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Musical Proportion and Formal Function in Classical Sonata Form: Three Case Studies from Late Haydn and Early Beethoven

James S. MacKay

“Sonata form”—the analytical brainchild of Antonin Reicha, A.B. Marx, and Carl Czerny in the first quarter of the nineteenth century—remains today a problematic paradigm. The inadequacy of the “textbook” model to explain the musical choices of especially Haydn and Beethoven is evident whenever one examines their sonata-form compositions. Consequently, writers from Donald Francis Tovey to William S. Newman and Charles Rosen have sounded various cautionary notes concerning this model, and have inspired others in recent times to search for new, more flexible means of describing how Classical sonata form functions musically.

The past few years have witnessed the appearance of two analytical approaches that can assist us in the quest. First, there is William Caplin’s taxonomy of Classical instrumental music at the level of the four-measure phrase and the two-measure phrase member.¹ It provides us with the technical means to identify thematic and transitional units and to distinguish between them on the basis of their syntactical components. Second, there is James Hepokoski and Warren Darcy’s identification of breaks in musical action (i.e., medial caesuras and essential expositional closures) as analogues to punctuation in language, which they use to demarcate formal events in sonata expositions.² Both approaches draw heavily on historical views of musical form: Caplin’s ideas about formal function derive from Schoenberg and Ratz;³ Hepokoski and Darcy’s interest in musical breaks as large-scale formal determinants is an extension of Heinrich Christoph Koch’s concept of “melodic punctuation.”⁴

Hepokoski and Darcy suggest a rather wide—but nonetheless distinct—range of possible temporal locations, within a sonata-form exposition, for each type of melodic punctuation. Their data suggests that the temporality of musical events is more integral to a listener’s perception of musical succession than has been hitherto assumed. Indeed, it could be argued that the musical proportion of an exposition’s formal components (i.e., main theme, transition, subordinate theme, closing section)⁵ influences subconsciously how we formally partition a sonata exposition, *regardless of the literal form-functional meaning of each expositional segment*, as determined by Caplin. Accordingly, this study seeks to

reconcile and combine the two approaches, to give a more multifaceted picture of how a listener experiences sonata form. The focus of this essay is primarily on expositions, but the principles suggested will have broader application to an understanding of sonata-form movements as a whole. The essay will therefore conclude with an examination of a complete movement: the finale of Haydn's Symphony No. 90.

In introducing the discussion at hand, it will be useful to summarize Caplin's, and Hepokoski and Darcy's analytic approaches to Classical form.

Caplin proposes that each musical component (phrase member) has a specific *formal function* within a composition. Each formal function can be classified as an initiating, intermediate, or concluding gesture. These form-functional phrase units then combine in different ways to create a theme-type (for example, an eight-measure *sentence* is formed from a two-measure basic idea that is immediately repeated and then followed by fragmentation and a cadential unit; this is a common structure for a main theme); or else the units may combine to form a non-thematic region such as a transition. Caplin illustrates how each of these formal functions can be employed differently in the context of their respective thematic locations within the form. Thus, we can largely differentiate between main themes, subordinate themes, and transitions (as well as developments, which resemble the last-mentioned formal region) on the basis of the formal functions they contain, and the order in which they are used. Caplin makes the distinction between *tight-knit* and *loose* thematic organization on the basis of a theme's syntactical components. Tight-knit themes are motivically clear-cut and have temporally balanced phrase members (e.g., two four-measure phrases, each consisting of a pair of two-measure phrase members, is an archetypal tight-knit theme). Techniques that create musical imbalance or a sense of development (such as fragmentation, extension, and interpolation) result in loose thematic organization.⁶ Caplin shows how formal tightness is generally associated with main themes, while formal loosening is more typical of the subordinate theme group. (Transitions and developments tend to be even looser than subordinate themes as to their formal structure, as their function is primarily to mediate between formal regions of relative tonal stability.⁷)

Although they are conversant with Caplin's taxonomy, Hepokoski and Darcy take a different tack. Rather than building up large-scale musical events from small motivic kernels (*à la* Schoenberg), they instead search for points of musical punctuation as a way of demarcating the various thematic components of sonata form. As of this writing, their "sonata theory" has not yet been published in full; an article entitled "The Medial Caesura and its Role in the Eighteenth-Century Sonata Exposition" (to which Hepokoski alludes in his more recent article, "Beyond the Sonata Principle") represents only a portion of their theory.⁸ However, to the extent that ideas presented therein complement and differ from those of Caplin, the article provides a window into their distinct approach to sonata form.

As a preliminary step in demarcating the various events of a sonata-form exposition, Hepokoski and Darcy identify points at which the musical flow

breaks, taking their lead from Koch's notion of "melodic punctuation."⁹ The emphasis on musical punctuation displays the authors' interest in using language-based analogies to explain the exposition's succession of events. Their two main forms of musical punctuation are the *medial caesura* and the cadence at the subordinate theme's conclusion, which effects *essential expositional closure*.¹⁰ As the presence and location of the medial caesura is crucial for determining the formal structure of a sonata-form exposition, I will describe it at length.

As Hepokoski and Darcy note, the medial caesura typically divides the exposition more or less at its midpoint. This cadence can be one of three types: a half cadence (HC) in the tonic, a HC in the subordinate key, and perfect authentic cadence (PAC) or (more rarely) imperfect authentic cadence (IAC) in the subordinate key; the second of these types is by far the most common. The measures leading to this caesura are often rather dynamic in character: Hepokoski and Darcy note that the harmony preceding the medial caesura is often a chromatic chord (e.g., a secondary dominant or augmented-sixth chord), the texture is "vigorous, highly active," and the dynamic level is quite loud, usually culminating in threefold "hammer blows" reiterating the goal harmony of the passage.¹¹ Thus, this juncture in the musical flow is often highlighted with a grand rhetorical flourish.

One of Hepokoski and Darcy's major contributions to a deeper understanding of sonata form is their acknowledgement that temporal location is a vital determinant of formal boundaries. (Their three subcategories of medial caesura, listed above, occur progressively later in the exposition.) This attention to temporal location is tied to a specifically Classical sense of musical balance. For a sensitive listener attuned to the norms of the style, it is often possible to get a sense of where one is situated formally in a work by Haydn, Mozart, or Beethoven, on the basis of musical proportion. The ensuing discussion will explore how this balanced musical proportion operates in Classical music at various levels of structure.

Even at the level of the two-measure phrase member (the smallest formal level in Caplin's system), a certain temporal balance is expected in Classical style. Indeed, a sense of balance and regularity is often considered to differentiate Classical music from that of the bordering Baroque and Romantic styles. Caplin's theory considers the four-measure phrase, made up of a pair of equally weighted two-measure phrase members, to be the normative model. Any alteration of this standard pattern is an example of musical extension or contraction. Thus, one would hear (for example) a three-measure phrase member in the context of the typical two-measure unit (or four-measure phrase) that it deforms.¹²

This notion of balance occurs at the thematic level of structure as well. Classical themes are typically built out of phrases of equal length: the proportions of phrase 1 tend to demand an equivalent response, temporally speaking, in phrase 2. Thus, the standard four-bar antecedent typically demands a consequent of roughly equal length. Similarly, an irregular antecedent often demands an equally irregular consequent as a counterbalance. This point is illustrated by the minuet from Haydn's Quartet in G Major, op. 54, no. 1 (see Example 1): its opening ten-measure theme balances a five-measure antecedent phrase with a consequent

Example 1. Haydn, String Quartet in G Major, op. 54, no. 1:
third movement, mm. 1–10.

The image shows two staves of music for Violin I. The first staff (measures 1-6) is labeled 'ANTecedENT' and 'CONSEQUENT'. The first two measures (1-2) are labeled 'Basic idea'. Measures 3-4 are labeled 'Contrasting idea'. Measures 5-6 are labeled '(extension)'. The first measure of the consequent phrase (measure 7) is labeled 'Basic idea'. The second staff (measures 7-10) is labeled 'Contrasting idea' and '(expanded)'. The final measure (measure 10) is labeled '(PAC)'. The key signature is one sharp (F#) and the time signature is 3/4.

phrase of identical length. The expansion is far from mechanical. In the antecedent phrase, Haydn prolongs dominant harmony until its end, extending a measure beyond the HC on the downbeat of m. 4. The consequent phrase is enlarged to its five-measure length by an inner expansion of the contrasting idea, which extends and delays the phrase's cadential unit.

The expectation of formal balance in the deployment of musical events operates at larger-scale levels as well. The first movement of Haydn's Piano Trio in G Major, Hob. XV:25, will serve as illustration (see Example 2). Its opening theme is in binary form, consisting of two parts of roughly equal length, as is typical of the model. The simplest binary type contains a pair of four-measure phrases in each half, thus 8+8 measures overall; in this theme, however, Haydn extends both halves. Due to an inner expansion of its second phrase, Part 1 runs ten measures in length (4+6 measures). As if in response, Part 2 is extended as well: to the standard eight-measure structure, Haydn adds a three-measure codetta. As in the preceding example, Haydn expands each half of the form differently. The temporal balance is not exact, but the overall illusion of musical balance, which the composer seeks, is surely achieved. The eleven-measure second half, which results from the addition of codetta material, almost exactly balances the ten-measure first half of the form. Clearly, Classical decorum demanded this type of musical balancing as a formal ideal. In this respect, Haydn's and Beethoven's frequent deviations from this principle in certain works may be seen as a deliberate deformation of the ideal for artistic purposes.¹³

Carrying this line of reasoning a step further, it seems logical to assert that a sonata-form movement, which (as per Koch) is simply a binary form writ large,¹⁴ also prompts certain expectations of the listener as to its proportion and sequence of musical events. This succession of events—namely, the establishment of a tonality, followed by a modulation to and cadence in a closely related key—is handled in a more complex manner in a sonata-form exposition than in a simple binary composition (e.g., each tonal event in a sonata-form movement tends to get its own thematic region, rather than merely a motive or incipit), but

Example 2. Haydn, Piano Trio in G Major, Hob. XV:25:
first movement, mm. 1–23.

PART 1

ANTECEDENT (4 measures) CONTINUATION (6 measures)

(HC)

(PAC, D major)

PART 2

CONTRASTING MIDDLE (4 measures) CONTINUATION (7 measures)

(HC)

(codetta)

(PAC)

the overall procedure in the larger form is fundamentally similar to that of the smaller one that it expands.

The concern for proportion implicitly influences Hepokoski and Darcy’s view of sonata-form expositions. Their medial caesura bisects the exposition, separating the Principal theme–Transition (PT) region, which establishes and then departs from the home tonality, from the Subordinate theme–Closing (SC) region, which introduces and then confirms the subordinate tonality. This point of division feels like a “halfway” mark in its rhetorical effect, if not always in its literal temporal location. They furthermore distinguish between exposition types on the basis of the presence or absence of such a musical break: expositions are bipartite in structure if a medial caesura is present, and continuous (Larsen’s “three-part exposition”) if it is absent.¹⁵

As Hepokoski and Darcy explain, the specific type of medial caesura (as determined by its harmonic goal) helps to establish its appropriate temporal placement in a sonata exposition—at least to some degree. Recall that a sonata exposition establishes a home tonality, and subsequently departs from it for the purpose of establishing a complementary tonality; accordingly, the degree of departure from the original tonality, suggested by the cadence, influences how far along in the form the various types of medial caesura cadences could effectively

occur. Not surprisingly, a HC in the tonic (Hepokoski and Darcy's "first-level default" for the medial caesura) typically occurs earlier in a sonata exposition than does a HC in the subordinate key, or a PAC in the subordinate key (Hepokoski and Darcy's second-level and third-level defaults, respectively).¹⁶ Because these cadence types are each a progressively later step in the process of destabilizing the home tonality and establishing the subordinate tonality in its place, their effective temporal placement in the flow of the exposition differs accordingly.¹⁷

If a medial caesura arrives "too soon" given its particular type, we will likely be unconvinced musically of its punctuation function. It is interesting how this moment-by-moment perception of musical unfolding influences how one might break down a complex type of discourse such as a sonata-form exposition, even at first hearing. To begin with, main themes are generally of predictable length. This length, moreover, is already to some extent determinable after the opening phrase (since, as suggested above, an opening phrase will typically be paired with a second phrase of equal length). Thus, the sense of appropriate musical proportion for the succession of material is set relatively early on, even for a work being experienced for the first time.

Regardless of initial impressions, one certainly becomes aware of well- (or poorly) executed proportions in subsequent hearings of a musical work; and it is upon revisiting the complex forms of skilled composers that one best understands the formal subtleties and ambiguities that accompany a home tonality gradually giving way to a complementary tonality. These formal subtleties and ambiguities will now be considered through two examples of an apparently misplaced or ambiguous medial caesura: the first movements of Beethoven's Sonata in F Major, op. 10, no. 2; and Haydn's Piano Trio in F# Minor, Hob. XV:26.

Beethoven's Sonata in F Major has been described by Rosen as an essay in Haydn's joking style.¹⁸ Certainly its opening movement makes use of the tonal norms and thematic devices of Classical sonata form in a willful and comic manner. As illustrated by Example 3, the movement departs its home tonality very quickly: after only twelve measures of main-theme material in a fast duple meter, Beethoven leaves the home key in the subsequent phrase (mm. 13–18) and leads (rather oddly and abruptly) to a HC in A minor! However, in m. 19, he immediately establishes the expected subordinate key of C major; and so one might consider the anomalous cadential goal (V of the minor mediant key) to be the exposition's medial caesura, despite its early placement and "incorrect" tonal orientation.

If there were no other candidates for this point of punctuation, we would be forced to accept m. 18 in retrospect as the true medial caesura. To cite a related case, the first movement of Beethoven's "Waldstein" Sonata in C Major, op. 53, modulates to V of III (a HC in E major) after departing the home tonality. Because no conventional half cadence in the dominant appears later in the exposition, this odd cadential goal, leading toward the mediant major key, is apparently to be taken as the exposition's true medial caesura. (This reading is confirmed by a twelve-measure passage prolonging the dominant harmony—Hepokoski and Darcy's "caesura fill"¹⁹—and subsequently the onset of the subordinate theme in E major.) However, such a cadence in the "wrong" tonal location could certainly

Example 3. Beethoven, Sonata in F Major, op. 10, no. 2:
first movement, mm. 1–19.

MAIN THEME

Piano

p

3

3

TRANSITION

8

p

3

(PAC, F major)

SUBORDINATE THEME (?)

14

rinf

3

3

3

3

3

3

p

(HC, A minor)

produce, in the stylistically aware listener, an expectation that a more normative medial caesura (i.e., HC in the home tonality, or a HC or PAC in the complementary tonality) will occur at a later point in the exposition. Such is Beethoven's procedure in the F-major sonata. Both the odd tonal goal of the putative medial caesura and its seeming premature appearance in the exposition hint that a subsequent musical correction will need to occur as the sonata movement unfolds.

Given the main theme's twelve-measure span, combined with the Classical ideal of balanced musical proportion, one might surmise that the transition will be of similar length. When this segment cuts off abruptly in the "wrong" key, after only six measures, the effect is deliberately perfunctory. Nonetheless, there is little that is unusual about the putative thematic unit that begins in m. 19—at least not from a form-functional standpoint. The theme can be interpreted as a (slightly expanded) sixteen-measure sentence, one of Caplin's compound theme models.

Example 4. Beethoven, Sonata in F Major, op. 10, no. 2:
first movement, mm. 18–37.

SENTENCE
(presentation)

Piano

18 *p* *sf*

24 *sf* *ff*

30 *p* *sf*

34 *sf* *sf*

HC (C major)

Mm. 19–26 can be understood as an archetypal presentation phrase, consisting of a basic idea stated twice, creating a statement–response pattern. Moreover, the harmonic shape of the phrase (a tonic prolongation in C major) clearly reinforces the subordinate tonality. The only disturbing feature is the discrepancy in the length of this sentence’s form–functional components: each basic idea spans four as opposed to the usual two measures. One might claim that the movement has switched in midstream to $R=2N$,²⁰ such that the four-measure basic idea is analyt-

ically analogous to the two-measure norm. (Such a shift is an expedient that Caplin never uses in his analyses.) However, that reading seems less than satisfactory. Perhaps the irregular length of the material's formal units is a hint that this theme is not what it appears to be, at least with regard to its formal function.

Moreover, in spite of the apparent initial aptness of this passage to serve as the subordinate theme, the arrival of this new thematic region and contrasting tonal region seems distinctly premature—after all, we are but seven brief measures removed from the main theme. As a result, the subordinate theme (if it may be called such) must do some of the rhetorical work usually allotted to the transition, as Rosen has noted.²¹ Probably due to its early appearance in the exposition, this theme, following its normative presentation phrase, quickly takes on the character of transitional material, leading (as traditions are wont to do) to a HC in the proper subordinate key (as shown in Example 4). It is as if Beethoven is now introducing the “correct” medial caesura, which he had withheld in m. 18. This “correct” cadence on the dominant of C major is more convincingly placed temporally than the early HC in A minor: the requisite G-major harmony arrives in m. 30, and is then prolonged through m. 37. Because the exposition is sixty-six measures in length, this harmony and its subsequent prolongation lies almost exactly at the midpoint. In contrast, the “wrong” cadence in m. 18 can now be perceived as having occurred far too early.

Beethoven's playing with formal boundaries and listener expectation in this exposition has still not reached its conclusion, however. The material following the medial caesura (m. 38*ff.*) doesn't sound like the onset of a theme; rather, it is shaped like the *concluding* half of a longer thematic unit. According to Hepokoski and Darcy, we would normally expect a *beginning* gesture to occur after a medial caesura, but Beethoven follows the grand rhetorical pause on V of C major with a thematic region that seems to begin somewhere in the middle.

As shown in Example 5, mm. 38–41 can be explained as a four-measure cadential gesture (following Caplin), immediately repeated (and varied) in the parallel minor. One might argue for an IAC in m. 41, had not the temporal placement in the musical flow been so ambiguous. M. 45, which “ought” to have clarified tonal and form-functional matters with a PAC in C major, instead resolves deceptively to a remote A^b-major chord (bVI of C major). Thus, the “ending” of mm. 38–41 is revealed instead to be a pseudo-cadential beginning gesture that subsequently opens up into the subordinate theme's “true” concluding phrase (mm. 47–55). Although it should be noted that Classical themes occasionally begin as if in the middle of a longer idea (e.g., the main theme of the first movement of Beethoven's op. 31, no. 3, can be understood in this light), it does serve to complicate further the clear establishment of the exposition's formal boundaries.

What ensues is the true conclusion of the subordinate theme: Beethoven follows the pseudo-cadential initiating gesture of mm. 38–45 with an expanded cadential progression (ECP),²² leading to the expected PAC that confirms the dominant tonality in m. 55. Following this cadence, the final twelve measures of the exposition are a non-problematic closing section: the harmonic content almost exclusively alternates tonic and dominant chords, thus serving to ground the formal tension that Beethoven had created earlier in the movement.

Example 5. Beethoven, Sonata in F Major, op. 10, no. 2:
first movement, mm. 38–55.

Basic idea? (pseudo-cadential)

Piano

38

(IAC?)

(basic idea repeated)

42

ff

sf

f

(deceptive cadence)

(ECP)

46

pp

cresc.

51

f

sf

f

(PAC)

One could say that both Caplin's and Hepokoski and Darcy's respective analytic systems are helpful (to some extent) in determining where Beethoven has placed the formal boundaries in this exposition. Caplin's theory permits a traditional reading of the exposition's formal boundaries,²³ wherein the subordinate theme arrives early (if a bit strangely). Hepokoski and Darcy's theory suggests a later onset for the subordinate theme: if one is seeking a medial caesura to determine the location of the subordinate theme, the musical punctuation of mm. 30–37 is surely far more emphatic than that of mm. 17–18. Needless to say, the discrepancy in analytical results is more than a difference in scholarly opinion; rather, it aptly illustrates this exposition's formal ambiguities. Playing Caplin's

Example 6. Haydn, Piano Trio in F# Major, Hob. XV:26:
first movement, mm. 1–16 (piano part only).

Antecedent

Piano

mf *fz* *p*

(HC, F# minor)

Failed consequent

5

mf *sf* *f*

(HC, A major)

(Transition?)

9

f

13

theory of formal function against Hepokoski and Darcy’s “sonata theory” effectively demonstrates the blurring of thematic boundaries that Beethoven has accomplished from the beginning of the transition (m. 13) through the PAC that ushers in the exposition’s closing section (m. 55).

Beethoven’s deformation of sonata form in the exposition of the F-major sonata greatly resembles Haydn’s formal procedure in the opening movement of his Piano Trio in F# Minor (Hob.XV:26). In Beethoven, the opening material can be segmented into a main theme of twelve measures, followed by a transition of six measures that begins (once again) with main-theme material.²⁴ As illustrated in Example 6, Haydn accomplishes the same formal design in eight measures of common time. The opening antecedent phrase leads to a HC in the home key;²⁵

the second phrase begins with the same incipit (initially suggesting a normative consequent phrase) but subsequently and surprisingly modulates to end with a HC in the relative major (i.e., A major).

Caplin views the opening phrase as a four-measure main theme, with a transition ensuing in m. 5.²⁶ To make this reading tenable, he apparently analyzes the movement as $R=1/2N$, so that the opening four-measure span is analytically equivalent to an eight-measure sentence.²⁷ Similar examples cited by Caplin include the opening movements of Beethoven's Sonata in G Minor, op. 49, no. 1, and the "Waldstein" Sonata, op. 53. The apparent large-scale periodic structure of the opening material cuts across formal boundaries, resulting in a main theme followed by a transition that begins with the main theme's basic idea—a common initiating procedure for the transitional region.²⁸ If one accepts Caplin's reading of mm. 1–4 as the complete main theme, then the ensuing material could be read in two different ways. Mm. 5–8 could serve as the complete transition, after which m. 9 would be the onset of an extended subordinate theme, concluding with a PAC in m. 28. Alternatively, mm. 5–21 could be a (slightly anomalous) two-part transition.²⁹ In this reading, Part 1 of the transition (mm. 5–8) begins with a main theme incipit, and subsequently leads (somewhat prematurely) to V of the eventual subordinate key; and Part 2 (mm. 9–21) continues with stock transitional rhetoric (increased harmonic and rhythmic activity, and chromaticism). This passage terminates with a second HC in the subordinate key (m. 19). Here, the tonal goal is prepared at length and confirmed with three measures of a dominant pedal.

To illustrate a different view of how the exposition can be formally parsed, we turn to H.C. Robbins Landon. He analyzes the passage beginning in m. 9 as a bridge passage (i.e., transition).³⁰ Thus, he pairs mm. 1–4 with the motivically parallel but oddly modulating mm. 5–8 to comprise the main theme. Landon suggests that m. 22 comprises the unequivocal establishment of the subordinate key, A major. This tonal arrival, along with a drop to a *piano* dynamic (one of Hepokoski and Darcy's signals for the onset of the subordinate theme group)³¹ and the onset of distinctive thematic material and triplet accompaniment figuration, leads Landon to identify the passage (spanning mm. 22–28) as the movement's subordinate theme (see Example 7).

I have suggested a range of possible formal readings for the first half of the exposition, informed by the observations of Caplin, Hepokoski and Darcy, and Landon. It is not my intention to privilege one formal reading over another; all of them are plausible. Which reading one prefers depends upon two factors: first, which HC in the subordinate key is interpreted as the exposition's medial caesura; and second, how one reads formally the opening eight measures.

As noted above, if the movement's first two phrases comprise both main theme and transition regions, then the remainder of the exposition—as per Caplin's criteria—must be a single subordinate theme (plus closing material beginning in m. 29).³² Despite its presentational character, new figuration, and clear articulation of the subordinate key (arguably for the first time), m. 22 must be considered a continuation phrase in Caplin's system, if one takes m. 9 as the onset of the subordinate theme region. The HC in m. 19 did not close off the preceding segment fully, and Caplin requires that all subordinate themes end with an

Example 7. Haydn, Piano Trio in F# Major, Hob. XV:26:
first movement, mm. 16–28 (piano part only).

authentic cadence.³³ Landon’s reading acknowledges the initiation function of m. 22, but fails to explain how mm. 9–21 can be a bridge passage (transition) when it is in the key of its cadential goal from the outset. However, the rhetorical signals of transitional material in these measures, combined with the convincing medial caesura in mm. 19–21, strongly support Landon’s formal reading over that derived from applying Caplin’s analytical principles.

Caplin’s theory does provide a graceful way out of this quandary, although he does not invoke it for this movement in particular. Much like the piano-trio

Example 8. Haydn, Sonata in E Major, Hob. XVI:31: finale, mm. 1–8.

The musical score consists of two systems of piano accompaniment. The first system, labeled "Antecedent", contains measures 1 through 4. The second system, labeled "Failed consequent", contains measures 5 through 8. The key signature is E major (three sharps). The time signature is 2/4. The first system concludes with a half cadence in E major, and the second system concludes with a half cadence in C# minor.

movement under consideration, the finale of Haydn's Sonata in E Major, Hob. XVI:31, begins with a main theme whose first two phrases both end with HCs (as shown in Example 8, the first phrase ends on V of the home key, while the next phrase ends on V of the submediant minor). In effect, the theme's opening phrase creates the expectation of a period, which is not carried out in conventional fashion by its second phrase. As with the opening measures of the piano-trio movement under discussion, it would be problematic to designate the initial eight-measure unit of Haydn's E-major sonata as "antecedent plus antecedent." The remote tonal goal of the second phrase has a different musical effect than the first phrase's normative tonal goal (i.e., the tonally further-ranging second phrase has *continuation* function instead of *initiation* function). Thus, Caplin designates the second phrase as a "failed consequent" that—instead of returning to the tonic—effects a greater tonal departure.³⁴

This strategy, though anomalous by high Classical standards, is not uncommon in the mid-eighteenth century. Alan Campbell has pointed out that a periodic structure in which the consequent phrase has a tonally more-remote cadence than the antecedent phrase is a common theme-type in the music of Domenico Scarlatti and his contemporaries.³⁵ Such a procedure is not atypical in Haydn's works up to about 1765 (Caplin's example of this theme-type dates from a decade later still), at which stage in his career Haydn's formal structures were still greatly influenced by the phrase-structural strategies of the late Baroque. It is a bit surprising, however, to see the composer returning to this procedure in 1795, the date of the Piano Trio in F# Minor. However, this theme-type was obviously part of his vocabulary even in his mature period. It is plausible to read the opening eight measures of the trio as an anomalous period (antecedent plus modulating "failed consequent"). After such a formal designation, the exposition proceeds conven-

tionally as to its formal function: mm. 9–21 would be the transition, followed by a conventional SC region (mm. 22–37).

This later placement of the S region seems rhetorically correct. As noted above, m. 22 is marked by a new and more forceful establishment of the key of A major, and by new triplet figuration. Although the subordinate tonality arrives in m. 9 (Haydn even precedes this moment with the requisite HC of the new tonality), one senses, even on first hearing, that it is likely premature to have truly begun the subordinate theme: if m. 8 is the medial caesura, it has occurred very early, only 22% of the way through the thirty-seven-measure exposition. If one reads m. 22 as the onset of S, the proportions seem more satisfactory: the medial caesura of m. 19 occurs 51% of the way through the exposition, which is a more normative placement from the standpoint of musical balance.

As a final example of how musical proportion affects our perception of form, we will examine the finale of Haydn's Symphony No. 90 in C Major; an annotated score reduction of the entire movement appears in the appendix of this article. This quicksilver movement (marked *allegro assai*) begins with a perfectly square eight-measure period, immediately repeated with new orchestration. This sixteen-measure span comprises a main theme that is almost unusually straightforward, permitting Haydn plenty of room for formal loosening as the movement unfolds.

The remainder of the exposition is problematic as to its formal shape, whether one invokes Caplin or Hepokoski and Darcy. The opening material returns in the dominant key in both mm. 30 and 54. Either of these musical junctures could be heard as a principal-theme-based (P-based) subordinate theme (the P-based S is a typical strategy for Haydn, as Hepokoski has noted),³⁶ but neither thematic statement is preceded by a proper medial caesura. The only incontrovertible cadence near the midpoint of the exposition is a HC in G major in m. 38, considerably after the first putative P-based S, and too far in advance of the second P-based S (m. 54) to be heard as a medial caesura followed by caesura fill. Since the exposition spans seventy-eight measures, the weak HC of m. 38 is virtually at the exposition's midpoint; but this juncture lacks the rhetorical emphasis that might have made it a convincing candidate for a medial caesura.

Of the three possible choices (mm. 29, 38 and 47), the last-mentioned passage is probably the best candidate for a medial caesura. In spite of its anomalous harmonic goal (vii^{o7} of G major replaces the expected V chord), it fits the model rhetorically. Haydn prolongs this dominant-functioning chord through m. 50, after which a monophonic caesura-fill continues through m. 53. This interpretation falls short, however: it is surely insufficient for the *rhetorical effect* of the medial caesura to be present if the proper cadential articulation is not present as well. The earliest candidate for the exposition's medial caesura (m. 29) has the same problem; and m. 38, the only HC following the main theme, is not followed by plausible S material, as we will explore further below.

The absence of clear cadential articulation complicates the location of the subordinate theme according to Caplin's principles as well. One can locate the beginning of the transition with no difficulty: this formal region begins in m. 16 with a false closing section (containing post-cadential material over a tonic

pedal)³⁷ followed by a move to V of V in m. 29. Given that Haydn doesn't truly cadence on this scale-step (V of G major quickly moves to its first inversion, thwarting the expected HC in the subordinate key), the statement of main-theme material on the dominant in mm. 30–34 does not strongly assert itself as the beginning of the subordinate theme group. If one therefore assumes that the transition continues past m. 30, then the HC in G major (m. 38) could be its endpoint. However, the material that follows this cadence is hardly thematic. Rhetorically, mm. 38–46 are the most “transitional” that we have yet heard, in that sequential repetition and heightened chromaticism dominate. As noted above, however, the harmonic goal of this phrase (m. 47) is not the expected V of G major, with which Haydn ought to precede the subordinate theme, but rather vii^{o7}, a mildly exotic tonal substitute. Haydn then states main-theme material once again on the dominant (i.e., a P-based S) in m. 54. Due to the relatively convincing harmonic preparation of this juncture with a dominant-functioning chord of the subordinate key, the ensuing passage (mm. 54–71) seems to be the best candidate for the subordinate theme, but neither Caplin's nor Hepokoski and Darcy's principles permit us to view this reading as incontestable.

The best solution for this formally problematic work would probably be to abandon the search for a normative S region altogether, and read the opening seventy-eight measures as a three-part exposition (or, to use Hepokoski and Darcy's terminology, a *continuous exposition*).³⁸ In this reading, the main theme (mm. 1–16) elides with an expansion section (mm. 16–71), which subsequently elides with closing material (mm. 71–78). The resulting tripartite proportion of 16–54–8 measures is a bit lopsided, but it seems to be the most satisfying reading, given that the material from m. 16 onward never truly provides the rhetorical space for a convincing S region. As Hepokoski and Darcy note, “undertaking a fruitless search for a second theme [in a continuous exposition] can lead only to a misunderstanding of [its] internal processes.”³⁹ Their cautionary note is appropriate regarding this exposition, as its musical effect is one of a gradual drift to the dominant tonality. The complementary tonal region is hinted at by the twin statements of P material on the dominant (mm. 30 and 54), but is confirmed only with the exposition's concluding measures.

Haydn follows this problematic exposition with a sixty-three-measure development based largely on main-theme material. One statement of the material (orchestrated for solo flute with light accompaniment in the violins) is on the tonic, and thus is a possible candidate for the recapitulation's onset. However, as this passage begins in m. 111, only twenty-three measures into the development, one would not expect it to represent already the beginning of the recapitulation. Even though development sections that are barely one-third as long as their expositions are not unknown in Classical style, one senses that this material has arrived too early, proportionally speaking.⁴⁰ (Moreover, Haydn's pairing of P melodic material with the rhythm of S from mm. 62–65 suggests variation of P rather than a formal restatement.) In any event, this main-theme incipit quickly dissolves into a sequential progression as the development continues through m. 141. V of C major is in place from m. 138, creating the requisite dominant pedal that usually precedes the recapitulation's “double return” of home tonality and main theme.

The recapitulation begins in m. 142. Because Haydn had stated main-theme material four times in the exposition (beginning in mm. 1, 9, 30, and 54), one would expect him to do a bit of musical pruning in the recapitulation: four statements of main-theme material, all in the tonic key, would be a bit much to bear. Haydn doesn't merely cut away at the recapitulation with pruning shears, however; instead, he uses a chainsaw! He recapitulates the first eight measures of the main theme, follows it with a transposed restatement of mm. 58–71 (our subordinate theme by default, minus its opening phrase), stated this time on the tonic, and concludes with a four-measure post-cadential unit followed by four measures of silence.

Although the passage from mm. 142–67 recapitulates both P and S versions of main-theme material and ends with an emphatic cadence, one can scarcely believe (given this material's brevity compared to the exposition and development) that the movement is truly over. The recapitulation has all of the syntactical components that are necessary to effect formal completion, but proportionally speaking it is far too brief to be rhetorically adequate. However, the four measures of silence that ensue shake one's confidence. Perhaps the movement has indeed concluded, albeit strangely.⁴¹

Then, in m. 172, the coda begins in the remote key of D \flat major! (One imagines that Haydn would have taken great pleasure had an unwary soul dared to applaud during the four-measure rest, on the reasonable expectation that the emphatic cadential gesture of mm. 162–63, and the four measures of stock post-cadential material that had ensued in mm. 164–67, had marked the end of the movement.) The coda extends for seventy measures, virtually the same length as the exposition, a vastness that is unprecedented in Haydn's sonata-form movements. As the coda unfolds, Haydn explores various combinations and reworkings of the exposition's main thematic material. Once the section has extended sufficiently to counterbalance the exposition, Haydn ends in a great cadential flourish. The finale's recapitulation and coda together span exactly one hundred measures, an adequate counterpart to its seventy-eight-measure exposition.

In this essay, I sought to explore how a sense of musical proportion assists the analyst in determining formal boundaries in the Classical sonata. As the preceding examples demonstrate, both Haydn and Beethoven occasionally use the expectation of musical balance to deceive the listener about formal location. It is apparent that a sonata exposition sets particular expectations of section length upon completion of the main theme (or even upon completion of the theme's first phrase). If these expected boundaries are at odds with the musical material's rhetoric, then there can be a leakage of characteristics from one formal region to another. Main themes that depart from the home tonality too soon (given the proportions of the exposition) blend with the ensuing transition. Subordinate themes that arrive too soon may take on transitional features. Subordinate themes that arrive too late (e.g., those that follow Hepokoski and Darcy's "third-level default" medial caesura after a PAC in the subordinate key)⁴² tend to sound like closing material.

This sense of Classical proportion can be applied equally to a complete sonata-form movement, as the length of the exposition has implications for the length of both the development and the recapitulation. A premature “double return” (of main theme and home key) in a development section often turns out to be a false recapitulation; the tonal and thematic return is unsupported by the previously established temporal proportions of the movement. Although recapitulations tend to be shorter than expositions (because transitional and thematically redundant material tend to be omitted or truncated in the recapitulation), an excessive amount of musical pruning can still give the listener a sense of rhetorical imbalance, as we observed in the concluding movement of Haydn’s Symphony No. 90, which required an extended coda to reestablish this balance.

As demonstrated by both Hepokoski and Darcy’s article, and Caplin’s book, every thematic event in a sonata-form exposition sets up expectations as to formal function and musical proportion, and these are either fulfilled or denied in subsequent measures. The methods by which Haydn and Beethoven play with these expectations, making the stylistically aware listener a partner in the creation of a sonata-form movement’s inner logic, constitutes one of the many musical riches of Classical style.

NOTES

1. William Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart and Beethoven* (New York: Oxford Univ. Press, 1998).
2. The latter is a work in progress, part of which appeared a few years ago: James Hepokoski and Warren Darcy, “The Medial Caesura and its Role in the Eighteenth-Century Sonata Exposition,” *Music Theory Spectrum* 19/1 (1997), 115–54. An expanded version of the theory outlined therein will appear in *Elements of Sonata Theory: Norms, Types and Deformations in the Late Eighteenth-Century Sonata* (New York: Oxford Univ. Press, forthcoming). Hepokoski also touches upon many of these points in “Beyond the Sonata Principle,” *Journal of the American Musicological Society* 55/1 (2002), 91–154.
3. Caplin, *Classical Form*, 3.
4. Hepokoski and Darcy, “The Medial Caesura,” 115.
5. This terminology follows Caplin (cf. *Classical Form*, chapters 3–7, for the main theme; chapter 8 for the subordinate theme and closing section; chapter 9 for the transition). Where more concise, I also use the P–T–S–C abbreviations (Principal theme–Transition–Subordinate theme–Closing) adopted by Hepokoski and Darcy (cf. “The Medial Caesura,” 121–22).
6. Caplin, *Classical Form*, 84–86.
7. Caplin, *Classical Form*, especially 125–77.

8. As Hepokoski and Darcy acknowledge in “The Medial Caesura,” 116–17.
9. Hepokoski and Darcy, “The Medial Caesura,” 115.
10. Hepokoski and Darcy, “The Medial Caesura,” 119–23.
11. Hepokoski and Darcy, “The Medial Caesura,” 124–25.
12. Caplin, *Classical Form*, discusses such proportional irregularities as “deviations from the norm”; see especially 47–48, 55–57.
13. The most extreme example of formal imbalance in the Classical era is the Finale of Haydn’s Sonata in D Major, Hob. XVI:42. This binary-form composition has an eight-measure first part and a ninety-three-measure second part (each half is repeated, making the binary division incontrovertible). In the greatly expanded second part, the expected return of the home key is repeatedly suggested but wittily avoided.
14. Cf. Charles Rosen’s discussion of Koch in *The Classical Style*, rev. edn. (New York: Norton, 1997), 87.
15. Larsen’s two-part and three-part exposition models appear in “Sonata Form Problems,” in *Handel, Haydn and the Viennese Classical Style* (Ann Arbor, MI: UMI, 1988), 269–79. Hepokoski and Darcy’s “continuous exposition” model includes Larsen’s three-part exposition model (in which the boundary between T and S blurs, thus forming an expansion section) with other similar exposition models that Larsen does not consider; see Hepokoski and Darcy, “The Medial Caesura,” 118–21.
16. Caplin has noted that all three of these (potential medial caesura) cadence types may be present in a sonata exposition (*Classical Form*, 196, table 13.1). In some instances, the presence of both a HC in the tonic and a HC in the subordinate key may signal a “two-part transition” (*Classical Form*, 135–38).
17. See Hepokoski and Darcy, “The Medial Caesura,” 126–27. They found that medial caesuras occur from 15% to 75% of the way through the exposition. A HC in the tonic key occurs the earliest, in the 15–45% range; a HC in the subordinate key in the 25–50% (rarely 60%) range; and a PAC in the subordinate key in the 50–70% (rarely 75%) range.
18. Rosen, *The Classical Style*, 474–75.
19. Hepokoski and Darcy, “The Medial Caesura,” 127–28.
20. Caplin often reads the real formal structure of a composition as operating at half or twice the level of the notated meter. In fast duple or triple time, sixteen measures of notated material, with cadences spread out twice as widely as the norm, may function syntactically as an eight-measure formal unit ($R=2N$). Similarly, in slow compound or quadruple time, cadences may occur every two notated measures; in such a case, it is preferable to show analytically that these two measures are anal-

- ogous to a complete four-measure musical thought; Caplin designates this relation as $R=1/2N$. See *Classical Form*, 35.
21. Charles Rosen, *Sonata Forms*, rev. edn. (New York: Norton, 1988), 236.
 22. An ECP is a cadential progression that spans an entire phrase; see Caplin, *Classical Form*, 45–47.
 23. Cf. Rosen’s reading cited above, in n. 21.
 24. Caplin discusses the formal ramifications of such a decision in *Classical Form*, 127–29.
 25. Although the dominant chord achieves its customary root position only on the second beat of m. 4, a HC is clearly perceived here. Haydn withholds the C \sharp on the downbeat of m. 4 to highlight the voice-leading similarities of mm. 3–4 and 7–8 (the F \sharp –E \sharp bass motion that concludes the opening phrase is transformed into F \sharp –F \natural , resolving to E, in the ensuing phrase).
 26. Caplin, *Classical Form*, 274, n. 21. See also 129, n. 21, cited below in n. 28.
 27. See n. 20.
 28. Caplin, *Classical Form*, 129. As both the “antecedent” and the “consequent” end with a HC, one is forced to “reinterpret the first [unit] as a main theme and the second as a transition,” as Caplin states.
 29. Caplin, *Classical Form*, 135–38.
 30. H.C. Robbins Landon, *Haydn, Chronicle and Works*, vol. 3 (Bloomington: Indiana Univ. Press, 1978), 435.
 31. Hepokoski and Darcy, “The Medial Caesura,” 125.
 32. One could also consider this material (mm. 29–31, repeated in mm. 32–34) to be an abbreviated Subordinate Theme 2, as it would comprise six “real” measures using Caplin’s $R=1/2N$ formula, thus potentially forming a compressed “eight-measure” theme. Regardless, its closing character is incontestable.
 33. Caplin, *Classical Form*, 97.
 34. Caplin, *Classical Form*, 89.
 35. Alan Campbell, *The Binary Sonata Tradition in the Mid-Eighteenth Century: Bipartite and Tripartite “First Halves” in the Venice XIII Collection of Keyboard Sonatas by Domenico Scarlatti* (M.A. thesis, McGill Univ., 2000), 43–44.
 36. Hepokoski, “Beyond the Sonata Principle,” 141.
 37. Caplin, *Classical Form*, 129.

38. Cf. Larsen, "Sonata Form Problems," 275–76; and Hepokoski and Darcy, "The Medial Caesura," 118–19.
39. Hepokoski and Darcy, "The Medial Caesura," 119.
40. Cf. Charles Rosen's discussion of multiple false recapitulations in Haydn's Symphony No. 55 (*Sonata Forms*, 276–80).
41. As Charles Rosen has noted (in words that I have paraphrased to conclude this paragraph), Haydn uses a similar procedure (i.e., an oddly concluding recapitulation followed by an extended rest, and then by a coda that brings back missing recapitulation material) in the opening movement of his String Quartet in E \flat Major, op. 50, no. 3; see *Sonata Forms*, 158–61.
42. Hepokoski and Darcy, "The Medial Caesura," 126–27.

Appendix.

Haydn, Symphony No. 90: fourth movement (reduction).

MAIN THEME

6 (MT repeated)

12 TRANSITION (expansion section?)

18

24

30 MT incipit (=ST?)

36

42

48

G+ : ii-----6 V-----6
(HC?)

HC (G+)

vii°7 (G+)
(dominant arrival)

54 MT incipit (-ST?)

59

65

71 Closing Section

PAC (G+)

77 DEVELOPMENT

The image displays a musical score for piano, consisting of five systems of two staves each (treble and bass clef). The score is numbered at the beginning of each system: 83, 88, 94, 100, and 105. The key signature is one flat (B-flat), and the time signature is 4/4. The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. The bass line often provides harmonic support with chords and single notes, while the treble line carries the primary melodic and rhythmic material. The notation includes various accidentals (sharps, flats, naturals) and dynamic markings (accents, slurs).

110 FALSE RECAP. (becomes model-sequence)

116

122

128

133

RECAPITULATION (M1)

138

144

M1 incipit (- S1, measure 58ff.)

150

156

Closing Section (codetta)

163

PAC (C+)

172 CODA

Musical score for measures 172-179, labeled CODA. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has two flats. The music features a melodic line in the treble and a harmonic accompaniment in the bass.

180

Musical score for measures 180-188. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has two flats. The music features a melodic line in the treble and a harmonic accompaniment in the bass.

189

Musical score for measures 189-197. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has two flats. The music features a melodic line in the treble and a harmonic accompaniment in the bass.

198

Musical score for measures 198-204. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has two flats. The music features a melodic line in the treble and a harmonic accompaniment in the bass.

205

Musical score for measures 205-212. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has two flats. The music features a melodic line in the treble and a harmonic accompaniment in the bass.

212

218

223

229

235