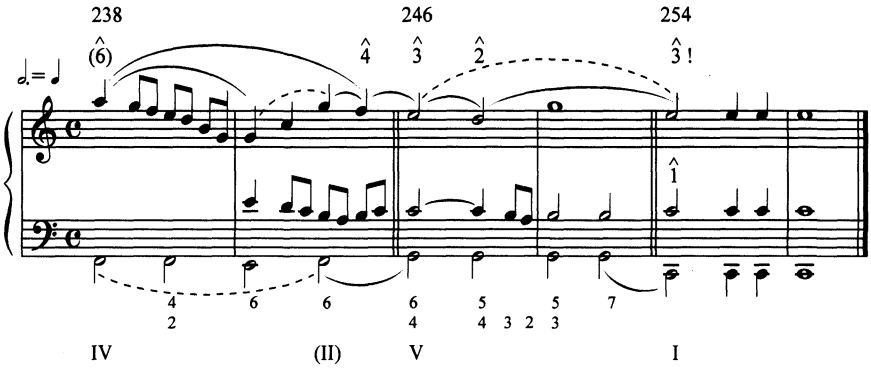


Example 6. F-A-E scherzo, coda (bars 238–59)

key of C major (score in example 6). In the coda, the harmonies have extended durations and begin on hypermetrically strong downbeats. As the durational reduction shows (example 7), the subdominant, dominant, and tonic components of the coda's large-scale harmonic progression each span eight bars.[9]

The F-A-E movement outlines a trajectory from rhythmic-metric uncertainty and tonal instability to unmitigated rhythmic-metric clarity and tonal

[9] The durational reduction interprets the fermata in the coda's last bar as implying sufficient extra duration to complete the four-bar hypermeasure (and thus provide an eight-bar duration for the tonic harmony). Performers generally do not hold the final chord quite this long; most recordings add one bar—not two bars—to the final chord. The listener, however, completes the hypermeasure with the silence that comes after the chord's release.



Example 7. Durational reduction of coda (bars 238–59)

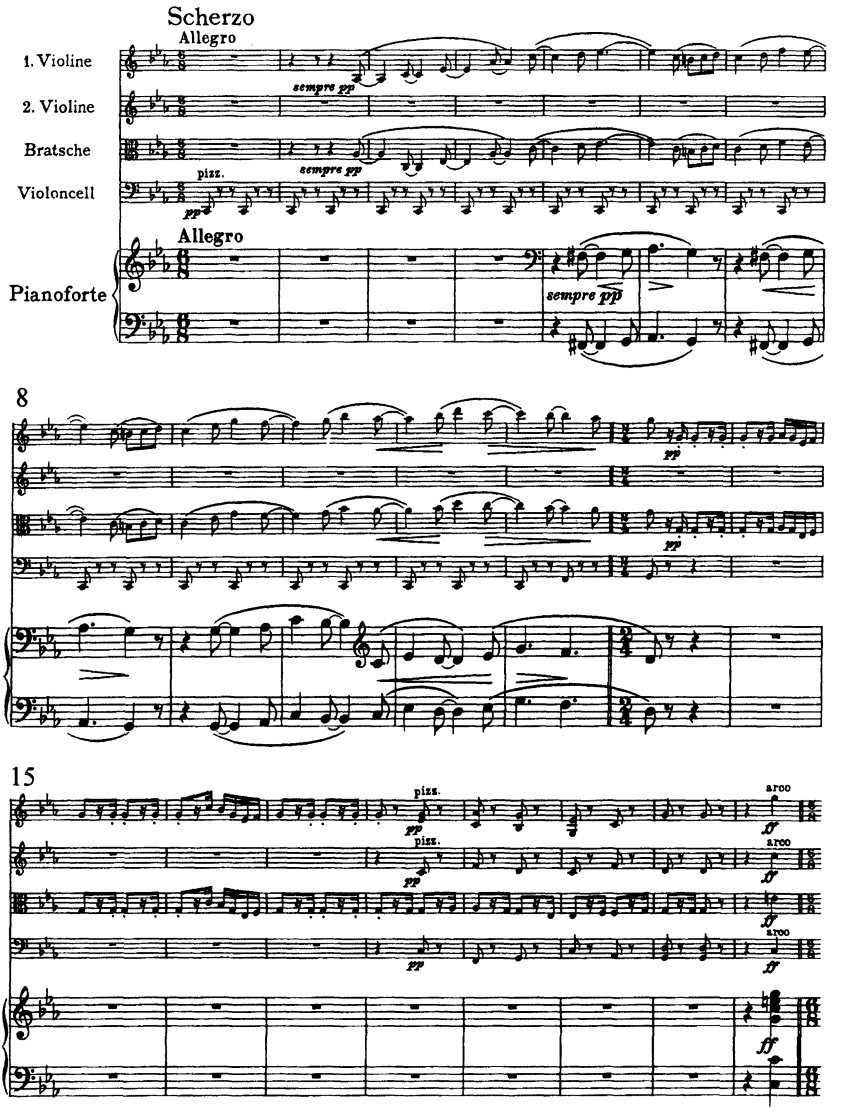
resolution. The rhythmic-metric and tonal dissonances of the opening are obvious: mid-bar accents and avoidance of tonic harmonies. In the first reprise, further tension emerges from hemiolas, consecutive hyperdownbeats, and an unexpected move to the minor mediant. Rather than thoroughly developing the unique conflicts of the opening few bars, the first reprise introduces one disruptive agent after another. None of these elements is ever singled out for climactic development and resolution. In fact, due to the hypermetrically periodic preparation of thematic repetitions, many of these elements gradually lose their potency. At the end of the movement, an elongated, hypermetrically periodic version of the trio imposes C major on the movement. Although the salient A♮-G at the start of the coda seems like a grand transformation of the A♭-G motion that pervaded the opening of the movement, the rest of the coda does nothing to solidify this connection and distinguish it from a general difference between the structure of the major and minor modes.

Piano Quintet Scherzo

The scherzo of the piano quintet focuses on fewer dissonant elements and more fully develops their possibilities on the path to resolution. My discussion of this lengthy scherzo will emphasize the opening material and its recurrences at bar 47 and bar 144. The mutual reinforcement of tonal and rhythmic-metric conflicts and resolutions is a particularly significant aspect of this scherzo, but I will sketch the tonal narrative before exploring the synchronized rhythmic-metric one.

The tonal instability of the opening results from the lack of a root-position C-minor chord (score in example 8). The scherzo begins with reiterations of C in the cello, but when the upper strings enter they arpeggiate an A♭-major chord. The middleground sketch of the scherzo (example 9) and the foreground sketch of the opening bars (example 10) interpret C as the prolonged scale step, but the sixth above the bass, A♭, displaces the fifth, G.[10] Before the shift to dominant

[10] Smith (1997) considers Brahms's substitution of first-inversion sonorities for root-position ones and the implications of these substitutions in several works, including the scherzo of the piano quintet.



Example 8. Op. 34 scherzo, bars 1–22

harmony at bar 13, there are moments where C-minor triads are implied (the downbeats of bars 7 and 9); in both locations, the upper strings simply double the cello's C. It is the absence of A♭, rather than the presence of G, that creates

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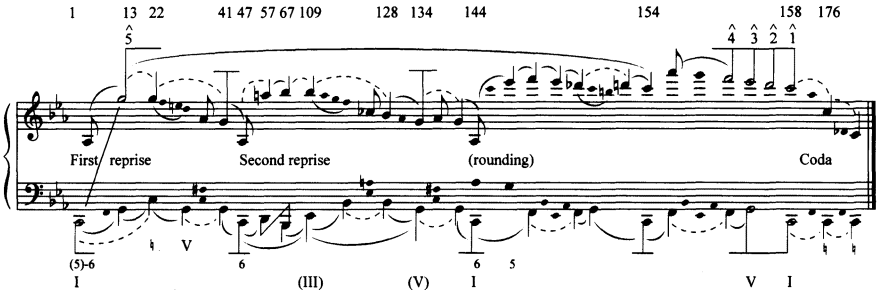
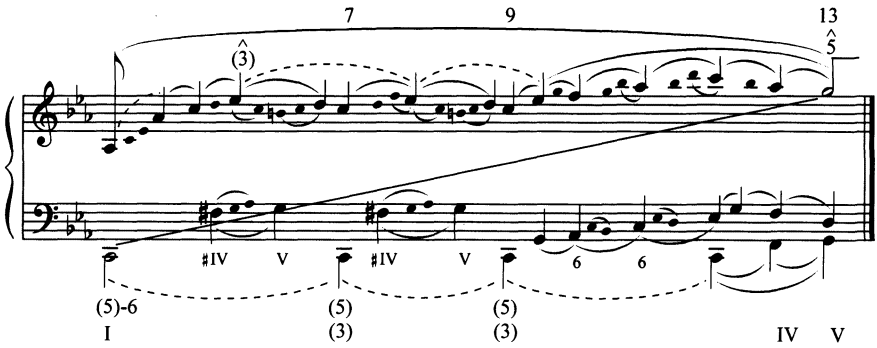
Smith does raise the possibility of hearing the opening few bars in A♭ major, since this was the key of the preceding slow movement, but he ultimately takes the viewpoint I have outlined—C as the prolonged scale step at the opening despite the sonority above that C. Similar to the present movement is the first movement of the D-minor piano concerto, which opens with a low D followed by F and B♭ in the upper instruments. Dubiel (1994) gives a thorough exegesis of the opening of the D-minor concerto and its impact on interpreting later events in the movement.

the transient effect of root-position, C-minor triads. G is prominent in the violin later in bar 9, but this G is unstable. Motivically, it expands the figure of bar 7, and its consonant support is only apparent. Once the rhythm is normalized, this G emerges as a dissonant embellishment of a chain of parallel sixths, as example 11 demonstrates. The top system in example 11 reproduces the canon between upper string and piano lines in bars 9–13. The prototype on the middle system removes the appoggiaturas from each gesture; this is more than a standard technique of pitch reduction—it returns these gestures to the original form presented in the violin line in bar 5. The lowest system then equalizes the durations within each line, revealing the underlying parallel sixths. This two-stage reduction not only offers justification for the reading of the upper line in the foreground voice-leading sketch (example 10), but it also shows the considerable tonal and rhythmic dissonances that pervade bars 9–13, dissonances that are later expunged from this material.

The upper line's A♭ eventually moves to a harmonically supported G at bar 13, but this is only a provisional resolution of the A♭ since the G is now the upper voice of dominant, rather than tonic, harmony. Although A♭-G successions were prominent in the piano, this is the first such motion in the strings. At the opening, A♭ conceptually displaces G, but A♭ and G are not juxtaposed

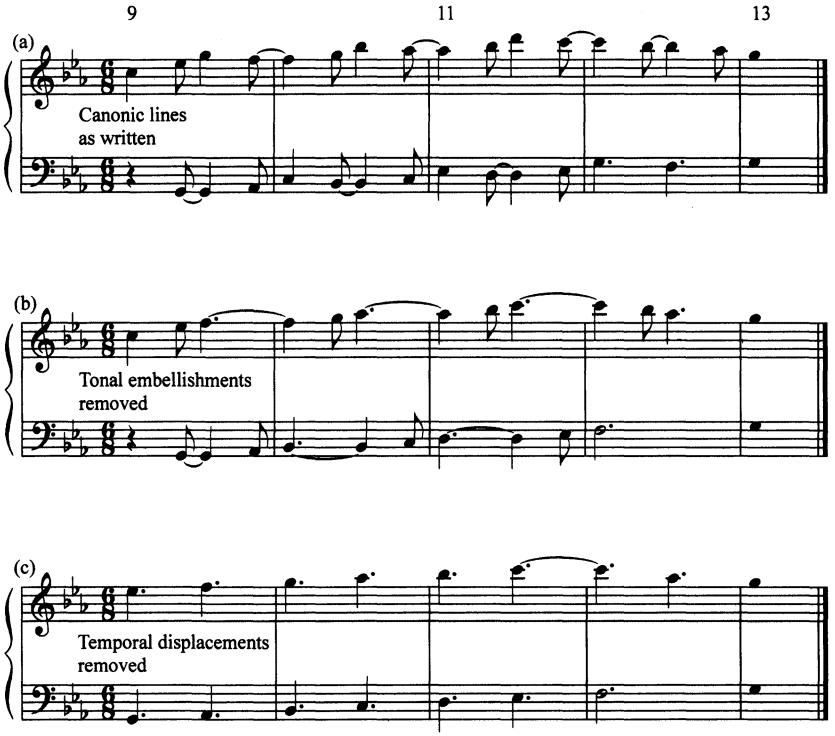


Example 9. Middleground sketch of Op. 34 scherzo (bars 1–193)

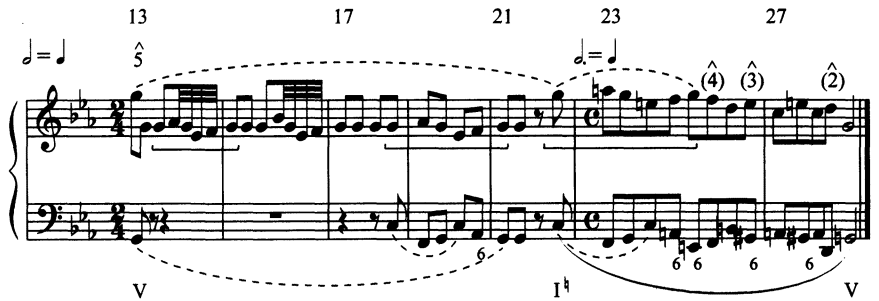


Example 10. Voice-leading sketch of bars 1–13

in the strings' melody. Starting at bar 13, Brahms makes the tonal problem of the opening a central component of the leading melodic line by dwelling



Example 11. Parallel sixth embellishment in bars 9–13



Example 12. Durational reduction of bars 13–30 with G-A(♭)-G motive bracketed

on a motive that embellishes G with its upper neighbour (see the brackets in example 12). The motive twice occurs within the span of dominant harmony, until a major-mode transformation of the six-note figure begins at the end of bar 22 and finally places the upper line's G above a structural tonic harmony; the upper neighbour, now A♮, still receives a metric accent. This phrase leads to the dominant, and Brahms avoids a return to tonic harmony when bars 22–30 return in 30–38; the melody's scale degree 5 is again supported by dominant harmony.

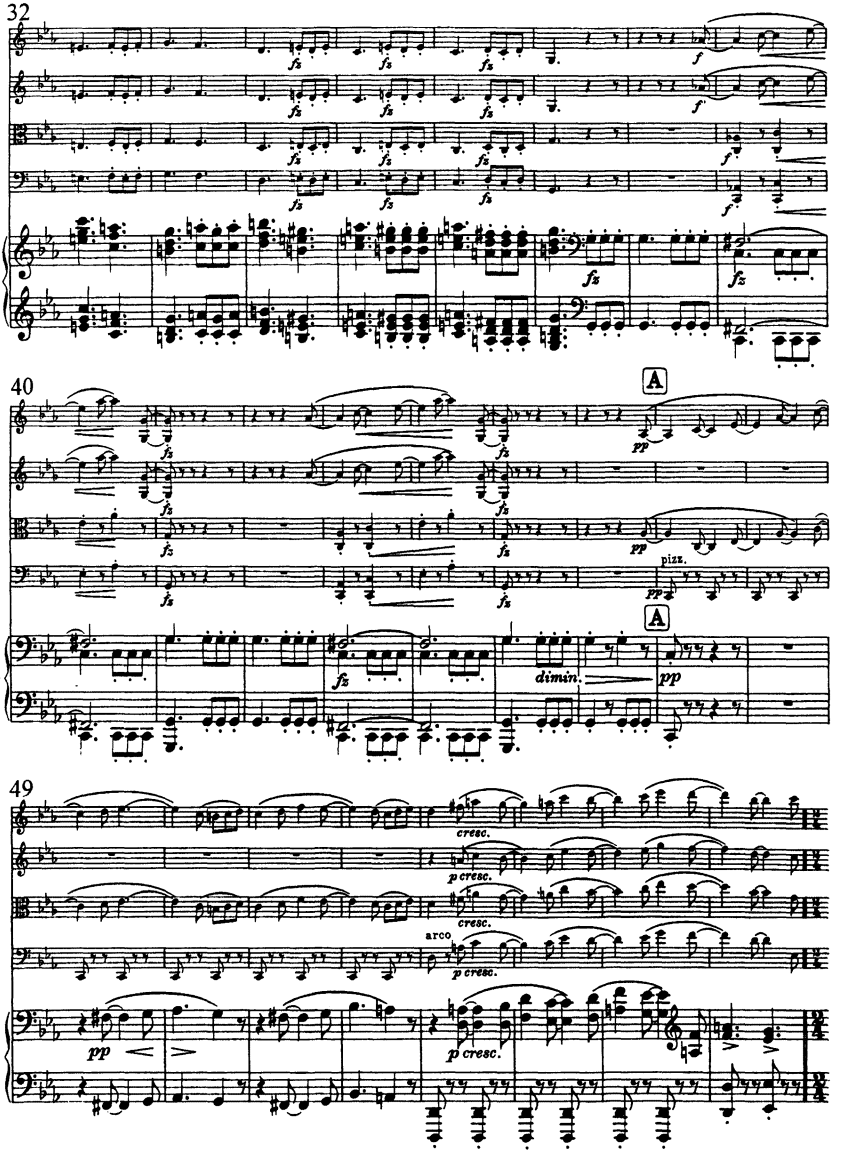
This dominant harmony is prolonged until the return of the opening material at bar 47, thereby situating that thematic return in a new tonal context

(score in example 13). In bars 39–40 and 43–44, Brahms brings back the A♭-major arpeggiation from the opening, placing this thematic idea within the dominant prolongation of bars 37–46 (sketches in example 14). The reinterpretation of the A♭-major arpeggiation as part of a dominant span is facilitated by the presence of F♯ in the piano, making the resultant sonority equivalent to an inverted augmented-sixth chord. As noted in Smith (1997), this reinterpretation of the A♭-major arpeggiation prior to the recall of the opening further weakens the tonic scale step at the recall. When the piano enters in the third bar of the recall, it reintroduces F♯, the pitch class that aided the direction of the A♭-major arpeggiation towards the dominant in the retransition. Thus, bars 47–50 (first beat) seem both like a return to the scherzo's opening and an expansion of the gesture in bars 39–40 and 43–44; in other words, bars 47–50 *almost* become subsumed within the span of dominant harmony, a possibility shown in example 14b. The tonal interpretation of bar 47 depends on the degree to which formal design shapes hearing of tonal structure. Privileging thematic recall suggests the reading in example 14a, but interpreting tonal structure more independently of formal design leads to the interpretation in example 14b. In general, I find analyses that fuse understandings of form and tonal structure preferable over those that hold onto tonal connections despite formal articulations. The key point, though, is that Brahms prepares the thematic return in such a way that the material's characteristic tonal instability is heightened.

This thematic material returns again at bar 144 (score in example 15), and this time the 6/3 sonority above C leads to a root-position, C-minor sonority two bars later. New lines in the second violin and cello at last provide a 6–5 motion above the C to resolve the conflict between sonority and prolonged scale step. The revised piano part strongly reinforces the C-minor sonority, outlining the pitches of the C-minor triad rather than presenting F♯ and A♭ in a double-neighbour figure leading to the dominant. Unlike the first thematic return, there is no possibility of a tonal interpretation that places the return within the span of the dominant (as in example 14b).

Brahms drastically rewrites the thematic return after bar 144, and these changes vigorously reinforce C, both melodically and harmonically. Bars 150, 154, and 158 present a root-position C-minor chord with scale degree 1 in the upper voice, and each of these arrivals is preceded by a root-position dominant harmony. Between bars 150–54 and 154–58, the harmony progresses through complete circle-of-fifths progressions as the upper line moves inexorably down towards scale degree 1. This is in sharp contrast to the corresponding passages earlier in the movement (bars 9–13 and 53–57). In the earlier locations, the upper line surged upwards (as studied in the two-stage reduction of bars 9–13 in example 11) with the overall harmonic progression moving away from the tonic (to V and II respectively).

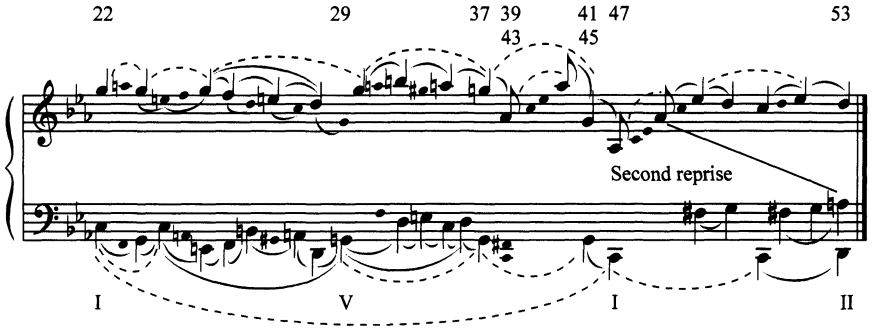
The scherzo's rhythmic-metric design correlates with the progression from instability to intensified instability to resolution observed in the movement's tonal structure. At the beginning of the scherzo, the pizzicatos in the cello establish the tactus. The melody's A♭-major arpeggiation moves at the same rate,



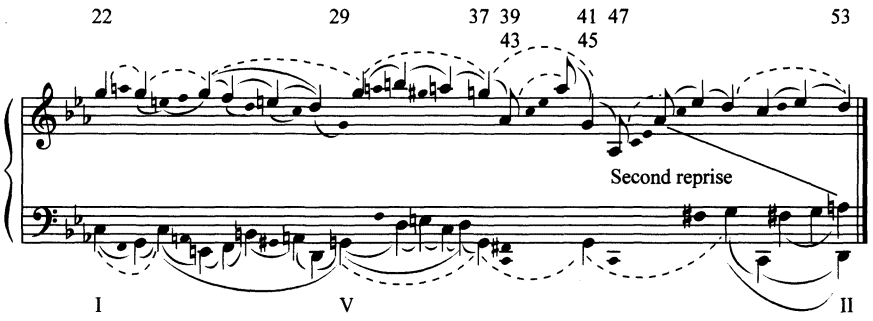
Example 13. Op. 34 scherzo, bars 32–56

but is not aligned with the cello's pizzicatos. In Krebs's terminology, the opening melody expresses a displacement dissonance, specifically D3-1.[11] At bar 144, this rhythmic displacement dissonance resolves. The arpeggio's alignment with

11 D3-1 indicates that the two layers of motion share a cardinality of three pulses (here, eighth notes) and the dissonant layer is displaced by one pulse ahead of the consonant layer (Krebs 1999, 33–35).



Example 14a. Voice-leading sketch of bars 22–57 with tonic rearticulation

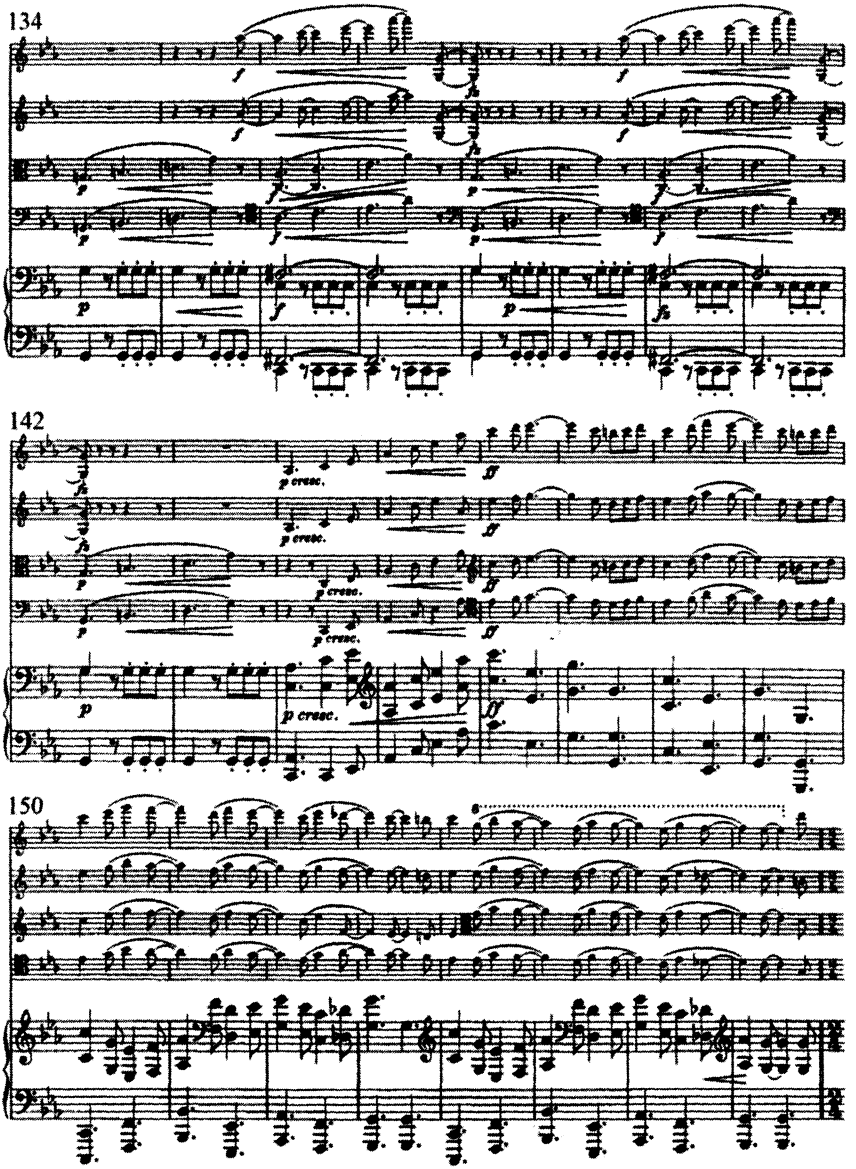


Example 14b. Voice-leading sketch of bars 22–57 with dominant prolongation

the metric framework, faster rhythms, and expanded two-octave range contribute to the climactic effect.

Aspects of the preceding retransition prepare the rhythmic resolution at bar 144. In the moments of the retransition when the dominant of C minor sounds (bars 134–35, 138–39, and 142–43), the viola and cello arpeggiate through a G-major chord. This G-major arpeggiation moves at the speed of the tactus and is aligned with the metre. Within the retransition it is juxtaposed with displaced arpeggiations of an A♭-major chord. Not only does this direct juxtaposition intensify the conflict between displaced and nondisplaced arpeggiations, but it also establishes an analogy to the passage's tonal structure.[12] The retransition prolongs the dominant of C minor; *in this context*, the six bars that feature arpeggiations of a G-major chord are tonally stable. Thus, the nondisplaced arpeggiations coincide with contextually stable harmonies while the displaced arpeggiations coincide with embellishing sonorities. With the shift of the harmonic prolongation to C at bar 144, the analogy continues; the A♭-major arpeggiations are no longer subsidiary from a tonal perspective, and they adopt the nondisplaced orientation associated with the dominant harmony during the retransition. At last A♭ is not associated with rhythmic displacement, and a satisfactory tonal resolution to G follows immediately.

[12] Lewin (1981) and Smith (2001) develop analogies between pitch and rhythmic-metric structures in Brahms's later piano and chamber works.



Example 15. Op. 34, scherzo, bars 134–57

By contrast, the retransition before the first return of the opening material at bar 47 did not contain G-major arpeggiations in the corresponding locations; only the piano's repeated-note motto sounded in these bars. Thus, the preparation for the first return did not present the conflict between displaced and non-displaced orientations as explicitly, nor did it posit an analogy between these orientations and pitch structure.

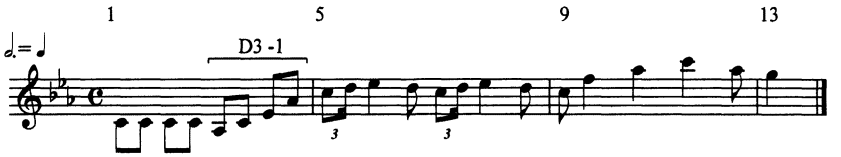
In addition to their differing rhythmic content, the return at bar 47 and that at bar 144 occur in different hypermetric contexts. Example 16a outlines the hypermetric structure of the scherzo's opening; examples 16b and 16c represent the hypermetric structure of the later retransitions and returns. (Note that these examples indicate rhythmic displacements by D3-1 rather than introducing triplet-sixteenth-note durations.) The scherzo's opening comes to suggest four-bar hypermetre with the melodic repetition in bars 5–6 and 7–8, and the culminating arrival on the dominant at bar 13. The first retransition places a hyperdownbeat of the four-bar hypermetre at bar 47, which corresponds to the third bar of the scherzo. This requires the listener to hear the thematic return in a new hypermetric alignment, or, more likely, to reinterpret bar 47. In other words, although bar 47 at first seems hypermetrically strong due to its preparation, the arpeggiation in bars 47–48 ultimately leads to a hyperdownbeat at bar 49.

The second retransition does not place a hyperdownbeat at the level of the four-bar hypermetre at bar 144, the moment analogous to bar 47 (and bar 3). This change at the level of the four-bar hypermetre results from the two extra bars (bars 132–33) that achieve the necessary modulation back to the dominant of C minor during the second retransition. As a result, no hypermetric reinterpretation is necessitated at the second, and climactic, thematic return; the arpeggiation leads to bar 146, which is projected as a hyperdownbeat at the four-bar level by the metric structure of the preceding music. The second return places the hyperdownbeat at the four-bar level at the moment when the first-inversion, A♭-major sonority yields to a root-position, C-minor chord. Thus, the deepest operative level of hypermetre is coordinated with the resolution of the scherzo's tonal instability.

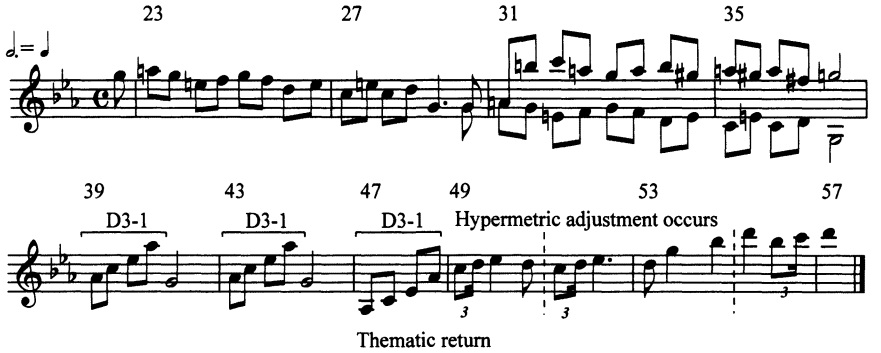
Within the second retransition, the altered hypermetric context adds a hypermetric dimension to the analogy between rhythmic and tonal structures suggested previously. Within the retransitions, the G-major harmonies are contextually stable; in the second retransition, not only do these harmonies support nondisplaced arpeggiations, but these harmonies also begin on hyperdownbeats at the four-bar level. In the first retransition, the onsets of G-major harmonies did not coincide with hyperdownbeats at the four-bar level; there, the displaced A♭-major arpeggiations had hypermetric priority.

There is one significant aspect of the scherzo's rhythmic-metric design that I have let pass without comment: the juxtaposition of 6/8 and 2/4 metres. The scherzo has three passages in 2/4 metre, as outlined in example 17. Brahms does not explicitly indicate that the tactus remains the same throughout the movement, but this is implied (and always observed in performance). As shown by the brackets in the durational reduction in example 12, the same motive occurs at the end of the first 2/4 section (bars 18–21) and at the start of the following 6/8 section (bars 22–25). Clearly, this thematic idea must move at the same pace, but with quadruple subdivisions when heard the first time and triple subdivisions when repeated in its fortissimo, chorale-like version.

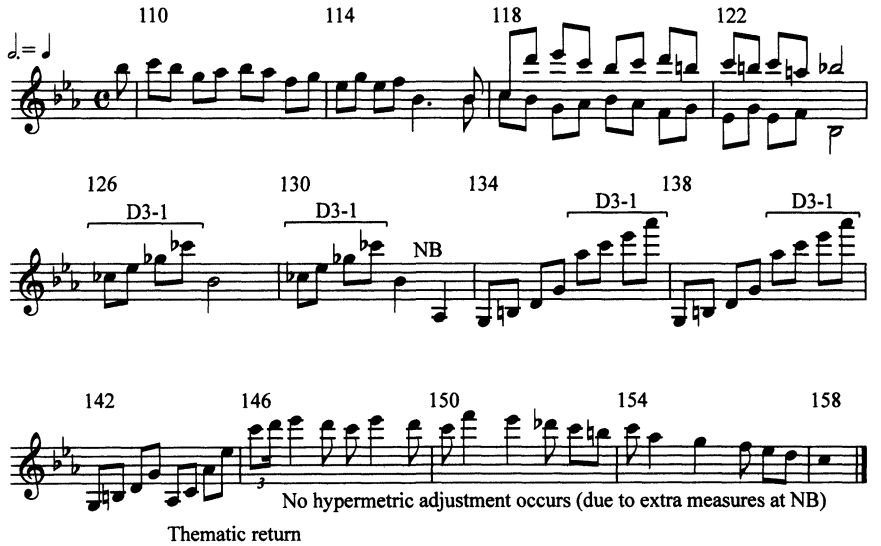
It is too facile to characterize the 2/4 sections as mere changes in subdivision and to give them no further consideration. Brahms introduces the first



Example 16a. Durational reduction of the upper line in bars 1–13



Example 16b. Durational reduction of the upper line in bars 23–57



Example 16c. Durational reduction of the upper line in bars 110–58

2/4 section dramatically. The music comes to rest on dominant harmony. Only first violin and viola sound, and they double one another at the octave. After a few measures, the other strings return, but playing pizzicato. As mentioned earlier, this suspenseful passage takes the A♭-G motion implicit in the movement's opening and makes it the basis for a melodic idea. Although this aspect

links the 2/4 material to the opening music, the sharp changes in texture and rhythmic subdivision set up an oppositional relationship between bars 1–13 and 13–21 (between materials A and X in the diagram in example 17). The grand C-major, 6/8 transformation of the 2/4 material initially makes bars 13–21 seem almost parenthetical, but the 2/4 material assumes an increasingly prominent role as the movement continues. The next 2/4 section at bar 57 is itself fortissimo and spawns a lengthy fugato, and the final 2/4 section provides the scherzo's conclusion. The interaction of the 2/4 and 6/8 materials can be construed as an essential subplot within the scherzo's rhythmic-metric and tonal narratives. I have already recounted the numerous ways that the third statement of the opening music (bar 144ff.) resolves both the tonal and the rhythmic-metric dissonances of the scherzo's opening. The scherzo's coda (bars 158–93) not only fulfills its role of confirming the return to C, but provides a medium for negotiating the relationship between the 6/8 and 2/4 materials. Bars 158–93 perform a vital role in integrating the 2/4 subplot with the scherzo's other elements.

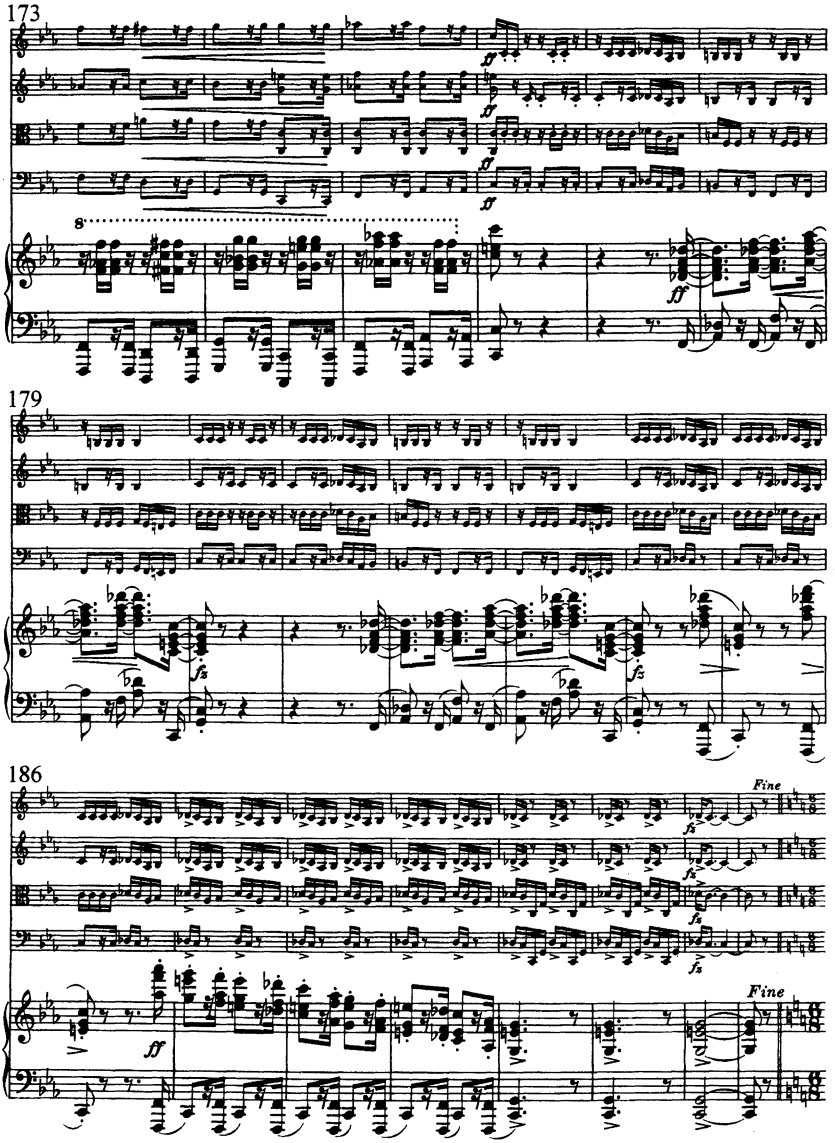
The coda's most distinctive pitch element is its insistence on the motion from D♭ to C, a motion not typical for the coda of a piece in C minor (example 18). Tovey ascribed an intertextual significance to this feature, relating the strings' superimposition of D♭ on the piano's final sustained C-major chord as a reference to the end of Schubert's C-major string quintet, D. 956 (Tovey 1949, 244). That Brahms originally scored Op. 34 as a string quintet—and one with Schubert's inclusion of two cellos rather than Mozart's model of two violas—adds considerable support to this already plausible connection. The immediate source of the D♭-C motion in the scherzo's coda is the Neapolitan sixth chord in the cadences right before the coda, but as Peter Smith has demonstrated this motion connects to D♭-C motions in the quintet's first movement.[13] Smith additionally argues that the D♭ ultimately has a destabilizing tonal role at the end of the scherzo because the presence of D♭ in the context of *major*-mode triads on C "makes the C tonic begin to sound like a dominant" (Smith 1997, 190). In Smith's view, this tonal transformation relates to the key scheme of the four-movement cycle (I—III—V—I); the shift from C minor to C major "anticipates the return of F minor for the finale."

The D♭-C emphasis, though, has an important meaning within the scherzo. Instead of occurring on A♭, the arpeggiations in the piano in bars 177–80 (and bars 181–84) occur a fifth lower, on D♭. Thus, the D♭-C motion recalls the earlier resolution of A♭-G, transferring that motion from scale degree 5 down to scale degree 1. Most significantly, the arpeggio figure—the scherzo's initial thematic idea—finally takes place within 2/4 metre. Although the 2/4 sections had drawn on one motivic component of the opening bars (the A♭-G motion), they had never included any reference to a melody based on arpeggiation. Thus, the coda provides thematic integration and breaks down the oppositional relationship that had existed between the 2/4 and 6/8 elements. Since

[13] James Webster and Walter Frisch previously noted the pervasiveness of D♭-C in the quintet's first movement (Webster 1979, 65 and Frisch 1984, 84–85).

Example 17. 6/8 and 2/4 materials in Op. 34 scherzo and formal interpretation

Bars:	1-13	13-21	22-37	37-47	47-57	57-67	67-100	100-09	109-24	124-43	144-58	158-93
Metre:	6/8	2/4	6/8	6/8	6/8	2/4	2/4	2/4	6/8	6/8	6/8	2/4
Material:	A	X	X (chorale)	Retrans.	A	X	fugato	X	X (chorale)	Retrans.	A	X + A
Key:	c-	c-	C+	c-	c-	Mod	e♭-	e♭-	E♭+	E♭+/c-	c-	c-/C+
Form:	First Reprise				Second Reprise (Repeat of first reprise?)						Rounding	Coda



Example 18. Op. 34, scherzo, bars 173–93

the displaced arpeggiations in the coda occur within 2/4 metre, the unit of displacement is a smaller portion of the tactus (D4-1 rather than D3-1). The decreased time interval between displaced attack and beat permits an exciting interaction between the displaced arpeggiation and a new accompaniment. The displaced D♭ arpeggiation in the piano interacts with the D♭-C motion in the strings; in the strings, the D♭-C figures begin on notated beats. The overall effect is of "crushing" the D♭ into the C, resolving the displacement, yet in a very different way than at bar 144. At bar 144, the resolution resulted from ex-

panding the arpeggiation across two octaves; in the coda, the resolution comes from forcing the displacement onto the notated beats and into the tonic.

The D♭-C motion gives the coda a rawness not often associated with resolution. Once the finale is underway, one can retrospectively posit an inter-movement continuity, but the scherzo's coda is final and resolute. Whereas Smith views the D♭ as a force that threatens the tonality of C, I hear the D♭ as a tempering of the scherzo's final expressive state and not as a structural element that points ahead to F minor. The resolution in this movement is qualified—perhaps made realistic—unlike the end of the F-A-E scherzo. The coda of the F-A-E scherzo resonates much more closely with the triumph of Beethoven's Fifth than does the conclusion of the scherzo from the piano quintet. Whether this reflects a change in Brahms's attitude towards Beethoven or only a realization that the scherzo of the quintet is part of a larger work (and one that ends in minor) cannot be ascertained. Reinhold Brinkmann has argued that while the finale of Brahms's First Symphony obviously draws on the tradition of works like Beethoven's Fifth and Ninth Symphonies, it also distances itself from that tradition, and Brinkmann further hypothesizes that this distancing reflects the increased skepticism and disillusionment in post-1848 Europe (Brinkmann 1995, 33–53). Brahms did conceive the scherzo of the piano quintet at the same time as most of the first movement of the C-minor symphony, but the idea that Brahms was questioning Beethoven's message already in the scherzo of the quintet is highly speculative. Either way, the coda of the piano quintet is structurally different from the coda of the F-A-E scherzo in its continued engagement with the main thematic—and dramatic—elements of the movement's discourse.

Conclusion

Given their shared links to Beethoven and their similar expressive trajectories, the scherzos from the F-A-E sonata and the piano quintet suggest a common artistic conception. When Brahms started to compose each movement, he was apparently imagining the same *type* of scherzo. During the few years that intervened, though, his compositional approach progressed significantly. In *Brahms and the Principle of Developing Variation*, Walter Frisch observes that Brahms's music of the early-mid 1850s does not possess the subtle and fluent motivic development of his mature compositions. Frisch finds great advances in the works of the early 1860s. For him, fluent motivic development emerges in the A-major piano quartet (Op. 26), and Brahms's achievement in the first movement of the piano quintet is "to combine that fluency with a still freer metrical process—or, we might say, to extend that fluency to the larger metrical framework of the music" (Frisch 1984, 95). Frisch comments that metric displacements "become tools of developing variation, means for modifying and transforming thematic-motivic material" (Frisch 1984, 93). My perspective on the scherzo from the piano quintet differs subtly from Frisch's assessment of the quintet's first movement. Frisch implies that rhythmic-metric structure is subsidiary to motivic development; it is a *tool* of developing variation. In my analysis of the scherzo, I suggest a more primary role for rhythm and metre. Rhythmic and metric phenomena not only vary the motives embedded within

themes, but can themselves be motivic agents whose development is as central as the development of pitch motives. In addition, my reading of the scherzo claims that changes in rhythmic-metric configuration coalesce into musical processes that span an entire movement and are determinative both of its structure and of its expressive qualities. For Frisch, rhythmic-metric events may cohere over a significant stretch of music, such as a second theme group or possibly a sonata exposition, and they may help to project important locations in a work's form, but their function attenuates at the scale of a complete movement (Frisch 1990).

In many of Brahms's post-1860 works, rhythmic-metric elements fundamentally shape overall structure and expression, and this occurs in pieces that have completely different expressive meanings than those studied in the present article. The openings of the Second Symphony and the A-major violin sonata (Op. 100), for instance, have pastoral associations yet both exhibit hypermetric dissonances that resolve in the codas of their first movements. At the start of the Second Symphony, the four-bar groups between the horns and the low strings are out-of-phase, and this destabilizes the harmony by causing a six-four inversion; in the coda (m. 477ff.), the four-bar groups in the melody and the bass line are stably coordinated.[14] In the violin sonata, five-measure hypermeter persists throughout the entire first theme; only in the coda (at m. 259) is the theme recomposed into four-measure units.

Studies of rhythm and metre in Brahms's music—including the present one—typically focus on one or two pieces. Brahms scholarship awaits a comprehensive monograph on rhythmic-metric process throughout the composer's œuvre. The inter-relatedness of rhythmic-metric process with tonal structure, though, makes this an even larger and more challenging, but no less desirable, endeavour.

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[14] David Epstein and Reinhold Brinkmann discuss this relationship between the opening measures and the coda of the first movement of the Second Symphony; see Epstein (1979), 165–68, and Brinkmann (1995), 70–72 and 120–21.

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ABSTRACT

The scherzos Brahms composed for his Piano Quintet in F Minor, Op. 34 (1862; rev. 1864) and for the Dietrich-Schumann-Brahms F-A-E violin sonata (1853) are dramatic, C-minor pieces that allude to works of Beethoven's middle period. Both scherzos open with tonal and rhythmic-metric dissonance and end with tonal and rhythmic-metric consonance, yet there are significant refinements in Brahms's handling of these global progressions in the piano quintet scherzo. The piano quintet scherzo engages a smaller network of interrelated dissonances, intensifies these dissonances throughout the movement, and resolves them convincingly near the end of the scherzo.

RÉSUMÉ

Les scherzos composés par Brahms que l'on retrouve dans son Quintette pour piano en fa mineur, Op. 34 (1862; révisé en 1864) et la sonate pour violon F-A-E Dietrich-Schumann-Brahms (1853) constituent de dramatiques pièces en do mineur faisant référence au Beethoven de la période intermédiaire. Les deux scherzos commencent avec une dissonance à la fois tonale et rythmique-métrique et se terminent avec une consonance tonale et rythmique-métrique. Toutefois, il faut mettre en évidence les raffinements d'importance apportés par Brahms dans l'échafaudage des progressions générales dans le scherzo du Quintette pour piano, qui utilise un plus petit réseau de dissonances inter reliées, les amplifiant à travers le mouvement et se dirigeant vers une résolution convaincante près de sa conclusion.