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A taxonomy of the effects and affects of surface-level metric dissonance

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A TAXONOMY OF THE LOCAL EFFECTS AND AFFECTS OF SURFACE-LEVEL METRIC DISSONANCE

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ABSTRACT

In his book, *Fantasy Pieces*, Harald Krebs presents a taxonomy of metric dissonance that lays a foundation for further study. The system that Krebs presents leaves ample opportunity to answer the following questions: Do metric dissonances that are labeled the same way have the same function in their musical context? What is the role of listening in the categorization of metric dissonance? While many theorists, including Richard Cohn, Walter Frisch, and Yonatan Malin, have provided valuable insights to the realm of metric dissonance, their work focuses mainly on hypermeter, large-scale formal implications, or specific analyses.

In light of the above problem, the purpose of this thesis is to expand the knowledge and understanding of instances of surface-level metric dissonances with particular attention paid to some of the ways a passage may be heard. Subsequently, I will propose extensions and modifications to Krebs's system, thereby furthering our understanding of the expressive trajectory of metric dissonance. I will draw upon the work of several other theorists, including Leonard G. Ratner, Robert Hatten, and Yonatan Malin in order to illuminate relative categories. In particular, I will define and illustrate categories of metric dissonance that bridge the gap between the written score and the sounding music, developing an understanding of this intriguing phenomenon through a hermeneutical lens.

I. INTRODUCTION AND LITERATURE REVIEW

Although the phenomenon of metric dissonance has long been a feature of Western tonal music, systematic study of the concept has only recently become a significant topic in scholarly literature. Still in its nascent stages, the research on metric dissonance has hitherto focused on basic definitions, classification, modes of interaction with other musical parameters, and formal implications. One of the most critical works that has made significant contributions to these areas is Harald Krebs's *Fantasy Pieces*.[1] This book lays the foundation for this field by systematically identifying, defining, and classifying instances of metric dissonance, and as a result is widely accepted as the single most important reference for discussion on metric dissonance today.

Despite being an invaluable tool for recognizing and labeling metric dissonances, Krebs's system gives theorists ample opportunity to expand our knowledge and understanding of this phenomenon. Krebs's system provides a nomenclature for labeling a score, but does not always explain what is manifested in sound; at times, the meaning of the labels applied to a particular situation may even contradict what the listener hears. Frequently, we find identical labels that achieve entirely different musical ends, and different labels that achieve essentially similar effects. Sometimes, we may even encounter instances labeled as metric dissonances that sound metrically consonant and vice versa.

In light of the above problem, the purpose of this thesis is to expand the knowledge and understanding of instances of surface-level metric dissonances with particular attention paid to some of the ways a passage may be heard. In particular, I will define and illustrate categories of

[1] Harald Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann* (New York: Oxford University Press, 1999).

metric dissonance that bridge the gap between the written score and the sounding music, developing an understanding of this intriguing metrical phenomenon through a hermeneutical lens. Through this taxonomy I will show how surface-level metric dissonances can enhance our interpretation of several passages, echoing the concerns of recent attempts in tonal analysis to strike a balance between formalistic views and humanistic understandings.[2]

Krebs recognizes the significance of expression with regards to rhythm and meter in an imaginary anecdote involving Berlioz and Schumann's two alter egos, Florestan and Eusebius.[3] While walking through the town of Euphonia, Florestan and Eusebius, guided by Berlioz, encounter children in different rooms performing a variety of complex rhythmic interactions. Florestan voices a concern that "rhythmic complexities and metrical conflicts are not of value in themselves."[4] In response, Berlioz replies, "It is our concern that every activity in this town be subservient to expression; *those who take pleasure in works that are false as to expression are inexorably banished, unless they consent to descend to some inferior employment, such as the making of catgut or the preparation of skins for kettledrums* [italics original]."[5] Krebs further acknowledges the potential for metrical conflicts to result in specific expressive ends through examples from Beethoven's music. With regard to Figures 1.1, 1.2, and 1.3 (Krebs's Examples 1.2A and B, and 1.3, respectively) Florestan states, "The comical, bizarre effect of the first passage [Figure 1.1] stems primarily from the semitone oscillations in the horns, which result in

[2] Some of the relative work on this topic has been done by the following: Kofi Agawu, *Playing with Signs: A Semiotic Interpretation of Classic Music* (Princeton: Princeton University Press, 1991); Robert Hatten, *Musical Meaning in Beethoven: Markedness, Correlation, and Interpretation* (Bloomington: Indiana University Press, 1994); Robert Hatten, *Interpreting Musical Gestures Topics, and Tropes: Mozart, Beethoven, Schubert* (Bloomington: Indiana University Press, 2004); Leonard G. Ratner, *Classic Music: Expression, Form, and Style* (New York: Schirmer Books, 1980); Peter Smith, *Expressive Forms in Brahms's Instrumental Music: Structure and Meaning in his "Werther" Quartet* (Bloomington: Indiana University Press, 2005).

[3] Krebs, *Fantasy Pieces*, 3-21. While Florestan and Eusebius converse throughout the text, Berlioz appears only in the first chapter, an historical review of metric dissonance.

[4] Ibid., 4.

[5] Ibid.

the intrusion of duple meter into the triple context. In the excerpt from the last movement of Beethoven's Quintet op. 29 [Figure 1.2], the comedy stems from the struggle between two-four and six-eight meters. Here [Figure 1.3] is another more dramatic example by Beethoven of the effective employment of rhythmic and metrical conflict ([Krebs's] Example 1.3); observe the *weighty pressing on weak beats*, which produces a sense of duple meter that yields to the notated triple meter as the seventh chord is resolved."[6]

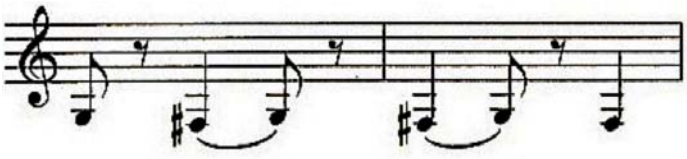

Figure 1.1: Krebs's Example 1.2A, from Beethoven's Symphony no. 7, 3rd mvt., mm. 199-200.

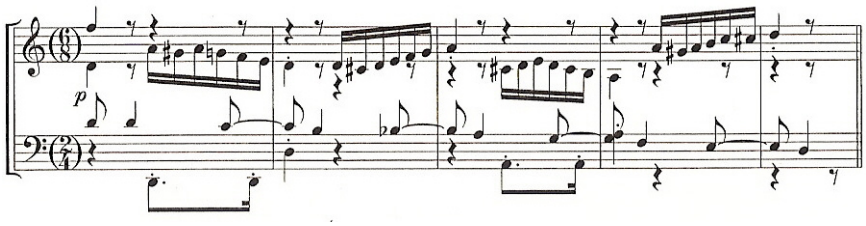

Figure 1.2: Krebs's Example 1.2B, from Beethoven's Quintet, op. 29, 4th mvt., mm. 124-28.

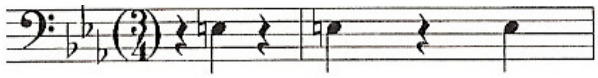

Figure 1.3: Krebs's Example 1.3, from Beethoven's Symphony no. 3, 1st mvt., mm. 128-29.

Theorists since Krebs have alluded to the necessity for a type of study that accounts for the expressive possibilities, functional capabilities, and purposes of metric dissonance. In his

[6] Ibid., 5.

review of *Fantasy Pieces*, Frank Samarotto writes, "I would on the other hand hope that the admirably efficient labeling system does not create the impression that all rhythmic effects have been precisely captured."[7] As Yonatan Malin points out, there has been some work devoted to the connection between metric dissonance and expression.[8] Though it is evident that several theorists have delved into this topic, their work has been mainly focused on music set to text or analyses of individual pieces. What is still needed is a foundation for classifying, analyzing, and understanding the many roles that metric dissonances play in music.

To set the scene for my hermeneutical program I will begin with an introduction of the notion of metric dissonance and its nexus of related concepts according to *Fantasy Pieces*. I will define and illustrate those terms and concepts that will most directly relate to the following chapters. After a historical overview of theoretical discussions of metric anomalies, Krebs opens his theoretical program by formally defining metric dissonance. To arrive at such a definition, Krebs returns to the fundamental notion of meter, which he stipulates as "the union of all layers of motion (i.e., series of regularly recurring pulses) active within it."[9] For a sense of meter to emerge, the layers must be divided into three types: the pulse, micropulse, and interpretive layers. The pulse layer is the "most quickly moving pervasive series of pulses, generally arising from a more or less constant series of attacks on the musical surface."[10]

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[7] Frank Samarotto, "The Body that Beats: Review of Harald Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann*." *Music Theory Online* 6/4 (October 2000), [paragraph] 6.1.

[8] Yonatan Malin, "Metric Displacement Dissonance and Romantic Longing in the German Lied," *Music Analysis* (forthcoming): 1. Sources mentioned by Malin include: Richard Cohn, "Complex Hemiolas, Ski-Hill Graphs, and Metric Spaces," *Music Analysis* 20/3 (2001): 295-326; Amelia S. Kaplan, "Two vs. Three: A Numerical Dialectic in Wagnerian Rhythmic and Harmonic Discourse," Ph.D. diss., University of Chicago (1998); Harald Krebs, *Fantasy Pieces* (1999): 156-173; Harald Krebs, "Dramatic Functions of Metrical Consonance and Dissonance in *Das Rheingold*," *In Theory Only* 10/v (1988): 5-21; Richard Kurth, "On the Subject of Schubert's 'Unfinished' Symphony: *was bedeutet die Bewegung*," *Nineteenth-Century Music* 23/I (1999): 3-32; Deborah Adams Rohr, "Brahms's Metrical Dramas: Rhythm Text Expression, and Form in the Solo Lieder," Ph. D. diss., University of Rochester (1997).

[9] Harald Krebs, *Fantasy Pieces*, 23.

[10] Ibid.

In Figure 1.4 (Krebs's Example 2.2) the pulse layer is the eighth note because it is the most quickly moving pervasive series of pulses.

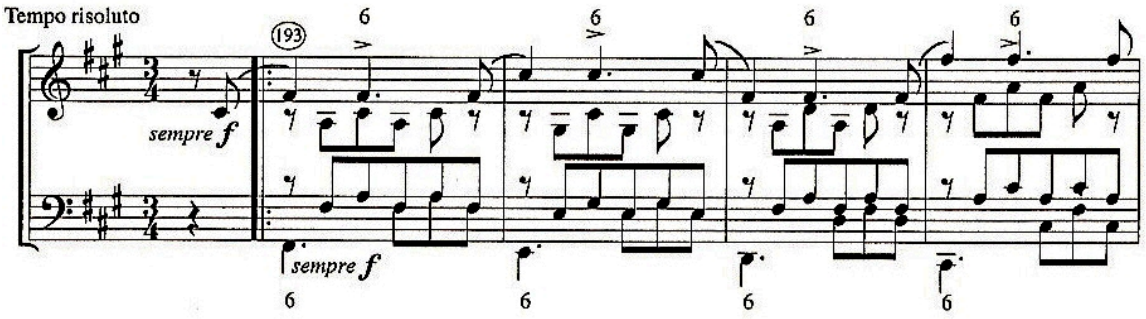

Figure 1.4: Krebs's Example 2.2, from Schumann's String Quartet, op. 41, no. 3, 2nd mvt., mm. 193-96.

An interpretive layer is defined as "a layer of motion that moves more slowly than the pulse layer and allows the listener to 'interpret' the raw data of the pulse layer by organizing its pulses into larger units."[11] One of the ways that interpretive layers can be derived is from the presence of phenomenal accents, a term that Krebs adopts from Fred Lerdahl and Raymond Jackendoff. Phenomenal accents are defined as "events at the musical surface that give emphasis or stress to a moment in the musical flow."[12] There are many types of phenomenal accents, such as dynamic, agogic or durational, density, registral, and new-event accents. In the top voice of Figure 1.4, an interpretive 6-layer is derived from the dynamic and agogic accents on the second beat. Another interpretive 6-layer is created by the harmonic change (new-event accent) that occurs on the downbeat of every measure. Finally, the micropulse layer is "an intermittently

[11] Ibid., 254.

[12] Ibid., 23. Quoted from Fred Lerdahl and Raymond Jackendoff, *A Generative Theory of Tonal Music* (Cambridge: MIT Press, 1983), 17.

appearing layer of motion moving more quickly than the pulse layer."[13] Krebs recognizes that this layer does not necessarily appear at all moments of a given work or section, and asserts that micropulse layers may be "woven into the metric tapestry of a work as coloristic embellishments."[14] Figure 1.5 (Krebs's Example 2.10) shows one manifestation of a micropulse layer. In this example the quarter note creates the pulse layer. An interpretive 3-layer, derived through phenomenal and durational accent, begins on every third beat in the right hand, while a second interpretive 3-layer, created by the harmonic rhythm, begins on every first beat in the left hand. The sixteenth-note figure that occurs repeatedly in the right hand is a micropulse layer. Notice how the micropulse layer is not constant, and merely provides embellishment to the core of the metrical occurrences.

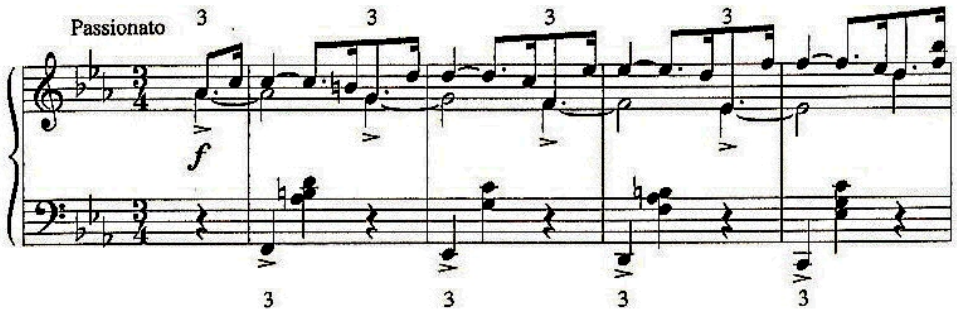

Figure 1.5: Krebs's Example 2.10, from Schumann's "Chiarina" from *Carnaval*, mm. 1-4.

Figure 1.6 shows all three layers at work in a hypothetical passage. The quarter note represents the pulse layer, the occasional eighth notes the micropulse layer, and the half and whole notes create two interpretive layers.

[13] Harald Krebs, *Fantasy Pieces*, 23.
[14] Ibid.

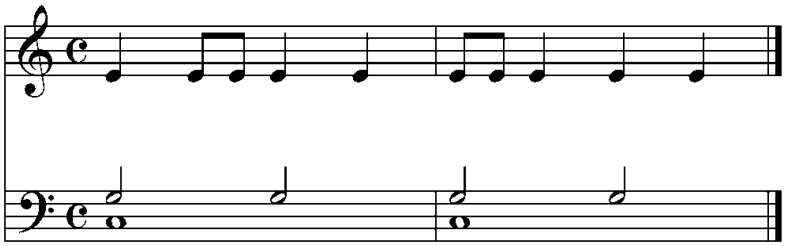

Figure 1.6: Manifestation of Pulse, Micropulse, and Interpretive Layers.

With Krebs's definition of meter and explanation of the layers that contribute to the meter of a musical work, a fundamental problem arises: If meter is the union of all layers of motion, how do we account for those layers that create conflicts with one another? It is through answering this question that Krebs is able to establish a dichotomy between metrical consonance and metrical dissonance. Metrical consonance is "a state of maximal alignment of layers of motion, existing when all pulses of all interpretive layers coincide with pulses on all faster-moving layers."[15]

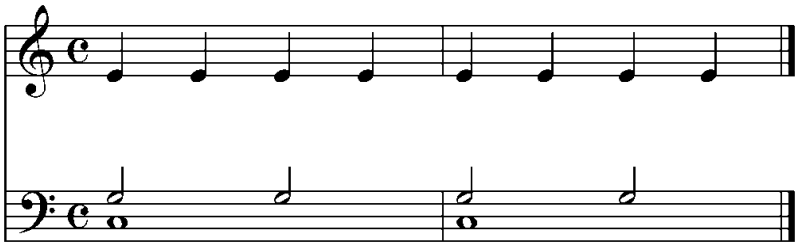

Figure 1.7: Manifestation of Metrical Consonance.

Figure 1.7 is in a state of metrical consonance. The pulse layer is the quarter note. An interpretive 2-layer is created by the presence of the half notes, and an interpretive 4-layer is

[15] Ibid., 254.

created by the presence of the whole notes. Notice how every attack of the half notes aligns with a quarter note, and every attack of a whole note aligns with a half note and quarter note. Every pulse (or attack) of both interpretive layers coincides with pulses on all faster-moving layers.

Metrical dissonance, on the contrary, is the "nonalignment of layers of motion."[16] Figure 1.8 displays a state of metrical dissonance. Once again, the pulse layer is the quarter note and an interpretive 4-layer is created by the whole notes. An interpretive 2-layer is derived from the tied quarter notes in the middle voice. Notice how the attacks of this 2-layer do not align with the attacks of the 4-layer. This metric dissonance is created because the slower-moving layers do not coincide with every faster-moving layer. Each interpretive layer does align with some member of the pulse layer, yet the 2-layer does not align with every pulse of the 4-layer.

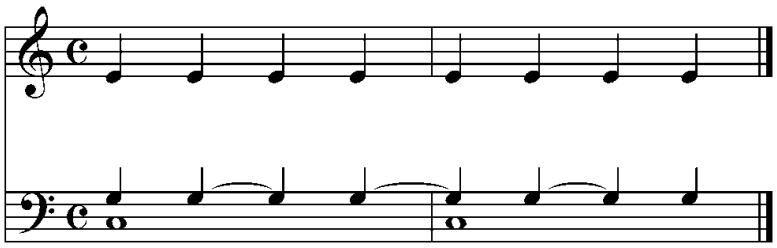

Figure 1.8: Manifestation of Metric Dissonance.

Having established the definitions of meter, metrical consonance, and metrical dissonance, Krebs progresses to construct a taxonomy of metric dissonance. He proposes two main types of metric dissonance: grouping and displacement.[17] Grouping dissonances, labeled with a capital G, are defined as "the association of at least two interpretive layers whose

[16] Ibid.

[17] Krebs originally terms these Type A and Type B, respectively. In *Fantasy Pieces*, Krebs adopts the terms grouping and displacement from Peter Kaminsky, "Aspects of Harmony, Rhythm, and Form in Schumann's Papillons, Carnaval, and Davidsbundlertanze," Ph.D. diss., University of Rochester (1990).

cardinalities are not multiples/factors of each other."[18] Figure 1.9 (Krebs's Example 2.3) shows a grouping dissonance. With the eighth notes acting as the primary unit of the pulse layer, a 2-layer (i.e., a layer that is made up of pulses of two eighth notes) and a 6-layer in the left hand create a metric consonance. The 3-layer in the right hand is metrically consonant with the 6-layer, yet metrically dissonant with the 2-layer because 2 and 3 are not multiples or factors of each other. In this example, the terms dissonant and consonant used for the 3-layer and 2-layer, respectively, are established in reference to their interaction with the notated meter. The resulting metric dissonance is labeled as G3/2; "G" for grouping dissonance, and 3/2 for the cardinalities of the 3- and 2-layers. It should be noted that grouping dissonances are written with the larger number, which is not necessarily the dissonant layer, first.

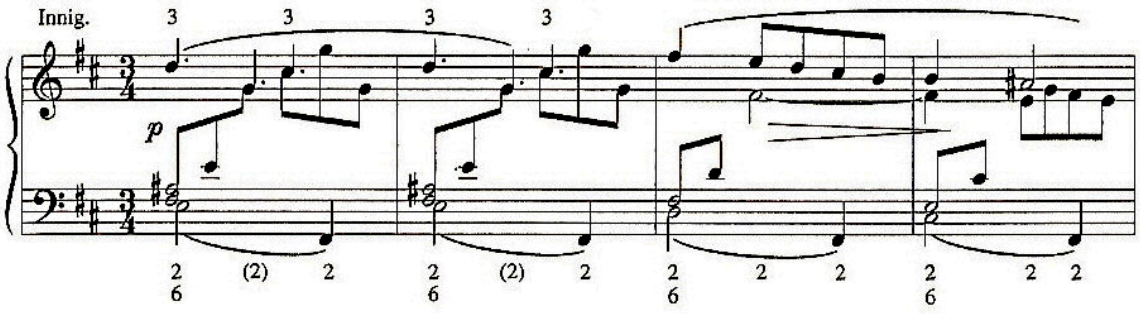

Figure 1.9: Krebs's Example 2.3, for Schumann's *Davidsbündlertänze*, op. 6, no. 2, mm. 1-4.

The other term of Krebs's taxonomy is displacement dissonance, which Krebs defines as "the association of layers of equivalent cardinality (i.e., congruent layers) in a nonaligned manner."[19] Figure 1.10 (Krebs's Example 2.9) shows a displacement dissonance. The pulse

[18] Harald Krebs, *Fantasy Pieces*, 254.
[19] Ibid., 253.

layer here is the sixteenth note and there is no micropulse layer. The interpretive layers are conveniently separated into the right and left hands. Both interpretive layers are derived through registral accents: the left hand accented by a lower register, and the right hand by a higher register. The left hand contains further phenomenal accents with the *ff* marking and accents on the lower of each set of two sixteenth notes. This dissonance is labeled D2-1: "D" for displacement, and 2-1 for the dissonant 2-layer in the left hand moved backwards by one unit in the pulse layer from the consonance. In this case, consonance is also established with reference to the notated meter. A "plus" sign denotes those displacements moved forward from the consonance, and a "minus" sign denotes those moved backwards. The positive or negative association in the label is determined by the musical context in which the displacement dissonance occurs. Some cases can be interpreted both ways when the differentiation seems inconsequential to the reading of the passage.

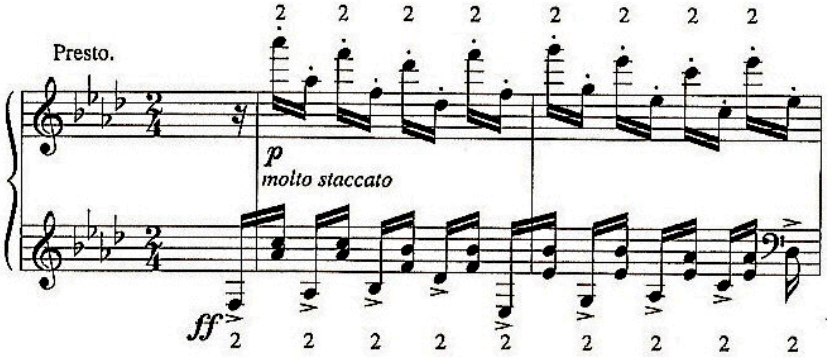

Figure 1.10: Krebs's Example 2.9, from Schumann's "Paganini" from *Carnaval*, mm. 1-2.

The final set of concepts essential to the goals of this thesis is Krebs's distinction between direct and indirect metric dissonances. A direct metric dissonance is a "dissonance

resulting from superposition of layers of motion."[20] That is, a direct metric dissonance is created by the simultaneous occurrence of conflicting metrical layers. As all previous figures have illustrated direct metric dissonances, Figure 1.11 (Krebs's Example 2.12A) shows a direct displacement dissonance. The pulse layer is the quarter note. The notated meter and harmonic arrivals allow us to hear a 4-layer beginning on beat one. The phenomenal accents on beat four prompt us to hear a displaced 4-layer, labeled D4-1 (where 1 unit is equal to the quarter note). Due to the simultaneous conflict between these two layers, a direct displacement dissonance emerges.

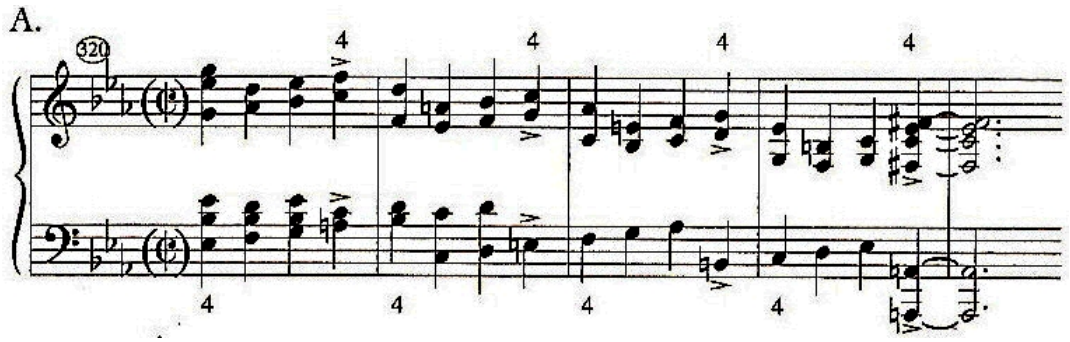

Figure 1.11: Krebs's Example 2.12A, from Schumann's Piano Quintet, op. 44, mm. 320-24.

An indirect dissonance, on the other hand, is a "dissonance resulting from the juxtaposition rather than superposition of layers of motion."[21] Rather than occurring vertically, as direct dissonances do, indirect dissonances occur horizontally, or next to each other. Figure 1.12 (Krebs's Example 2.12B) projects an indirect grouping dissonance. Each beat one is divided into four eighth notes, and each beat two is divided into six triplets. The juxtaposition of these rhythms results in an indirect G3/2 dissonance. As Krebs points out, "Indirect dissonance

[20] Ibid.
[21] Ibid., 254.

exists because of our tendency as listeners to maintain an established pulse for a short time after it is discontinued in actuality."[22] An indirect dissonance is a conflict between two events, one of which has stopped sounding but is still mentally continued by the listener.

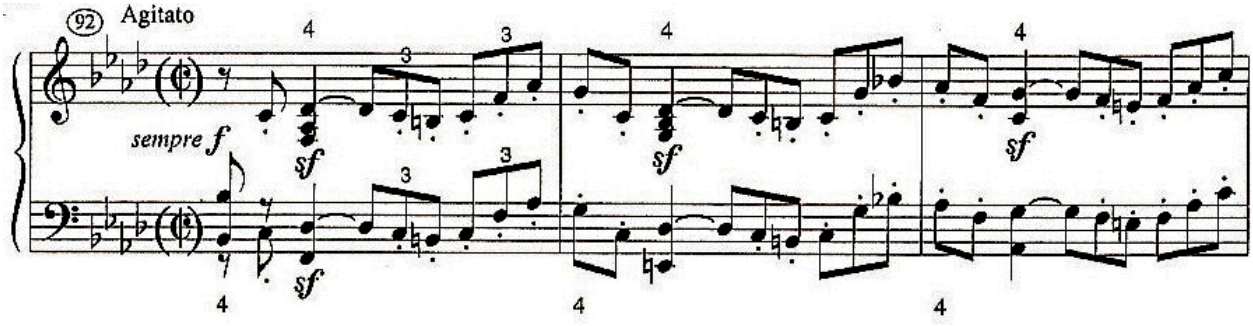

Figure 1.12: Krebs's Example 2.12B, from Schumann's Piano Quintet, op. 44, mm. 92-94.

With Krebs's system as my primary theoretical foundation, I will present a taxonomy of surface-level metric dissonance that takes into consideration the hermeneutic interpretation resulting from hearing each passage. Each passage will be placed in a category based on how it is heard and the role of the metric dissonance in its musical context; however, each musical example is not necessarily the only means by which to achieve its respective effect or affect.

To begin this taxonomy, I will first develop a dichotomy between those situations that achieve musical effects and those that achieve musical affects. One possible way to create this dichotomy is to set up the opposition between the "structural" for musical effects, and the "expressive" for musical affects. However, Robert Hatten discusses several issues brought about by the use of these terms as separate entities."[23] First and foremost is the implication that in defining these terms as a dichotomous relationship, the assumption is that they are mutually

[22] Ibid., 45.
[23] Robert Hatten, *Interpreting Musical Gestures*, 9-11.

exclusive; that is, structural entities cannot be expressive, and expressive entities cannot be structural. Hatten asserts the inaccuracy of this assumption when he states, "We could as easily state that we 'structure an expression' as that we 'express a structure.'"[24] Certainly, these terms are not mutually exclusive as the dichotomy implies.

Furthermore, as will be shown in Chapter 2, the category that represents what may be called structural metric dissonances does not always have structural implications, though it is a part of the structure of the music on some level. For example, the textural metric dissonance that will be discussed in Chapter 2 does not affect the interpretation of the musical structure, but is often an accompanimental gesture occupying at least the length of a phrase. By contrast, the cadential metric dissonance is tied directly to the structure of the musical surface. As Chapter 2 will show, the cadential metric dissonance is a substantial factor in the structure of the cadence, and therefore in the structure of the phrase.

For the aforementioned reasons I will use the terms functional and expressive metric dissonance in a dichotomous fashion. Functional metric dissonances, as will be discussed in Chapter 2, are defined as surface-level metric dissonances that create or enhance compositional effects. Within this category are subcategories that I will call the cadential metric dissonance, the textural metric dissonance, and the label-listener paradox. These subcategories further delineate the effect that each metric dissonance projects. Within the subcategory of cadential metric dissonance Austin T. Patty's work on pace will contribute to a further understanding of the concept.[25]

[24] Ibid., 10.

[25] Austin T. Patty, "The Influence of Melodic and Harmonic Pacing on Musical Climax with Particular Attention to Brahms's A Major Violin Sonata." (Presentation given at Annual Meeting of the South Central Society for Music Theory, 9 February 2007).

Expressive metric dissonances, as will be discussed in Chapter 3, are defined as surface-level metric dissonances that create and/or contribute to the emotion or mood to be portrayed by each particular excerpt, thereby achieving musical affects. Subcategories of expressive metric dissonances that I will discuss and define are humor, pictorialism, and nostalgia. In order to understand these subcategories further, I will make use of the work of Leonard G. Ratner on topics, and Robert Hatten on binary opposition.

II. FUNCTIONAL METRIC DISSONANCES

In the construction of a music-theoretical system, the nomenclature should clearly differentiate distinct musical phenomena within the parameter that it serves to conceptualize. That is, different labels should refer to different musical functions, and the same label in two separate situations should mean that they are functionally the same. For example, let us consider the occurrence of a second-inversion tonic chord. If we label it simply I6/4 we know that we have a tonic chord in which the fifth is the lowest sounding pitch. Theorists have developed an understanding of the I6/4 as having at least four different functions: passing, neighboring, arpeggiating, or cadential. Further, theorists have come to understand that the cadential I6/4 is an extension of dominant function, and thus label it a V6/4.[26] This re-labeling allows us to understand the function of the chord in its musical context. It is just this type of evolution that I seek to develop in the understanding of surface-level metric dissonance.

Similar to the rudimentary Roman numeral analysis, which allowed us only to identify the chord content and inversion, Krebs's system provides the beginning of an understanding of surface-level metric dissonance. Krebs's labeling system does not reflect the musical function of the dissonances in their immediate context. Because of this, the same label may be applied to dissonances that are deployed to achieve fundamentally different musical ends. Just as most standard music theory textbooks have only one label to identify the second-inversion tonic chord based on the pitch content, we have only one label to identify each particular instance of metric dissonance. And, whereas in the late twentieth century Roman numeral analysis evolved to

[26] The following articles are useful in the discussion of 6/4 chords: David Beach, "The Functions of the Six-four Chord in Tonal Music." *Journal of Music Theory* 11/1 (Spring 1967): 2-31; David Beach, "More on the Six-four." *Journal of Music Theory* 34/2 (Fall 1990), 281-290.

allow for a sophisticated and syntactic functional understanding of chords,[27] the labeling of metric dissonances should likewise evolve to account for the possible functions that can occur.

To illuminate the problems associated with the current labeling system, I will analyze two fundamentally different examples that have the same label. An indirect grouping dissonance occurs between mm. 1-7 and 8-10 of Figure 2.1, which shows the opening measures of the first movement of Mozart's Piano Sonata in G Major, K. 283.

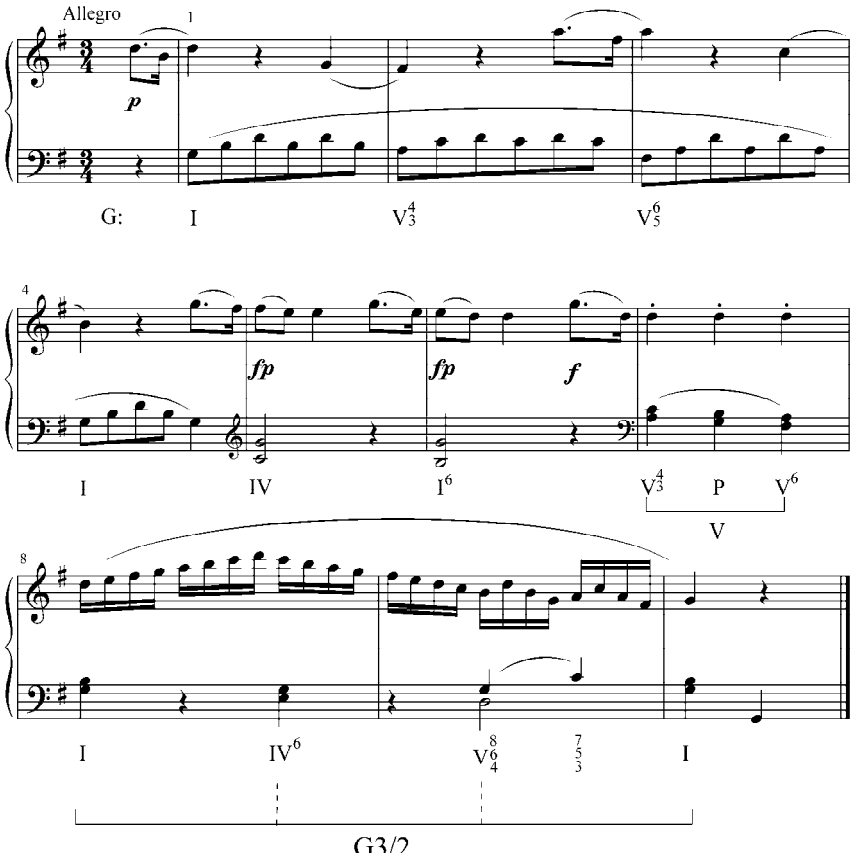

Figure 2.1: G3/2 Metric Dissonance in Mozart's Piano Sonata in G Major, K. 283, 1st mvt., mm. 1-10.

[27] Some of the most influential of such textbooks are: Edward Aldwell and Carl Schachter, *Harmony and Voice Leading*, 2nd ed. (New York, Harcourt Brace Janovich College Publishers, 1989); Robert Gauldin, *Harmonic Practice in Tonal Music* (New York, W. W. Norton & Company, 1997); Steven G. Laitz, *The Complete Musician: An Integrated Approach to Tonal Theory, Analysis, and Listening* (Oxford: Oxford University Press, 2003).

Measures 1-7 are consonant with the notated 3/4 meter. In m. 8, the grouping of the quarter-note pulse layer changes from 3 to 2. Simultaneously, the harmonic rhythm changes from one chord every measure, which solidifies the projected 3-layer, to one chord every two beats, now projecting a 2-layer. This change creates an indirect G3/2 dissonance. In this example, the G3/2 dissonance represents a hemiola typical of a cadential gesture. In the accompaniment of Figure 2.2, which shows mm. 30-34 of the second movement of Brahms's Clarinet Quintet in B Minor, op. 115, we also find a G3/2 metric dissonance. At m. 32, the second violin has eighth notes consonant with the notated 3/4 meter while the viola and cello have triplets. Together, the different layers in the accompaniment project a direct grouping dissonance of three-against-two (G3/2, where one unit is equal to the eighth note).

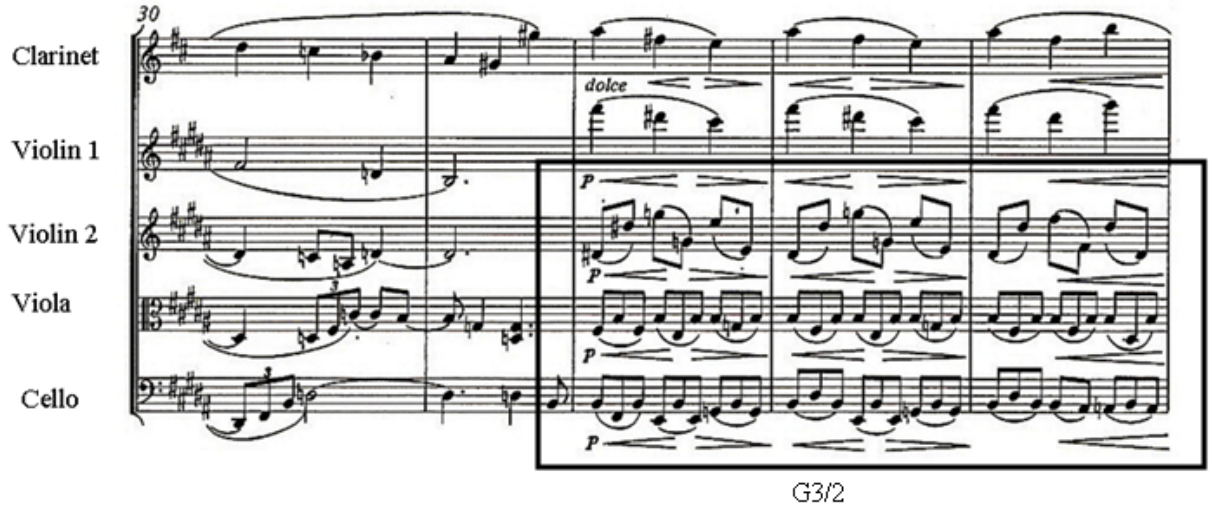

Figure 2.2: G3/2 Dissonance in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 30-34.

The difference between these two passages (Figures 2.1 and 2.2), both labeled G3/2, is evident. The dissonance in Figure 2.1 is more audibly pronounced and serves to enhance the harmonic and melodic tension of the pre-dominant and dominant in the cadential gesture. The

dissonance in Figure 2.2 goes almost unnoticed to the listener. What we do hear, however, is the effect of a thicker, richer texture. These two passages are labeled the same way in Krebs's system, but ultimately have undeniably different functional ends; Figure 2.1 is an integral part of the cadential gesture while Figure 2.2 enhances the texture.

The category of functional metric dissonances will group instances of surface-level dissonances into subcategories that identify their specific musical goals. Functional metric dissonances are defined as surface-level dissonances that create or enhance compositional effects. In this category are examples that impact only the surface of the music, generally lasting the length of a phrase or less. As opposed to the extramusical association and musical affects of expressive metric dissonances, the subcategories of functional metric dissonances (cadential, textural, and the label-listener paradox) will classify metric dissonances based on their primary function within the immediate musical context, their musical effect, and clarify Krebs's labeling system by providing an understanding of the role of each instance as part of the passage.

The cadential metric dissonance is defined as a metric dissonance at cadential points that presents a rhythmic correlative to the harmonic tension and acceleration of the pre-dominant and dominant. Most often, metric consonance will be restored at the resolution to tonic. As Lester states, "Cadences are by nature neither metrically accented nor metrically unaccented . . . Their accentual status is created by their context—by the preceding patterns of accentuation and by the accent-producing factors that occur along with them."[28] The "accentual status" that Lester refers to here is the strength of the cadential gesture itself. The strength of the cadence is influenced by the factors that contribute to the tension and their resolution. That is, the more tension that occurs within the pre-dominant and dominant (through harmony, rhythm, or both) the stronger

[28] Joel Lester, *The Rhythms of Tonal Music* (Carbondale: Southern Illinois University Press, 1986), 177.

the resolution at the arrival of the cadence. Furthermore, the more tension-contributing factors that resolve at the arrival of the cadence, the strong the sense of resolution.[29]

The concepts of tension and resolution are analogous to Austin T. Patty's intensification and relaxation, respectively, in his discussion of the pacing of musical events. To introduce the idea of pacing, Patty states, "The pacing of musical events influences our experience of musical climax in a variety of ways. The common assumption is that a fast pace, considered as a fast rate of harmonic or melodic change, contributes to tension at points of climax, and that a slow pace helps tension to dissipate."[30] Despite its obvious limitations, the pace-tension hypothesis is useful in understanding the processes the majority of tonal music follows. From here, Patty organizes the pace-tension hypothesis which states that "1) a fast pace creates tension, and acceleration is a kind of intensification; 2) a slow pace creates relaxation, and deceleration is a kind of abatement."[31] It would then follow logically that an increasingly faster pace (i.e., acceleration) creates increasing tension, and a progressively slower pace (i.e., deceleration) creates more relaxation.

In discussing cadential gestures that conform to the pace-tension hypothesis, intensification is most often created through acceleration of harmonic rhythm, metric dissonance, or a mixture of the two. For example, the classic hemiola figure in 3/4 meter, which is essentially Krebs's G3/2 dissonance, often strengthens cadential motions in Baroque and Classical repertoires by clarifying the accented metric position of the goal through intensification and subsequent relaxation. Through harmonic and rhythmic acceleration and deceleration,

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[29] Edward T. Cone, "*Musical Form and Musical Performance* Reconsidered." *Music Theory Spectrum* 7/v (1985): 149-158. Through an alternate understanding, Cone comes to similar conclusions about the cadential dissonance, which he refers to as a "hemiola cadence." Cone asserts that the pattern of strong and weak measures that lead up to a hemiola is interrupted by the hemiola itself. Generally, the second of two hemiola measures should be a strong measure. Since it is not, essentially suspending the expected strong measure and re-locating it to the resolving downbeat of the next measure, the strength of the cadential gesture is enhanced.

[30] Patty, "The Influence of Melodic and Harmonic Pacing," 1.

[31] Ibid., 4.

cadential dissonances project this intensification and release. Figure 2.1 is representative of this hemiola, which I call a cadential metric dissonance. This example maintains the triple subdivision of the measure throughout the passage. That is, the pulse layer is consistently the quarter note. Yet, beginning in m. 8, the starting point of the cadential gesture, the grouping of the quarter-note pulse layer is altered from three to two, thereby creating a G3/2 cadential metric dissonance. This dissonance enhances the change in harmonic rhythm from one chord every measure, or three pulses, to one chord every two pulses. Following the pace-tension hypothesis, the acceleration caused by the change in harmonic rhythm and the indirect G3/2 dissonance, intensification occurs. Subsequently, in m. 10, when the harmony progresses to the expected tonic and the G3/2 dissonance dissolves to metric consonance, the listener senses resolution.

Cadential metric dissonances can also occur in a fashion that is at odds with the pace-tension hypothesis. While Patty does not deny the significance of the pace-tension hypothesis, his main purpose is to illustrate examples that contradict its foundation. He states, "Contrary to the pace-tension hypothesis, however, deceleration does not always promote abatement [relaxation]."[32] His point here is that deceleration may project intensification and acceleration may result in relaxation. In Patty's Example 5, shown here in Figure 2.3, the musical climax found on the second beat of m. 20 is attained through registral accent, dynamic accent (crescendo), and harmonic and rhythmic *deceleration*. Measures 16-17 each have two chords, m. 18 has only one chord, and the Neapolitan sixth that begins on the second beat of m. 19 is extended for four beats, resolving at the climax on the second beat of m. 20. Patty also points out that the melodic D occurring on the second beat of m. 19 is the third part of a hemiola that begins in m. 18. We would expect this hemiola to resolve on the downbeat of m. 20, but that resolution is delayed until the D moves to E on the second beat of m. 20, further enhancing the

[32] Ibid., 5.

deceleration and accentuating the climax. Patty concludes, "The effect of the deceleration, however, is not the restoration of a calmer, less intense state; nor does it offset the intensification in other parameters. Instead, the deceleration magnifies our anticipation of the upcoming climax."[33]

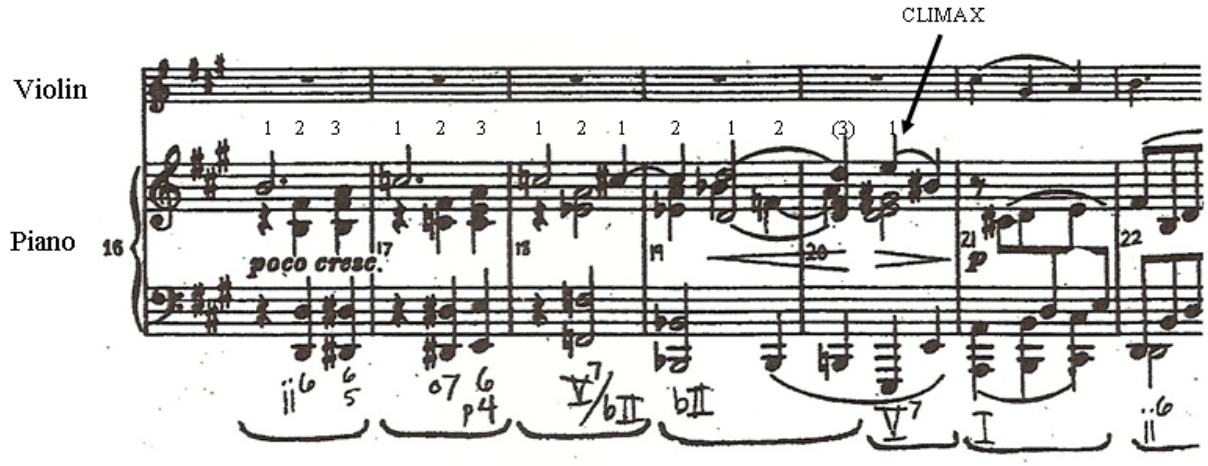

Figure 2.3: Patty's Example 5, from Brahms's Violin Sonata, op. 100, 1st mvt., mm. 16-22.

Figure 2.4, from the opening measures of the second movement of Brahms's Horn Trio in E-flat Major, op. 40, is an example of a cadential metric dissonance that intensifies through deceleration of the basic pulse and simultaneous acceleration of harmonic content. In order to fully understand this passage and identify the interpretive layers, we must view the phrase in its entirety. This phrase is a sentence structure that spans mm. 1-17; mm. 1-4 present the basic idea, mm. 5-8 are a sequential repetition of the basic idea, and mm. 9-17 are a continuation through liquidation leading to a cadence.[34]

[33] Ibid.

[34] William E. Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental work of Haydn, Mozart, and Beethoven* (Oxford: Oxford University Press, 1998), 9-12. The terms basic idea, sequential repetition, and continuation through liquidation come from Caplin's discussion of sentence structure.

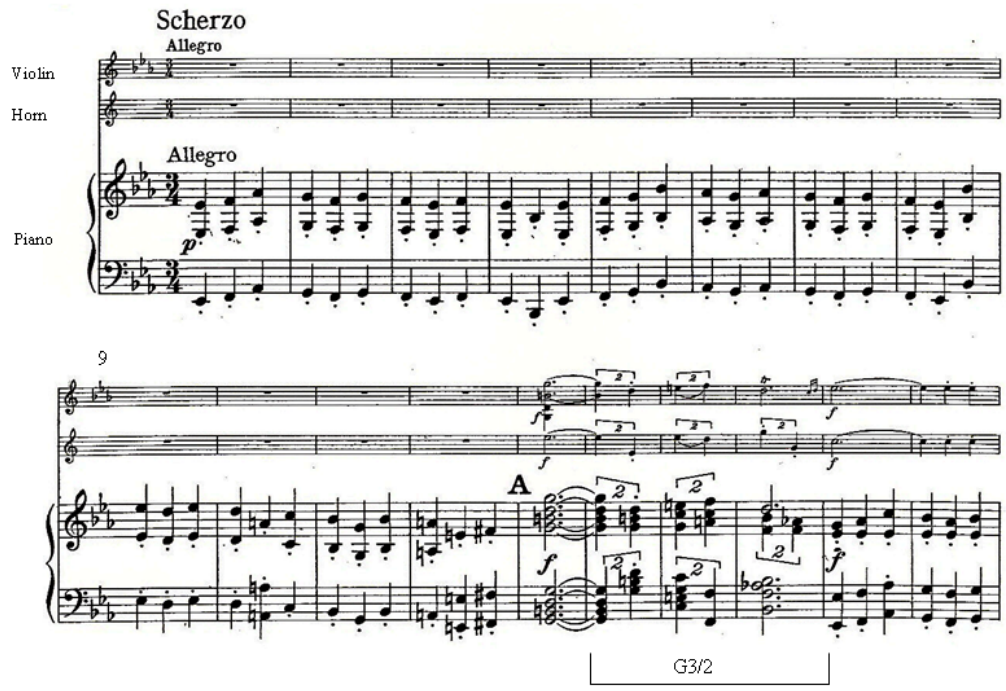

Figure 2.4: G3/2 Cadential Dissonance in Brahms's Horn Trio in E-flat Major, op. 40, 2nd mvt., mm. 1-18.

The pulse layer is the quarter note. The descending line and motivic similarities of mm. 1-4 and 5-8, shown in the melodic reduction of Figure 2.5, allow us to interpret a 3-layer.

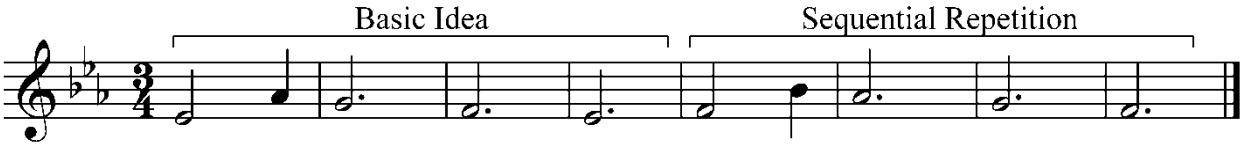

Figure 2.5: Melodic Reduction of mm. 1-8 of Brahms's Horn Trio in E-flat Major, op. 40, 2nd mvt.

From mm. 9-12, there are two possible interpretive layers: first, a continuation of the previous 3-layer, shown in the melodic reduction of Figure 2.6, and second, a 2-layer, shown in the reduction of Figure 2.7. The interpretation of a 3-layer seems most justified. The notated

meter is 3/4 and we can immediately find motivic similarities between mm. 1-8 and 9-12; namely, the neighbor motive that serves to prolong one pitch through each measure. Furthermore, mm. 11-12 are motivically parallel to mm. 9-10, the lower neighbor motive now becoming a lower skip, but also serving to prolong one pitch through each measure. The persistence of this motive from mm. 1-12, establishes a 3-layer. A descending stepwise melodic line occurs from mm. 9-13, a 6-progression that tonicizes G, shown in the melodic reduction of Figure 2.6. The melodic fluency of this 6-progression further supports the interpretation of a 3-layer.[35] Lastly, the harmonies implied by the passage, also shown in Figure 2.6, contribute to the sense of a 3-layer here. The passage begins in tonic, moves to the dominant of iii at m. 10, which resolves to G minor in m. 11. The tonicization of G continues with the secondary dominant implied in m. 12, this time resolving to III in m.13.

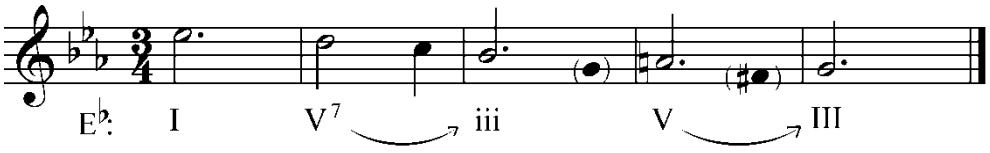

Figure 2.6: 3-Layer Interpretation of mm. 9-13 of Brahms's Horn Trio in E-flat Major, op. 40, 2nd mvt.

One could argue that the passage from mm. 9-12 is actually projecting a 2-layer, intensifying through acceleration in mm. 9-12, leading to the G major chord in m. 13, and ultimately to the E-flat chord in m. 17 through another type of intensification. The melodic reduction shown in Figure 2.7, based on the primary notes of each group, projects a disjunct melodic line that skips a tritone twice, from E-flat to A-natural, and from B-flat to E-natural—

[35] For a thorough discussion of melodic fluency and its structural implications, see Allen Cadwallader and David Gagné, *Analysis of Tonal Music: A Schenkerian Approach* (Oxford: Oxford University Press, 1998), 20.

not projecting the higher level implications that the stepwise melodic reduction does. Finally, if we interpret a 2-layer from mm. 9-12, we must hear this passage as an indirect G3/2 with the already established 3-layer of mm. 1-8.

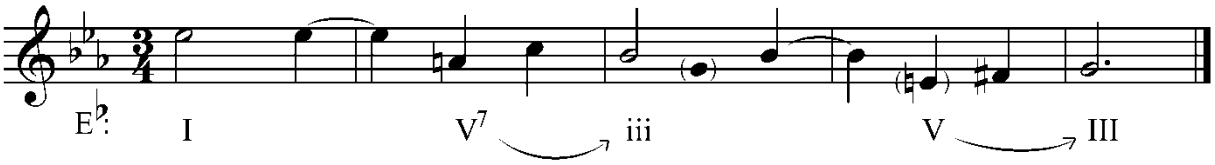

Figure 2.7: 2-Layer Interpretation of mm. 9-13 of Brahms's Horn Trio in E-flat Major, op. 40, 2nd mvt.

Having compared the above two interpretations, it becomes apparent that the 3-layer is more justified for several reasons. First and foremost, we do not hear a change in grouping from mm. 8-9 that would validate an indirect grouping dissonance. Rather, mm. 1-12 are metrically unified, with respect to the pulse layer and the interpretive 3-layer. The first time that we hear a change in rhythm and grouping is at m. 13, the arrival on G major and presence of a dotted half note when previously there were consistent quarter note pulses. Second, the reduction shown in Figure 2.6 maintains the stepwise coherence one would expect from a melodic line where the reduction in Figure 2.7 does not.

The established 3-layer becomes ambiguous in m. 13 with the arrival of the sustained G major chord. The listener at first perceives this to be a strong arrival. It is tonally prepared by the dominant function implications of m. 12, and agogically accented. However, by m. 14 it becomes clear that this is a temporary arrival leading back to the tonic key of E-flat in m. 17, the true goal of the phrase. The quarter-note pulse layer disappears at the arrival on the dotted half note in m. 13. Though this pulse layer is no longer audible, it was present long enough for the

listener to mentally imply its continuation. Likewise, the introduction of duple subdivision of the bar in m. 14 is so brief compared to the preceding triple subdivision that the passage projects a strong sense of metrical conflict. The change from triple to duple subdivision causes us to hear an indirect G3/2 dissonance. Measures 14-16 lead via descending fifths sequence to a V^7-I cadential progression that reintroduces the tonic of E-flat. Metrically, while the duple subdivision in mm. 14-15 is significant, the deceleration of the pulse layer leading into the cadential passage is more significant: where we had three pulses to every measure, we now have a cadential passage that contains only two pulses to every measure. This cadential metric dissonance is therefore created through deceleration and enhances the intensification associated with the pre-dominant and dominant. As Patty states, "Deceleration does not detract from intensification; rather, we have found that deceleration can contribute to mounting tension."[36]

While I have shown two fundamentally different G3/2 dissonances that achieve the same goal, other G3/2 dissonances can serve entirely different purposes from that of the cadential metric dissonance. One important possibility might be termed textural metric dissonances—direct or indirect metric dissonances that enhance the timbre, texture, or other sonic effects of an ensemble, most often occurring as accompanimental gestures. Figure 2.8, showing mm. 30-34 of the second movement of Brahms's Clarinet Quintet in B Minor, op. 115, projects a textural metric dissonance. In this excerpt, the viola and cello have straight triplets while the second violin has eighth notes, creating a G3/2 dissonance that is clearly not cadential. In this case, since the melody is subdivided by eighth notes and 3/4 is the notated meter, the 3-layer created by the triplets plays the dissonant role. Despite the presence of a dissonance within Krebs's system, the passage projects very little sense of metrical conflict. This phenomenon is quite common with regard to textural metric dissonance. The listener does not hear the 2-layer and 3-

[36] Ibid., 8.

layer separately. Rather, the blending of these layers creates a thicker, fuller texture, perhaps even creating the illusion of a larger ensemble accompanying this melody.

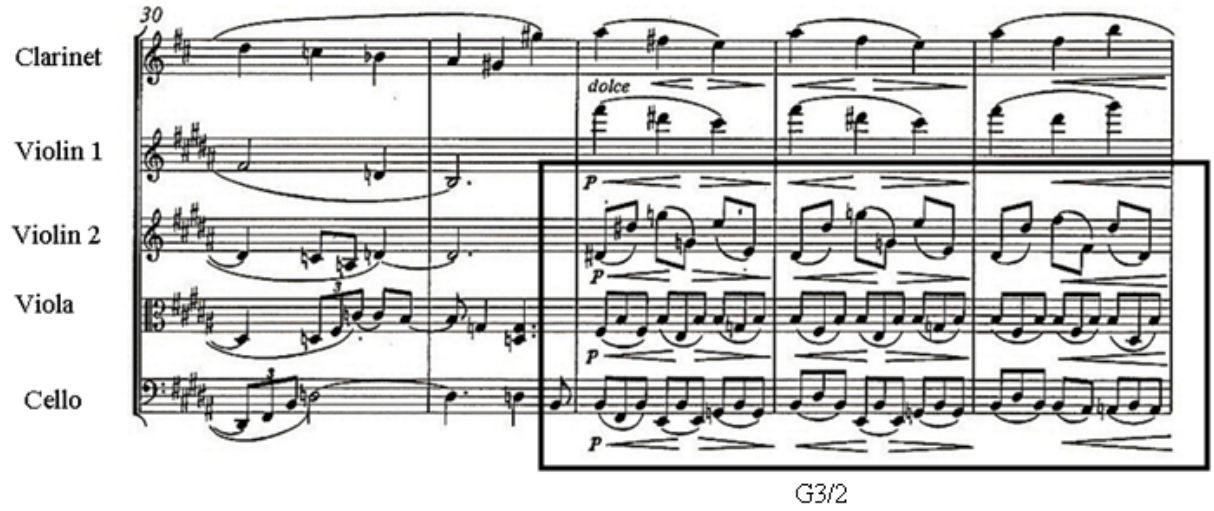

Figure 2.8: G3/2 Textural Dissonance in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 30-34.

Another textural grouping dissonance, with an identical label in Krebs's system, but quite different to the ear, can be found in mm. 139-146 of the first movement of Brahms's Horn Trio in E-flat Major, op. 40 (Figure 2.9). Both the horn and violin are melodic here, and the piano plays the accompaniment. The triplets in the piano right hand are dissonant with the notated 2/4 meter and the consonant eighth-note pulse layer projected in the left hand, violin, and horn. Once again, we have a G3/2 dissonance between the right and left hands of the piano part; Although the left hand is consonant with the pulse layer, it is dissonant with the melodic parts and notated barlines. The consistent placement of the lowest note on beat two creates a registral accent that encourages the listener to hear this beat as beat one. Therefore, the left hand creates a D4+2 dissonance (where one unit is equal to the eighth note). Whereas it was quite difficult to

audibly separate the triplets from eighth notes in Figure 2.8, in Figure 2.9 the dissonance is slightly more audible. Nonetheless, the presence of this superposed grouping and displacement dissonance creates a thicker, fuller texture similar to the one found in Figure 2.8.

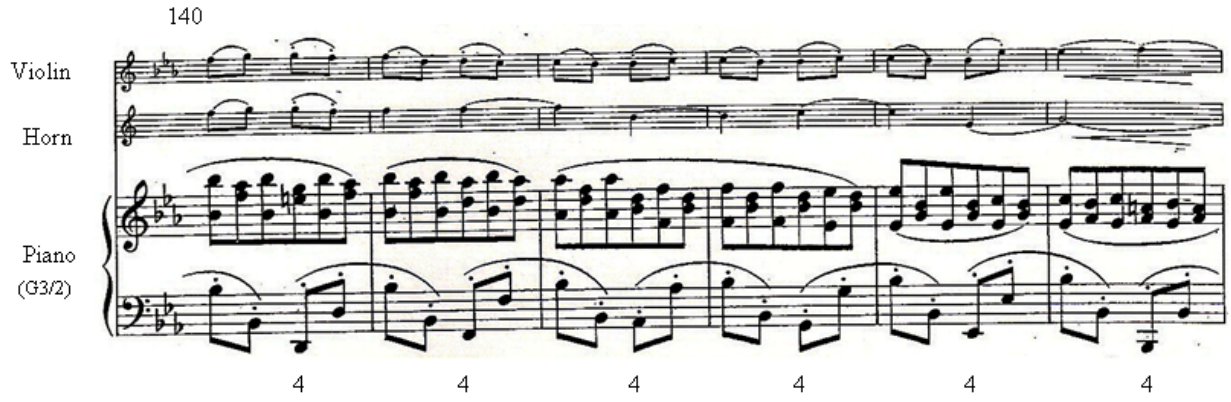

Figure 2.9: G3/2 Textural Dissonance in Brahms's Horn Trio in E-flat Major, op. 40, 1st mvt., mm. 140-145.

In the previous illustrations of textural grouping dissonances, each instrument carries one of the two elements of the dissonance (i.e., the second violin in Figure 2.8 projected the 2-layer, while the viola and cello projected the 3-layer). To be sure, this does not have to be the case. In Figure 2.10A, mm. 1-4 of the second movement of Brahms's Clarinet Quintet in B Minor, op. 115, and the composite rhythm shown in Figure 2.10B, a textural grouping dissonance is derived from the composite rhythm of the accompanimental ensemble (the second violin, viola, and cello). Unlike the previous examples, the role that each instrument plays in the grouping dissonance changes from beat to beat. On every beat one accompanimental instrument plays triplets while at least one other accompanimental instrument, sometimes both, has eighth notes. This projects a G3/2 textural grouping dissonance. However, the instrumentation of the triplets

and eighth notes changes from beat to beat. On the second beats of mm. 1-3 the cello has no attack on beat two, the viola has eighth notes, and the second violin has triplets. On the third beat of these measures the second violin and viola both have eighth notes and the cello carries the triplets. Notice how this switching of triplets and eighth notes continues throughout the first four measures of this passage. Regardless of which accompanimental instruments are carrying each component of the G3/2 textural grouping dissonance, the effect is the same: a smooth, rich, and full texture.

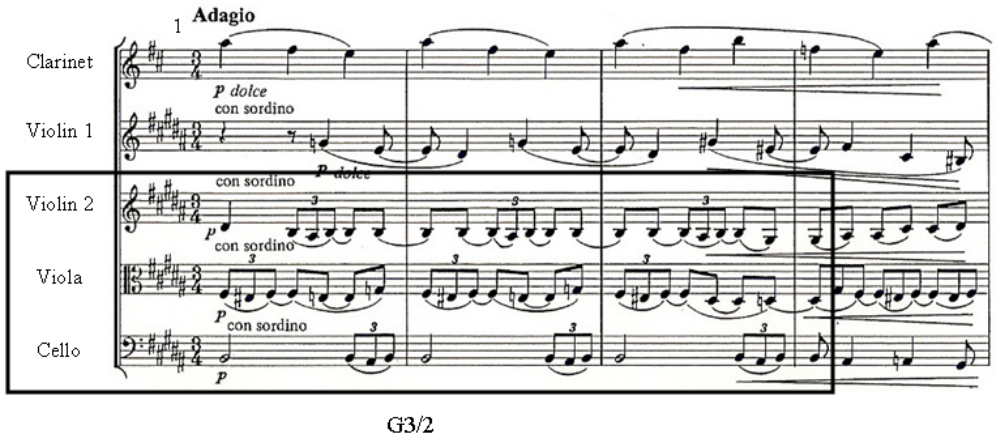

Figure 2.10A: G3/2 Textural Dissonance in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 1-4.

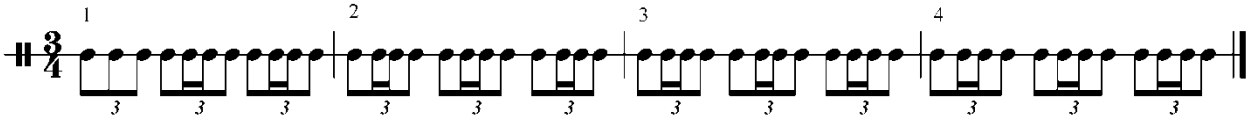

Figure 2.10B: Composite Rhythm of Accompaniment in Figure 2.10A.

Just as grouping dissonances may yield several different effects, a textural metric dissonance may be manifested through grouping or displacement. In the accompaniment of

Figure 2.11A, also from the second movement of Brahms's Clarinet Quintet in B Minor, op. 115, displacement creates a textural metric dissonance in mm. 9-11. The second violin, viola and cello make up the accompanimental ensemble, and each instrument has a triplet-based layer. The second violin is projecting a D3+2, the viola D3+1, and the cello a consonant triplet layer (where one unit is equal to the eighth-note triplet). A composite rhythm of essentially straight triplets is created by the merging of these three parts (Figure 2.11B). The aforementioned merging of the accompanimental lines, creating the composite rhythm, is what creates a 3-layer in this passage. The staggered articulations between the parts, which contribute to the displacement dissonance, allow the ensemble to sound homogenous, again creating the effect of a thicker, fuller texture.

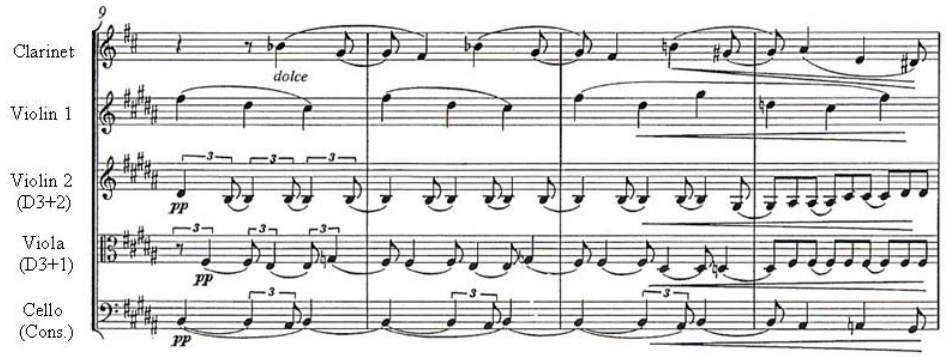

Figure 2.11A: Textural Displacement Dissonance in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 9-12.

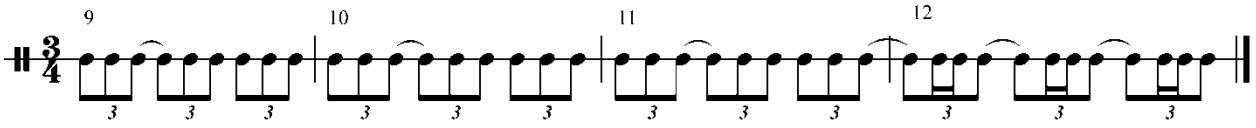

Figure 2.11B: Composite Rhythm of Accompaniment in Figure 2.11A.

To fully appreciate the effect of the above passage from Brahms's Clarinet Quintet in B Minor, op. 115, let us compare it with the opening of the second movement of Beethoven's String Quartet in F Major, op. 18, no. 1, shown in Figure 2.12. In this passage, Beethoven creates the texture of the accompanimental ensemble by composing straight triplets in all three parts. A 3-layer is projected by the accompanimental ensemble, making the composite rhythm of Beethoven's (Figure 2.12) and Brahms's (Figure 2.11) excerpts essentially identical. The texture of Beethoven's passage is markedly thinner than that of Brahms's passage because all three accompanimental lines articulate at the same time, allowing for a decay of sound between each articulated note. Though the accompanimental composite rhythms are essentially identical, the textural densities of the two passages are markedly different.

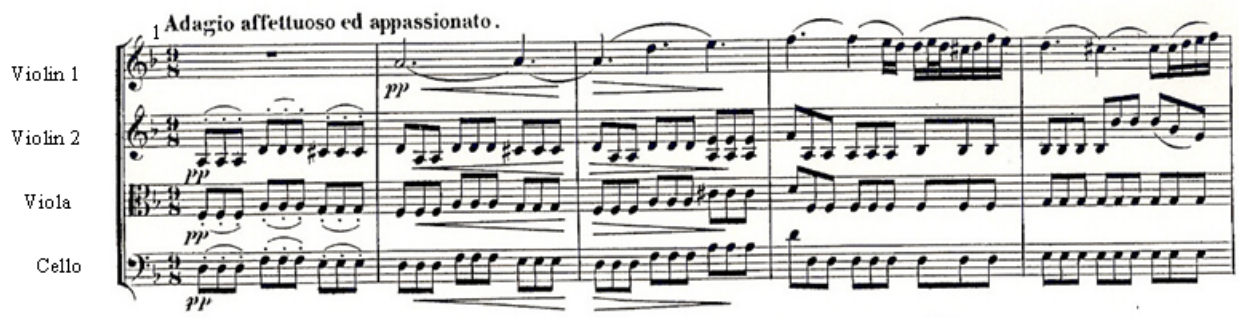

Figure 2.12: Consonant Textural Comparison in Beethoven's String Quartet in F Major, op. 18, no. 1, 2nd mvt., mm. 1-5.

The final category of functional metric dissonances is what I call the label-listener paradox. The label-listener paradox is created when, in passages involving a metric dissonance, the score leads to one analysis, or label, while the listener hears the opposite. That is, the written score shows a consonance where we hear a dissonance or vice versa. This category may not be as common as the foregoing ones; yet, its inclusion here is important in that its proper

understanding is the most lacking under Krebs's labeling system. When a scholar presents a new theory, it is intended to enhance previous understandings and allow theorists to develop a more accurate analysis of the material. In the following examples, I will argue that Krebs's system supplies the reader with information contrary to what is heard.

This is not to say, however, that Krebs gives no consideration for the sound of a passage. The plus or minus sign in the label of a displacement dissonance, for example, addresses the direction in which the displaced line sounds in relation to the consonant layer. He states, "Does displacement proceed in a forward or a backward direction from the pulses of a referential musical layer? Measuring in the direction of musical flow from these pulses seems more reasonable; I believe that it is possible to hear virtually all displacements in a 'forward' manner. There are, however, displacement dissonances that can also be perceived in a backward direction—dissonances whose antimetrical pulses can be heard as 'early onset' in relation to the following metrical pulses."[37] In addressing the proper labeling of displacement dissonances, Krebs does give some indication of the significance of how a passage manifests in sound. Yet, his consideration is limited in application, stopping short of providing theorists an understanding of the effect that the sound of a metric dissonance has on the label we choose. It is this oversight that results in the conflict between the label and the manifestation in sound.

When we see a label, we expect that label to tell us something significant not only about what we see in the score, but also about how we are to hear the passage. In mm. 54-62 of the third movement of Brahms's Clarinet Quintet in B Minor, op. 115 (Figure 2.13), Krebs's label tells us the exact opposite of what we hear. The quarter notes in the first and second violins are consonant with the notated meter. Meanwhile, the clarinet has a displaced line, labeled D4+1 (where one unit equals the eighth note). Given the written score and this label, we would expect

[37] Krebs, *Fantasy Pieces*, 35.

to hear a passage in which the first and second violins sound consonant and the clarinet sounds metrically dissonant. However, what we actually hear is just the opposite. The *pizzicato* marking in the first and second violins creates a softer sound that fades much more quickly than the sustained, displaced melodic quarter notes of the clarinet part. Upon listening, one would be inclined to label the clarinet as consonant and the first and second violins as a D2+1 dissonance.

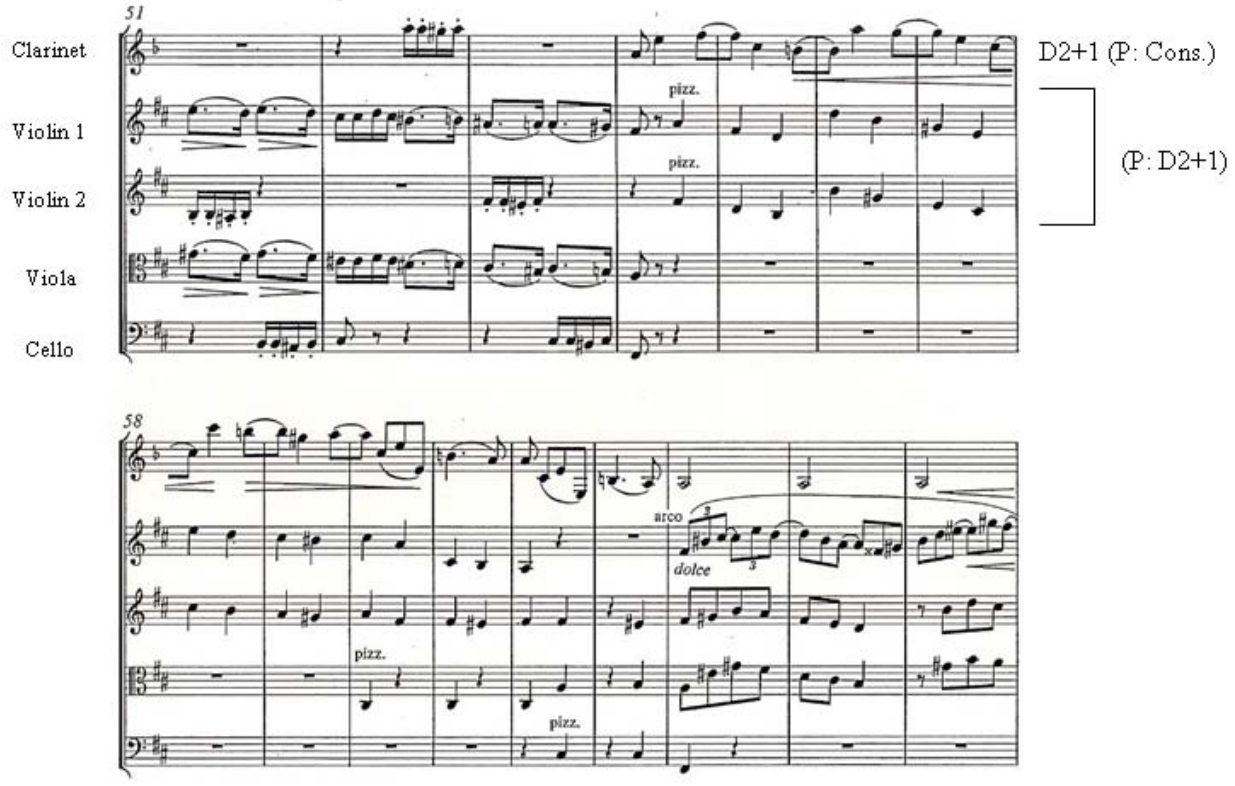

Figure 2.13: Label-Listener Paradox in Brahms's Clarinet Quintet in B Minor, op. 115, 3rd mvt., mm. 51-66.

To remedy this situation, I propose a refinement of Krebs's label that will allow theorists to capture the sonic manifestation of a particular passage. Given Krebs's system, the clarinet

would be labeled a D2+1. In order to clarify this, let us add a parenthetical label that addresses how the passage sounds. The letters C and D, for metrically consonant and dissonant would be optimal; yet, I do not wish to confuse this type of label with Krebs's D, for displacement. Instead, I will use the letter P, for perceived. In order to give this passage an appropriate label, I would identify the clarinet as D2+1(P: Consonant), and the first and second violins as (P: D2+1). This label allows us to understand how the passage is notated while the parenthetical label alerts the reader to the clash between how it is written and how it sounds.

Figure 2.14, which shows mm. 64-87 of the fourth movement of Brahms's Trio in B Major, op. 8, illustrates a similar problem. It seems obvious that the right hand in the piano is carrying a consonant melodic line, and the accompanimental pairing of the cello and the left hand of the piano are projecting a D2+1 (where one unit equals the eighth note). The notationally consonant interjections in the first violin, and the switch of the cello from notationally dissonant accompaniment to the melodic in m. 80 allow for this reading. Also, due to one's strong expectation to hear the principle melody as consonant, we hear the passage as it is labeled at first. The unrelenting nature of the displaced eighth notes coupled with the *pesante* marking and frequent double stops in the cello quickly (certainly by m. 68 where the melody repeats) change our perception of consonance and dissonance. It can be heard and justified the cello, doubled by the left-hand of the piano, is metrically consonant while the melody in the right-hand of the piano sounds like a D2+1. The score tells us to label the cello and the left hand of the piano as D2+1. Upon hearing, however, the label for the accompanimental pairing should be D2+1 (P: Consonant) and the melodic line, the right hand of the piano, should be labeled (P: D2+1).

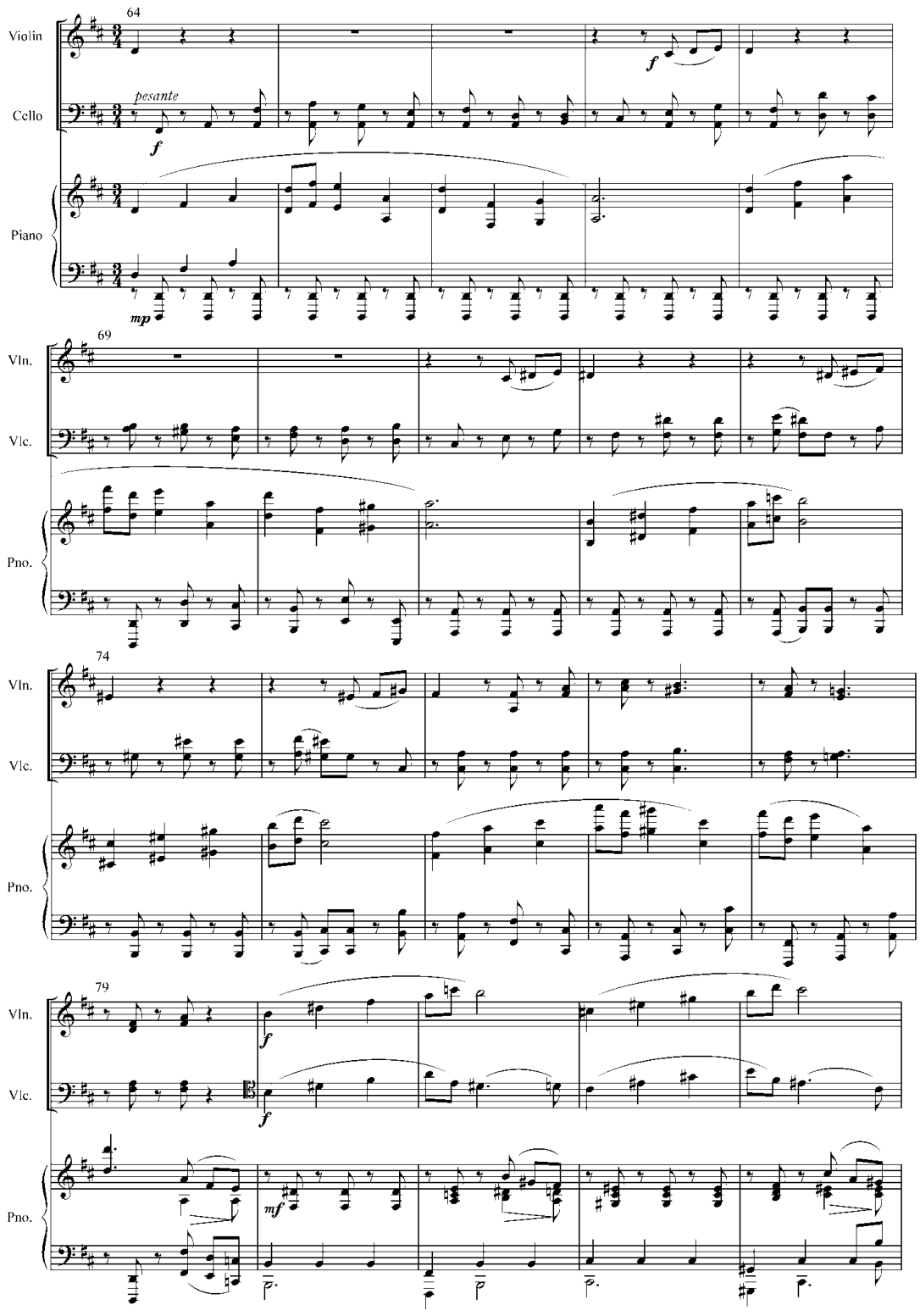

Figure 2.14: Label-Listener Paradox in Brahms's Trio in B Major, op. 8, 4th mvt., mm. 64-83.

In this chapter I have developed several categories representing some of the effects that a metric dissonance can have. This taxonomy has sought to clarify some weaknesses found in Krebs's system, showing how passages labeled the same can serve different functions and how different functions can be represented by more than one type of metric dissonance. I have further added to Krebs's system a labeling that accounts for the sound of a passage when the notation contradicts its sonic manifestation.

III. EXPRESSIVE METRIC DISSONANCES

Expressive metric dissonances are those metric dissonances that create and/or contribute to the emotion or mood to be portrayed by each particular excerpt. Like the category of functional metric dissonances, expressive metric dissonances are mainly surface-level occurrences. While functional dissonances achieve different local musical effects, as discussed in the previous chapter, expressive dissonances evoke musical affects, generally occurring over longer spans of time than functional dissonances. In this chapter, we will identify different types of expressive dissonances and examine how they depict emotive and expressive topics such as humor, pictorialism,[38] and nostalgia.

The possibilities for expanding Krebs's system that were addressed in our discussion of functional dissonances equally motivate this discussion of expressive metric dissonances. Passages that have the same label under Krebs's system may achieve fundamentally different expressive ends, while excerpts that are labeled differently may serve similar expressive purposes. As the musical examples in this chapter will show, the expressive categories proposed here will illuminate the compositional affects of surface-level dissonances that are undifferentiated in Krebs's taxonomy.

To be sure, several theorists have explored the expressive possibilities of metric dissonance.[39] However, many of these studies focus on only one piece of music or one specific

[38] The term "pictorialism" is used by Ratner, *Classic Music*, 25-26. Though Ratner uses pictorialism to refer explicitly to those works without text, I will adopt a broader definition in this chapter, including works with text.

[39] Most notable publications regarding the expressive trajectories of metric dissonances include Harald Krebs's *Fantasy Pieces*, 156-173; Krebs, "Dramatic Functions of Metrical Consonance and Dissonance in *Das Rheingold*," *In Theory Only* 10/5 (February 1988), 5-20; Yonatan Malin, "Metric Displacement Dissonances and Romantic Longing in the German Lied," *Music Analysis* (forthcoming); Richard Cohn, "Dramatization of Hypermetric Conflicts in the Scherzo of Beethoven's Ninth Symphony," *Nineteenth-Century Music* 15/3 (1992), 22-

genre without presenting a generalized theory of expressive metric dissonance. Further, the pieces studied often rely on text or characters to clarify the dramatic and expressive contexts. Krebs's discussion of *Das Rheingold*, for example, focuses on the correlation between metric dissonance and dramatic conflict as brought about by specific characters and text.[40] It is difficult to extend these concepts to other works as Krebs discusses their relevance only to one context. While Yonatan Malin examines exclusively German Lieder in his discussion of Romantic longing,[41] this is a quality, as I will show later, that is found in instrumental music as well.

One way to organize different types of expressive dissonances is through the concept of topics. In his seminal book on 18th-century music, Leonard Ratner defines topics as "subjects for musical discourse."[42] My expressive dissonances will be constructed upon this definition as it is elaborated by Ratner. He further delineates topics into two main subcategories: types and styles. According to Ratner, types "appear as fully worked-out pieces."[43] In this regard, he discusses various dances and dance-movements that are typical of 18th-century music, showing how their characteristic rhythms and pace assign them to one type or another, and separates them into high, middle and low styles.[44] While each dance type is characterized by its unique rhythmic structure and identifying pace, Ratner allows for the fact that a dance type may portray different emotions. For example, Ratner states of the minuet, "In classic music, compositions entitled *minuet* or *menuetto* covered a wide range of expression, from the frankly humorous to the deeply pathetic." Ratner shows three minuets here that project elegant, rustic, or deeply pathetic expressive

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40; and Ira Braus, "Dancing to Haydn's Fiddle: A Reply to Floyd Grave's 'Metrical Dissonance in Haydn'," *Indiana Theory Review* 17/1 (Spring 1996), 25-35.

[40] Harald Krebs, "Dramatic Functions," 5-20.

[41] Yonatan Malin, "Metric Displacement Dissonances."

[42] Ratner, *Classic Music*, 9.

[43] Ibid.

[44] Ibid.

qualities.[45] Although Ratner discusses how each type exemplifies the category of expression in which it is placed, he does not identify how each minuet achieves its respective expressive quality.

Styles, on the other hand, are "figures and progressions within a piece."[46] Unlike types, which are full movements or works, styles are sections, phrases, or moments within a movement or work that identify strongly with a particular expressive interpretation. In the subcategory of styles, Ratner employs a wider range of music than dance types in order to develop the possibilities within. Whereas a dance type is characterized by temporal factors such as meter, rhythm, and common tempo markings, a style is characterized by any musical factor that makes it unique. For example, Turkish music, occasionally evoked in the works of Classical composers, is distinguished by instrumentation thought by Western Europeans to be typical of Turkish music: drums, triangle, winds, and cymbals. The familiar *Sturm und Drang* style "uses driving rhythms, full texture, minor mode harmonies, chromaticism, sharp dissonances, and an impassioned style of declamation." The French overture was most recognizable by its "slow and heavy march tempo with dotted rhythmic figures."[47]

My category of expressive dissonances will be based on this dichotomy between types and styles. Generally, Ratner defines his subcategories according to rhythm, pace, or instrumentation. A less commonly employed approach, and the one that I will take to categorize expressive dissonances, is the one found in Ratner's subcategories of *Sturm und Drang* and Sensibility. Ratner defines *Sturm und Drang* as "the expression of subjective and intense

[45] Ibid., 10.
[46] Ibid., 9.
[47] Ibid., 18-26. Other styles that Ratner discusses include military and hunt, singing, brilliant, musette and pastorale, *Empfindsamkei*t (sensibility), strict and learned, and fantasia.

personal feelings," and Sensibility as "an intimate, personal style, often sentimental in quality."[48] Ratner does not define these categories by any specific musical parameter. Rather, he allows for the fact that each expressive quality may be produced by a variety of musical characteristics. Each example within my subcategories of expressive dissonance is representative of its respective category, and will be defined through a series of subjective expressive characteristics, in much the same way as Ratner defines *Sturm und Drang* and Sensibility.

One of the most prevalent topics in 18th-century music is that of humor. As I will show, the use of metric dissonance is often a vital source of musical humor. Defining humor is a difficult task, as senses of humor differ, often greatly, from one person to another. Indeed, whether or not humor is a single topic, or something broader that can permeate a number of topics, styles, and contexts is an open question.

For our purposes, we shall first concentrate on one crucial and well-delineated aspect of humor that is often portrayed by a metric dissonance: the idea of unexpectedness. A well-known example of unexpected humor (not related to metric dissonance) comes from the second movement of Haydn's Surprise Symphony, op. 94, shown in Figure 3.1. The antecedent phrase of this theme and variation movement, from mm. 1-8, provides the listener with nothing out of the ordinary, harmony and phrase structure unfolding as one would expect. The second phrase, mm. 9-16, begins much softer than the first, and with a more delicate texture, but is similarly predictable until the very end where the surprise for which the symphony is named occurs: a *fortissimo* chord on the second beat of m. 16. It is unexpectedness of this sort that gives humor to a particular passage.

[48] Ibid., 21-22.

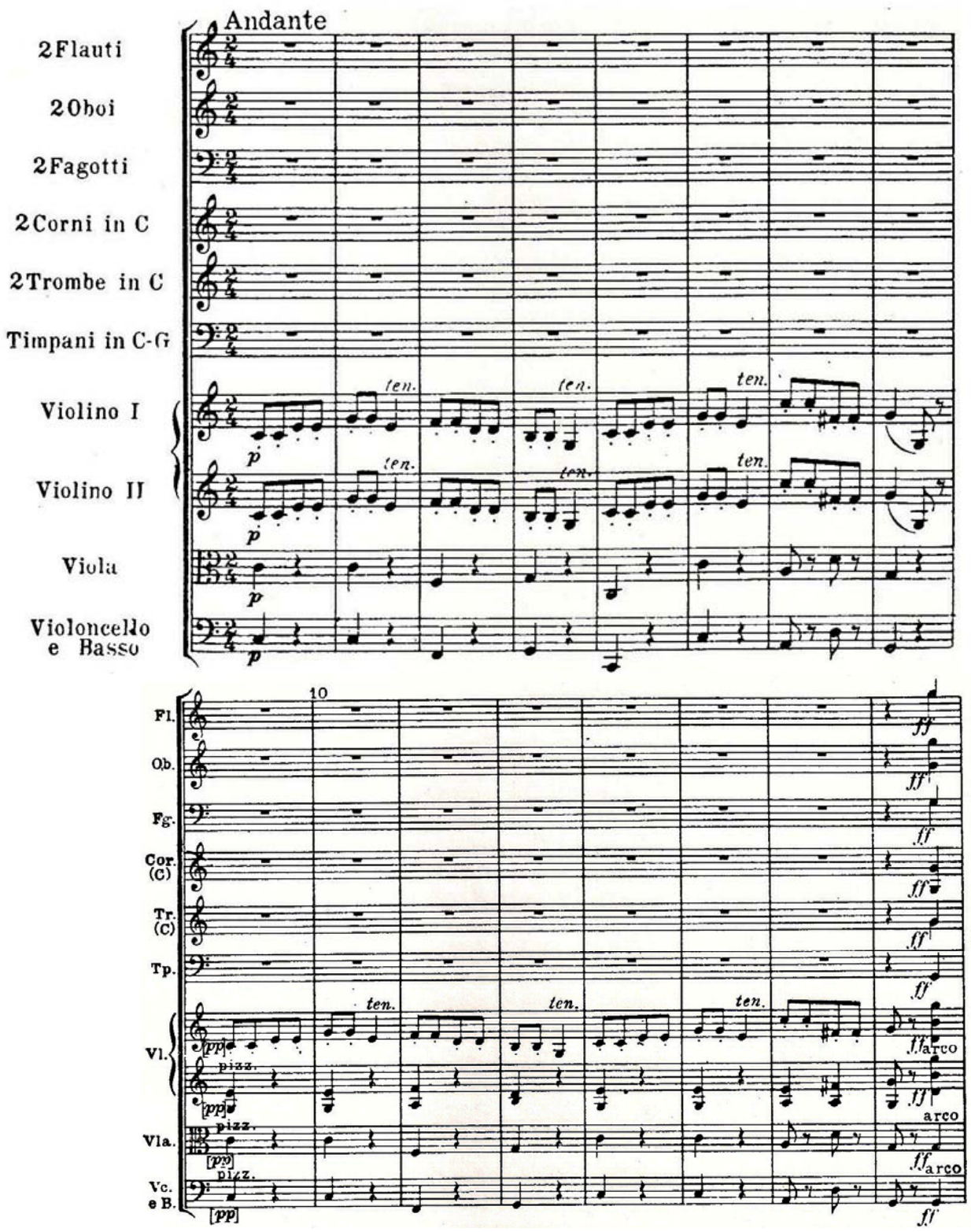

Figure 3.1: Metrically Consonant Unexpected Humor in Haydn's *Surprise* Symphony, op. 94, 2nd mvt., mm. 1-16.

One of the most common sources of humor in 18th-century music may be found in the scherzo genre. Literally a "joke," the scherzo appears either as an independent work or as a movement within a larger work, and therefore epitomizes Ratner's definition of a topic. Furthermore, since Beethoven is generally regarded as the first composer to establish the scherzo as a regular alternative to the minuet and as a classic movement-type, I will use passages from Beethoven's scherzos to illustrate this subcategory of expressive dissonance.[49]

When we encounter a scherzo, we expect to find a movement in triple meter, with a light feel and lively tempo. While there are many musical dimensions a composer may exploit to depict a joke, playing with rhythm and meter is definitely one of the more important resources of the joking character. Furthermore, the jokes within a scherzo are often the result of an unexpected, or seemingly misplaced rhythmic or metric event. Measures 1-34 of the second movement of Beethoven's String Quartet in F Major, op. 59, no. 1, is a case in point (Figure 3.2). Marked *Allegretto vivace e sempre scherzando*, this movement is intended to be played "always jokingly," and contains several inherently jocular qualities. The first measure, and subsequent rhythmically identical measures are ambiguous with regards to the interpretation of where strong beat one is to be heard. The notation tells us that the first sixteenth note should sound as the strong beat one. However, there are no performance indications to bring this out as such, though many recordings do just that. The other way to hear this motive is as a D3+1 (where one unit is equal to the eighth note). This reading is supported by the agogic strength of the second beat. Unexpected humor in the realm of agogic accents occurs within the rhythmic motive found in mm. 1-4, 9-12, 17-22, and 29-34. Measures 1-4 and 9-12 are part of the four-bar hypermetric pattern. In m. 4, the agogically accented dotted quarter note is the longest note up to this point of

[49] Hugh MacDonald and Tilden A. Russell: 'Scherzo', *New Grove Online* ed. L. Macy (Accessed 9 November 2007), <http://www.grovemusic.com.libezp.lib.lsu.edu>

the passage and sounds on a hypermetrically weak beat. The same agogic accent occurs in m. 12. In m. 21, the agogically accented dotted quarter note that happened first on the fourth hyper-beat of the rhythmic motive now happens on the fifth hyper-beat of the motive and is sustained an extra measure.

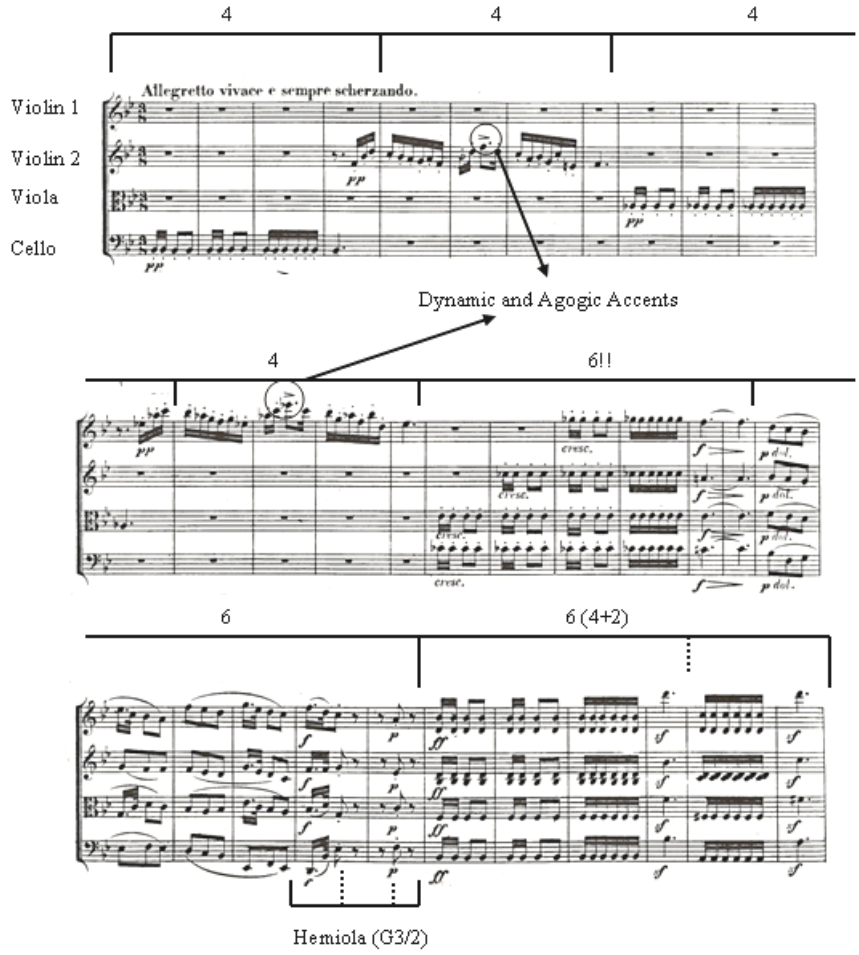

Figure 3.2: Humor in Beethoven's String Quartet in F Major, op. 59, no. 1, 2nd mvt., mm. 1-34.

Melodically, an agogic accent is found on beat two of m. 6. This melodic and durational highpoint of the first melodic statement, mm. 5-8, lasts long enough for the listener to be

surprised by the apparent pause on beat two before quickly resolving to melodic normalcy. The same unexpected joke occurs in m. 14 of the second melodic statement, mm. 12-16.[50]

On a higher structural level, the first sixteen measures establish a four-bar hypermeter. At m. 17, the hypermeter changes from four to six bars. Measures 17-22 are based on the original rhythmic motive, but expand it in length, texture, and pitch range. The second six measures of this section introduce a lyrical melody that contrasts with the frantic nature of the tune found in mm. 5-8 and 13-16. The opening rhythmic motive returns once again in the final six measures. In these six measures, phenomenal accents are found on hypermetric beats four and six (mm. 32 and 34, respectively), hypermetrically weak beats. Adding to the unexpected nature of the humor in this passage is the multititude of forms in which these pheonomenal accents occur—agogic, registral, and dynamic.

Whereas the metrical humor discussed in the scherzo of Beethoven's String Quartet in F Major, op. 59, no. 1 is created through the manipulation of the listener's expectations, humor also results from the superposition of conflicting rhythmic or metrical figures. For the listener, this type of humor arises when a movement or section of a work is unsettling in such a way that one cannot aurally identify the notated meter. Although not every passage that is metrically dissonant is humorous, we find in 18th-century music many examples in which the unsettling nature of metric conflict works in tandem with other factors to evoke a strong sense of humor.

A good example is found in mm. 1-8 of the third movement of Beethoven's String Quartet in B-flat Major, op. 18, no. 6, shown here in Figure 3.3. To begin with, neither the upper duo (first and second violins) nor the lower one (viola and cello), project the notated meter of 3/4

[50] Several other non-metric factors also contribute to the humor at this structural level; The first rhythmic motive is in the tonic key (B-flat), the second (mm. 9-12) is on A-flat, the third (mm. 17-22) is on C-flat, and, finally, the rhythmic motive is restated in B-flat at m. 29. This bass motion (B-flat, A-flat, C-flat, B-flat) may be a composing out of a chromatic double neighbor. Also, the first melodic statement tonicizes F, the second tonicizes E-flat, then a new, more singing melody is introduced in the tonic key of B-flat from mm. 23-28.

in a straightforward, consonant fashion. The upper duo projects a 3/4 meter that is displaced by one eighth note, Krebs's D6-1 (where one unit equals the eighth note). The dynamic accent created by the *sf* marking makes it clear that the notated anacrusis to each measure is actually to be heard as a strong beat. The 3/4 meter as actually projected by the upper duo is re-notated in Figure 3.4.

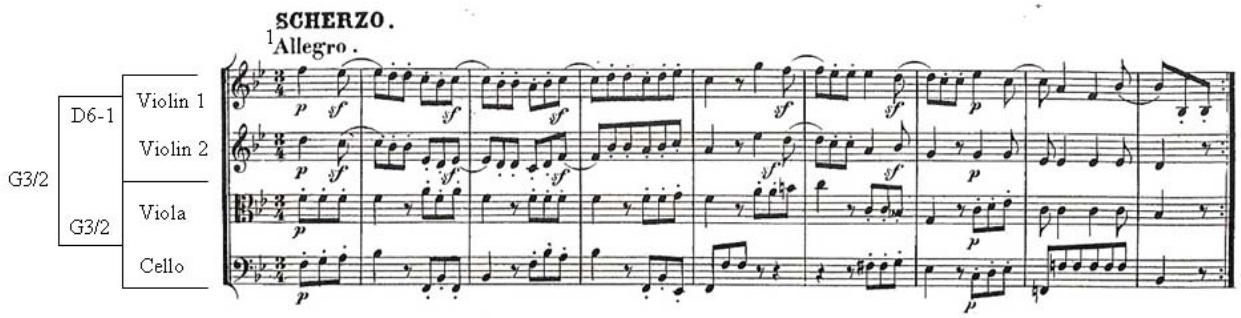

Figure 3.3: Humor in Beethoven's String Quartet in B-Flat Major, op. 18, no. 6, 3rd mvt., mm. 1-8.

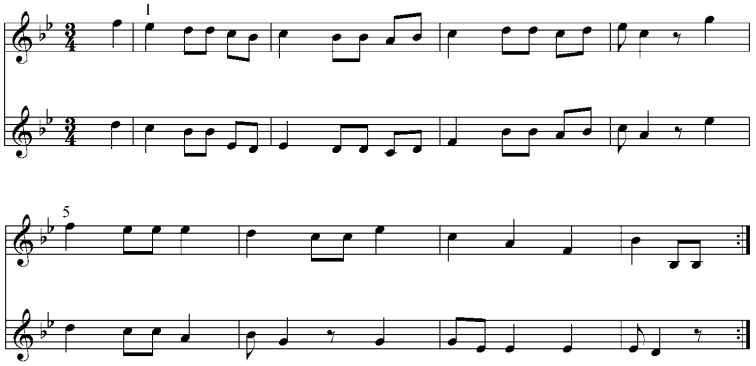

Figure 3.4: Re-notated Upper Duo of Beethoven's String Quartet in B-flat Major, op. 18, no. 6, 3rd mvt., mm. 1-8.

Meanwhile, the lower duo is projecting a 6/8 meter that is consonant only with regard to the notated downbeat, but is actually a G3/2 dissonance against the notated meter. As shown in Figure 3.5, the re-notated version of the lower duo, the downbeat of every measure is harmonically supported. Also, the constant grouping of three eighth notes beginning on the second beat of each measure, and the almost constant dominant support on each of these groupings lead this passage to be heard much more convincingly in 6/8 meter than they do to hearing a 3/4 meter.

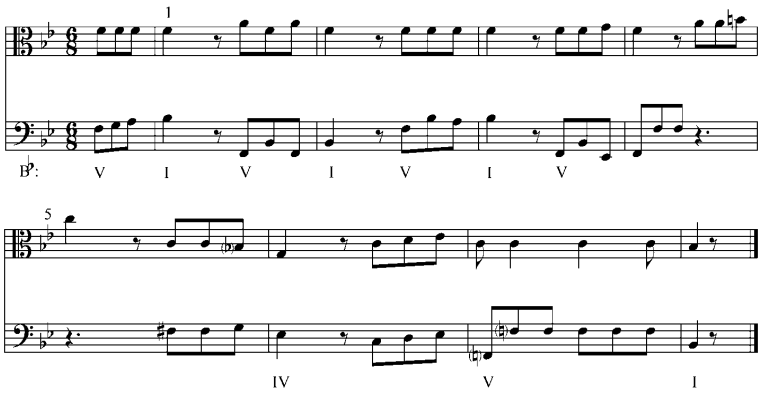

Figure 3.5: Re-notated Lower Duo of Beethoven's String Quartet in B-flat Major, op. 18, no. 6, 3rd mvt., mm. 1-8.

Besides the conflict between the two individual duos and the notated meter, metric dissonance between the two duos themselves also contributes to the humor of the passage. Since the upper duo projects a displaced 3/4 meter (a meter containing duple subdivision of the beat) and the lower duo projects a 6/8 meter (a meter containing triple subdivision of the beat), together they project a grouping dissonance of three-against-two, G3/2 (where one unit equals the eighth note). The representational diagram of Figure 3.6 shows the eighth-note pulse layer,

the D6-1 in the upper duo, the G3/2 in the lower duo, and the G3/2 created by the superposition of the two parts.

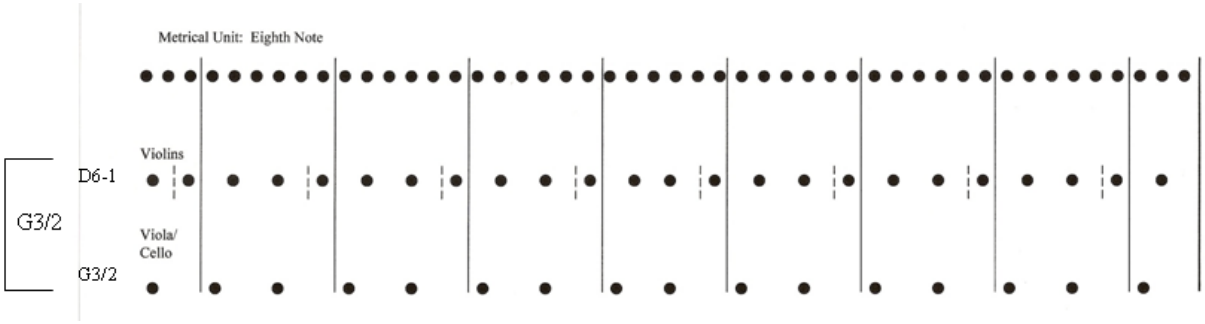

Figure 3.6: Representational diagram of Beethoven's String Quartet in B-flat Major, op. 18, no. 6, 3rd mvt., mm. 1-8.

A completely different affect that is often created by displacement dissonances is the idea of *Sehnsucht*. *Sehnsucht*, yearning or longing, is "one of the most prominent features of Romantic consciousness."[51] Metric dissonance, analogous to the idea of *Sehnsucht*, is "one of the recurring elements of nineteenth-century style."[52] As Malin points out, displacement dissonance and *Sehnsucht* do not always co-exist, showing that displacement dissonances in the works of Schumann "express or symbolize a variety of affects, including disquiet, excitement, conflict (inner or outer), madness, humor, and suspended, dreamlike states."[53] Nonetheless, the concept of *Sehnsucht* and presence of displacement dissonance can effectively complement one another. The key to this co-existence is that "Displacement dissonances may create a sense of

[51] Yonatan Malin, "Metric Displacement Dissonance," 1. Other notable theorists acknowledging the Romantic significance of *Sehnsucht*, or longing are: Eric Sams, *The Songs of Johannes Brahms* (New Haven: Yale University Press, 2000), 23-25; Charles Rosen, *The Romantic Generation* (Cambridge: Harvard University Press, 1995), 98-114.

[52] Yonatan Malin, "Metric Displacement Dissonance," 1.

[53] Ibid., 3.

separation, or distance, as well as motion into the distance."[54] Furthermore, a pivotal part of *Sehnsucht* is the desire for some entity that one does not currently have, typically a lost person, place, or time. As I will show, displacement dissonance complements this idea by depicting this desire; the displaced parameter can symbolize representing that which is to be desired.

The idea of *Sehnsucht* can be further divided into two subcategories. First, the desire for something never experienced, such as the longing for the love of another, or a state of happiness not yet fulfilled, is what I will call basic longing. In Figure 3.7, which shows mm. 16-19 of Brahms's "Sehnsucht," no. 3 of the op. 49 Lieder, we identify an instance of basic longing.

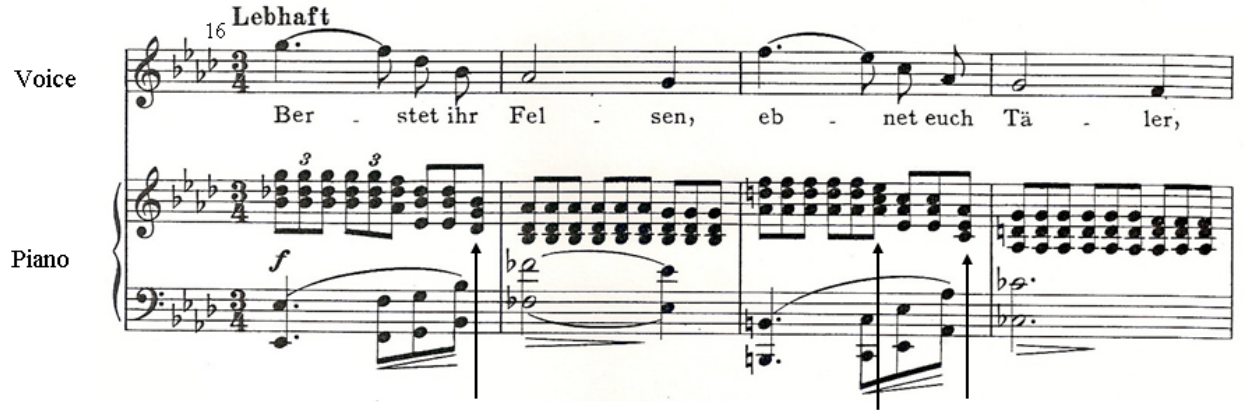

Figure 3.7: Basic Longing in Brahms's "Sehnsucht," op. 49, no. 3, mm. 16-19 (arrows indicate displacement in piano doubling of voice).

In this passage, we find a grouping dissonance that leads to a slight displacement of some pitches. The piano right hand projects metrically dissonant triplets against the consonant eighth notes of the voice and piano left hand. The label here is G3/2 (where one unit equals the eighth note). The uppermost voice in the right hand essentially doubles the melody in the voice. However, due to the triplet subdivision, when the voice changes pitch, the right hand is just

[54] Ibid., 3.

slightly behind in multiple places, creating a displacement. For example, in m. 16 the voice moves from G to F on the second eighth note of beat two. The voice and the right hand move to D together. When the voice changes to B-flat on the second eighth note of beat three, the right hand of the piano lags behind ever so slightly, moving to B-flat on the third eighth-note triplet of beat three. In this passage the metric dissonance enhances the text, allowing for the musical depiction of basic longing. The full text with translation is shown in Figure 3.8. The male protagonist speaks of his faraway love, longing for the barriers between them to come down so he can see her once again. Longing is expressed in the text. The music portrays this longing through the displaced notes that are caused by the G3/2 dissonance. The displaced notes encourage us to hear them as the entity, the woman in this case, that is just out of reach.

Hinter jenen dichten Wäldern	**1**
Beyond those dense forests	
Weilst du, meine Süßgeliebte,	**2**
You tarry, my loved one,	
Weit, ach weit, weit, ach weit!	**3**
Far, ah far, far, ah far away!	
Berstet ihr Felsen,	**4**
Crack you cliffs,	
Ebnet euch Täler,	**5**
Become smooth valleys,	
Daß ich ersehe,	**6**
So that I can manage to see,	
Daß ich erspähe,	**7**
Can manage to espy	
Meine ferne süße Maid!	**8**
My faraway sweet girl!	

Figure 3.8: Text and English Translation of Brahms's "Sehnsucht," op. 49, no. 3.[55]

At the end of the song, a clearer displacement dissonance appears in the piano postlude of mm. 42-47, shown in Figure 3.9. The left hand provides metric consonance and harmonic

[55] Johannes Brahms, *Complete Songs for Solo Voice and Piano: Series II*, ed. Eusebius Mandyczewski, trans. Stanley Appelbaum (New York: Dover Publications, 1979).

reference. The right hand, displaced by half a beat, creates a D6+1 dissonance (where one unit is equal to the eighth note) that echoes and fills in the harmonies implied by the consonant left hand. Although the text is no longer present, the listener can nonetheless extend the desire the text has left behind, interpreting this passage as a final expression of his longing to see his love again. Furthermore, the repetitive motion from IV to I, plagal or "Amen" cadences, give the listener a sense of finalization of a prayer the man has made. The *crescendo* and *stringendo* markings in m. 42 that reach climax in m. 46 actually heighten the longing, giving the listener an increased sense of desperation.

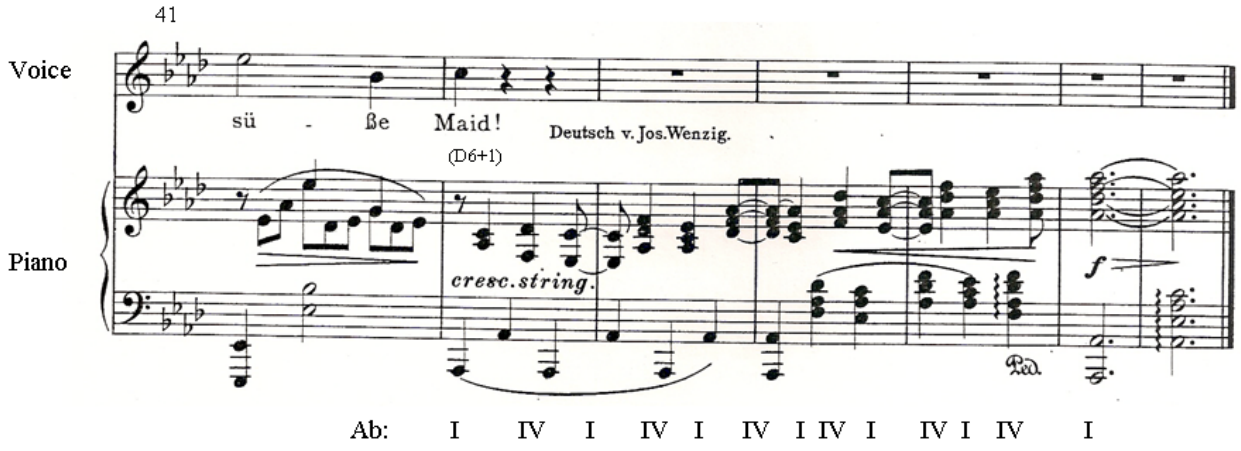

Figure 3.9: Basic Longing in Brahms's "Sehnsucht," op. 49, no. 3, mm. 41-47.

"Seit ich ihn gesehen" (Since I Have Seen Him), the first song of Schumann's *Frauenliebe und Leben*, op. 42, provides another example of basic longing. The text, shown with translation in Figure 3.10, portrays a woman longing to see a man, looking to his memory, unable to think of anything else. This is representative of basic longing in the form of unattained love. To isolate the contributing factors in this passage, we need to look no further than the one-measure piano introduction. As shown in Figure 3.11, the introduction consists of a short I-IV-

V-I progression. The appearance of tonic on the notated downbeat allows for a perception of metric consonance.

Seit ich ihn gesehen, glaub ich blind zu sein;	**1**
Since I have seen him, I believe I am blind;	
Wo ich hin nur blicke, seh' ich ihn allein;	**2**
Wither I am looking, I see him alone;	
Wie im wachen Traume schwebt sein Bild mir vor,	**3**
Like in a waking dream, his image floats before me,	
Taucht aus tiefstem Dunkel heller, heller hur empor.	**4**
Rising from the deepest darkness, brighter and brighter.	
Sonst ist licht und farblos alles um mich her,	**5**
Everything else around me is light and colorless,	
Nach der Schwestern Spiele nicht begehr' ich mehr,	**6**
The games of my sisters I want to share no more,	
Möchte lieber weinen, still im Kämmerlein;	**7**
I would rather weep silently in my little chamber;	
Seit ich ihn gesehen, glaub' ich blind zu sein.	**8**
Since I have seen him, I believe I am blind.	

Figure 3.10: Text and English Translation of Schumann's "Seit ich ihn gesehen," op. 42, no. 1.[56]

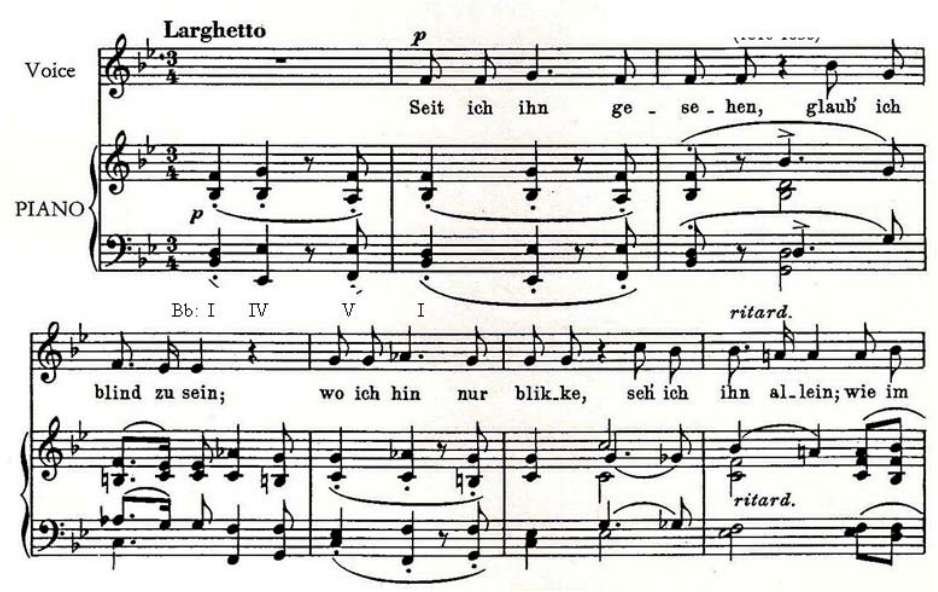

Figure 3.11: Basic Longing in Schumann's "Seit ich ihn gesehen," op. 42, no. 1, mm. 1-7.

[56] Robert Schumann, *Frauenliebe und Leben, Op. 42: A Cycle of Eight Songs for Voice and Piano*, ed. Sergius Kagen, trans. Edith Braun and Waldo Lyman (New York: International Music Company, 1954).

The rhythm, on the other hand, gives the listener a sense of displacement. The eighth-note rest on beat three of the first measure prolongs the sound of beat two, giving us a sarabande-like pause on beat two. This pause gives reason to interpret this passage as a D6+2 (where one unit is equal to the eighth note), causing the listener to hear beat two as durationally accented and, therefore, more metrically consonant. The resulting dissonance may be weak because of the harmonic support for the notated downbeats; nonetheless, the presence of the displacement, found throughout the majority of this song, creates enough ambiguity to portray the expression of basic longing.

The second subcategory of *Sehnsucht* is what I will call nostalgic longing. In this type of longing, one expresses desire for the past and embraces a fond remembrance for a state once experienced. Since displacement features prominently in musical representation of this subcategory of *Sehnsucht*, the role of displacement must be further defined. Nostalgia, unlike basic longing, relies upon the desire for a place or entity once experienced but now gone. In nostalgic longing, the binary opposition between the present and the past, or desired state, is a key element. Most often, the consonant state is the present while the dissonant state signifies the past, the place or entity that is desired and out of reach.[57]

Let us return to Schumann's *Frauenliebe und Leben*, op. 42. In mm. 23-43 of the eighth and final song, "Nun has du mir den ersten Schmerz getan" (Now You Have Caused Me the First Pain), we find the original melody, once representing basic longing, evolve to represent nostalgic longing (Figure 3.12). In the first song, I showed how the opening melody led to a reading of

[57] A superb reference for the concept of binary opposition can be found in the introduction of Robert Hatten's *Interpreting Musical Gestures, Topics, and Tropes*, 8-16. In this section Hatten discusses the potential misunderstanding caused by an opposition between structure and expression, as well as specific musical oppositions found in *The Magic Flute*, such as major vs. minor. He further extends the idea of binary opposition to his theory of markedness, whereby an opposition found in a musical context can draw attention to a particular passage, enhancing its marked quality.

displacement dissonance that allowed us to interpret basic longing. The melody from the opening of the first song returns at m. 24.[58] Rather than the basic longing that we hear at the first statement of this melody in the first song, this time we get a sense of nostalgia. Though separated by the intervening six songs, the listener can immediately recognize this as the same melody heard in the first. Because the listener still remembers this melody, its occurrence in the eighth song allows for an extension of the original interpretation of basic longing.

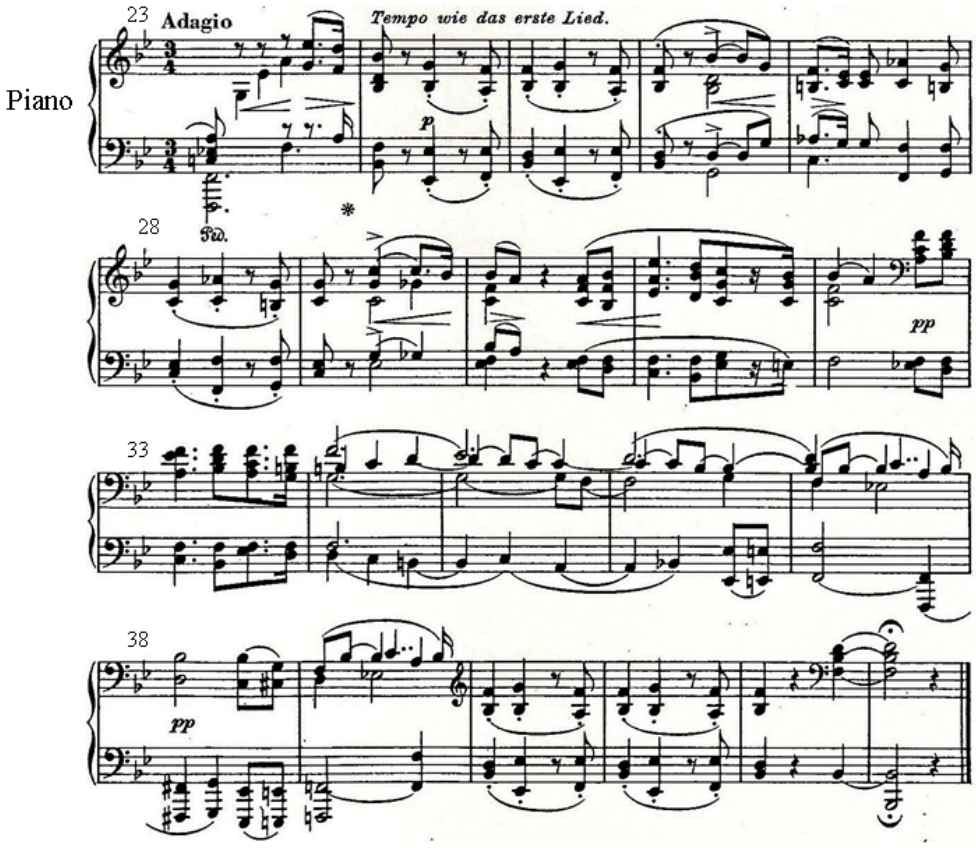

Figure 3.12: Nostalgic Longing in Schumann's "Nun has du mir den ersten Schmerz getan," op. 42, no. 8, mm. 23-43.

[58] The entire song cycle takes us through a woman's experience with love, from courting to marriage, a child, and, in the eighth song, the death of her husband.

The woman has lost her love, and though no text appears with the final statement of this melody, as listeners we can clearly imagine her looking fondly upon the past, nostalgic for what once was but is no longer. While the interpretation of D6+2 here, identical to the interpretation discussed in Figure 3.11, allows us to hear basic longing, the placement of the melody at the very end of the cycle along with its reminiscence of the original melody now promotes a sense of nostalgic longing.

Without textual reference, one must depend solely on the musical parameters to recognize nostalgic longing. Figure 3.13, from the second movement of Brahms's Clarinet Quintet in B Minor, op. 115, projects a strong sense of nostalgic longing without the presence of any text. In mm. 1-4, where I previously discussed the textural grouping dissonance found in the accompaniment, the melodic parts in the clarinet and first violin are integral to a sense of nostalgic longing.

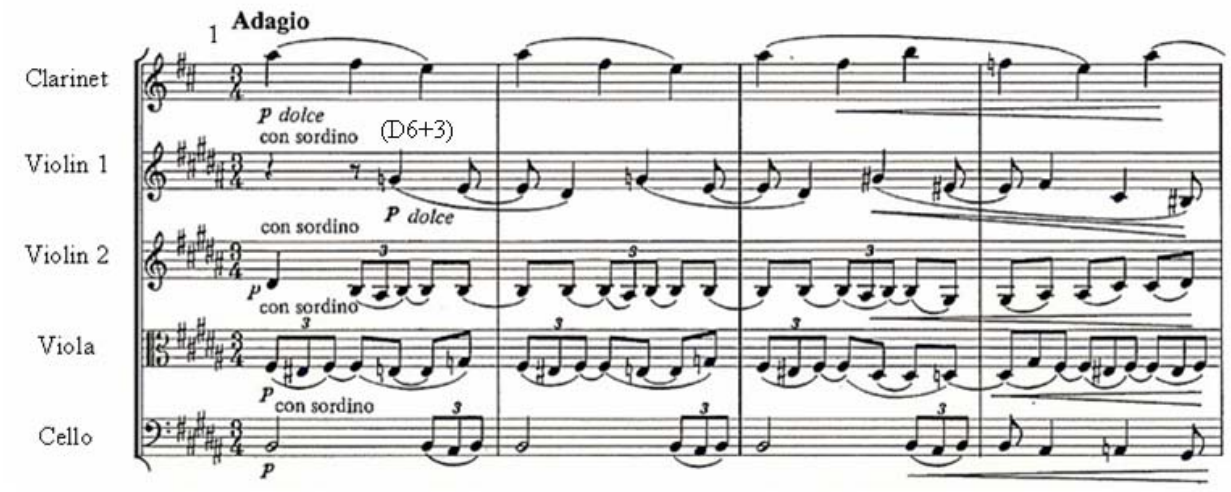

Figure 3.13: Nostalgic Longing in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 1-4.

The clarinet projects a metrically consonant line in the key of B major. The first violin echoes this melody, a seventh below the clarinet and metrically displaced by a beat and a half creating a D6+3 (where one unit is equal to the eighth note). A displacement by a beat and a half is unusual, discouraging the listener from interpreting an imitative texture. The occurrence of the first violin's melody a seventh below along with its displacement seemingly implies the emergence of an extremely dissonant sound. What we hear, on the contrary, is a largely consonant passage that evokes a metaphorical sense of nostalgia. This passage does not project the effect of imitation as it is classically understood. Rather, the temporal displacement of the melody allows us to hear two separate entities; one in the present (metrically consonant), and one in the distance (displaced).

To invoke Hatten's idea of binary opposition in support of the theory of Markedness, the nostalgic longing is created by the binary opposition between the present in the clarinet and the past in the first violin. There are several factors that lead to the interpretation that the first violin plays the role of the past. First, the clarinet is the metrically consonant line, giving this part a stronger sense of temporal stability. Second, the violin is muted, giving it a feeling of being in the distance, or the past. It is as though the original melody in the clarinet has inspired memories of the past, which are portrayed in the first violin.

As we look further in the movement, we find a continuation of this sense of nostalgic longing. In Figure 3.14, where I previously discussed the presence of a textural displacement dissonance in the accompaniment, the melodic roles are now reversed. The first violin plays the role of the present and the clarinet plays the role of the past, also a seventh below. While the roles are reversed, the affect is the same; a sense of nostalgia is projected by this passage as well.

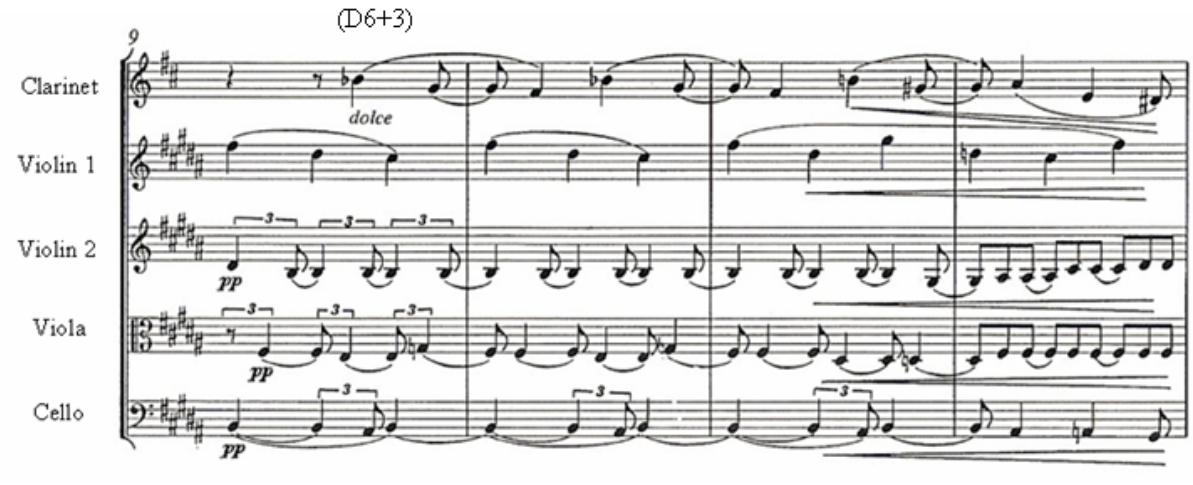

Figure 3.14: Role Reversal of Nostalgic Longing in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 9-12.

It is not until m. 32, shown in Figure 3.15, that the past and present are unified. Here, the clarinet and first violin play the opening melody in unison; they are both metrically consonant.

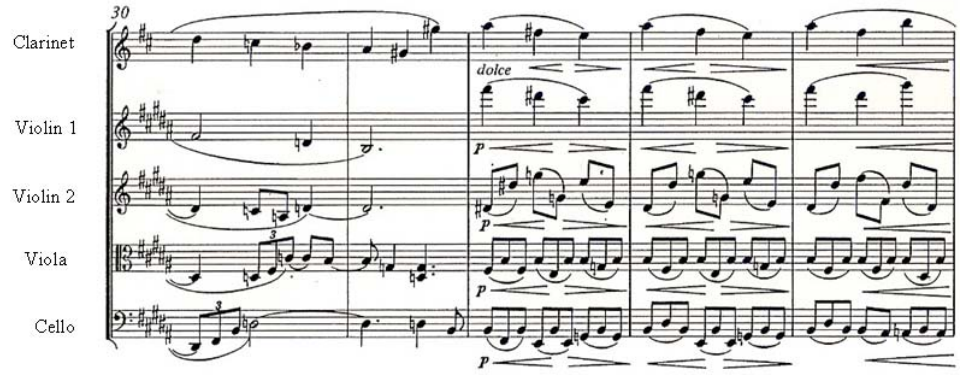

Figure 3.15: Unification of Past and Present in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 30-34.

And yet, I would argue that nostalgic implications persist. In m. 128, shown in Figure 3.16, the clarinet has a melodic line lasting three measures. This melody is elided with an echo from the

first violin in mm. 131-133, now an octave lower. Though not an actual metric displacement, the nostalgic affect here is still present due to the nature of the echo in the first violin. Because the first violin begins the statement three measures after the statement in the clarinet (as opposed to a beat and a half found earlier in the movement), we can now imagine that the distance between the past and the present has increased.

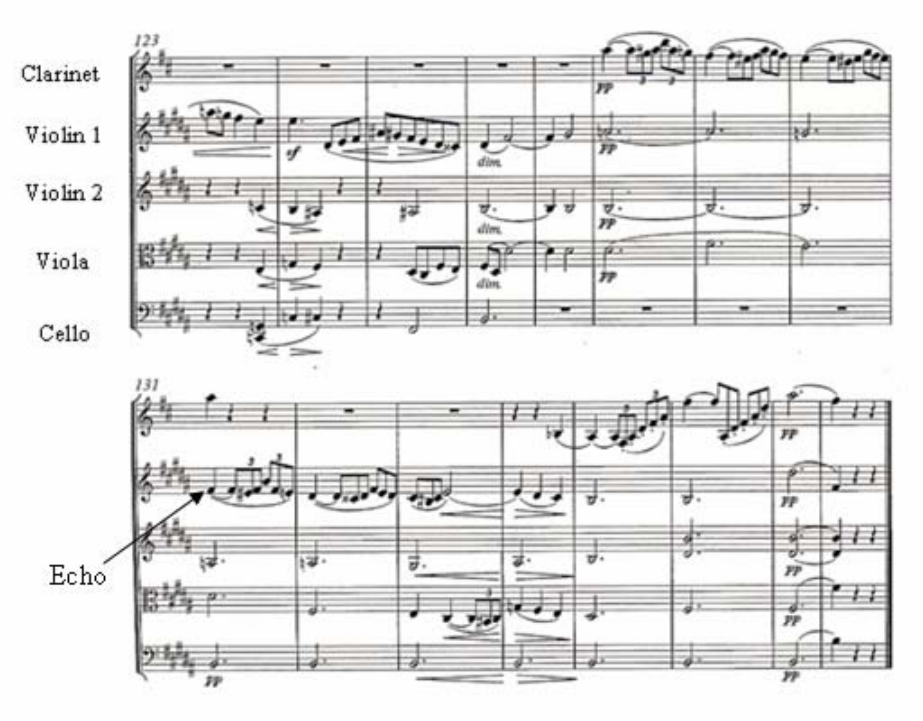

Figure 3.16: Consonant Nostalgic Longing in Brahms's Clarinet Quintet in B Minor, op. 115, 2nd mvt., mm. 123-138.

Another topic often projected by metric dissonance is that of pictorialism, explicitly defined by Ratner. He states, "Pictorialism and word-painting in music represent efforts to imitate or symbolize specific ideas from poetry or other types of literature."[59] He summarizes that the main difference between pictorialism and word-painting is that pictorialism is "generally associated with instrumental music" while word-painting is "the matching of a word or phrase in

[59] Leonard Ratner, *Classic Music*, 25.

a text to a musical figure."[60] Though the general distinction here is based on the difference between instrumental and vocal music, I have chosen to use the term pictorialism for several reasons. First and foremost, word-painting, as Ratner states, is most often associated with "madrigals, descriptive French clavecin music, battle pieces, etc."[61] These genres are not the focus of this thesis and I do not wish to imply that association. Furthermore, the implication of word-painting is limited, by Ratner's definition, to a specific word being matched to a musical figure. The matching between words and music that I wish to capture is more substantial in scope than a single word and an isolated musical figure.

Brahms's *Auf dem See*, op. 59, is a prime example of pictorialism. Lines 5-8 of the text, shown with translation in Figure 3.17, describe an experience on a boat; the singer describes the nature that surrounds him and the movement of the boat in the waves.

Wie der Kahn uns hebt und wie get,	**5**
How the boat lifts and rocks us,	
Leichter Nebel steigt und fällt,	**6**
How light mist rises and falls,	
Süßer Himmelsfriede lieget	**7**
The sweet peace of Heaven lies	
Über der beglänzten Welt.	**8**
Over the shining world.	

Figure 3.17: Text and English Translation, Lines 5-8 of Brahms's *Auf dem See*, op. 59, no. 2.[62]

It is easy to hear the wave motion in the up and down melodic contour that occurs in each measure. The movement of the boat is captured through the dotted eighth-sixteenth note figure in the piano. This figure symbolizes the rocking of the waves. Beyond the representation of the

[60] Ibid.
[61] Ibid.
[62] Johannes Brahms, *Complete Songs*.

figure itself, metric dissonance allows us to interpret the movement of the boat in the waves. In Figure 3.18, mm. 1-5 of this song, the first wave is metrically consonant, with its rocking figure falling on the downbeat of every bar. A second wave is then introduced by the right hand on the third beat of the first measure, creating a displaced rocking figure of D3+2 (where one unit is equal to the quarter note). Through this displacement we can hear the frequency of the waves and how they impact the boat; before one wave passes by the boat, another has already begun.

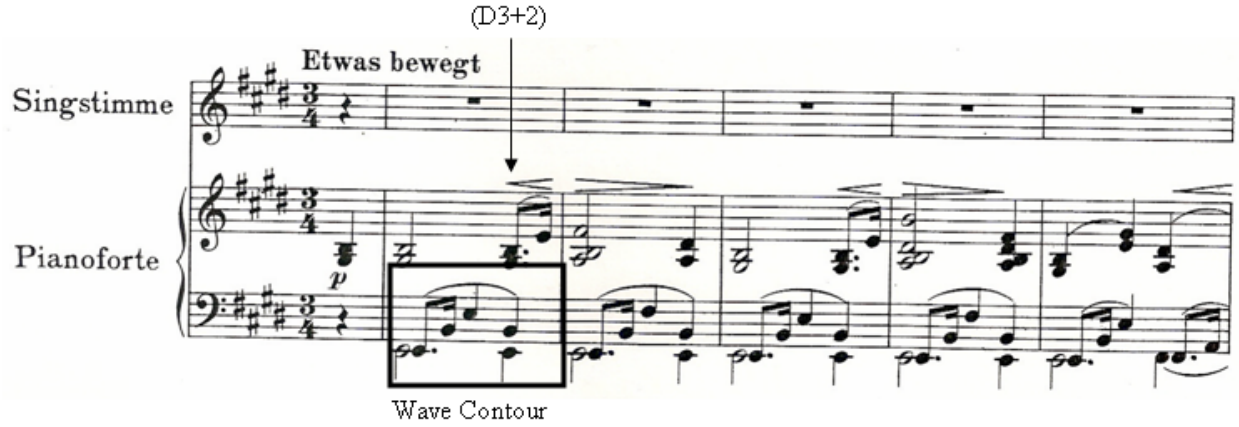

Figure 3.18: Pictorialism in Brahms's *Auf dem See*, op. 59, no. 2, mm. 1-5.

Based on this rocking figure, we can also trace the change in intensity of the waves throughout the song. At m. 30, shown in Figure 3.19, only one wave is now present, depicted through metric consonance. The rocking figure appears only on the downbeat of every measure. There is no displaced layer. Once we arrive at m. 33, also shown in Figure 3.19, the waves are slightly more intense. Here, an indirect G3/2 dissonance (where one unit equals the eighth note), marked by triplets in the left hand of the piano on the first two beats of every measure, and the rocking figure in the right hand on the third beat of every measure, establish a slightly more intense state. This indirect dissonance is weaker than the displacement dissonance we saw at the

beginning of the song. The state of metric consonance in mm. 36-38, also shown in Figure 3.19, depicts a complete calm of the waves. Where we originally had a displacement dissonance depicting the frequency with which the waves impacted the boat, we now have the gentle calm of steady triplets.

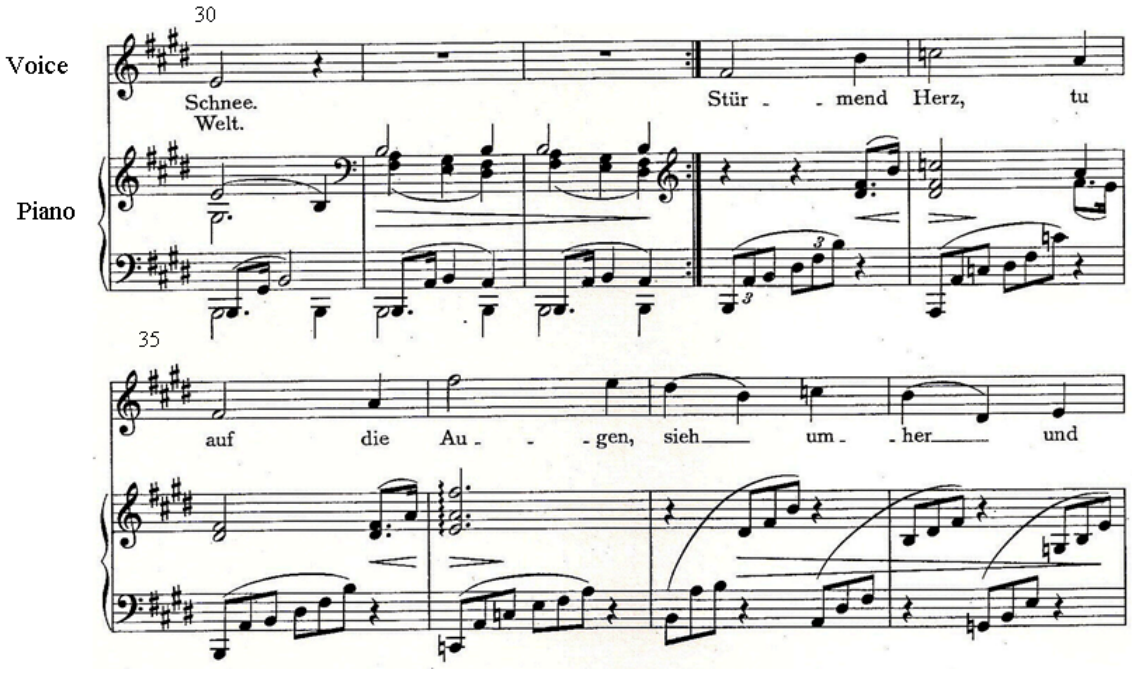

Figure 3.19: Pictorialism in Brahms's *Auf dem See*, op. 59, no. 2, mm. 30-38.

In mm. 72-76, shown in Figure 3.20, a similar dissonance to that of the opening measures occurs. Here, however, the dissonance would be labeled D3+1 (where one unit equals the quarter note). Nonetheless, as in the opening passage, we have two waves per measure. This D3+1 leads to the climax in mm. 77-78. In these measures the waves become most intense with a rocking figure occurring on every beat. The figure that begins every measure is consonant, the figure beginning on beat two is a D3+1, and the figure beginning on beat three is a D3+2. Only

in these two measures do we have six waves present, making this passage the most rhythmically intense with regard to the waves manifested in the rocking figure.

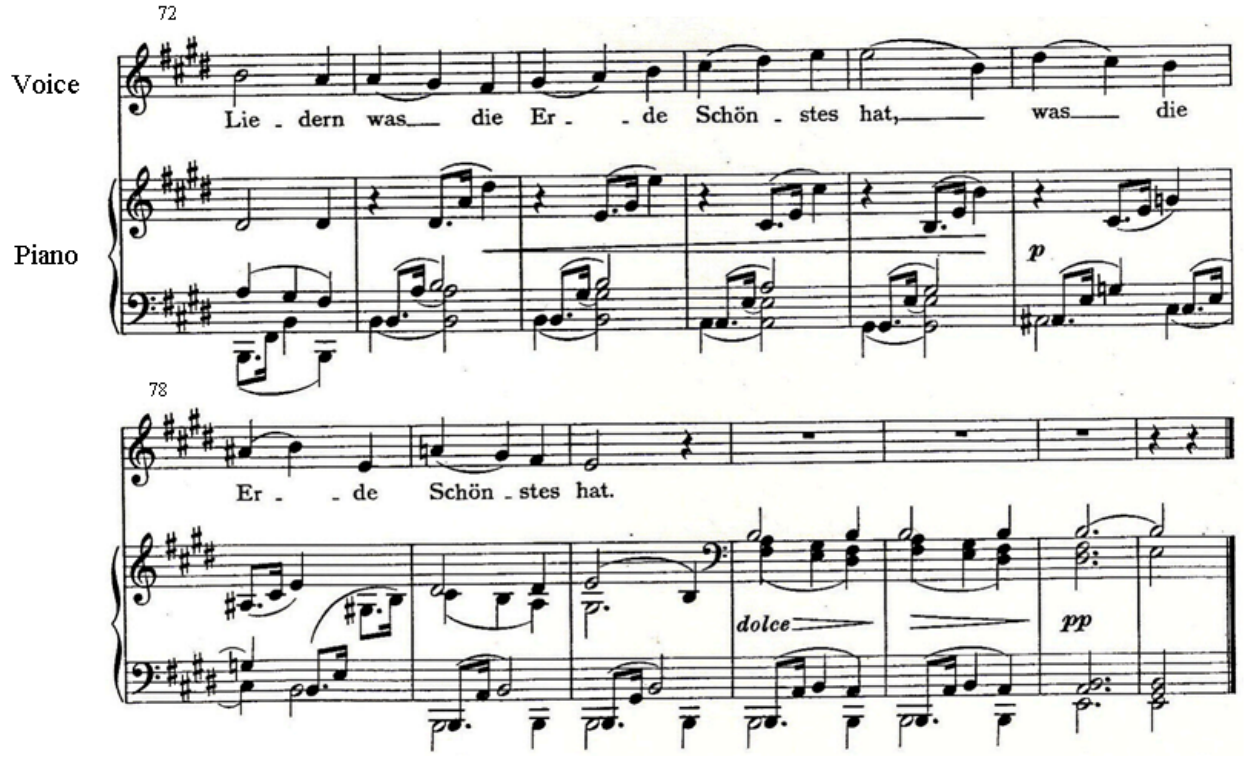

Figure 3.20: Pictorialism in Brahms's *Auf dem See*, op. 59, no. 2, mm. 72-84.

As we have seen, metric dissonance can contribute extensively to the presence of an affective quality. In this chapter, I have presented a brief survey and taxonomy of some possible expressive interpretations that hinge on the presence of a surface-level metric dissonance. Just as we saw in the previous chapter, similar labels achieve vastly different expressive interpretations. More importantly, however, is the idea that metric dissonance plays an integral role in the interpretation of the expressive trajectory of music.

IV. CONCLUSION

The taxonomy presented in this thesis, which is built upon Harald Krebs's system of classifying metric dissonances, seeks to answer two fundamental questions: Do metric dissonances that have the same label in Krebs's system always have the same function in their musical contexts? More fundamentally, what is the role of listening in the categorization of metric dissonances? The basic dichotomy between functional and expressive metric dissonance I present in this thesis is a tool intended to help answer these questions. Within the category of functional dissonances, for example, I have shown how a G3/2 can be cadential in one passage and textural in another. I have also demonstrated how a textural effect can be projected by the use of either grouping or displacement. The subcategory of the label-listener paradox addresses the importance of considering the actual perception of the passage when it contradicts the notation. Expressive metric dissonances address the indispensable role of hearing by classifying surface-level metric dissonances into subcategories according to their different musical affects. Further, this dichotomy between functional and expressive metric dissonances—and their subsequent subcategories which identify, classify, and analyze specific instances of surface-level metric dissonance—gives theorists a more accurate understanding of the many roles that metric dissonances play in the interpretation and analysis of music.

The extent to which this taxonomy of metric dissonance enhances our understanding of the effects and affects of a musical passage makes clear the necessity for such a study, and provides an incentive for future study. A survey of a broad range of tonal literature will yield results contributing to this study in three ways: First, theorists may expand the examples that represent each particular subcategory that I have presented, thereby enriching our understanding

of the possible manifestations of each particular category. Second, with an extensive survey of the available literature, more subcategories will evolve, providing deeper insights into the possible effects and affects of surface-level metric dissonance. Lastly, the categories discussed and defined in this thesis along with those presented by subsequent theorists may be applied to analyses of entire movements or pieces, providing a large-scale understanding of an individual work or group of works. In any case, the results will undoubtedly prove to be useful to the continued study of metric dissonance and its applications.

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