The Classical Cadence: Conceptions and Misconceptions

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Many music-theoretical terms are readily used in the expectation that their meanings will be clear and well known to educated musicians. Such is the case with *cadence*. In scholarly writings on tonal music, theorists and historians regularly speak of cadence with little or no specification of its semantic range. Yet for all its seeming familiarity, cadence is an enormously complex concept, one that often conveys distinctly different connotations and embraces a multitude of musical phenomena. Unfortunately, the notion of cadence has also accrued a host of inconsistent formulations and misconceptions that have regularly led to discrepant applications in actual musical contexts: a cadence recognized by one writer often fails to meet the requirements for cadence set by another. Since most theories of musical form entail specific cadential requirements, analyses of both phrase structure and large-scale form are compromised when the identification of cadences is thrown into doubt.

One way of regaining control over the concept of cadence is suggested by Ann Blombach, who attempts "to formulate a broad comprehensive definition containing the vital elements" that distinguish cadence "from every other kind of musical phenomenon"; such a definition would "apply to any type of music, from the earliest to the most recent."[1] Though such an inclusive definition of cadence has its attractions, a contrary approach might ultimately prove more useful—namely, to focus on a relatively narrow, stylistically unified repertory, one in which most historians recognize cadence as a central feature. The obvious choice is the instrumental music of the three leading Viennese

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1. Ann Blombach, "Phrase and Cadence: A Study of Terminology and Definition," *Journal of Music Theory Pedagogy* 1 (1987): 231. Her definition reads: "A *cadence* is any musical element or combination of musical elements, including silence, that indicates relative relaxation or relative conclusion in music. ('Conclusion' is intended in the sense of 'destination of ideas,' as opposed to merely stopping with no indication of finality or direction.)"

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composers of the late eighteenth century—Haydn, Mozart, and Beethoven—music that today is regularly seen to exhibit the essential features of "the classical style."[2] In no other repertory does cadential articulation, and especially cadential play, assume such major significance for formal expression. Indeed, the highly teleological character of this music depends in no small measure on attempts to gain varying degrees of cadential closure at pivotal moments within a movement. If the concept of cadence can be successfully grounded for music of the classical style, then it might be possible to extend and refine the notion to earlier and later styles with greater confidence.[3]

What follows is a reassessment of the classical cadence, with occasional glances at baroque and romantic practice. My goals are to examine critically the various notions that have become attached to the concept of cadence in general, to retain those features that find genuine expression in the classical repertory, and to weed out problematic ideas that have the potential of producing theoretical and analytical confusion. I argue that the definition of cadence and its analytical application should be considerably more restricted than has normally been the case. In particular, I hold that cadence is best understood as a *syntactical* component of music, as distinguished from the wide variety of musical forces that are, broadly speaking, *rhetorical* in function. By limiting cadence largely to the syntactical realm, I am intending not to downgrade or dismiss other aspects of music traditionally considered cadential, but rather to permit them to be more precisely differentiated in their structural and expressive effects from cadence, as I define it. Though my endeavor to make an exacting determination of what constitutes cadence—and what does not—may raise the specter of semantic quibbling, I hope to convince the reader that broader issues are at stake, especially for the analysis of musical form. Indeed, the motivation for this study largely issues from my own involvement in formal theory, where phrase-structural interpretations depend on accurate cadential identifications. Ultimately, I trust that a more precise and focused conception of cadence will have the heuristic value of sharpening our listening experience and encouraging us to make more subtle distinctions among a wide variety of harmonic, rhythmic, and formal phenomena.

2. In an article dealing with terminological precision, it is important to acknowledge that by invoking the phrase "the classical style," I do not mean to argue for a rigidly defined style period or repertory, but rather to identify a body of scholarship that has focused on the instrumental works of Haydn, Mozart, and Beethoven. The theorists and historians I cite continually direct their attention to these three composers, and the theoretical approach that underlies this study issues from a detailed investigation of their instrumental works. For a history and critique of "classical style" as a historiographical category, see James Webster, *Haydn's "Farewell" Symphony and the Idea of Classical Style: Through-Composition and Cyclic Integration in His Instrumental Music* (Cambridge: Cambridge University Press, 1991), 335–66.

3. My general sense is that the notion of cadence that I develop here is valid for most music of the eighteenth century along with many works from the nineteenth century. In romantic and post-romantic styles, however, mid-level formal closure is attained by a wider variety of noncadential means compared to eighteenth-century practice, in which cadence is the primary mechanism for thematic closure.

The theoretical underpinning for this study is laid out in my book *Classical Form*.[4] Though issues of cadence arise there repeatedly, they are scattered among many other concerns that enter into the definition of formal categories. The present study pulls together these individual points of theory into a more unified perspective and explores in greater depth issues that were only hinted at in the book; as well, I propose here some new ideas not discussed in that earlier work. To forestall any misunderstanding from the start, I must clarify that my approach is entirely a modern one: this is not a historicist view of the classical cadence. I neither appeal to writings of eighteenth- and early nineteenth-century theorists on cadence nor make any claims for what Haydn, Mozart, or Beethoven may have understood by the concept.[5] Rather I believe, along with many theorists and historians, that the consistency of compositional practice exhibited by these composers permits us to formulate principles for a modern understanding and interpretation of their works as they present themselves to us today.

Throughout this study, I compare my conceptions of cadence and their analytical application with statements from some of the most distinguished scholars working on eighteenth-century music. Though I frequently take issue with some of their ideas, my point is not to chide them for failing to employ my own definition and understanding of cadence. Rather, it is by entering into dialogue with these received views that I can test the extent to which my proposed refinements clarify the phenomenon of cadence and enrich our perceptions of its compositional use.

Traditional Notions of Cadence

Cadence (from Latin *caderer,* "to fall") has a long history as a theoretical term.[6] It gained initial currency in late fifteenth-century Italian theory in reference to "closing gestures," that is, specific intervallic formations used to

4. William E. Caplin, *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven* (New York: Oxford University Press, 1998); see esp. pp. 27–29, 42–45, 51–55, and 101–11.

5. As I stated in the introduction to *Classical Form,* "As fascinating and suggestive as contemporary writings may be, their ideas on musical form are limited by a rudimentary theory of harmony (which understands little about harmonic progression at multiple levels) and a lack of familiarity with the huge classical repertory that we have at our fingertips today" (p. 5). In my view, the same remarks hold for earlier theorists' conceptions of cadence.

6. For a comprehensive account, see *Handwörterbuch der musikalischen Terminologie,* ed. Hans Heinrich Eggebrecht (Wiesbaden: F. Steiner, 1972–), s.v. "Kadenz." For considerable information on traditional notions of cadence, see also Janet Schmalfeldt, "Cadential Processes: The Evaded Cadence and the 'One More Time' Technique," *Journal of Musicological Research* 12 (1992): 1–52. In addition to its more common meanings as "formal conclusion" and "basic harmonic progression," *cadence* was also used in reference to various types of melodic ornamentation in baroque vocal music and to regularly alternating rhythmic-metric accentuation in French Enlightenment theory; these latter two senses of the term will not be treated here.

conclude passages in both monophonic and polyphonic textures.[7] Throughout the sixteenth and seventeenth centuries, the term normally had attached to it a wide variety of qualifying expressions (such as *cadentia ordinaria, cadentia cantizans, cadentia simplex, cadentia perfecta, cadentia diatonica*) in order to distinguish closes based on the scale degree of the final pitch, the particular voice being closed, the style of counterpoint, the interval of melodic or contrapuntal progression, the modality, and many other compositional factors.[8] (The practice of qualifying cadences continues, of course, to the present day with terms such as *perfect authentic cadence, deceptive cadence,* and *contrapuntal cadence*.)

In the eighteenth century, models of natural language had a profound impact on music theory in general, and the idea of cadence as closing gesture was strongly associated with grammatical punctuation of language, especially in the writings of Mattheson, Riepel, Kirnberger, and Koch.[9] With the origins of harmonic theory early in that century, cadential classifications became based primarily on harmony rather than on melodic or contrapuntal interval. Moreover, the sense of cadence enlarged considerably when Rameau took the fateful decision of recognizing the harmonic content of the *cadence parfait* as the fundamental paradigm of harmonic progression in general. The concept of cadence was thus no longer confined to musical situations involving gestures of ending. From then on, any harmonic progression could be considered a cadence, whether or not it occurred at the end of a musical unit.

Well into the nineteenth century, a cadential progression was understood to involve just two harmonies. Toward the end of that century, however, Hugo Riemann expanded the progression to embrace the complete functional sequence, tonic–subdominant–dominant–tonic, and he deemed such a cadence the fundamental model of *tonality,* a broader conception of tonal relations than harmony alone. Twentieth-century theory, overwhelmingly concerned with musical hierarchies, applied the notion of cadence to multiple levels within a work, even invoking the idea of an "enlarged cadence" to account for the tonal progression of an entire piece.

The divers elements associated with our current conceptions of cadence have been well analyzed by Blombach. By reviewing definitions of cadence drawn from eighty-one pedagogical texts (whose median publication date is 1970), she has identified how often various elements appear within those definitions. Her results are summarized in Table 1, where the numbers represent

7. Cadence was originally used alongside, but eventually replaced, the earlier term *clausula* (from Latin, "to close").

8. The *Handwörterbuch* article cites over eighty cadential types (pp. 5–6).

9. On the impact of language models for music theory, see Mark Evan Bonds, *Wordless Rhetoric: Musical Form and the Metaphor of the Oration* (Cambridge: Harvard University Press, 1991), chap. 2.

Table 1 Elements of Cadence Definitions (from Blombach, "Phrase and Cadence," table 1, p. 227)

Element	Percentage before 1970	Percentage after 1970	Percentage all
Harmony, chord progression	77	63	70
List of cadences (PAC, etc.)	54	68	62
End of phrase	57	51	54
Conclusion	51	56	54
Melody	57	49	53
Rest, pause	43	49	46
Rhythm	46	37	41
Language, punctuation	29	49	39
Formula	40	22	30
Relaxation	31	27	29
Formal indicator	14	34	25
"To fall"	20	24	22
Recognizes other styles	23	15	18
Other elements	3	7	9
Confirm tonality	6	7	7
Completion of formal unit	9	2	5

percentages of occurrence of a given element.[10] It is no surprise that "end of phrase" and "conclusion" place high on the list. But it is telling that "harmony, chord progression" leads the group, thus revealing how powerful was the conceptual enlargement effected by Rameau in the eighteenth century.[11] The inclusion of "language, punctuation" in more than a third of the definitions also attests to the influence that eighteenth-century models of natural language have continued to exert on our notions of cadence. Noteworthy is the prominent appearance of the element "rest, pause": the idea that achieving formal closure entails a cessation of rhythmic activity is strongly entrenched in the concept of cadence. The mention of "formula" in many of the definitions is also not surprising, given that the content of cadences is normally conventional or repeatable from work to work. Finally, I must draw attention to the low rankings for "formal indicator" and "completion of formal unit"; as the rest of the article will make abundantly clear, these are precisely the elements that I find at the heart of the classical cadence.

10. Blombach, "Phrase and Cadence," 227. The first column contains percentages from textbooks published prior to 1970; the second column, textbooks published after 1970; the third column, totals for all textbooks.

11. Caution must obviously be exercised when trying to interpret data such as that shown in Table 1. It is most likely the case that, when taken together, either one of the two elements "end of phrase" and "conclusion" would occur in a very large percentage of the definitions, thus displacing "harmony, chord progression" from the leading position.

Having briefly sketched some traditional conceptions of cadence in general, I want to begin clarifying which elements I believe are essential to the classical cadence, which are adjunct, and which are irrelevant or misleading. The following basic concepts are fundamental to my approach:

- Cadence effects formal closure at a limited number of levels of musical structure.
- The harmonic content of the cadence—the *cadential progression*—is highly constrained.
- *Cadential function* embraces the time-span from the beginning of the cadential progression to its end—the *cadential arrival.*
- Passages of *cadential content* do not always function as syntactical cadences.
- Cadential function must be distinguished from *postcadential function,* which embraces the music that follows the cadential arrival (and appears prior to a new beginning).
- Cadential arrival represents a formal *end,* not a rhythmic *stop.*
- The appropriate linguistic analogy for cadence is syntactical closure, not the external, written signs of *punctuation.*
- *Cadential strength* can be distinguished as syntactical or rhetorical, the former being the one aspect essential for form-functional expression.

Cadence as Closure

Central to my concept of cadence is the fundamental idea that cadence effects formal closure at middle-ground levels in the structural hierarchy of a work. More simply put, a cadence must *end* something. Now this idea—the most pervasive and historically rooted of all notions of cadence—might seem so trivial as not to require further elaboration. Yet many of the problems associated with conceptualizing and analyzing cadence result from not specifying (or even not being able to specify) exactly what formal unit a given cadence is actually ending. Since the implications of this premise are far-reaching, I want to address a number of major issues that ensue from it.

Cadence creates musical closure, but not all closure in music is cadential. Closure in general involves bringing to completion some process implicating one or more modes of musical organization at a given structural level of a work. I believe that cadence is only one type of closure and is operative only at a limited number of levels. Determining which specific musical processes are closed by cadences can be somewhat complicated and will sometimes vary from case to case. At all times, however, a definite *harmonic* process is closed, since the harmonies associated with the cadence always bring to some degree of completion a broader harmonic progression beginning prior to the onset of the cadence. Often we can identify a distinctly *melodic* process closed by cadences, such as when, in the case of a perfect authentic cadence (PAC), a

melodic line descends to the tonic scale degree.[12] Some writers have also spoken of cadence achieving a sense of *rhythmic* or *metric* close, though the actual mechanisms of such closure are often left unclear.[13] More importantly, however, the various types of closure associated with individual musical parameters are, in themselves, insufficient to create cadence unless a sense of *formal* closure is present as well.

When speaking of cadence achieving formal closure, I mean something like what Fred Lerdahl and Ray Jackendoff describe in connection with a "cadenced group," a unit of grouping structure that "at some level of reduction reduces to two elements, the second of which is a cadence. The first of these elements is the *structural beginning* of the group, and the cadence is the *structural ending*." In other words, "a cadence must be a cadence *of something;* a group that consisted only of the articulation of its ending would be unsatisfying."[14] The logic of formal closure thus requires that a cadence be grouped with at least one preceding event at the same level of structure and that the cadence usually be the last event in the group.[15] If we cannot identify an initiating formal unit that precedes a potential cadence, then we cannot legitimately speak of a true cadence. Put somewhat differently, since the first idea of a group normally expresses the sense of formal initiation, this idea cannot itself be a cadence, for an essential condition for formal closure would no longer obtain: there would be no beginning for which such a cadence would be the ending.

12. An *imperfect* authentic cadence (IAC) leaves the melodic line unclosed on the third (or rarely, fifth) scale degree.

13. Thus Leonard B. Meyer invokes rhythmic processes when noting that "a semicadence might be defined as one in which a mobile, goal-directed, harmonic process is temporarily stabilized by decisive rhythmic closure," but he does not specify any further just how such closure comes about (*Explaining Music: Essays and Explorations* [Berkeley and Los Angeles: University of California Press, 1973], 85). In Riemann's theory of meter, which posits a normative scheme of eight alternating weak and strong measures, metrical closure is achieved in measure "eight" of the scheme, the measure in which a cadence normally occurs (*System der musikalischen Rhythmik und Metrik* [Leipzig: Breitkopf und Härtel, 1903]). Whether such metrical closure is responsible for cadence is not clear in Riemann's approach, however. That genuine cadences can occur on metrically weak measures (by any accounting of strong and weak measures) and even on weak beats within a measure prohibits us establishing a determinate relation of cadence and meter.

14. Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge, Mass.: MIT Press, 1983), 168. It also seems reasonable to permit a cadenced group to contain an element standing between the functions of structural beginning and ending that would express the sense of structural middle, what I term a *medial* formal function (*Classical Form*, 43). (The pervasively binary nature of Lerdahl and Jackendoff's system does not readily permit such tripartite basic structures.)

15. This last point needs further refinement. On the one hand, it might be the case that the formal unit does not conclude with a structural end, in other words, that formal closure does not take place. In that case, the last event in the formal unit may not be a cadence. On the other hand, the cadential event might be followed by some postcadential event that still logically groups with the formal unit as whole.

What, then, are the formal groups closed by cadences? In my view, a cadence closes a *theme* and, in many cases, a component part of a theme. Unlike most traditional notions of theme, which primarily refer to relatively short melodic ideas, my notion derives from the usage of Arnold Schoenberg and his followers (especially Erwin Ratz) and refers to a complete formal unit, minimally eight measures in length, consisting of the clear articulation of a formal beginning, middle, and end (the latter being the cadence).[16] Such a formal unit can function in the broader context of a classical movement as a *main theme,* a *subordinate theme,* an *interior theme,* or a *coda theme;* the *transition* and *development* sections are also constructed as themelike units, and these may close with a cadence.[17] The basic theme types are the *sentence, period, small ternary,* and *small binary;* various *hybrids* of the sentence and period can also be identified.[18] All of these theme types achieve formal closure by means of cadence. In addition, some of the component parts of these types have cadential endings. For example, the two parts of the period—the *antecedent* and *consequent*—each end with a cadence (the first one being weaker than the second). The A and A′ sections of the small ternary (also the first and second parts of the small binary) have cadential requirements as well. On the contrary, the sentence form has no cadential articulation prior to its closing cadence.

Traditionally, the formal unit considered to be closed by a cadence is the *phrase*. Cadence and phrase are so intimately connected that the two terms are frequently defined in reference to each other, as in: a cadence is a melodic-harmonic formula ending a phrase; a phrase is a formal unit ending with a cadence.[19] Indeed, many theorists posit cadential ending as a central component of their notions of phrase:

> The phrase is a constant motion toward a goal—the cadence.[20]

> A phrase can be roughly characterized as the lowest level of grouping which has a structural beginning, a middle, and a structural ending (a cadence).[21]

16. Arnold Schoenberg, *Fundamentals of Musical Composition,* ed. Gerald Strang and Leonard Stein (London: Faber and Faber, 1967); and Erwin Ratz, *Einführung in die musikalische Formenlehre: Über Formprinzipien in den Inventionen und Fugen J. S. Bachs und ihre Bedeutung für die Kompositionstechnik Beethovens,* 3d ed., enl. (Vienna: Universal, 1973).

17. All genuine themes close cadentially; a "themelike" unit, though containing the same basic formal functions as a theme, sometimes closes in a noncadential manner or even remains open without any sense of formal closure. Most of my *Classical Form* is devoted to a detailed description of the structure and function of these various thematic units.

18. These types are treated in part 2 of Caplin, *Classical Form.*

19. Blombach, "Phrase and Cadence," 226.

20. Roger Sessions, *The Musical Experience of Composer, Performer, and Listener* (Princeton, N.J.: Princeton University Press, 1950), 12.

21. Fred Lerdahl and Ray Jackendoff, "Toward a Formal Theory of Tonal Music," *Journal of Music Theory* 21 (1977): 123.

> The concept of phrase is most productively understood, both historically and theoretically, as admitting only two choices for its end-point: a half cadence or an authentic cadence.[22]

This powerful connection of phrase and cadence, however, has led to a number of theoretical and analytical difficulties. On the one hand, a phrase ending is sometimes identified as a cadence despite the failure of its concluding harmonic progression to satisfy the fundamental criteria for cadence (such as when the dominant is not in root position, an issue I will discuss shortly below) or despite the failure of the last part of the phrase to represent a formal end for any one of a number of reasons. On the other hand, the concept of phrase is sometimes defined so broadly as to embrace not only relatively short groups (four to eight measures) but also large thematic regions consisting of multiple subgroups.[23] I would argue that many of the problems associated with cadence (and indeed with phrase) can be dispelled when the two concepts are entirely disengaged. *Cadence* can then be viewed as a manifestation of formal functionality, whereas *phrase* can be used as a functionally neutral term for grouping structure (embracing approximately four measures of music).[24]

By separating cadence from phrase it is possible to describe more clearly which phrases have cadential closure and which do not. As mentioned before, the antecedent and consequent phrases of the period close with a cadence. So, too, does the second phrase, the *continuation,* of the sentence.[25] But the initial four-measure phrase of the sentence, what I have termed a *presentation,* never closes with a cadence, even if its final harmonic progression (V–I) suggests one.[26] A presentation consists of a two-measure *basic idea* that is immediately repeated in measures three and four of the phrase. Inasmuch as the basic idea itself functions to begin the theme, its repetition must also be seen to express formal initiation; indeed, the repetition could even be said to intensify that sense of initiation. As a result, the repeated basic idea should not be comprehended as concluding a formal process, and so we should not speak of a

22. Warren Darcy and James Hepokoski, "The Medial Caesura and Its Role in the Eighteenth-Century Sonata Exposition," *Music Theory Spectrum* 19 (1997): 123.

23. For example, William Rothstein identifies a single phrase lasting thirty-seven measures starting from the beginning of Chopin's Mazurka in G♯ Minor, Op. 33, no. 1 (*Phrase Rhythm in Tonal Music* [New York: Schirmer Books, 1989], 232).

24. See also Janet Schmalfeldt, "Coming to Terms: Speaking of *Phrase, Cadence,* and *Form,*" *In Theory Only* 13, nos. 1–4 (1997): 95–115.

25. As discussed in Caplin, *Classical Form* (pp. 40–41), the continuation *phrase* of the sentence form fuses together two discrete *formal functions*—continuation and cadential. In many *looser* formal situations, such as in a subordinate theme or transition, these two functions can occupy their own unique phrases; in that case, the continuation phrase would not have cadential closure.

26. See Beethoven, Piano Sonata in C, Op. 2, no. 3, mm. 3–4, as discussed in ibid., 45 (ex. 3.13).

cadence closing the presentation phrase. To be sure, there are musical forces that effect closure of some kind for the phrase, or else we would not perceive it to be a unified group; but the nature of that closure—be it harmonic, melodic, rhythmic, or textural—is not cadential.[27]

Since cadential formations normally occupy at least two measures of music and since a cadence must be preceded by an initiating event, which itself is minimally two measures long, then the formal unit closed by a cadence is usually no shorter than four measures.[28] We see, therefore, that cadential closure does not tend to operate at levels of musical organization lower than the four-measure phrase; instead, other modes of musical closure are used to bring motives and other short ideas to a conclusion.[29]

If cadence does not provide closure at the lower ends of the structural hierarchy of a work, we might ask whether there are any constraints on cadences functioning at higher levels, namely, those above the level of the theme. The idea that large-scale formal units, including an entire movement, are closed by cadences finds repeated expression in the musicological literature of this century. Thus Schoenberg, on several occasions, takes the extreme position of seeing an entire piece as an enlarged cadence.[30] Edward T. Cone remarks that if "there is a sense in which a phrase can be heard as an upbeat to its own cadence, larger and larger sections can also be so apprehended. A completely unified composition could then constitute a single huge rhythmic impulse, completed at the final cadence."[31] Likewise, Lerdahl and Jackendoff extend their notion of cadenced group to the largest level of a piece.[32] Charles Rosen even considers that the last finale of every Mozart comic opera "serves as

27. An exception arises in the case of a basic idea that itself seems to close with a cadence, as considered later in connection with the idea of "limited cadential scope" (see the discussion of Ex. 9 below).

28. Rarely does a cadence close a three-measure unit; for such a case, see the opening of the slow movement of Beethoven's String Quartet in G, Op. 18, no. 2, analyzed as ex. 4.12 in Caplin, *Classical Form,* 57.

29. Lerdahl and Jackendoff similarly circumscribe cadence hierarchically by distinguishing cadenced groups from other, lower-level groupings whose boundaries are closed noncadentially. "The smallest levels of cadenced groups correspond rather closely to the traditional notion of musical *phrase*" (*Generative Theory,* 168).

30. "In a general way every piece of music resembles a cadence, of which each phrase will be a more or less elaborate part" (Schoenberg, *Musical Composition,* 16). "To exaggerate a little . . . we can consider the chorale, as well as every larger composition, a more or less big and elaborate cadence" (Arnold Schoenberg, *Theory of Harmony,* trans. Roy Carter [Berkeley and Los Angeles: University of California Press, 1978], 290). These references to cadence, along with others, are gathered together in the "Concordance of Terms" from Arnold Schoenberg, *The Musical Idea and the Logic, Technique, and Art of Its Presentation,* ed. and trans. Patricia Carpenter and Severine Neff (New York: Columbia University Press, 1995), 358–59.

31. Edward T. Cone, *Musical Form and Musical Performance* (New York: W. W. Norton, 1968), 26.

32. Lerdahl and Jackendoff, *Generative Theory,* 233.

cadence to the entire opera."[33] At somewhat lower structural levels, we find Leonard B. Meyer referring to the entire slow introduction of Beethoven's "Les Adieux" Sonata as a "high-level cadence."[34] William Rothstein speaks of a sonata exposition closing with a cadence, and localizes it specifically at the point where the "first perfect cadence in the key of the second group" occurs.[35] Warren Darcy and James Hepokoski follow Rothstein in referring to the same cadential articulation as the "essential expositional closure" and the corresponding place in the recapitulation as the "essential sonata closure."[36]

It is difficult to evaluate and substantiate many of these claims. But given the pervasive reference to such high-level cadences in the theoretical literature, it is worth pursuing the matter in some detail. As far as an entire piece being a single cadence, the idea can quickly be dismissed as illogical, for such an overarching cadence could not be construed to end anything other than itself. To say, however, that a given cadence appearing late (or even at the end) in a work represents cadential closure for the work as a whole is somewhat more viable, but still problematical. Take the case of a movement in sonata form, where a decisive cadence ends the second-theme group in the recapitulation. What exactly would it mean to say that this cadence, per se, is responsible for creating closure for the entire movement, in the sense, say, of Darcy and Hepokoski's essential sonata closure?

There are two hierarchical perspectives from which this question can be considered, corresponding essentially to Lerdahl and Jackendoff's distinction between "time-span reduction" and "prolongational reduction." Their two representations of fundamental structures for sonata form are reproduced in Figures 1a and b. In both reductions, the local V–I cadence of the recapitulation's second-theme group brings closure to the form. From the perspective of the time-span reduction (Fig. 1a), the second highest level (labeled "b") would be, presumably, a cadenced group consisting of a structural beginning and a structural end.[37] The moment of structural beginning would be the initial I harmony, but this moment has attached to it a large time-span embracing the entire exposition; thus the exposition would represent the subgroup expressing the structural beginning of the form (a notion that seems plausible enough). Likewise, the moment of structural end is articulated by the local V–I progression, but the entire subgroup representing this end comprises

33. Charles Rosen, *The Classical Style: Haydn, Mozart, Beethoven* (New York: W. W. Norton, 1972), 305.

34. Meyer, *Explaining Music,* 266.

35. Rothstein, *Phrase Rhythm,* 116.

36. Darcy and Hepokoski, "Medial Caesura," 119. See also James Hepokoski, "Beyond the Sonata Principle," this **Journal** 55 (2002): 134–36.

37. Lerdahl and Jackendoff do not speak explicitly of cadenced groups in connection with these reductions, so what follows is an interpretation that tries to hold to the spirit of their ideas.

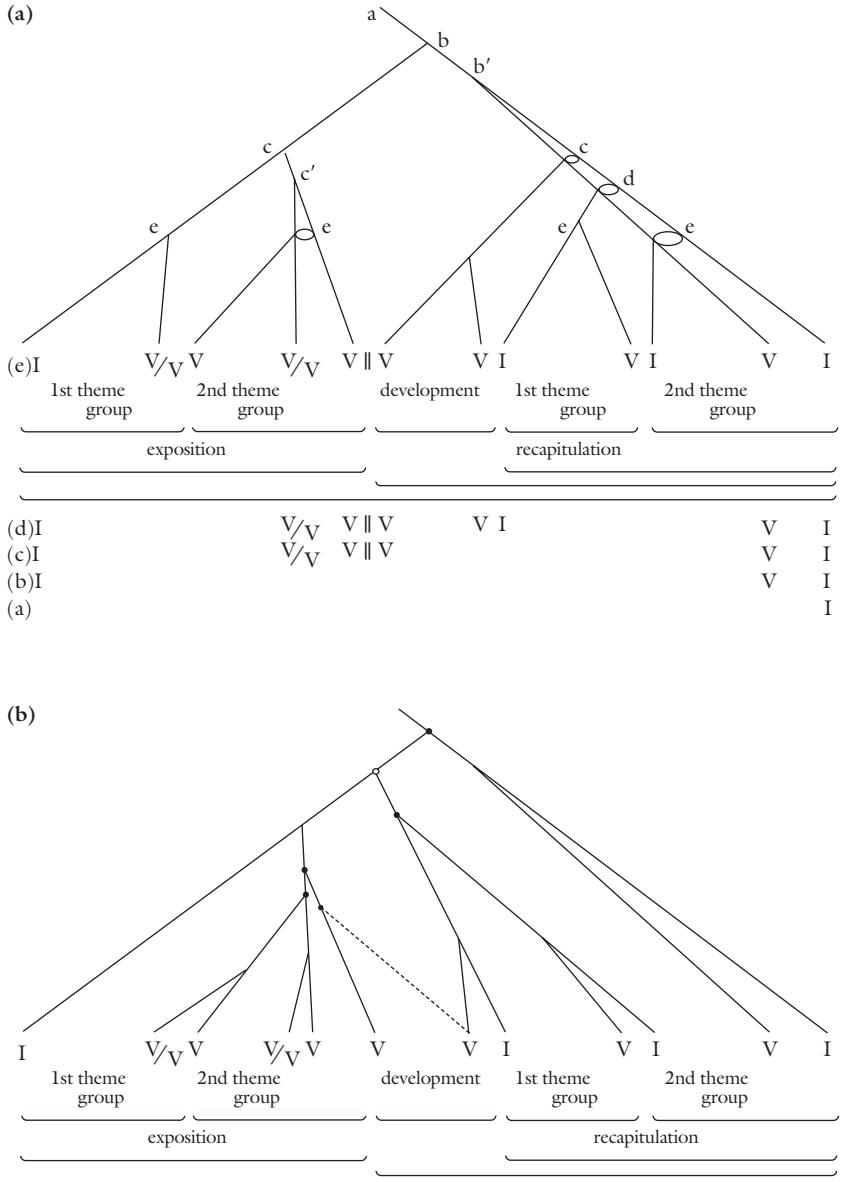


Figure 1 (a) Time-span reduction of sonata form; (b) prolongational reduction of sonata form (from Lerdahl and Jackendoff, *Generative Theory*, exx. 9.29 and 9.35)

both the development and the recapitulation.[38] What is not especially convincing, however, is the idea that the development and recapitulation together function as the cadence that closes the cadenced group (the movement as a whole). Even if we say that the development section expresses a structural middle and that the recapitulation represents the structural end (a somewhat more credible idea), it is not clear that we would want to say that the recapitulation, as a whole, is a large cadence, for its internal organization is considerably more complex than any kind of cadential formation ending a thematic unit.[39]

From the perspective of the prolongational reduction (Fig. 1b), the ending of the complete movement only includes the actual V–I cadential formation closing the second-theme group. Everything that precedes that local cadence is connected as right-branching extensions to the initial tonic of the movement. As a cadenced group, the highest level in this representation would see the event that functions as the structural beginning embracing the entire exposition, the entire development, and most of the recapitulation; the event that functions as the structural ending would comprise the local cadence of the second-theme group. Although these two events reside on the same hierarchical level from the point of view of a prolongational reduction, their actual durational dimensions are entirely disparate. Thus we could question whether we are really talking about a *formal* process at all.[40] To say that the movement as a whole is formally closed by this local cadence is thus problematic. It is perhaps more profitable to understand that, on the one hand, the principal prolongations of pitch organization (which are primarily harmonic for Lerdahl and Jackendoff) achieve closure at the same time as the second-theme group in the recapitulation is cadentially closed. Whereas, on the other hand, the

38. This interpretation assumes that the notions of structural beginning and ending are manifestations of actual time-spans, not of time-points; unfortunately, Lerdahl and Jackendoff are not entirely clear on this issue, though most of their discussion suggests that these structural events are groups, thus time-spans. But at one point in their theory they refer to formal beginnings and cadences as "structural accents," and since they explicitly associate "metrical accents" with time-points, it is possible that they mean "structural accents" to be durationless moments as well. I will return to this distinction between time-span and time-point when discussing cadential function versus cadential arrival.

39. There are also melodic-motivic considerations that make it difficult to hear the entire recapitulation as a cadence. Since the recapitulation begins with the same material that began the exposition (the structural beginning), it is not easy to hear this material as articulating the beginning of a cadential formation; at the level of the theme, it is rare in music of the classical style for the cadential unit to begin with the same melodic ideas that open the theme.

40. Indeed, when Lerdahl and Jackendoff acknowledge that Figure 1b "expresses the structural counterpoint between the major grouping divisions of the piece and the major patterns of tension and relaxation" (*Generative Theory,* 248), they strongly suggest that formal processes operate independently of prolongational ones, and that the former are represented more accurately by a time-span reduction than by a prolongational reduction.

large-scale formal closure of the movement is achieved (according to the time-span reduction) by the development and recapitulation together in relation to the exposition (or in my alternative reading, by the recapitulation as ending in relation to the exposition as beginning and development as middle). And neither of these two higher-level closures—of formal time-span and of harmonic prolongation—need be considered cadential, an ending function that more appropriately operates at middle-ground levels of formal organization.

Lerdahl and Jackendoff's prolongational reduction (Fig. 1b) resembles in certain respects the hierarchy of a Schenkerian model of large-scale pitch organization. From a Schenkerian perspective, to say that an entire movement is closed by a cadence is tantamount to saying that the *Ursatz* itself closes with a cadence.[41] In this respect, Schenker's own writings on the matter are interesting, but somewhat inconclusive. At one time, he refers to the final $\hat{2}$–$\hat{1}$ (supported by V–I) component of the *Ursatz* as a "cadential formula," thus suggesting that the preceding $\hat{3}$ ($\hat{5}$ or $\hat{8}$) represents material of an initiating (as well as possibly medial) formal function.[42] The resulting hierarchical situation, then, could be analogous to Lerdahl and Jackendoff's prolongational reduction in that, as is often the case, the initial I of the *Ursatz* takes up a large percentage of the temporal duration of the movement, with the cadence of the *Ursatz* normally occurring in connection with a relatively foreground cadence closing some thematic unit. Thus the concerns I raised above in considering such a closure to be formal and cadential in the context of a prolongational reduction would be applicable to an *Ursatz* closure as well. At other times, Schenker discusses at some length that the "forms of the fundamental structure [*Ursatz*] must not be confused with the cadences of the conventional theory of harmony" and points out that the similarity between a $\hat{3}$–$\hat{2}$–$\hat{1}$ (I–V–I) fundamental structure and a conventional cadence with this same melodic-harmonic progression "is merely external"; he thus strongly suggests that *Ursatz* and cadence are conceptually distinct entities.[43]

Though I have tried to cast doubt on the validity of considering cadential closure to be operative at relatively high levels of formal organization, it is worth considering at least two reasons why the notion has become so ingrained in much contemporary theory. First, a cadence typically presumed to close an entire movement is often accorded a high degree of foreground rhetorical emphasis through such means as harmonic expansions, highly active surface rhythmic articulations (often culminating in the furiously shaking cadential trill), a loud dynamic, full textures, and the placement of the final

41. The *Ursatz* as a whole cannot logically be conceived as a formal cadence, since it would not function to end anything.

42. Heinrich Schenker, *Free Composition,* ed. and trans. Ernst Oster (New York: Longman, 1979), 16.

43. Ibid., 17. Note that Schenker speaks of the conventional theory of *harmony,* not the theory of *form,* thus revealing how powerfully cadence was conceived in his day as a harmonic construct.

cadential tonic in a hypermetrically strong position. All of these modes of accentuation render such cadential arrivals so prominent and forceful that they can give the impression that they must be concluding something more structurally significant than a thematic region alone.[44]

Second, since the hierarchies of both Schenker's model and the two reductive models of Lerdahl and Jackendoff are *uniform* and *continuous,* in that the same basic principles of harmony, voice leading, and reduction preference are applied at all structural levels, it is easy to assume that if formal closure at lower levels is primarily cadential, then formal closure at higher levels should be cadential as well.[45] But whereas models of pitch, grouping, and metrical hierarchies may effectively be conceived as uniform and continuous, it is not necessarily the case that models of *formal* hierarchies need to be understood in the same way; indeed, there are good reasons to believe that the forces defining formal functionality on some levels of structure are essentially different from those defining it on higher levels. In other words, the modes of musical organization that permit the expression of a formal beginning, middle, and end at the level of the phrase may be unlike those expressing the same sense of functionality for the larger sections of a movement. If so, then the nature of formal closure need not be conceptualized as identical, namely, as cadential, for all levels.

That a hierarchy of formal closure may be fundamentally discontinuous is suggested by an analogy to literary closure. Consider the case of a generic murder mystery. A stereotypical element of discourse that functions to bring closure to the plot is the classic announcement by the detective: "The butler did it." This sentence, however, has its own formal (syntactical) organization, and the element that brings the sentence to a close is the appearance of a direct object ("it") following the verb ("did"); until that direct object is spoken, the sentence is technically open. It seems unlikely that the syntactical element of the direct object, which brings closure to the sentence, is also responsible for bringing closure to the entire course of the mystery plot; rather, it is the meaning of the sentence as a whole (which admittedly needs to be closed) that effects the higher-level formal closure. Thus the mechanisms for closure at both local (sentence syntax) and global (plot syntax) levels remain distinctly different. I would claim that a similar situation obtains for formal closure in classical music. At lower levels (but not the very lowest, as discussed earlier), the major means of closing some phrases and most themes is cadence. At higher levels,

44. Thus James Webster notes, in connection with the aria "Un'aura amorosa" from *Così fan tutte:* "Rhetorically, too, the final vocal cadence seems to round off not just the final section, but the entire aria" ("The Analysis of Mozart's Arias," in *Mozart Studies,* ed. Cliff Eisen [Oxford: Clarendon Press, 1991], 122). I raise again the notion of "rhetorically strong cadences" toward the end of the article (in the section "Cadential Strength" below).

45. On hierarchical continuity versus discontinuity, see Leonard B. Meyer, *Music, the Arts and Ideas* (Chicago: University of Chicago Press, 1967), 96–97, 257–59, 306–8; and idem, *Explaining Music,* 89–90.

formal closure is achieved by other musical forces. Unfortunately, we have no simple, conventional term to label such closure. In that absence, theorists have all too quickly extended the term *cadence* to cover those situations. Such application of cadence is best understood as *figurative* and should not be taken in its literal sense.[46] I return to consider this issue further after I have clarified the distinction between cadential function and cadential arrival later in the article.

Cadence as Harmony; Harmony as Cadence

The important role that harmony plays in the articulation of cadence as a mechanism of formal closure is well known to musicians and central to most conceptions of the classical cadence. Somewhat less familiar, but just as prominent, is the role that cadence has played in the theory of harmony. As mentioned earlier, the idea that harmony is conceived as a cadential phenomenon originates with Rameau. The traditional notion of cadence as ending formula provided Rameau with a musical construct whose patterns of dissonance resolution and fundamental-bass motion could form the basis of an explanatory model for why individual harmonic entities are motivated to progress from one to another. Rameau then extended the explanation of the *perfect cadence* (V–I) and the *irregular cadence* (I–V, IV–I; also termed *imperfect cadence*) to all harmonic progressions, irrespective of their position within a phrase. In these progressions he recognized various "imitations" of the cadence that arose through "evading" the cadence (inverting one or both harmonies or adding dissonance to the final harmony) or "breaking" the cadence (allowing the fundamental bass to ascend a step, thus creating a deceptive cadence [*cadence rompue;* lit. "broken cadence"]). Some progressions do not fit well into Rameau's cadential model (especially various sequences), but, as Joel Lester has observed, "it seems never to have occurred to him that harmonies could relate to one another in meaningful ways other than in terms of cadential progressions or their imitation."[47]

Though there were some exceptions, subsequent harmonic theories continued to be based upon a cadential model, such that harmonic progression and cadence became virtually synonymous.[48] Indeed, the two major (and competing) systems of harmony developed in the course of the nineteenth

46. My colleague Steven Huebner has suggested the term *figurative cadence* to cover the extension of cadence to high structural levels; see "Structural Coherence," in *The Cambridge Companion to Verdi,* ed. Scott Balthazar (Cambridge: Cambridge University Press, forthcoming).

47. Joel Lester, *Compositional Theory in the Eighteenth Century* (Cambridge: Harvard University Press, 1992), 119.

48. One theorist who does not appeal to cadence in his theory of harmony is Heinrich Christoph Koch, who restricts the concept of cadence to "formal ending"; as a result, Koch limits "cadential harmonies" to those in root position exclusively (see Lester, *Compositional Theory,* 279).

century—Simon Sechter's *Stufentheorie* and Riemann's *Funktionstheorie*—were based, in manifestly different ways, on the cadence as model for harmonic progression. Especially in Riemann's theories, the cadence stood as a model not only for harmonic relationships, but, more broadly, for *tonal* ones as well. The cadential progression—now expanded to include an initial tonic, a subdominant, a dominant, and a final tonic—was seen as the principal agent for establishing and confirming a tonal center, the sense of key.

Though cadence served as the preeminent explanation for harmonic analysis, theorists recognized that some kinds of progression were not well covered by the model. In particular, most harmonic sequences as well as some progressions involving "passing" harmonies could not be regarded as fundamentally cadential.[49] Indeed, the increased recognition that passing harmonies were structurally subordinate to their surrounding harmonies led to Schenker's notion that an individual *Stufe* could be *prolonged* through various contrapuntal-harmonic techniques. Eventually the idea that harmonic progressions at one structural level principally acquire their meaning and raison d'être by serving to prolong various harmonies at higher levels of structure allowed this prolongational model of harmony to surpass the cadential model in a number of influential texts used today.[50]

Yet the cadential model of harmony still finds its advocates, among them Leonard G. Ratner, whose theories, along with those of a number of his students, have exercised considerable influence on the formal analysis of music from the classical period. At the heart of Ratner's conception of harmony is the *cadential formula,* a voice-leading configuration involving the succession of scale steps 1, 4, 7, and 1 (typically distributed within two voices).[51] Ratner argues that typically within a periodic structure such cadential formulas are employed to "indicate," "establish," and eventually "confirm" a key. Example 1 illustrates Ratner's analysis of the opening of Haydn's Piano Sonata in E♭, Hob. XVI:28. The entire theme up to measure 8 consists of a series of cadential formulas of increasing "rhetorical emphasis."[52] It is especially noteworthy that Ratner deems harmonic progressions to be cadential independent of the

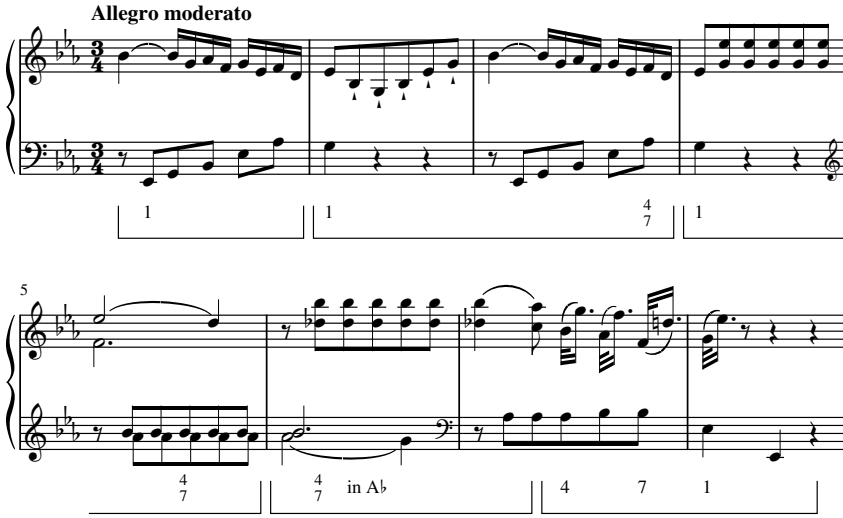
49. Thus Riemann regarded sequences as essentially melodic in nature and not analyzable using functional harmonic labels.

50. See Edward Aldwell and Carl Schachter, *Harmony and Voice Leading,* 3d ed. (New York: Harcourt Brace Jovanovich, 2003); Robert Gauldin, *Harmonic Practice in Tonal Music* (New York: W. W. Norton, 1997); and Peter Westergaard, *An Introduction to Tonal Theory* (New York: W. W. Norton, 1975).

51. "The essence of the cadence-creating process is the interaction of the tonic note with the *tritone* formed by 4 and 7 of the major scale. The sounding of 4 and 7 together or consecutively creates an interval of tension; such a tension is resolved when 7 proceeds to 1" (Leonard G. Ratner, *Classic Music: Expression, Form, and Style* [New York: Schirmer Books, 1980], 51); see also Leonard G. Ratner, *Harmony: Structure and Style* (New York: McGraw-Hill, 1962).

52. Ratner, *Classic Music,* 53. The analytical overlay is by Ratner; likely missing is the indication, on the third beat of measure 1, of a "4" and a "7" (placed vertically) as shown at the analogous place in measure 3.

Example 1 Cadential formulas, Haydn, Piano Sonata in E♭, Hob. XVI:28, first movement, mm. 1–8 (from Ratner, *Classic Music*, ex. 4-5)



actual positions of the harmonies as defined by their bass voice. Thus the opening progression from measure 1 to measure 2, I–V^4_2–I^6, is just as cadential harmonically as the final progression IV–V^7–I. To be sure, Ratner characterizes formal cadences on the basis of the position of their constituent harmonies, so that a true "authentic cadence" requires the final dominant and tonic to be in root position. But he also recognizes an "inconclusive cadence" where the tonic or dominant is inverted, a cadence that "is a signal for further action."[53]

Despite the prominent use of the cadential model within the history of harmonic theory and its obvious explanatory utility, the linking of cadence and harmony has been detrimental in at least two ways to the concept of cadence in its primary sense of "formal conclusion." In the first place, the term *cadence* can be invoked in situations that entirely violate the hierarchical requirements for formal closure. Thus when we read, as we often do, that Beethoven's First Symphony opens with a cadence in F major, the term can logically refer to a harmonic situation exclusively, not a formal one.[54] Likewise, when Schoenberg speaks of an entire movement as an enlarged cadence, his idea has meaning only if taken in the sense of a large-scale harmonic-tonal progression. Even Schenker, who minimizes references to cadence in his writings, introduces the

53. Ibid., 34.

54. W. S. Rockstro et al., "Cadence," in *The New Grove Dictionary of Music and Musicians,* 2d ed. (2001), 4:781.

"auxiliary cadence" as a harmonic progression lacking an initiating root-position tonic. That his concept is only tangentially related to cadence as formal conclusion is clear when he cites examples of the auxiliary cadence serving "as the basis for the so-called second theme of a sonata movement" or "supporting even an entire piece."[55] A second consequence of linking cadence so strongly to harmony is that many progressions that are considered cadential from an exclusively harmonic point of view are not actually associated with genuine formal cadences in the classical style. Thus when a progression such as I–II$^4_2$–V$^6_5$–I is described as "cadential" (as Meyer does when referring to the opening of the first prelude of Bach's *Well-Tempered Clavier*), the impression is given that this progression can be used as the basis of a formal cadence.[56] But even an informal examination of eighteenth-century instrumental repertories reveals that such progressions are rarely, if ever, used to close formal units at the hierarchical level of a theme.

If the wholesale equating of harmonic progression and cadence has led to the kinds of problems just mentioned, it is still possible to identify specific progressions as cadential in ways that are compatible with the concept of cadence as formal conclusion. In critiquing the traditional theory of harmony, Carl Dahlhaus points to a possible way out of the dilemma by taking formal context into account: "The widespread theory that in Classical music all harmonic relationships can be seen as expansions or modifications of the cadence is thoroughly mistaken. It is necessary to distinguish between closing sections, whose harmony constitutes a cadence, and opening and middle sections."[57] Thus, following Dahlhaus's cue, I propose that most harmonic progressions can be classified as one of three basic types: *prolongational, sequential,* and *cadential*.[58] Within themes, prolongational progressions are associated with most initiating contexts and some medial contexts;[59] sequential progressions are normally tied to medial contexts; and cadential progressions form the basis of closing contexts. From a more specifically harmonic perspective, a prolongational progression functions to sustain in time an individual harmony (within an implied tonality), using such embellishing techniques as pedal point and

55. Schenker, *Free Composition,* 89.

56. Meyer, *Explaining Music,* 227.

57. Carl Dahlhaus, "Harmony," sec. 3/ii, in *The New Grove Dictionary of Music and Musicians,* 2d ed. (2001), 10:864.

58. The following discussion summarizes a more extensive treatment of harmonic progressions in Caplin, *Classical Form,* 24–31. Many theories of harmony differentiate sequential progressions from other types. And some modern theories informally appeal to a prolongational model at some points and to a cadential model at other points. I am not aware, however, of a prior theory that so categorically distinguishes prolongational progressions from cadential ones or that systematically develops the consequences of this distinction as the basis for defining the relationship of harmony to form.

59. Prolongational progressions are also used in what I term *framing* formal contexts, namely, a *before-the-beginning* (such as a thematic introduction) or an *after-the-end* (such as a postcadential codetta); see ibid., 15–16.

neighboring, passing, and substitute chords. Most often it is the tonic harmony of some key that is prolonged in this manner, but other scale degrees, especially the dominant, can also be subjected to harmonic prolongation. Example 2 illustrates selected prolongational progressions; the curved line embracing the roman numerals indicates the boundaries of the prolongation. A sequential progression projects a consistent melodic-contrapuntal pattern with the fundamental purpose of moving the music away from, or returning it to, a particular harmonic function or tonal center, often with the result of temporarily destabilizing the prevailing harmonic context. Sequential progressions can themselves be classified in terms of the interval generated by the roots of their component harmonies (e.g., descending fifth, ascending step); such progressions are sufficiently familiar not to require further exemplification.

Whereas a prolongational progression emphasizes the identity of an individual harmony, thus implying a tonality in which that harmony receives its meaning (as tonic, say), the tonality itself is not made certain until its principal harmonic functions are articulated in a sufficiently powerful manner. It is thus the role of a cadential progression to confirm a tonal center as such.[60] And it does so by introducing dominant harmony in its most stable form—*in root position*—thus strongly implying a resolution to a stable, *root-position* tonic. In the case of the *authentic* cadential progression, the dominant (which may contain a dissonant seventh to aid in the implication of resolution) actually progresses to tonic.[61] With the *half*-cadential progression, the dominant becomes the goal harmony (and thus must remain a stable, fully consonant triad); a subsequent resolution to tonic does not belong to the progression proper but occurs at the beginning of the next harmonic progression (though sometimes this resolution is omitted and a different harmony initiates the next progression). A central tenet of my concept of cadence is the requirement that dominant harmony occur exclusively in root position prior to the moment of cadential arrival (or, in the case of a half cadence, just at the moment of arrival).[62] So essential is this harmonic condition that if the dominant first appears inverted (say as V^6_5) or becomes inverted after initially being in root position, then either no sense of cadence will be projected or else a potentially cadential situation fails to be fully realized as such.

The dominant of a cadential progression is often introduced by one or two preceding harmonies—an initial tonic, usually placed in first inversion, and a pre-dominant harmony, usually built over the fourth scale degree in the bass.[63]

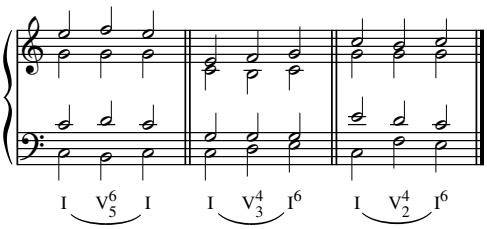
60. Though there is ample precedent for the idea that cadence is key confirming, it is surprising that only 7 percent of the definitions surveyed by Blombach include that element; see Table 1 above.

61. If the final tonic is inverted or replaced by a substitute harmony (usually VI), then we can speak of a *deceptive* cadential progression.

62. Following the moment of cadential arrival in a half cadence, the dominant may then become inverted without weakening the sense of cadence.

63. Pre-dominant harmonies (sometimes referred to as "dominant preparation" harmonies or even more generically as "subdominant" harmonies) include a wide variety of harmonic for-

Example 2 Prolongational progressions



Example 3 illustrates some standard cadential progressions; the square brackets embracing the roman numerals indicate the boundaries of each progression. That the progression typically includes a pre-dominant harmony is well known. The presence of an initial tonic is less often discussed by theorists, yet when mentioned, such a tonic is normally understood to be in root position (as in the textbook progression I–IV–V–I, which, as it turns out, is not typical of the classical style). More frequently, the initial cadential tonic appears in first inversion and is often accorded emphasis as a sign that a cadential progression is indeed under way. A root-position tonic, on the contrary, is normally prolonged from the very beginning of a thematic unit and thus can rarely signal the start of something cadential. Indeed, following a prolonged root-position tonic, the appearance of I^6 to initiate the cadential progression later in a theme helps to lighten the harmonic texture, to provide greater dynamic momentum, and to motivate a return to the stability of the final cadential tonic. Combined with a pre-dominant built over the fourth scale degree in the bass, the cadential I^6 initiates a powerful ascending melodic motion toward the fifth scale degree, which supports the root-position dominant, the linchpin of the cadential progression.

Inasmuch as the raison d'être of the cadential progression is to confirm a tonality, the so-called plagal progression I–IV–I is entirely inadequate to the task. The subdominant harmony does not contain the essential elements, especially the leading tone, to set up powerful expectations for a resolution to a stable tonic. Instead, the progression is entirely suited to a prolongational role, especially seeing as the common tone between the harmonies is the root of the tonic. If the plagal progression does not fulfill the requirements of a true cadential progression, then the formal construct of "plagal cadence," described in virtually every music theory textbook on rudiments and harmony, must be seen as a fiction, at least for the classical repertory (as well as for earlier

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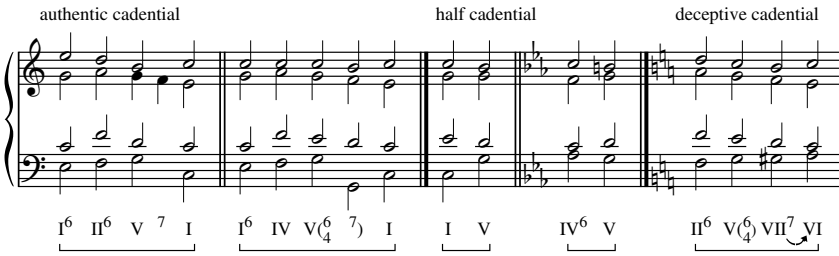
mations whose principal function is to progress to dominant harmony. The main cadential pre-dominant in music of the classical style is II^6, though IV is often used as well. Other pre-dominants include a group of applied dominants to the dominant built over the raised fourth degree (typically VII^7/V), the various augmented sixth chords, and the Neapolitan harmony in first inversion.

Example 3 Cadential progressions



eighteenth-century styles).[64] The situation that theorists normally identify as a plagal cadence is either a postcadential codetta (a topic to be discussed at greater length below) or simply a noncadential articulation within a thematic unit.

My assertion that a cadential progression—and thus actual cadential closure—depends categorically on the presence of a root-position dominant can be tested through comparison with some analyses offered by Fred Lerdahl and Ray Jackendoff and by William Rothstein.[65] In the course of extensive analytical work on Bach's setting of the chorale "Befiehl du deine Wege" from the *St. Matthew Passion* (see Ex. 4), Lerdahl and Jackendoff find the phrase following the double bar (upbeat to m. 5) to end with a cadence in D major, whose dominant takes the form of VII^6.[66] I would maintain, on the contrary, that replacing a potentially cadential dominant with a triad built on the leading tone results in the denial of cadential meaning to that dominant. If so, then we should not speak of a genuine cadential progression here, but instead acknowledge that the phrase ends without a cadence.[67] Undoubtedly, a palpable

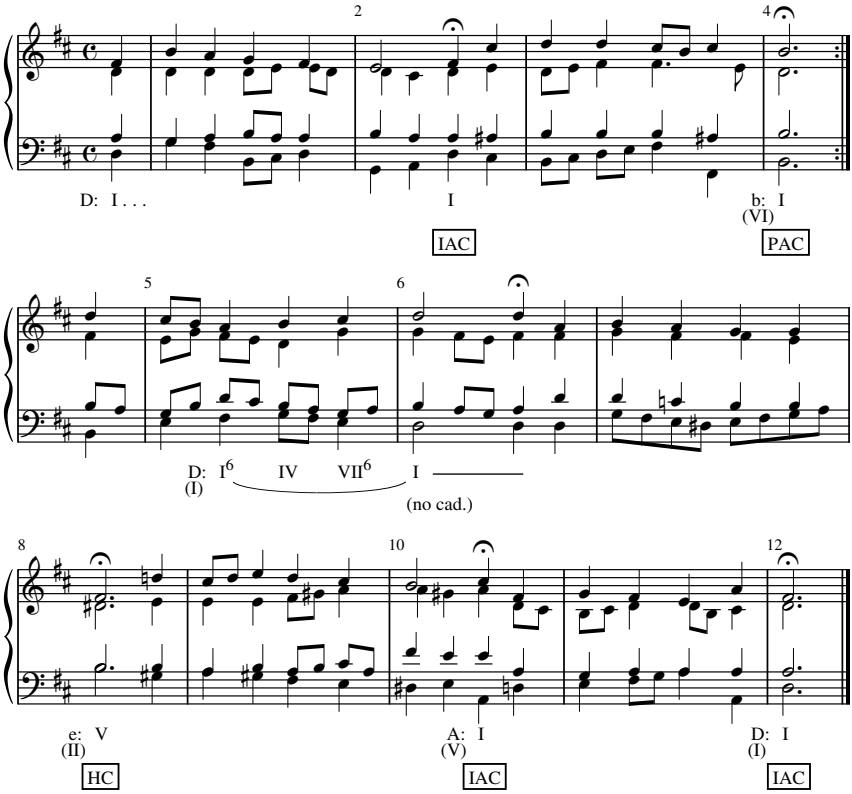
64. It is perhaps possible to speak of plagal cadences in some nineteenth-century works, but even there, it is probably better to understand such situations as deviations from the classical cadence, whereby the rhetoric of the cadence may be present, despite the absence of a genuine cadential progression.

65. Though the following two examples fall outside the strict confines of the classical style, they nonetheless illustrate situations that arise repeatedly within that style.

66. Lerdahl and Jackendoff, *Generative Theory,* 158. Lerdahl and Jackendoff identify this chorale as "O Haupt voll Blut und Wunden" (presumably following the title found in the well-known Riemenschneider edition of the chorales). The analytical overlay in Example 4 is mine, not that of Lerdahl and Jackendoff. Except where otherwise noted, the analyses added to the remaining examples are mine as well.

67. It may be noted, furthermore, that the melodic line $\hat{6}$–$\hat{7}$–$\hat{8}$ concluding the phrase is not entirely suited to a cadential situation. As well, the motion from $\hat{6}$ to $\hat{7}$ can easily create parallel fifths in the voice leading when a pre-dominant built over the fourth degree in the bass leads to a root-position dominant. An informal examination of many of Bach's chorale settings suggests that this melodic pattern rarely generates genuine cadences. Among the nine different settings of this same chorale tune that I have consulted, none uses an authentic cadence (or any other genuine cadence for that matter) at this point in the melody.

Example 4 Bach, chorale, "Befiehl du deine Wege," *St. Matthew Passion*



sense of "ending" is associated with the phrase, but the mechanism for creating that closure need not be conceived—or musically perceived—as cadential. If it were, then such a phrase should, in principle, be regularly usable in formal locations that would bring thematic units to a close. But throughout the eighteenth century, it is rare to find cases of formal units closed by harmonic progressions whose dominant is inverted (in this case, VII^6 substitutes for V^4_3). To be sure, if we assume that all phrases must end with cadences—and the powerful immersion of most theorists in the Bach chorales may reinforce that assumption—then we would be unwilling to recognize that phrase closure can be noncadential in nature. But a number of passages in the chorale repertory reveal that Bach can, in fact, end a phrase without a cadence. Sometimes the final note in the melody does not fall on a scale degree suitable for a cadence (such as the fourth or sixth degrees); at other times, a cadence would be possible, but Bach avoids writing a real cadential harmonic progression, thus thwarting the potential for such closure. Such is the case here. Moreover, we

can observe the detrimental effect that would have arisen if Bach had actually created a *perfect* authentic cadence in D at measure 6. For such a cadence would have poorly anticipated and even potentially obscured the structural significance of the *imperfect* authentic cadence that closes the chorale. As Bach writes it, the second half of the chorale contains a series of carefully gradated phrase endings, beginning with noncadential closure at measure 6, continuing with a half cadence in E minor at measure 8, an imperfect authentic cadence in A major (the dominant of the home key) at measure 10, and an imperfect authentic cadence in the home key to end the chorale.[68]

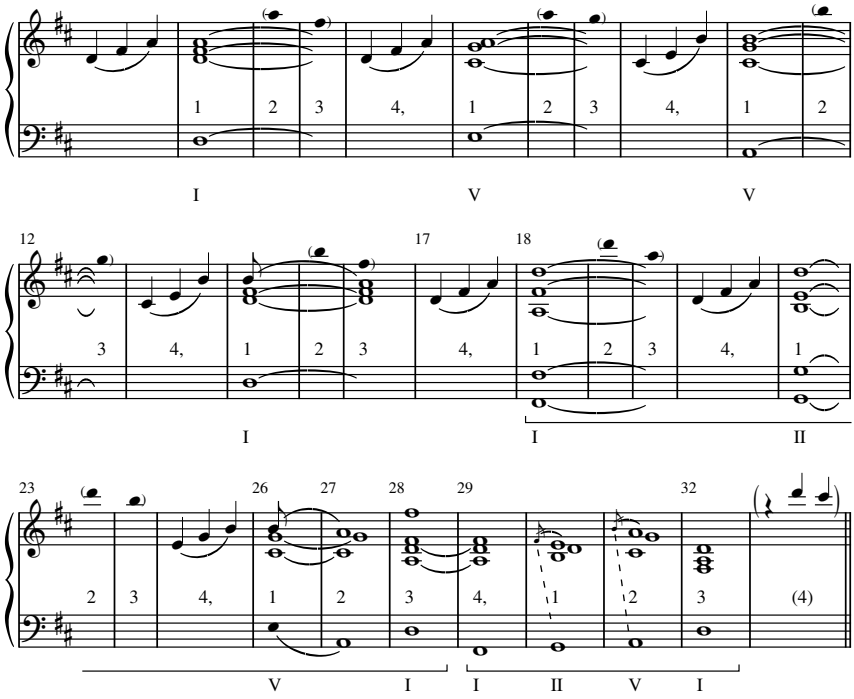
A second example reveals how an inverted dominant harmony undercuts a potential cadence. In his reductive sketch of the famous *"Blue Danube" Waltz* theme (see Ex. 5a), Rothstein brackets two harmonic progressions (mm. 18–28 and 29–32), which "indicate 'a constant movement toward a goal—the cadence,' with 'cadence' defined in its traditional harmonic sense."[69] He notes, however, that "the cadences indicated by our brackets are not felt to be of equal weight or finality; the second cadence is clearly much stronger than the first." To justify this difference in cadential strength, Rothstein appeals to a variety of notions, the most compelling being the melodic tension associated with the end of the first cadence as opposed to the melodic resolution of the second cadence.

We might ask, however, whether the first bass pattern is fully realized as cadential. For Strauss—quite deliberately one must assume—follows the predominant II^6_5 with an *inverted* dominant in measure 26. Rothstein identifies the inversion but subordinates it in his reductive analysis to the subsequent root-position dominant. Insofar as it is axiomatic within the view of cadence presented in this study that a cadential dominant must first appear in root position and remain so throughout its duration, I interpret the cadential situation differently. Following the tonic prolongation of measures 1–17 (note how the dominant is first inverted, then afterwards placed in root position, just what happens later at measures 26–27), the appearance of I^6 at measure 18 can be understood, as Rothstein rightly observes, as a conventional signal for the onset of a cadential progression (see Ex. 5b). And the move to II^6_5

68. As an aside, it is interesting to note that the punctuation of the chorale text might seem to support my analysis of noncadential closure at measure 6, in that this is the only phrase ending not accompanied by a punctuation mark. Indeed, with one exception, none of the other nine settings of the same melody I have examined contain a punctuation mark at this point in the chorale (the second verse of "O Haupt voll Blut und Wunden" has a comma). A quick survey of the Bach chorale repertory suggests that there is no simple relation of musical cadence to text punctuation; while most cadences are associated with some kind of punctuation mark in the text, many other, fully legitimate cadences have no such mark. Thus the absence of punctuation per se should not necessarily suggest the absence of cadence. I discuss the more general issue of relating cadence to punctuation in a later section of this article.

69. Rothstein, *Phrase Rhythm*, 7; the quotation within this statement is Roger Sessions's characterization of phrase (see n. 20 above). The analytical overlay in Example 5a is by Rothstein.

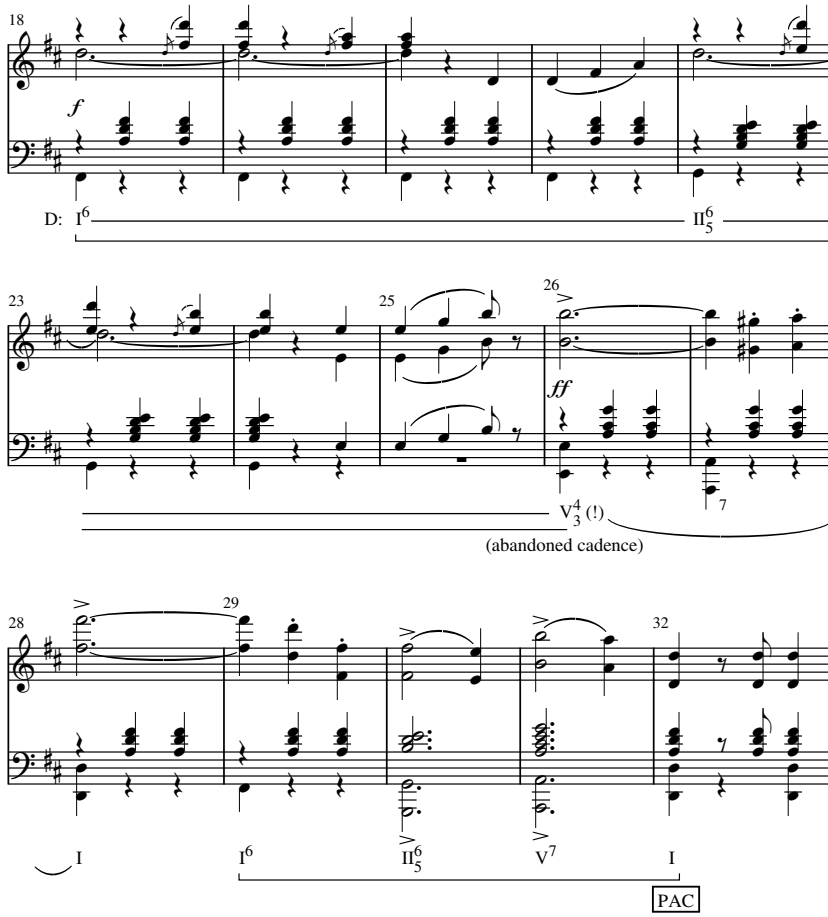
Example 5a Johann Strauss, Jr., *"Blue Danube" Waltz, No. 1,* foreground reduction of main theme (from Rothstein, *Phrase Rhythm,* 6)



supports the expression of impending cadence. But when the bass fails to rise to the dominant degree, pulling downwards instead to the second degree (m. 26), the ongoing cadential progression is *abandoned,* and the return to tonic at measure 28 (via an embellishing root-position dominant) completes a tonic prolongation.[70] The regaining of I^6 at measure 29 holds open the possibility of another attempt at cadence, this one being successful when the II^6_5 yields to a root-position V^7, a genuinely cadential dominant that resolves to I at measure 32. An interesting detail of musical texture further supports the idea that a potential cadence is abandoned at measure 26. The sudden elimination of accompanimental patterns and the reduction to a single voice at measure 25 creates a marked break in the ongoing texture. Indeed, the change of the last quarter-note upbeat to an eighth note and eighth rest contributes to the effect. As a result, when the full texture returns *fortissimo* at the downbeat of measure 26, the moment gives the impression of being a new

70. For a definition and discussion of *abandoned* cadence, as distinct from *deceptive* and *evaded* cadences, see Caplin, *Classical Form,* 106–7.

Example 5b Strauss, "*Blue Danube,*" mm. 18–32 (from Rothstein, *Phrase Rhythm*, 5)



beginning (after the cadential abandonment), not a continuing and immediate drive to an ending. Indeed, it might be argued that the strong sense of initiation associated with measure 26 would render the situation noncadential even if the dominant had appeared in root position. That Strauss avoids a potential conflict of harmony and form by using an inverted dominant reveals his sensitivity to the cadential processes at play. It is only when the bass reaches down again to the third degree at measure 29 that the music directs itself toward imminent closure, which is then effected at measure 32 by the one and only cadence in the theme. Cadential abandonment and eventual realization is experientially more complex than the relatively straightforward case of a weak cadence followed by a stronger one. Strauss's careful treatment of the bass line within this theme points us toward this more interesting interpretation.

Cadential Arrival versus Cadential Function

Even in the sense of "formal conclusion," the term *cadence* is often used in two different ways. On the one hand, cadence signifies the actual moment of formal closure, that point, say in the case of a perfect authentic cadence, where the cadential dominant resolves to the final tonic. This is the place in the musical score where the analyst would place some symbol for cadence (e.g., PAC) and the listener would say "here is where the cadence really happens." More precisely, we can term this time-point the *cadential arrival* and define it as occurring where the final harmony of the cadential progression first appears. Often enough, the final note of the melody in the soprano voice also corresponds with the cadential arrival, but frequently the sense of melodic closure for the thematic unit occurs somewhat after the final cadential harmony arrives, usually as a result of suspension resolutions or some further arpeggiation of the tones of the final harmony (what Koch describes as "overhang" [*Überhang*]).[71]

But the phenomenon of cadence as closure consists of more than just the moment of cadential arrival, for there must be some musical material immediately preceding that arrival whose formal purpose is to announce "a cadence is forthcoming." This time-span, which also includes the arrival of the cadence itself, expresses *cadential function* because it sets up, and then usually fulfills, the requisite conditions for thematic closure through specific harmonic, melodic, rhythmic, and textural devices. Even if the implied cadential arrival fails to materialize—owing to deception, evasion, or abandonment—we can still identify a passage of music whose formal function is cadential. Sometimes the cadential function is relatively compressed, as is the case especially with a simple half cadence ending a four-measure antecedent phrase. At other times, the cadential function is considerably expansive, such as in subordinate-theme areas where the confirmation of the new key requires powerful expression. But no matter what the length of the cadential function, its boundaries are essentially defined by the underlying cadential progression. To be sure, there are situations where it is not so obvious that the cadential progression has actually started, and thus the onset of the cadential function is understood retrospectively. Frequently enough, however, the composer decisively articulates the beginning of the progression by various means, such as a clear shift from stable root-position tonic to the more mobile first-inversion form or a prominent change in the register of the bass voice.

The idea that cadence involves a time-span leading up to and including the time-point of arrival has been implicitly recognized by a number of theorists

71. Heinrich Christoph Koch, *Introductory Essay on Composition: The Mechanical Rules of Melody, Sections 3 and 4*, trans. Nancy Kovaleff Baker (New Haven, Conn.: Yale University Press, 1983), 24.

and historians. Thus Rosen identifies the final phrase of a Mozart piano sonata's subordinate theme (shown in Ex. 6) as "four bars of cadence."[72] Rothstein indicates that a similar formal context (toward the end of the "Blue Danube" Waltz passage discussed earlier) involves a "pre-cadential situation" and notes that the accelerated harmonic rhythm toward the end of the phrase "helps to signal the coming cadence."[73] And Ratner recognizes a "grand cadence of first reprise" toward the end of the exposition in the first movement of Mozart's String Quintet in E♭, K. 614.[74] Lerdahl and Jackendoff provide one of the more explicit formulations of the idea: after first defining a "cadential preparation" that consists of "events leading up to the cadence," they then speak of a "cadential nucleus" that includes both the cadential preparation and the cadence proper.[75]

The more specific notion of "cadential function" also crops up now and then in the theoretical literature, though usually in ways that are rather vague and that differ considerably from the conception developed here. So, for example, Rosen discusses how "the exposition of a sonata is based on only one action, the establishment of one polarity . . . ; once it has arrived, everything remaining in the first half [the whole exposition] tends to have a purely cadential function. In a concerto, the withholding of this cadence is the simplest and most justifiable procedure, the occasion for virtuoso passagework from the soloist."[76] Though it is not clear just how we are to understand "cadential function" in this context, the term seems to apply to a fairly large stretch of music, one that both precedes and follows a cadence. Following the lead of Rosen, Darcy and Hepokoski also recognize cadential function within the latter part of a sonata exposition: "The tonal function of S [the secondary-theme zone] is *cadential:* its purpose is to cadence decisively in the new key."[77] Again, it is uncertain what they mean by cadential function, except that, in the most general sense, "a cadence has to occur." To be sure, the secondary-theme area of a sonata exposition must close with a cadence, but their statement suggests that the entire zone has a cadential function, an idea clearly divergent from the concept of cadence that I have been presenting.

Even when not speaking explicitly of cadential "function," some writers characterize specific grouping structures as cadential, implying, as a result, that

72. Rosen, *Classical Style,* 72.

73. Rothstein, *Phrase Rhythm,* 22–23.

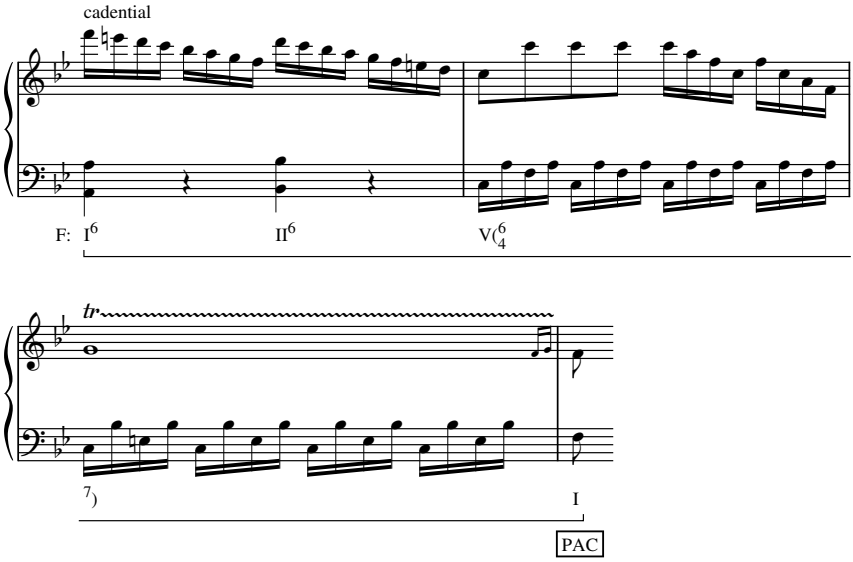
74. Ratner, *Classic Music,* 241.

75. Lerdahl and Jackendoff, *Generative Theory,* 191–94. Their cadential preparation includes any pre-dominant harmonies as well as the cadential six-four, whereas the cadence proper consists of the V–I progression exclusively. (That they conceptually separate the cadential six-four from the dominant is odd, since most theorists recognize that six-four chord as expressing dominant function.) Lerdahl and Jackendoff do not specifically acknowledge the presence of an initial tonic as part of the cadential preparation, but their theory does not exclude that possibility.

76. Rosen, *Classical Style,* 269–70.

77. Darcy and Hepokoski, "Medial Caesura," 121.

Example 6 Mozart, Piano Sonata in B♭, K. 333, first movement, mm. 56–59



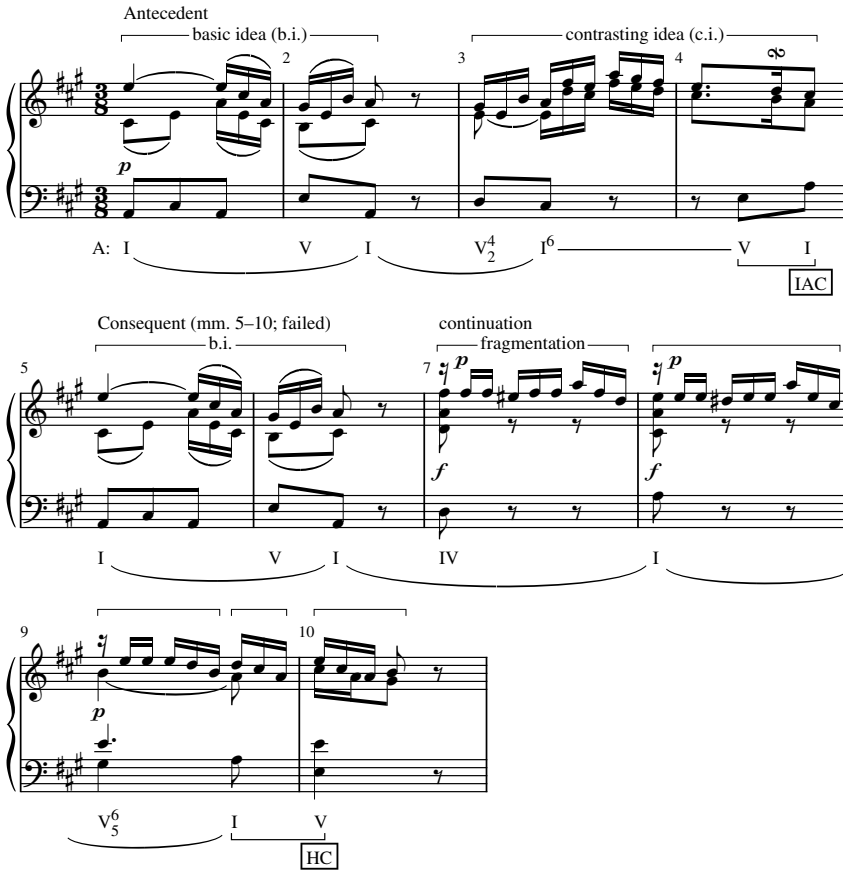
they fulfill that formal function. Thus James Webster identifies measures 7–10 of the main theme in the finale of Haydn's "Farewell" Symphony (see Ex. 7) as a "cadential phrase," though the actual half-cadential progression begins only in the last eighth-note beat of measure 9.[78] Rothstein introduces the notion of "cadential theme," which he defines as a "new or striking melodic idea that appears shortly before, and that leads to, the closing cadence [of the second-theme group]."[79] And along similar lines, Darcy and Hepokoski refer to a "thematically profiled cadential module," typically used by Haydn at the end of an "expansion section" (a position corresponding to the close of what I would call the subordinate-theme area).[80] But by far the most influential references to "cadence phrase" or "cadence theme" arise repeatedly in the writings of Donald Francis Tovey, who uses these expressions in reference to

78. Webster, *Haydn's "Farewell" Symphony,* 98. The analytical annotations in the example reflect my harmonic-formal interpretations, not Webster's. In my view, measures 7–10 function as a *continuation* phrase (*Classical Form,* 40–42) primarily because it initiates prominent phrase-structural fragmentation (i.e., a reduction in the size of the grouping structure from two measures to one measure); I see the cadential function occurring only at the very end of the phrase, as supported by the condensed half-cadential progression. The phrase that begins in measure 5 starts off as a consequent, but that function fails to be fully realized when it closes at measure 10 with a weaker cadence (HC) than the one closing the antecedent (IAC).

79. Rothstein, *Phrase Rhythm,* 118.

80. Darcy and Hepokoski, "Medial Caesura," 135.

Example 7 Haydn, Symphony No. 45 in F♯ Minor ("Farewell"), fifth movement, mm. 1–10



passages that (usually but not always) *follow* a cadential arrival.[81] Such usage has been the source of great confusion for the concept of cadence, for it fundamentally mistakes cadential function with postcadential function, a crucial distinction that I will address shortly below.

Having now distinguished between cadential function and arrival, I want to return briefly to the question of whether or not high-level formal closure should be conceptualized and experienced as specifically cadential. To support my contention that broad stretches of music, ones that embrace multiple thematic units, achieve closure in ways that are noncadential, let me propose the

81. See Donald Francis Tovey, *A Companion to Beethoven's Pianoforte Sonatas* (London: Associated Board, 1935); references to "cadence phrase" and "cadence theme" are found throughout the analyses.

following analogy. As we have just discussed, the process for creating closure at the level of an individual theme takes place within the *time-span* of the cadential *function;* what ultimately completes the process of thematic closure occurs at the *time-point* of cadential *arrival.* I claim that a similar distinction obtains at higher levels of organization, say, of an entire exposition. To simplify the argument, let us consider a relatively short exposition that contains a single subordinate theme. I would suggest that the process of creating expositional closure occurs within the time-span of the entire subordinate theme, for even when that theme begins, we can hear ahead ("protend," as phenomenologists would say) to the eventual end of the exposition and already experience that the exposition is in the process of closing. And, to be sure, the ultimate realization of that expositional closure occurs at the time-point of cadential arrival that decisively ends the subordinate theme. Although the time-points for the fully realized closure of both subordinate theme and exposition are located at the same temporal location, the time-spans of closing function are vastly different in size and internal organization. Hence it seems reasonable to differentiate these formal functions through our technical vocabulary. At the thematic level, the function can be termed *cadential* (with its conventional harmonic-melodic content); at the expositional level, we have no standard label. I would suggest, then, that the notion of *subordinate-theme function* as a constituent formal function of an exposition should incorporate the concept of closure, just as *cadential function* incorporates closure for an individual theme.[82] It might at first seem farfetched to ask us to hear broad-range processes of formal closure at a multiplicity of levels, but such experiential demands have been part and parcel of Schenkerian approaches to harmonic-contrapuntal processes for many decades now, and to invoke the idea for formal functionality hardly seems a radical proposal.

Cadential Function versus Cadential Content

In addition to its harmonic content, cadential function in classical works often projects melodic-motivic gestures that can generally be described as *conventional,* as opposed to the *characteristic* ideas typically used at the beginning of a thematic unit. In earlier style periods, the content of the cadence is so conventionalized that we can appropriately speak of a melodic formula, almost always of falling contour (hence the etymology of the term), that unequivocally signals cadential closure. Some of these formulaic gestures continued to be employed in the high classical period—especially the cadential trill in Mozart's concerto style—but it became less and less the case, particularly with

82. Likewise, the formal function of *recapitulation* would incorporate closure of the entire sonata form.

Beethoven, that the same cadential idea is used in multiple works.[83] Nonetheless, most cadential melodies of the classical style remain conventional (if not formulaic) by projecting a consistent descending stepwise motion within a series of uniform durational values. On the contrary, the characteristic melodies of opening gestures tend to feature a diversity of intervallic content (combinations of leaps, steps, and directional changes) and a variety of durational patterning. The process that achieves cadential conventionality has been emphasized by Schoenberg in his concept of motivic *liquidation,* which "consists in gradually eliminating characteristic features, until only uncharacteristic ones remain, which no longer demand a continuation. Often only residues remain, which have little in common with the basic motive [found at the beginning of the theme]."[84] That melodic-motivic conventionality inhibits formal continuation is also discussed by Jonathan D. Kramer, who convincingly summarizes the aesthetic rationale for composers' using conventionalized gestures in cadences: "The reason for simplification and convention rather than contextual references at the end [of a formal unit] is to avoid any implications toward the piece's future which would work against coming to a close."[85]

Though we can speak of cadential function possessing a cadential *content* (consisting of conventionalized harmonic, melodic, and rhythmic gestures), we must be careful not to assume that the presence of cadential content necessarily signals cadential *function.* Indeed, confusing cadential content and function has led to problematic analyses of cadence, which, in turn, can lead to problematic interpretations of phrase structure and form. If the hierarchical conditions of cadence as formal ending are not met, then even passages whose material content is suggestive of formal cadence would not normally result in a cadential arrival (or the promise of one). Thus when Webster identifies "initial cadences" in measures 2 and 4 of Haydn's "Farewell" Symphony finale (see again Ex. 7), we must question just what the first of these cadences is actually closing.[86] In the appropriate formal context, of course, the musical content of measures 1–2 could very well serve to articulate a genuine cadence. And even in its position at the beginning of the theme, it projects a certain cadential quality. Formally, however, these measures function as an initiating unit (a basic idea), to which measures 3–4 could be seen as effecting cadential closure (by means of an imperfect authentic cadence). To call the opening unit "a cadence" that is immediately followed by another "cadence" misses the opportunity of making finer experiential distinctions. For the content of the two opening measures projects, paradoxically, what might be called the "idealiza-

83. Thus I somewhat overstate the case in *Classical Form* that a "conventional melody [of a cadence] . . . is interchangeable from piece to piece" (p. 37).

84. Schoenberg, *Musical Composition,* 58.

85. Jonathan D. Kramer, "Beginnings and Endings in Western Art Music," *Canadian University Music Review* 3 (1982): 4.

86. Webster, *Haydn's "Farewell" Symphony,* 75.

tion of cadence" in the context of formal initiation, while the second two-measure unit actually achieves cadential closure for the four-measure phrase.

When speaking of a formal unit that seems to open with a cadence, it is difficult not to think of the third movement of Mozart's Symphony No. 41 in C, K. 551 ("Jupiter") (Ex. 8). The beginning of the trio has frequently been cited as an example of a witty effect that arises from displacing a cadence from its normative formal position. Leonard Ratner's description is typical:

> The cadence is placed at the *beginning* of the period [mm. 60–61], not the end, as if it were a final cadence for the minuet. The half cadence in m. 4 of the trio [m. 63] loses much of its clarity and almost all of its emphasis because of the steady eighth-note motion in the melody. Throughout this trio, in fact, the cadence never seems to find its proper place; it is used for everything *but* a point of arrival, and this seems to be the point of the trio—to put the cadence out of countenance.[87]

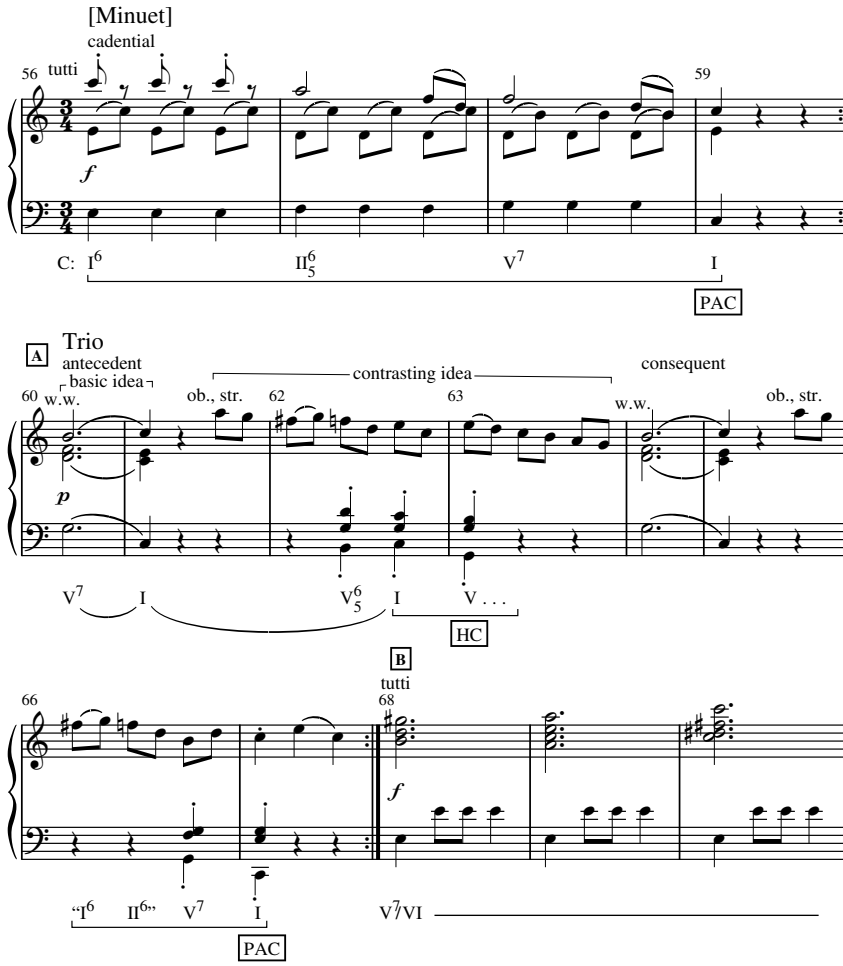
In light of the distinction that I am proposing between cadential content and cadential function, we need to inquire into the status of "the cadence" that Ratner identifies at the beginning of the trio. For although the content of this unit resembles a cadence, it is incapable of functioning as one for reasons already discussed—it cannot be construed to end a formal unit. Rather, this two-bar gesture is used throughout the trio as a basic idea to initiate both the antecedent and the consequent phrases of the A and A′ sections. That this basic idea contains cadential material seems reasonable enough: an authentic cadence must conclude with V–I, which often supports $\hat{7}$–$\hat{8}$ in the melody. But as I have discussed, the classical cadence more typically brings three to four harmonies; as a result, the absence of an initiating tonic (I^6) and pre-dominant (II^6) permits the simple V^7–I progression here to be interpreted not only as cadential but also as prolongational or even sequential. Indeed, when it appears immediately after the cadential phrase that closes the minuet, the basic idea of the trio can very well give a first impression of ending the minuet—not as a *cadence* (*pace* Ratner), but as a postcadential *codetta,* which follows directly upon the perfect authentic cadence in measure 59.[88] In other words, the content of measures 60–61 projects the idealization of codetta as much as of cadence. When the same gesture returns to initiate the A′ section (m. 80), it creates a completely different effect (see Ex. 8b). Following a long-held dominant of VI (mm. 68–75, last five measures not shown), a retransitional passage in measures 76–79 brings a descending-fifths sequence whose last link is the V^7–I progression of measures 80–81; that this sequential link actually functions as a basic idea is signaled foremost by the change in instrumentation. Seeing as classical composers are usually careful to distinguish sequential

87. Ratner, *Classic Music,* 39.

88. I develop in greater detail below the distinction between cadential and postcadential functions.

Example 8 Mozart, Symphony No. 41 in C, K. 551 ("Jupiter"), third movement

(a) Mm. 56–70



progressions from cadential ones, we should not jump to the conclusion that the final V–I motion of the sequence is necessarily cadential.[89]

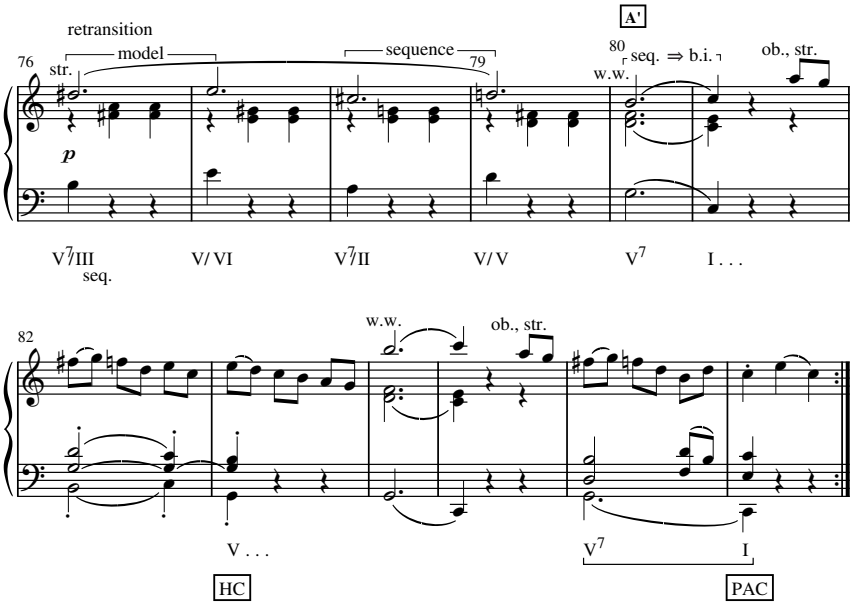
If Ratner's "cadence" actually turns out to be a basic idea disguised first as a codetta and then as a sequential link, what, then, is the status of the actual cadences needed to articulate musical form in this trio? Has Mozart really managed "to turn things topsy-turvy," as Ratner further describes it?[90] The fact is,

89. In romantic styles, on the contrary, composers frequently blur the distinction between sequential and cadential progressions, thus creating more ambiguous formal implications.

90. Ratner, *Classic Music,* 39.

Example 8 continued

(b) Mm. 76–87



both the antecedent and the consequent phrases of the A and A′ sections are completely in order. Nothing whatsoever is problematic with the half cadences.[91] The perfect authentic cadences that close the periods are also normal except in one fascinating respect. Given the bass quarter notes in measure 62 (see Ex. 8a), we might believe that the implied harmonic support for the melody of the authentic cadence in measure 66 is I^6–II^6–V^7 (as the quotation marks around the tonic and pre-dominant in the example indicate). But in the A′ section (Ex. 8b), Mozart shows us that the final cadence is really to be understood as supported exclusively by V^7–I (thus suggesting, somewhat ironically in light of my previous discussion, that we might indeed regard the opening basic idea as having a fully legitimate cadential content after all).[92] The only cadential anomaly in this trio is the lack of closure for the B section (normally, a half cadence), which, as already discussed, is motivated by the final sequential link becoming the basic idea of the A′ section. Ratner is right, of course, to stress the compositional play expressed in this trio, but the witty effects here arise from a rather more complicated set of references—both cadential and noncadential—than his comments might otherwise suggest.

91. In the section "Cadence as Punctuation" below, I consider Ratner's suggestion that continuity of musical motion weakens a cadential effect.

92. Note how Mozart subtly prepares the slurred dotted half note G in measure 86 by changing the bass line of measure 82 (cf. m. 62).

Limited Cadential Scope

Distinguishing between cadential content and function is, in some cases, a matter of hierarchical perspective. For it is sometimes valid to speak of cadential content having an actual cadential function at one level of structure while also recognizing that this same content loses its function at a higher level of structure. In these cases, it might be useful to invoke the notion of *limited cadential scope* to account for the effect of such cadences. Take, for example, the opening of Mozart's Piano Sonata in C, K. 279 (Ex. 9). If we identify cadences at the downbeats of measures 3 and 5, as do Lerdahl and Jackendoff, then we must ask exactly what formal units these cadences are closing.[93] Clearly, it is too early to speak of closing the main theme itself, for when we consider the broader context, we can identify a sentence structure for that theme as a whole, one whose promised cadential close is initially denied by the deceptive cadence in measure 10, but then realized by the perfect authentic cadence in measure 12. To the extent that we want to identify cadences at the downbeats of measures 3 and 5, it is best to see them functioning to provide closure to the basic idea itself, but having no further effect on the theme. For at the level of the theme, a basic idea is exclusively an opening idea; that idea itself cannot bring a formal cadence.[94]

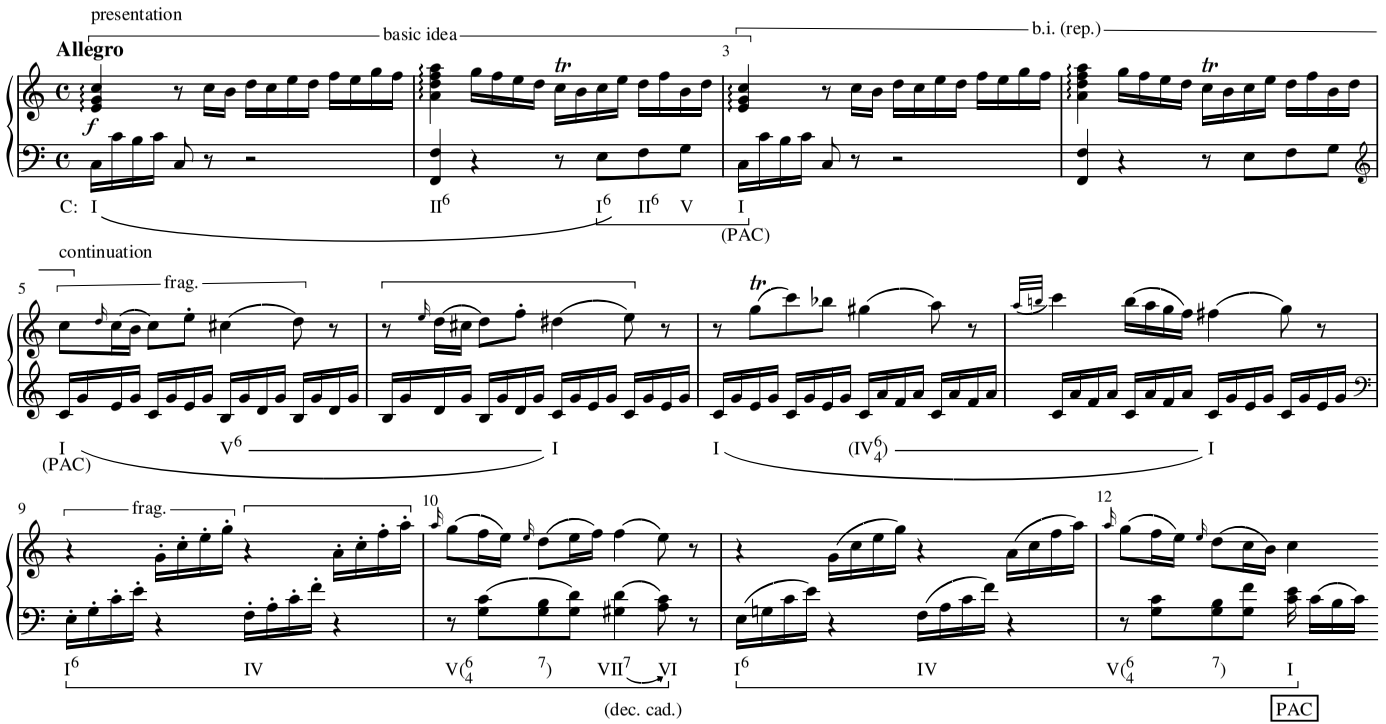
The notion of limited cadential scope also helps to clarify a problematic formal situation identified by Webster at the beginning of Haydn's Symphony No. 92 in G ("Oxford") (see Ex. 10): "The slow introduction opens with what sounds like the antecedent of a normal period. . . . But the following phrase cadences even more strongly on the dominant (m. 8)—is this then an anti-period?—; and worse yet, so does the third (m. 12)."[95] After highlighting the emphasis on dominant harmony throughout these measures, Webster proceeds to argue that in the context of the rest of the slow introduction and the beginning of the main theme of the exposition, this dominant is actually undermined and cannot be seen as structural after all. But leaving aside the broader role of dominant harmony in these measures, his analysis of cadences raises questions. Finding a half cadence at measure 4 seems, at first glance, reasonable enough: a clear half-cadential harmonic progression leads to a sense of closure for a phrase that has all of the features of a four-measure antecedent, one that could begin a normal period, as Webster notes. But the idea of a half cadence at measure 8 is problematic due to the lack of harmonic progression

93. Lerdahl and Jackendoff, *Generative Theory,* 62.

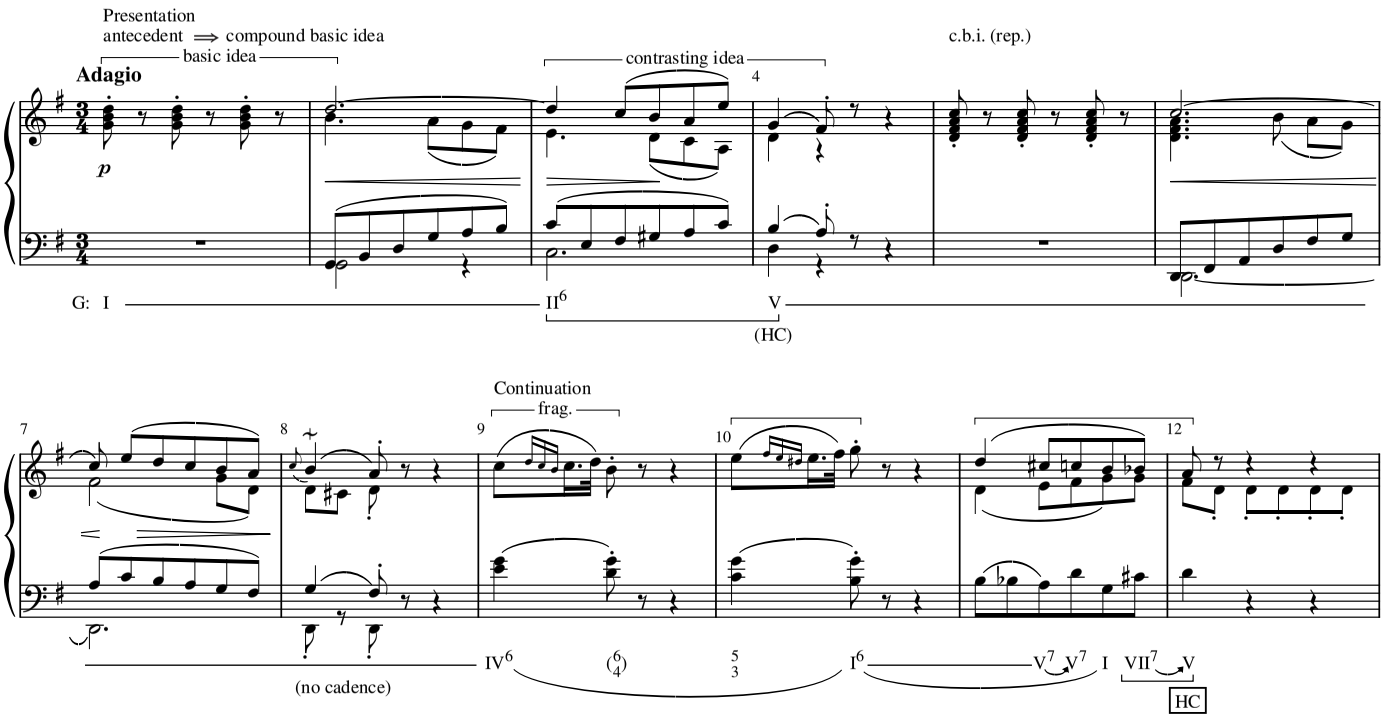
94. In Example 9, and in some analyses to follow, I indicate cadences of limited scope by placing the cadential label in parentheses rather than in a box.

95. Webster, *Haydn's "Farewell" Symphony,* 167. Webster defines an anti-period as "a period whose consequent cadences *off* the tonic and hence is more 'open' than the antecedent" (p. 44).

Example 9 Mozart, Piano Sonata in C, K. 279, first movement, mm. 1–12



Example 10 Haydn, Symphony No. 92 in G ("Oxford"), first movement, mm. 1–12



into that measure.[96] Indeed, a single dominant is prolonged from measure 4 through measure 8. Moreover, it is not at all clear what makes this putative dominant cadence "stronger" than the first one (the melodic trill? the C♯ inflection in the second violin?). Starting at measure 9, harmonic activity picks up again, and the progression into measure 12 creates an unobjectionable half cadence.

If a half cadence at measure 8 should be ruled out, then what kind of formal situation obtains, and how does it relate to the half cadences in measures 4 and 12? Given the lack of cadence at measure 8, the idea of a (anti-)periodic structure for measures 1–8 can no longer be sustained. Yet the melodic-motivic content of the second phrase clearly repeats that of the first. Following this repetition, measures 9–12 bring fragmentation into one-measure units and a marked acceleration of harmonic rhythm, the two major attributes of continuation function (such as that in the second part of a sentence form). In light of the two four-measure units that precede this continuation, the idea of a *compound sentence* (normatively sixteen measures in length) suggests itself, for this theme type often features a continuation that is compressed into four measures, thus resulting in a twelve-measure theme.[97] In this interpretation, then, the half cadence in measure 12 is the only one that truly effects thematic closure. And so the cadence in measure 4 must now be called into question. Here, the notion of limited cadential scope can be of aid, for we can understand that this cadence may indeed close the first four-measure unit per se, but then have no further effect at the higher-level organization of the theme, where the individual units making the eight-measure presentation should not, in principle, bring cadential articulation.[98] We see, therefore, that whereas the cadential situation is somewhat more complicated than that suggested by Webster, the formal outcome is actually quite clear and conventional.

Cadential Function versus Postcadential Function

Perhaps the most pervasive confusion about the nature of cadence arises from the failure to distinguish conceptually between the time-span of music that *precedes* the cadential arrival and the time-span that *follows* that arrival. The former can rightfully be characterized as cadential in function since it provides the

96. In some later examples, we again encounter cases in which an identification of cadence proves problematic because the presumed moment of cadential arrival is not articulated by a distinct progression of harmonies.

97. Caplin, *Classical Form,* 69.

98. I thus analyze the opening four measures as an antecedent, which, in retrospect, is understood as a *compound basic idea*. (The symbol ⇒ indicates the retrospective reinterpretation.) A compound basic idea is a four-measure unit consisting of a basic idea followed by a contrasting idea, but no cadential closure. It is thus a hybrid of an antecedent (of a simple period) and a presentation (of a simple sentence); see Caplin, *Classical Form,* 61.

actual musical content for effecting formal closure. The latter should not be understood as cadential because the music following the moment of arrival can have no further impact upon the fact that formal closure has indeed been achieved. This music can instead be considered *postcadential* in function as distinct from the genuine cadential function, which precedes (and includes) the cadential arrival. A truly cadential passage expresses the temporal sense of *end;* a postcadential passage expresses the distinctly different temporal sense of *after-the-end.*[99] Such material following the end is usually motivated by the need either to dissipate the energy accumulated in the process of achieving the end or to sustain (or even to boost) such energy in order to reinforce the sense of arrival. Not all cadences require a postcadential passage (the half cadence internal to the period form rarely includes such material), but in many contexts, postcadential function is appropriate in order to avoid an overly abrupt cessation of musical activity at the moment of cadential arrival. In particular, the subordinate-theme group of a sonata exposition (and recapitulation) is normally followed by a postcadential unit, since the final cadence of the group usually is given such a strong articulation that further material is required to dissipate the energy accrued by that cadence. But the main theme of a movement may also include a postcadential passage (as shown later in Ex. 12). The transitions in the exposition and recapitulation, as well as in the final part of the development section, usually end with a half cadence, which is then followed by a subsequent postcadential extension, one that may be quite elaborate in scope.

Postcadential material can be divided into two basic categories on the basis of the final harmony of the cadence. Following an authentic cadence, the passage can be termed a *closing section,* which itself is made up of one or more *codettas.*[100] An individual codetta ranges in length from a single chord to a full four-measure phrase and prolongs the tonic harmony achieved at the end of the preceding authentic cadence. Following a half cadence, a comparable passage can be termed a *standing on the dominant.*[101] This unit prolongs dominant harmony and often consists of individual ideas that are comparable in nature to the codettas of a closing section.[102] The harmonic content of a post-

99. The notion of after-the-end finds expression as well in temporal contexts that are nonmusical. For example, the end of any race is achieved when the racer crosses the finish line; the after-the-end of the race includes the brief winding-down period that immediately follows the crossing of the line (see ibid., 15). And if the formal closure of a mystery story occurs when the murderer is uncovered, as discussed earlier, the after-the-end of the plot concerns itself with the fates of the criminal and others suspected of the crime, as well as the glorification of the detective.

100. The use of *closing section* is potentially misleading, since "closing" itself is suggestive of "cadential closure." I have resigned myself to the term, however, because such a passage within a sonata-form exposition (or recapitulation) has traditionally been called a "closing theme."

101. The original German expression "Stehen auf der Dominante" originates with Ratz, *Musikalische Formenlehre,* 25.

102. For the sake of consistency, the postcadential passage following a half cadence could also be termed a closing section, with its individual units called codettas. But since such usage in con-

cadential passage usually consists of prolongational progressions, but cadential progressions are frequently used as well. Indeed, the individual codettas of a closing section often have cadential content, though their formal function is postcadential. And it is surely the appearance of such content that has reinforced the conceptual confusion between cadential and postcadential functions that so pervades theoretical discourse.

One possible historical source for this confusion is that the German word *Schluß* has the general meaning of "close" as well as the more technical meaning of "cadence." Thus, when speaking of the final phrase of a sonata exposition by Haydn (see Ex. 11, mm. 37–40), Tovey translates the widespread German term *Schlußgruppe* as "cadence-phrase," though he could have chosen the less specific term "closing phrase" as well.[103] But from the theoretical perspective developed here, the actual cadential function, which brings closure to the subordinate theme of the exposition, begins with the upbeat to measure 34 and ends with the cadential arrival on the downbeat of measure 36. The following phrase—Tovey's "cadence-phrase"—is a closing section consisting of codettas whose content may be cadential but whose function is entirely postcadential.

Tovey's tendency to label postcadential passages as various types of cadential units (phrases, groups, themes) exerted enormous influence on North American theory, especially in the writings of Charles Rosen. For example, when presenting a "textbook" definition of sonata form, Rosen states, "At the end of the second group, there is a *closing theme* . . . with a cadential function. The final cadence of the exposition, on the dominant, may be followed by an immediate repetition of the exposition."[104] Although it is difficult to know exactly what constitutes this "closing theme" (it may be the closing section proper, but it may also include the cadential component of the subordinate-theme group), the "final cadence" undoubtedly refers to the final *codetta,* since rarely does an exposition end with the actual cadence closing the subordinate-theme group. Rosen also speaks of a cadence and its "repetitions."[105] These repeated "cadences," however, are actually codettas within a closing section that follows the true cadence. (Tovey's "cadence-phrase" in measures 37–40 of Example 11 contains codettas that might be taken as repetitions of the cadence.) Further confusion arises when Rosen refers to the entire closing section of a concerto ritornello as an "elaborate cadence" and speaks of the

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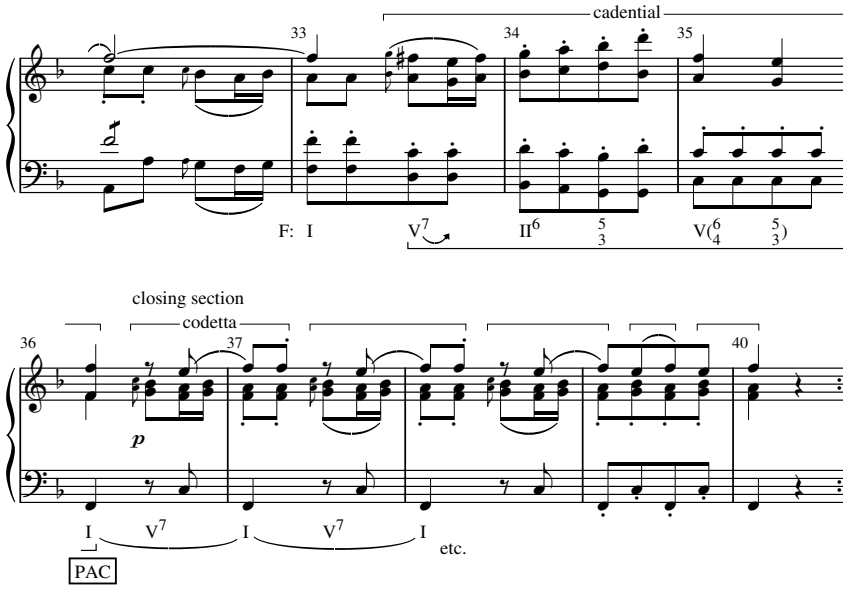
nection with a prolongation of dominant harmony has no basis in traditional theory, I have elected to follow Ratz in using different expressions based on the underlying harmony, even though the formal situations are essentially the same.

103. Donald Francis Tovey, *The Forms of Music* (New York: Meridian Books, 1956), 210. He also regularly uses the expressions "cadence group" and "cadence theme."

104. Charles Rosen, *Sonata Forms,* rev. ed. (New York: W. W. Norton, 1988), 2. Other references to "final cadences" that are actually codettas appear on pp. 75 and 241–42.

105. Ibid., 105.

Example 11 Haydn, String Quartet in D Minor, Op. 42, fourth movement, mm. 32–40



coda to the finale of Beethoven's Eighth Symphony as "fifty bars of cadence in stretto style."[106] Many other writers invoke cadence in the same vein. Thus Cone, after correctly identifying the cadence closing a subordinate theme, labels the following material a "cadential phrase, confirming the key" of that theme.[107] Like Rosen, Webster refers to "final cadences" that are actually codettas and speaks of a true cadential arrival that is clinched "with four additional root-position V–I cadences"; again these are better understood as codettas than as cadences.[108] Similarly, Lerdahl and Jackendoff identify a cadence that is immediately followed by "additional cadences," though these are preferably seen as codettas that are structurally subordinate to the real cadence, as their tree graph reveals.[109] And Ratner uses the label "cadential phrase" to refer to a passage that actually functions as a standing on the dominant.[110]

In almost all of these cases, the theoretical confusion arises because cadential function is not sufficiently distinguished from postcadential function,

106. Ibid., 74, 351.
107. Cone, *Musical Form,* 50.
108. Webster, *Haydn's "Farewell" Symphony,* 146, 78.
109. Lerdahl and Jackendoff, *Generative Theory,* 235.
110. Ratner, *Classic Music,* 42.

along with a further conflation of cadential content and cadential function. Especially in codettas whose content is the same as, or very similar to, the actual cadence closing the theme, it is easy enough to assume that the cadence is merely being repeated (following Rosen and Webster). In such cases, it seems that theorists and historians succumb to a kind of terminological inertia, such that if something looks like a cadence, then it might just as well be called a cadence, whether or not it actually functions as one. The theoretical problem, however, is that codettas with cadential content cannot usually be construed to "end" a prior initiating unit, and thus the basic hierarchical conditions of formal closure do not obtain. Beyond this logical consideration, the failure to differentiate cadential from postcadential has the potential of obscuring our experience of musical temporality, namely our sense that such-and-such stretch of time creates ending, while a subsequent stretch affirms a coming-after-the-end. These are fundamentally different aesthetic sensibilities, and these differences deserve to be respected analytically whenever possible. To be sure, there are genuine cases of formal ambiguity in which it can be difficult to specify exactly where the moment of cadential arrival separates the cadential function from the postcadential one.[111] But such cadential play is largely effective because, in principle, we are aware that there is a distinction to be made. We do a disservice to our listening experience by lumping together as "cadence" the variety of gestures that express both ending and after-the-ending.

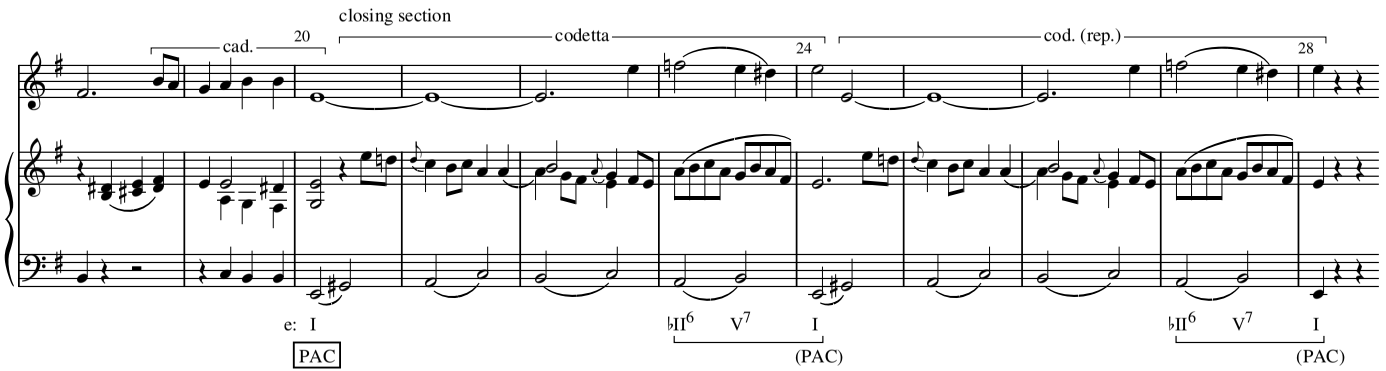
To complicate the matter further, there are indeed cases where a closing section seems to contain real cadences, ones that function to conclude a distinct four-measure phrase. Here, however, the notion of limited cadential scope helps to clarify the situation. Consider Example 12, from the end of the main theme of Mozart's Violin Sonata in E Minor, K. 304. The theme (built as a small ternary) concludes formally with a perfect authentic cadence in measure 20. What follows is a closing section consisting of a repeated four-measure codetta. The codetta, however, is itself closed with a clear cadential progression. Within the limited scope of the codettas, these cadential figures have a genuine cadential function. From the perspective of the theme as a whole, however, they participate within a broader postcadential function and thus cannot be considered true cadences.

Despite the common confusion of cadential and postcadential functions, some scholars are clearly aware of the distinction. Blombach, for one, explicitly differentiates "the actual cadence" from "the repeated dominant-to-tonic pattern that frequently occurs at the ends of tonal compositions or major sections."[112] Likewise, Darcy and Hepokoski hold that the "closing zone" of a sonata exposition embraces all of the material that follows their "essential

111. I discuss just such a case in connection with the scherzo of Beethoven's Piano Sonata in E♭, Op. 7, in *Classical Form,* 221 (ex. 15.1).

112. Blombach, "Phrase and Cadence," 233.

Example 12 Mozart, Violin Sonata in E Minor, K. 304, first movement, mm. 18–28



expositional closure" (usually the first substantial authentic cadence in the new key), and they assign that zone a "post-cadential" tonal function, whose "purpose is to solidify further the new key."[113]

Darcy and Hepokoski's description of postcadential function as a further solidification of a tonal region articulated by a cadence relates to another widely held view, namely, that the material following a cadential arrival—which, as we have seen, is termed "cadential" by other scholars—serves primarily to confirm, reinforce, or emphasize the cadence itself. Indeed, they are even more explicit on this point when they discuss how their closing zone typically includes "a chain of cadential modules that confirm the PAC with varying degrees of strength."[114] A similar idea is expressed by Ratner: "The most powerful effect of arrival is created when the *cadential action* itself is *reinforced and extended,* forming an *area* of arrival. This generally takes place toward the end of a large section of a movement." He then refers to the end of a duet in Mozart's *Don Giovanni,* in which the dramatic action "is underscored by a series of strong cadences in D minor, culminating in an extended play on the D minor chord," in other words, by what I would call a broad postcadential passage.[115] Kofi Agawu, a student of Ratner, elaborates these ideas by distinguishing between "syntactic" and "rhetorical" components of closure: "The syntactic component is the melodic-harmonic event that closes the overall structure. . . . The rhetorical component . . . is the set of devices that emphasize the close—notably, repetition in various dimensions and on various temporal levels."[116] Agawu's syntactic component is normally an actual cadence with its point of arrival. The rhetorical component occurs in a passage following this arrival, as exemplified by a codetta that appears after the end of the first-movement main theme of Mozart's String Quintet in C, K. 515. Agawu notes that the actual cadence closing this theme (mm. 56–57),

> while fulfilling a syntactical obligation, does not carry sufficient rhetorical weight to provide an effective balance for the period as a whole. The event necessitates a complementary confirmation—hence measures 57–60, which constitute a prolonged cadence. . . . It is not enough simply to supply a cadence in order to secure the tonal meaning of a period; it is also necessary to confirm it.[117]

113. Darcy and Hepokoski, "Medial Caesura," 121. Their views in this respect are perhaps influenced by Rothstein, who also characterizes the material following the first major cadence in the exposition's new key as "post-cadential" (*Phrase Rhythm*, 116).

114. Darcy and Hepokoski, "Medial Caesura," 121.

115. Ratner, *Classic Music*, 46.

116. V. Kofi Agawu, *Playing with Signs: A Semiotic Interpretation of Classic Music* (Princeton, N.J.: Princeton University Press, 1991), 67.

117. Ibid., 81–82. Agawu illustrates other cases of rhetorical endings with several examples in which the actual cadence (the syntactic component) is "repeated" multiple times (thus recalling Rosen and Webster); see, on pp. 69–71, his analyses of the second movement of Mozart's Piano Sonata in C minor, K. 457, and the first movements of Haydn's piano sonatas in C♯ minor

The idea that postcadential material confirms, emphasizes, or strengthens the cadential arrival or the tonal region associated with that arrival seems at first glance plausible enough. But further reflection prompts a number of concerns. For instance, if a cadence is not followed by a closing section, does that mean that the cadence remains unconfirmed? Inasmuch as the word *confirm* "implies the making unquestionable of something in question by means of authoritative statement or indisputable fact," does the lack of a closing section undermine the existence of a cadence?[118] Moreover, if, as argued earlier, a cadential progression is the principal means of confirming a tonality, then how could a subsequent postcadential passage (which is often made up exclusively of prolongational progressions) also be seen as confirmatory of a key? In response to these questions, I would hold that a real cadence need no further confirmation in order to have full legitimacy as an agent of formal closure (at the thematic level); as well, the need for subsequent postcadential function entails other matters (dynamics, rhythm, texture, grouping structure) that are not specifically cadential in nature.

Another concern involves the notion of cadential strength (a topic to be treated in greater detail below). That a prominent postcadential area can reinforce and strengthen the sense of cadential arrival seems reasonable enough (especially when the constituent codettas seem to repeat the cadence). But there is another kind of cadential emphasis that should be considered as well. Many cadences, especially those closing subordinate themes and codas, witness enormous expansions of the harmonies that *precede* the final one, thus delaying the cadential arrival and causing the listener to desire it all the more. Surely this expansion of cadential function preceding the moment of arrival also has an effect of making the cadence appear powerful. But the nature of this emphasis and strengthening of the actual cadential function is of a different kind than that created by a postcadential function. Just as it is important to differentiate cadential and postcadential as discrete formal functions, so too is it important to differentiate the aesthetic effects of emphasis that result from expansions associated with these differing functions.[119]

(Hob. XVI:36) and D (Hob. XVI:37). These discussions give the impression that Agawu's rhetorical component is congruent to my postcadential function. But in his analysis of the first movement of Mozart's String Quintet in E♭, K. 406 (pp. 67–68), he includes within the rhetorical component passages that both precede and follow a cadential arrival.

118. *Webster's Third International New Dictionary of the English Language Unabridged,* 476.

119. Karol Berger also notes that lengthening the duration of the harmonies preceding the cadence "will intensify the expectation of the arrival," yet he maintains that lengthening the final tonic through an "appendix" also yields cadential strengthening. In other words, he seems not to distinguish conceptually a cadential strengthening from a postcadential one ("The First-Movement Punctuation Form in Mozart's Piano Concertos," in *Mozart's Piano Concertos: Text, Context, Interpretation,* ed. Neal Zaslaw [Ann Arbor: University of Michigan Press, 1996], 244).

"End" versus "Stop"

Relatively high on Blombach's list of elements traditionally associated with cadence is "rest, pause" (see again Table 1). The idea that a cadence is normally associated with a cessation in musical activity has become highly entrenched in everyday notions of cadence, especially in pedagogical writings. Thus Joel Lester, in his textbook on harmony, considers a "break in the rhythmic continuity" as a fundamental element of cadence, such that its absence converts a potential cadence into a "caesura," a different kind of phrase ending.[120] Indeed music students, in particular, often appeal to a criterion of rest or pause in their analyses of cadence. In my own teaching experience, I regularly encounter the following kinds of statements: "This moment must be a cadence because everything stops," or, conversely, "this moment cannot be a cadence because the music keeps on going." Most theorists and historians, however, understand, at least implicitly, that a cessation of motion is not essential to cadence: even a cursory examination of the musical literature reveals that although many cadences are followed by a break in activity, many others clearly occur in contexts where rhythmic continuity is sustained beyond the moment of cadential arrival. In fact, some scholars are explicit on this point. Blombach's broad definition of cadence, for example, appeals fundamentally to the notion of cadence as conclusion, noting that " 'conclusion' is intended in the sense of 'destination of ideas,' as opposed to merely stopping with no indication of finality or direction."[121] In other words, formal "end" and rhythmic/textural "stop" may very well be associated in many cadential situations, but they are fundamentally different phenomena, both conceptually and experientially. Formal closure may take place in the context of rhythmic/textural continuity, and a break in rhythm and texture may occur at moments that are formally open.[122]

If most scholars do not consider a rhythmic stop to be a necessary condition for cadence, some still betray a lingering sense that they are significantly entwined. Ratner, for example, discusses how "*melodic action* [i.e., continuity through the cadential arrival] can reduce the effect of arrival even when the harmony clearly makes an authentic cadence."[123] In a similar vein, Douglass Green holds that "continuity often tends to obviate the conclusive quality of an otherwise strong cadence."[124] Karol Berger notes that in the standard

120. Joel Lester, *Harmony in Tonal Music,* vol. 1, *Diatonic Practices* (New York: Alfred A. Knopf, 1982), 50, 53.

121. Blombach, "Phrase and Cadence," 231.

122. Both of these situations are illustrated in Caplin, *Classical Form;* see the discussion of exx. 4.7 and 4.3 on p. 51.

123. Ratner, *Classic Music,* 45. See also his remarks, cited earlier, on the half cadence of the "Jupiter" Symphony trio (my Ex. 8a, m. 63).

124. Douglass M. Green, *Form in Tonal Music: An Introduction to Analysis,* 2d ed. (New York: Holt, Rinehart and Winston, 1979), 15.

cadence, "there is at least one beat and at most three beats of general rest in both the melody and the accompaniment," and that an elimination of these rests (by means of elision, *inter alia*) results in cadential weakening.[125] The suggestion by these writers that formal closure is somehow weakened by the absence of rhythmic break shows how persistent is the notion that ending and stopping are fundamentally linked.

The issue of ending versus stopping is often implicated with that of cadential versus postcadential. If a cadence is followed by a closing section or a standing on the dominant, there is rarely a break in rhythm and texture. It is only after the postcadential section plays itself out that a genuine stop in the ongoing rhythmic activity takes place, often to help set in relief the beginning of the next thematic unit. In such cases, the moments of cadential arrival and rhythmic stop are entirely nonconcurrent. Example 13, from the first movement of Beethoven's String Quartet in C Minor, Op. 18, no. 4, illustrates this situation. The first part of a *two-part transition* (which begins earlier at measure 13, not shown) leads to a powerful home-key half cadence at the downbeat of measure 20.[126] At that moment, the accompaniment changes and a postcadential standing on the dominant begins with a new two-measure idea, which is repeated and fragmented within a prolongation of dominant harmony. The final liquidation of postcadential materials brings a textural break in the second half of measure 25. The second part of the transition then begins in the following measure with a completely new idea in the submediant region.

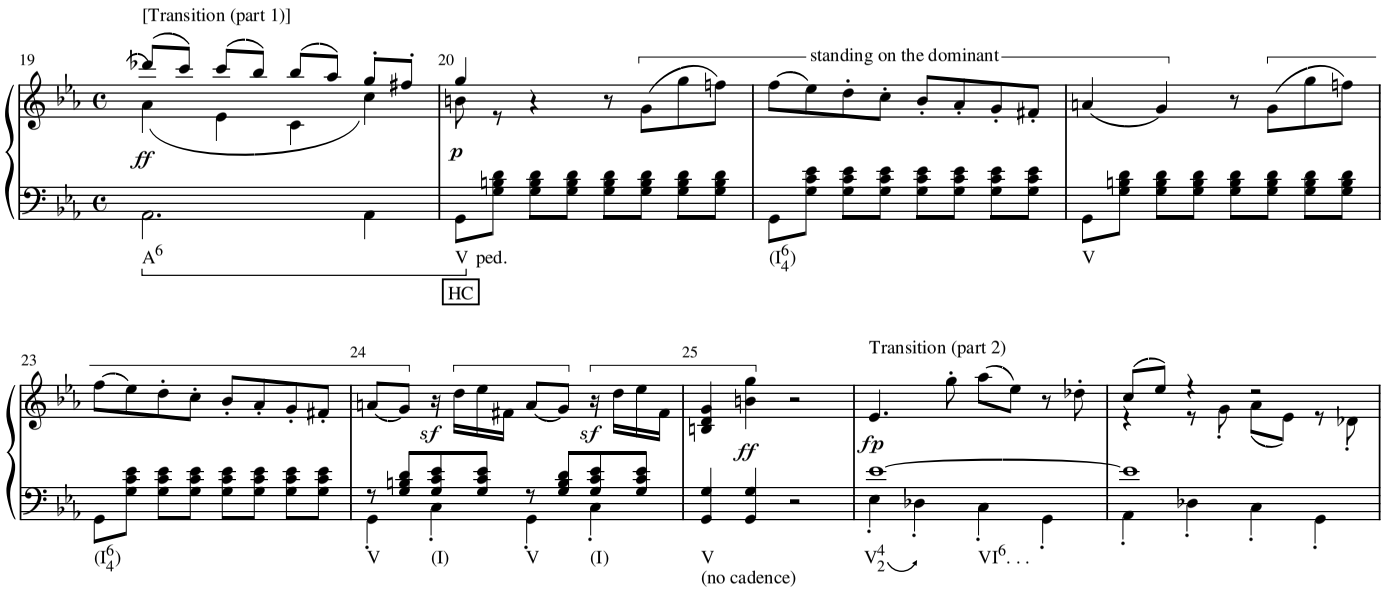
Under the influence of the traditional association of cadence with rhythmic stopping, some theorists and historians are led to identify the kind of rhythmic/textural break at measure 25 as the actual location for cadence. Such is the case with Darcy and Hepokoski's notion of the "medial caesura" as a major landmark in a sonata-form exposition. Like Lester's caesura, that of Darcy and Hepokoski explicitly involves a decisive gap in rhythmic activity and prevailing texture at that point in the exposition where (as a general rule) the transition ends and the subordinate-theme group begins: "the two-part exposition is characterized by a strong mid-expositional punctuation break, the *medial caesura*—most often articulating a half cadence."[127] Here, they strongly connect the rhythmic disruption of a medial caesura to cadence, a relationship further supported by their labeling system, which specifically associates a medial caesura (MC) to one of three cadence types—a half cadence in the new key (V:HC), one in the old key (I:HC), or an authentic cadence in the new key (V:PAC). And although in their article they tend not to indicate exactly where a given cadence occurs, their discussion of the passage in Example 13 makes

125. Berger, "Punctuation Form," 246–47.

126. For a discussion of the two-part transition, whose first part ends with a home-key half cadence, and whose second part typically begins off-tonic (often on submediant harmony), see Caplin, *Classical Form,* 135–38.

127. Darcy and Hepokoski, "Medial Caesura," 117.

Example 13 Beethoven, String Quartet in C Minor, Op. 18, no. 4, first movement, mm. 19–27



explicit the linkage of half cadence and textural break: "At m. 25 the music reaches what at first sounds like an unambiguous i:HC . . . MC, complete with *fortissimo* double hammerstroke and GP."[128] A difficulty with identifying a half cadence at measure 25, however, is the lack of genuine harmonic progression into that measure (the tonic harmonies of measure 24 have been functioning exclusively, since the beginning of the standing on the dominant, as neighboring chords). I would argue that by recognizing the cadential arrival to occur earlier at measure 20 (approached by an unabashed half-cadential progression), we are able to identify two different senses of closure here: the moment of cadential closure at measure 20, which marks the end of the ongoing thematic processes of the transition's first part, and the moment of rhythmic/textural closure at measure 25, which marks a potential medial caesura. Moreover, the presence of a distinct postcadential standing on the dominant (with its own internal formal organization) emerges clearly from this analysis, whereas that distinction becomes obscured if the moments of cadential arrival and medial caesura are conflated.[129]

Example 14a, which shows the first-movement main theme of Haydn's Symphony No. 100 in G ("Military"), also illustrates how locating cadences on the basis of a criterion of rhythmic stopping can obscure the distinction between cadential and postcadential functions. At measure 31, so clear a break in rhythm and texture occurs that we might be led, as is Joel Lester in his introductory harmony text, to recognize there a half cadence, one that would mark the end of the theme's first part.[130] But similar to the case of the Beethoven quartet just discussed, such an identification would be problematic due to the lack of harmonic progression from measure 30 into the downbeat of measure 31. As my analysis of Example 14a shows, dominant harmony appears first at measure 29 and is prolonged for three measures. If a half cadence is to be identified anywhere, it is better seen to come on the downbeat of measure 29, with the following measures understood as postcadential in function. But even

128. Ibid., 141; GP = general pause. Darcy and Hepokoski go on to explain that whereas this home-key medial caesura is initially "proposed," it is eventually "declined," such that the following music continues the "transitional zone," arriving finally at "a III:HC (first-level default) MC at m. 33."

129. It should be noted that Darcy and Hepokoski suggest at times that cadential arrival and medial caesura are not necessarily connected. For example, they discuss how a medial caesura can follow the attainment of a "structural dominant." "Once the structural dominant has been sounded, it may be rhetorically emphasized through energetic reiterations of the half cadence. The music goes through the cadence several times . . . in this way helping to produce the characteristic rhetorical drive toward the MC [medial caesura] proper" (ibid., 124). Here, then, they strongly imply that the actual half cadence occurs with the initial appearance of the structural dominant and that the subsequent repetitions of the cadence belong to a postcadential passage culminating in the medial caesura, where the rhythmic activity stops.

130. Lester, *Harmony* 1:52. The motivation for Lester's analysis of a cadence at measure 31 clearly owes much to his definition of a true cadence, which, as discussed above, emphasizes the need for "a break in rhythmic continuity" at the end of a phrase (see n. 120 above).

more than with the Beethoven quartet, the issue of where to identify the cadence in the Haydn theme is central to an assessment of its overall formal organization. For another motivating factor in finding a cadence at measure 31 is the tradition of identifying cadence in the final measure of an eight-measure thematic unit. And considering that the subsequent unit (mm. 32–39) also lasts eight measures and closes in its final measure with a perfect authentic cadence, we could easily be inclined to recognize a large period form (antecedent + consequent), which projects a normative 8 + 8 grouping structure.

The formal and cadential organization of this theme is not, however, so neatly symmetrical. Indeed, attempting to analyze the form of the opening eight measures reveals a number of complexities: the initial two-measure basic idea (mm. 24–25) is followed immediately by fragmentation into one-measure units, in the sense of a continuation, and further fragmentation into half-measure units appears in measure 28. It would be possible, in fact, to reconstruct a more conventional eight-measure sentence (see Ex. 14b), such that measure 26 of the original begins a repetition of the basic idea, which then leads into a regular continuation using the remaining materials of the theme (though somewhat altered harmonically).[131] The antecedent of the actual theme could thus be seen as a compressed sentence, whose six measures are then extended postcadentially to fill out a more normative eight measures.[132] The large consequent repeats the antecedent until measure 36, at which point the one-measure fragments are further extended until the cadential idea of measures 38–39. Both units thus begin with a compression and close with an extension. But in the former, the extension is postcadential; in the latter, it is pre-cadential (as part of the continuation function).[133] To be sure, it would be easy enough to recognize the situation here as merely another example of Haydn's quirkiness, such asymmetries (even within broader symmetries) being standard fare of his compositional practice. But a further examination reveals that these various formal manipulations mark measure 28 for special attention, first by allowing it to occur "too early" in the antecedent

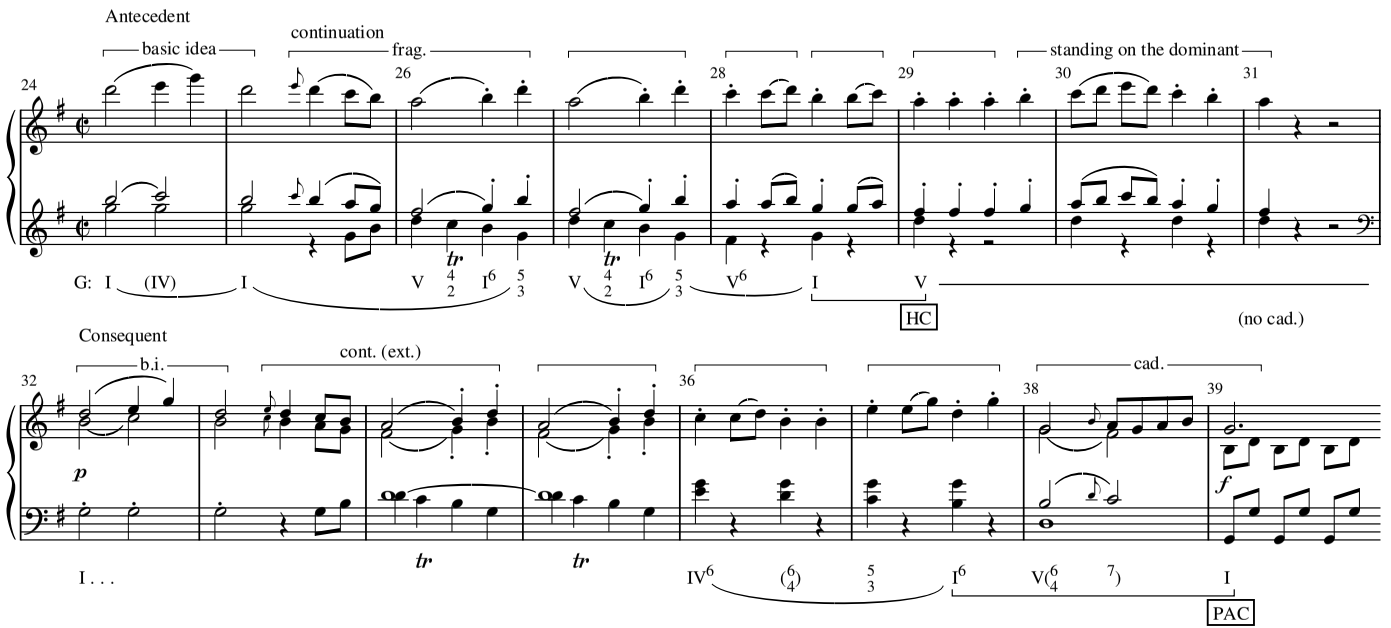
131. This reconstructed version also helps clarify what may seem to be an anomaly in my analysis of Haydn's actual theme (Ex. 14a). Although the "basic idea" and "fragment" each literally embrace three half-note beats, one can be perceived as longer than the other from a formal perspective, because the basic idea contains two metrical downbeats, whereas the fragment contains just one downbeat. It is as though the initial basic idea lacks the upbeat figure that is given to the fragment. In the reconstructed version, the repeated basic idea includes the upbeat figure but also contains a second metrical downbeat.

132. See Caplin, *Classical Form,* 199, for a discussion of similar nonconventional main themes in sonata expositions.

133. An alternative analysis would take the large-scale consequent as the model and identify there a regular eight-measure hybrid type: compound basic idea (mm. 32–35) plus continuation (mm. 36–39) (see ibid., 61). The antecedent would then be seen to begin with the same compound basic idea, but have a drastically reduced continuation (mm. 28–29). I find this somewhat simpler interpretation less satisfactory, since in a real-time listening experience, we hear the antecedent prior to the consequent. I thus prefer the more intricate reading given in the text.

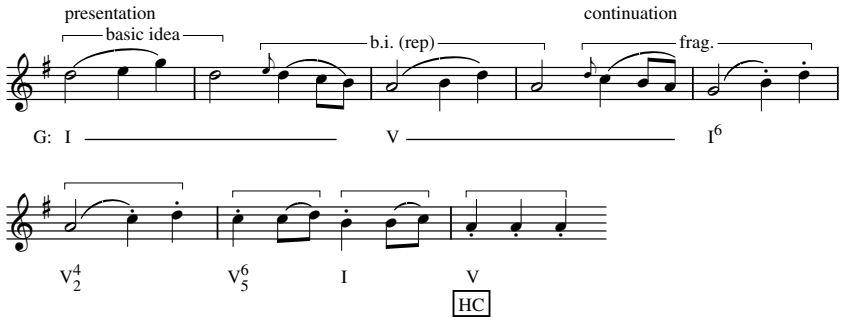
Example 14 Haydn, Symphony No. 100 in G ("Military"), first movement

(a) Mm. 24–39



Example 14 continued

(b) Reconstruction of mm. 24–31



of the main theme, and then by eliminating it in the consequent (in that measure 36 continues the one-measure fragmentation instead of bringing the new half-measure fragments). Being thus marked, measure 28 (both alone and in its relation to measure 36) becomes the source of powerful motivic and formal developments that occur throughout the movement.[134]

Cadence as Punctuation

Related to the association of cadence with rhythmic break is the notion that cadence represents a kind of musical "punctuation." As mentioned earlier, the eighteenth-century emphasis on linguistic analogies in describing and explaining strictly musical phenomena led theorists from that time to view various musical phrases or themes as ending with differing degrees of punctuation, usually called "resting points," just like the phrases and sentences of written language.[135] The persistence of this idea is revealed in Blombach's tabulations, with "language, punctuation" ranked only slightly lower than "rest, pause" (Table 1). Recent manifestations occur frequently in the writings of Ratner and his school, in Darcy and Hepokoski's characterization of the medial caesura as a "punctuation break," and even more pervasively in Berger's theory of "punctuation form."[136]

The analogy of cadence and punctuation, however, is debatable on a number of grounds. In written language, punctuation marks are used as an aid to reading and as a kind of analysis of the grammatical structure of the individual

134. Limitations of space prohibit a detailed examination, but see measures 79 and 86, as well as measures 95 and 103.

135. Johann Philipp Kirnberger, *The Art of Strict Musical Composition,* ed. David Beach, trans. David Beach and Jurgen Thym (New Haven, Conn.: Yale University Press, 1982), 403–6; and Koch, *Introductory Essay,* 1–3.

136. Berger, "Punctuation Form," 239–59.

sentence. As a guide to reading aloud (or in the imagination), punctuation can help render the syntax more obvious by functioning as indications for rests or pauses of various lengths. And in cases of grammatical ambiguity, punctuation marks can help indicate the intended syntax of the author. But punctuation is not a necessary requirement of written language, as witnessed by ancient texts, which contained no such signs. And, of course, punctuation per se does not exist in spoken language, though a sentence may be uttered in a way that suggests a particular punctuation in written form.[137] In short, punctuation may be a visual sign of syntax but is not a real source of syntax. A phrase or sentence achieves a degree of syntactical closure not by ending with any given punctuation mark, but by word meanings, inflections, and ordering. Cadence, too, is an element of syntax, more specifically, an element that generates formal closure at specific levels of musical organization. Characterizing cadence as a type of musical punctuation is thus clearly problematic. Moreover, the relationship of cadence to punctuation has the potential of confusing cause with effect: creating a musical pause does not in itself give rise to cadence, but a given cadence may manifest itself in such a way that it creates a punctuating effect. In other cases, a genuine cadence may create no sense of punctuation, but that fact, in itself, does not diminish the syntactical function of the cadence.

To illustrate some consequences of the cadence-punctuation relationship, let us consider Example 15, which opens the slow movement of Beethoven's Piano Sonata in E♭, Op. 7. In discussing a "rearrangement of the normal functions" of rhetorical discourse (opening, continuation, and completion), Leonard Ratner offers the following account:

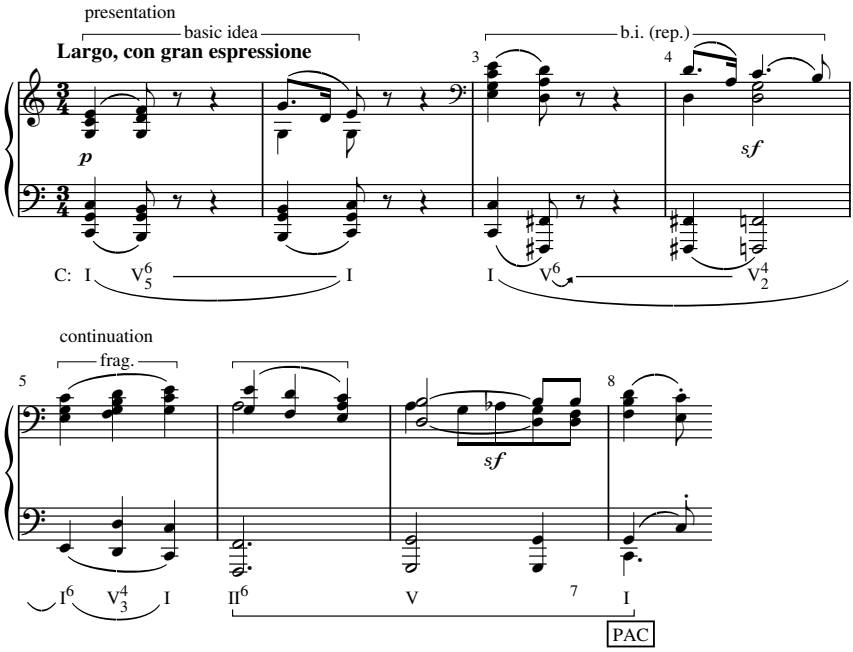
> Each pause in mm. 1–3 . . . is a clear and emphatic articulation. Ordinarily, a half cadence would appear at m. 4 but the preceding pauses would reduce its punctuating effect. Hence, while m. 4 is actually a half cadence, the dissonance in the melody, the weak position of the bass, and the sustained tones in all voices disguise the effect of punctuation. Measure 4, presumably the end of phrase I, introduces the legato style of the latter half of the period, building to a broad authentic cadence in m. 8. The fragmentary beginning, three measures long, built from terse cadential gestures, is answered by a broadly scaled line—five measures long. Punctuation is *overstated* in the beginning and *understated* at the half cadence—a rearrangement of normal cadential functions.[138]

These remarks raise a number of questions. Does the punctuating effect of the pauses in measures 1–3 have form-functional consequences? Are the gestures in those measures truly cadential? Are the criteria for half cadence satisfied in measure 4? On this last question, the possibility for a real half-cadential pro-

137. The absurd result of literally speaking punctuation marks is masterfully realized in a famous comedy sketch by Victor Borge, who invents actual sounds for the various marks and interpolates them into spoken texts ("Phonetic Punctuation," *Caught in the Act,* Columbia Records CL 646).

138. Ratner, *Classic Music,* 39.

Example 15 Beethoven, Piano Sonata in E♭, Op. 7, second movement, mm. 1–8



gression at measure 4 is suggested by the pre-dominant $V^6/V[\frac{4}{2}]$, but the subsequent addition of a seventh and inversion of the harmony subverts a necessary condition for a true half cadence, namely, that a cadential dominant must appear exclusively in root position. But even if a root-position dominant triad had appeared on the second beat of measure 4, there would be contextual reasons for doubting a genuine half cadence at this point. Inasmuch as measures 1–2 contain the basic idea of the theme, measures 3–4 repeat that idea (though with a somewhat inverted contour). The resulting phrase is a presentation, a formal function that creates an intensified sense of initiation. As discussed earlier, presentation phrases, in principle, do not engender cadential closure. Thus I would argue that for both harmonic and contextual reasons, measure 4 brings no cadential articulation. Moreover, it is questionable whether the opening three measures feature "cadential gestures," since their underlying harmonic support (especially given the inverted dominant) has no cadential implication. To be sure, the pauses create a punctuating effect, but the stopping of musical motion in these measures is not associated with formal ending: indeed, the sense of hesitancy projected by the pauses intensifies a feeling of opening, which, along with the repeated basic idea of the presentation, creates a strong sense for functional continuation and eventual closure

(mm. 5–8).[139] We see here how a commitment to notions of musical punctuation as an essential component of cadence can lead to problematic conclusions about a presumed reordering of formal functions.[140]

Cadential Strength; Syntax versus Rhetoric

Pervasive in the theoretical literature is the idea that cadences can project varying degrees of strength. We have already encountered suggestions of this kind when Ratner, Green, and Berger see rhythmic continuity as an agent of cadential weakening,[141] or when Darcy and Hepokoski, Ratner, Agawu, and Berger understand a postcadential closing section as strengthening a prior cadential arrival.[142] We have also seen that cadences are sometimes considered more or less weighty if the harmonies preceding the final tonic are lengthened or contracted.[143] Other criteria invoked by theorists include the metrical placement of the final tonic (the infamous "masculine" versus "feminine" cadence),[144] differing degrees of textural completeness,[145] rhythmic "noncongruence" (between melody and bass),[146] dynamic intensity,[147] and the presence or absence of a dissonant seventh in the penultimate dominant.[148] At times, what is described as cadential weakening is better understood as noncadential, such as when Berger sees cadential weakening occurring if the third of the final tonic is placed in the bass, though he acknowledges that "situations of this kind are invariably on the borderline between the cadence and noncadence."[149]

How are we to evaluate the wide range of claims made for varying modes of cadential strength and weakness? To sort through this issue, it is helpful to

139. The idea that rhythmic discontinuity is associated with formal initiation may seem counterintuitive, for we might, at first, assume such gestures of hesitancy to be more appropriately introductory in nature. Yet the main themes of many classical movements feature frequent starts and stops, and it is often the role of the transition section (a middle-ground medial function) to get the movement truly under way (see Caplin, *Classical Form,* 197).

140. See ibid., ex. 6.4 (p. 76) for an analysis of this theme as a regular sentence type.

141. See nn. 123, 124, and 125 above. See also Ratner's discussion of how "a cadence in C appears but only in the *middle* of a phrase, so that the punctuating effect of this cadence is reduced to that of a comma instead of a period; melodic and harmonic punctuation here do not coincide, and the effect is to maintain the sense of flow" (*Classic Music,* 428).

142. See nn. 114, 115, 116, and 119 above. Meyer, on the contrary, sees the immediate repetition of a half cadence (in the sense of an echo) as weakening the point of relative stability and arrival (*Explaining Music,* 257).

143. See n. 119 above. See also Green, *Form,* 9; and Lerdahl and Jackendoff, *Generative Theory,* 192.

144. Cone, *Musical Form,* 43–45; Green, *Form,* 9; and Berger, "Punctuation Form," 244.

145. Webster, *Haydn's "Farewell" Symphony,* 37.

146. Ibid., 60; a criterion of rhythmic noncongruence is also cited in Green, *Form,* 9.

147. Webster, *Haydn's "Farewell" Symphony,* 147.

148. Green, *Form,* 8.

149. Berger, "Punctuation Form," 246–47.

distinguish between cadential *syntax* and *rhetoric* (along the lines suggested by Agawu, though somewhat differently formulated).[150] In its syntactical aspect, a given cadence represents a particular cadential *type* on the basis of its harmonic-melodic content exclusively. In its rhetorical aspect, that cadence has a unique compositional realization entailing the entire range of musical parameters, including rhythm, meter, texture, intensity, and instrumentation. Thus a particular half cadence may be realized as a metrically accented orchestral tutti within a *forte* dynamic, whereas another half cadence may take the form of a metrically weak, thinly textured event within a *piano* dynamic. From a syntactical point of view, the two cadences are identical; each is representative of the type "half cadence." From a rhetorical perspective, these cadences have entirely different realizations and thus project opposing expressive effects.

When characterizing cadential strength and weakness, it is important that we distinguish between the syntactical and rhetorical aspects. For in the classical style, at least, differences in syntactical strength manifestly relate to the expression of formal functionality, whereas it is questionable whether rhetorical differences alone have such a form-defining potential.[151] Syntactically, there are only three distinct degrees of cadential strength and weakness, and these are associated with the three fundamental cadence types of the classical style: half cadence, imperfect authentic cadence, and perfect authentic cadence (ordered from weaker to stronger).[152] As agents of formal definition, any cadence representative of a given type is equally strong or weak in relation to any cadence of another type. Thus any particular realization of a perfect authentic cadence is syntactically stronger than any realization of a half cadence (within some given formal context, such as the antecedent and consequent phrases of the period form). Rhetorically, on the contrary, the multitudinous degrees of cadential strength are indefinite, even to the point of varying from one performance to another. Rhetorical differentiation of cadential strength does not seem to be directly implicated in the definition of classical formal functions (at least, according to the theory developed in my *Classical Form*). Rhetorical strength may, of course, be congruent with syntactical strength. Typically enough, the half cadence closing the antecedent phrase of a period is rhetorically weaker than the authentic cadence closing the consequent. But noncongruence of syntax and rhetoric is regularly found as well. The perfect authentic cadence closing the main theme of a sonata exposition is often rhetorically weak compared to the half cadence closing the subsequent transition, yet, from a form-functional perspective, the former cadence is syntactically stronger than the latter. Similarly, a subordinate-theme group will typically

150. See n. 116 above. Whereas Agawu relates the rhetorical components of cadence primarily to postcadential areas, I will focus on genuinely cadential functions.

151. Preliminary research suggests that some romantic composers employ rhetorical differentiation of cadence types as a means of formal structuring; this topic needs considerably greater study before more definitive conclusions can be reached.

152. See Caplin, *Classical Form*, 53.

consist of multiple themes, each ending with a perfect authentic cadence.[153] Syntactically, all of these cadences are of equal strength—they fully satisfy the requirements for thematic closure—yet they often have decidedly different rhetorical expressions.

In light of the distinctions just drawn, we can now see that many, if not most, of the criteria for cadential strength regularly cited in the theoretical literature relate more to the rhetorical aspect than to the syntactical one. For that reason, we should strive in analytical practice not to confuse those factors responsible for one or the other aspect. If we identify varying degrees of cadential strength and weakness that are rhetorical in nature, then we should be careful not to allow these distinctions to distort our formal readings, which should be based essentially on syntactical strength. Beyond these considerations, we should take care not to assume that if a musical event is rendered rhetorically strong, it should be taken as cadential primarily on that account.

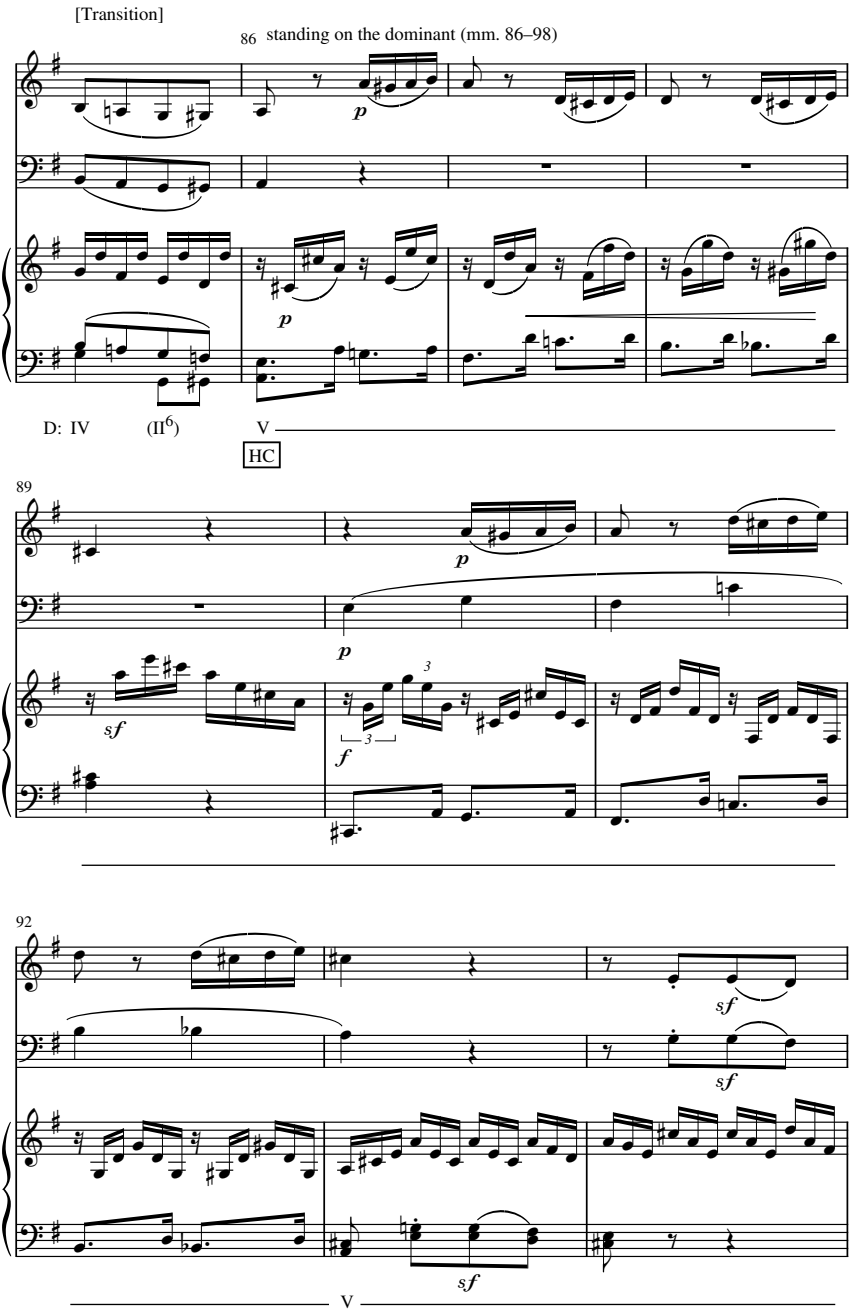
To illustrate these points, let us consider a passage that arises in the opening movement of Beethoven's String Trio in G, Op. 1, no. 2 (see Ex. 16). At measure 86, the exposition's transition arrives, conventionally enough, at a half cadence in the new key of D major. There follows an extensive standing on the dominant, which leads to a powerful resolution of the prevailing V^7 to a root-position tonic at measure 99. Immediately thereafter, the first of two subordinate themes begins. Considering the rhetorical strength accorded the harmonic resolution to tonic along with its location at the final moment of the transition, it might be tempting to recognize the presence of an authentic cadence. Indeed, such a view is offered by Darcy and Hepokoski, who want to identify there a "deformation" of a standard medial caesura:

> A clear approach is made to what we expect to be a normative triple hammer-blow V:HC MC [read: dominant-key half cadence, medial caesura] at mm. 97–98. At this juncture the violin and cello drop out for the remainder of the measure, while the right hand of the piano part traces out a melodic fill from g^2 down to d^1. More important, the usual caesura-fill energy-loss is absent here. On the contrary, the fill, continuing in aggressive triplet-sixteenth-notes, insists on retaining the full measure of gained energy and plunges precipitously to the new D-major tonic, now reinforced by the strings (m. 99), before S [the "secondary-theme zone"] itself emerges, *piano*, at the upbeat to m. 100. The composer has wrenched a normal MC, V:HC (first-level default), into a strong V:PAC (third-level default) by brute force.[154]

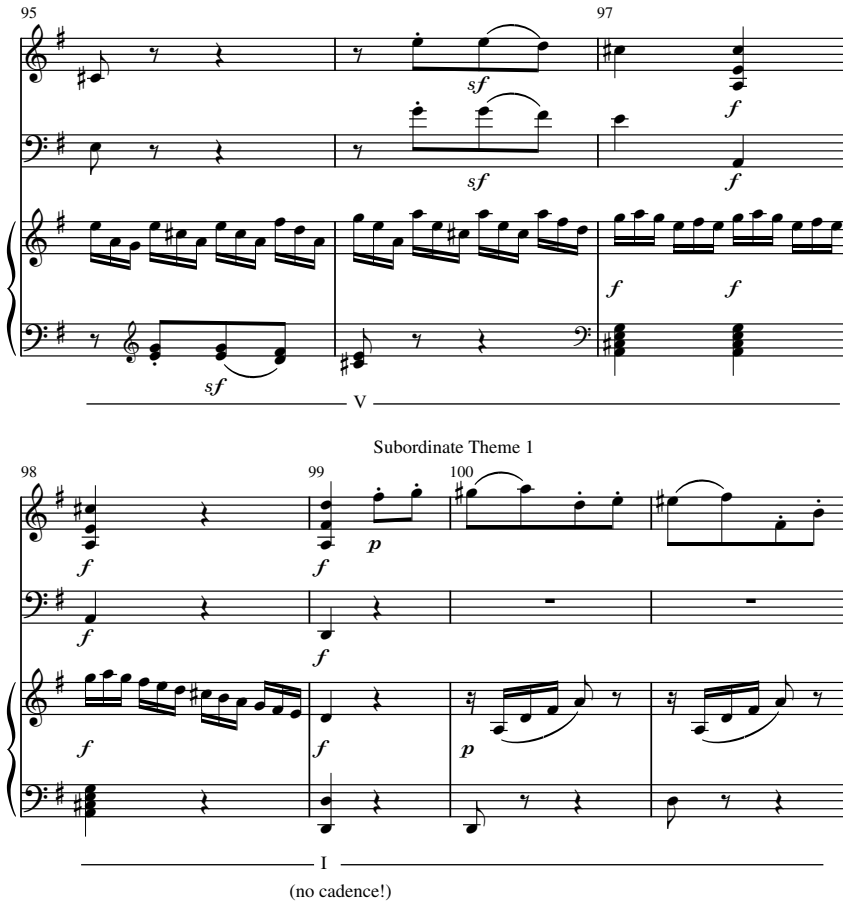
As indicated by the set of images that they use in describing this musical passage—"aggressive triplet-sixteenth-notes," "gained energy," "plunges," "wrenched," and "brute force"—Darcy and Hepokoski are clearly responding to the many rhetorical devices that effect a powerful resolution of dominant to tonic at measure 99. And they are surely correct in pointing out that the music

153. Ibid., 121.
154. Darcy and Hepokoski, "Medial Caesura," 129.

Example 16 Beethoven, Piano Trio in G, Op. 1, no. 2, first movement, mm. 85–101



Example 16 continued



expresses the sense of authentic cadence at this point. But we might further reflect on the possibility that this is more a case of cadential *content* than actual cadential *function*. For in order to hear a syntactical perfect authentic cadence at measure 99, the preceding dominant must be understood as the penultimate harmony of an authentic cadential progression. But earlier, at measure 87, the dominant unambiguously appears as the ultimate harmony of a half-cadential progression, and throughout the subsequent standing on the dominant, there is no reason to believe that the formal context is anything but postcadential. So when the dominant resolves to tonic at measure 99, it would require a massive retrospective reinterpretation to hear the entire dominant prolongation as cadential in function. To be sure, the resolution to this tonic is rhetorically powerful, but the "brute force" applied to this moment does not

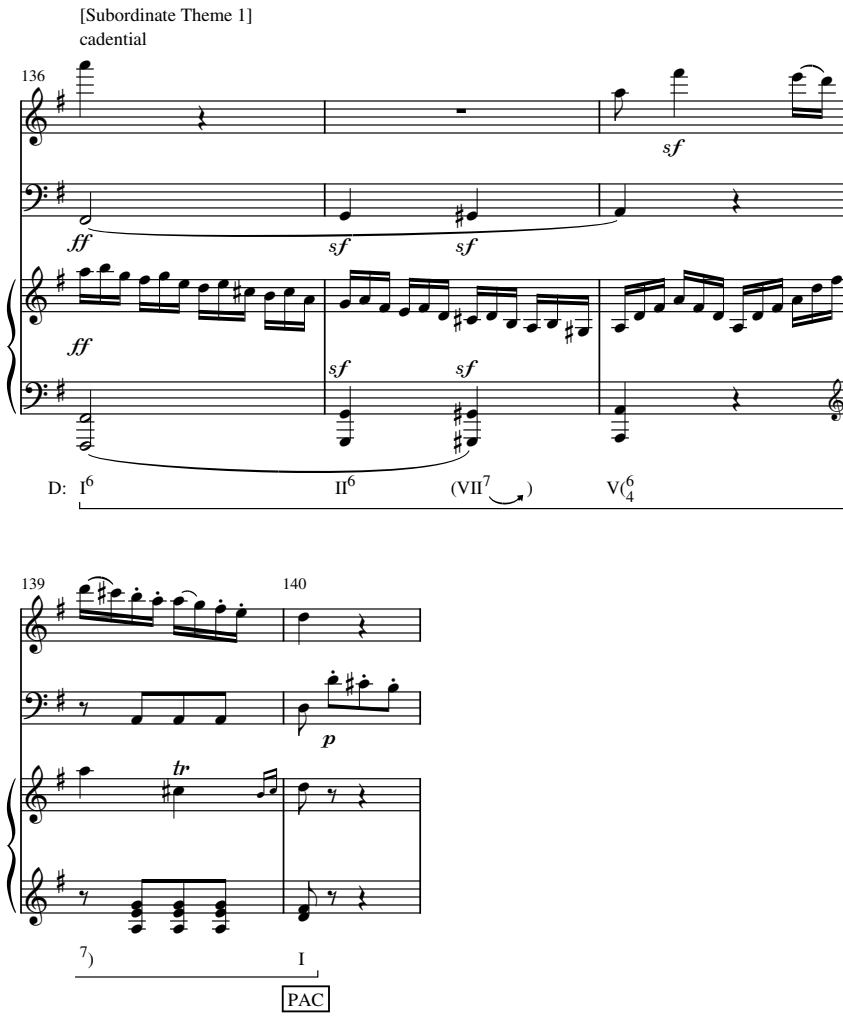
thereby destroy the syntactical expression of an earlier half cadence and replace that with an authentic cadence. There is no doubt something unusual about the downbeat of measure 99. Normally, a standing on the dominant progresses to a tonic that initiates a new formal process. But instead, the first complete measure of the next unit, the subordinate theme, occurs at measure 100, as accurately noted by Darcy and Hepokoski. As a result, the tonic of the downbeat of measure 99 is grouped with the transition as its final event. Yet just because this tonic is the last member of the transition does not mean that it represents cadential closure; rather, for the reasons just discussed, this tonic is best understood to belong to the postcadential function that has been in force since the half cadence at measure 87.[155]

Inasmuch as the precipitous plunge of aggressive sixteenth-note triplets in measure 98 suggests a cadence at measure 99, but actually fails to create one, it is interesting to observe what happens the next time Beethoven brings back a similar plunge. Later in the first subordinate theme, a flowing sixteenth-note piano line gives way to a sixteenth-note triplet descent, which clearly references the earlier descent at measure 98, though now supported by a prominent I^6. Such a harmonic arrival conventionally signals the onset of the cadential function that we expect to end the subordinate theme. But, as typically occurs in such themes, the function fails to be fully realized when the subsequent cadential six-four yields to V^4_2, forcing a resolution back to another I^6. At this point (see Ex. 17, m. 136), the piano repeats the precipitous plunge to initiate again the cadential function, one that fully satisfies all requirements for cadential closure four measures later. It is as though Beethoven, having projected rhetorically the "idealization" of authentic cadence earlier at measure 99, now uses a similar (though even more intensified) gesture to actualize a syntactical authentic cadence at measure 140. Here, both rhetorical and syntactical forces align themselves at a moment of unquestionable cadential closure.

Finally, it should be noted that the cadence at measure 140 is not the final perfect authentic cadence of the exposition. Following that cadence, a second subordinate theme begins, which closes quickly with a rhetorically weak cadence at measure 147. The theme is immediately repeated and then considerably extended, leading eventually to another cadence (with expanded pre-dominant harmony) at measure 167. This final cadence of the exposition is rhetorically stronger than the preceding one at measure 147, yet it remains weaker than the one ending the first subordinate theme at measure 140. Whereas all three authentic cadences of the subordinate-theme group are rhetorically differentiated as to strength of expression, they are equally

155. Though unusual, the resolution of a standing on the dominant to tonic harmony prior to the onset of a subsequent formal function is by no means unprecedented: a similar situation arises in the slow movement of Mozart's Symphony No. 39 in E♭, K. 543, where a standing on the dominant that begins the subordinate theme resolves to I^6 (in the sense of an extension) prior to the beginning of the subsequent continuation phrase (see Caplin, *Classical Form,* 115, ex. 8.14, mm. 44–46).

Example 17 Beethoven, Piano Trio in G, Op. 1, no. 2, first movement, mm. 136–40



weighted syntactically: each provides the necessary and sufficient means of bringing their individual subordinate themes to a formal close.

A Plea for Terminological Precision

Within the history of music theory, it is easy to identify a kind of conceptual inertia that allows a theoretical idea, once introduced and generally accepted, to hold sway for many decades, even centuries. Indeed, most of the common

terms that we use today were introduced by theorists in the eighteenth century (or even earlier). Yet despite the tenacity with which musicians cling to certain ideas, we can recognize significant shifts in usage and meaning, and eventually these changes in concept penetrate our pedagogical habits as well. Throughout the nineteenth century and well into the twentieth, for example, it was entirely commonplace to speak of every change of tonal focus, no matter how local, as a "change of key" or "modulation." But once Schenker's notion of tonicization (*Tonikalisierung*) became accepted as a norm, the term *modulation* practically vanished from some theorists' vocabulary, and, for many others, was used only with caution (and perhaps some unease). Something similar can be seen in the case of the cadential six-four chord, which, in most North American practice, was consistently identified as an inverted tonic sonority, but which is now, for the most part, understood as a dominant-functioning harmony (again, largely under the influence of Schenkerian practice, though that idea also originates in the eighteenth century).

If we turn from issues of pitch organization to concepts and terminology associated with musical form, particularly phrase structure, fewer conceptual shifts are easily recognized. Most musicians still speak of thematic organization in terms of period structure and continue to label highly diverse types of phrases as "antecedent" and "consequent," though the influence of Schoenberg's sentence type has gained momentum in the last decade or so. As for "cadence," the situation is particularly grim. In the present study, I have identified what I take to be problems and inconsistencies about cadence in the writings of eminent scholars of our time. The situation in the pedagogical trenches is considerably worse. I continue to encounter students who have been taught from an early age that every progression from V to I, no matter the inversion of the chords, is a cadence of some sort. (Sometimes a progression of any one harmony to any other is considered a cadence, a pedagogical practice that betrays the lingering influence of Rameau.)

I conclude this study by urging theorists and historians to reflect upon their theoretical discourse about cadence and to consider changing linguistic habits, based, of course, on a greater sensitivity to the conceptual issues at stake. It is time, for example, to stop calling every resolution of V^7 to VI a "deceptive cadence"; no longer should the V–I codetta that ends a piece be spoken of as its "final cadence"; and we should once and for all banish the "plagal cadence" from most theoretical writings on music of the eighteenth century. Allowing our usage to reflect a clearer understanding of cadence will have an enormously salutary effect not only in our written research and scholarly presentations, but in our everyday teaching, where it perhaps matters most.

To be sure, we might ask why it is necessary to circumscribe the notion of cadence in the ways I have proposed. Why not let it remain a looser, more flexible concept, so as better to embrace a multiplicity of phenomena? I would counter that whereas open-ended definitions may give the impression of inclusiveness, they can actually result in blurring distinctions that truly matter.

By limiting the concept of cadence, the intent is not to shut out our perceptions of varying phenomena, but rather to encourage us to be more precise about how phenomena that seem similar in some respects can actually be experienced as aesthetically different.

In particular, I am asking that we take seriously the idea of perceiving *closure* in a wide variety of ways and that we let our theoretical terminology reflect this diversity. For to assume that all closure in music is cadential risks losing the ability to make distinctions that have genuine formal consequences. For example, the classification of conventional theme types that I have proposed in *Classical Form* depends in large measure on recognizing that some phrases truly close with a cadence (with its specific harmonic and melodic requirements) whereas other phrases close noncadentially (usually because of supporting harmonies that are prolongational rather than cadential). As for higher levels of formal organization (say, an entire sonata-form exposition), the experiential situation is especially complex, for the powerful effect that a rhetorically emphasized cadential arrival can make as it fully confirms the closure of a single thematic unit (a subordinate theme) may give the impression that the arrival itself is essentially responsible for closing the larger section (the entire exposition). But as I argued earlier, it is experientially richer to view the mechanisms of closure for a large-scale section taking place within a time-span that is broader (and more heterogeneous in its internal organization) than the cadential function within a theme. To pin the cause of closure at all levels in a work's formal hierarchy on a single cadence diminishes the experience of multiply embedded processes of closure as they establish themselves in the course of a movement.

Beyond the issue of formal closure in general, I maintain that the other distinctions I have developed in connection with the concept of cadence have significant consequences for our experience of musical form. Discriminating between cadential content and cadential function permits us to deal in a sophisticated manner with how the "idealization" of cadence can be projected independently of the syntactical requirements for cadence. I have discussed cases where cadential content can appear in initiating formal contexts (Ex. 8) as well as in postcadential ones (Ex. 16), and I have considered the compositional ramifications of this play of content and function. Additionally, the distinction between cadential and postcadential functions is, I argue, a fundamental reality in our experience of musical temporality. At the heart of any formal analysis is the need to be precise about where themes genuinely end and to contrast the process of closure with those forces that work themselves out after closure has taken place. To confuse cadence with codetta, even where the latter may resemble the former in content, risks losing sight of where the major formal goals of a movement occur.[156] Finally, the distinction

156. Precise knowledge of that kind can be especially relevant to performers who want to make analytically informed decisions about where to project thematic goals and how to sustain,

between the syntactical and rhetorical aspects of cadential strength permits us to identify a multitude of nuanced manifestations of cadence as expressive devices without thereby distorting the more conventionalized processes of formal structuring, which depend upon a limited number of cadence types.

As I stated at the outset, I believe that the conceptual refinements of cadence that I have promoted throughout this study are more than merely semantic. Though I am obviously concerned with the terms we use to describe musical phenomena, I am even more concerned with the experiential distinctions we make while using our chosen terminology. And I emphasize again that the clarifications I propose for cadence gain much of their significance by being entirely integrated within a broader theory of musical form. In most of the examples that I discuss above, my views on cadential identification yield a new formal perspective for the passage at hand. Given this intimate relation of cadence to form, I am hopeful that as scholars continue to pursue research in musical form, the reorientation in conception and usage I have been advocating in this study may eventually come about. At least a greater involvement in the complexities of formal theory should stimulate further debate among theorists and historians about the nature of cadence, not only the classical cadence of Haydn, Mozart, and Beethoven, but cadence as manifest in earlier and later repertories as well.

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increase, or decrease the energy following those goals. For insights on how issues of cadence and form can be useful to performers, see Janet Schmalfeldt, "On Performance, Analysis, and Schubert," *Per musi: Revista de performance musical* 5–6 (2002): 38–54.

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Abstract

The article examines notions traditionally attached to the concept of cadence in general, retains those features finding genuine expression in "the classical style" (as defined by the instrumental works of Haydn, Mozart, and Beethoven), and investigates problematic ideas that have the potential of producing theoretical and analytical confusion. It is argued that cadence effects formal *closure* only at middle-ground levels of structure; a cadential *progression* is highly constrained in its harmonic content; cadential *function* precedes the moment of cadential *arrival,* whereas the music following this arrival may be *postcadential* in function; cadential *content* must be distinguished from cadential function; cadence represents a formal *end*, not a rhythmic or textural *stop;* and cadential *strength* can be distinguished in its syntactical and rhetorical aspects. An analysis of selected musical passages demonstrates that an accurate identification of cadence has a major impact on the interpretation of musical form and phrase structure.