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The secondary stress on the third beat in a simple quadruple meter facilitates half-measure hyperbeats. Through the shortening or lengthening of hyperbeats and/or hypermeasures, the hypermetric downbeat may shift to mid-measure creating a second-half-strong hypermetric state. The first movements of Haydn's piano sonatas in D major Hob. XVI: 19, and G minor Hob. XVI: 44 contain many such hypermetric shifts between first-half- and second-half-strong. The shortening and lengthening of hypermeasures that generate and resolve these shifts have formal implications and create balance and unity in the movements on both local and global levels.

MAKING UP FOR LOST TIME: HYPERMETRIC EQUILIBRIUM IN TWO  
KEYBOARD SONATAS OF FRANZ JOSEPH HAYDN

by

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## CHAPTER I

### INTRODUCTION

In recent years, there has been a resurgence of interest in the music of Franz Joseph Haydn. Recent publications have emphasized sonata form, meter, minor keys, schemata, and rhetoric in Haydn's works. Theorists who focus on rhythm and meter, including Floyd Grave, Danuta Mirka, and Ryan McClelland, spend the majority of their time with Haydn's numerous symphonies and string quartets, leaving his piano sonatas largely neglected. In order to begin filling this void, I intend to examine the hypermetric and formal structure of the first movements of Haydn's D-major sonata Hob. XVI: 19 and G-minor sonata Hob. XVI: 44.

Current theorists including William Rothstein find that the primary metric unit in Classical period music is not the notated beat, but either the measure or the half-measure. The Haydn sonatas analyzed in the following chapters are in a "compound" 4/4 meter, where compound refers not to a triple division of the beat, but to the compounding of two measures of 2/4 into one measure of 4/4.<sup>1</sup> Because of the compound nature of the measures, I consider hypermeter at both the measure and *half*-measure levels to accommodate the frequent hypermetric shifts that create mid-measure downbeats.<sup>2</sup>

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<sup>1</sup> William Caplin, "Theories of Musical Rhythm in the Eighteenth and Nineteenth Centuries," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, Cambridge: Cambridge University Press, 2002, 661.

<sup>2</sup> See Rothstein, *Phrase Rhythm in Tonal Music*, Ann Arbor, MI: Musicalia Press, 2007, 136.

The primary difference between the meters 2/4 and 4/4 in eighteenth-century music theory is the location of cadences within measures. Friedrich Wilhelm Marpurg and Johann Philipp Kirnberger agree that moments of harmonic closure ought to occur on the first beat of a measure; thus, if a cadence arrives on beat three, the piece is conceived to be in duple time so that the phrase ends on a functional downbeat.<sup>3</sup> Since half-measure hypermetric displacements allow cadences to fall on the weaker third beat of quadruple measures, the works of Haydn challenge the eighteenth-century distinction between duple and quadruple meters. My analysis will track such hypermetric shifts, their causes, and their structural implications.

I will pay particular attention to the interactions between the onset accents of hypermetric downbeats, the end accents of tonal rhythm, patterns of durational rhythm, and phrase structure. The terms tonal and durational rhythm were coined by Carl Schachter and will serve, respectively, as primary and secondary considerations in my hypermetric interpretations. Tonal rhythm refers to the pattern of musical motion that “flows from the succession and combination of tones, *for the tonal system has rhythmic properties.*”<sup>4</sup> These properties arise from a number of tonal features including the repetition of tones, harmonic context, and consonance and dissonance. Durational rhythm

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<sup>3</sup> Johann Philipp Kirnberger, *The Art of Strict Musical Composition*, tr. David Beach and Jürgen Thym, New Haven: Yale University Press, 1982, 392. See also Floyd Grave, “Metrical Displacement and the Compound Measure in Eighteenth-Century Theory and Practice,” *Theoria* 1 (1985): 29.

<sup>4</sup> Carl Schachter, “A Preliminary Study,” in *Unfoldings*, ed. Joseph Straus, Oxford: Oxford University Press, 2002, 36, emphasis original.

encompasses the groupings and accents that arise from musical features not involved in tonal rhythm, including durational and dynamic accents.<sup>5</sup>

Symmetry, balance, and unity are three prominent features of eighteenth-century music. Charles Rosen finds the short, periodic phrase to be a primary factor in the development of the Classical style.<sup>6</sup> The symmetry and balance generated at the phrase level create nested groups with lengths that are powers of 2. For example, two-measure sub-phrases, four-measure phrases, eight-measure periods, sixteen-measure sections, and thirty-two-measure binary forms are common in eighteenth-century compositions. Yet Haydn's phrase lengths are anything but predictable: evaded cadences, phrase elisions, and internal and external phrase expansions frequently result in phrases containing an odd number of measures. Both eighteenth-century and contemporary music theorists use the four-measure phrase as a reference point for understanding phrases that contain three, five, or other odd numbers of measures. For example, a five-measure phrase may be normalized as an extension of a four-measure phrase through the addition of a single prefix or suffix measure.

The proportions of Classical period music lead listeners to expect symmetry not only on the phrase level, but on larger formal levels as well. James McKay summarizes William Caplin's and James Hepokoski and Warren Darcy's theories of Classical sonata form by concluding that "every thematic event in a sonata-form exposition sets up expectations as to formal function and musical proportion, and these are either fulfilled or

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<sup>5</sup> Schachter, 37.

<sup>6</sup> Charles Rosen, *The Classical Style*, New York: W. W. Norton, 1972, 57.

denied in subsequent measures.”<sup>7</sup> The rhetorical task of the first large section of the sonata is to create thematic expectations that subsequent sections can be compared against.<sup>8</sup> I propose that a work can also create hypermetric expectations, providing opportunities for composers to delight listeners through deviation from anticipated outcomes.

While Haydn’s phrasing may not provide an ideal example of classical equilibrium, a thorough examination of both phrase structure and hypermeter may reveal balance at a higher level. Typically, an eight-measure passage divides into two four-measure phrases. If Haydn instead writes a three-measure phrase, followed by a five-measure phrase, equality is evaded, but the respective deletion and addition of a measure preserve the eight-measure level. If hypermetric reinterpretation is a kind of shortening due to the hyperbeat shared by two intersecting hypermeasures, the addition of beats through internal or external expansion may level the scales by compensating for what was “lost.” This type of balance is also considered on a global level since hypermetric additions and deletions can create equilibrium over the course of an entire movement.

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<sup>7</sup> James McKay, “Musical Proportion and Formal Function in Classical Sonata Form: Three Case Studies from Late Haydn and Early Beethoven,” *Theory and Practice* 29 (2004): 56. The three case studies take the analytical perspectives of 1) Caplin’s *Classical Form*, 2) Hepokoski and Darcy’s “The Medial Caesura and its Role in the Eighteenth-Century Sonata Exposition,” *Music Theory Spectrum* 19/1 (1997): 115-54 and *Elements of Sonata Theory*, noting that the latter was still a work in progress when McKay’s article was published in 2004, and 3) McKay’s reconciliation of the views of Caplin and Hepokoski and Darcy.

<sup>8</sup> James Hepokoski and Warren Darcy, *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata*, Oxford: Oxford University Press, 2006, 16.

## I.A: Literature Review

### I.A.1: Eighteenth-Century Theories of Meter and Phrase Structure

Caplin's research on the prevailing metric theories of the eighteenth century provides necessary historic background concerning the concept of compound meter. In his contribution to the *Cambridge History of Western Music Theory*, Caplin compares the ways in which Marpurg, Johann David Heinichen, Johann Mattheson, Tomas Baltazar Janovka, and Johann Gottfried Walther classify time signatures based on each theorist's attention to faster or slower levels of metric activity. In spite of differences in interpreting beat and division levels within a time signature, eighteenth-century theorists generally maintained that a compound meter joins together multiple iterations of a simple meter.<sup>9</sup> The term "simple" in this context should not be taken to mean a meter where the beat is divided into two. Instead, simple implies that there is a single metric foot in the measure, while compound implies multiple metric feet, which in turn implies that the measure can conceptually be split into two distinct measures.<sup>10</sup> Heinichen therefore classifies 6/8 as a compound meter combining two measures of 3/8, while Marpurg claims that 4/4 contains two iterations of 2/4 and as such is also a compound meter.<sup>11</sup>

In addition to distinguishing between simple and compound meters, Kirnberger classifies meters as "even" or "odd." As implied by their names, even meters contain an even number of beats (two or four), while odd meters contain an odd number of beats

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<sup>9</sup> Caplin, "Theories of Musical Rhythm," 661.

<sup>10</sup> Kirnberger, 385.

<sup>11</sup> Caplin, "Theories of Musical Rhythm," 661.

(three).<sup>12</sup> Kirnberger highlights the distribution and accent of the beats within each measure when he defines meter as “the precise uniformity of accents that are given to a few notes and of the completely regular distribution of long and short syllables.”<sup>13</sup> Kirnberger supports Marpurg’s assertions that common time is a compound meter and that the first half of the measure is of greater metric weight than the second half. The quadruple pattern of strong-weak-semistrong-weak differentiates it from the consistent strong-weak alternation of duple meter.<sup>14</sup> Kirnberger suggests that 4/4 is an alternation of strong and weak measures of 2/4.<sup>15</sup> That each measure of 4/4 can be conceptually divided into two unequally accented parts has an impact on both phrase structure and hypermeter which is why I will consider hypermeter at the half-measure level.

#### I.A.2: Theories of Meter and Hypermeter in the Twentieth and Twenty-First Centuries

Kirnberger’s views of “uniform accents” and a “regular distribution of long and short syllables” are echoed in twentieth-century theorists Fred Lerdahl and Ray Jackendoff’s definition of meter as a “periodic alternation of strong and weak beats.”<sup>16</sup> Lerdahl and Jackendoff’s influential theory of metric structure provides the framework for many contemporary metric studies. They define metric hierarchy and

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<sup>12</sup> Kirnberger, 385.

<sup>13</sup> Kirnberger, 382. Kirnberger’s “long and short syllables” refer to the repetition of a poetic foot constructed of stressed (long) and unstressed (short) syllables.

<sup>14</sup> Kirnberger, 393.

<sup>15</sup> Kirnberger, 398-9.

<sup>16</sup> Lerdahl and Jackendoff, 382.

represent it in a dot notation that forms a metric grid.<sup>17</sup> I will employ the same dot notation in my metric and hypermetric analyses of Haydn's keyboard sonatas. Like Lerdahl and Jackendoff, I will explore the creation of hypermetric accents in Haydn's sonatas, particularly those created by structural beginnings and endings, and will frequently rely on their Metric Preference Rules (MPR) 1 and 2. MPR 1 states that parallel metric interpretation is favored in situations of parallel musical content, and MPR 2 proposes that the first iteration of material will be heard as stronger than immediate repetitions of the same.<sup>18</sup>

Carl Schachter's explication of Heinrich Schenker's conception of tonal rhythm effectively integrates harmony with rhythm and meter.<sup>19</sup> Schachter highlights the integral connection between tonality and rhythm when he states that "rhythm is so bound up with tonal organization that the analysis of rhythm must be compatible with our clearest and deepest insights into tonal structure."<sup>20</sup> While meter is more closely associated with durational rhythm, harmonic rhythm frequently coincides with meter through the strategic placement of goals of tonal motion in metrically accented positions.<sup>21</sup> The hypermetric accents created by tonal motion are made evident through durational reductions, which I will employ in my analyses.

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<sup>17</sup> Lerdahl and Jackendoff, 19.

<sup>18</sup> Lerdahl and Jackendoff, 30, 75.

<sup>19</sup> See Schachter, *Unfoldings*.

<sup>20</sup> Schachter, 36.

<sup>21</sup> Schachter, 40.

In addition to exploring and responding to Lerdahl and Jackendoff and Schachter's works, music theorists in the late twentieth century investigated the unequal stresses of eighteenth-century common time and the half-measure metric displacements they afford. Leading in this exploration were Floyd Grave and Charles Burkhart. Grave gives attention to Kirnberger's theories and musical examples in order to explain eighteenth-century theories of meter and to represent the metric hierarchy of compound 4/4.<sup>22</sup> He also emphasizes the importance of the half-measure unit and its role in generating metric displacements through

literal or sequential repetition of one-and-a-half measure units, phrase elisions that cause the repetition or recurrence of thematic statements to fall in the middle of the bar, and the initiation of a section in the middle of the measure following a cadence on a downbeat.<sup>23</sup>

Grave's analysis of the first movement of Haydn's Symphony 65 reveals mid-measure downbeats in the second theme produced through *added* beats. While Grave's analyses are limited to brief passages, my analyses will trace paths of metric and hypermetric displacements through entire movements.

Charles Burkhart holds that the strong-weak-semistrong-weak alternation within each 4/4 measure creates "a kind of 'hypermeasure' of two 2/4 bars—one strong, one weak."<sup>24</sup> In a study of hypermetric displacement in the works of J. S. Bach, Burkhart

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<sup>22</sup> Grave, "Metrical Displacement," 30-31.

<sup>23</sup> Grave, "Metrical Displacement," 30.

<sup>24</sup> Charles Burkhart, "Mid-Bar Downbeat in Bach's Keyboard Music," *Journal of Music Theory Pedagogy* 9, (1994): 4.

outlines three methods that can be used to create mid-measure downbeats. A composer may *add* a beat to the previous hypermeasure, which shifts the location of the next downbeat to the usually hypermetrically-weak second beat. **Figure 1.1** shows the shift to a mid-measure downbeat in Haydn's Sonata in D major, Hob. XVI: 19, i through the addition of a fifth beat on the downbeat of m. 64. This addition is substantiated by the tonic arrival and change in figuration in the middle of m. 64. After hearing a new hypermetric downbeat, one can retrospectively interpret the previous hypermeasure as five beats instead of four. The hyperbeat numbers are shown below the staff, and the metric grid above the staff. The parenthetical dots represent the expectation of a hypermetric downbeat on the first beat of m. 64. The composer may also use *successive downbeats* to shift the hypermeter by closing a phrase on a downbeat and moving immediately to another downbeat to begin the next phrase. Successive downbeats is the rarest of the three categories and the only one that does not involve phrase overlap.<sup>25</sup> Burkhart holds the third method of hypermetric shift, *elision*, to be the most severe in its effect since it requires the reinterpretation of a beat other than the downbeat as the new "one."<sup>26</sup> Haydn frequently generates mid-measure downbeats via elision in his D-major and G-minor sonatas. I follow Rothstein's and Schenker's practice of referring to hypermetric elisions as "hypermetric reinterpretations" in order to differentiate it from the elision or overlap of themes and phrases.<sup>27</sup>

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<sup>25</sup> Burkhart, 5.

<sup>26</sup> Burkhart, 5.

<sup>27</sup> Rothstein, 52.

**Figure 1.1. Mid-Measure Downbeat through Addition in Haydn, Sonata in D major, Hob. XVI: 19, i, mm. 62-64**



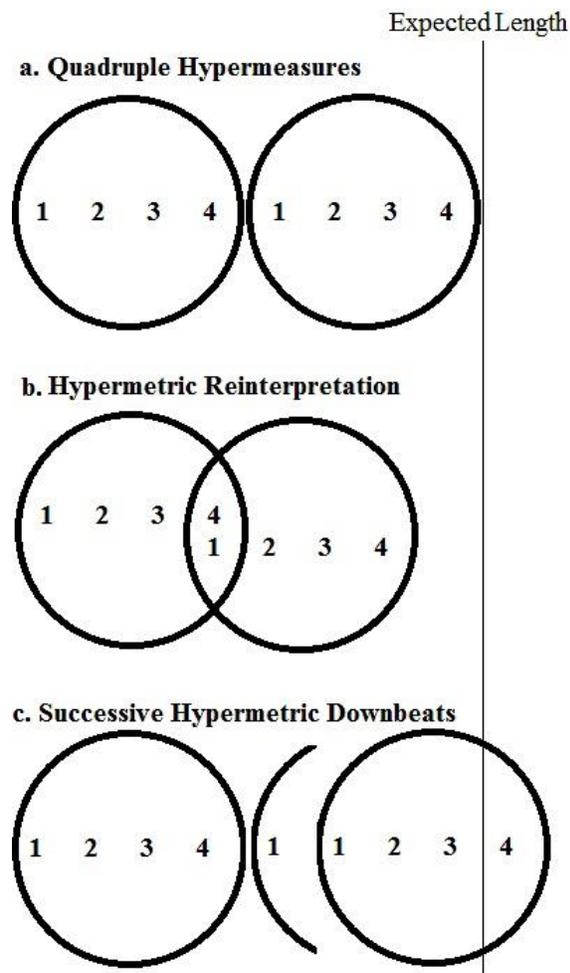
While Burkhart delineates three distinct categories, I will consider only two main categories of hypermetric displacement: 1) Deletion – alterations resulting in hypermetric shortening and 2) Addition – alterations resulting in hypermetric lengthening. The literal deletion or addition of hyperbeats in relation to expected norms or previous iterations of parallel material clearly align with these two categories. **Figure 1.2** illustrates how hypermetric reinterpretation and successive downbeats are also types of shortening and lengthening, respectively.

**Figure 1.2a** depicts two measures of quadruple hypermeter as a reference for the expected length of similar passages. Considering hypermetric reinterpretation, Rothstein states that “when a [hyperbeat] is reinterpreted, one [hyperbeat] that “should” have occurred does not: the last [hyperbeat] of a hypermeasure, rather than being followed by a new first [hyperbeat], *becomes* that first [hyperbeat].”<sup>28</sup> **Figure 1.2b** illustrates this “missing” beat by presenting the overlapping hypermeasures in the style of a Venn diagram. One result of the overlap is that the two hypermeasures as a unit are a hyperbeat

<sup>28</sup> Rothstein, 52. All bracketed insertions of “hyperbeat” are replacing the words “measure” or “bar” since Rothstein’s discussion of measure-level hypermeter also applies to higher and lower levels.

shorter than expected. Conversely, successive hypermetric downbeats constitutes a type of addition since they result in a unit whose length is greater than expected, as seen in **Figure 1.2c**.

**Figure 1.2. Reinterpretation and Successive Downbeats as Hypermetric Shortening and Lengthening**



Since the strong-weak-semistrong-weak sequence of half-measure hyperbeats in Haydn's compound 4/4 may be shifted by a half-measure, each hypermeasure is either

first-half-strong or second-half-strong, paralleling David Temperley's even-strong and odd-strong designations.<sup>29</sup> In his 2008 article "Hypermetrical Transitions," Temperley primarily focuses on the process of sudden or gradual shifts from even-strong to odd-strong hypermeter and vice-versa. I will use the terms first-half-strong and second-half-strong to refer to the *hypermetric state* of a passage since these designations can be applied to various hypermetric types and levels (measure-level triple, half-measure-level quadruple, etc.).

### I.A.3: Previous Analyses of Haydn's Works

Rothstein addresses hypermeter, tonal rhythm, and phrase structure collectively as the phrase rhythm of a tonal work. Rothstein distinguishes hypermeasures from phrases since the latter require tonal motion.<sup>30</sup> Rothstein's examination of phrase rhythm in the works of Haydn, specifically the A $\flat$  major Sonata, Hob. XVI: 46, i, emphasizes the half-measure as the primary metric unit, the irregular length of Haydn's phrases, and the importance of tonal rhythm in determining phrase structure.<sup>31</sup> The lack of standard phrase lengths in Haydn's early piano sonatas (1770s and prior) leads Rothstein to conclude that there is little feeling of hypermeter, and that tonal rhythm plays a more prominent role in the phrase rhythm of the piece.<sup>32</sup> While I agree that tonal rhythm plays a prominent role

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<sup>29</sup> David Temperley, "Hypermetrical Transitions," *Music Theory Spectrum* 30 (2008): 305-6.

<sup>30</sup> Rothstein, 5.

<sup>31</sup> Rothstein, 136.

<sup>32</sup> Rothstein, 141.

in the grouping structure of the early sonatas, I also propose the presence of significant hypermetric events in the two sonatas analyzed in this thesis, which were written between 1767 and 1773. Rothstein's work on the internal expansion of phrases and the impact of such expansions on hypermeter also serves as a model for my analyses. Internal phrase expansion may occur as a result of repetition, deceptive resolution, composed-out fermatas, and/or the insertion of new material. Additionally, Rothstein's concept of conflicting hypermetric downbeats is evident in Haydn's D-major Sonata Hob. XVI: 19. Rothstein uses the piano works of Mendelssohn to introduce the concept of conflicting downbeats due to the frequent metric independence of the left- and right-hand lines.<sup>33</sup> Rothstein's introductory example of the principle involves one line emphasizing the first beat in common time and the other line emphasizing the third beat of the measure – a displacement at the half-measure level. I will use Frank Samarotto's term *shadow [hyper]meter* to refer to such displacements.<sup>34</sup> Rothstein's influential text on phrase rhythm will thus provide a framework for my analysis of tonal rhythm, phrase expansion, and hypermetric displacement in the sonatas of Haydn.

Danuta Mirka conducted a more recent examination of rhythm and meter in the music of Haydn. Mirka's work builds upon previous metric theories including those of Koch, Kirnberger, Lerdahl and Jackendoff, Temperley, and Krebs. In her analysis of the first movement of Haydn's String Quartet in C major, Op. 50 No. 2, Mirka addresses the

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<sup>33</sup> Rothstein, 199.

<sup>34</sup> Frank Samarotto, "A Theory of Temporal Plasticity in Tonal Music: An Extension of the Schenkerian Approach to Rhythm with Special Reference to Beethoven's Late Music," Ph.D. diss., The City University of New York, 1999, 235.

local displacement dissonance created by the reinterpretation of a waltz accompaniment. She also notes a higher-level displacement that occurs as the perceived “compound” 6/4 meter, comprised of two notated measures of 3/4, is shifted by a measure (m. 98).<sup>35</sup>

**Figure 1.3** shows the music in its notated meter along with brackets under the score indicating the compound 6/4 and its pivot in m. 96 from odd-measure downbeats to even-measure downbeats. The reinterpretation of m. 96 as strong is supported by the extension of predominant harmony through m. 97, the change in texture, and the strong dominant arrival in m. 98. The C-major quartet also features evaded cadences in the second theme that “make up” for the premature cadences of the first theme.<sup>36</sup> Similar premature and delayed cadences occur in Haydn’s keyboard sonatas in D major and G minor. An additional parallel between the C-major string quartet and the keyboard sonatas addressed in this thesis is the metric shifting of thematic material and the effect such shifts have on the alignment of metric and tonal accents.<sup>37</sup> While Mirka considers duple hypermeter, my own analyses will focus on triple and quadruple hypermeter, include hypermeasures of up to six hyperbeats, and consider non-isochronous hypermeasures and their normalizations.

Insight into the tonal rhythm of the first movement of Haydn’s G-minor Sonata Hob XVI: 44 can be gleaned from Schenker’s analysis of the movement in the second volume of *Das Meisterwerk in der Musik*. Schenker’s concept of sonata form is fundamentally different from that of his predecessors due to his view of organicism and

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<sup>35</sup> Danuta Mirka, *Metric Manipulation in Haydn and Mozart: Chamber Music for Strings (1787–1791)*, Oxford: Oxford University Press, 2009, 254-274.

<sup>36</sup> Mirka, 262.

<sup>37</sup> Mirka, 264.

improvisation as the generating forces of form. The G-minor sonata nicely illustrates Schenker's view of sonata form as a natural composing-out of the tonic triad.<sup>38</sup> While Schenker does not address the hypermeter of this piece directly, his sketches of the bass arpeggiation and *Urlinie* indicate significant harmonic arrivals that impact my hypermetric interpretation.

**Figure 1.3. Shifting Compound 6/4 Meter in Haydn's String Quartet in C major, Op. 50, no. 2, i, mm. 93-100**



#### I.A.4: Clarification of Terminology

The concept of hypermetric displacement is predicated upon the concept of metrical displacement dissonance set forth by Harald Krebs. In a creative work written largely from the perspective of the persona of Schumann's personalities and uniquely illustrated with coffee bean diagrams, Krebs outlines two major types of metric

<sup>38</sup> Heinrich Schenker, *Das Meisterwerk in der Musik*, vol. II (1926), tr. William Drabkin, New York: Cambridge University Press, 1995, 23.

dissonances: grouping dissonance and displacement dissonance.<sup>39</sup> Displacement dissonance can be understood as non-aligned pulse layers of the same cardinality.<sup>40</sup> These displacements are represented by  $Dx+a$  or  $Dx-a$ , where  $D$  signifies displacement,  $x$  is the shared cardinality, and  $a$  is the degree of separation between  $x$ -layers.<sup>41</sup>

**Figure 1.4** depicts a passage from Schumann's *Papillons* Op. 2, no. 10 that Krebs uses to introduce  $D3+1$  (1 equals a quarter note) displacement dissonance. I have indicated at the beginning of the passage the three quarter notes that make up the right-hand 3-layer (above the staff) and the left-hand/chordal 3-layer (below the staff). In the third measure of the example I change to Krebs's notation of displacement dissonance, where the 3s correspond to the initiation of each 3-layer, revealing the separation of right- and left-hand layers by a beat.

**Figure 1.4.  $D3+1$  Displacement in Schumann, *Papillons* Op. 2, no. 10, mm. 25-32**



<sup>39</sup> Since grouping dissonances will not be addressed in this study, I encourage readers to pursue Krebs' explanation of grouping dissonance on their own. Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann*, New York: Oxford University Press, 1999, 31-33. The curious reader may also wish to explore Krebs' earlier work "Some Extensions of the Concepts of Metrical Consonance and Dissonance," *Journal of Music Theory* 31, no. 1 (1987): 99-120, and Channan Willner's exploration of the interaction between hypermeter, displacement, and grouping dissonances (specifically hemiolas) in "Metrical Displacement and Metrically Dissonant Hemiolas," *Journal of Music Theory* 57, no. 1 (2013): 87-118.

<sup>40</sup> Krebs, 33.

<sup>41</sup> Krebs, 35.

Displaced hypermetric downbeats in the closing zone of Haydn's D-major sonata are often coupled with cadential elisions that generate what Janet Schmalfeldt calls the "one more time" technique. Haydn frequently employs this technique at the close of a sonata exposition, where he uses elision to creatively evade cadences and repeat the closing theme to delay the terminal perfect authentic cadence of the first large formal section of a work. "At the very point where the cadential... goal is reached, that harmony serves a double function: it simultaneously marks both the end of the phrase and the beginning of the next."<sup>42</sup> Schmalfeldt goes on to delineate three main types of evaded cadences: deceptive, elided, and genuine. Deceptive resolutions and phrase elisions need no explanation. The genuine evaded cadence is characterized by one or more of the following: a melodic leap away from the penultimate scale degree 2 or 7, the harmonic substitution of I<sup>6</sup> for the expected root-position harmony, and sudden changes in texture or orchestration coupled with a new beginning.<sup>43</sup> In her examination of cadential evasion, Schmalfeldt mentions that genuine evaded cadences affect phrase rhythm, but she does not explore the intersection of hypermetric reinterpretations and cadential elisions.

In addition to considering hypermeter in Haydn's works, I will examine the impact hypermeter has on local and global formal structure. In considering the overall sonata-allegro form of the movements, I will rely on Hepokoski and Darcy's terminology concerning sonata form. These terms will include primary-theme zone (P), transition

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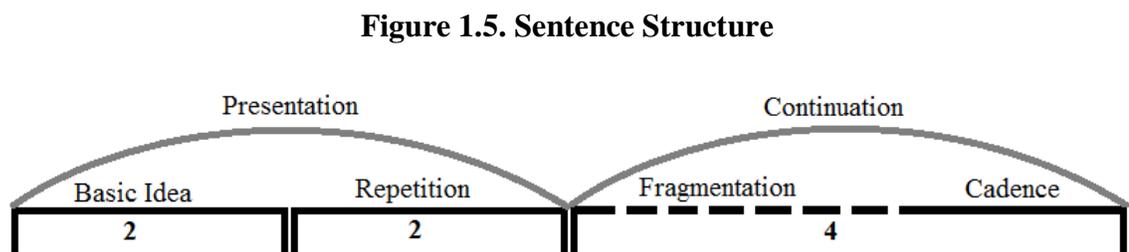
<sup>42</sup> Janet Schmalfeldt, "Cadential Processes: The evaded Cadence and the 'One More Time' Technique," *Journal of Musicological Research* 12, (1992): 14.

<sup>43</sup> Schmalfeldt, 13-14.

(TR), secondary-theme zone (S), essential expositional closure (EEC), closing zone (C), medial caesura (MC), retransition (RT), and essential structural closure (ESC).<sup>44</sup>

In my labeling of smaller formal divisions, I will make use of William Caplin's detailed description of sentence structure, emphasizing both the  $x+x+2x$  length of the sentence and the thematic content and purpose of each section within the sentence.<sup>45</sup>

**Figure 1.5** depicts both the length and thematic content of the segments of a musical sentence. The sentence begins with a *basic idea* followed by an exact, sequential, or dominant *repetition*.<sup>46</sup> These two sections of equal length create the *presentation* phase of the sentence. The *continuation* is twice the length of the basic idea; it serves to develop the basic idea, often through fragmentation and sequential repetition, and to provide cadential material to conclude the phrase.<sup>47</sup>



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<sup>44</sup> Hepokoski and Darcy, xxv-xxviii.

<sup>45</sup> William Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven*, New York: Oxford University Press, 1998.

<sup>46</sup> Matthew BaileyShea, "Beyond the Beethoven Model: Sentence Types and Limits," *Current Musicology* 77 (2004): 8.

<sup>47</sup> Caplin, *Classical Form*, 9-10.

Beyond the basic sentence model, Caplin provides the formal designations of *tight knit* and *loose knit*. A tight-knit sentence is harmonically stable, symmetric in its grouping, and unified in its melodic-motivic material.<sup>48</sup> In contrast, a loose-knit sentence is less conventional in thematic structure and may contain harmonic instability, asymmetrical grouping, and phrase expansion.<sup>49</sup> The continuation of the sentence is less strict in its partitioning in that the fragmentation of the theme and the cadential material do not need to be of equal length. In the chapters that follow, I will examine nested loose-knit sentential structures that maintain the x+x presentation and the expected thematic scheme.

The music of Haydn, sonata form, hypermeter, and metric/hypermeteric displacement have been topics of research by numerous music theorists ranging from Haydn's contemporaries to my own contemporaries. The analyses in the chapters that follow rely upon the studies mentioned above, focusing on the specific interactions between tonal rhythm, hypermeter, and form in two of Haydn's keyboard sonatas.

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<sup>48</sup> Caplin, *Classical Form*, 257.

<sup>49</sup> Caplin, *Classical Form*, 255.

## CHAPTER II

### D-MAJOR SONATA HOB. XVI: 19, i

In approximately 1765 Haydn's compositional style for keyboard breaks away from the older divertimento style that in general is neither polyphonic nor highly developed and matures into sonatas containing more complex and creative thematic developments.<sup>50</sup> The complete autograph of Haydn's D-major Sonata Hob. XVI: 19 has been preserved and dated 1767, making it one of the first works in his newly matured writing style.<sup>51</sup> The hypermetric and formal structure of the joyous first movement are examined in this chapter, with a particular focus on how the movement's asymmetrical themes and hypermetric disturbances create balance at the phrase and formal division levels. While the quadruple organization implied by the time signature is often evident at the half-measure hypermetric level and the phrase level, the thematic and hypermetric organization at the intervening levels are far less predictable.

Frequent hypermetric reinterpretations shift the hypermeter to second-half-strong, sometimes resulting in triple hypermeter at the half-measure level. The shortening of a quadruple hypermeasure to a triple hypermeasure and the displaced hypermetric downbeats are often compensated for through the lengthening or addition of hyperbeats. My hypermetric interpretations—including those involving lengthened hyperbeats and

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<sup>50</sup> For further delineation between divertimento and sonata forms see H.C. Koch, *Musikalisches Lexikon*, Frankfurt, 1802/R.

<sup>51</sup> Ulrich Leisinger, "Preface" in Joseph Haydn, *The Complete Piano Sonatas, vol. 2*, Austria: Weiner Urtext Edition, 2009, xiii.

hypermeasures—are based principally on tonal rhythm and secondarily on thematic divisions, Lerdahl and Jackendoff’s MPRs 1 and 2, and textural, registral, and durational accents.<sup>52</sup> Hypermetric expansions balance the many “missing” fourth hyperbeats and often create a non-isochronous hypermeasure at the measure level.<sup>53</sup> The lengthened hyperbeats that make up for prior displacements can be rhythmically normalized to fit into a simple triple or quadruple hypermetric context.<sup>54</sup> In addition to the compensation for hypermetric displacements through rhythmic normalizations, the frequent triple hypermeter evident on the half-measure and measure hypermetric levels make this movement a rarity in the Classical period.<sup>55</sup>

The form of the movement, depicted in **Table 2.1**, will serve as an outline for this chapter. After an introduction to the balanced formal structure of the exposition, I will consider the expected quadruple and the realized triple hypermeter of PT<sub>1</sub>. Metric and hypermetric displacements are of primary interest in PT<sub>2</sub>.

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<sup>52</sup> MPR 1 proposes parallel metric interpretation of passages of parallel musical content, while MPR 2 suggests that the first presentation is metrically stronger than an immediate repetition. Lerdahl and Jackendoff, 19.

<sup>53</sup> For a thorough discussion of the parameters of non-isochronous meters please consult Justin London, *Hearing in Time*, 2<sup>nd</sup> ed., Oxford: Oxford University Press, 2012.

<sup>54</sup> William Rothstein coined the term “rhythmic normalization” to refer to the process of re-aligning rhythmically displaced events based on pitch parameters. My normalizations alter non-isochronous groupings such as 2+3+2 into a single triple hypermeasure based on the tonal rhythm. See Rothstein, “Rhythmic Displacement and Rhythmic Normalization,” in *Trends in Schenkerian Research*, ed. by Allen Cadwallader, New York: Schirmer Books, 1990.

<sup>55</sup> On the rarity of triple hypermeter, see Temperley, 305. Triple hypermeter has been explored by Rick Cohn in “The Dramatization of Hypermetric Conflicts in the Scherzo of Beethoven's Ninth Symphony,” *19th Century Music* XV, no. 3 (1992): 188-206.

**Table 2.1. Summary of Sonata Form and Hypermetric Features**

Large Section	Zone	mm.	Key	Cadence	Primary Feature	Hypermetric State	
						F-H-S mm.	S-H-S mm.
Exposition	P	1-11	DM	HC m. 16 MC m. 18	Displacement and normalization	1-7a, 9-11	7b-8
	TR	12-18				12-15a, 18	15b-17
	S	19-33	AM	EEC m. 33	Shadow hypermeter	19-30a, 32-33	30b-31
	C	33-42		PAC m. 42	One more time	38-39a, 41-42	33b-37, 39b-40
Development	P	43-47	AM	HC m. 65	Key and hypermeter	43-47a	
	S	47b-66	Em, Bm			49-55a	47b-48, 55b-58
	RT	57b-68	Bm, DM			59-64a, 68	64b-67
Recapitulation	P	69-79a	DM	HC m. 79	Expansion of PT <sub>2</sub>	69-75a	75b-76
	S	79b-93		ESC m. 93	Key and hypermeter	77-90a, 92-93a	90b-91
	C	93-102		PAC m. 102	Return to opening register	98-99a, 101-102	93b-97, 99b-100

The local displacement of PT<sub>2</sub> sets the stage for my discussion of shadow hypermeter in ST<sub>1</sub>. Next, I use passages from the development and recapitulation to demonstrate a correlation between hypermeter, themes, and harmonic functions. The Closing (C) zone

will illustrate the unification of the exposition through its recall of earlier hypermetric shifts in combination with Schmalfeldt’s “one more time” technique. In conclusion, I revisit the concept of balance by relating the first hypermetric shift of the movement to its parallel presentation in the recapitulation.

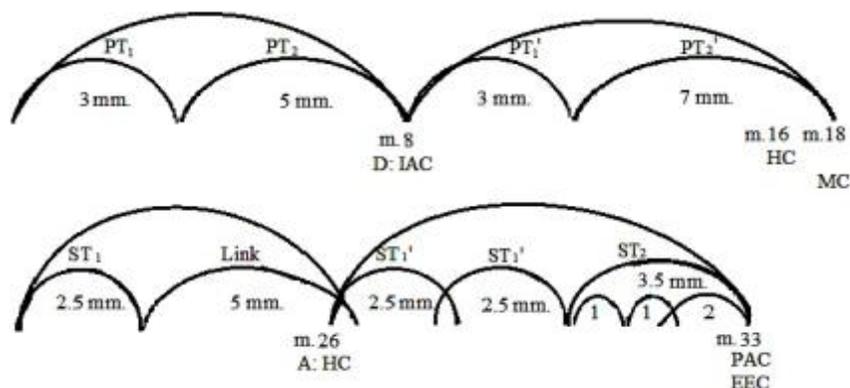
### II.A: Hypermeter in the Exposition

The exposition contains five phrases and five distinct themes, but the phrasal and thematic divisions are not always in alignment with each other or with the hypermeter. **Table 2.2** provides an overview of the themes within the exposition, while **Figure 2.1** displays the nesting of themes within phrases, phrase groups, and zones. Figure 2.1 makes evident the balanced duple organization of the exposition through 1) the division of the exposition into P and S zones, 2) the separation of each zone into two phrases, and 3) the partitioning of each phrase into either two themes or a theme and a transition. The movement contains a nearly symmetric structure at the phrase ( $8+(8+2)+7.5+8$ ) and multi-phrase levels ( $16+15$ ), but breaks into themes of different lengths constructed of a combination of triple and quadruple hypermeter.

**Table 2.2. Thematic Division of the Exposition**

<b>Theme</b>	PT <sub>1</sub>	PT <sub>2</sub>	PT <sub>1</sub> '	TR	ST <sub>1</sub>	Link	ST <sub>1</sub> '	ST <sub>1</sub> '	ST <sub>2</sub>	C
<b>mm.</b>	1-3	4-8	9-11	12-18	19-21a	21b-26a	26a-28a	28a-30a	30b-33	33b-42

**Figure 2.1. Balance in the Formal Plan of the Exposition**



The first phrase of the movement introduces an asymmetrical grouping of 3+5 measures. While PT<sub>1</sub> and PT<sub>2</sub> are unequal in length, the phrase maintains a normative eight-measure length. Just as the eight-measure-long phrase does not divide evenly into halves, the ten-measure long second phrase divides thematically not into 5+5, but into 3+7. While 8+10 is not a symmetric division of the phrase group, the cadence of the second phrase arrives in m. 16, creating a second eight-measure phrase that is extended by a two-measure-long dominant suffix. In addition to the location of the cadences, the cadence types are also of particular significance since the parallel phrases end with imperfect and half cadences, respectively. The satisfaction of a perfect authentic cadence in the tonic key is postponed until the ESC in the final measures of the recapitulation.

The division of the S theme also contains a slight asymmetry at the phrase level. The first phrase spans just over seven measures, cadencing on the downbeat of m. 26, while the second phrase contains almost eight measures, terminating with the EEC on the third beat of m. 33. The thirty-three measures leading up to the EEC are divided nearly

evenly into P and S zones. While MC arrives in m. 18, the half cadence occurs in m. 16. The normalized eight-measure second phrase allows the dominant arrival in m. 16 to serve as the central point between the first note and the EEC.<sup>56</sup> This proportional framework provides balance to the exposition in spite of the thematic and hypermetric irregularities.

#### II.A.1: Metric and Hypermetric Displacement in the Primary Zone (mm. 1-18)

The expectation of division at the four-measure level is heightened by the sentence-like beginning of the first phrase of the movement. **Figure 2.2a** provides a recomposition of the opening four measures as a complete sentence. The bold brackets above the staff draw attention to the measure-long basic idea and its exact repetition in mm. 1-2. The fragmentation of the lively dotted theme in m. 3, marked by a dashed bracket, is a transposition of the ascending-third motive designated with a thin bracket in mm. 1-2. The basic idea, repetition, fragmentation organization creates the expectation of a cadence in m. 4, supplied in **Figure 2.2a**, that would close the sentence and confirm the key. In this hypothetical opening the presentation fits within a quadruple hypermeasure, so the continuation is expected to start on a hypermetric downbeat. Instead of the expected four-measure sentence, the cadential material is eliminated, truncating the sentence and expanding the phrase through the initiation of a new theme (PT<sub>2</sub>), as seen in **Figure 2.2b**. While PT<sub>1</sub> ends on tonic harmony, the first three measures fail to constitute

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<sup>56</sup> The balance between P and S zones does not include the short dominant lock that serves as a TR (mm. 16b-18) or the C zone (mm. 33b-42).

a complete phrase due to the lack of tonal motion and single harmonic function.<sup>57</sup> Neither the neighboring  $V^6$ s and  $V^6_{5s}$  in mm. 1-2 nor the passing  $V^4_{3s}$  in m. 3 suffice to trigger dominant function. Instead, these voice-leading harmonies prolong tonic and the cadence and conclusion of the first phrase is delayed.

**Figure 2.2. Establishment of Hypermeter in mm. 1-4**

**a. Recomposition Completes Sentence Structure**

Example a shows two systems of music. The first system, labeled 'm. 0', contains measures 1-4. Above the staff, a bracket spans measures 1-2 labeled 'Basic Idea', and another bracket spans measures 3-4 labeled 'Repetition'. The second system, labeled 'm. 3', contains measures 1-4. Above the staff, a bracket spans measures 1-2 labeled 'Fragmentation', and another bracket spans measures 3-4 labeled 'Cadential Material'. Below the second system, harmonic analysis is provided: 'DM: V6' is indicated for measure 3, and 'PAC' is indicated for measure 4.

**b. PT<sub>2</sub> Entry Shifts Hypermetric State**

Example b shows two systems of music. The first system, labeled 'm. 0', contains measures 1-4. Above the staff, a bracket spans measures 1-2 labeled 'Basic Idea', and another bracket spans measures 3-4 labeled 'Repetition'. The second system, labeled 'm. 3', contains measures 1-4. Above the staff, a bracket spans measures 1-2 labeled 'Fragmentation'. In the first system, 'PT<sub>1</sub>' is marked in measure 1 and 'PT<sub>2</sub>' is marked in measure 2. In the second system, 'PT<sub>1</sub>' is marked in measure 3.

<sup>57</sup> See the first chapter of Rothstein, *Phrase Rhythm in Tonal Music*.

The parallel structure of the opening two measures may lead one to invoke Lerdahl and Jackendoff's Metric Preference Rule (MPR) 1 in constructing a parallel hypermetric reading of mm. 1 and 2 and of mm. 3a and 3b that supports a 1 2, 1 2, 1, 1 division. While this is a viable *thematic* division, my hypermetric interpretation combines parallel passages, resulting in a 1 2 3 4, 1 2 reading. This interpretation incorporates MPR 2, which states that the first presentation is stronger than its immediate repetition.<sup>58</sup> Based on the continuation of the dotted-16<sup>th</sup> motive and ascending-third motive, and the recognition of new thematic material and a new hypermetric downbeat in m. 4, I propose the further combination of 1 2 3 4, 1 2 into a single hypermeasure of six hyperbeats (1 2 3 4 5 6) making a higher-level three-beat hypermeasure. Both levels of hypermeter are indicated on Figure 2.1b, with the half-measure level directly below the staff and the measure level under that in bold.

While PT<sub>1</sub> is in a triple hypermeasure at the measure level, the hypermetric shifting of PT<sub>2</sub> creates a triple hypermeasure at the half-measure level. **Figure 2.3** reveals both metric and hypermetric displacements in PT<sub>2</sub>, setting the stage for the large scale shifting of meter that becomes a distinctive feature of the work. With the entry of PT<sub>2</sub> in m. 4, a new hypermetric downbeat is articulated and the right hand continues projecting first-half-strong hypermeter through the durational and registral accents on the downbeats of mm. 4 and 5. In stark contrast, the accompanying left-hand pattern resists the established meter by resting on the strong first and third beats and entering an 8<sup>th</sup> note "late." The offset 4s placed between the staves in Figure 2.2 mark the metric-level

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<sup>58</sup> Lerdahl and Jackendoff, 75-76.

displacement dissonance by indicating the beginning of each metric group equal to four 8<sup>th</sup> notes. Since the left hand trails the right hand by one 8<sup>th</sup>, this is a 4+1 displacement where 1 equals an 8<sup>th</sup> note.<sup>59</sup>

**Figure 2.3. Displacement Dissonance and Hypermetric Displacement in mm. 4-8**

The figure shows a piano accompaniment score for measures 4 through 8. The music is in 4/4 time. Vertical dotted lines above the staves indicate metric group boundaries. In measure 4, there are four groups of four eighth notes each, with the first group starting one eighth note later than the others. In measure 7, the first two beats are circled, and a bracket below them is labeled '4/1' over '2', indicating a hypermetric shift. Below the score, the harmonic analysis 'DM: V7 I IAC' is provided.

The return to metric consonance in m. 7b (circled in Figure 2.3) initiates the first hypermetric shift of the movement. On the third beat of m. 7 the right- and left-hand

<sup>59</sup> This accompanimental gesture—an 8<sup>th</sup> rest followed by three 8<sup>th</sup>-note repetitions of a single pitch—serves not only to define PT2 in the first movement but is also the basis for the thematic content of the second movement.

rhythmic patterns realign, resolving the metric dissonance. The resolution creates a sudden strong emphasis as both hands play on the beat. This accent combined with the accelerated harmonic rhythm creates a new hypermetric downbeat in the middle of m. 7 that is confirmed by two subsequent repetitions of the half-measure pattern down a diatonic step (m. 8a and 8b).

I propose that the five measures of PT<sub>2</sub> (mm. 4-8) break into three hypermeasures of 4, 4, and 3 hyperbeats. The eleven total hyperbeats fit into five measures due to a hypermetric reinterpretation in m. 7. The hypermetric reinterpretation is represented in Figure 2.3 and subsequent figures by a pivot in the metric grid above the staff. The two hyperbeat numbers separated by a slash below the staff also represent the reinterpretation where the first integer reflects the beat number in the previous hypermeasure, and the second integer (always 1) indicates the reinterpretation of that beat as a new downbeat. In addition to shifting the hypermetric downbeat to second-half-strong, the hypermetric stress in the middle of m. 7 can create an impression of a higher-level compound duple hypermeasure as indicated in bold below the staff.<sup>60</sup>

Since my hypermetric interpretation relies in part upon the supposition of a displacement dissonance in mm. 4-7a, I would like to consider a few similar left-hand accompaniment patterns. Krebs considers the waltz bass a mild displacement dissonance

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<sup>60</sup> While in Chapter 1, I used the term “compound” to refer to an eighteenth-century view of quadruple meter, my use of “compound duple” in connection with hypermeter indicates the conventional two beats, each of which are divisible by three. Additionally, while I recognize that the lower-level 4+3 hypermeter in mm. 6-8 is not a typical division of compound duple, the lower-level hypermetric downbeats every three hyperbeats supports a six-eight interpretation at the higher-level.

between the bass on the downbeat and the chordal accompaniment initiated on beat 2.<sup>61</sup> Downbeat rests are common in a waltz where the oom-pah-pah accompaniment is altered so that the “oom” is omitted rather than articulated on the first beat. The remaining articulated beats are still heard as “pah-pah” on beats two and three and the chords remain metrically dissonant against the downbeats, particularly if the right-hand layer enters on beat 1. While this dissonance is often weak due to the hearing and acceptance of the waltz bass as a Gestalt, the dissonance can be intensified through the addition of durational or dynamic accents the second beat of each measure.<sup>62</sup> Similarly, downbeat rests in accompaniment patterns in duple and quadruple time can be heard as more or less dissonant based on their context. The opening theme of the first movement of Haydn’s A-flat-major Sonata, Hob XVI: 46 illustrates this point. **Figure 2.4** shows the right-hand emphasis on beats 1 and 3 through durational and registral accents in the first three measures. The melody is supported harmonically by repeated left-hand dyads that enter on the second and sixth 8<sup>th</sup>-notes of the measure, leaving the strong first and fifth 8<sup>th</sup>-note positions unoccupied. Since the rest-8<sup>th</sup>-8<sup>th</sup>-8<sup>th</sup> pattern begins the work, metric consonance has not been established, and the accompaniment is not heard as a strong dissonance since it is not shifted in comparison to any prior material. Instead, the accompaniment aids in the establishment of the metric context of the movement and distinguishes itself as a characteristic feature of the first theme.

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<sup>61</sup> Krebs, 91-92

<sup>62</sup> See Krebs, 91-92 for his discussion of the intensification of waltz bass dissonance in Schumann, *Papillon* no. 1. See also Mirka, 254-257 for a similar displacement dissonance in Haydn, String Quartet in C Major, Op. 50, no. 2, i.

**Figure 2.4. Displaced Accompaniment in Haydn, Sonata in A<sup>b</sup> Major, i, mm. 1-3**



While mm. 4-7a in the D-major sonata may be heard as a Gestalt in the manner of a waltz accompaniment or the A-flat-major sonata, I propose that it can also be heard as a displacement dissonance due to its contrast with the established metric context of mm. 1-3. Since the displaced left-hand pattern of mm. 4-7 comes after metric consonance has been firmly established in PT<sub>1</sub>, the gesture is likely heard as a displacement dissonance that contrasts with the previous theme.<sup>63</sup>

The second-half-strong hypermeter initiated in m. 7 is short-lived: the opening theme returns on the final 32<sup>nd</sup> note of m. 8, reestablishing the first-half-strong hypermeter on the downbeat of m. 9 and initiating the second phrase. Due to the swift return to the original hypermeter, one may question the hypermetric shift in m. 7. But this shift is retrospectively justified by a parallel shift in m. 15 that is sustained until the beginning of the S zone.

**Figure 2.5** depicts harmonic and hypermetric deviations in the second presentation of PT<sub>2</sub>. The 1 2 3 4, 1 2 3 4/1 2 3 half-measure hypermetric grouping of PT<sub>2</sub>

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<sup>63</sup> While the accompaniment pattern of PT<sub>1</sub> also begins with an 8<sup>th</sup> rest, it does not contain the emphatic repetition of a single pitch within each hyperbeat nor does it rest on the third beat of each measure. The grouping of PT<sub>2</sub> accompaniment into half-measure units (three 8<sup>th</sup> notes on a single pitch and an 8<sup>th</sup> rest) contributes to the contrast between accompaniment patterns in PT<sub>1</sub> and PT<sub>2</sub>.

in mm. 4-8 expands to 1 2 3 4, 1 2 3 4/1 2 3 4 5 6 7 in mm. 12-18. The final hypermeasure of the P zone begins with a mid-measure downbeat in m. 15 as in m. 7. The repetition of the second half of m. 15 in the first half of m. 16 delays the arrival of V, and higher-level hyperbeat 2, until the second half of m. 16, continuing the mid-measure hypermetric stress. The dominant pedal and passing tones of m. 16b are repeated every half-measure until the downbeat of m. 18, prolonging the second hyperbeat and restoring the first-half-strong hypermetric state. The third higher-level hyperbeat arrives with a change in texture to block A-major triads that repeat to fill the measure.

**Figure 2.5. Non-Isochronous Triple Hypermeter Restores First-Half-Strong at MC, mm. 12-18**

The image shows two staves of musical notation. The top staff is labeled 'm. 14' and the bottom staff is labeled 'm. 17'. Both staves are in 3/4 time. The top staff has a treble clef and a bass clef. The bottom staff has a treble clef and a bass clef. The notation includes notes, rests, and accidentals. Below the staves, there are hypermetric annotations. For m. 14, there are numbers 1, 2, 3, 4/1, 2, 3 under the notes, and a bracket labeled '1' under the first three notes, and another bracket labeled '2' under the last two notes. Below these brackets are the labels 'DM: V' and 'HC'. For m. 17, there are numbers 4, 5, 6, 7, 1, 2 under the notes, and a bracket labeled '3' under the first three notes, and another bracket labeled '1' under the last two notes. Below these brackets is the label 'MC' STI'.

**Figure 2.6a** provides a durational reduction of mm. 15b-18 where the quarter note equals a measure. The three distinct half-measure patterns initiated in mm. 15b, 16b, and 18a divide the passage into three higher-level hyperbeats. The iteration of the broken A<sup>7</sup>

harmony for three half-measures elongates the second beat of the hypermeasure, undoing the displacement beginning in m. 15b. **Figure 2.6b** normalizes the elongated second beat, fitting the hypermeasure into a simple triple context.

**Figure 2.6. Durational Reduction and Normalization of mm. 15b-18**

Figure 2.6 consists of two musical examples, labeled 'a.' and 'b.', illustrating durational reduction and normalization. Example 'a.' is titled 'mm. 15b-18' and shows a piano score in 3/8 time. The top staff (treble clef) has a 2+3+2 beat structure indicated above it. The bottom staff (bass clef) has a 2+3+2 beat structure indicated above it. Below the staves, the chord diagram is given as 'DM: IV I<sup>6</sup> IV I<sup>6</sup> V<sup>7</sup>' and 'HC/MC'. A legend below indicates that a quarter note equals 1 measure. Example 'b.' is titled 'mm. 15b-18 Normalized' and shows the same piano score but in 3/4 time. The chord diagram below it is 'DM: IV I<sup>6</sup> IV I<sup>6</sup> V<sup>7</sup>' and 'HC/MC'.

The displacement dissonances of PT<sub>2</sub> and the return to consonance in mm. 7 and 15 have significant performance implications related to the ornamentation of the right-hand part. In both cases, a small ornamental note precedes the notated third beat of the measure. In the “Notes on Interpretation” in the Wiener Urtext Edition of Haydn’s *The Complete Piano Sonatas*, Robert Levin notes that while appoggiaturas are to be performed on the beat, grace notes that are not appoggiaturas may be articulated before the beat. In such instances interpretation is at the performer’s discretion.<sup>64</sup> The thoughtful pianist will interpret the ornament on beat 3 as an appoggiatura since it is a step above the chord tone. This interpretation and a clean *on the beat* articulation highlight the resolution of the metric dissonance and the initiation of a hypermetric displacement.<sup>65</sup>

<sup>64</sup> Robert Levin, “Notes on Interpretation,” in Joseph Haydn *The Complete Piano Sonatas*, vol. 2, Austria: Wiener Urtext Edition, 2009, xvi.

## II.A.2: Shadow Hypermeter in the Secondary Zone (mm. 19-33)

**Figure 2.7** depicts first-half-strong hypermeter in ST<sub>1</sub> along with a shadow second-half-strong hypermeter. The right-hand entrance on the downbeat of m. 19 sounds hypermetrically strong. However, since this line is the accompaniment rather than the melody, it may be interpreted retrospectively as a hypermetric upbeat. The melodic line enters in the left hand with a pickup to beat three, creating a hypermetric stress in the middle of m. 19 in addition to the one felt on the downbeat of m. 19. The local metric displacement that occurred in mm. 4-8 is now paralleled on a larger scale as the left hand again trails behind the right hand in a 4+1 displacement, where 1 now equals a hyperbeat rather than an 8<sup>th</sup> note.

The shadow hypermeter is intensified by the melodic and harmonic motion of mm. 21-23. After the first presentation of ST<sub>1</sub>, Haydn inserts a harmonically and hypermetrically unstable transitional “link” that makes up for the lack of a distinct TR between P and S zones.<sup>66</sup> After five hyperbeats of static repetition of the broken octave figure on E, the change of pitch in the right hand coupled with the octave doubling of the left hand heighten the mid-measure accent in m. 21b.

The second-half-strong shadow hypermeter is further supported by the unexpected A-minor (global v) arrival in m. 22b that interrupts the previous hypermeasure and serves as a hypermetric downbeat.

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<sup>65</sup> While many recordings of this movement follow Levin’s suggested interpretation, others place all of the grace notes before the beat in the style of the 32<sup>nd</sup>, dotted 16<sup>th</sup> figure that pervades PT<sub>1</sub>.

<sup>66</sup> Measures 12-18 serve a dual purpose as both TR and the second presentation of PT<sub>2</sub>.

Figure 2.7. Shadow Hypermeter in ST<sub>1</sub>, mm. 19-26

m. 19

Primary (RH): 1 2 3 4  
 Shadow (LH): Upbeat 1 2 3  
 1 2

m. 21

1 2 3 4  
 4 1 2 1  
 3 4 1  
 3 1

Am: i

m. 23

1 2 3 4  
 2 3 4 5  
 1 2  
 2  
 VI

m. 25

5 6 1 2  
 6 7 1 2  
 3 1 1 1  
 3 1 1 1

Ger +6 V HC

The harmonic rhythm in mm. 22b-26 realigns the hypermetric layers through a higher-level non-isochronous triple shadow hypermeasure. **Figure 2.8** provides a durational reduction of the harmonic rhythm supporting the shadow hypermeter, beginning with the A-minor harmony in m. 22b. The change of harmony to F major in m. 23b marks the second higher-level shadow hyperbeat and continues the second-half-strong shadow hypermeter. The extension of this harmony to *three* hyperbeats and the transformation of the submediant triad into a predominant augmented-sixth chord on the downbeat of m. 25 (higher shadow hyperbeat 3) shift the emphasis of the shadow hypermeter to first-half-strong, partially resolving the displacement dissonance.<sup>67</sup>

**Figure 2.8. Durational Reduction Revealing Non-Isochronous Shadow Hypermeter in mm. 22b-26**

mm.22b-26

Am: i VI<sup>6</sup> Gr<sup>+6</sup> V

♩ = 1 measure

The displacement dissonance is fully resolved on the downbeat of m. 26 where the dominant arrival creates the first cadence in the key of the dominant and an unmistakable hypermetric downbeat. The cadence elides the harmonic arrival with the

<sup>67</sup> While both layers are articulating a first-half-strong hypermetric state and higher hyperbeat 3, the displacement is not yet fully resolved since the layers are articulating different beats at the lower hypermetric level.

beginning of a second presentation of ST<sub>1</sub>. The coordination of the harmonic arrival and resolution of hypermetric dissonance with the beginning of ST<sub>1</sub> reinforces the first-half-strong reading of the earlier iteration of the theme. First-half-strong is further supported as the primary hypermeter through mm. 19-26 by the melodic ascent from E to C# in mm. 21-22, which prolongs the local tonic, and the change of figuration on every downbeat in mm. 23-26.

After the two additional presentations of ST<sub>1</sub> in mm. 26-30a, Haydn presents ST<sub>2</sub> as a sentence containing two hypermetric shifts. **Figure 2.9** depicts the sentence that grows out of the basic idea presented in m. 30b. This new melodic idea generates a shift to second-half-strong hypermeter through successive downbeats. The basic idea presented in mm. 30b-31a is repeated in mm. 31b-32a, forming the presentation of the sentence. The end of the second iteration of the basic idea is elided with the continuation of the sentence, thereby shifting the hypermeter again. The expected left-hand articulation of a first-inversion A-major harmony comes one 8<sup>th</sup> note early, on the downbeat, and the right-hand 32<sup>nd</sup>-note runs that occurred on every other beat in the presentation now occur on each beat. The early arrival of the left hand triggers a hypermetric downbeat that serves as a pivot from second-half-strong back to first-half-strong. The continuation of the sentence concludes with the second cadence of the S zone, the EEC, which is the first perfect authentic cadence in the movement.

**Figure 2.9. Hypermetric Reinterpretation in ST<sub>2</sub> Leading to the EEC, mm. 30-33**

### II.B: Associations Between Hypermeter, Harmony, and Themes

The introduction of each theme in the exposition is associated with a specific hypermetric context. **Table 2.3** contains a listing of the main themes, their locations within the movement, and the hypermeter and/or hypermetric state associated with each theme. PT<sub>1</sub> for example, is always presented in a first-half-strong triple hypermeter. PT<sub>2</sub> and ST<sub>2</sub> consistently contain mid-phrase hypermetric reinterpretations that shift the hypermetric state, creating triple hypermeter at either the half-measure or measure level. The quadruple hypermeter of ST<sub>1</sub> is first-half-strong with a second-half-strong shadow. The C zone, addressed in detail in this section, contains a hypermetric addition that

creates a non-isochronous duple measure that serves as a transition between simple duple and compound duple hypermeters.

**Table 2.3. Themes and their Associated Hypermetric Contexts**

Theme	PT <sub>1</sub>	PT <sub>2</sub>	
<b>mm.</b>	1-3 9-11 43-45 69-71	4-8 12-18 46-47 72-78	
<b>Half-Measure Hypermeasure</b>	<u>123456</u> First-half-strong	4+4+x (except 46-47)	
<b>Common Higher Hypermetric Organization</b>	Simple Triple or Interrupted Quadruple	Compound Duple (1234,1234,123) or Non-Isochronous Triple (1234,1234, <u>1234567</u> )	

Theme	ST <sub>1</sub>	ST <sub>2</sub>	C
<b>mm.</b>	19-21a 26-30a 49-53a 79-82a 86-90a	30b-33 90b-93	33b-42 93b-102
<b>Half-Measure Hypermeasure</b>	4(+1) First-half-strong	4+4 Elided	4+5+6(+4)
<b>Common Higher Hypermetric Organization</b>	Simple Duple with Shadow “tail”	Compound Duple (1234,1234,1)	Transition from Simple Duple to Compound Duple ( <u>1234</u> , <u>12345</u> , <u>123456</u> )

While mm. 46-47 are included in Table 2.3 as a presentation of PT<sub>2</sub>, these measures do not have the expected 4+4+3 or 4+4+7 structure found in complete presentations of PT<sub>2</sub>. **Figure 2.10** shows the elision of this shortened PT<sub>2</sub> in A major with the beginning of ST<sub>1</sub> in m. 47. The entry of the accompaniment gesture from ST<sub>1</sub> in the left hand combines with the aligned articulation on the third beat of the measure to create

a hypermetric shift to second-half-strong. As is the case in mm. 6-8, the hypermetric reinterpretation and three-hyperbeat-long figurations divide three measures into two hypermeasures. Even though the developmental passage deviates from its parallel presentation in the exposition, the fundamental hypermetric characteristics of the theme—reinterpretation, mid-measure stress, and triple hypermeter—are preserved.

**Figure 2.10. Compound Duple Hypermeter and Elision in the Development, mm. 46-49**

**II.B.1: Hypermeter and Cadential Evasion in the Closing Theme (mm. 93-102)**

In order to label a section of a sonata as a C zone, one must first identify the cadences that serve as essential closure in the exposition and recapitulation: the EEC and ESC, respectively. One candidate for the ESC is the final perfect authentic cadence of the movement in m. 102. I prefer an earlier ESC (m. 93) due to the harmonic stasis of mm.

93b-102, which prolongs tonic through neighbor motion in the bass (mm. 94b-98a) and the melodic descent to the opening register D4 in the soprano melody (mm. 98-102). In addition to providing melodic resolution, the C zone succinctly reviews the thematic and hypermetric characteristics of the movement.

**Figure 2.11** shows the significant thematic, harmonic, and hypermetric events of the C zone. These elements contribute to the unification of the work since they refer back to significant moments earlier in the movement. The presentation and subsequent embellishment of the descending- and ascending-fourth motives in mm. 93-97 are reminiscent of the repetition and variation of the respective PT themes in the first and second phrases of the movement. Similarly, the triplet arpeggios of the left hand may also encourage the listener recall the motivic development of PT<sub>1</sub> in mm. 10-11 (RH). In addition to these similarities, the hypermeter and cadences of the C zone invoke the P zone. As shown in Table 2.3, PT<sub>1</sub> is in simple hypermeter, while the end of the second presentation of PT<sub>2</sub> contains a hypermetric shift that creates a non-isochronous triple hypermeasure.

The C zone begins with a sentence presentation similar to mm. 1-2. The introduction and varied repetition of a two-hyperbeat basic idea create a simple quadruple hypermeter that fits into a higher duple context (mm. 93b-95a). The development of the theme through inversion begins in m. 95b, continuing the second-half-strong stress and initiating a new hypermeasure. The prominent trill on G5 over A<sup>7</sup> harmony in m. 97a creates expectation of a cadence in m. 97b.

Figure 2.11. Elision and the One More Time Technique in the C Zone, mm. 93-102

The musical score is divided into several sections with annotations:

- m. 93:** Labeled "Basic Idea". The right hand has a melodic line with a trill (tr) and a fermata. The left hand has a rhythmic accompaniment with triplets. Chords are indicated as  $D: I^6$  and  $ii^6 V$ . The sequence is labeled PAC and ESC.
- m. 94:** Labeled "Repetition". The right hand continues the melodic line. The left hand has a rhythmic accompaniment with triplets. Chords are indicated as  $I$ . The sequence is labeled PAC and ESC.
- m. 96:** Labeled "Cadential Material". The right hand has a melodic line with a trill (tr) and a fermata. The left hand has a rhythmic accompaniment with triplets. Chords are indicated as  $I$ . The sequence is labeled PAC and ESC.
- m. 98:** Labeled "Development of BI". The right hand has a melodic line with a trill (tr) and a fermata. The left hand has a rhythmic accompaniment with triplets. Chords are indicated as  $I$ . The sequence is labeled PAC and ESC.
- m. 100:** Labeled "DM:  $I^6$   $ii^6$   $V^7$  PAC". The right hand has a melodic line with a trill (tr) and a fermata. The left hand has a rhythmic accompaniment with triplets. Chords are indicated as  $I^6$ ,  $ii^6$ , and  $V^7$ . The sequence is labeled PAC and ESC.

Instead, the exact repetition of m. 97a in m. 97b, boxed in on Figure 2.12, continues the figuration and the hyperbeat initiated in m. 96b, lengthens the hypermeasure to five hyperbeats, and creates a higher-level non-isochronous duple hypermeasure. The function of this addition is not simply to restore the first-half-strong hypermeter, as was the case in previous iterations of non-isochronous hypermeter, but also to serve as a pivot between simple and compound hypermeters.

The cadential arrival that is denied in m. 97 is evaded twice, albeit weakly, through melodic embellishment in mm. 98-99 (labeled EC on Figure 2.12), paralleling the lack of satisfactory cadential resolution to tonic harmony in the P zone through weak cadences in mm. 8 and 16. The downbeat of m. 98 serves as a hypermetric downbeat due to the harmonic resolution of the preceding  $V^7$ , slower harmonic rhythm, and beginning of a new figure. Yet the obscured melodic resolution on the downbeat, continuation of the triplet figure, and initiation of a new cadential figure deny the resolution the strength of a satisfactory cadence. The three-hyperbeat cadential idea initiated in m. 98 is an example of Schmalfeldt's "one more time technique" and shifts the hypermetric stress back to mid-measure in m. 99. The parallel one more time passage in the exposition lends support to my interpretation of the recapitulation. The exposition contains stronger cadential evasions supported by a more drastic melodic leap away from scale degrees four and two to the leading tone an octave higher (mm. 37-38, 39).

While the one more time technique is common in the S and C zones of Haydn's sonatas, the combination of cadential repetition and hypermetric displacement found in this work is far less common. Of the keyboard sonatas in sonata-allegro form, this

movement is the only one to demonstrate shifting of the one more time as a result of triple hypermeter.<sup>68</sup> At the end of the second iteration of the three-hyperbeat formula the lack of melodic embellishment accommodates a cadence in m. 101 that returns the hypermeter to first-half-strong for the final hypermeasure of the movement (mm. 101-102). In sum, the C zone reflects the P themes through its sentence presentation in simple hypermeter, non-isochronous hypermetric transition (PT<sub>2</sub>'), and one more time repetitions in a compound duple hypermeasure.

## II.B.2: Correlation Between Harmonic and Hypermetric Stability

In addition to the association of themes with specific hypermetric contexts, I also propose a correlation between harmonic and hypermetric stability. While music in the tonic key of D major is not always associated with a single hypermeter type, it is usually in a first-half-strong hypermetric state.<sup>69</sup> The stability of the tonic key therefore becomes associated with the stable first-half-strong hypermetric state. Conversely, passages of less harmonic stability—particularly modulatory ones in the development, TR, and RT—are frequently the location of hypermetric shifts.

The development section harmonically ventures farthest from the tonic, visiting the keys of E minor (ii) and B minor (vi). This harmonic drift away from tonic coincides

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<sup>68</sup> My survey of Haydn's 60+ piano sonatas focused primarily on first movements and movements in sonata-allegro form, of which only this D-major movement combines one more time with mid-measure downbeats. Additional works by Haydn combining the one more time technique with hypermetric mid-measure downbeats include his Symphony 65.

<sup>69</sup> The C zone of the recapitulation is an exception to this rule in that it summarizes prior hypermetric fluctuation.

with two prolonged second-half-strong hypermetric states. **Figure 2.12** shows the initiation and prolongation of second-half-strong hypermeter in mm. 55-58. The accompaniment figure of ST<sub>1</sub> is transferred to the right hand in m. 53 where it continues a stepwise ascent through a tenth (B to D) stretched over a duration of six hyperbeats within a higher-level simple triple hypermeasure. The melodic arrival and subsequent pause on the registrally climactic D6 in mm. 55-56b creates a mid-measure stress that causes a reinterpretation of hyperbeat 6 as hyperbeat 1. The repetition of the right-hand B-D ostinato for two hyperbeats in mm. 55b-56a, along with the one-chord-per-two-hyperbeats harmonic rhythm in mm. 56b-58a, create a second-half-strong quadruple hypermeter.

RT (mm. 57b-68) usher in the return of the tonic key and the first-half-strong triple hypermeter that began the movement. Because the pattern in m. 57b is repeated in m. 58a, as indicated on Figure 2.12, the closely-related pattern in m. 58b is expected to repeat in m. 59a. The substituted early arrival of the local tonic changes the harmonic rhythm and creates a new hypermetric downbeat, returning the hypermeter to first-half-strong. The harmonic rhythm of one chord per hyperbeat continues for six hyperbeats that can be grouped into a higher-level triple hypermeasure like the opening three measures of the movement. This return to the initial hypermeter is accompanied by a return to the opening tonic of D major through an E-minor pivot chord.

While the return to the tonic key lasts until the end of the piece, the shift to first-half-strong hypermeter is short-lived. **Figure 2.13** shows the five-beat hypermeasure supported by the left-hand descent of a ninth from D to C-sharp in mm. 62-64a.

Figure 2.12. Prolonged Second-Half-Strong Hypermeter in the Development, mm. 52-62

The figure displays four systems of musical notation, each representing a different measure in the development section. Each system consists of a piano part with a treble and bass staff, fingerings, phrasing slurs, and harmonic analysis below the bass staff.

- m. 52:** The piano part features a complex rhythmic pattern with sixteenth notes. Fingerings are indicated as 3, 4, 1, 2, 3, 4. The harmonic analysis below the bass staff shows a sequence of chords:  $Em: V$ .
- m. 55:** The piano part continues with similar rhythmic patterns. Fingerings are 5, 6/1, 2, 3, 4, 1. The harmonic analysis below the bass staff shows:  $Bm: i$ ,  $VI_4^6$ ,  $P_4^6$ ,  $vii^{o7}$ ,  $V_4^6$ , and  $Ger^{+6}$ .
- m. 58:** The piano part features a different rhythmic pattern. Fingerings are 2, 3, 4/1, 2, 3, 4. The harmonic analysis below the bass staff shows:  $V^7$ ,  $i$ ,  $P_4^7-6$ ,  $i^7-6$ , and  $DM: ii^4-3$ .
- m. 61:** The piano part continues with similar rhythmic patterns. Fingerings are 5, 6, 1, 2. The harmonic analysis below the bass staff shows:  $V^4-3$  and  $I^4-3$ .

The return to tonic harmony in m. 64b and my interpretation of the parallel passage in mm. 55b support the interpretation of m. 64b as a mid-measure hypermetric downbeat. The shift of the hypermetric state to second-half-strong retrospectively creates a higher-level non-isochronous duple hypermeasure in mm. 62-64a. The second-half-strong pattern initiated in m. 64b persists to the end of the development, creating another long stretch (nine half-measures) of shifted hypermeter.

**Figure 2.13. Hypermetric Shifts in RT, mm. 61-68**

The figure displays three systems of musical notation, each representing a different hypermetric state. The first system, labeled 'm. 61', shows a 5/3 time signature with six measures of music. The second system, labeled 'm. 64', shows a 5/1 time signature with four measures of music. The third system, labeled 'm. 66b', shows a 1/3 time signature with five measures of music. Vertical dots above the notes indicate hypermetric downbeats. Brackets below the measures indicate hypermetric groupings.

Because Haydn used V in the tonic key in MC, he is able to recycle this dominant “lock” material at the end of RT in preparation for the recapitulation.<sup>70</sup> The A-major harmony that begins in m. 65b readies the listener for the return of the P zone and the three-hyperbeat A-major arpeggio figure (mm. 66b-67) returns the hypermeter to first-half-strong. RT is but one example of a transitional passage that has a two-fold purpose, both harmonic and hypermetric. The link passages in both the exposition and the recapitulation, and the dominant lock that precedes MC, all contain non-isochronous hypermeasures that restore first-half-strong hypermetric stress.

### II.B.3: Considerations of Hypermetric and Formal Balance

The expansion of a hypermeasure can compensate not only for the shortchanging of the hypermeasure that immediately precedes it, but also for the hyperbeats “lost” through hypermetric reinterpretation in earlier parallel passages. **Figure 2.14** shows how the recapitulation’s first deviations from the exposition work to “correct” the initial hypermetric shift of the movement. The initial hypermetric reinterpretation of the movement (PT<sub>2</sub> m. 7, also m. 15) is repeated in m. 75. The reinterpretation of beat 4 of the previous hypermeasure as 1 of the next one results in the omission of an expected hyperbeat in mm. 7, 15, and now 75.

Since there are two presentations of PT<sub>2</sub> in the exposition, there are at least two possible options for the parallel passage in the recapitulation, as seen in **Figure 2.14 a** and **b**.

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<sup>70</sup> The term dominant lock (coined by Hepokoski and Darcy) refers to the dominant fill that extends from the half cadence to MC proper.

**Figure 2.14. Balanced Hypermetric Addition and Reinterpretation in PT<sub>2</sub>:  
mm. 7-8, 15-18, and 74-79**

a. mm. 7-8+79

b. mm. 15-18+79

c. m. 74

m. 77

D: HC

**Figure 2.14a** splices together mm. 7-8 and m. 79 in order to show the expected location of an imperfect authentic cadence in the recapitulation (m. 76b). Similarly, **Figure 2.14b** draws attention to the half cadence that would occur in m. 76b if the passage paralleled mm. 15b-18. Both parallel passages create the expectation of a cadence and continuation of the second-half-strong hypermetric state in m. 76b. Yet the score in **Figure 2.14c** reveals the extension of the previous hyperbeat through the absence of a cadence and stalling of harmonic rhythm due to the abrupt absence of the left-hand. While the length of mm. 75-78 parallels mm. 15b-18, and both fit into a non-isochronous triple hypermeter, the above mentioned change in harmonic rhythm alters the location of the lengthened hyperbeat. The durational accent on the downbeat of m. 77 and the realignment of right and left hands on the downbeat of m. 78 mark the second and third beats of a 3+2+2 hypermeasure in contrast to the 2+3+2 grouping of mm. 15b-18.<sup>71</sup>

PT<sub>2</sub> serves as the thematic backdrop for the first hypermetric alteration of the movement and the first hypermetric alteration in the recapitulation *relative* to the exposition. Just as the three-measure PT<sub>1</sub> is balanced by a five-measure PT<sub>2</sub>, the initial “loss” of hyperbeats to hypermetric reinterpretation in the exposition is balanced by the addition of hyperbeats in parallel passages in both the exposition (mm. 15b-18) and the recapitulation (mm. 75b-78). The following chapter will reveal an even more dramatic example of Haydn’s recapitulatory restoration of hypermetric equilibrium in the G-minor Sonata.

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<sup>71</sup> See Figure 2.6, p. 33.

## CHAPTER III

### G-MINOR SONATA HOB. XVI: 44, i

The first movement of Haydn's *Sonata in G minor* Hob. XVI:44 contrasts a provocative chromatic primary theme with the lively descending arpeggios of a secondary theme in the relative major. The movement, written between 1771 and 1773, demonstrates balanced phrase structure and form through the complementary addition and deletion of hyperbeats. The hypermetric shifts in this movement are not as frequent as they are in the D-major sonata, nor are they as closely linked to the key areas of the piece. Instead, the primary hypermetric appeal of the movement lies in how it compensates for hypermetric reinterpretation via added hyperbeats, as well as in the structural parallels created by these alterations.

This chapter proceeds both chronologically and topically through the movement. **Table 3.1** summarizes the form of the movement and the primary hypermetric and formal features I will be discussing in my analysis. I will begin with an examination of the opening measures, which establish quadruple hypermeter. My discussion of the first hypermetric shift follows, serving as a reference point for hypermetric shifts later in the movement. After considering the opening hypermetric context, I will examine sentence structures in ST. I will then consider the parallel structure of TR and C before turning to the development in order to highlight Haydn's balanced use of added and deleted hyperbeats. I then address the insertion of a cadenza in C in the recapitulation

and the role this insertion plays in balancing previous deletions in C and TR in the exposition. I then consider the formal unity of the entire movement in terms of loose-knit sentences on four structural levels. Finally, I extend Heinrich Schenker's proposition of formal organicism in this movement to include hypermeter.

**Table 3.1. Summary of Sonata Form and Primary Formal and Hypermetric Features**

Large Section	Zone	mm.	Key	Cadence	Primary Feature	Hypermetric State	
						F-H-S	S-H-S
Exposition	PT	1-4	Gm	PAC m. 4	Quadruple hypermeter	1-4	
	TR	5-12	Gm- B $\flat$ M	MC m. 12	Reinterpretation and addition	5-6a, 12	6b-11
	ST	13-20	B $\flat$ M	EEC m. 20	Sentences	13-20	
	C	21-30	1st: B $\flat$ M- Gm 2nd: B $\flat$ M- Cm	HC m. 30	Completion of TR sentence	21-30	
Development		31-51	Cm- E $\flat$ M- Gm	HC m. 51	Nested loose-knit sentences	31-51	(39b-42)
Recapitulation	PT/TR	52-57a	Gm	HC m. 57a	Altered PT and TR shift ST	52-57a	
	ST	57b-63		ESC m. 63			57b-63
	C	63-77		PAC m. 77	Cadenza balances segment lengths	64-77	

### III.A: Hypermeter in the Exposition

#### III.A.1: Establishment of Normative Hypermeter and Hypermetric Shifting in PT and TR (mm. 1-12)

**Figure 3.1** shows the even division of the opening four measures into two phrases that form a parallel period. Due to the parallel construction of mm. 1 and 3, the downbeat of m. 3 serves as the second lower-level hypermetric downbeat. The restatement of PT in mm. 3-4 deviates from the initial iteration in order to end with a satisfactory perfect authentic cadence. The division of the period into two phrases is paralleled by a division into two quadruple hypermeasures, while the period as a whole articulates a higher-level quadruple hypermeasure.

**Figure 3.1. Hypermeter Established in PT and Shifted in TR, mm. 1-6**

The figure displays a musical score for measures 1 through 6, divided into two systems. The first system contains measures 1-4, and the second system contains measures 5-6. Above the notes, vertical dots indicate hypermetric downbeats. Below the notes, horizontal lines with numbers 1-4 indicate hypermetric measures. Roman numerals and chord symbols are placed below the lines to denote harmonic structure. In the first system, the hypermetric measures are 1, 2, 3, 4, 1, 2. The chords are Gm: i, V<sub>2</sub><sup>4</sup>, V<sub>3-3</sub><sup>6,7</sup>, i, iv, V<sup>4-3</sup>, and HC. In the second system, the hypermetric measures are 3, 4, 1, 2, 3, 4/1. The chords are Gm: i, VI, ii<sup>06</sup>V, i, PAC, i, vii<sup>07</sup>, V, 2, 1!, and V<sup>7</sup>/III!

Following the strong cadence in m. 4, the triplet D-E $\flat$ -D anacrusis and subsequent leap to G that opened the movement are repeated an octave lower. The melody then *ascends* to B $\flat$ 4, where the entry of the left hand on C $\sharp$  and G color the B $\flat$  as the seventh of a secondary leading-tone chord that resolves to dominant harmony. The diminished-seventh chord in m. 5 serves as a parallel and an intensification of the secondary dominant harmony in m. 1. The measure-long pattern of m. 5 is then transposed up by step to create a melodic sequence. The melodic and harmonic parallels between mm. 1 and 5 may initially suggest that mm. 5-6 will continue PT. **Figure 3.2** provides a recomposition of mm. 5-6 that follows in the harmonic footsteps of mm. 3-4. This imagined realization of mm. 5-6 continues the expected first-half-strong quadruple hypermeter.

**Figure 3.2. Recomposition of mm. 5-6**

1 2 3 4

Gm: i  $vii^{\circ 7}$  V  $i$  IAC

Instead of continuing in a harmonically and hypermetrically predictable manner, the melodic sequence in mm. 5-6 takes an unexpected turn that marks the passage as the end of PT and the beginning of TR. While my recomposition uses the C5 in m. 6 as the chordal seventh of a dominant harmony, the actual passage introduces an unexpected V<sup>7</sup> of III that generates the first mid-measure downbeat of the piece. **Figure 3.1** depicts the harmonic surprise and new accompaniment pattern that create the shift, while **Figure 3.3** displays the continuation of the second-half-strong hypermeter through an extension of F dominant harmony and the measure-long patterns that begin on the third beat of mm. 6 through 9, respectively. The continuation thus confirms a retrospective reinterpretation of hyperbeat 4 as 1 in m. 6b.

**Figure 3.3. Restoration of First-Half-Strong Hypermeter through MC, mm. 7-14**

The musical score for Figure 3.3 consists of two systems of piano accompaniment. The first system covers measures 6 through 9, and the second system covers measures 10 through 14. The notation includes treble and bass staves with various note values, rests, and articulation marks. Below the staves, hypermetric markings are provided: for measures 6-9, the markings are 3, 4/1, 2, 3, 4, 1, 2, 3; for measures 10-14, the markings are 4, 1, 2, 3, 4. A dashed line separates the two systems. Below the second system, harmonic labels are given: Bbm: VI, Ger+6, and V<sub>4-3</sub><sup>7</sup>-8 MC.

**Figure 3.3** also depicts the return to first-half-strong hypermeter through an added hyperbeat that creates a non-isochronous hypermeasure just before MC. After the introduction of V of III, TR continues in quadruple hypermeasures beginning in mm. 6b, 8b, and 10b. After two hypermeasures of dominant pedal in the relative major (mm. 6b-10a), a predominant augmented-sixth chord is gradually introduced over the span of three hyperbeats, elongating beat 2 before resolving to V in m. 12.<sup>72</sup> **Figure 3.4a** provides a durational reduction of the passage in a duple meter where each measure of the original corresponds to a quarter note in the figure. The extension of predominant harmony elongates the fifth beat of the measure-level hypermeter, compensating for the earlier hypermetric reinterpretation and restoring the first-half-strong emphasis. **Figure 3.4b** provides a normalized version of the predominant and dominant harmonies to fit within the context of the remainder of the passage. The measure-level hypermeasure can nest within an even higher triple hypermeter. These hyperbeats, indicated on Figure 3.4a by the downbeats and on Figure 3.3 in bold italics, align with the beginning of the dominant pedal in B♭ major, the repetition of this accompaniment in B♭ minor, and the initiation of predominant harmony. As was the case in the D-major sonata, TR in this movement serves both harmonic and hypermetric purposes.

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<sup>72</sup> An alternate interpretation may consider the predominant harmony as a hyperbeat too short and normalize through the expansion of the predominant harmony to four hyperbeats. The measure-long dominant harmony may also sound short and be expanded to a full hypermeasure in length.

Figure 3.4. Durational Reduction and Normalization of TR, mm. 6b-12

mm. 6b-12

a.

mm. 10b-12 Normalized

b.

$\bullet = 1$  measure

B $\flat$ : V  $\begin{matrix} 7-6-7-6 \\ 3-4-3-4 \end{matrix}$   $\begin{matrix} 7-6-7-6 \\ 3-4-3-4 \end{matrix}$  VI Ger $^{+6}$  V $\begin{matrix} 7-8 \\ 4-3 \end{matrix}$

B $\flat$ : VI Ger $^{+6}$  V $\begin{matrix} 7-8 \\ 4-3 \end{matrix}$

### III.A.2: Loose-Knit Sentence Structure in ST (mm. 13-20)

With the first-half-strong hypermeter restored, the S zone begins with a sentence in B $\flat$  major. **Figure 3.5** marks the measure-long basic idea (m. 13) and its exact repetition (m. 14) with solid brackets above the staff. The continuation of the sentence prolongs tonic harmony via a diatonic ascending-2<sup>nds</sup> sequence that moves the bass line from D to B $\flat$ , filling in the sixth between first-inversion and root-position tonic harmonies (pickup to m. 15 through m. 17a). The melody ascends in parallel 10<sup>ths</sup> along with the bass, arriving on D5 in m. 17. Were this the end of the phrase, the overall proportions would be 1+1+2 $\frac{1}{4}$ , only a single beat longer than a normative sentence. Yet the weak V $^6$ -I resolution across the barline of mm. 16-17 does not satisfactorily conclude the phrase. Instead, mm. 17-19 continue the melodic ascent from D5 all the way to G5. Measures 19-20 provide cadential material and conclude the elongated 1+1+6 sentence.

Figure 3.5. Loose-Knit Sentence in ST, mm. 13-20

The musical score is divided into four systems, each with a label above it:

- m. 13:** Labeled "Basic Idea" and "Repetition". It shows a melodic line with a trill (*tr*) and a bass line with a sequence of chords. Fingering numbers 1, 2, 3, and 4 are indicated below the notes. A dashed line connects the first two measures, and another connects the last two. A  $I^6$  chord is marked at the end.
- m. 15:** Labeled "Fragmentation". It shows a melodic line with a trill (*tr*) and a bass line with a sequence of chords. Fingering numbers 1, 2, 3, and 4 are indicated below the notes. A dashed line connects the first two measures, and another connects the last two. Harmonic analysis below the staff reads:  $IV \quad | \quad ii^6 \quad V^{4-3} \quad || \quad iii^6 \quad vi \quad | \quad IV^6 \quad vii^{b4-3} \quad | \quad V^6$ .
- m. 17:** Labeled "Fragmentation". It shows a melodic line with a trill (*tr*) and a bass line with a sequence of chords. Fingering numbers 1, 2, 3, and 4 are indicated below the notes. A dashed line connects the first two measures, and another connects the last two. Harmonic analysis below the staff reads:  $I \quad | \quad I \quad | \quad I$ .
- m. 20:** Labeled "Cadential Material". It shows a melodic line with a trill (*tr*) and a bass line with a sequence of chords. Fingering numbers 3 and 4 are indicated below the notes. Harmonic analysis below the staff reads:  $B \ M: I^6 \quad IV \quad V^{4-3} \quad | \quad I \quad EEC$ .

Figure 3.6 provides a recomposition of ST as a sentence that strictly follows the  $x+x+2x$  model. Comparing Figure 3.6 with Figures 3.5 clarifies my view of ST as a sentence that is elongated through insertion. The recomposition provides a link to connect mm. 13-15a with m. 19, illustrating how mm. 15b-18 can be viewed as an insertion that

therefore delays the cadence. The insertion lengthens the phrase to eight measures (mm. 13-20), a phrase whose regular first-half-strong quadruple hypermeter I will compare with altered presentations of the theme as they occur in the development and recapitulation.

**Figure 3.6. 1+1+2 Recomposition of ST, mm. 13-16**

### III.A.3: Sentence Structure in C (mm. 21-30)

Like ST, C begins as a sentence, but its thematic roots are in TR.<sup>73</sup> **Figure 3.7** shows the two-hypermeasure basic idea that differs from TR not only in key, but also through the addition of an alto voice that harmonizes the melody in parallel 6<sup>ths</sup> and 3<sup>rds</sup>. C provides the expected sentential continuation that TR withheld. Instead of shifting the hypermeter to second-half-strong, m. 22 presents a complete restatement of the melodic

<sup>73</sup> My selection of m. 20 as the EEC is supported by Schenker's sketches of this movement in *Das Meisterwerk in der Musik*, vol. II, 23. Schenker indicates the arrival of III in m. 13 and the melodic arrival on scale degree 3 in m. 20, leaving the remainder of the exposition to serve as a connection to either m. 1 or m. 31.

basic idea up a diatonic step. The melodic sequence is transposed up a step once again in m. 23 but is altered on beat 3, where the soprano and alto leap to G5-Eb5, a step higher than expected. This altered presentation of the basic idea marks the beginning of the continuation and is immediately followed by cadential material that ends the sentence in m. 24, closing off the second of two quadruple hypermeasures, the only four-measure 1+1+2 tight-knit sentence of the movement, and a higher-level quadruple hypermeasure. The cadence in m. 24 elides with the beginning of cadential repetitions that contain two “echo” perfect authentic cadences (mm. 26, 28).

**Figure 3.7. Sentence Structure in C, mm. 20-28**

The figure displays a musical score for measures 20 through 28, divided into three systems. The first system (measures 20-24) is annotated with 'Basic Idea' (measures 20-22) and 'Repetition' (measures 23-24). The second system (measures 23-24) is annotated with 'Fragmentation' (measures 23-24) and 'Cadential Material' (measures 23-24). The third system (measures 26-28) is annotated with 'IV', 'V<sup>6</sup><sub>3</sub> I (PAC)', 'I<sup>6</sup>', and 'IV', 'V<sup>6</sup><sub>3</sub> I (PAC)'. The score includes measure numbers (m. 20, m. 23, m. 26), bar numbers (1-4, 1-2, 3-4), and Roman numeral chord symbols (Bb: I, ii<sup>6</sup>, V<sup>6</sup><sub>3</sub>, I, I<sup>6</sup>, IV, V<sup>6</sup><sub>3</sub>, I (PAC)).

### III.B: Balanced Hypermetric Alterations and Loose-Knit Sentence Structure in the Development (mm. 31-51)

Following the EEC and the C zone, Haydn develops the P zone in the key of the subdominant using successive downbeats and reinterpretation to create hypermetric interest. **Figure 3.8** shows the alteration of PT and TR in the development and the new hypermetric situations they create. Measures 31-33a (not shown) are an exact transposition of mm. 1-3a, setting up the expectation for a perfect authentic cadence in C minor in m. 34. The consequent phrase drifts away from the parallel passage in the exposition (mm. 3-4) by ending with dominant and tonic harmonies in G minor instead of C minor and presenting a rhythmic diminution of m. 5a. This altered presentation of PT becomes the pattern of a sequence; it appears again in mm. 35-36 transposed down a second, creating a quadruple hypermeasure and the presentation of a sentence.

**Figure 3.8. Loose-Knit Sentence in TR in the Development, mm. 35-42**

The figure displays three systems of musical notation for piano, illustrating the development of a loose-knit sentence structure. The first system, starting at measure 33, shows a melodic line with a 'Basic Idea' (measures 33-34) and its 'Repetition' (measures 35-36). The second system, starting at measure 37, shows a melodic line with 'Basic Idea' (measures 37-38), 'Repetition' (measures 39-40), and 'Fragmentation' (measures 41-42). The third system, starting at measure 40, shows a melodic line with 'Cadential Material' (measures 40-42). The score includes various annotations such as 'RH/melodic: 1', 'LH/harmonic: 1', and 'Cm: V HC'.

There are at least two possible hypermetric interpretations of the passage that parallels TR and serves as the continuation of the sentence. While the F-minor harmony of m. 36 is restated on the downbeat of 37, the change in figuration, durational and registral accents in the right hand, and interpretation of previous iterations of TR all support m. 37 initiating a new hypermetric downbeat. Following the F-minor triad and the bass line stepwise descent through a perfect 5<sup>th</sup>, the left-hand change in register and surface rhythm and modulation to E $\flat$  major through the addition of a m7 to the B $\flat$  harmony (m. 39b) can be heard as a new (successive) hypermetric downbeat. This hearing is indicated on **Figure 3.8** as the “LH/harmonic” interpretation. The return of first-half-strong hypermeter in conjunction with ST (m. 43) necessitates a second hypermetric modification to compensate for the earlier addition. Within the E $\flat$ -major context of mm. 39b-40, the B $\natural$  can serve as a return to the key of C minor and cause a hypermetric reinterpretation that returns the hypermeter to first-half-strong.<sup>74</sup>

An alternate hearing of mm. 37-42 relies on the repetition of the right-hand motive to justify a continuation of first-half-strong hypermeter. **Figure 3.8** shows this reading in the “RH/melodic” hyperbeats under the score. The continued prominence of the dotted-quarter note on beats one and three of the measure and the B $\flat$  pedal in mm. 39-40 support this interpretation and serve as the continuation of a nested sentence. In sum, the passage may be heard as: 1) hypermetric 1 2 3 4 1, 1 2 3 4/1 2 3 4, where

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<sup>74</sup> While the G-major harmony can serve as a return to the key of C minor, it may also be heard as a local tonicization of the submediant in E $\flat$  major.

addition in the first hypermeasure is balanced by a reinterpretation between the second and third hypermeasures; or 2) three quadruple hypermeasures.

The development of the S zone is brief and leads almost immediately to the fragmentation of PT that serves as both RT and the climax of the movement. **Figure 3.9** displays the presentation of the first half of ST in C minor and the following tonal and thematic departure that leads to the recapitulation. After the expected 1+1-measure presentation of ST in mm. 43-44, the theme is fragmented in a new manner, alternating descending arpeggios and ascending scales in a descending-2<sup>nds</sup> sequence. Cadential material does not arrive at this point; instead, the sequence breaks off with a rest accompanied by a fermata. The upbeat to m. 46 begins a statement of PT in the key of E $\flat$  major that serves not as the continuation of the previous sentence, but as the basic idea of a new sentence. The brackets over the music in **Figure 3.9** show the transposed beginning of PT that serves as the two-hyperbeat basic idea and the restatement of the idea a step higher. The brackets closest to the notes show the fragmentation of PT as it repeats every measure in mm. 46-47, every half-measure in m. 48 (including the imitation in the left hand), and every beat in mm. 49-50. The diminution builds tension leading up to the registral climax (E $\flat$ 6) on the fourth beat of m. 49. The triplet upper-neighbor figure and following leap up a perfect 4<sup>th</sup> are all that remain of the fragmented PT as it continues into m. 50, where the sequence ends to accommodate the half cadence in G minor that concludes the development and ushers in the return of PT. Since the harmonic sequences in mm. 48-50 continue the phrase through progressive fragmentation of the theme, RT can be heard as a 1+1+4 loose-knit sentence.

Figure 3.9. Diminution of PT in RT, mm. 43-54

The figure displays a musical score in G minor, 4/3 time, with measures 43 through 54. The score is divided into four systems, each with specific annotations:

- System 1 (m. 43):** Labeled "Basic Idea" and "Repetition". It shows a melodic line in the right hand with a trill (tr) and a sequence of notes. The left hand provides a harmonic accompaniment. Measure numbers 1, 2, 3, and 4 are indicated below the staff.
- System 2 (m. 45):** Labeled "Fragmentation" and "Repetition". It features a dense, rapid melodic passage in the right hand. The left hand has a more sparse accompaniment. Measure numbers 5, 6, 1, 2, 3, and 4 are indicated below the staff.
- System 3 (m. 48):** Labeled "Fragmentation". It shows a continuation of the melodic and harmonic material from the previous systems. Measure numbers 1, 2, 3, 4, 5, and 2 are indicated below the staff.
- System 4 (m. 51):** Labeled "Cadential Material". It consists of a few final notes in both hands. Measure numbers 3, 4, and 6 are indicated below the staff.

At the bottom of the score, the key signature and time signature are specified: Gm:  $V \frac{4}{3}$  HC.

### III.C: Hypermeter in the Recapitulation

#### III.C.1: Second-Half-Strong Hypermeter in ST (mm. 52-63)

Not even three measures pass before Haydn introduces significant alterations to PT in the recapitulation.<sup>75</sup> In the exposition, Haydn includes a six-measure dominant preparation (mm. 6b-12a) leading up to the introduction of the S theme and key area. Since the recapitulation does not modulate, there is no need for a dominant pedal to establish a new key. **Figure 3.10** shows the two sequences that are inserted in place of the dominant pedal (mm. 54-55 and m. 56) to “transition” not between keys, but between tonic and dominant harmonies. As previously mentioned, the antecedent-consequent presentation of PT in mm. 1-4 closes with a perfect authentic cadence in G minor, creating the expectation of a perfect authentic cadence in m. 55. If an exact copy of PT occurred in the recapitulation without TR, ST would be approached from tonic harmony instead of dominant harmony. Because of the alterations made to link PT to ST, PT in the recapitulation is not a periodic structure. The 4+7 grouping, successive weak cadences, and transitional function of the passage are significantly different from the straightforward parallel symmetric period of the exposition.<sup>76</sup>

Following the prominent half cadence, ST appears in the tonic key for the first time. **Figure 3.10** reveals that the final presentation of ST begins not with a pick-up to a downbeat, but with a pickup to beat *three* (of m. 57). Since the first two statements of ST<sub>1</sub>

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<sup>75</sup> The absence of the left hand in m. 53 marks the first alteration in the recapitulation. This lack of accompaniment parallels the C-minor presentation of PT in the development and does not have significant hypermetric or harmonic implications.

<sup>76</sup> The alignment of the end of the phrase and end of the sequence in m. 56 is an additional hypothetical scenario that would result in a first-half-strong presentation of ST in the following measure.

began in strong hypermetric positions, the final statement's mid-measure beginning is a surprise that shifts the hypermeter to second-half-strong. The dominant harmony in m. 57 extends not a full measure, as it did in m. 12, but only a half measure, accommodating the early arrival of ST. The “missing” hyperbeat of dominant harmony is indicated on Figure 3.10 by the circle that marks the shortened sixth beat of the measure-level hypermeter. The reduction of the length of dominant harmony by half mirrors the shortening of the P and TR zones from twelve measures in the exposition to six in the recapitulation.

**Figure 3.10. Altered PT and TR Shift ST, mm. 52-57**

The image shows two systems of musical notation. The first system, labeled 'm. 52', consists of a grand staff with treble and bass clefs. Above the staff are vertical dots indicating hypermetric positions. Below the staff are horizontal lines with numbers 1, 2, 3, 4, 1, 2, representing hyperbeats. The second system, labeled 'm. 55', also has a grand staff and hypermetric markings. A large circle is drawn around the final half of measure 57, highlighting a specific musical event. Below the staff in the second system are horizontal lines with numbers 3, 4, 1, 2, 3, 1, representing hyperbeats.

### III.C.2: Balance of Hypermetric Reinterpretation and Insertion in TR and C (mm. 5-12, 64-77)

Figures 3.1 and 3.3 showed instances of local deletion and addition of hyperbeats in succession that compensate for each other and result in a return to the original hypermetric state.<sup>77</sup> The first hypermetric reinterpretation of the movement (m. 6) was quickly corrected through the addition of a half-measure (m. 11) just prior to MC (m. 12), but such local hypermetric adjustments are not always the case.

The displaced presentation of ST in mm. 57b-63 is by far the longest period of second-half-strong hypermeter in the movement.<sup>78</sup> The half-measure shortening of TR in the recapitulation (m. 57) relative to the exposition (m. 12) must be made up for in order to “right” the hypermeter before the conclusion of the movement. **Figure 3.11a** shows how the altered continuation of ST’s bass line, beginning with the pickup to the third beat of m. 59, ascends not a 6<sup>th</sup> (as in the pickup to m. 15 through m. 17a), but a 10<sup>th</sup>, from B $\flat$  to D. This alteration provides partial compensation for the earlier loss of time by taking up an odd number of half-measures and allowing C to return to the first-half-strong hypermeter. While this addition corrects the shifted hypermeter, it does not compensate for the previous deletion since mm. 59-63 are three hyperbeats *shorter* than expected due to the absence of material parallel to mm. 17b-18. **Figure 3.11b** shows the parallel passage in the exposition and reveals the difference in length between the continuations of C sentences. Given that the 1+1+4.5 ST<sub>1</sub> of the recapitulation is shorter than the 1+1+6

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<sup>77</sup> Also see Figure 1.2, p. 10.

<sup>78</sup> Also see Table 3.1, p. 52.

ST of the exposition, the hypermetric addition in mm. 59-63 does not compensate for the shortening of PT and TR in the development.

**Figure 3.11. Varied Lengths in the Continuation of ST in the Exposition and the Recapitulation**

The figure displays two systems of piano music, labeled 'a.' and 'b.', each with two staves (treble and bass clef).  
 System 'a.' starts at measure 59b. The first staff shows a complex melodic line with many sixteenth and thirty-second notes. The second staff shows a bass line with quarter and eighth notes. Below the staves, fingerings are indicated: 1, 2, 3, 4, 1 for the first staff; 3, 4, 1 for the second staff. A horizontal line with a dashed center line spans across the first four measures of the first staff, and another line spans across the first two measures of the second staff.  
 System 'b.' starts at measure 15. The first staff continues the melodic line. The second staff shows a bass line with quarter and eighth notes. Below the staves, fingerings are indicated: 1, 2, 3, 4 for the first staff; 3, 4 for the second staff. A horizontal line with a dashed center line spans across the first four measures of the first staff. The system continues to measure 17, with fingerings 1, 2, 3, 4 for the first staff and 1, 2, 3, 4 for the second staff. A horizontal line with a dashed center line spans across the first four measures of the first staff in this section.

The significant lengthening of C compensates for the previous hypermetric loss and shortening of both PT and ST. **Figure 3.12** shows Haydn’s creative repayment of the lost time through the insertion of a harmonically static cadenza (mm. 66-70) that contains less hypermetric stress than the remainder of the movement. C begins as expected in mm.

64-65 with a transposition of mm. 21-22 to the tonic key. If C were to continue paralleling the parallel passage in the exposition, mm. 66-67 would transpose mm. 23-24, continuing the sentence and terminating the phrase with a cadence. This expectation is thwarted by a fragmentation of C that is drawn out into a four-measure written cadenza that significantly delays the cadential material.

**Figure 3.12. Making Up for Lost Time: Cadenza, mm. 66-70**

The figure displays three systems of musical notation for piano. The first system, labeled 'm.64', shows a treble and bass staff with a bass line marked with fingerings 1, 2, 3, 4, 1. The second system, labeled 'm.67', shows a treble and bass staff with a bass line marked with a (2) and a fermata. The third system, labeled 'm.70', shows a treble and bass staff with a bass line marked with fingerings 3, 4, 1, 2. The score includes markings for 'sempre piu adagio' and 'a tempo'.

The cadenza inserted into C is significant for three additional reasons. First, I consider the cadenza to be less metric due to the minimal left-hand involvement, overall harmonic stasis, and the addition of the marking *sempre piu adagio*. The parallel construction of mm. 23 and 66 and of mm. 24 and 71 support my placement of

hyperbeats 1, 3, and 4, and the left-hand entry in m. 67 on an F# diminished-seventh chord substantiates my placement of the second hyperbeat.<sup>79</sup> The relaxed metric and hypermetric state is a stark contrast with the rest of the movement. Second, recall that TR is conceptually based upon the more normative C and contains the first hypermetric reinterpretation of the movement. The cadenza thus harkens back to the first loss of time and balances the initial hypermetric reinterpretation through a significant phrase expansion. Finally, the insertion of a cadenza into C transforms the only tight-knit sentence of the movement (mm. 20-24) into a loose-knit sentence, yet it also plays a crucial role in creating a proportional  $x+x+2x$  structure on a higher level. The impact of the cadenza on the large-scale sentence structure of the work will be considered in detail in the following section.

#### III.D: Nested Loose-Knit Sentence Structures through Entire Movement

Sentence structures unify this movement through their prominent appearances on four hierarchical levels. Loose-knit sentences are evident on the sub-phrase, phrase, and multi-phrase levels. Furthermore, the proportional  $x+x+2x$  length of segments governs even longer sections of the form. **Table 3.2** provides an overview of the sentence structures within the movement. Each of the higher-level (multi-phrase and section) sentence structures are made possible largely through hypermetric addition and deletion. I have already addressed the phrase-level loose-knit sentences in ST and C, their parallel passages in the development and recapitulation, and the nested loose-knit sentence

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<sup>79</sup> A less radical interpretation continues the quadruple hypermeter and considers my interpretation as a higher-level hypermeter.

structure found in RT. Before highlighting the proportional division of the recapitulation made possible by the addition of the cadenza, I would like to address sentence structure at the multi-phrase level in the P zone.

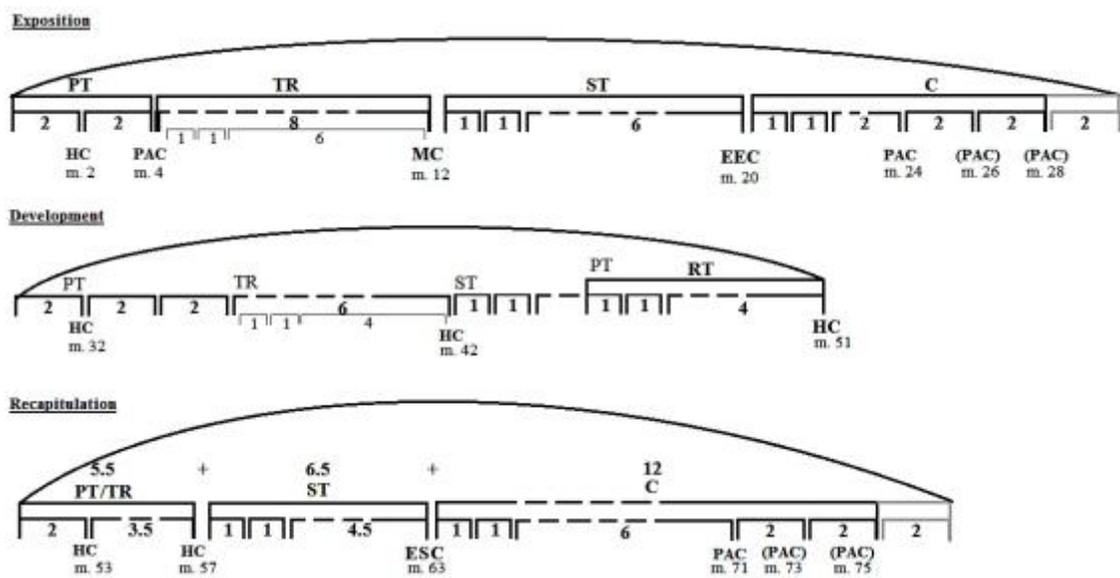
**Table 3.2. Sentences at Four Structural Levels**

Section	Bars	Sentence Level
PT	1-12	<u>Nested</u> Multi-Phrase 2+2+8 Phrase 1+1+6.5
ST	13-20	Phrase 1+1+6
C	21-28	Phrase 1+1+2
Development	33-42	Phrase 2+2+6 Sub-Phrase 1+1+4
	46-51	Phrase 1+1+4
Recapitulation	52-75	Recapitulation 5.5+6.5+12 PT+ST1+C

Measures 1-4 not only comprise a parallel, symmetric period but also function as the presentation of a larger, multi-phrase sentence diagrammed in **Figure 3.13**. The basic idea ends with a half cadence in m. 2, its repetition concludes with a perfect authentic cadence in m. 4, and the sentence terminates with MC. My interpretation of TR as the

continuation of PT presentation is based on the melodic and harmonic parallels between PT and TR as outlined on pp. 50-51. The continuation of the sentence is depicted in Figure 3.13 by a dashed line that returns to solid, indicating the development of the basic idea and the cadential material, respectively.

**Figure 3.13. Entire Movement: Nested Sentence Structures**



Within the continuation (mm. 5-12) one can assert another loose sentence that is confirmed through the sentential structure of C later in the movement. The internal sentence begins with m. 5 as a basic idea that is partially restated in m. 6 before being interrupted by the prolonged dominant. The resulting grouping is 1+1+6.5, where the repetition of the basic idea and the continuation share a beat due to the thematic elision and hypermetric reinterpretation in m. 6b. Were it not for the extension of dominant and predominant harmonies in mm. 7-10, the sentence would have a 1+1+2 structure. By

substituting a B $\flat$ -major harmony and a B $\flat$ 4 on the fourth beat of m. 6, measures 7-10 can be interpreted as an insertion. The P zone through MC is affected by the same insertion. The continuation of the multi-phrase sentence is double its expected length due to the dominant insertion (mm. 7-10) between the fragmentation and the cadential material.

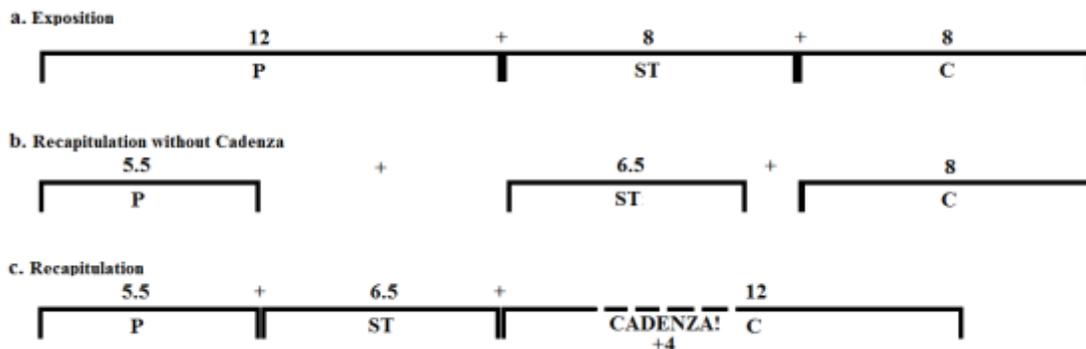
At a yet higher level, the recapitulation divides into three sections that match with the  $x+x+2x$  sentential proportions. While PT and TR are independent in the exposition, I consider them a single unit due to their combination in the recapitulation. Taking PT/TR, ST, and C as the three main sections, the exposition displays a 3:2:2 proportional division, as seen in **Figure 3.14a**.<sup>80</sup> The shortening of PT/TR by half and the shortening of ST result in a 5.5+6.5 division of the first half of the recapitulation. The approximately 6+6 partitioning of the first two thematic areas of the recapitulation pays homage to the pervasive sentence structures of the movement and may create the expectation of a twelve-measure continuation. PT/TR and ST serve as the “presentation” dividing twelve measures of music nearly evenly without splitting them exactly in two. If the length of C paralleled the exposition, it would add 8 measures to the previous 5.5+6.5, as seen in **Figure 3.14b**. **Figure 3.14c** shows how the addition of the cadenza lengthens the final segment, balancing the shortening of PT and ST in the recapitulation and producing a 1:1:2 partitioning. The cadenza could have conceptually been any length, yet the insertion is exactly four measures. The resulting thematic grouping of the recapitulation is

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<sup>80</sup> I have not included mm. 76-77 in my construction of the loose knit sentence since they serve a modulatory purpose in the first ending just as their parallel presentation in mm. 29-30 (both endings) does.

5.5+6.5+12, the closest parallel to an x+x+2x proportional structure observable on a high level within the movement.

**Figure 3.14. Comparison of Thematic Section Lengths in the Exposition and Recapitulation**



Since the first two sections of the recapitulation are contrasting (PT and ST), they serve as a presentation only in their proportional lengths. The third segment more closely aligns with the thematic function of the continuation in that C contains both fragmentation (in the cadenza) and cadential material (PAC and echo cadences). The cadenza serves not only as the fragmentation of the section-level “sentence,” but also as the elongated fragmentation of the phrase-level sentence (mm. 64-71), resulting in the nesting of a loose-knit sentence within the x+x+2x structure of the recapitulation. The hypermetric, phrase, and formal divisions of the movement display balance through hypermetric addition and deletion and unity through the layering of loose-knit sentences.

In addition to addressing balance and unity, I would like to close this chapter by highlighting the organic nature of the hypermeter and phrase structure of the movement.

Heinrich Schenker used this movement to illustrate organicism in sonata form through

the composing out of the tonic triad. I propose that the movement also displays organicism in hypermeter and phrase structure. The first hypermetric reinterpretation sets into motion an organized process of hypermetric shifting that spans the whole movement. TR serves as a harmonic and hypermetric transition in its introduction of the key of the mediant and of second-half-strong hypermeter. By association, every instance of second-half-strong or shadow hypermeter may be related back to this initial moment given their similar thematic content (C, TR in the development, cadenza). The insertion of eight hyperbeats for the purpose of modulation (mm. 7-10) is significant as it creates the first nested loose-knit sentence of the movement. The loose-knit sentence structure of TR is “tightened up” in mm. 20-24 where TR material is developed into a closing theme. The TR/C theme is further developed in the recapitulation where the cadenza loosens the sentence structure and significantly reduces hypermetric stress. The insertion in C in the recapitulation balances the initial hypermetric reinterpretation in TR due to the parallel content of both passages. The cadenza also creates a high-level  $x+x+2x$  division that binds together the previous, lower-level loose-knit sentences. The hypermetric significance of the movement is not the number or length of shifts, but the formal unity achieved through the balance of addition and deletion in hypermetric and phrase alterations that arise organically from the first measures of the work.

## CHAPTER IV

### CONCLUSION

In both of the sonata movements examined in this thesis, hypermetric displacement regularly produces mid-measure downbeats and a second-half-strong hypermeter. The independence of right-hand and left-hand lines contributes to both metric displacement dissonances and half-measure hypermetric displacements between melody and accompaniment. In this type of half-measure hypermetric displacement, the harmonic rhythm and the hypermetric context of parallel passages inform my decisions to prioritize one line as the primary hypermeter and consider the other as the displaced shadow hypermeter. Hypermetric displacements including shadow hypermeter and second-half-strong hypermeter interact with both the harmony and the various levels of form in Haydn's sonatas on local and global levels.

The hypermetric state of a work may correspond to the thematic or harmonic content. In the D-major sonata, the first-half-strong hypermeter corresponds with the tonic key. Since passages in the development modulate away from both tonic key and first-half-strong hypermeter, RT functions as both a harmonic and a hypermetric return. While the G-minor sonata does not display the same overarching connections between harmonic and hypermetric states, passages of less harmonic stability in the development are often hypermetrically ambiguous due to Haydn's repetition, continuation, and development of themes and the elongated phrases they create.

The shifts from first-half-strong to second-half-strong and back are achieved through the addition or deletion (reinterpretation) of hyperbeats. While phrase lengths may vary and hypermetric shifts may result in hypermeasures containing an odd number of beats, the combination of a deletion and an addition frequently allow for lengths that are powers of 2 at the next higher level. The asymmetric pairings of phrases and sub-phrases are often as close to symmetric as possible, such as 3+5 measure division of the opening eight measure phrase of the D-major sonata. The exposition of this movement contains significant cadences in mm. 8, 16, and 33, creating an underlying framework built on powers of 2, yet creatively modified through the expansion and combination of themes in order to deviate from even divisions at the sub-phrase level.

In addition to the immediate local balance of deletions and additions, the G-minor sonata possesses a global balance as well in that hypermetric additions in the recapitulation account for deletions that occurred in the exposition. The cadenza in the recapitulation makes up for the first hypermetric reinterpretations of the piece, while also revealing the unified structure of the work by creating a loose-knit sentence in the recapitulation that reflects the loose-knit sentence structures that permeate the movement. Instead of hypermetric addition and deletion emphasizing powers of 2, the modifications in the three thematic sections of the recapitulation result in a nearly  $x+x+2x$  proportional construction.

The coherence brought about in both movements through the nesting of either segments whose lengths correspond to powers of 2 or sentential structures, and the symmetry achieved through the balanced addition and deletion of time, may not be

initially evident to the listener, performer, or music theorist. These characteristics of the Classical period are beautifully woven into Haydn's elongated phrases and made evident only through the careful examination of the intersections of hypermeter, tonal rhythm, and the harmonic and thematic organization of sonata form. The performance implications of local and global hypermetric alterations in Classical keyboard works, including the articulation of the resultant nested forms, remains an area of potential future study. Furthermore, additional studies in hypermeter and form in other works of Haydn and other Classical-era composers may reveal similar unity and symmetry hidden beneath a looser surface-level organization.

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