

METRICAL DISSONANCE IN BRAHMS'S SECOND PIANO TRIO, OPUS 87 IN
C MAJOR

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ABSTRACT

One of the fastest-growing areas in recent analytical musicology is concerned with rhythm and metre, particularly the exploration of the analogy of dissonance and consonance with the pitch domain. Brahms's oeuvre forms a core part of this research. His works are pervaded by metrical dissonance, including displacement as well as hemiola-type devices. The latter often remain unclassified in description; their various apparitions can include double hemiola, reverse hemiola and displaced hemiola, along with different classes of hemiola.

As chamber music from Brahms's high maturity, the Piano Trio in C major, Opus 87, is a paradigmatic site for rhythmic-metric interest. Metrical dissonances repeatedly participate in formal articulation and often become motivic. They are also one facet of inter-movement links which in this work help create a global trajectory of delayed resolution. Various elements suggest the possibility of a multi-dimensional complementary pairing with the Op. 88 String Quintet in F.

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*Piano reduction by the author.

INTRODUCTION

The last fifteen years have seen an explosion of musicological work on issues concerning rhythm and metre in Western classical music. Much of this has utilised the perspective of metrical consonance and dissonance, founded on an analogy with the pitch dimension. Brahms's works have always appealed to analysts and continue to provide a wealth of material for analysis, generating new awareness of the roles of rhythm and metre in his highly and subtly organised language. As chamber music from his high maturity, his Second Piano Trio, Opus 87, is a paradigmatic site to investigate such phenomena; it does not disappoint.

Chapter 1 reviews the recent literature and introduces the terminology of metrical dissonance. It gives particular attention to the phenomenon of hemiola, which pervades Brahms's work but often remains unclassified in description. The chapter clarifies such phenomena as double hemiola, reverse hemiola and displaced hemiola as well as introducing the possibility of different classes of hemiola.

Chapters 2–5 analyse each of the four movements of Op. 87 in turn. It is no surprise, given its context, that it features great rhythmic complexity; what the analyses aim to show is that the specific perspective of metrical dissonance focuses this complexity into a clear picture with particular efficacy. In the outer movements, metrical dissonances repeatedly participate in formal articulation and particular ones – unusual types of hemiola – become motivic. In the inner movements dissonances have a lesser role motivically but are nonetheless deployed on a strategic par with pitch-related devices. Finally, they are one facet of inter-movement links which in this work help create a global trajectory of delayed resolution. Chapter 6 concludes and offers some prospects for further work.

CHAPTER 1

LITERATURE REVIEW

Introduction

An enormous growth of literature on the analysis of rhythm and metre in the last fifteen years develops ideas from scholarship stretching back over two hundred. This chapter surveys this literature with a focus on the more recent research which explores the analogy of metrical consonance and dissonance with the pitch dimension. The theories of Harald Krebs and Richard Cohn stand out; their terminology and notation have proved particularly elegant and powerful. Recent works by Yonatan Malin and Danuta Mirka also offer much from a more perception-based viewpoint. The specific issue of hemiola is explored in some detail. All music examples are by Brahms.

The hegemony of pitch

Rhythm and metre are integral parts of the Western classical tradition, and yet to a certain extent they are 'taken for granted'.¹ In 1925, one musicologist commented: 'Rhythm, an equally important element in modern music, has not yet taken [harmony and counterpoint's] place as a theoretical study'.² The hegemony of pitch and subsequent derogation of rhythmic-metric issues can be seen as a remnant of the old style of musicology that 'accepted a linear model of historical change, which measured progress primarily in terms of harmonic innovation'.³

¹ Yonatan Malin, *Songs in Motion: Rhythm and Meter in the German Lied* (New York: Oxford University Press, 2010), 35.

² C.F. Abdy Williams, quoted in Jonathan Dunsby and Arnold Whittall, *Music Analysis in Theory and Practice* (London: Faber Music, 1988), 64.

³ Kevin Korsyn, 'Brahms Research and Aesthetic Ideology', *Music Analysis*, 12/1 (March 1993), 90.

Theories of metrical dissonance

The twentieth century, however, saw a gradual increase in literature on metre.⁴ The approaches taken were varied and often incompatible; a full survey is beyond the scope of this thesis.⁵ As Carl Schachter said of several of these authors, ‘much of their work is interesting and helpful, but significantly enough, some of these writers themselves obviously consider their attempts to be merely preliminary excursions into a field still to be explored’.⁶

Many of these scholars were attempting a comprehensive structural theory of rhythm and metre, a huge if not impossible task. In contrast, what has emerged more recently is the exploration of one particular viewpoint on rhythmic-metric issues, exploring the analogy of consonance and dissonance with the pitch dimension. Rather than an all-encompassing theory, this serves as an analytical lens through which to view certain phenomena.

Berlioz is believed to have made the first explicit comparison of rhythmic and pitch dissonance.⁷ Wallace Berry, in 1985, discussed the concept of “dissonance” within the metric element, an aspect of development complementary to that of tonal fluctuation, and

⁴ See: Grosvenor Cooper and Leonard Meyer, *The Rhythmic Structure of Music* (Chicago: University of Chicago Press, 1960); Wallace Berry, ‘Metric and Rhythmic Articulation in Music’, *Music Theory Spectrum*, 7 (Spring 1985), 7–33; William Rothstein, *Phrase Rhythm in Tonal Music* (New York, Schirmer Books, 1989); Maury Yeston, *The Stratification of Musical Rhythm*, (New Haven: Yale University Press, 1976); Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (London: MIT Press, 1983). For a contemporary investigation of Hugo Riemann’s theories of rhythm and metre, see *The Oxford Handbook of Neo-Riemannian Music Theories* (ed. Edward Gollin and Alexander Rehding) (Oxford: Oxford University Press, 2011), chapters 15–17.

⁵ For a survey of some of the earlier literature, see Schachter, ‘Rhythm and Linear Analysis: A Preliminary Study’, *The Music Forum*, IV, (1976), 281–334.

⁶ Schachter, ‘Rhythm and Linear Analysis: A Preliminary Study’, 300.

⁷ Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann* (Oxford: Oxford University Press, 1999), 13.

subject to appreciable tendencies of resolution'.⁸ Following this 'formal similarity between tonal and metrical hierarchy',⁹ some authors, including Henry Cowell and Charles Seeger, worked by 'rigidly following a pitch-rhythm analogy',¹⁰ as did many of the serialist composers of the twentieth century, but Justin London gives convincing reasons why the two domains are not completely isomorphic.¹¹

Harald Krebs's 1999 publication *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann* was a landmark in the area of metrical dissonance, generating its own terminology and systems as well as refining previous ones.¹² Krebs shows without a doubt that systematic use of metrical dissonance was an integral part of Schumann's compositional style. His contribution was to take focus away from a desire for a comprehensive theory of broad rhythmic organisation and provide tools to easily explain perceivable rhythmic phenomena by inspecting any point of the score in isolation. Through this he could be said to have established metrical dissonance as an independent analytical method.

Richard Cohn has written three important articles investigating metre, hypermetre and complex hemiolic effects;¹³ through these he has 'placed meters on a more equal

⁸ Berry, 'Metric and Rhythmic Articulation in Music', 13.

⁹ Danuta Mirka, *Metric Manipulations in Haydn and Mozart: Chamber Music for Strings (1787–1791)* (New York: Oxford University Press, 2009), 130.

¹⁰ Krebs, *Fantasy Pieces*, 16. Henry Cowell, *New Musical Resources* (Cambridge: Cambridge University Press, 1997); Charles Seeger, 'On Dissonant Counterpoint', *Modern Music*, 7/4 (June–July 1930), 25–31.

¹¹ Justin London, 'Some Non-Isomorphisms between Pitch and Time', *Journal of Music Theory*, 46/1-2 (Spring–Autumn 2002), 127–151.

¹² Harald Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann* (Oxford: Oxford University Press, 1999). Krebs specifically admits the debt of his theory to both Schachter's and Berry's work, which focus both on the idea of metrical conflict and (implicitly) the move towards a score-based method of analysis. He surveys other early uses of the dissonance metaphor in pages 14–21. See also Krebs, 'Some Extensions of the Concepts of Metrical Consonance and Dissonance', *Journal of Music Theory*, 31/1 (1987), 99–120.

¹³ Richard Cohn, 'The Dramatization of Hypermetric Conflicts in the Scherzo of Beethoven's Ninth Symphony', *19th-Century Music*, 15/3 (Spring 1992), 188–206; 'Metric and Hypermetric Dissonance in the Menuetto of

ontological footing with pitches, pitch classes, pitch-class collections (chords, melodies, etc.), and many other musical “objects”¹⁴. While Scott Murphy admits that such classifications can belie some of metre’s primary characteristics, he believes that ‘the benefits of reifying meters in this manner for both work-based analysis and repertoire-based theory are beginning to emerge’ by creating diversity in the ways such objects may be compared with one another.¹⁵ As two examples of refined versions of Cohn’s ideas, Murphy uses ‘metric cubes’ to relate metric states from the first movement of Brahms’s Third Symphony, and Daphne Leong uses ‘ski-paths’ to compare diverse musical situations in Wagner and Humperdinck, concluding that ‘certain metric symmetries parallel certain dramatic ones’.¹⁶

Schenkerian analysis has often been criticised of failing ‘to do justice to rhythm, that crucial element without which there could be no music’.¹⁷ In 1976, Schachter tried to dispute this with a set of three articles applying Schenkerian ideas to rhythm and metre.¹⁸ By 1992, the situation had reversed to the point where Cohn stated that the recent interest on rhythm and metre ‘has been fueled in great part by the ascendance of Schenkerian

Mozart’s Symphony in G Minor, K. 550’, *Intégral*, 6 (1992), 1–33; ‘Complex Hemiolas, Ski-Hill Graphs and Metric Spaces’, *Music Analysis*, 20/3 (2001), 295–326.

¹⁴ Scott Murphy, ‘Metric Cubes in Some Music of Brahms’, *Journal of Music Theory*, 53/1 (2009), 1.

¹⁵ *Ibid.*

¹⁶ ‘Metric cubes’ are refinements of Cohn’s ideas from ‘Dramatization’, ‘Metric and Hypermetric Dissonance’ and ‘Complex Hemiolas’. ‘Ski-hill graphs’ are introduced in Cohn 2001. Daphne Leong, ‘Humperdinck and Wagner: Metric States, Symmetries, and Systems’, *Journal of Music Theory*, 51/2, (Fall 2007), 211.

¹⁷ Schachter, ‘Rhythm and Linear Analysis: A Preliminary Study,’ 281. He nonetheless defends the isolation of pitch from rhythm on p.288.

¹⁸ Carl Schachter, ‘Rhythm and Linear Analysis: A Preliminary Study’; ‘Rhythm and Linear Analysis: Durational Reduction’, *The Music Forum*, V (New York: Columbia University Press, 1980), 197–232; ‘Rhythm and Linear Analysis: Aspects of Meter’, *The Music Forum*, VI/1 (New York: Columbia University Press, 1987), 1–59.

models of pitch¹⁹ and some recent studies have successfully begun to integrate Schenkerian ideas with rhythmic-metric analysis.²⁰

The renaissance in the study of rhythm and metre is thought by Cohn to be ‘the most significant work in [recent] tonal theory’.²¹ While some believe that these advances ‘have come at the price of divorcing it from other areas of music theory’,²² others work hard to integrate such studies: Ryan McClelland and Peter Smith both investigate issues of metre within a holistic analytical style, and recent texts by Danuta Mirka and Yonatan Malin both work to describe metre more dynamically.²³ What is still noticeably absent is an account of changing metrical *style* from Mirka’s ‘metric manipulations’ in the late eighteenth century through to the conflict of Schumann, the complexity of Brahms, and on towards the twentieth century – although as when dealing with the pitch domain, temptations towards a linear narrative should be resisted.

Metrical layers

Krebs’s theory starts from the premise that regularly occurring events in music form *metrical layers*. These layers operate at various scales. Krebs divides them into three classes: the pulse layer, micropulses, and interpretive layers. The pulse layer is the fastest *pervasive* series of pulses. Occasional layers that move more quickly, micropulses, are considered to

¹⁹ Cohn, ‘Metric and Hypermetric Dissonance’, 189.

²⁰ See, for example, Dave Headlam, ‘A Rhythmic Study of the Exposition in the Second Movement of Beethoven’s Quartet Op. 59, No. 1’, *Music Theory Spectrum*, 7 (Spring, 1985), 114–138; Ryan McClelland, ‘Brahms’s Capriccio in C Major, Op. 76, No. 8: Ambiguity, Conflict, Musical Meaning, and Performance’, *Theory and Practice*, 29 (2004), 69–94; Ryan McClelland, *Brahms and the Scherzo* (Farnham: Ashgate, 2010); Peter Smith, *Expressive Forms in Brahms’s Instrumental Music: Structure and Meaning in His “Werther” Quartet* (Bloomington: Indiana University Press, 2005).

²¹ Cohn, ‘Dramatization’, 189.

²² Mirka, *Metric Manipulations*, xi.

²³ Mirka, *Metric Manipulations*; Yonatan Malin, *Songs in Motion: Rhythm and Meter in the German Lied* (New York: Oxford University Press, 2010).

be ‘coloristic embellishments’.²⁴ The most significant layers are those that move slower than the pulse layer. These are interpretive layers, which “interpret” the raw data of the pulse layer by organizing its pulses into larger units’.²⁵ The metre of a work to Krebs is ‘the union of all layers of motion active within it’.²⁶ Similarly Malin’s conception of metre is as a ‘hierarchy of interlocking periodicities’.²⁷

The events that create these metrical layers are varied. There are two distinct types: phenomenal and subjective.²⁸ Phenomenal accent types include dynamic accents, agogic accents (we tend to hear long durations as the beginning of metric groups; the last event before a silence often has an effective agogic accent),²⁹ contour or registral accents (high or low points in a line), harmonic accents, textural or density accents, ornamentation, and any type of ‘new-event accent’. In addition, ‘notational devices such as slurs and beams of consistent length, for instance, may suggest interpretive layers [...] [slurring] rarely, however, creates perceptible layers on its own’.³⁰ Dynamic accents are perhaps the most potent, along with harmonic accents; both of these ‘can form very clearly perceptible layers of motion independently of other factors’.³¹ Potential interpretive layers are therefore ubiquitous in any piece of music; the analyst must discern the ones which ‘move into the

²⁴ Krebs, *Fantasy Pieces*, 23.

²⁵ *Ibid.*

²⁶ *Ibid.* Rhythm and metre are thus taken to be interdependent, much like pitch and harmony, following Ryan McClelland’s preference for ‘a relatively strict separation of rhythm from meter ... something ... is lost if one conceives of meter as rhythm rather than viewing meter and rhythm as separate, interacting entities’ (Ryan McClelland, ‘Extended Upbeats in the Classical Minuet: Interactions with Hypermeter and Phrase Structure’, *Music Theory Spectrum*, 28/1 (Spring 2006), 23–56, quote at 29). The substantial opposition to this is Christopher Hasty, *Meter as Rhythm* (Oxford: Oxford University Press, 1997), which McClelland is presumably referring to.

²⁷ Malin, *Songs in Motion*, 39.

²⁸ The term ‘phenomenal accent’ originates in Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (London: MIT Press, 1983).

²⁹ See Mirka, *Metric Manipulations*, 42–46.

³⁰ Krebs, *Fantasy Pieces*, 26.

³¹ *Ibid.*, 29.

perceptual forefront', usually by being articulated by the greatest number, or the most prominent types, of phenomenal accents.³²

Subjective accents are inferred by the listener. The two types of accent coexist interdependently; 'at some times the sense of accent flows from the musical surface to the emerging metre, and at other times from the metre to the unfolding musical surface'.³³ The interplay between them is a complex issue but a notable hallmark of Brahmsian style.

Harmonic accents

Harmonic accents are a slightly controversial accent-type. They include harmonic dissonances as well as notable harmonic changes or progressions, and are particularly 'potent delineators of layers'.³⁴ In fact, harmonic change underlying a given musical passage 'is commonly considered the most powerful factor influencing meter [...] a pattern of harmonic changes that consistently contradicts the notated meter will likely evoke a new metric perception'.³⁵ Yet while a change of harmony has accentual weight, the issue of relative weight is a thorny one. The metric weight of the tonic chord, for example, has produced debate: Edward Cone and Roger Sessions believe it does have inherent weight, but Berry warns that the 'obvious primacy of I in tonal structures must not be confused with its variable metric import'.³⁶ The term 'structural accent', which is now commonplace in tonal analysis, has yet to be reconciled with metrical accents in the sense of the subjective and phenomenal.

³² Ibid., 28.

³³ Justin London, *Hearing in Time: Psychological Aspects of Musical Meter* (Oxford: Oxford University Press, 2004), 283, quoted in Mirka, *Metric Manipulations*, 22.

³⁴ Krebs, *Fantasy Pieces*, 29.

³⁵ Mirka, *Metric Manipulations*, 50–51.

³⁶ Berry, 'Metric and Rhythmic Articulation in Music', 8.

Classifying interpretive layers

An interpretive layer can be characterised by an integer denoting the number of pulses it regularly subsumes. This integer gives the layer cardinality; an interpretive layer of cardinality n is an 'n-layer'.³⁷ Interpretive layers may span many pulses, ultimately creating hypermetre (discussed below); at higher levels they may be designated hierarchically (for instance as a 2_o-layer rather than a 32_l-layer).

Metrical consonance

Metrical consonance occurs when interpretive layers nest, with their cardinalities multiples or factors of each other. The metre of a work (usually denoted by the time signature) is thus a 'particular consonance that functions as the normative metrical state of that work'.³⁸

Metrical consonance is normative for pre-twentieth-century tonal music. The creation of metre requires reiteration over several cycles, but it equally requires a hierarchy of phenomenal accentuation. Situations where the latter is absent create a sense of metrical stasis, where downbeat and upbeat are indistinguishable; subjective accents sustain them, but only temporarily.

Dissonant layers

More interesting than consonant states are scenarios where layers other than the primary metrical layer are introduced by the composer. These layers are termed dissonant layers

³⁷ Krebs, *Fantasy Pieces*, 23.

³⁸ *Ibid.*, 30.

and create metrical dissonance.³⁹ The ways dissonant layers relate to consonant layers can be divided into two groups: displacement dissonance and grouping dissonance.⁴⁰

Displacement dissonance

Layers that share cardinality with consonant layers but consistently differ in their accent placement create *displacement dissonance*. This type of dissonance is denoted $Dx\ y + z$, where x can be a notehead of the scale concerned, y is the cardinality of the layer, and z is the integer by which the norm is displaced – this may be positive or negative.⁴¹ Very occasionally, y is absent as the cardinality in a state of complex dissonance may be indeterminable or irrelevant. Example 1.1 shows $D\flat_6-1$ created by contour and harmonic accents, since the change of harmony is perceived on the bass note changes.

Example 1.1: Op. 117/1, 1–4.

³⁹ Some scholars, for instance Mirka and McKee, have tried to utilise the term ‘rhythmic dissonance’ in addition to metrical dissonance, using the former to define antimetrical events which do not constitute a truly competing layer, either because they are single events or because the metre is maintained ‘in the face of conflicting accentual cues’ (Eric McKee, review of ‘Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann’ by Harald Krebs, *Notes*, Second Series, 57/1 (September 2000), 97–99, quote at 99). The term is not used here, and the appendage ‘metrical’ should be seen as defining the rhythmic-metric dimension rather than assigning a metric as opposed to rhythmic effect to the situation in question, attempts to do which become quickly become subjective.

⁴⁰ These terms have not had a stable history. To Cooper and Meyer (*The Rhythmic Structure of Music*), grouping dissonance is ‘metric crossing’ or ‘rhythmic dissonance’ and displacement dissonance is ‘non-congruence’ (Krebs, *Fantasy Pieces*, 14). Berry uses ‘metrical incongruity’ and ‘polymeter’ (Krebs, *Fantasy Pieces*, 15). Hemiolas are referred to as ‘rhythmic dissonances’ by Yeston in *The Stratification of Musical Rhythm*. Krebs himself terms them ‘Type A’ and ‘Type B’ dissonances in ‘Some Extensions’.

⁴¹ See Krebs, *Fantasy Pieces*, 35, on positive and negative displacement. The use of the notehead to denote the scale concerned is not used by Krebs but introduced in this thesis.

Displacement dissonance operates across a spectrum, and does not necessarily mean different metrical placement of the same rhythms or pitches. This is one end of the spectrum, and it does happen, as in Example 1.2, but is not necessary; Walter Frisch talks of ‘the threshold between strong syncopation and actual metrical displacement’,⁴² and Charles Rosen considers that the ‘dislocation between melody and bass is something at which Brahms became very expert, and I think he went further than any other composer before him’.⁴³ Thus some displacement dissonances are equivocal – moments when the bar line just ‘wobbles a bit’.⁴⁴ This represents a uniqueness of style; Rosen notes of one example that ‘Schumann would probably have carried this on until finally you were convinced that the sixth beat was the first beat of the bar’.⁴⁵ Performance decisions have a significant impact on perception in such situations.

Example 1.2: Complete displacement in Op. 120/2, I, 22–26.

Similarly, it is important to realise that while displacement dissonance in this theory requires a regular accent which marks the beginning of a dissonant layer, the primary consonant layer may still be present and accented, perhaps with strong harmonic accents,

⁴² Walter Frisch, ‘The Shifting Bar Line: Metrical Displacement in Brahms’, in *Brahms Studies: Analytical and Historical Perspectives* (ed. George Bozarth) (Oxford: Oxford University Press, 1990), 139–164, quote at 152.

⁴³ Charles Rosen, ‘Brahms the Subversive’, in *Brahms Studies: Analytical and Historical Perspectives* (ed. Bozarth), 111.

⁴⁴ Berry, ‘Metric and Rhythmic Articulation in Music’, 10.

⁴⁵ Rosen, ‘Brahms the Subversive’, in *Brahms Studies* (ed. Bozarth), 114.

and perhaps even in the same stream; the absence of strong-beat events is independent of the creation of displacement dissonance. Example 1.3 is therefore a legitimate example of dissonance, with a displaced 6-layer created by agogic and harmonic accents. This does not sound jarring in the same way as a pitch dissonance might, but imagining the first harmony of each bar lasting a minim and the second a crotchet shows that Brahms's version is not quite as consonant as it 'could' be.

The image shows a musical score for Example 1.3, Op. 100, II, 16-23. It consists of two staves: Violin (Vln.) and Piano (Pno.). The tempo is marked 'Vivace'. The piano part is marked 'p molto leggero'. The score shows a sequence of chords in the piano part, with a '6' written below each chord, indicating a 6-layer. The violin part has a melodic line that is displaced relative to the piano part.

Example 1.3: Op. 100, II, 16–23.

Grouping dissonance

Layers that have different cardinality create *grouping dissonance*. Such dissonance is denoted $G_{x/y}$, where x and y are the respective cardinalities of the layers. The most common grouping dissonance is of 3-layers and 2-layers (or multiples of these); a $G_{3/2}$ -type conflict, also known as hemiola, which is discussed further below. Complex grouping dissonances of the type $G_{x/y/z}$ may occur; where all layers are of the form $2^n 3^n$, these are not particularly uncommon, but situations where all three factors are distinct primes are rarely encountered in the tonal canon.

In the scenario of a continuous periodic oscillation between two values of the form $a b a b a b$, the listener may be presented with an interpretive issue in the absence of confirmatory phenomenal accents. In this perceptual paradox, Cohn defines interpreting the stream as $(a b) (a b) (a b)$ as a *parallel* scheme, conforming to a psychological preference for duple relations.⁴⁶ The alternative, a *switchback* scheme of the form $(a b a) (b a b)$, can also be aesthetically satisfying, as each metric unit is bounded on both ends by a single value, responding to a ‘basic desire for closure’;⁴⁷ since there is ‘an inversional relationship between adjacent units: **aba** is balanced by **bab**’,⁴⁸ there is also a duple, parallel interpretation at a higher level.

Situations which invoke this choice do not necessarily produce perceivable metrical dissonance. Equally, the presence of some features listed as phenomenal accent-types (a non-hierarchically ordered set of durations, or a phrase with a contour peak on a weak beat) may not actively disrupt the sense of metre; a dissonance can register without ‘trying’ to persuade us to perceive it as a new layer.⁴⁹ Instead, dissonances can be of different strengths; usually ‘grouping dissonance does not rise to the level of a perceived change of meter; similarly, most displacement dissonances do not shift the perceived downbeat’.⁵⁰ This, however, does not negate the use of metrical dissonance as an analytical tool.

⁴⁶ Cohn, ‘Dramatization’, 191–194. On the preference for duple relations, see Mirka, *Metric Manipulations*, 36.

⁴⁷ Cohn, ‘Dramatization’, 193.

⁴⁸ Ibid.

⁴⁹ Malin, *Songs in Motion*, 60.

⁵⁰ McClelland, *Brahms and the Scherzo*, 6 (footnote).

Classifying metrical states

There are various ways of notating consonant metrical situations. Richard Cohn's system, as developed in two articles, is used here.⁵¹ This system defines and interprets *metric complexes*, also called *metric spans* or *metric states*. A metric state interprets a time span by successively grouping its pulses (or sub-spans) until a list of ratios is obtained (see Example 1.4). Such a span is deemed consonant if each ratio is an integer, and fully consonant if each integer ratio is prime. In the common-practice canon, these primes are almost invariably 2 or 3, which are (at low and middle levels at least) usually assumed to be fundamentally non-hierarchical in relation to each other.⁵²

The image shows a musical score for Op. 118/5, measures 9-12. The score is in 6/8 time and features a piano (p) and "piu espressivo" marking. Brackets below the bass line group pulses into metric states. The first state is labeled "Metric state: ♩[2 3 2]" and the second is "Metric state: ♩[2 2 3]".

Example 1.4: Op. 118/5, 9–12.

One difference is that Cohn (as well as Krebs and Murphy), notates the ratios from the highest level first, or 'top-down'. Malin believes that 'the top-down and bottom-up

⁵¹ Cohn, 'Dramatization' and 'Metric and Hypermetric Dissonance'. 'Dramatization' used metric complexes based on the ratio-type system. The metric spans in the second article consisted of lists of pulse numbers of the form <1,2,4,12,24>. The two systems are compatible. Krebs's different system is explained in *Fantasy Pieces*, 30.

⁵² Hugh MacDonald disputes this, asserting that in the nineteenth century, triple meters began to replace normatively duple ones as 'bearers of expressive flexibility' (231), ultimately claiming that 'the languor and perfumed exoticism of much late-nineteenth-century piano music may be ascribed to the threes, sixes, nines, and twelves into which much of it divides' (236). His article is difficult to cite; its title consists of a 9-8 time signature and a six-flat key signature. In its normal citation as '[G-Flat Major Key Signature]' it fuels the argument that pitch concerns are considered more important than metric ones in musicology. *19th-Century Music*, 11/3 (Spring 1988), 221–237.

methods each have heuristic value, depending on the analytical context',⁵³ but only the bottom-up method is used in this thesis; the quickest pulse level first, and the level illustrated with a notehead. With this orientation classifications tend to move from the objective realm into the subjective.

Where all ratios in the span are either 2 or 3, the complex is said to be pure duple or pure triple respectively.⁵⁴ Where both 2 and 3 are involved as factors, the complex is said to be mixed. Mixed complexes are technically consonant yet nevertheless invite conflict, instability and confusion through the possibility of changing the ratios between levels; they have 'an inherent potential to host ambiguity and conflict'.⁵⁵

Metric complexes may be situated diagrammatically within 'metric spaces' to facilitate relation. Cohn has developed two types of metric space, one of which is used in Chapter 3.⁵⁶ He also coined the 'ski-hill graph' at the same time as the second metric space. As a development of Cohn's metric spaces, Murphy developed 'metric cubes', short-hand for 'hypercubes', which may operate over several dimensions to more accurately relate metres which are incomparable in Cohn's spaces.⁵⁷

Direct and indirect dissonance

Dissonances where conflicting layers are presented explicitly and simultaneously are termed *direct dissonances*. Where conflicting layers are presented in juxtaposition, the dissonance is *indirect*.⁵⁸ The premise is that after the cessation of a layer, the listener continues projecting

⁵³ Malin, *Songs in Motion*, 38.

⁵⁴ Cohn coined the terms in 'Dramatization'.

⁵⁵ *Ibid.*, 195.

⁵⁶ Scott Murphy describes them as 'Type I' and 'Type II' metric spaces ('Metric Cubes', 2–7). The first was developed in Cohn, 'Dramatization' and the second in Cohn, 'Complex Hemiolas'.

⁵⁷ Murphy, 'Metric Cubes'.

⁵⁸ Krebs, *Fantasy Pieces*, 45–46.

it subconsciously for a short time; a new realised layer thus conflicts with the mental projection of the previous layer, creating indirect dissonance.

Cohn points out how crucial this distinction is; without it, a paradigmatic Handelian pre-cadential hemiola is not dissonant since the two conflicting layers do not sound simultaneously. In this indirect situation, however, Cohn believes there is a 'sense of disruption to the ongoing flow, a disruption that is set right (or "resolved")', thus providing support for the use of the dissonance metaphor.⁵⁹ There are parallels in the tonal realm: a harmony may be immediately consonant but contextually dissonant.⁶⁰

High-level, mid-level and low-level dissonance

The phenomena so far discussed can manifest themselves at many different scales. Krebs defines these as low-, mid- and high-level dissonance, where the submetrical is low-level and hypermetrical is high-level.⁶¹ Changing a dissonance to a higher or lower level is known as augmentation and diminution respectively.

Hypermetre

Metrical layers also exist at levels beyond the bar line. This has been recognised and explored in the literature on hypermetre, which has grown into a substantial sub-discipline within metric theory. The emergence of cognitive science in the 1970s was instrumental in encouraging the study of hypermetre as it 'legitimated the role of the expert listener as witness'.⁶² Metre and grouping beyond the bar line are not encoded into scores and thus do

⁵⁹ Richard Cohn, 'Harald Krebs on Metrical Dissonance in the Music of Schumann and Brahms', *The American Brahms Society Newsletter*, 20/2 (2002), 5–7, quote at 5.

⁶⁰ Ibid.

⁶¹ Krebs, *Fantasy Pieces*, 53-57. The term 'submetrical' has become common parlance, despite the logical use of 'hypometrical' as the opposite of hypermetrical.

⁶² Cohn, 'Dramatization', 189.

not have the status of objective facts (the famous exception to this is the scherzo movement from Beethoven's Ninth Symphony), but with cognitive science 'individual perception can represent the intersubjective consensus of a community'.⁶³

Hypermetre grows particularly logically out of Lerdahl and Jackendoff's atemporal theories of hierarchical grouping.⁶⁴ In another dimension, it relates to poetry; Krebs mentions that prosodists have 'recognized that there can exist deeper-level stresses in lyric poetry'.⁶⁵ This is also explored by Stephen Rodgers, and Cooper and Meyer use prosodic notation at all levels.⁶⁶

When discussing hypermetre, bars become *hyperbeats* within larger *hypermeasures*, and a regular succession of equally patterned hyperbeats creates hypermeter. Hypermeter is normatively duple or quadruple as a two-fold duple grouping; this holds for the vast majority of cases, although Krebs claims that this has 'never been satisfactorily explained'.⁶⁷ The rare examples of triple hypermetre often occur in tempi sufficiently fast that the notated measures are arguably perceived as single beats; higher up the grouping structure, a duple organisation still prevails.⁶⁸ Extensions of duple hypermetrical units to triple ones is relatively common, but this does not necessarily lead to triple hypermeter;⁶⁹ Rodgers

⁶³ Ibid.

⁶⁴ Lerdahl and Jackendoff, *A Generative Theory of Tonal Music*.

⁶⁵ Harald Krebs, 'The Expressive Role of Rhythm and Meter in Schumann's Late Lieder', *Gamut: Online Journal of the Music Theory Society of the Mid-Atlantic* [online journal], 2/1 (January 2009), Article 9 (<http://trace.tennessee.edu/gamut/vol2/iss1/9>, (accessed 7/10/11), 280.

⁶⁶ Stephen Rodgers, 'Thinking (and Singing) in Threes: Triple Hypermeter and the Songs of Fanny Hensel', *Music Theory Online* [online journal], 17/1 (April 2011), <http://www.mtosmt.org/issues/mto.11.17.1/mto.11.17.1.rodgers.html> (accessed 7/10/11).

⁶⁷ Harald Krebs, 'Hypermeter and Hypermetric Irregularity in the Songs of Josephine Lang' in *Engaging Music: Essays in Musical Analysis* (ed. Deborah Stein) (Oxford: Oxford University Press, 2005), 16. He points to Rothstein and Schenker as well as back to eighteenth-century theorists such as Kirnberger.

⁶⁸ Examples include the Scherzo from Beethoven's Ninth Symphony, Beethoven's Bagatelle Op. 126 No. 6, the Rondo alla Zingarese from Brahms's Piano Quartet in G minor, Op. 25 and the Coda of the Scherzo from Dvořák's Eighth Symphony.

⁶⁹ See the Menuetto from Mozart's Symphony No. 40, which is cited by Temperley (2008) as an example of triple hypermeter, but actually represents inconsistent extensions of two-bar norms.

believes that instances of triple hypermetre in the songs of Fanny Hensel occur as a ‘distortion of duple norms’.⁷⁰ As with metrical dissonance, ‘normal four-bar hypermeter is not expressive in itself; it is by deviating from normal hypermeter that expressive effects can be achieved’.⁷¹

Hypermetrical grouping dissonances are very rare,⁷² perhaps due to the limits of what a listener can entrain to and contain within a psychological present.⁷³ Concerted applications of hypermetrical displacement dissonance are also unusual, perhaps for the same reason and also because many low-level displacement dissonances feature a superposition of pitch-dissonant harmonies which would become untenable at high levels.

Example 1.5 shows an exception.

Example 1.5: Op. 120/2, II, 81–88 (piano part).

⁷⁰ Rodgers, ‘Thinking in Threes’, [9].

⁷¹ Krebs, ‘The Expressive Role of Rhythm and Meter in Schumann’s Late Lieder’, 284.

⁷² One example may be the Coda of the Scherzo from Dvořák’s Eighth Symphony, which debatably features triple hypermeter concluding with a hypermetrical hemiola.

⁷³ Metric entrainment is the technique whereby we entrain to a beat and can predict exactly when the next one will occur. We generally entrain to beats in the range of 200 to 2,000 milliseconds, with a preference centred on around 120bpm (500ms) and commonly within the 81–162bpm range (370–740ms) (Malin, *Songs in Motion*, 44). Beats faster than this are perceived as a stream or grouped (in some conscious or subconscious way) into groups within the preferred entrainment range. We attempt to subdivide slower beats than this. Both Malin and Mirka discuss scales of perception, or spans of musical memory. There is a short-term musical memory (Mirka, *Metric Manipulations*, 19), also called ‘span of consciousness,’ ‘specious present’, or ‘psychological present’, during which ‘all percepts and sensations are simultaneously available for attention, perception, and cognitive processing’ (Malin, *Songs in Motion* 19). This is about 4 seconds, but may span 2–8 seconds.

It is therefore rare that the same analytical tools that are used to explore metrical dissonance can be used at higher scales, leading to the independent growth of literature exclusively on hypermetre. More common than hypermetrical dissonance, as the term applies to lower levels, is hypermetric irregularity, where the pattern of strong and weak bars is disturbed, including through expansion, contraction, or the repetition or deletion of bars or small groups. This may produce expressive effects including tension or confusion; Krebs observes that in general, hypermetric irregularity can provide interest to avoid monotony, can 'be involved in the creation of a sense of closure'⁷⁴ and can be used as an expressive device (particularly in songs). Similarly there are situations of hypermetric ambiguity, where 'substantial stretches [...] lend themselves equally well to more than one analysis',⁷⁵ although performance choices may weight or even override the perception of such ambiguity. In short, 'hypermeter, like surface-level meter, is more than a theoretical concept; in the hands of a fine composer, it can become a significant vehicle of musical expression'.⁷⁶

David Temperley has explored the phenomenon of 'hypermetric transitions', the movement between 'odd-strong' and 'even-strong' duple hypermetre.⁷⁷ Many of his examples could be seen as contractions or expansions of the normative contextual measures, however; since there is no feasibly perceptible difference between the two end states, it is the transitional bars that are the only interesting ones.⁷⁸ Temperley also notes the phenomenon of 'hypermetrical liquidation' in passages of surface-level liquidation. The frequency of instances where measures which are transitional in pitch and formal function

⁷⁴ Krebs, Harald Krebs, 'Hypermeter and Hypermetric Irregularity' in *Engaging Music* (ed. Stein), 28.

⁷⁵ Krebs, 'The Expressive Role of Rhythm and Meter in Schumann's Late Lieder', 286.

⁷⁶ Krebs, 'Hypermeter and Hypermetric Irregularity' in *Engaging Music* (ed. Stein), 29.

⁷⁷ David Temperley, 'Hypermetrical Transitions', *Music Theory Spectrum*, 30/2 (Fall 2008), 305–325.

⁷⁸ Temperley does admit that to perceive whether the current hypermeter is odd-strong or even-strong 'would require not just a good musical memory, but rather some kind of meticulous metrical bookkeeping' (323).

are also transitional in hypermetrical terms cannot be coincidental. However, Krebs points out that absolute regularity is not compulsory: just as fermatas or ritardandos can exist without destroying the sense of metre, so the durational equality we ascribe normatively to hypermeasures 'must not be interpreted as precluding a stretching or a contraction of individual units',⁷⁹ and this perspective further undermines Temperley's hypermetric transitions.

Phrase rhythm

Hypermetre and phrase rhythm are distinct, although 'several aspects of hypermetre are related to phrase structure'.⁸⁰ A useful maxim is that 'hypermeasures are metric units, whereas phrases are units of musical form'.⁸¹ Phrases and hypermeasures 'coexist in a state of creative tension'⁸² in which they can be in or out of phase with each other; McClelland considers various possibilities of this in the classical minuet as well as one example from Brahms.⁸³ Berry believes that such counteractions between metre and form 'are a critical aspect of rhythmic vitality'.⁸⁴ Particularly in the nineteenth century, Wayne Petty sees a 'tendency of much music of that era to unfold too regularly in duple hypermetre with phrase structures that march too consistently in lock step with those larger metrical schemes'⁸⁵ and Krebs considers Schumann's music to be 'dominated by undisturbed four-bar hypermeter'.⁸⁶ In contrast, Brahms's style tends to be much more hypermetrically complex. Murphy analyses one example, the *Ronda alla Zingarese* from the Op. 25 Piano

⁷⁹ Krebs, 'Hypermeter and Hypermetric Irregularity' in *Engaging Music* (ed. Stein), 20.

⁸⁰ Mirka, *Metric Manipulations*, xi.

⁸¹ Krebs, 'Hypermeter and Hypermetric Irregularity' in *Engaging Music* (ed. Stein), 19.

⁸² *Ibid.*, 28.

⁸³ Ryan McClelland, 'Extended Upbeats in the Classical Minuet: Interactions with Hypermeter and Phrase Structure', *Music Theory Spectrum*, 28/1 (Spring 2006), 23–56.

⁸⁴ Berry, 'Metric and Rhythmic Articulation', 14.

⁸⁵ Wayne Petty, 'Brahms, Adolf Jensen and the Problem of the Multi-Movement Work', *Music Analysis*, 22/i-ii (2003), 105–137, quote at 111.

⁸⁶ Krebs, *Fantasy Pieces*, 55.

Quartet, whose 'hypermetric states are just as varied as the movement's themes and keys'.⁸⁷

Hemiola

By far the most common grouping dissonance consists of interaction between 2-layers and 3-layers. Considering just how common these interactions are, it is surprising that hemiola remains a vague, casually-used term, despite Channan Willner's call in 1991 for 'a substantial historical and analytical study of the hemiola's relations to rhythmic and tonal structure and a series of detailed studies of its use by the major composers of the tonal era and the Renaissance'.⁸⁸ Since then some academic attention has been paid to it, but a system of classification has yet to be formulated for a varied phenomenon occurring across the canon.

Definitions of hemiola in the major musical dictionaries provide a starting point for discussion. As well as noting the etymology of hemiola,⁸⁹ they describe it as follows:

- A: This rhythmic device consists of superimposing 2 notes in the time of 3, or 3 in the time of 2 [...] A rhythmic device much used in cadential progressions by composers up to and including the baroque period.⁹⁰
- B: 'Hemiola' in the modern metrical system denotes the articulation of two units of triple metre as if they were notated as three units of duple metre [...] This is a common feature of Baroque music, especially of the French courante, and is used for giving rhythmic variety to dances and helping to effect an allargando at the end of a longer movement; Handel made much use of it. In the 19th century it was used by

⁸⁷ Scott Murphy, On Metre in the Rondo of Brahms's Op. 25', *Music Analysis*, 26/3 (1997), 323-353, quote at 324.

⁸⁸ Channan Willner, 'The Two-Length Bar Revisited: Handel and the Hemiola', *Göttinger Händel-Beiträge*, 4 (1991), 208.

⁸⁹ Hemiola originally meant an intervallic fifth; the ratio of string length needed being 3:2.

⁹⁰ 'Hemiola or Hemiolia', in *The Oxford Dictionary of Music*, 2nd ed. rev. (ed. Michael Kennedy), *Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/opr/t237/e4832> (accessed 15/08/12).

Schumann and often by Brahms, and was an important feature of the Viennese waltz.⁹¹

- C: In modern notation, a hemiola occurs when two bars in triple metre (e.g. 3/2) are performed as if they were notated as three bars in duple metre (6/4), or vice versa. This rhythmic device is common in music of the Baroque period, especially in the Courante. It was later used by Schumann and particularly by Brahms.⁹²

Four issues arise from these quotes, some occurring in more than one: the equivocation of direction – triple metre replacing duple is seen as the same as the converse (A and C), the prescription of an ‘allargando effect’ (B), the classification of hemiola as an essentially Baroque phenomenon (all, although B & C admit later use), and the assumption that hemiolas only occur at cadential locations or at the end of movements (A and B). The first two will be discussed in the following paragraphs. The third, at least in the case of Brahms, is patently groundless. The final issue – location – is beyond the scope of this thesis to explore, although some occurrences outside traditional cadential locations will be noted.

Parallelism

Parallelism is an important issue in the study of metrical dissonance and particularly of hemiola. It denotes ‘the repetition of a group or segment at the musical surface’,⁹³ which may be literal or sequential, and may be present in some dimensions (melody, rhythm, harmony) but not others. Parallelism, particularly in a hemiola, may be made even more recognisable by a ‘characteristic opening chunk’, like a turn, ‘designed to facilitate the recognition of the parallelism at the very beginning of the second segment’.⁹⁴

⁹¹ Julian Rushton, ‘Hemiola’, in *Grove Music Online, Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/12768> (accessed 15/08/12).

⁹² ‘Hemiola’, in *The Oxford Companion to Music* (ed. Alison Latham), *Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/opr/t114/e3212> (accessed 15/08/12).

⁹³ Mirka, *Metric Manipulations*, 137.

⁹⁴ *Ibid.*, 138.

The importance is that in such cases, ‘we strongly prefer a metrical structure in which strong beats are similarly placed in each occurrence of the pattern’,⁹⁵ or, put more baldly, ‘to perceive patterns as parallel means to perceive them as having parallel metrical structure’.⁹⁶ Parallelism can thus be used in creating displacement and grouping dissonance. It is the most common way of creating hemiola, but is neither necessary nor exhaustive.

Reverse hemiola

The first refinement to be made is to classify hemiolic direction. Despite the equivocation of the above quotes, it is unnecessary to define as identical phenomena the replacement of duple metre with triple metre *and* its converse. Instead, common sense and overwhelming frequency in the canon prescribe that the typical direction is to replace 3-groups with 2-groups. The opposite – the replacement of 2-groups with 3-groups – is a much rarer occurrence and is here termed *reverse hemiola*.⁹⁷ Thus, in the current notation, a reverse hemiola occurs when a [3 2] layer appears to conflict with a normative [2 3] layer. Mirka believes that the relative rarity of reverse hemiola is perhaps because ‘the level of measure is first realized and only afterward put into question. As a result, the metrical structure is clarified only in retrospect. This means that such manipulation is less effective and at the same time cognitively more difficult’.⁹⁸ Examples 1.6–1.9 show some instances in Brahms’s works.

⁹⁵ Temperley, ‘Hypermetrical Transitions’, 306.

⁹⁶ Mirka, *Metric Manipulations*, 137.

⁹⁷ The possibility of reverse hemiola is mentioned by Malin (*Songs in Motion*, 55) who in turn takes it from Deborah Adams Rohr, “Brahms’s Metrical Dramas: Rhythm, Text Expression, and Form in the Solo Lieder” (PhD diss., University of Rochester, Rochester, New York, 1997), 178. Malin does not elaborate on the effect or function of such a phenomenon. Mirka also notes the possibility (although under her discussion on *imbroglio*) (*Metric Manipulations*, 145–6).

⁹⁸ Mirka, *Metric Manipulations*, 146.

Example 1.6: Explicit reverse hemiola (with time signature change): Op. 60, II, 48–9.

Example 1.7: Op. 108, IV, 55–57.

Example 1.8: Op. 118/2, 29–31.



Example 1.9: Op. 120/2, I, 15–17 (piano part).

Classes of hemiola

Perhaps the most general definition of hemiola was Cohn's, in 1992: 'In essence, any interpretational conflict in a mixed span represents a generalization of the concept of hemiola'.⁹⁹ Such a definition risks being so wide that it loses analytical power. Nine years later, he was a little more specific: 'When a span of time is trisected in place of an anticipated bisection, a *hemiola* is said to occur. More broadly, under current usage, the term refers to any successive or simultaneous conflict between a bisection and trisection of a single time-span'.¹⁰⁰

Opposing Cohn in both compass and meaning is Danuta Mirka's definition of hemiola (taken from the context of eighteenth-century theory) only as 'a composed-out *allargando* before the cadence' where the size of *Takteile* doubles and the result is one double measure.¹⁰¹ She distinguishes this from *imbroglio*, which is 'metric confusion [which] occurs when a different meter is introduced in a composition, for example, where in 3/4, certain places are in 2/4, etc.'.¹⁰²

⁹⁹ Cohn, 'Dramatizations', 195.

¹⁰⁰ Cohn, 'Complex Hemiolas', 295.

¹⁰¹ Mirka, *Metric Manipulations*, 161.

¹⁰² *Ibid.*, 136.

The term *imbroglio* has all but disappeared from musical terminology, without even a modern Grove entry, and this thesis does not use it. This is partly because of its etymology; ‘confusion’ seems inappropriate beyond the point that such phenomena became a common tool to composers and comprehended by listeners. It is also because it includes grouping dissonances other than G3/2 types. Finally, *imbroglio* as the introduction of a different metre includes such occurrences where the inserted metre does not ‘add up’ to a number of bars in the normal metre. This seems a significantly different phenomenon to those cases where they do, as in a hemiola.¹⁰³

Steering between these two opinions is possible. This could be achieved, for example, by following Willner’s articles on hemiola, which focus on its use by Handel and define three main types: expansion, contraction, and cadential hemiolas.¹⁰⁴ Rather than discrete distinctions, expansion and contraction hemiolas represent opposite ends of a spectrum where the ‘pacing of tonal events’ is slowed or accelerated respectively.¹⁰⁵ The expansion type represents what Mirka defines as hemiola, with the broadening effect noted in several of the dictionary definitions. In the cadential type, the metrical and harmonic emphasis of the downbeat of the second bar ‘remains undiminished’;¹⁰⁶ this is a direct dissonance, and does not ‘affect the prevailing metrical [or hypermetrical] structure’,¹⁰⁷ thus sitting between the extremes of the expansion and contraction hemiola. It is these instances

¹⁰³ Mirka also points out that hemiola was not explicitly defined at the time of her main sources (*Metric Manipulations*, 159). It is unclear whether the terms *imbroglio* and hemiola ever chronologically overlapped, and if so, how they were distinguished.

¹⁰⁴ The three main types are introduced in ‘The Two-Length Bar Revisited’. See also ‘More on Handel and the Hemiola: Overlapping Hemiolas’, *Music Theory Online* [online journal], 2/3 (March 1996), <http://www.mtosmt.org/issues/mto.96.2.3/mto.96.2.3.willner.html> (accessed 26/11/11), and ‘Metrical Displacement and Metrically Dissonant Hemiolas’ (2007), online at <http://www.channanwillner.com/pdf/metrical.pdf> (accessed 26/11/11).

¹⁰⁵ McClelland, ‘Extended Upbeats’, 34.

¹⁰⁶ Willner, ‘The Two-Length Bar Revisited’, 209.

¹⁰⁷ *Ibid.*, 208.

that might be usually termed cross-rhythms; ‘cadential’ could be replaced with ‘static’ as a logical complement to the contraction and expansion types and also to negate connotations of cadential location.¹⁰⁸ Examples 1.10–1.13 show instances of each type in Brahms’s works (see also Example 1.21 for a good example of a contraction hemiola).

Example 1.10: An expansion hemiola, Op. 86/1, 10–15.

Example 1.11: Another expansion hemiola (Op. 25, III, 21–25). It does not feature a decrease in surface rhythm, but in terms of hypermetre, the two measures at the surface represent one hyperbeat.

¹⁰⁸ Willner’s ‘inversion hemiola’ (‘The Two-Length Bar Revisited’, 225–226, resulting from juxtaposition of trochaic and iambic figures) can be classed under static hemiola, if it is deemed to be a hemiola at all.

Example 1.12: A contraction hemiola (Op. 78, I, 133). Interestingly it features neither an increase in surface rhythm nor a particular increase in harmonic rhythm, but does represent a one-bar hypermeasure.

Example 1.13: A static hemiola, or cross-rhythm (Op. 117/1, 13–16). No effect on hypermetre or change in harmonic rhythm.

These definitions are not flawless. In particular, true contraction hemiolas are rare in Brahms; while many examples may contract longer rhythmic motives to create an effect of acceleration, they usually continue to cover the same harmonic ground as two normative bars (sometimes with an embellishing harmony inserted) and do not affect hypermetre if considered as two bars of triple metre. Example 1.14 shows one such difficult instance: an increase in harmonic rhythm is balanced by consistent duple hypermetre.

Example 1.14: Op. 40, IV, 15–24 (piano part).

The terms thus provide only the start of an advance on Cohn's generalisation, making it possible to discern different types of hemiola, but in opposition to Mirka they recognise that metrical phenomena other than the 'allargando' kind are perceived as hemiola, and that these are in turn perceived very differently to insertions of other time signatures. Mirka's definitions of hemiola and G3/2-type imbrogio are assimilated as hemiola, but delineated within it as different types.

Finally, with these distinctions Willner disputes Edward Cone, who claims that the typical hemiola 'forces the hearer to scan those two measures as a single at slower pace, or else it confronts him with an ambiguity between two meters'.¹⁰⁹ Willner takes issue with both parts of this statement: cadential (or static) hemiolas 'cannot be regarded simply as one larger measure for the purpose of metrical or rhythmic parsing',¹¹⁰ and since 'reasonably precise accounts of the metrical design and significance of each hemiola can in fact be given (if necessary, on an ad-hoc basis); there is therefore no reason for metrical

¹⁰⁹ Edward Cone, 'Musical Form and Musical Performance Reconsidered,' *Music Theory Spectrum*, 7 (1985), 149–58, quoted in Willner, 'The Two-Length Bar Revisited', 216.

¹¹⁰ Willner, 'The Two-Length Bar Revisited', 216.

ambiguity, as such, to be readily associated with the hemiola, at least not in Handel's music'.¹¹¹

Complex hemiola

Situations occasionally occur where hemiolic relationships are present on more than one level. Specifically, double hemiola is defined as 'the relationship between symmetrical divisions of a time-span that simultaneously bear 3:2 conflicts at two adjacent levels of the metric hierarchy',¹¹² although adjacency of hemiolic conflicts is not considered compulsory in this thesis. Indirect double hemiolas are slightly more common than direct ones.

Examples 1.15–1.18 show instances in Brahms's works.

The image shows a musical score for Violin and Piano. The Violin part is in treble clef with a key signature of one sharp (F#). The Piano part is in treble and bass clefs with the same key signature. The Violin part has a melodic line with a 3:2 hemiola relationship. The Piano part has a rhythmic accompaniment with a 3:2 hemiola relationship. The two hemiolas are connected by lines to a diagram on the right showing two pairs of notes with a slash between them, representing the 3:2 ratio.

Example 1.15: A paradigmatic example of double hemiola (Op. 78, I, 235).¹¹³

¹¹¹ Ibid.

¹¹² Cohn, 'Complex Hemiolas', 295.

¹¹³ Noted by Cohn ('Complex Hemiolas', 304–7) and Peter Smith (New Perspectives on Brahms's Linkage Technique', *Intégral*, 21 (2007), 120–7).

171

dim.

dim.

3 eighth notes / quarter note

3 eighth notes / quarter note

Example 1.16: Op. 120/2, I, 171–173. The piano right hand pitches encourage a parallel rather than switchback reading.

255 **Tranquillo**

poco f ma dolce

Tranquillo

p

dolce

Example 1.17: Op. 8 (1889 version), I, 255–258. An example of indirect double hemiola (same levels as Example 1.16).

Example 1.18: Op. 111, I, 12–13.

Displaced hemiola

In Brahms's works, hemiolas sometimes appear combined with displacement dissonance.

Mirka notes several examples in Haydn's works.¹¹⁴ She realises that such occurrences represent the combination of displacement and grouping dissonances, and following Floyd Grave she refers to them as 'free falls'.¹¹⁵ While 'free fall' captures the common (but not universal) feeling of loss of metre in such situations, 'displaced hemiola' appears to describe more accurately the phenomenon. In each of Examples 1.19–1.22, either harmonic displacement or instrumentation creates a more dissonant effect than just the articulation of the strong and weak part of each hemiolic beat. Example 1.22 is also a good example of a hemiola in a non-cadential location – the displaced hemiola ends with the predominant chord of the cadential progression.

¹¹⁴ Mirka, *Metric Manipulations*, 139.

¹¹⁵ *Ibid.*

139

Musical score for Example 1.19, Op. 60, II, measures 139-140. The score is in 6/8 time and B-flat major. It features three staves: Treble, Bass, and Grand Staff. The Treble staff has a melodic line with a fermata and a forte (*fz*) dynamic. The Bass staff has a rhythmic accompaniment with a forte (*fz*) dynamic. The Grand Staff has a complex texture with a forte (*f*) dynamic.

Example 1.19: Op. 60, II, 139–140.

33

Musical score for Example 1.20, Op. 108, II, measures 33-36. The score is in 3/4 time and D major. It features two staves: Violin and Piano. The Violin staff has a simple melodic line. The Piano staff has a complex texture with a *dolce* dynamic.

Example 1.20: Op. 108, II, 33–36.

49 *dim.*

Example 1.21: Op. 87, III, 49–51.

70 *pp* *dim.*

ii⁷ V⁷ i

Example 1.22: Op. 120/2, II, 71–76 (piano part).

Metrical dissonance in Brahms

The examples given above show the prevalence of complex metrical dissonance in Brahms's works. The following chapters explore metrical dissonance in each movement of his Second Piano Trio, Op. 87 in C major. The work was written in 1882, near the end of what is viewed as Brahms's 'high maturity' – the first movement especially is said to typify this period.¹¹⁶

¹¹⁶ David Brodbeck, 'Medium and Meaning: New Aspects of the Chamber Music' in *The Cambridge Companion to Brahms* (ed. Michael Musgrave), (Cambridge: Cambridge University Press, 1999), 111. Brodbeck considers the high maturity to begin with the two String Quartets, Op. 51, and end with the String Quintet, Op. 88 (99). James Webster disputes this sectioning of the mature works, at least with regard to first-movement sonata forms, positing that the 'real period of consolidation' begins with the Second Symphony and the G major Violin Sonata (Op. 78, 1877–8). See James Webster, 'The General and the Particular in Brahms's Later Sonata Forms', in *Brahms Studies* (ed. Bozarth), 49–78.

Parallels between harmonic and metric processes in works of the high maturity and late period have been explored by several scholars. David Lewin pursued a pitch-metre analogy in Op. 76, No. 8, showing its innovative metrical structure and arguing that ‘metric states synchronise with analogous harmonic functions’.¹¹⁷ Frisch believes this is a period where ‘Brahms has fully integrated the nuances of metrical displacement into his musical vocabulary’¹¹⁸ and considers a similar pitch-metre parallelism in the third song of Op. 121, (the *Four Serious Songs*).¹¹⁹ Malin says ‘analogies between pitch and rhythm have proved to be especially cogent for Brahms’s music. It is not only that one finds rhythmic processes that are analogous to tonal processes but that the processes frequently go together’.¹²⁰ Most recently, Peter Smith has considered the Third Piano Quartet, Op. 60, and developed the same idea to a greater extent in his concept of *dimensional counterpoint*.¹²¹

¹¹⁷ Quote is from Cohn, ‘Complex Hemiolas’, 305. David Lewin, ‘On Harmony and Meter in Brahms’s Op. 76, No. 8’, *19th-Century Music*, 4/3 (1981), 261–65. Lewin’s point was not to argue ‘exact formal isomorphism in the metric and tonal structures of the passage’ but to point out that ‘the philosophical principles underlying metric structures are the same as those underlying the harmonic structure of tonality’. (264)

¹¹⁸ Frisch, ‘The Shifting Bar Line’ in *Brahms Studies* (ed. Bozarth), 159.

¹¹⁹ *Ibid.*, 160.

¹²⁰ Malin, *Songs in Motion*, 61. Brahms is not exclusive in this respect. The slow movement of Mozart’s String Quartet in D Minor, K421/417b shows a striking correlation between tonic key and triple hypermetre, and Richard Cohn considers parallel dramatic trajectories in ‘Dramatizations’.

¹²¹ Peter Smith, *Expressive Forms in Brahms’s Instrumental Music: Structure and Meaning in His “Werther” Quartet* (Bloomington: Indiana University Press, 2005).

CHAPTER 2

I. ALLEGRO

The context of this movement (a sonata-form first movement, a chamber ensemble, and the ‘Olympian connotations’¹²² of the tonality) creates high expectation for the Brahmsian complexity that has always fascinated analysts. This chapter analyses tonic statements of the main theme: metrical and hypermetrical reframings become a tool for development and formal articulation across the movement, which closes in a state of non-maximal metrical resolution.

Two guiding ideas

Two recent ideas in Brahmsian scholarship shape the following interpretation. The first is Peter Smith’s that ‘Brahms characteristically confirms the multivalence of his ambiguous ideas by exploring competing structural potentials as his compositions unfold [...] exploration of “various viewpoints” often becomes the impetus behind a passage or even an entire composition’.¹²³

The second idea comes from Wayne Petty, who considered that Brahms faced two main compositional problems when composing a multi-movement work: ‘how to open a work with a relatively square and tonally closed theme yet still make that theme introduce ideas that demand the scope and scale of a sonata movement to come to fruition’, and ‘how

¹²² Ivor Keys, *Brahms Chamber Music*, BBC Music Guides (London: BBC, 1974), 50.

¹²³ Peter Smith, ‘You Reap What You Sow: Some Instances of Rhythmic and Harmonic Ambiguity in Brahms’, *Music Theory Spectrum*, 28/1 (2006), 58.

to write a movement that suits the *opening* position in a multi-movement work, one that raises issues that call forth the subsequent movements, thereby forging a larger purpose'.¹²⁴

The quotes are reviewed in the conclusion, after analysis of the five tonic main theme statements throughout the movement: at the opening, at the end of the expository main theme group, at the beginning of the development and the recapitulation, and in the movement's final bars. Edward Cone cited this theme as an example of harmonic congruence (a melodic-harmonic identity through vertical and horizontal deployment of the same material).¹²⁵ In terms of rhythm and metre it also proves complex, and both of the ideas above have relevance purely in the metrical dimension of this one theme, although this is obviously a myopic perspective on a complex and multi-faceted movement.

Second statement

To appreciate the complexity of the first statement it is prudent to look first at the central three statements and then refer them to the beginning; Example 2.1 shows the second statement.

¹²⁴ Petty, 'Brahms, Adolf Jensen and the Problem of the Multi-Movement Work', 111.

¹²⁵ Edward Cone, 'Harmonic Congruence in Brahms', in *Brahms Studies: Analytical and Historical Perspectives* (ed. Bozarth), 165. Harmonic congruence is salient, if not explicit, in all four movements.

The image shows a musical score for three instruments: Violin (Vln.), Viola (Vc.), and Piano (Pno.). The score is divided into two sections. The first section, labeled 'Displaced Hemiola', spans measures 31 to 33. In this section, the strings play a rhythmic pattern of 'W S W S W S' (Weak-Strong) in duple metre. The piano part plays a similar pattern of 'S W S W S W' (Strong-Weak) in duple metre. The second section, labeled 'Main Theme Return', starts at measure 34. The strings play a melodic line, and the piano part provides accompaniment. The score includes dynamic markings such as *f* (forte) and *mf* (mezzo-forte).

Example 2.1: The second tonic main theme statement, at the end of the expository main theme group (31–39).

The bars immediately preceding the thematic return offer the first example of displaced hemiola. Both piano and strings are in duple metre, but with differing strong beat placement. The displaced hemiola continues after the main theme returns, but both duple lines move into the piano part; the metrical dissonance becomes an accompaniment to the consonant theme. Rather than being completely lost in the compound dissonance, the listener can appreciate a hierarchy between the three conflicting metrical layers; the 6-layer in the strings is clearly the dominant melody, while the piano parts are clearly subordinate accompaniment, the right hand echoing the bass line in the left.

This second statement is also the only one which directly employs subdominant harmony, in bars 33–34 (although the tonic sevenths at the beginning of the recapitulation give a subdominant inflection). The subdominant is used unusually sparingly in the whole Trio, and while strong tonicisation of it is hinted at further in this movement and subsequent ones, it is not realised until the final movement – the first example of inter-movement processes and links which pervade the opus.

The metrical dissonance changes in the third to sixth bars (35–38) of the second statement: the grouping dissonance disappears leaving the cardinality of 3/4 metre unchallenged, but the displacement dissonance undergoes diminution from D_{2+1} to D_{2+1} .

Third statement

The third statement (which initially feigns an exposition repeat) is again preceded by displaced hemiola (Example 2.2). This is in fact a double hemiola; $G_{3/2}$ dissonances occur directly between duplet and triplet quavers, and indirectly between duple and triple metre (or directly if the cello is perceived to continue triple metre in bars 127–8). At the point of thematic return, both grouping elements of the dissonance disappear, but D_{3+1} remains in the piano part, created by density accents and lack of downbeat accentuation.

Displaced Hemiola

Violin

Violoncello

Piano

123

3 3 3

cresc.

S W S W S W

W S W S W S

Main Theme Return

129

Vln.

Vc.

Pno.

f

mf

f

mf

DJ3+1

3?

136

Vln.

Vc.

Pno.

cresc.

cresc.

cresc.

3 3 3 3 3 3

Reverse Hemiola

Displaced Hemiola

Example 2.2: The third main theme statement (123–141).¹²⁶

¹²⁶ Bars 127–8 of the violin part might appear to be in a W-S-W-S-W-S pattern through contour accents. However, the high octaves are within the higher pitches of the piano part, and are anyway counteracted by the intuitive bowing and the natural resonance of the violin open G string, which accentuate the lower octave.

Bar 134 also reintroduces a hint of grouping dissonance, with $G\downarrow B/2$ suggested by density accents on the fourth quaver. Bars 136–138 intensify this dissonance through contour and density accents; the new 3-layers are in a state of reverse hemiola to the notated $3/4$ metre. The contour accents are included in the strings and so the notated metre is no longer articulated; in the dissonance's two-fold repetition the primary metrical layer is submerged.¹²⁷

Example 2.3 shows elements of hypermetric ambiguity in this statement. Agogic accents, along with a repeated two-bar grouping, suggest hyperdownbeats on bars 132 and 134. Bar 136 is then given accentuation through the new one-bar grouping (a 'new-event' accent) and its repetition.¹²⁸ The subsequent hemiola in bars 139–140 is notable for being in a state of indirect double hemiola to bars 136–138. With agogic, dynamic and new-event accents as well as this strikingly different metrical dissonance to the preceding bars, it acts as a hyperdownbeat, reasserting the original hypermetre (in which the theme begins on a hyperdownbeat). However, while conforming to and even reasserting this hypermetre, in terms of surface rhythm it appears to be an expansion hemiola. In terms of harmony it is a deceleration of the rate of change of the immediately preceding bars – but looking further back, harmonic rhythm has fluctuated in the course of the theme. This illuminates the difficulties of categorising hemiolas, particularly with regards to harmonic rhythm.

¹²⁷ Krebs, *Fantasy Pieces*, 255: 'Submerging: the process of rendering a surface-level dissonance subliminal; the dissonance begins in a form involving explicit articulation of all constituent layers but then, by the elimination from the musical surface of the constituent musical layer, becomes subliminal.'

¹²⁸ Any first event or pattern of events which is subsequently repeated has a natural accentuation through an echo effect – Temperley's 'first occurrence strong' rule. David Temperley, 'Hypermetrical Transitions', 306.

Hypermetre: S W S W S W S

Displaced HM: W S W S W S W

HM: W S W S W

DHM: S W S W S

One-bar grouping - Echo effect

Displaced Hemiola
Reasserts Hypermetre

Example 2.3: The third main theme statement, exploring hypermetric ambiguity (129–140).

Fourth statement

The fourth statement, at the recapitulatory boundary, is arguably the most interesting (Example 2.4). Yet again it is preceded by a displaced hemiola. McClelland suggests that in Brahms's works, 'rhythmic and metric phenomena not only vary the motives embedded within themes, but can themselves be motivic agents whose journey is as central as the

development of pitch motives'.¹²⁹ This displaced hemiola seems a prime example of a metrical dissonance becoming motivic in this way and signalling the main theme return. It is also combined here with an $D\downarrow 2+1$ dissonance in addition to the $D\downarrow 2+1$ dissonance within the displaced hemiola; this compound displacement dissonance follows Frisch's opinion that the end of the development section 'constitutes a primary location for metrical displacement' in Brahms's works.¹³⁰ When the thematic return is reached it is framed in a $D\downarrow 3+1$ dissonance, as in the third statement.

Harmony: $V^7 \rightarrow I$
 Metre: Dissonant \rightarrow Consonant \rightarrow Dissonant

204

Vln.

Vc.

Pno.

Added $D\downarrow 2+1$

Recapitulatory Boundary

Hypermetre: S W S W S W S W S

Displaced Hemiola Consonance $D\downarrow 3+1$

Example 2.4: The fourth tonic main theme statement, beginning the recapitulation (204–215).

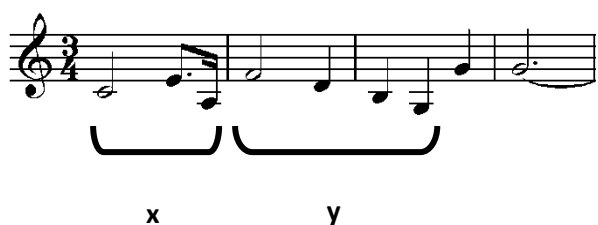
The most intriguing aspects of this passage relate to the two bars immediately before the main theme return (bars 207–8). The change from complex dissonance (the displaced hemiola and added $D\downarrow 2+1$) to simple dissonance ($D\downarrow 3+1$ at the main theme return) is bridged here by two bars of metrical consonance – the hemiola has been moved from its

¹²⁹ McClelland, *Brahms and the Scherzo*, 5: 'This viewpoint is also expressed in Samuel Ng, 'A Grundgestalt Interpretation of Metric Dissonance in the Music of Johannes Brahms' (Ph.D. diss., University of Rochester, 2005).'

¹³⁰ Walter Frisch, 'The Shifting Bar Line' in *Brahms Studies* (ed. Bozarth), 156.

usual cadential location in this movement. These two bars are the peak of formal tension, bringing the dominant seventh which is to resolve at the return of theme and tonic. Yet the tonal *resolution* across the boundary is countered by a metrical *dissolution* from consonance to dissonance, with the same two-crotchet piano figure in both consonant and dissonant positions either side of the boundary, creating both linkage and contrast. The full resolution of metrical dissonance is not only temporary; it does not align with the recapitulatory boundary or with resolution of harmonic dissonance, in an example of Smith's *dimensional non-congruence*.¹³¹

The two bars before the recapitulatory boundary serve another function as a recollection of what might be termed motive **y** of the main theme (Example 2.5), in a strong-weak hypermetric position contrasting with its usual weak-strong alignment. Frisch's 'shifting bar line' is here a shifting hyperbar line.



Example 2.5: The main theme, with a simple motivic division.

The differing hypermetric alignments of **y** either side of the boundary create a hypermetric tension at the same time as linkage, in the same way that the consonant and dissonant alignments of the two-crotchet figure create both linkage and contrast.¹³² While neither of these features blur the articulation of recapitulation caused by the double return of tonic and main theme, they smooth the recapitulatory boundary by creating linkage

¹³¹ See Smith, *Expressive Forms*, particularly 31–65.

¹³² See Smith, 'New Perspectives on Brahms's Linkage Technique', 111–2, where Smith explores a similar situation in the Second Symphony.

across it, and as a result Brahms avoids the potential bluntness of the double return.¹³³ This subtle hypermetric tension was implicit from the beginning (note in Example 2.1 the two-bar groupings at 34–35 and 36–37 which receive no phenomenal accentuation) but is only made explicit here; the recapitulatory boundary, while granting resolution in the double return, also hosts an increase of tension.

Opening

Having explored the metrical dissonances in the main theme statements across the movement, an inspection of the opening (Example 2.6) reveals embryonic forms of all these.

¹³³ See Peter Smith, 'Liquidation, Augmentation, and Brahms's Recapitulatory Overlaps', *19th-Century Music*, 17/3 (Spring 1994), 237–261, for exploration of more ambiguous situations at this formal juncture.

V → I ? Agogic accents → hyperdownbeats?

Allegro ♩ = 138

Violin *poco f*

Violoncello *poco f*

Piano *poco f*

Allegro ♩ = 138

Contour Agogic Density

8

Vln. *p*

Vc. *p*

Pno. *p*

Example 2.6: The opening bars of the movement (1–12).

The piano entry in bar 4 presages the displacement dissonance which is to frame the third and fourth statements. It also creates hemiola through contour accents, agogic accents, and density accents in turn. The first-time listener, though, doesn't initially know whether to interpret this hemiola as displaced (starting on a delayed hemiolic downbeat) or not (starting on a hemiolic upbeat).

The subdominant presence in the second statement and inflection in the fourth statement is again presaged in the opening, which hints at the possibility of subdominant (F) as tonic; opening with an unharmonised melody 'suggests the presence of an extended

upbeat'¹³⁴ which could be a V-I movement – though this possibility is destroyed by the F's subsequently revealed identity within a G⁷ chord.¹³⁵ This is another example of dimensional non-congruence: the strings suggest an introduction yet give the material of a main theme.

The possibility of this extended upbeat at the beginning has connotations for hypermetre.¹³⁶ In an alternative reading of the opening, the first bar is a hyperupbeat delaying the hyperdownbeat to bar 2. Hypermetric ambiguity continues: the strings' agogic accents on 2, 4, 6 and 8 all support a 'displaced' hypermetre, which initially also has some harmonic plausibility since, as already noted, the C, E and A of the first bar could be seen as anticipating an F triad and the chromaticism of the following few bars relates just as tenuously to either key. Mirka points out that 'perception of the tonic fosters the perception of metrical downbeat';¹³⁷ it does so just as much for the *hypermetrical* downbeat, and the ambiguity of key at this point is interdependent with the ambiguity of hypermetre; if either were more decisively stated, then the listener could associate that point with both dimensions. Duple 'odd-strong' hypermetre reasserts itself at 13, thus granting retrospective realisation that 1 was a hyperdownbeat after all; at this point the ambiguity of the potentially displaced piano hemiola is also resolved.¹³⁸

The first statement thus holds, in an undeveloped and ambiguous state, the kernels of the metrical dissonances which characterise it in its returns throughout the movement. It

¹³⁴ McClelland, 'Extended Upbeats', 25.

¹³⁵ David Brodbeck points out the additional suggestion of A minor. This has two aspects – the key is realized in the middle of the subordinate theme group, and the resultant reading of the main theme ($\hat{3} - \hat{5} - \hat{1} - \hat{6} - \hat{4} - \hat{2} - \hat{7}$) is realized in its D_♭ major appearance starting at bar 165. ('Medium and meaning' in *The Cambridge Companion* (ed. Musgrave), 114.

¹³⁶ See Channan Willner, 'Bar 0 and the Suppressed Hyperdownbeat' (2007), online at http://www.channanwillner.com/pdf/bar_0.pdf.

¹³⁷ Mirka, *Metric Manipulations*, 56. The opposite is also true; perception of the downbeat can foster the perception of the tonic, in the uncommon situations where meter is established before key.

¹³⁸ Temperley coins odd-strong and even-strong hypermetre in 'Hypermetric Transitions'.

must be noted that many of the metrical features noted above are weak and conflicting in their first appearance; it is in the theme's subsequently reframed appearances that these dissonances come to the fore. McClelland has investigated Brahms's 'destabilised beginnings' in depth;¹³⁹ this is a representative example of destabilisation both in the tonal and metric domains, and is both vague and ambiguous.¹⁴⁰ Yet it is notable that the first bar in itself is unequivocal in terms of key, metre and hypermetre. It is what immediately follows that shakes the listener's original (and ultimately correct) assumptions, destabilising the beginning. This is a feature of Brahmsian style in both harmonic and metric domains; as Smith notes, 'paradoxically these moments of ambiguity arise within what, we eventually realize, is an entirely regular continuation'.¹⁴¹ Ambiguity shakes perception from what is subsequently re-evaluated as regular; the 'first impression' often turns out to be the 'right answer'.¹⁴²

Close

After the complexity of the first four statements of the theme, the only statement left to consider is that which closes the movement (Example 2.7). This ultimate statement is an example of the Beethovenian trick noted by Kerman of how the main theme can 'all by itself, and with no extensions whatsoever, make a paradoxical but plausible conclusion for

¹³⁹ Ryan McClelland, 'Brahms and the Principle of Destabilised Beginnings', *Music Analysis*, 28/1 (2009), 3–61.

¹⁴⁰ Brahmsian ambiguity is something of a can of worms (see Smith, 'You Reap What You Sow', 2006; Dunsby, *Structural Ambiguity in Brahms*, 1981; Cone, 'Attacking a Brahms Puzzle' and Stein, 'Introduction to Musical Ambiguity' in *Engaging Music* (ed. Stein), 2004). The tenet used here is that in ambiguous situations, differing data present can be invoked to support different equally plausible interpretations, whereas in vague situations, there is insufficient or no information to support any interpretation at the desired level of specificity. Thus a situation can be both vague and ambiguous, in that different interpretations are suggested, but none with enough consistency to be totally plausible. Other viewpoints exist.

¹⁴¹ Smith, 'New Perspectives on Brahms's Linkage Technique', 143.

¹⁴² David Epstein believes there is always a 'key': 'some level or perspective which, when revealed, makes sense of these conflicting concepts and points to a higher purpose that they all serve' (David Epstein, 'Brahms and the Mechanisms of Motion: The Composition of Performance' in *Brahms Studies: Analytical and Historical Perspectives* (ed. Bozarth), 194), but Kevin Korsyn warns of the possible 'Procrustean bed' that such *a priori* judgements can create ('Brahms Research and Aesthetic Ideology', 101).

the entire movement'.¹⁴³ Like the other statements, this is preceded by a displaced hemiola – one of the most undisguised. For the first time, both elements of the dissonance – the displacement and the hemiola – are resolved at exactly the point of thematic return. The three instruments move into unison, both in rhythm and harmony, creating a sense of conclusion through resolution.

¹⁴³ Joseph Kerman, 'Notes on Beethoven's Codas' in *Beethoven Studies, Vol 3*, (ed. Alan Tyson), (Cambridge: Cambridge University Press, 1982), 159.

The image shows a musical score for Violin, Violoncello, and Piano, covering bars 351 to 364. The score is annotated with hypermetre labels (S, W) and callouts for specific musical features.

Violin (Violoncello): The top two staves show the Violin and Violoncello parts. The Violin part starts at bar 351 with a measure number above it. The Violoncello part starts at bar 355. Both parts are annotated with hypermetre labels (S, W) below the staves.

Piano: The bottom staff shows the Piano part, starting at bar 355. It is annotated with hypermetre labels (S, W) below the staff.

Annotations:

- Hypermetre:** Labels 'S' and 'W' are placed below the staves to indicate hypermetre units.
- Triplet/Duplet Dissonance:** A callout box points to a specific measure in the Piano part.
- Becomes Indirect:** A callout box points to a specific measure in the Piano part.
- Ends with Displaced Hemiola:** A callout box points to the final measure of the Piano part.

Example 2.7: Bars 351–end.

However, the unison – in both senses – also has aspects of incompleteness. Not only is the monodic unison in contrast to the general instrumental and harmonic texture of the movement, but there is also a lack of pulse layer below the level of crotchet (and below the two minims at 363 and 364). Mirka would call this the missing articulation of *Taktglieder* and *Takteile*, while Cohn would say the metre is not fully consonant; both perspectives

highlight a salient feature: that the absence of harmony acts in parallel with the absence of pulse layer pulses. Further, a conflict between duplet quavers and triplet quavers at 358 has not been decisively resolved in favour of either; the ending, which uses neither, leaves that conflict open. Cohn's notion of full consonance does seem to have an expressive justification.

The tension between hypermetric alignments of **y** is also present, but ultimately unresolved. The coda features persistent statements of **y** (eight in all, the last four shown in Example 2.7), all in hypermetrically strong-weak configuration; duple hypermetre is constant for almost the entire coda. Yet right at the end, in the final statement of the theme and thus the final statement of the motive, it returns to its original weak-strong alignment. Thus the tension inherent in this motive, while seemingly banished by a triumphant coda, returns in the last – otherwise consonant – thematic statement. Smith's assertion that 'a decisive recontextualization typically resolves the double meaning [of ambiguous ideas] as part of the work's close' does not happen in this case.¹⁴⁴

Conclusion

All main theme returns are preceded by a displaced hemiola (although not all instances of the latter precede the former), which becomes a motivic metrical dissonance. It articulates these formal boundaries in contrasting ways: in two cases the dissonance partially resolves at the point of thematic return; before the recapitulation, it resolves farther in advance, blurring the recapitulatory boundary; before the conclusion, it fully resolves yet does not leave full consonance.

¹⁴⁴ Smith, 'You Reap What You Sow', 59.

Returning to the two quotes which shaped this analysis, the movement shows an example of Smith's theory – Brahms confirming the multivalence of ambiguous ideas – here through metrically dissonant reframings of the main theme. As for Petty's two problems, quite separately from in the harmonic dimension, Brahms deals with both in the metric dimension. The first issue – to begin with a relatively square and tonally closed theme – he turns on its head, beginning with a vague and open theme in both tonal and metric dimensions, and ultimately concluding with the 'square' version.

The second problem is also addressed. The metric reinterpretations of the main theme go through a directed process, an example of what Kerman calls 'the story of a theme'.¹⁴⁵ A destabilised beginning, vague as a result of complexity, holds the potentials for dissonance, tension and ambiguity at both metrical and hypermetrical levels; through repeated reinterpretation these serve as a point of development for the main theme in its tonic returns. The central three statements are dissonant, with the middle one exploring the most remotely dissonant states; the fourth, while nearest to consonance, employs linkage technique and dimensional non-congruence at metric and hypermetric levels. Eventually, 'initially destabilized thematic material subsequently returns in stabilized form'¹⁴⁶ in the final statement. This is metrically consonant, and returning to consonance at the point of final thematic reprise creates a marked feeling of resolution. But hypermetric tensions which became explicit in the latter stages of the piece remain ultimately unresolved by the coda, and the ending's lack of full consonance along with the lingering hypermetric tension in the **y** motive give it a status of non-maximal resolution. Full resolution is now left to the following movements, and this is how Brahms 'calls them forth,' providing, at least in the

¹⁴⁵ Kerman, 'Notes on Beethoven's Codas', 150.

¹⁴⁶ McClelland, *Brahms and the Scherzo*, 9.

metrical dimension of the primary theme, part of his solution in this case to Petty's second problem.

CHAPTER 3

II. ANDANTE CON MOTO

Brahms's love of variation in all forms is well known, but a theme and variations movement offers an unusual scenario with regard to rhythmic-metric features. In this movement they perform both varying and unifying functions. In particular, the metrically dissonant endings of the theme and each variation create a striking link with the Op. 88 String Quintet. Elements of the *style hongrois* play a prominent role in the creation of metrical dissonance.

The movement is set out as a theme and five variations. It presents a double theme; variations alternate in their thematic focus.¹⁴⁷ Each is 27 bars long except for the final variation which has a small elided coda extending it to 34 bars. A conflict between piano and strings is again perceptible in this movement, reinforced at the beginning by a metrical conflict: D♩+1.

Rhythm and metre in a variation-form movement

Since well before Brahms's time, movements in variation form tend to explore different metric states much more than other movement types. The opportunity for rhythmic-metric variety is unusually pronounced in Brahms's works, as his 'bass-line-orientated approach gave scope for widespread stylistic variety, arguably far more than the prevailing nineteenth-century 'character variations' which were beholden to restricting surface characteristics of their themes'.¹⁴⁸ The succession of these states might form a coherent

¹⁴⁷ Karl Geiringer, *Brahms: His Life and Work* (London: Unwin, 1968), 237. Also noted by Malcolm Macdonald (*The Master Musicians: Brahms* (London: Dent, 1990), 283) and Julian Littlewood (*The Variations of Johannes Brahms* (Series: Poetics of Music, ed. Christopher Wintle) (London: Plumbago Books, 2004), 175).

¹⁴⁸ Littlewood, *The Variations of Johannes Brahms*, 10. See also Elaine Sisman, 'Brahms and the Variation Canon', *19th-Century Music*, 14/2 (Autumn, 1990), 132–153, particularly a quote by Brahms on 133.

narrative, or even a goal-oriented process; whether such a goal would be pure consonance, or whether there is a tonic metre in the movement, are interesting possibilities.

The style hongrois – a metrically dissonant dialect

This movement, like the others, features many of the rhythmic gestures of the *style hongrois* as listed by Jonathan Bellman.¹⁴⁹ All are either naturally metrically dissonant or hold dissonant potential.

The lombard is the most recurrent of these gestures, appearing in one of the three forms shown in Example 3.1 in every variation except the last.¹⁵⁰ Its most common form is as 3.1a, appearing so in the theme and second and third variations. In the first variation it appears in augmented form (3.1b); Littlewood claims that by ‘neutering’ this ‘Gypsy’ figure in this way the variation ‘satisfies both the teleological and the periodic demands of variation form: the snap returns, yet now tame and gentle’.¹⁵¹ In any of these forms it naturally creates a $Dx+1$ dissonance through agogic accents; this is often intensified by dynamic accents and is the motivic metrical dissonance of this movement. Its appearance as Example 3.1c in the fourth variation is more complex; this variation is considered in isolation below.



Example 3.1: The different guises of the lombard figure in the movement.

¹⁴⁹ Jonathan Bellman, ‘Toward a Lexicon for the *Style Hongrois*’, *The Journal of Musicology*, 9/2 (Spring 1991), 214–237; *The Style Hongrois in the music of Western Europe* (Boston: Northeastern University Press, 1993).

¹⁵⁰ Bellman, *The Style Hongrois in the Music of Western Europe*, 62.

¹⁵¹ Littlewood, *The Variations of Johannes Brahms*, 178.

The spondee (Example 3.2) occurs in the theme and the third and fourth variations.¹⁵² It is not naturally metrically dissonant but rather neutral in its equal agogic weighting. It thus harbours the potential for displacement dissonance if the second of the pair is given extra phenomenal weight. It is also itself displaced in the piano part of the theme.

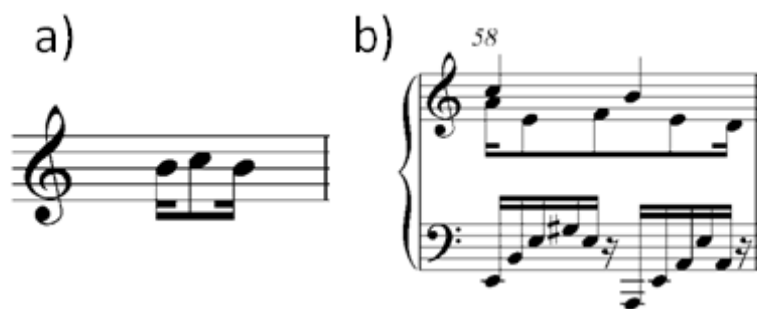
Example 3.2: Bars 1–4, showing use of the spondee.

The most direct manifestation of the alla zoppa rhythm (Example 3.3) is in the second variation.¹⁵³ From the perspective of metrical dissonance, it can be seen as a relative of the lombard, both creating $Dx+1$ dissonances through agogic accents. This $D4+1$ is ‘tightened’ into a $D2+1$ dissonance when chains of syncopations occur framed by semiquavers, as in Example 3.3b.¹⁵⁴

¹⁵² Bellman, *The Style Hongrois in the Music of Western Europe*, 112.

¹⁵³ *Ibid.*, 114–5.

¹⁵⁴ Krebs, *Fantasy Pieces*, 255: ‘Tightening: progression from a loose displacement dissonance to a tighter relative; accomplished by division of the cardinality by an integral factor, with preservation of the displacement index.’



Example 3.3: Use of *alla zoppa*, in a) simple form and b) linked into a chain of syncopations in bar 58.

Finally, Example 3.4 shows the most sparingly used *style hongrois* feature: the anapaest (short-short-long), occurring only in the first variation.¹⁵⁵ Yet again this is naturally dissonant, creating a D4+2 dissonance through the agogic accent on the ‘long’.



Example 3.4: An anapaest figure, bar 31.

The last bar: metrically dissonant linkage

The specific metrical dissonance (D₂+1) of the last bar of the theme and each variation acts as a global metrical link (in the fourth variation it is D₃+1). This dissonance is ultimately resolved, as shown in Example 3.5f.

¹⁵⁵ Bellman, *The Style Hongrois in the Music of Western Europe*, 114.

The image displays six musical excerpts, labeled a) through f), each showing the final two bars of a theme and its variations. Each excerpt is arranged in a three-staff format: Violin (Vln.), Viola (Vc.), and Piano (Pno.).

- a)** Measures 26-27. Dynamics: *p*.
- b)** Measures 53-54. Dynamics: *p*.
- c)** Measures 80-81. Dynamics: *p*.
- d)** Measures 107-108. Dynamics: *p*.
- e)** Measures 134-135. Dynamics: *dim. e rit.* and *pp*.
- f)** Measures 169-170. Dynamics: *pp*.

Example 3.5: The last two bars of the theme and each variation.

This occurrence is not unique in high-maturity Brahms. In the Op. 86 songs, the first five all have displaced endings and the sixth resolves the displacement. A more complex pattern obtains in the Op. 95 songs, and metrically common endings occur in all movements of Op. 108. Of Brahms's variation movements in multi-movement sets, few exhibit such tendencies, partly because their variation form is often less clearly delineated. The exceptions are the second movement of the Clarinet Quintet, Op. 115, and the final movement of the second Clarinet Sonata, Op. 120/2, comparable for a consistent appoggiatura-resolution on the second beat of each final bar (and even later in the Sonata), sometimes with other added rhythmic features. Like Op. 87, both of these end with at least two downbeat-accented bars of tonic harmony; metrical dissonance has been resolved.

Another interesting comparison can be drawn with the central movement of the first String Quintet, Op. 88. A five-part 'rondo-like' fusion of the slow and scherzo-type

movements,¹⁵⁶ it has occasionally even been considered a set of double variations, marking a formal similarity with Op. 87;¹⁵⁷ a motivic similarity is also present.¹⁵⁸ Example 3.6 shows a comparable use of metrical dissonance at the close of each constituent section; although this varies more due to the changes in time signatures, it can be construed as $D\downarrow 2+1$, $D\downarrow .2+1$, $D\downarrow 2+1$ and $D\downarrow 2+1$ respectively, with the first and middle section endings arising from a hemiola.

¹⁵⁶ Geiringer, *Brahms*, 238.

¹⁵⁷ Sisman and Littlewood do not consider Op. 88 in their surveys of Brahms's variation movements. In a less academic sphere they have been mentioned as such, however; see for instance Joanna Wyld, sleeve notes for Nash Ensemble, *Brahms String Quintets* (Onyx, ONYX4043, 2009)

(<http://www.onyxclassics.com/sleevenotes.php?ID=97>, accessed 17/08/2012).

¹⁵⁸ Compare Op. 88.II.32–33 with Op. 87.II.1–4.

a) Musical notation for section a) in bass clef, 3/4 time, key of D major. It shows the last three bars of a section starting at measure 29. The first bar has a *dim.* marking. The melody consists of quarter notes and rests.

b) Musical notation for section b) in treble clef, 6/8 time, key of D major. It shows the last three bars of a section starting at measure 77. The melody features eighth notes and rests.

c) Musical notation for section c) in bass clef, 3/4 time, key of D major. It shows the last three bars of a section starting at measure 114. The first bar has a *dim.* marking. The melody consists of quarter notes and rests.

d) Musical notation for section d) in treble clef, 4/4 time, key of D major. It shows the last three bars of a section starting at measure 161. The first bar has a *pp dim.* marking. The melody consists of quarter notes and rests.

e) Musical notation for section e) in treble clef, 3/4 time, key of D major. It shows the last three bars of a section starting at measure 206. The melody consists of quarter notes and rests.

Example 3.6: The last three bars of each section of Op. 88, II.

The last seven bars

Widening the focus, the last seven bars of the theme and each variation often feature a change in figuration. This serves to metrically smooth the junctures between variations by introducing a subtle precursor of the metrical state (whether consonant or dissonant) which is to characterise the next.

In the theme, the introduction of semiquavers in these last seven bars does just this by prefiguring the semiquaver movement of the first variation (Example 3.7). Within the theme they also act as a feature of fragmentation, heralding the end of the phrase and section. This semiquaver movement is thus functioning both inside and outside the theme.

The image shows a musical score for three instruments: Violin (Vln.), Viola (Vc.), and Piano (Pno.). The score is in 2/4 time. The first part, labeled 'Andante con moto' and 'f', consists of bars 1-2, 21-22, and 28-29. The second part, labeled 'Variation I' and 'p', consists of bars 28-29. The score shows the transition from the theme to Variation I, with the last seven bars of the theme and the first seven bars of Variation I highlighted. The piano part features a prominent semiquaver movement in the last seven bars of the theme and the first seven bars of Variation I.

Example 3.7: Bars 1–2, 21–22 and 28–29.

At the end of the first variation the last seven bars form a bridge to the second variation (Example 3.8) by temporarily eliminating the triplet/duplet semiquaver grouping dissonance but elevating the second semiquaver of each crotchet beat to a higher prominence, preparing for the D_{M+1} dissonance featured in the second variation.

Variation II

48 55

Vln.

Vc.

Pno.

f

dolce

6 6 6 6

Example 3.8: Bars 48–49 and 55–56.

The last seven bars of the second variation reassert quaver movement, which was subdued for most of the variation by the $\text{♩} \text{♩} \text{♩}$ pattern and fluid sextuplet semiquavers (Example 3.9). Otherwise, and excepting the abandonment of triplet semiquavers in the two bars, the last seven bars in this case do not bring a change of dissonance to herald the next; the triplet/duplet grouping dissonance and D_{4+1} from the alla zoppa rhythm continue until the last two bars. The more abrupt change of metrical state at the beginning of the third variation thus complements a change of dynamic, modality, instrumentation and articulation all marking the halfway point of the movement.

Variation III

75 80

Vln.

Vc.

Pno.

f

f

3 3 3 3

Example 3.9: Bars 75–76 and 80–83.

Until the last seven bars, the lombard dissonance (D_{4+1}) is the only metrical dissonance in the third variation. In these seven bars the motivic D_{2+1} dissonance

resurfaces (Example 3.10). This quaver pulse slows down the semiquaver pulse that was established earlier in the variation and prepares for the modulation to compound metre. The general articulation, which changes from staccato to legato, also helps smooth the transition between these two variations.

Example 3.10: Bars 102–108.

The fourth variation (whose metrically dissonant state is considered below) is pervaded by ties, causing a limping feel. The strong hemiolic suggestion of these ties is finally followed through, firstly in 131 and then in 134 (Example 3.11), presenting $G\frac{13}{8}$, a diminution of which ($G\frac{13}{2}$) characterises the last variation.

Example 3.11: Bars 129–135.

Progression through a Cohnian Type II Metric Space

The consonant states of this movement, and their dissonant juxtapositions and superpositions, lend themselves well to being viewed using the second type of Richard Cohn's metric spaces.¹⁵⁹

The smallest micropulses in the movement are triplet and duplet semiquavers. These can be related by viewing them as groupings of triplet demisemiquavers ($\text{♪} = 3\text{♪}$, $\text{♪♪♪} = \text{♪}$); while this micropulse is never explicitly stated, its durations are resultant in direct conflicts of the two smallest explicit pulses (in the first and second variations and coda) and its invocation facilitates relation of the main metric states. Due to its implicit nature, its groupings (forming the lowest explicit pulses) are bracketed in Figure 3.1a, which shows the possible metrical states in a 4-level complex with one triple factor. Figure 3.2 then shows the progression through these states across the movement.

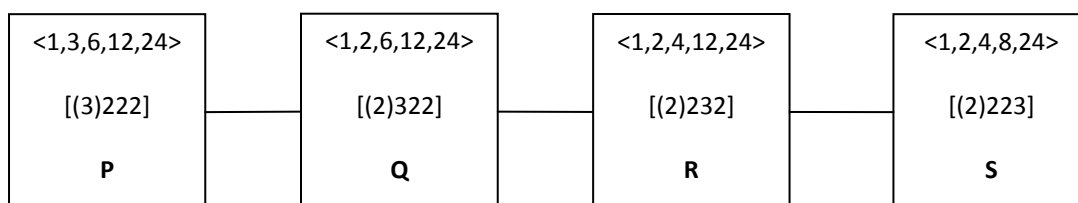


Figure 3.1a Possible states in a 4-level metric space with one triple factor in numeric form.

¹⁵⁹ Developed in Cohn, 'Complex Hemiolas'. Cohn himself does not classify his two metric spaces as Type I and Type II – Murphy compares them, names them as such and provides the subsequent development of his own metric hypercubes in 'Metric Cubes'.

The image shows a musical score for three staves in 2/4 time, divided into four sections labeled P, Q, R, and S. The top staff contains quarter notes. The middle staff contains eighth notes, with triplets in sections Q, R, and S. The bottom staff contains sixteenth notes, with triplets in sections Q, R, and S. Section P shows simple quarter notes in the top staff and eighth notes in the middle and bottom staves. Section Q introduces triplets in the middle and bottom staves. Section R features triplets in all three staves. Section S uses triplets in all staves, with the top staff having a triplet of quarter notes and the other two staves having triplets of eighth notes.

Figure 3.1b: Possible states as contrived bars.

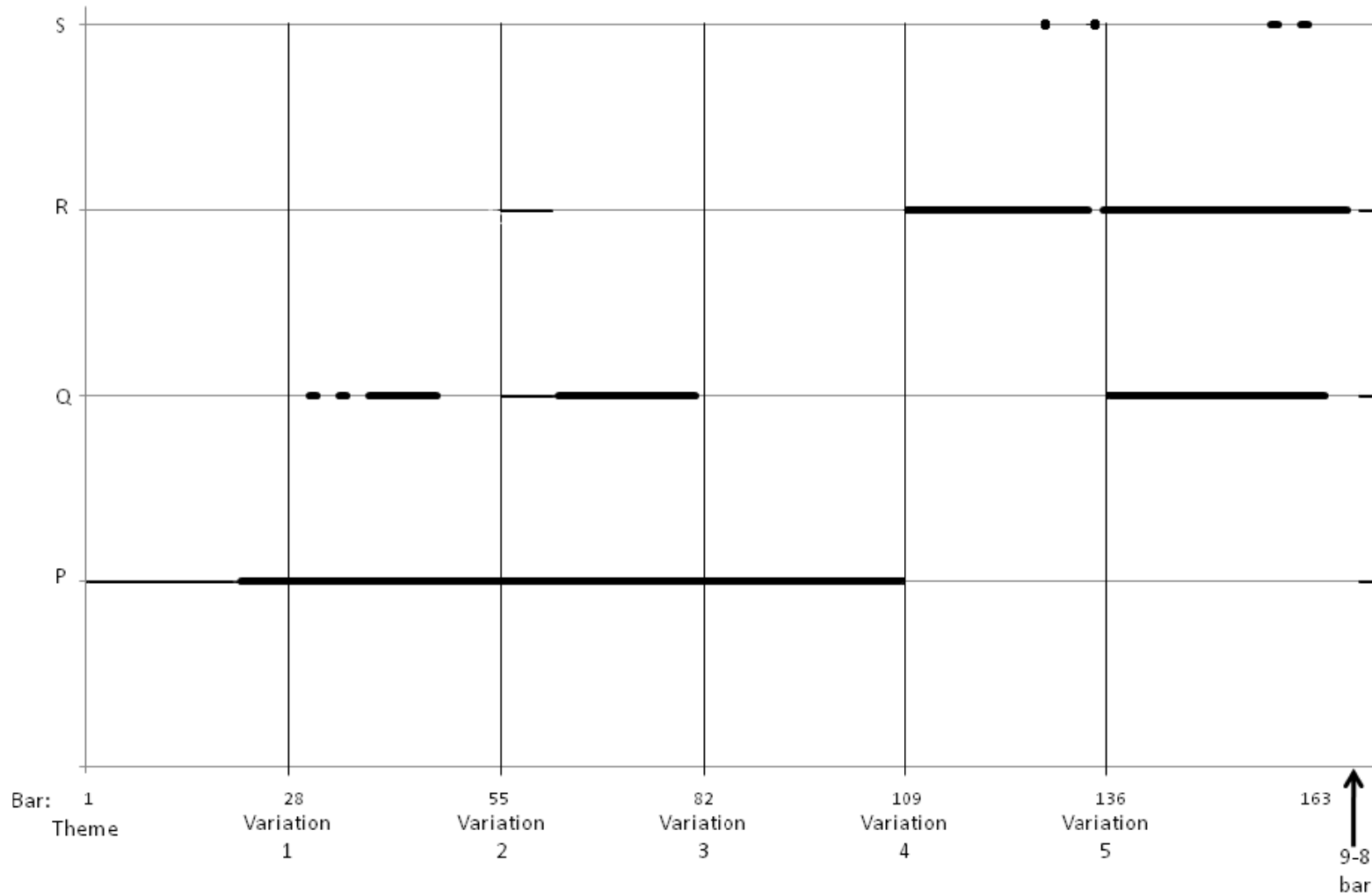


Figure 3.2: Progression through metric states in the second movement. Points where two full lines appear in parallel represent dissonant states. Points where two thin lines appear in parallel represent incomplete consonances which may support more than one state.

Globally there is a movement from **P** at the beginning to **R** at the end. **S**, the most distant state from the initial **P**, is the least used, never appearing as a local consonance but only in hemiolas at the end of the fourth and fifth variation.

Each state is only reached 'stepwise' through adjacent states. The only exception to this is the jump from consonant **P** in the third variation to **R** in the fourth. Since, as discussed above, the beginning of this variation is marked by significant changes in several dimensions, this central variation thus stands as an island, separated from its neighbours on both sides. **Q** and **R** occur in synthesis for most of the final variation, ruffled by **S** twice at the hemiolas across bars 157–8 and 161–2, and finally by the anomalous 9/8 bar, 168 – the only point in the movement which is not in one of the four states. This could be viewed either as a written-out ritardando or as a final metrical perturbation further denying the tonic status of any state.

While, as noted above, the final two bars (in fact the final variation) resolve the displacement dissonance which permeates the movement, they do not resolve the vagueness of tonic metre, since they equally support **P**, **Q** or **R**.

The movement through these states, and the difference between end-states, denies any of them the status of tonic metre. One final ramification of this perspective is that the movement has an unconfirmed metrical state at the beginning, since fluid semiquaver movement only arrives in the final seven bars of the theme. It thus lacks full consonance, linking it to the end of the first movement. Equally, if **R** is taken as the primary metrical state

of the coda, this is equal to the 6/8 time signature which begins the third movement: the second movement functions as a metrical bridge between its neighbours.¹⁶⁰

The fourth variation

The inevitable breakthrough into a major-mode variation coincides with a metrical process: a change into 6/8. The metrical complexity of this variation is sufficient to be considered in isolation, and is due in large part to the interaction between rhythm and harmony. The intensive use of suspensions and appoggiaturas is similar to that noted by Edward Cone in the second song of the contemporaneous Op. 86: 'this type of polyphony, in which passing-tones or neighbours are sounded against their preparations or resolutions (or both), produces another typically Brahmsian texture that encourages the tendency toward harmonic congruence'.¹⁶¹

David Lewin analyses a similar situation in the Intermezzo in E minor, Op. 116 No. 5 using Franconian mensuration theory. Examples 3.12 and 3.13 show similarity between the two; many of Lewin's observations about the Intermezzo are equally pertinent here.¹⁶²

Andante con grazia ed intimissimo sentimento

The image shows a musical score for the first four measures of the Intermezzo in E minor, Op. 116 No. 5. The tempo is 'Andante con grazia ed intimissimo sentimento'. The score is in 6/8 time and E minor. It features a piano (p) and dolce texture. The music consists of a single melodic line in the right hand and a supporting bass line in the left hand. The right hand has a series of eighth notes with various ornaments and suspensions, while the left hand provides a steady accompaniment of eighth notes and chords.

Example 3.12: Op. 116/5, 1–4.

¹⁶⁰ Laurence Wallach considers there to be a harmonic link as well: 'The unstable opening [of the third movement] is so designed that it grows smoothly out of the A minor of the previous movement.' (*The Complete Brahms: A Guide to the Musical Works* (London: Norton, 1999), (ed. Leon Botstein), 110).

¹⁶¹ Edward T. Cone, 'Harmonic Congruence in Brahms', in *Brahms Studies* (ed. Bozarth), 168. Discussing 'Feldeinsamkeit', Op. 86 No. 2. He also discusses 'Sommerabend', Op. 85 No. 1.

¹⁶² David Lewin, 'Brahms, his Past, and Modes of Music Theory' in *Brahms Studies* (ed. Bozarth), 13–27.

Variation IV

109

Vln.

Vc.

Pno.

p dolce

p dolce

p dolcissimo sempre

Example 3.13: Op. 87, II, 109–112.

Across the variation, the strings generally present metrical consonance. The piano conflicts with this: the third quaver of each beat is tied to the first of the next. The agogic accent on the third beats and lack of main beat accentuation thus create a displacement dissonance, yet in which direction is difficult to decide due to harmonic content. As in the Intermezzo, ‘it is difficult to say where the suspensions are prepared and where they resolve, since the suspensions themselves are syncopated in some way which is not immediately clear’.¹⁶³ To achieve what might be termed ‘agogic consonance’ suggests a shunt either one quaver backward or two forward. In addition, the second mode of Franconian theory provides the possibility of a $D\flat+1$ dissonance, suggesting $| \text{♩} \text{♩} \text{♩} |$ as the consonance which is displaced (like the state in a sarabande).

As Example 3.14 shows, during the first three bars a hypothetical shunt to ‘correct’ any of the three possible displacements works harmonically, since the third chord of each triplet acts as a link chord between the two melody notes it bridges.

¹⁶³ Ibid., 20.

109

Vln.

Vc.

Pno.

p dolce

p dolce

piu p

Detailed description: This musical score shows three staves: Violin (Vln.), Violoncello (Vc.), and Piano (Pno.). The key signature has three sharps (F#, C#, G#) and the time signature is 6/8. The Vln. staff begins with a rest and then plays a melodic line starting at measure 4. The Vc. staff plays a bass line starting at measure 1, with a *p dolce* marking at measure 4. The Pno. staff consists of two staves (treble and bass clef) playing chords and arpeggios. The piano part is shifted backward by one quaver (one eighth note) compared to the original score. Dynamics include *p dolce* and *piu p*. A double bar line with repeat dots is present in the Vln. staff at measure 6.

Example 3.14a: Piano part shifted backward one quaver.

109

Vln.

Vc.

Pno.

p dolce

p dolce

piu p

Detailed description: This musical score is identical to Example 3.14a, showing Vln., Vc., and Pno. parts in 6/8 time with three sharps. The piano part is shifted forward by one quaver (one eighth note) compared to the original score. Dynamics include *p dolce* and *piu p*. A double bar line with repeat dots is present in the Vln. staff at measure 6.

Example 3.14b: Piano part shifted forward one quaver.

109

p dolce

p dolce

piu p

Example 3.14c: Piano part shifted forward two quavers.

The first possibility to be discarded is that of Ex. 3.14c: the string parts, which are both logically and rhetorically consonant, deny the aural hypothesis of $D\flat B+2$ dissonance in the fourth bar.¹⁶⁴

The chords in the piano part move in a quadruple pattern where the first and last chords are consonant, the second is composed of passing notes between the two, and the third leaps over the fourth chord creating suspensions which resolve downward onto it. Successive pairs of chords thus present alternations of the tuple forms consonant-dissonant and dissonant-consonant. This defies strict analysis through the lens of Franconian mensuration theory, since whether the music is in first mode (LB) or second mode (BL) each pair should start with a consonant harmony.¹⁶⁵

However, the situation is no easier to analyse through the lens of metrical dissonance. The question then becomes whether the harmonic accents lie on the dissonances or on their resolutions. Unfortunately Krebs does not clarify the problem – harmonic accents are intuitive in his theory. From perception here they appear to lie on the second quaver of each triplet; the suspensions on the fifth quavers register as harmonic changes (and are also contour accents). This reading is strengthened by the locations of the bass note changes, firstly in bars 111–112 and then sporadically throughout the variation. As read this way, the harmonic accents create a $D\flat B+1$ dissonance – different from the $D\flat B-1$ or $D\flat B+2$ suggested by the agogic accents.

The violin entry in the fifth bar also presents a series of suspensions, this time starting on the first triplet quaver and resolving on the third. If the suspended note is taken

¹⁶⁴ See Murphy, 'On Metre in the Rondo of Brahms's Op. 25', *Music Analysis*, 26/3 (2007), 323–353, for discussion of the interaction between logical and rhetorical metres.

¹⁶⁵ Lewin, 'Brahms, his Past, and Modes of Music Theory' in *Brahms Studies* (ed. Bozarth), 24.

as holding the harmonic accent (as above) then the line presents metrical consonance, as indeed it appears to from its rhythms. Yet the resolution on the third quaver of each triplet, along with the piano part, makes these third notes the most played quaver beats in each bar. A kind of density accent (similar to those observed in the ‘event occurrence analysis’ in the next chapter) aligns with and increases the dissonance created by the agogic accents in the piano at the same time as the violin appears to be opposing it. In the Quartet, Op. 67, Frisch notes a similar

optical illusion – here translated into the aural sphere [...] if played alone, the cello part seems to support the notated meter [...] but when played with the upper parts, the cello adapts to their metrically displaced framework [...] This is the kind of variation, at once beautiful and brainy, that only Brahms could write.¹⁶⁶

Furthermore, only the sixth quaver of each bar presents a consonant chord across all parts; harmonic stability is delayed to the final quaver. An even higher level of delayed resolution results from the final harmony of each odd bar resolving to that of each even bar. Despite the ‘limping’ quality of the rhythm, the precise harmonic contents give the music a sense of unrelenting forward motion, a yearning for stability which is maximally delayed. As in Lewin’s case study, ‘the rhythmic displacements and imaginary events of [a hypothetical shunt one way] thus distort the actual music as much as the alternate displacements and imaginary events of [a hypothetical shunt the other way]’.¹⁶⁷

The pattern is significantly perturbed in bars 121 and 122. This is the only place where the piano stresses strong quavers, but this leads to a situation far from consonance. As Example 3.15 shows, these bars present unfulfilled elements of displaced hemiola. Irregular dissonances conflict with each other in these two bars to create a very unstable

¹⁶⁶ Frisch, ‘The Snake Bites Its Tail’, 167.

¹⁶⁷ Lewin, ‘Brahms, his Past, and Modes of Music Theory’ in *Brahms Studies* (ed. Bozarth), 24.

metrical situation. The strings present a rare example of what Willner terms ‘overlapping hemiola’, yet whether this tallies with a listener’s perception is arguable.¹⁶⁸

The image shows a musical score for Example 3.15, covering bars 120 to 123. The score is in G major (one sharp) and 6/8 time. It features a vocal line at the top and a piano accompaniment below. The piano part is divided into two systems. The first system shows the vocal line and the piano accompaniment. The second system shows the piano accompaniment with rhythmic markings above it: '2 2 2/upbeat? 2 2'. The piano part is marked 'pp' (pianissimo).

Example 3.15: Bars 120–123.

Full hemiola is achieved at bar 131, and repeated at 134. In 131 it is lightly contested by a second-quaver accent in the piano part. The final uncompromised hemiola at 134, while dissonant, is the apotheosis of the variation; as noted above, it also represents the most remote metrical point in the movement from the initial state.

This variation explores displacement dissonance with great complexity, while at the same time no dissonant metre is put forward as a single competitor for prominence. The currently-tonicised metre – non-displaced 6/8 – always remains plausible and perceptible as the backdrop for conflict. The ‘dialectic synthesis of musical contradictions’ between

¹⁶⁸ See Willner, ‘More on Handel and the Hemiola: Overlapping Hemiolas’.

Franconian mensuration theory and Romantic tonal practice is just as prevalent here as in Lewin's example, not to be composed for another 10 years.¹⁶⁹

Coda

As explored above, the final bars of each variation change slightly in metric state to prefigure the next. The last variation obviously cannot do this. Instead, new metrical dissonances perform different functions.

At bar 156, where the last seven-bar phrase should start, there is a caesura, the first thus far in the movement. (Such a technique will become an explicit formal marker in the final movement.) It also acts as a signpost to the listener (who does not, of course, know that this is the last variation) that something different is about to happen.

An indirect hemiola starting at the half-bar occurs at bar 157–8 – it might be termed shifted rather than displaced, and it is not cadential but in fact delays any harmonic progression. The previous groupings both articulated a three-quaver grouping; while the new left hand clearly articulates a crotchet grouping, the new right hand has less clarity and can be perceived as a triple quaver grouping (as it is usually stressed by performers). As such, the left hand is in hemiola with the triplet quavers and the right hand with the triplet semiquavers: each hand is in a state of hemiola to its previous figuration but this could also be viewed in each case as an augmentation (Example 3.16).

¹⁶⁹ Lewin, 'Brahms, his Past, and Modes of Music Theory' in *Brahms Studies* (ed. Bozarth), 24.

Caesura

Augmentation from previous, but
also hemiola relation to previous

Example 3.16: Bars 156–159.

This dissonance both fulfils and frustrates expectation. It changes the metric state, as expected in the last phrase, yet by doing so in a form of augmentation it follows a tradition for codas. More unexpectedly, it disrupts hypermetre and begins to disrupt the variation-ending procedure which has become normative in this movement.

After a repetition of the shifted hemiola in bars 161–2, it is followed by a different dissonance in bar 165: the triplet semiquavers in the cello (then violin) form a $G1.5/1$ dissonance with the piano part. In addition, a density and contour accent on the last semiquaver of each beat in the right hand in bars 165 and 166 creates D_{16-1} . One might fancifully consider these density accents as a preparation of a similar dissonance at the beginning of the trio section of the third movement (Example 3.17).

The image displays two musical excerpts. The left excerpt, labeled '165', shows a piano part with a triplet of eighth notes and a violin part. The piano part has a 'cresc.' marking. The right excerpt, labeled '67', shows violin, viola, and piano parts. The piano part has a 'cresc.' marking. Circles highlight specific dissonances in the piano part of both excerpts.

Example 3.17: Second movement, bar 165; third movement, bars 67–68.

After the caesura, the coda features three distinct metric perturbations: the shifted hemiolas at bars 157–8 and 161–2, the low-level grouping and displacement dissonances in 165–168, and finally the change to 9/8, noted earlier, in the antepenultimate bar. Whereas in the other movements the codas resolve dissonances introduced in the body of the movement, this closing section introduces new dissonances. While it ends in a state of consonance, these late disturbances to an already unstable metrical situation limit the movement's sense of ultimate closure.

Conclusion

The specific metrical dissonance of the very last bar of each variation serves as a global motivic link. The changes of figuration in the last seven bars of the theme and variations serve a contradictory double purpose of intra- and inter-thematic functions, both heralding the end of the section through fragmentation and also prefiguring the next variation through allusion; they smooth the potentially blunt boundary between variations. The third variation stands as an island in the middle of the movement; the approach to it is not

signalled by a change in metrical dissonance, and the departure from it features the only leap of more than one metrical state, from **P** to **R**.

In the last variation, the potential logical impossibility of merging states is replaced by a coda including both the intensity peak, and the resolution, of metrical dissonance. Several new and distinct dissonances are introduced in the coda, and despite their resolution the sense of closure is subsequently limited.

The large scale progression of metrical states integrates the movement, since the states are related in an exhaustive collection, at the same time as denying any particular state tonic status. The initial state and lack of full consonance links with the end of the first movement; the end-state and eleventh-hour perturbation again prohibits closure and leads by similarity into the third movement.

Rhythmic and metric features in this movement thus serve not merely as a source of variety but also as linking agents, both within and without the movement. Particularly in the coda, it is metrical dissonance in the absence of harmonic variety which is the driving force towards both climax and (albeit partial) closure. In such a unifying capacity it contests the moniker 'conflict', although elements of a conflict between strings and piano articulate themselves through metrically dissonant means.

CHAPTER 4

III. SCHERZO. PRESTO; POCO MENO PRESTO

Minuet- and scherzo-type movements are usually the most metrically dissonant of multi-movement works. This is partly due to their normatively being in triple metre and thus, usually with mixed metric complexes, hosting dissonant potential. Their root in dance movements and the scherzo joke etymology also encourage metrical dissonance to characterise tricks being played on dancers.¹⁷⁰

This scherzo, unlike the norm and especially in comparison to the rest of Op. 87, is remarkably metrically consonant. But consonance does not equal stability, and instead the scherzo involves situations of neutrality and ambiguity – an unexplored and unresolved ambiguity in contrast to that in the first movement. In terms of mode and general skittish character it rejects Classical-period scherzo norms, and perhaps it is more than coincidence that Brahms was using the designation explicitly for the final time. McClelland believes the movement is generally typical of Brahms in that ‘the initial tonic harmony is destabilized through tonal and rhythmic-metric means’,¹⁷¹ and specifically typical of high-maturity Brahms in its size – smaller in scale than earlier Brahms scherzi – and that ‘despite continuous thematic development, the later movements [scherzi including that of Op.87] do not resolve their conflicts as fully and do not achieve the same degree of closure observed in the earlier movements’.¹⁷² In contrast to the scherzo, the trio section contains considerable surface-level metrical dissonance which hides background regularity.

¹⁷⁰ Mirka, *Metric Manipulations*, 146.

¹⁷¹ McClelland, *Brahms and the Scherzo*, 201.

¹⁷² *Ibid.*, 195.

Formally the scherzo is in dialogue with rounded binary form; the trio clarifies itself as such more readily.¹⁷³ The scherzo return after the trio is identical except for an added closing section which visits the subdominant minor region.¹⁷⁴ Of the four, this movement displays least conflict between piano and strings. There is a similarity in style to Mendelssohn's 'fairy' scherzi, which is an unusual scherzo style for Brahms.¹⁷⁵

Scherzo

The movement begins in a state of uneasy metrical consonance, with debatable ambiguity as to the strong beat. The first beats, assuming the sustaining pedal is employed, contain density accents, but the fast upward movement and lack of melody suggest upbeats to the second notated beats, where there are textural, agogic and contour accents.¹⁷⁶ The harmony, leading from stable to unstable inversions in each bar, reinforces the notated downbeats at first. Interestingly, the later appearance of the repeated note figure (bar 27 in the cello part) begins on the second beat and thus places the agogic accents on notated downbeats.

Harmonic rhythm constantly varies (Example 4.1). There is one harmony per bar in bars 1–2, then every beat in 3–4 and 6–7, but the second beat harmony of bar 7 is then held through bar 8 creating a kind of agogic accent. McClelland points out that 'the first harmony that has a stable rhythmic-metric setting is the V^7/III in [bar] 5 – a harmony that points away

¹⁷³ While McClelland considers the formal design 'unremarkable ... both scherzo and trio are rounded binary forms with exact repetitions of their first reprises' (*Brahms and the Scherzo*, 196), Robert Pascall talks of 'the formal originalities of the third movement of the C major piano trio' (Robert Pascall, 'Ruminations on Brahms's Chamber Music', *The Musical Times*, 116/1590 (August 1975), 697–699).

¹⁷⁴ McClelland, *Brahms and the Scherzo*, 201.

¹⁷⁵ Michael Musgrave, *The Music of Brahms* (London: Routledge, 1985), 200. Regarding Mendelssohn's fairy style, see Francesca Brittan, 'On Microscopic Hearing: Fairy Magic, Natural Science, and the Scherzo Fantastique', *Journal of the American Musicological Society*, 64/3 (Fall 2011), 527–600.

¹⁷⁶ These are not true agogic accents, but those where the listener hears the last event before a silence as accented. See Mirka, *Metric Manipulations*, 42–46.

from C minor'.¹⁷⁷ The stability of chord inversions also varies considerably. Harmony is unusually reticent here in clarifying key, metre and hypermetre.



Example 4.1: Rhythmic reduction of harmonies (3:1), bars 1–16.

In bars 6–8 a light D_{\flat}^{b+1} dissonance is created by contour accents in the piano left hand. These three bars divide into two equal groups harmonically and in motivic material; a hint of 9/8 or reverse hemiola (two 9/8 bars in conflict with three 6/8 bars); a similar phenomenon is to become motivic in the fourth movement. There is a phrase ambiguity in the following bars, as it is not clear whether bars 9–10 and 13–14 belong to the material that precedes or succeeds them. This does not significantly disturb the metrical consonance – which continues apart from the slight ruffling caused by the D_{\flat}^{b+1} dissonances – but both of these features are to be expressed more strongly later.

The material from bars 9–10 and 13–14 returns in expanded form after the middle section (Example 4.2). Bars 33–38 are neutral with regard to the placing of the downbeat; these are ‘six uncomfortably static measures’.¹⁷⁸ Violin and cello alternate, as do piano left and right hands, but such that contour accents are always balanced (violin with left hand, cello with right) – again the conflict between forces in the other movements is absent – and ‘although the juxtaposition of fast repeated notes and lengthy silences at the scherzo’s outset is disconcerting, a minimally differentiated flow of sixteenth notes is scarcely more reassuring’.¹⁷⁹ This metric neutrality, or ambiguity, corresponds to a harmonic stasis and

¹⁷⁷ McClelland, *Brahms and the Scherzo*, 196.

¹⁷⁸ *Ibid.*, 198.

¹⁷⁹ *Ibid.*

lack of melodic-motivic material, but also to a larger formal ambiguity: whether bar 32 has commenced the A' section. The listener does not know whether the rounding is being delayed, or altered and expanded: the same material that caused ambiguity in its appearance at bars 9–10 and 13–14 is now doing so on a larger scale.

Metrical neutrality

Hypermetrical reverse hemiola?

Triple grouping suggested Unequivocal grouping dissonance

Example 4.2: Bars 33–44.

Starting at bar 39, the grouping dissonance from bars 6–8 also returns on a larger scale. Bars 39–44 are hypermetrically irregular since 39–41 and 42–44 form three-bar groups. If bars 6–8 are considered as reverse hemiola this could even be considered a hypermetrical reverse hemiola. This is tied to a harmonic shift; an irregular sequence of half-diminished sevenths ($ii^{\flat 7}$ at 39–40, $\#iv^{\flat 7}$ at 42–43, $\flat vii^{\flat 7}$ at 45). During this passage a $G\flat/B$ dissonance arises between the piano left and right hands, first in bar 41 and then in bar 44; the pitch-content of bars 39–40 and 42–43 also hints at 3-grouping to a lesser extent.

Closing section

The continuation passage with $D\flat_6+1$ returns in bar 47. It leads to a cadential progression at bar 51 which is accompanied by a displaced hemiola. Unlike displaced hemiolas in previous movements, this time the displaced layer is in a $D\flat_2-1$ dissonance to the normative layer (rather than $D\flat_2+1$). The piano left hand therefore *anticipates* the upcoming downbeat harmony, including the resolution to C major over the bar line. This strong VI-ii⁶-V-i cadence is a moment of unusual (for the movement) tonal clarity, but it is combined with a jarring metrical dissonance. This is an unusually good example of a contraction hemiola, both in terms of the previous harmonic rhythm and the hypermetre (it is a one-bar hypermeasure). Perhaps the strongest metrical dissonance in the scherzo, it comes at the point of tonal resolution but also functions as hypermetric resolution – from then on duple hypermetre is constant.

In conclusion, metrical dissonance may be at an unusually low level in the scherzo but it still participates in formal articulation. The movement opens with a weak level of dissonance which ebbs back and forth slightly before resolving briefly at the end of the first section (bars 17–31). The boundary between the middle section and the rounding is marked by metric neutrality. In the rounding, features from the first section (the subtle semiquaver 3-layers from bar 11, displacement dissonances on the third quaver which suggest a hemiola, and the placement of the repeated-note motive) are repeated, strengthened and come to a climax in the displaced hemiola at bar 51. This climax coincides with tonal resolution, after which metric, hypermetric and tonal destabilisations are minimal. These metrical dissonances, while used strategically, do not have the same kind of motivic or developmental identity as those in the previous movements.

Trio

In form this is a much clearer rounded binary than the scherzo and follows tonal norms; these background features are matched by a contrast in mood: ‘out of these cold surroundings soars the Trio, a radiant arch of melody in the warmest possible C major – an intoxicating tune even for Brahms, among his most full-hearted love-music’.¹⁸⁰ The first and middle sections are each sixteen bars long, as is the second reprise and closing section together (the A’ section eliminates the four-bar repetition of the theme and the closing section is four bars long). Thus the trio as a whole is three equal 16-bar sections – or, when the first section repeat is considered, a total of sixty-four bars: 2⁶. This exactitude in proportional relationship exemplifies the perspectival conflict of bipartite versus tripartite fundamental to ternary and sonata-type forms, and contrasts markedly with the formal equivocation of the scherzo.¹⁸¹

The trio starts from a stable metrical and tonal rooting; a \downarrow [3 2 2] consonance in C major. A complete absence of semiquavers is notable in contrast with the scherzo, yet the quaver pulse layer is consistent and persistent, in common with the semiquaver pulse in the scherzo. As the first eight bars progress, however, the metrical consonance is disturbed by a \downarrow 6-1 dissonance which is introduced on the last quaver of each bar in the piano part, rising in intensity with each iteration through increasing density and contour accents (higher pitches), yet not acting as a truly competing metrical layer since the tonic pedal is still so strongly articulated on every first beat with contour, textural and harmonic accents. At bar 69 the dissonance morphs into a displaced hemiola, along with the first appearance of any

¹⁸⁰ MacDonald, *The Master Musicians: Brahms*, 284.

¹⁸¹ See William Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven* (Oxford: Oxford University Press, 1998), 71–73 for discussion of this.

accidentals – a superposition of metrical and harmonic change (Example 4.3).¹⁸² The displaced hemiola is a direct dissonance with the left hand, which continues articulating 6/8.

62 *Poco meno presto*

Violin *mp espress.* *cresc. sempre*

Violoncello *mp cresc. sempre*

Piano *mp* *ben legato* *cresc. sempre*

Antimetrical attacks increase in density and pitch

67

Vln. *f*

Vc. *f*

Pno. *f*

Displaced Hemiola Partial resolution to hemiola

Example 4.3: Bars 62–71.

This is a good example of how metrical dissonance can be submerged in a performance. The systematic increase in density and contour accents on the last beat in the bar can be, and indeed usually are, played increasingly quietly to the point where they may

¹⁸² See Op. 97, No. 6, for an inverted use of the same device. The effect is subtler, but the deployment is less deniable, due partly to slurs.

not interrupt the regular metrical flow at all, yet their phenomenal insistence seems undeniable. This is also another example of Brahms's musical prose being fuelled by metrical dissonance, as in the first movement: when duple regularity threatens to become predictable, metrical dissonance propels the music to the next section; the displaced hemiola and the tied note at the top of the violin melody both bridge the eight-bar boundary, almost like a roller coaster car hanging at the peak of a hill, and as the harmonic and melodic tension relaxes in bar 71, the displaced hemiola partly resolves, to hemiola.

Bars 86-93

A complex example of metrical dissonance – the peak of such processes in the trio – occurs in bars 86–93. Second and fifth-beat quavers are absent for seven consecutive bars, resulting in a constant $\text{♩} \text{♩} \text{♩}$ rhythm. The gradual erosion of strong-beat accentuation and increase in weak-beat accentuation creates displacement dissonance, but one that is hard to analyse since different aspects contribute to $D_{\text{B}+2}$ and $D_{\text{B}-1}$.

Figure 5.1 is an event occurrence analysis of these five bars, showing simply which quaver pulses are marked by events in each line. The density of events on pulses 3 and 6 is obvious, as is the paucity on pulses 1 and 4. Also notable, however, is that after the absence of 6 in bar 86, none of these four pulses goes entirely unmarked.

	86			87			88			89			90			91			92			93												
Vln					3		6	1	3		6			3	4	6		3		6		3		6		3		6		2	3	4	5	6
Vc					3		6	1	3		6			3	4	6		3		6		3		6		3		6		2	3	4	5	6
RH	1		4		1		3		6		3	4	6	1	3		6	1	3		6	1	3	4	6	1	3	4		6		6		
LH	1	3	4				3	4		1	3		6	1		4	6		3	4	6		3	4	6		3					6		

Figure 4.1: Event occurrence analysis, bars 86–93.

Figure 4.1: Event occurrence analysis, bars 86–93.

The figure displays a musical score for three instruments: Violin (Vln.), Viola (Vc.), and Piano (Pno.), covering bars 86 to 93. The score is annotated with motives (m) and sub-motives (m').

Motives in the top staff (melody):

- m_1 (bars 86-87)
- m_2 (bars 87-88)
- m_3 (bars 88-89)
- m_4 (bars 89-90)
- m_5 (bars 90-91)
- m_6 (bars 91-93)

Motives in the Vln. and Vc. parts:

- m_3 (bars 87-88)
- m_3 (bars 88-89)
- m_5 (bars 89-90)
- m_5 (bars 90-91)
- m_5 (bars 91-92)
- m_5 (bars 92-93)

Motives in the Pno. part:

- m_2 (bars 86-87)
- m_3 (bars 87-88)
- m_4 (bars 88-89)
- m_4 (bars 89-90)
- m_4 (bars 90-91)
- m_6 (bars 91-92)
- m_6 (bars 92-93)
- m_6 (bars 93)

Sub-motives in the Pno. part:

- m_2' (bars 86-87)
- m_3' (bars 87-88)
- m_4 (bars 88-89)
- m_4 (bars 89-90)
- m_5 (bars 90-91)
- m_5 (bars 91-92)
- m_5 (bars 92-93)
- m_5 (bars 93)

Annotations:

- "Displaced reverse hemiola?" is written above the Vln. and Vc. parts in bars 89-91.

Example 4.4: Motivic analysis of bars 86–93.

The image displays a musical score for Example 4.5, covering bars 86-93. The score is arranged in three systems, each with a different instrument: Violin (Vln.), Viola (Vc.), and Piano (Pno.). The key signature is B-flat major (two flats), and the time signature is 6/8. The piano part begins with a forte (*f*) dynamic. The score is annotated with blue circles and black rectangles. The blue circles, labeled 'Suspension', are placed around notes in the Vln., Vc., and Pno. staves that are tied across bar lines. The black rectangles, labeled 'Tied anticipation', are placed around notes in the Vln., Vc., and Pno. staves that anticipate the next chord. The annotations are most prominent in the second and third systems.

Tied anticipation

Suspension

Example 4.5: Harmonic analysis of bars 86–93.

The disadvantage of an event occurrence analysis is, quite clearly, that it ignores several salient parameters. The advantage – and the pertinence in this case – is that it illustrates the relation of performance to metrical dissonance, since any beats which are marked by events can in turn be weighted dynamically by a performer; since dynamic accent is one of the most salient factors in metric perception, a metrical layer can thus be created. Any beats which are not marked or which are marked sparsely cannot receive as much if any weighting, and dissonance results.

Example 4.4 is a motivic analysis which shows how the passage is built through intense development of a single motive m_1 (stated in the preceding bars). Note that the metrical placement of these motives is important; m_5 is not just a dotted crotchet. Example 4.4 also shows displacement dissonance at the level of dotted crotchet in the differing metrical placements of the same motives, particularly m_3 and m_4 . The pitch groupings of m_5 in the string parts in bars 90–92 debatably create a displaced reverse hemiola.

Finally a harmonic analysis (Example 4.5) shows how the passage saturates a reasonably straightforward harmonic progression with suspensions (sometimes across voices) and tied anticipations. The latter should create $D\mathcal{B}-1$ dissonance, but since the pitches are members of the previous chords they also create $D\mathcal{B}+2$. The suspensions create perhaps the most difficult factor in analysing the metrical dissonance contained in this passage. As in the fourth variation of the second movement, this is the question of harmonic accent – do the weak-beat resolutions of common 4-3, 6-5 and 9-8 suspensions have an inherent metrical accent? When these phenomena occur in all voices in the same beat, the change of harmony is completely delayed until the third quaver, definitely creating $D\mathcal{B}+2$.

Yet in these situations there are many common tones between the delayed harmony and the succeeding one to which it is tied, creating $D\flat-1$ at the same time.

Much like the fourth variation of the second movement, this passage presents a situation where metrical dissonance feels both 'right' and 'wrong' at the same time. While the rhythm and density accents create a sense of displacement dissonance, the pitch content seems to exert equal tension in opposite directions, resulting in a state of dynamic equilibrium. These bars also present the climax of tonal processes, the two dimensions congruent.

Closing section

The return is metrically reframed – instead of the increasing $D\flat-1$ dissonance and ensuing displaced hemiola, Brahms uses a more static hemiola in bars 94–103, a direct dissonance and one which does not accompany cadential movement. This again reiterates the question of harmonic accent, since if resolutions of suspensions have an inherent accent then it becomes a displaced hemiola. Increasing in accentuation in bar 97 (with the reach to the melodic peak), it decreases in bar 98 and then resurfaces, lightly accented, from bars 99–103, after which it disappears. A light $D\flat+1$ dissonance reappears in bars 104–107, created only by density accents in the right hand and adding to the harmonic sense of non-closure leading to the scherzo return.

The overall arc of metrical dissonance in the trio runs parallel to the overall harmonic route. Initial metrical consonance is quickly disturbed by displacement dissonance, which grows and changes to grouping dissonance, resolving back to a weak displacement dissonance at the end of the first section. The middle section explores both types of

dissonance, reaching a complex peak in the middle. The A' return is characterised by grouping dissonance rather than the previous cumulative displacement. This grouping dissonance reaches a final peak before gently subsiding. The 'arch of melody' noted by MacDonald is matched by arches in both the harmonic and metric dimensions.

Scherzo return; codetta

The scherzo return is exact; the small codetta of six bars replaces the final bar of the first scherzo. As in the first and second movements, the codetta visits flat regions (\flat II and \flat V^{Ø7}) without tonicising the traditional subdominant – a move that is now delayed until the final movement.

As in the first scherzo, the displaced hemiola at bar 160 is followed by constant duple hypermetre which extends into the codetta. Cadential activity beyond the hemiola is lacking, so bar 161 represents the limit of metrical and tonal closure in the movement. McClelland considers that displacement dissonance and tonal instability are never fully resolved, but that this resolution is directed to the final movement through thematic similarity.¹⁸³ As at the end of the first movement, the metrically 'bare' bars 165, 167, 169, 171 and 173 perhaps help create this feel of metrical non-resolution. But unlike the first movement, this codetta dissipates its energy, both metrical and tonal, as if it is leaking out. The cello part from bar 165 exhibits this in its movement from tremolo through triplet notes to single notes.

¹⁸³ McClelland, *Brahms and the Scherzo*, 201 and 249. He also notes that 'A similar inter-movement progression occurs in the Piano Trio in C Minor, Op. 101' (201).

Conclusion

While the scherzo is metrically consonant (if neutral and ambiguous) but tonally unstable, the 'expansive, tonally stable, major-mode trio'¹⁸⁴ provides more surface-level metrical dissonance, but which does not truly undermine its tonic metre or hypermetre. The scherzo and trio thus complement each other in terms of dimensional counterpoint; the scherzo formally conflicted, metrically neutral and melodically vague where the trio is lyrical and formally clear but metrically dissonant. They run parallel in their lack of ultimate harmonic closure.

The A' sections in both cases involve metrically dissonant reframings of the theme, varying otherwise exact returns and ultimately curtailing a complete sense of closure through lack of metrical resolution. In the codetta, odd flat-region chords replace the traditional subdominant, and a lack of full metrical consonance replaces traditional augmentation.

Notable in the scherzo is a constant blurring of downbeat at various levels, both metric and hypermetric, through which Brahms consistently suspends comprehension. The neutrality originally causes ambiguity on a phrase level, but in its return it causes more blurring and ambiguity on a formal level in the dissolution of metre and hypermetre at bars 33–38, a scenario which will recur in the final movement.

The trio is a regularly proportioned arch in all dimensions. It presents the displaced hemiola, motivic in the first movement, and a hint of the reverse hemiola which is to be motivic in the last. The peak of metrical dissonance is a situation of complex displacement similar to that in the second movement.

¹⁸⁴ Ibid., 201.

The lack of closure McClelland considers characteristic of Brahms's late scherzo-type movements, allied with thematic similarity, adds to the unresolved tension which is to be dealt with in the final movement. A lack of inter-instrument conflict and an unusually low level of metrical dissonance (in the scherzo) make this movement the exception, nonetheless connected to the other movements, particularly the outer ones, through various similarities and allusions.

CHAPTER 5

IV. FINALE. ALLEGRO GIOCOSO

A 'lively Finale'¹⁸⁵ in 4/4 might seem like a less likely site for metrical dissonance than earlier movements in triple time. The movement is treated by critics at best with cursory indifference and at worst with scorn: 'a finale worthy by its conciseness to companion the first two movements, but inferior to them in material';¹⁸⁶ 'not quite powerful enough';¹⁸⁷ 'no less concise, yet more loosely built and more artless than the first movement'.¹⁸⁸

But this movement features plenty of metrical innovation and is an interesting case study of metrical resolution. Unusually there are changes visible in Brahms's manuscript, which add to both metrical dissonances and their resolution. After a brief discussion of form and style, this chapter investigates the most notable metrical dissonance of the movement, a reverse hemiola. The retransition is discussed as an area of metrical stasis and finally the coda, viewed by one biographer as 'of ambiguous expressive import',¹⁸⁹ is interpreted to function both to end the movement, and the opus as a whole, through the resolution of large-scale tensions both harmonic and metric.

Form and style

This movement, like the others, shows features of the *style hongrois*, which Bellman notes grew to be associated with final movements at this time.¹⁹⁰ There are thematic links to both

¹⁸⁵ Geiringer, *Brahms: His Life and Work*, 237.

¹⁸⁶ Mason, *The Chamber Music of Brahms* (New York: Macmillan, 1933), 148.

¹⁸⁷ Musgrave, *The Music of Brahms*, 199.

¹⁸⁸ Geiringer, *Brahms: His Life and Work*, 237.

¹⁸⁹ Jan Swafford, *Johannes Brahms: A Biography* (London: Macmillan, 1997), 475.

¹⁹⁰ However, the *Rondo alla Zingarese* finale of the G minor Piano Quartet Op. 25 is the only finale to be explicitly designated as such; Brahms allowed other finales to let their varying levels of Hungarian content

the first movement, with dotted rhythms in the second part of the measure and emphasis on (here #), and to the third movement in the contour of the theme.

There is some disagreement as to whether this movement is considered to be in sonata, sonata-rondo or rondo form.¹⁹¹ The sonata-form interpretation is preferred here in spite of the jubilant, perhaps rondo-like character; the recapitulation of the subordinate-theme complex, the tonal adjustments in the recapitulation, and the fact that bars 59–116 act more like a developmental rotation than an interior theme seem strong sonata elements.¹⁹² Each formal section is preceded by a caesura, the only instances of such in the movement until the very end (Example 5.1). Development, recapitulation and coda are all reached by VII-I progressions, ‘preventing them from sounding predictable’.¹⁹³

Example 5.1: Caesurae before the development, recapitulation and coda boundaries.

Reverse hemiola

One of the most notable metrical features of this movement is its use of reverse hemiola,

which first appears in the third bar of the main theme: 6/4 grouping conflicts indirectly with

‘speak for themselves’ (Bellman, 207), similar to McClelland’s observation of the reduced use of the designation *Scherzo* for fast inner movements (McClelland, *Brahms and the Scherzo*, 201).

¹⁹¹ McClelland (‘Destabilised Beginnings’, 27–30) and Musgrave lean towards a rondo interpretation (*The Music of Brahms*, 195: ‘a leisurely rondo movement’), while Macdonald says ‘It is cast in sonata form, with an unusually large number of themes, but an altogether more relaxed, rondo-like tone’ (Macdonald, *The Master Musicians: Brahms*, 284); Swafford agrees with both of these points: ‘In its overall shape the finale is laid out in sonata form, but for most if its course it has the lighthearted, dancing feel of the traditional rondo finale’ (*Johannes Brahms: A Biography*, 475).

¹⁹² This perspective is essentially Caplinian. See *Classical Form*, 235 and 285.

¹⁹³ Wallach in *The Compleat Brahms: A Guide to the Musical Works* (ed. Botstein), 111.

the 4/4 bars beforehand (Example 5.2).¹⁹⁴ This instance shows melodic and rhythmic parallelism (and similar harmony) as well as beginning with a characteristic turn.¹⁹⁵ The reverse hemiola reading is softened, however, by the agogic accents on the third beat of bar 3 and the fourth of bar 4, reducing the beginning of bar 3's weight as downbeat and encouraging the initial reading of bar 4 as the reverse of bar 3; the listener only fully appreciates that it is a reverse hemiola at the end of bar 5. It represents another solution to Petty's 'Great Nineteenth-Century Rhythm Problem' – the resulting group is five bars long.

Example 5.2: Bars 1–5.

A subtler version of the same device occurs in bars 8–10. It is tempered by the piano's consistent bar-long groupings (creating a direct dissonance) and a lack of parallelism, but the change of harmony halfway through bar 9 still phenomenally accentuates the second 6-crotchet group; this is complemented by a subjective accent since it occurs at the same point of the phrase as in bar 3.

In the A' section, the reverse hemiola (bars 13–16) is supplemented with a 4/4 insertion and made compound by a D_{2+1} dissonance in the piano part (Example 5.3). A

¹⁹⁴ See Mirka, *Metric Manipulations*, 145, for some discussion of reverse hemiola. See also 151–156 for a different view of submetrical dissonance created in such situations.

¹⁹⁵ In situations of reverse hemiola, turns and parallelism are even more important to foster recognition, as there are only two groups. See *Ibid.*, 138.

listener who had not comprehended bars 3–5 as a reverse hemiola might interpret bars 14 and 15 as reflected repetitions of bar 13, then bar 16 as a cadential bar, preserving duple hypermetre. Either way, these bars play with elements of metrical expectation and frustration.

Example 5.3: Bars 13–17.

The same device is developed yet again in the subsequent phrase, the transition to the second group (Example 5.4). An insertion is complemented here by symmetrical additions before and after the reverse hemiola, creating a 6-bar group. A $Dx+1$ dissonance is also present, initially created by the *sf* marking, density accent and harmonic accent on the second beat of bar 17; these same accent types are later joined by slurs.

Dx+1: Agogic, dynamic, density and contour accents

Example 5.4: Bars 17–23.

The added Dx+1 dissonance ‘weaves’ these 8-layers in to the 12-layers. At the same time, upward pitch movement opposes the potential ‘slowing-down’ effect caused by the larger groups of the reverse hemiola, as does contrary motion between the strings and the piano. This event illuminates the shortcomings of Krebs’s notation; it is possible neither to define the grouping dissonance (which is not G6/4 due to the extensions and insertion) or the displacement (which is not always D4+1 due to the 6-groups).

The manuscript shows evidence of a different original layout to this passage (Example 5.5), which does not include any grouping dissonance and is hypermetrically consonant, suggesting a simple four-bar layout.¹⁹⁶ The extra dissonance in the final version acts both to integrate the bars and to add to loose organisation through hypermetric distortion, as appropriate for this formal location.¹⁹⁷

¹⁹⁶ A scan of the manuscript is in the public domain and available at [http://imslp.org/wiki/Piano_Trio_No.2,_Op.87_\(Brahms,_Johannes\)](http://imslp.org/wiki/Piano_Trio_No.2,_Op.87_(Brahms,_Johannes)) (last accessed 28/06/12).

¹⁹⁷ Caplin, *Classical Form*, 85.

Example 5.5: Original bars 18 and 19 as scribbled out in Brahms's manuscript.

In these first 23 bars Brahms has deployed reverse-hemiola-type devices four times, each different in accentual weight, and the last two with extensions. A particular metrical dissonance has again become motivic despite variation.¹⁹⁸

At the beginning of the development, the reverse hemiola in bars 61–63 combines with a lower-level grouping dissonance, $G_3 \mathbf{1.5/1}$. Another instance in bars 85–87 links this figuration (with $G_3 \mathbf{1.5/1}$) to the expository one (with $D_2 \mathbf{2+1}$). Despite the lack of characteristic rhythmic material, this metric device recalls the opening and creates expectation which the first subordinate theme fulfils by appearing at bar 88. In addition, the descending quaver line and the triplet/duplet quaver dissonance is reminiscent of the transitional theme which began at bar 43. A motivic potency in the absence of rhythmic or melodic motives, and an integration of elements from several themes, make this dissonance notable (Example 5.6).

¹⁹⁸ This observation aligns itself with a Schoenbergian perspective on Brahms's compositional language, which nonetheless appears appropriate here.

Descending quavers reminiscent of piano entry and closing theme

Reverse hemiola – motivic at movement level

Triplet-duplet quaver dissonance – motivic of development and closing theme

$D:2+1$ – motivic of main theme

Example 5.6: Bars 85–87.

The different occurrences of the reverse hemiola device throughout the movement highlight the spectral nature of hemiola.¹⁹⁹ Occurrences such as at bars 8–10, with weaker parallelism and added continuation of the consonant metre, barely perturb the preceding metre (although do perturb hypermetre) and some would no doubt challenge their classification as hemiolas. This is nonetheless supported by harmonic grouping, hypermetre and phrase lengths, and also by proximity to other such devices less equivocally deployed. The reverse hemiola functions motivically, as the displaced hemiola does in the first movement, and is not found outside reminiscences of the main theme group.

Retransition

The end of the development (bars 97–116) brings a metrical stasis much like that at bars 141–7 in the third movement. The music seems to move into 2/4 here as the downbeat dissolves, with no accentuation of metric hierarchy beyond the minim level. This is matched

¹⁹⁹ Since the recapitulation follows the exact path of the exposition, it is redundant to explore use of reverse hemiola in that section. Instances in the coda are dealt with in the following section.

by a harmonic stasis – the bass pedal supports a succession of chords with unclear direction including several augmented triads. The longer groupings at bars 102–104 and 110–112 bluff that something is going to happen and that thematic material might follow; at the same time they worry the listener, who hopes he may have held onto the barline, that he is about to be thrown off it.²⁰⁰ They resist classification as metrically dissonant, but neither do they possess a clear nesting of metrical layers necessary to create consonance.

In bar 114, the piano (followed by the strings in 115) ceases upbeat events, reasserting the bar line and beginning to dissipate the metrical fog. In an example of dimensional non-congruence, the tonal clarity of the long standing on the dominant begins to dissolve at the same point; as the bar line becomes clear again, the sense of harmonic centre is disturbed, pointing now towards E- (the arrival of C+ completes a deceptive cadence). The crotchet silences at bars 115 and 116 after the ceaseless development heighten the tension which is resolved with the return of the main theme and tonic. The ‘primary location for metrical displacement’ at the close of the development is here presented in a process of metrical dissolution; the recapitulation, rather than being a jubilant return to consonance, creeps back in a recessive dynamic and with a missing melodic first beat.²⁰¹

Coda

To place the coda in context, the recapitulation is an exact restatement of the exposition, apart from one tonal adjustment in bar 137 (leading to cadential arrival in E+ instead of the expository B+) which transposes the rest of the recapitulated material down a fifth. Such

²⁰⁰ The manuscript shows another late alteration here: the insertion of bars 104–111. These are written on a separate leaf with the insertion point marked in blue pencil in the manuscript.

²⁰¹ Frisch, ‘The Shifting Bar Line’ in *Brahms Studies* (ed. Bozarth), 156.

practice is noted as characteristic of Brahms (as well as Schubert and Mendelssohn) by James Webster and invokes the controversial issue of non-resolving recapitulations.²⁰²

The coda equals the other three sections in size. As in the first two movements, the start of the coda is signalled by augmentation – this formal parallel adds to a thematic link with the first movement. The augmentation is here finally accompanied by tonicisation of the subdominant.²⁰³ Despite being hinted at since the first movement, IV has never been strongly tonicised; any subdominant inflection has been fleeting and not synchronised with the coda boundary as here. The coda-based subdominant – ‘a standard gesture of closure in sonata and other forms’²⁰⁴ – fulfils expectations invoked from the first movement and starts a process of closure within the final movement’s coda.

The contrasting middle of the main theme follows at bar 187 (Example 5.7). This has also been augmented and adjusted to the tonic. The move to the contrasting middle is accompanied by a move from triplet to duplet crotchets through a switchback reading of the piano triplet quavers encouraged by the string grouping. Rather than feeling dissonant, this particular shift is usually smoothed in performance due to the *poco rit.* – *in tempo* marking.

²⁰² James Webster, ‘Sonata Form’ in *Grove Music Online, Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/26197> (accessed 16/08/12): ‘All three composers [Schubert, Mendelssohn and Brahms] give full recapitulations which tonally resolve the second group, generally in the tonic or in the keys a 5th below those in the exposition.’ On non-resolving and failed recapitulations see James Hepokoski, ‘Back and Forth from Egmont: Beethoven, Mozart, and the Nonresolving Recapitulation’, *19th-Century Music*, 25/2-3 (Fall 2001/Spring 2002), 127–154.

²⁰³ Incidentally, it is only at this point in the movement that Mason claims we acquire a ‘belated toleration’ to the ‘inferior’ main theme (*The Chamber Music of Brahms*, 148).

²⁰⁴ Peter Smith, ‘Brahms’s Motivic Harmonies and Contemporary Tonal Theory: Three Case Studies from the Chamber Music’, *Music Analysis*, 28/1 (2009), 97.

Possible indirect grouping dissonance smoothed by *poco rit.* → *in tempo*

187

Vln. *poco rit.* - - - - - *in tempo*

Vc. *pp* *poco rit.* - - - - - *in tempo*

Pno. *pp* *poco rit.* - - - - - *in tempo*

Parallel/switchback dilemma

Example 5.7: Bars 188–189.

The statement of the first subordinate theme in Ab+ at bar 199 completes the appearance of this motive in the two other major keys in the northern hexatonic system which C+ belongs to (stated in E+ at 74);²⁰⁵ Ab+ acts as the symmetric reflection about C+ of E+.²⁰⁶ The immediate restatement of the theme's basic idea in C+ starting at bar 201 is triumphant, both in surface effect (of major-third-related harmonies) and as a return to the tonic. This is also the final point before the last three bars when harmonic and metric consonances coincide. The following view interprets that the subsequent closing material resolves other inherent tensions, both metric and harmonic.

²⁰⁵ Richard Cohn, 'Maximally Smooth Cycles, Hexatonic Systems, and the Analysis of Late-Romantic Triadic Progressions', *Music Analysis*, 15/1 (March 1996), 9–40.

²⁰⁶ A similar device is noted in the Op. 111 Quintet by Peter Smith, who interprets that since there is no progression that explicitly links the two non-tonic sonorities, their own abstract adjacency in hexatonic space is sublimated; they retain their function as tonal poles about the tonic and 'traditional tonal relations absorb chromatic thirds without a challenge to the governing diatony.' ('Brahms's Motivic Harmonies', 72.)

The final manuscript alteration shows a different original ending, scribbled out in Brahms's hand. The presence of this change naturally encourages comparison between the two; Example 5.8 shows the original ending.

The image displays two systems of a musical score for Example 5.8. The first system begins at measure 206 and the second at measure 210. The score is written for Violin (Vln.), Viola (Vc.), and Piano (Pno.) in 4/4 time. The original ending is marked with a double bar line and a 'Coda' symbol in the piano part at the end of the second system.

Example 5.8: The original ending (scribbled out on manuscript).

The first difference to be considered is that the original ending did not contain the complete circle of fifths in bars 214–217. In an unusual way, the presence of this ‘resolves’ the *Grundgestalt* harmonically, being the only time the motive is harmonised functionally rather than with non-functional diminished or half-diminished sevenths. The raised fourth, initially seen as a topical *style hongrois* reference, becomes an essential formal feature creating tonal instability in the refrain (from the destabilized beginning) which is resolved in the coda.

As well as harmonic dissonance, the circle of fifths in the final version resolves hypermetric dissonance, since as the reverse hemiola does not follow, the hypermetric perturbation that this usually causes is absent; the rest of the coda follows regular duple hypermetre. This material is not entirely metrically consonant, however; bars 214–217 feature a superposition of three different displacement dissonances: D_{2+1} , $D_{\frac{1}{2}+1}$ and intermittent $D_{\frac{1}{4}+1}$ (a product of the first two). The first is subsequently resolved: the hierarchy of harmonies in bars 218–9 gives first beats dominance. The second is also resolved: off-beat quavers are consistently subordinate from bar 218, where the quaver turn which begins the reverse hemiola earlier in the movement returns, stripped of its ensuing $\downarrow \cdot \uparrow$ rhythm.

Finally, the first ending contained significantly reduced use of the $\uparrow \downarrow \cdot \uparrow \downarrow$ transitional motive (which was recapitulated exactly as in the exposition, and did not feature in the development). Bar 208 in the original ending featured only the *quaver pairs* repeated in a metrically consonant figuration, in contrast to the dissonance they normally aid in creating. The replacement bars instead include more of the *dotted motive*. In previous statements, this was either stated once at a time with framing quaver pairs, which together created four beats, or twice in a row, which created a half-bar displacement, the first beat of a reverse hemiola cycle which thus had to be ‘resolved’ with another double statement. Only in the coda does it occur three times in a row, which ‘returns’ it to the original place in the bar in a form of self-resolution. Emphasis is also created by the classical rhetorical gesture of thrice-statement. Adding to a feeling of resolution is the fact that only the third, metrically resolving statement of the dotted motive states it in the tonic (bar 213). Significantly this material facilitated both the initial departure from tonic in the exposition and the

transposition in the recapitulation that allowed partial resolution of all other material down a fifth.

Subordinate theme resolves to C – first tonic setting in ultimate statement

Main theme – returned to tonic key and metre after subdominant augmentation
Metrical 'resolution' of transitional motive. Ultimate statement in tonic

Complete circle of fifths – harmonic resolution through functional use
Hypermetrical resolution of reverse hemiola turn

Final metric cycle of A-B transitional material (in minim guise) leading to tonic
Final silences (as used to mark the development, recapitulation and coda boundaries)

Example 5.9: Bars 199–224.

While the original ending did feature metrical resolution, the final version does so in a more emphatic and varied way, as with its tonal aspects (Example 5.9). Many of these resolutions are in the form of cycles. The appearance of the subordinate theme in Ab+ and then in C completes a symmetric octave-spanning cycle (C-E-Ab-C) started at bar 74. The cycle of the reverse hemiola, interrupted in the original coda, is complete in the final tonic reprise, after which it is eliminated along with its inherent hypermetric perturbation. The ‘self-resolving’ twice-repetition of the dotted motive can be seen as a rhythmic cycle. The full circle of fifths at bars 214–217, a cycle in the harmonic dimension, adds to the continuing feeling of resolution and closure.

In addition to concluding the movement, the coda also has aspects of inter-movement closure. Through thematic similarity, augmentation at the coda boundary and a primary theme return near the end, it recalls the first movement and fulfils its subdominant expectations. The primary themes of both movements exhibit harmonic congruence, which in this movement ‘determines the course of the first theme and its developments’.²⁰⁷ The vagueness of tonic-metre status in the second movement is certainly eliminated here, as is the harmonic lack of closure in the third. *Style hongrois* elements and instrumental conflict create allusions to the other movements in rhythmic and harmonic ways, creating an inter-movement unity: ‘All this good cheer in the home key might seem like bluster were it not for the condensed return of identifying harmonic characteristics of the movement and of the whole piece’.²⁰⁸ While explicit cyclical linkage,²⁰⁹ such as the return of an earlier

²⁰⁷ Cone, ‘Harmonic Congruence in Brahms’, in *Brahms Studies* (ed. Bozarth), 173.

²⁰⁸ Wallach, in *The Complete Brahms* (ed. Botstein), 111.

²⁰⁹ More explicitly cyclic elements have also been noted in Op. 78, the Third String Quartet Op. 67 and the *Schicksalslied*, Op. 54, as well as several song cycles. See Frisch, ‘The Snake Bites Its Tail’, 159. In *Brahms Studies* (ed. Bozarth), see Imogen Fellingner, ‘Cyclic Tendencies in Brahms’s Song Collections’, 379–388; David Brodbeck, ‘Brahms’s Edition of Twenty Schubert Ländler: An Essay in Criticism’, 229–250; Ludwig Finscher, ‘Brahms’s Early Songs: Poetry versus Music’, 331–344.

movement's theme, is absent, cyclical aspects nonetheless appear at various scales of the work, and the movement thus challenges Webster's note of a 'certain lack of Beethovenian 'necessity' in [Brahms's] developments and codas'.²¹⁰ Also Beethovenian is the return of the primary theme in the coda, which Robert Hopkins considers both adds weight to the coda and also 'enhances closure by symmetrically balancing the form' – as it did in the first movement.²¹¹

These aspects of cyclicity and resolution are not superlative, however. Unlike in the first movement, the primary theme does not provide the final bars of the movement. Also lacking is any reminiscence in the coda of the theme which ends the exposition and the recapitulation (starting at bars 43 and 163 respectively). While this was resolved to the tonic key in the recapitulation, it still contained a direct metrical dissonance between triplet and duplet quavers (G♯1.5/1) which is not referred to or resolved in the coda.

Conclusion

Like the displaced hemiola in the first movement, a specific and recurrent metrical dissonance is one of the most notable features of this movement in the rhythmic-metric dimension. Brahms's exploration of this unusual device is persistent and, like the displaced hemiola in previous movements, the reverse hemiola becomes motivic.

Brahms's manuscript changes are fascinating, showing the addition of metrical dissonance at the beginning, the extension of metrical stasis in the retransition, and the alteration of the original ending which arguably enhances metrical closure.

²¹⁰ James Webster, 'The General and the Particular in Brahms's Later Sonata Forms', *Brahms Studies* (ed. Bozarth), 50.

²¹¹ Robert Hopkins, 'When a Coda is More than a Coda: Reflections on Beethoven' in *Explorations in Music, the Arts, and Ideas: Essays in Honor of Leonard B Meyer* (ed. Eugene Narmour and Ruth A. Solie) (New York: Pendragon, 1988), 403.

There are several interesting examples of dimensional counterpoint, harmonic and metric features interacting but often pointing in opposite directions on their consonance-dissonance spectra. The alternation of such situations is present from the beginning: bars 1–2 are harmonically non-functional but metrically functional while bars 3–5 are harmonically functional but metrically dissonant. The coda shows constant alternation between harmonic and metric consonance and dissonance. More globally, formal points are signalled by strong metric signals (silences) at the same time as harmonic confusion; the only four silences in the entire movement mark the end of the exposition, development, recapitulation and coda.

The coda shows tonic readjustment of material not tonicised in the recapitulation, as well as interesting rhythmic organisation which rearranges certain motives into a metrically consonant state. Similarities to all the previous movements create a web of allusion in thematic, harmonic and metric dimensions. These cyclic aspects add to the strong sense of closure reached in the coda, which concludes both the movement and the opus in a triumphant mood.

CHAPTER 6

CONCLUSIONS AND PROSPECTS

The intimacy and inherent elitism of chamber music allows composers to write some of their most emotionally and musically challenging works, and Op.87 is no exception. Metrical dissonances perform a range of functions at all levels from local to global, aiding in creation of a situation where ‘four movements of original design fit together with unobtrusive perfection’.²¹² At their most complex and subtle level they take part in dimensional counterpoint with other aspects of the musical work; sometimes these different dimensions work in tandem but sometimes they pull against each other.

Yet in many ways the preceding chapters offer only a first step towards a satisfactory analysis of Opus 87. The final chapter briefly acknowledges what has and has not been discussed, and where the preceding analyses might ideally lead.

Motivic metrical dissonances

One of the most notable observations is that specific metrical dissonances, beyond aiding in motivic development, themselves become motivic in each movement. The displaced hemiola in the first movement, reverse hemiola in the last, displacement dissonance in the second, and, to a lesser extent, metrical neutrality and ambiguity in the third, recur to perform formal articulation or blurring as well as linkage within and between movements. Brahms’s motivic and linking techniques in the pitch dimension have been noted since his

²¹² Wallach, in *The Complete Brahms* (ed. Botstein), 109.

own time and are still an active topic of analysis.²¹³ The perspective of metrical dissonance shows a new depth to the way Brahms approached such issues.

Beyond noting these motivic traits the thesis sometimes fails to fully chart the metric narrative, which has a 'more central role in Brahms's oeuvre than is typical of common-practice repertoire as a whole'.²¹⁴ This was particularly so in the analyses of the outer movements, which focussed more on motivic material and formal processes: while Chapter 2, for instance, showed that metrical dissonance in the primary theme was central to the formal procedure of the first movement, it could not apply the same hypothesis to the rest of the movement's themes. It also significantly underplayed the harmonic aspects of the movement; the lack of a satisfactory V⁷-I cadence in the recapitulation or coda (the final cadential dominant lacks a seventh) is just one example of how the harmonic dimension interacts with the metrical one to similar ends. While investigation of rhythm and metre was the primary goal of the thesis, this is ultimately of little value if it cannot be united with a thorough pitch analysis.

Resolution and linkage

Following Brahms's 'ambitions for the greater unification of multi-movement structures',²¹⁵ the role of metrical dissonance in inter-movement continuity is partially achieved through non-maximal resolutions. At the end of the first movement, the double hypermetric role of the **y** motive is left in a state of tension and full metrical consonance is denied. The second begins in a similar state, metric tonic status is left ultimately unconfirmed, and despite

²¹³ See Peter Smith, 'New Perspectives on Brahms's Linkage Technique'; 'Brahms's Motivic Harmonies and Contemporary Tonal Theory: Three Case Studies from the Chamber Music'; 'Brahms and Motivic 6/3 Chords', *Music Analysis*, 16/2 (July 1997), 175–217.

²¹⁴ McClelland, *Brahms and the Scherzo*, 8.

²¹⁵ Pascall, 'Some Ruminations', 698.

ultimate resolution of displacement dissonance which has provided intra-movement unity, the second is the only movement which introduces distinct new dissonances near its close. Closure is also unstable in the third movement, where thematic similarity aids in leading to the fourth. In general, the central movements do not outline the progression of metrical conflict to resolution which is found in the outer movements. These outer movements both show parallel formal ambiguity within what turns out to be a straight sonata form where the main theme appears in the tonic to articulate the first three formal boundaries, and in an augmented form on the flat side (metric and harmonic processes hand in hand) to articulate the coda.

Codas

Each coda features important treatment of metrical dissonance, including augmentation and resolution. The consistency with which these metrical devices prove important in each movement's coda seems more than coincidental. The extent to which the last movement achieves a minimal structural conclusion in the recapitulation and then a maximal one in the coda is remarkable; it is a prime example of 'the 19th-century tendency to displace towards the end the weight of every form, single movements and whole cycles alike'.²¹⁶ Literature on Brahms's codas is slight, even though McClelland notes 'the importance of codas' as a stylistic change across Brahms's oeuvre.²¹⁷ This seems a promising avenue for further research, in search of 'a theory that explains the structural functions of codas and why they became necessary to the work'.²¹⁸

²¹⁶ James Webster, 'Sonata Form' in *Grove Music Online, Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/26197> (accessed 16/08/12).

²¹⁷ McClelland, *Brahms and the Scherzo*, 297.

²¹⁸ Hopkins, 'When a Coda is not a Coda', 394.

A typical conclusion?

Claims of inter-movement linkage and the delay of a sense of strong closure until the final movement might be considered thoughtlessly conservative conclusions, pointing towards notions of organicism, unity and a 'Beethovenian plot archetype' of conflict leading to triumphant finale apotheosis.²¹⁹ Such traits are not criteria of value and neither are they omnipresent in Brahms's works – note, for example, the 'unheroic' ending of the Third Symphony,²²⁰ or the C minor Piano Quartet, with its ultimately 'devastating', 'brittle' and 'failed' C major climax.²²¹ They also conflict with ideas of Brahms the autumnal, elegiac and melancholic composer, aware of his own position as 'part of a culture that could not last much longer, a middle-aged person aware of lateness'.²²²

Nevertheless, in some works at least, metrical dissonance or consonance at the close of individual movements does follow a pattern, as in Chapter 3 where it was noted that some multi-song opuses follow a dissonance-consonance progression. In the chamber output, the Third Piano Trio, Op. 101, is a particularly good example, but others include Opp. 40, 51/1, 51/2, 99, and 111. In each case early and/or inner movements end either in a metrically dissonant state or metrical consonance is only reached with the final chord, whereas in the final movements consonance is reached further before the close. The only cases of chamber works where final movements end even in an arguably dissonant state are Opp. 34 and 114. Modern analysts have not given up the traditional idea that Brahms valued inter-movement unity: Webster considers that Brahms sought 'a deeper level of integration

²¹⁹ Reinhold Brinkmann, *Late Idyll: The Second Symphony of Johannes Brahms* (Cambridge, Mass.: Harvard University Press, 1997), 34 and 203–4.

²²⁰ *Ibid.*, 221.

²²¹ Smith, *Expressive forms*, 231.

²²² Margaret Notley, *Lateness and Brahms: Music and Culture in the Twilight of Viennese Liberalism* (New York: Oxford University Press, 2007), 220. On melancholy see Brinkmann, *Late Idyll*, 125–144.

of a multi-movement work than was possible by thematic-motivic links alone',²²³ and McClelland believes that 'finding ways to reduce finality without denying tonal closure became important to Brahms's forging of multi-movement works, especially in the second half of his output'.²²⁴ Proper investigation is needed of what role metrical dissonance might play in multi-faceted strategies of inter-movement linkage and closure in this repertoire.

Paired works and the Op. 88 Quintet

The final link to be suggested is more tenuous. Brahms's habit of writing paired works is well-known;²²⁵ in these pairs it is common to find 'the second complementing the first in mood and manner'.²²⁶ Explicit pairs include those 'pairs of contrasting realisations of a genre' linked by the same or adjacent opus numbers,²²⁷ and over a wider timescale, Elaine Sisman suggests that variation sets might form complementary pairs of a masculine and feminine type.²²⁸ Written in the same summer as Op. 87 (which is 'clearly weighted toward the masculine side'),²²⁹ the String Quintet in F, Op. 88, offers itself as a more unusual pairing candidate, being in a slightly different genre. Brahms was unusually pleased with both works, noting his pride in both cases in letters to his publisher, Simrock: of the Trio he said, 'You have not so far had such a beautiful trio from me and very probably have not published one to match it in the last ten years';²³⁰ of the Quintet, 'You have never before had such a

²²³ James Webster, 'The *Alto Rhapsody*: Psychology, Intertextuality, and Brahms's Artistic Development', in *Brahms Studies*, Vol. 3 (ed. David Brodbeck) (Lincoln: University of Nebraska Press, 2001), 41.

²²⁴ McClelland, *Brahms and the Scherzo*, 296.

²²⁵ Brinkmann: 'The four symphonies of Johannes Brahms are, like some of his other works, to be placed in pairs.' (*Late Idyll*, 32).

²²⁶ George Bozarth, in *The Complete Brahms* (ed. Botstein), 102.

²²⁷ David Brodbeck, 'Medium and Meaning' in *The Cambridge Companion* (ed. Musgrave), 111. These pairs include the piano sonatas Opp. 1 & 2, the Op. 21 and Opp. 23 & 24 piano variations, the Opp. 25 & 26 Piano Quartets, Op. 51 String Quartets, Op. 79 Rhapsodies, and the Clarinet Sonatas Op. 120.

²²⁸ Sisman, 'Brahms and the Variation Canon', particularly 143–145.

²²⁹ Brodbeck, 'Medium and meaning' in *The Cambridge Companion* (ed. Musgrave), 111.

²³⁰ MacDonald, *The Master Musicians: Brahms*, 282.

beautiful work from me'.²³¹ It is possible not only that they might form such a masculine-feminine pair,²³² but that rhythmic-metric features, including metrical dissonance, may be a part of Brahms's compositional strategies in such pairings, contrasting yet 'sprung up from the self-same, deeply hidden root'.²³³

Apart from similarities in key (the Quintet in the delayed subdominant of the Trio) and chamber status, there are some rhythmic links which are interesting when viewed from the perspective of consonance and dissonance. As well as those noted in Chapter 3, Example 6.1 shows the main theme of the Quintet's first movement: a rhythmic rotation of the main theme of the Trio's finale which is more metrically consonant and lacks the *style hongrois* raised fourth. The end of this movement also shows a different resolution of the dotted transitional motive found in Op. 87's finale – through augmentation, Brahms dissipates rather than cyclically resolves its metrical tension (see Op. 88, I, 219–221). The fusion of the inner movements in Op. 88 creates 'the soul and center to which he made the outer movements defer'²³⁴ – the opposite of the pillared structure of Op.87 – and the Baroque influences of the Quintet contrast with the *style hongrois* of the Trio. Along with the metrical modulation in the finale, leading to a 'reversal of expectations'²³⁵ in the final material, these are a few ways in which Op. 88 creates mirror images of situations in Op. 87, several of which could be considered feminine in comparison.

²³¹ Ibid., 285.

²³² Brodbeck also suggests that Op.88 'provides the trio with a 'feminine' contrast of its own' ('Medium and meaning' in *The Cambridge Companion* (ed. Musgrave), notes to chapter, 297).

²³³ Brinkmann, *Late Idyll*, 32, quoting Philipp Spitta, 'Johannes Brahms,' in *Zur Musik*, (Berlin: Gebrüder Paetel, 1892), 425.

²³⁴ Margaret Notley, in *The Compleat Brahms* (ed. Botstein), 135.

²³⁵ Ibid., 137.

Allegro non troppo ma con brio

poco f

Example 6.1: Op. 88, I, 1–4.

To satisfactorily explore the conception of such pairs would require a holistic analysis of these and many other works. Nevertheless, Brahms's tendency towards such links suggests a final possibility for further research towards integrating the analysis of metrical dissonance into a successful analytical style.

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