FIVE

The G-minor *Presto*

The *Presto*'s continuous fast notes and two pairs of repeat signs recall nineteenth-century perpetual motions and binary forms. Indeed, Johannes Brahms (1833–97) turned this very movement into two compositions with precisely those features: piano etudes for developing facility.[1] In one etude he kept Bach's solo in the right hand and wrote continuous sixteenths against it in the left hand, and in the other he kept Bach's solo in the left hand and wrote continuous sixteenths against it in the right hand.

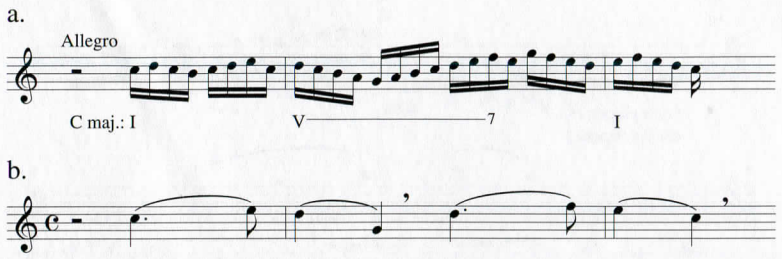
But similarities between this movement and later perpetual motions and binary forms are deceptive. The dynamic of Bach's rhythms and forms is fundamentally at odds with later apparently similar compositions. This chapter contrasts Bach's *Presto* (and some other continuous-rhythm movements from the solo-violin works) with nineteenth-century perpetual motions and contrasts the *Presto*'s two-section outline with later binary forms. Differentiating Bach's practices from those of later eras allows his own inherent structures to emerge.

The *Presto* and Perpetual Motions

Paganini's Moto perpetuo *and Its Metric Hierarchy*

The *Moto perpetuo* by Niccolò Paganini (1782–1840), whose opening appears in Example 5-1a, is the nineteenth-century epitome of its genre. The melodic fluidity encourages violinists (and even flutists—witness James Galway's famous recording) to aim for a thrilling sense of speed. This fluidity is not merely a factor of the actual speed—it arises even more from the rhythms inherent in the melodic line. In the first four beats of the melody, for instance, a chord tone appears on every strong, odd-numbered sixteenth (the first and third sixteenths of each beat) and a nonharmonic tone on almost every weak, even-numbered sixteenth. Every nonharmonic tone is a neighbor or passing tone that connects to the preceding and following notes by step, so that no nonharmonic tone jumps out of the texture because of a prominent skip. In addition, chord tones, not nonharmonic tones, adorn the tops and bottoms of most significant melodic spans: E atop the opening tonic chord, D and G during the following dominant, and so forth. As a result, every prominent note is a chord tone as well as a tone on a relatively strong metric point.

Example 5-1. Paganini, *Moto perpetuo* (New York: International, n.d.): (a) mm. 1–3; (b) the underlying *bel canto* melody.



These melodic features contribute to the impression that the sixteenths are merely filler in a leisurely *bel canto* melody with clearly marked phrase subdivisions, as Example 5-1b illustrates. No significant level of rhythmic activity exists between this melody and the running sixteenths that fill in the melodic gaps; that is, one level of essential rhythmic activity (the actual notes of the piece) features fluid sixteenth notes, and another essential level of rhythmic activity delineates the underlying melody depicted in Example 5-1b. No intermediate levels receive any strong articulation: nothing in the texture focuses regular attention on the eighth-note level, and even quarter-note activity only projects when the underlying melody notes move at that pace. Figure 5-1 graphically depicts the levels of the metric hierarchy. With such a metric hierarchy, no matter how fast the sixteenths go (and the faster they go, the more thrilling the ride), the *Moto perpetuo*

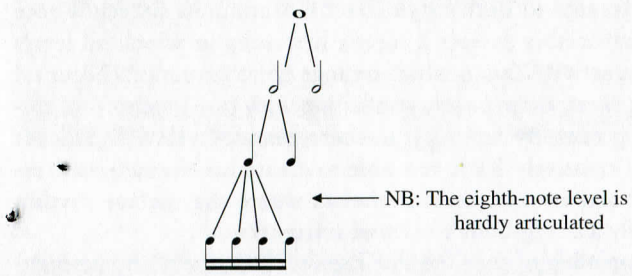
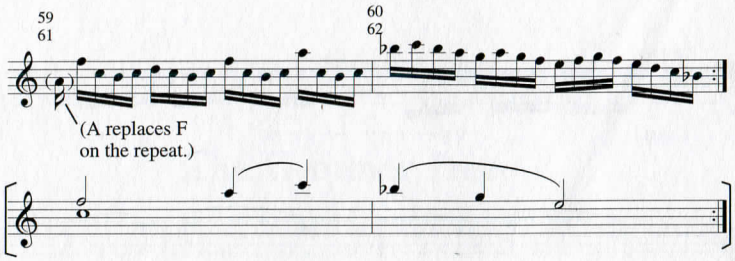


Figure 5-1. The metric hierarchy in Paganini's *Moto perpetuo*.

Example 5-2. Paganini, *Moto perpetuo,* mm. 59–62.



unfolds with the Italianate grace and poise of a lyrical aria by one of Paganini's operatic contemporaries like Gaetano Donizetti (1797–1848) or Vincenzo Bellini (1801–35).

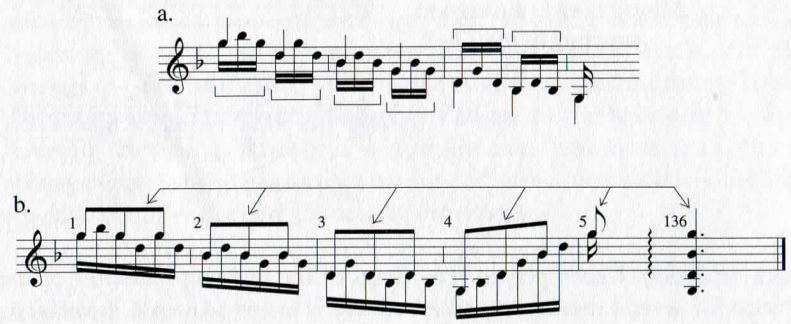
To be sure, Paganini does not maintain exactly this state of affairs throughout the piece. Already in m. 2 he skips out of the nonharmonic tone E at the end of the third beat and places a passing tone on the third sixteenth of the next beat (the same E). But even with these minor disruptions to the alternation of chord tones and nonharmonic tones, the main melodic notes are all on the beats. Even later in the *Moto perpetuo*, when a more *agitato* effect emerges, the same features predominate. In the passage from the development section in Example 5-2, where there are many more skips than at the opening, the main melodic notes are still entirely on the beat, and the figuration has the effect of reinforcing the disparity between the surface rhythm of rapid sixteenths and the essential melody activity in quarters and half notes. These metric and textural features of Paganini's *Moto perpetuo* characterize innumerable nineteenth-century rapid continuous-rhythm textures.

The Metric Hierarchy of Bach's Presto

The type of texture and metric hierarchy found in Paganini's *Moto perpetuo* is entirely foreign to Bach's style. Bach's continuous sixteenth-note textures almost invariably project a metric hierarchy in which all levels project significant activity and in which a range of accentuations occur on metrically weak points, often boldly conflicting with one another and creating metric ambiguities. By deploying these interacting levels of significant rhythmic activity creatively Bach was able to create his characteristic increase in overall activity even in movements where the surface rhythm seems to be merely a continuous stream of sixteenths.

Consider the opening of the G-minor *Presto*. Excitement and ambiguity abound even in the first three measures: Is the meter 3/8 or 6/16? Both

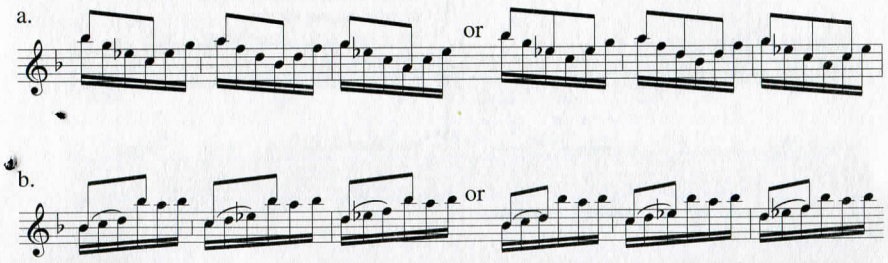
Example 5-3. J. S. Bach, Sonata in G Minor, for Violin Solo, *Presto*: (a) mm. 1–4 interpreted in 3/16; (b) mm. 1–4 interpreted in 3/8.



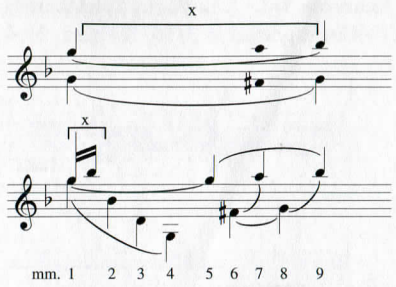
duple and triple patternings seem to be embedded in Bach's figuration. Each group of three notes replicates the opening three-note motive one stage lower in the downward arpeggiation of the tonic chord shown in Example 5-3a. At the same time, as Example 5-3b shows, alternate notes mark the eighth-note beats, yielding a measure-by-measure outline of the motto voicing of the G-minor tonic chord of the first movement—a voicing of the tonic chord that ends the *Presto*. Furthermore, this metric ambiguity emerges in other figurations throughout the *Presto*, such as those shown in Example 5-4.

Remarkably, neither metric patterning seems strong enough to overwhelm the other. No matter which way violinists think they are playing the passage, the other interpretation remains quite audible in their performance. I urge violinists to record themselves playing the passage conceptualizing it both ways and then listen immediately to their own performances and see how much residue of the other interpretation remains in

Example 5-4. Bach, Sonata in G Minor, *Presto*, later appearances of the 3/8 vs. 3/16 metric conflict: (a) mm. 9–11; (b) mm. 25–29.



Example 5-5. Bach, Sonata in G Minor, *Presto*, underlying structure in mm. 1–9.



each rendition. I have played recordings of the opening measures of the *Presto* for several musicians and asked which meter projected. Invariably, I received varying answers, confirming that the metric ambiguity here is so deeply embedded that some residue of it projects no matter how hard the violinist aims for a single vision.[2]

Even more strikingly, whichever metric interpretation a performer or listener desires for any of these passages, prominent notes conflict with it, beginning right in m. 1. The highest note in that measure, B♭, falls on a weak metric point in both the 3/8 and 6/16 interpretations. Yet that weak metric placement of the high B♭ is by no means a compositional miscalculation on Bach's part. The opening G–B♭ foreshadows the motion between the same two pitches that underlies the opening G-minor music stretching from m. 1 to m. 9, as shown by the "x" brackets in Example 5-5 (urging violinists to articulate that B♭ clearly no matter which meter they hear).

The 1+5 slurring that begins in m. 5 calls attention to a different sort of metric conflict: a syncopation that the skips would have projected even if the measure were unslurred.

All this purposeful metric complexity stands in sharp contrast to Paganini's *bel canto*. Bach's figuration creates the metric hierarchy shown in Figure 5-2. Instead of Paganini's fast surface flashily elaborating a much slower simple melody, Bach's metric hierarchy offers musical interest at every level: in the prominent sixteenths contesting the meter, in 3/8 versus 6/16, or in the alternation of different patterns in mm. 5–8.

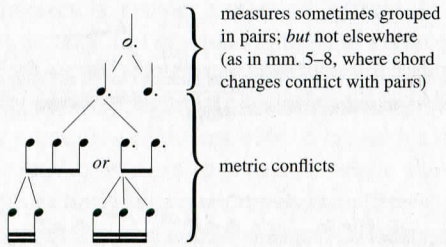


Figure 5-2. The metric hierarchy in Bach's *Presto*.

These ambiguities even affect interpretation of strong and weak measures. Consider mm. 4–8. Returning to the opening high G on the downbeat of m. 5 seems to begin a new unit of phrasing: an alternation in two-measure units of two patterns, implying a strong–weak alternation beginning in m. 5 that makes odd-numbered measures strong. But the changes of harmony occur instead on the even-numbered measures. Either the strong–weak patterning changes to adjust to the harmonic rhythm (creating, at least in retrospect, a three-measure unit in mm. 1–3) or a measure-level syncopation arises because of harmonic changes—the factor that is usually decisive in locating downbeats.[3]

An Obscure Metric Notation

To be sure, Bach supplements his 3/8 meter signature with a special barring: Every other bar line is just a short stroke, not a full bar line, as shown in Figure 5-3. Bach occasionally employed this notation elsewhere, as in the *Corrente* (written in 3/4) of the B-minor Solo-Violin Partita, the opening of which appears in Figure 5-4a. He also seems to have begun to write bar lines in the same manner in the *Presto Double* of that movement (which has the same meter signature as the *Corrente*). As Figure 5-2b shows, the second bar line of the *Double* seems to have been written twice, perhaps to make it a complete bar line—thereafter, all the bar lines are single strokes of the usual length. A puzzling instance of this notation occurs in Bach's A-minor Three-Part Invention. In the *Clavierbüchlein vor Wilhelm Friedemann Bach* Bach wrote short bar lines every other measure, whereas in his later autograph of all the inventions he wrote normal barring.[4]

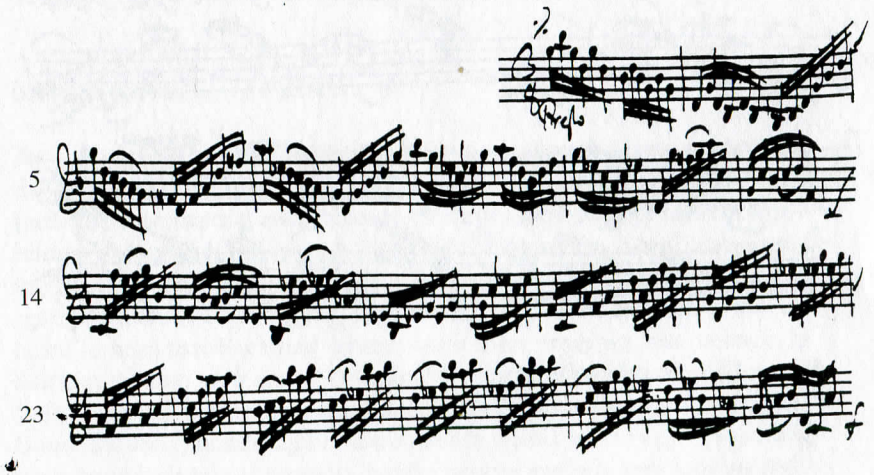


Figure 5-3. Bach, Sonata in G Minor, *Presto*, autograph score.

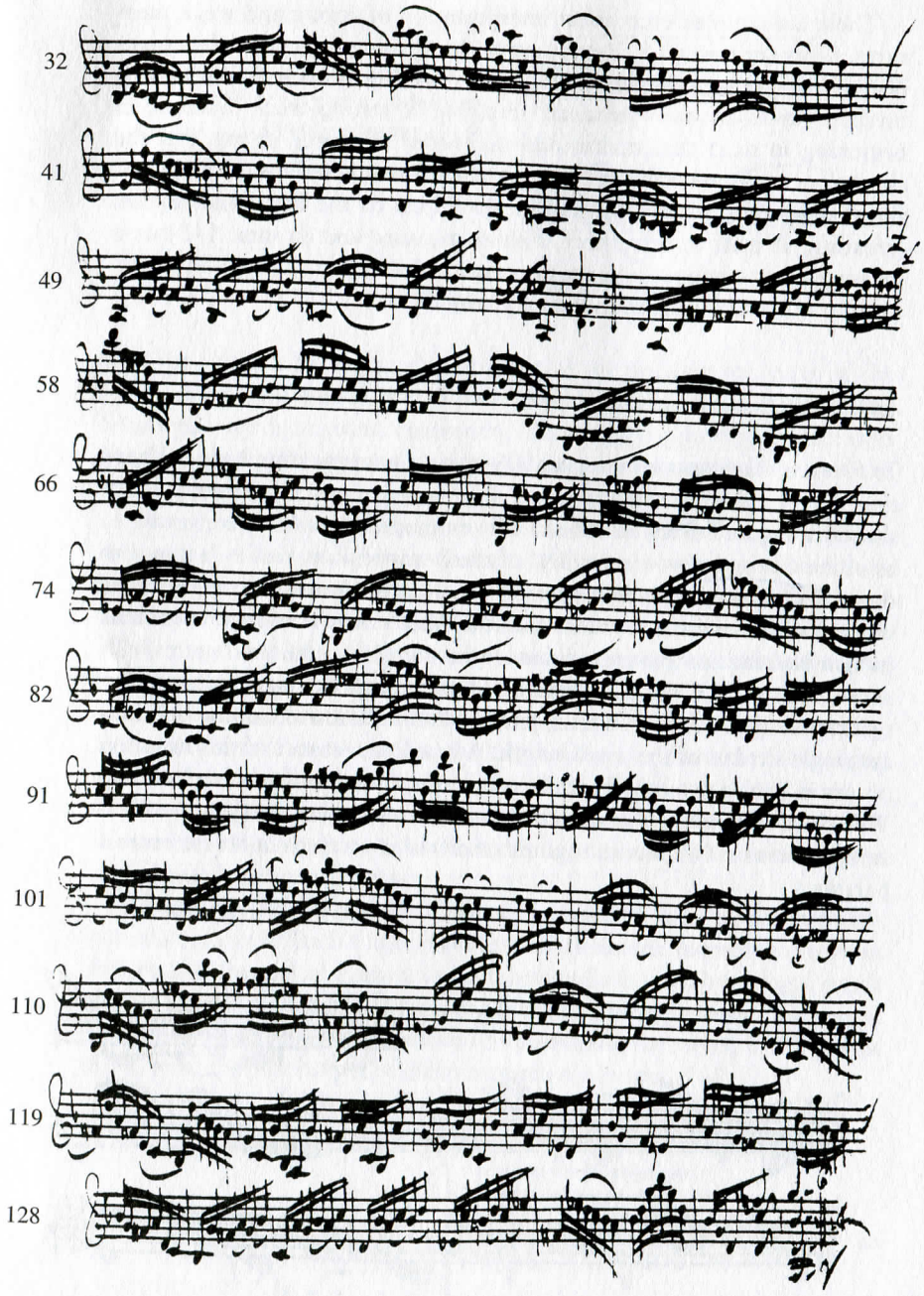


Figure 5-3. (*continued*)

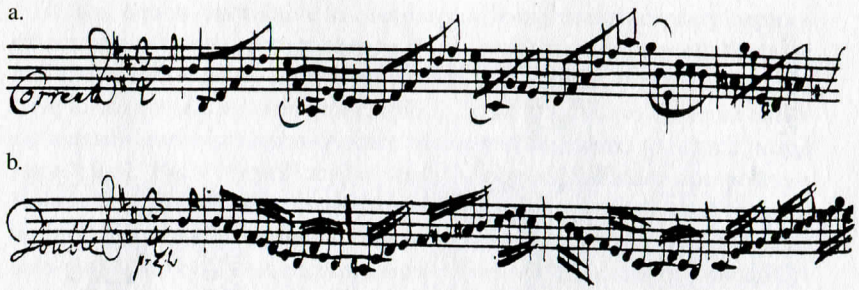


Figure 5-4. Bach, Partita in B Minor for Violin Solo, autograph score: (top) *Corrente*, mm. 1–7; (bottom) *Double* of the *Corrente*, mm. 1–4.

The significance of these short bar lines remains obscure. I know of no eighteenth-century discussion and am unaware of any modern discussion. The notation may have carried some implications for tempo, which could explain why Bach began to notate the *Double* of the *Corrente* in the B-minor Partita with these half bar lines and then corrected himself, perhaps after he realized that he had written *Presto* for the *Double* but not for the *Corrente*. But then why would he have written out the A-minor Invention once with these half bar lines and once without them? Perhaps the half bar lines are supposed to indicate strong and weak measures. If that is the case, however, many violinists disregard the notation. Many recordings of the *Presto* shift the strong–weak measure groupings during the course of the movement. Probably the most extreme recording I know in that respect is that by Nathan Milstein, who plays the cadential arrival of each half of the movement so strongly in a metrical sense—even though they are notated in midmeasure—that he then inserts an entire (weak) measure of silence before taking each repeat or continuing to the next section![5]

Baroque versus Later Metrics

The vibrant, continually changing interaction among the energized levels of the *Presto*'s metric hierarchy characterizes much high-Baroque music. But such rhythmic, metric, and phrasing situations were foreign to nineteenth-century styles. Charles Gounod (1818–93), for instance, heard in the opening prelude from Bach's *Well-Tempered* merely a rippling accompaniment against which to compose his "Ave Maria," shown in Example 5-6a. He failed to hear that Bach had written not a mere arpeggio, but an intricate Baroque pattern with several conflicting structures as shown in Example 5-6b (recalling multiple possibilities in the G-minor *Presto*'s figuration).[6] Gounod's slowly unfolding *bel canto* melody takes center stage, suppressing these complexities and turning Bach's Baroque prelude into a nineteenth-century texture stylistically quite similar to Paganini's *Moto perpetuo*.

Example 5-6. (a) Gounod, "Ave Maria," opening of melody; (b) Bach, Prelude in C Major, *Well-Tempered Clavier,* vol. 1, m. 1, patternings.

a.

b.

It is of course instructive to compare early-eighteenth-century compositions to nineteenth-century ones to study the differences between Baroque and nineteenth-century notions of rhythm and texture. But as luck would have it, we possess an even more striking bit of evidence to compare early-eighteenth- and nineteenth-century notions of rhythmic structure in the same piece. Bach himself and a major nineteenth-century composer—Robert Schumann—set themselves the identical compositional task: to write a full accompaniment to the same movement from one of Bach's solo-violin works. These accompaniments demonstrate clearly how differently these two ages conceptualized rhythm and style. Zeroing in on these differences helps us as performers and listeners to realize how many of our notions of Bach style remain under the influence of nineteenth-century ideas.

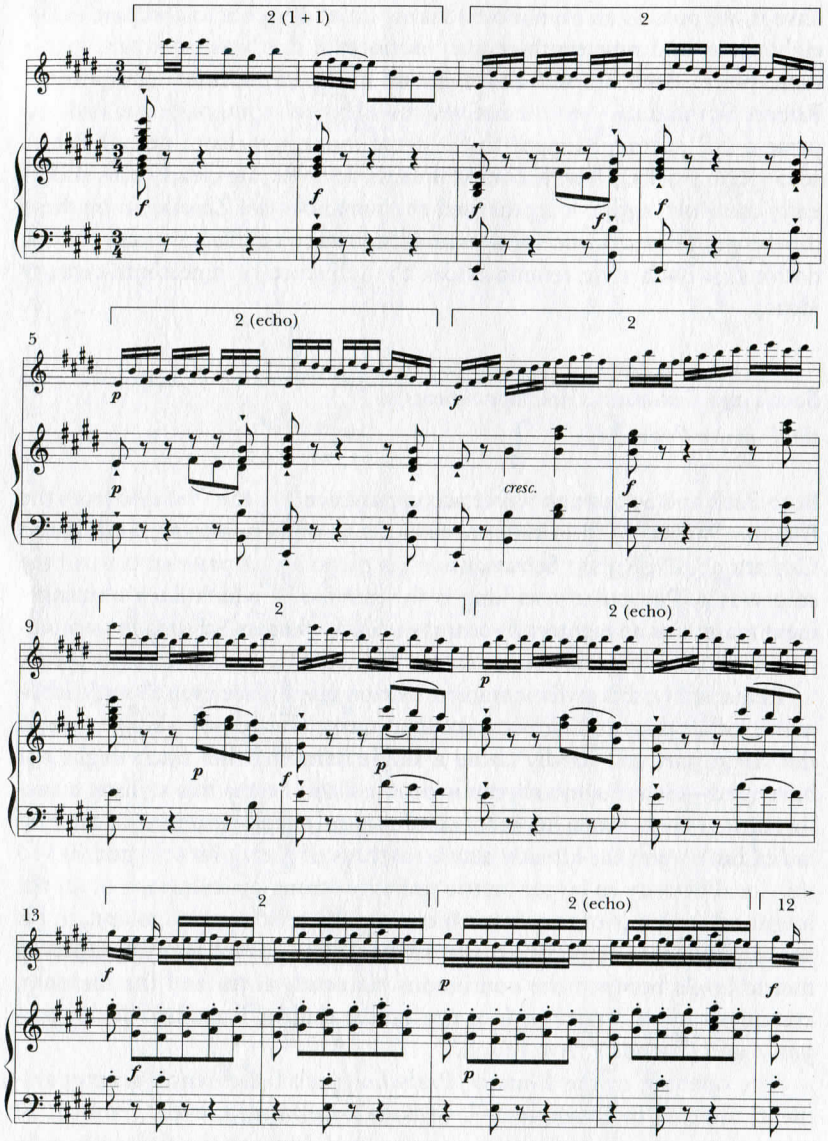
Bach's and Schumann's Accompaniments to the E-major Preludio

Both Bach and Schumann wrote accompaniments to the *Preludio* from the E-major Partita: Bach in order to turn the movement into the *Sinfonia* to Cantata no. 29; Robert Schumann in his piano accompaniments to all the solo works. Particularly striking is the manner in which Bach's arrangement maintains an eighteenth-century sound, whereas Schumann's accompaniment turns the movement into a nineteenth-century *moto perpetuo.*

Remarkably, this stylistic transformation takes place even though Schumann, other than adding his accompaniment, altered not a single note in the violin part and hardly chose a single harmony that Bach might not have used—Schumann's rhythmic profile alone begets this stylistic transformation. Bach, when he wrote an orchestral accompaniment to the *Preludio,* built upon the already active rhythms of the violin solo and linked this local activity to larger metric units by strong articulations of all the intermediate levels of the metric hierarchy. By contrast, Schumann, in his accompaniment, emphasized the swing of the meter and downplayed metric levels between the continuous sixteenth notes and the measure, creating a more lyrical surface not unlike that of Paganini's *Moto perpetuo* and Gounod's "Ave Maria."

The opening of the E-major *Preludio* (with Schumann's accompaniment) appears in Example 5-7. In Bach's violin solo, every level of the metric hierarchy from the two-measure level down to the sixteenths possesses a clear profile. The two-measure rhythmic level in Bach's solo is quite regular, with measures grouped into pairs by repeated or echoed patterns, as noted by the groupings over the score. The measure level features a frequent sarabandelike articulation of the second beat: in mm. 1–2, the eighths begin on beat 2; in mm. 3–6 and 9–12, a new chord member appears in the moving part on the second beat and remains until the end of the measure, as shown in Example 5-8a. Indeed, such stressed

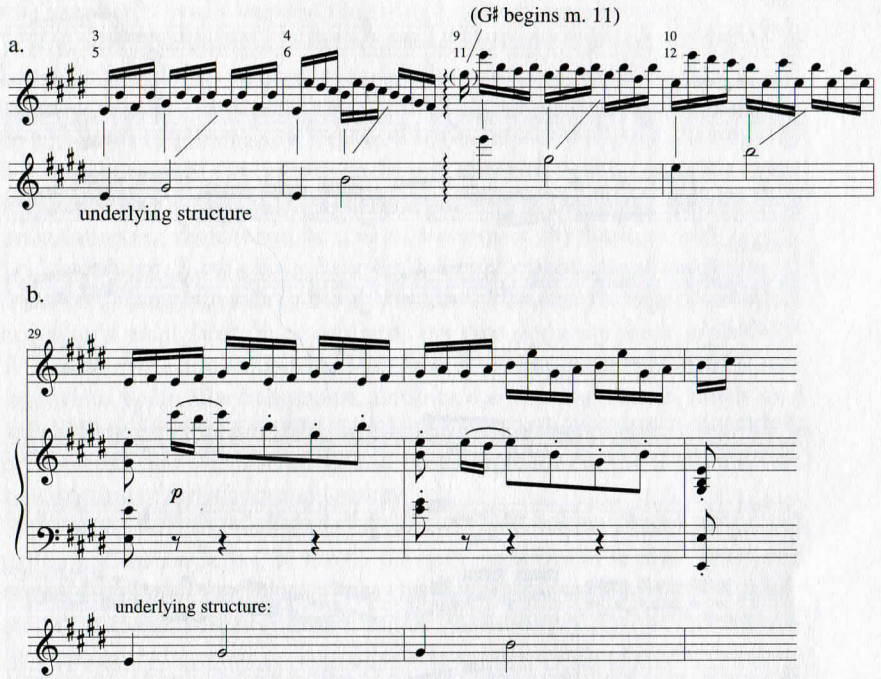
Example 5-7. Bach, Partita in E Major, *Preludio*, mm. 1–17, with Robert Schumann's accompaniment.



second beats characterize many later figures, including the one shown in Example 5-8b.

Faster levels of the metric hierarchy spice up this relatively regular meter and hypermeter. Having the piece open with a rest means that perception of both the 3/4 meter and the two-measure regularity is delayed

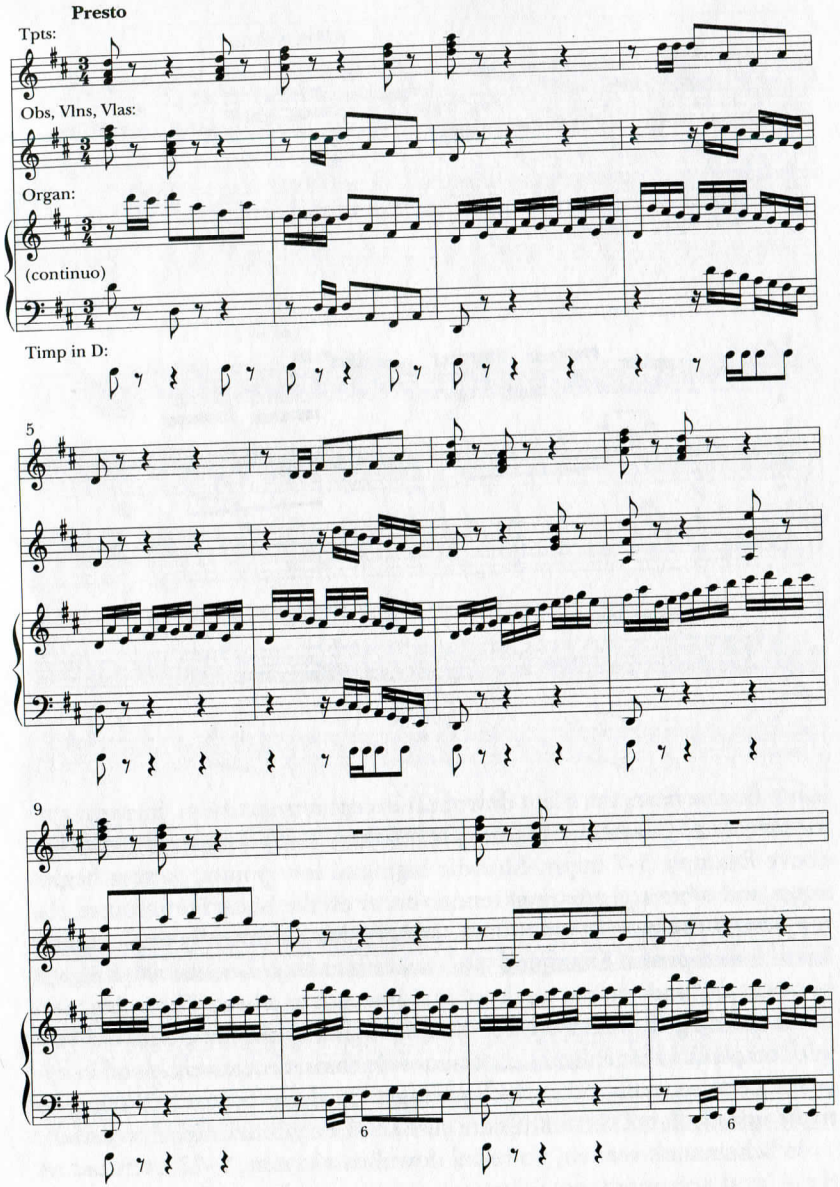
Example 5-8. Bach, Partita in E Major, *Preludio*: (a) mm. 3–6 and 9–12; (b) mm. 29–31, with Schumann's accompaniment.



(since no one hears the silent downbeat except retroactively), imparting to the listener a less symmetrical impression than the two-measure groupings above Example 5-7 imply. Melodic high and low points, pattern beginnings, and other accentuations tend to occur off the beats. For instance, the top note of the moving voice in m. 3 highlights a metrically weak eighth. In the later figure in Example 5-8b, each ascent begins on the weak eighth of a beat and ends on the weak second sixteenth of a beat. The interaction of the metric grid with these accentuations creates the imaginative rhythmic complexity that enlivens continuous rhythms, deceptively bland in appearance in so many other Bach passages (in sharp contrast to the relatively unarticulated sixteenth-note surface in Paganini's *Moto perpetuo*).

In Schumann's version, powerful downbeats in mm. 1–12 overshadow these local accentuations. Schumann ignores any hints of the sarabande rhythm that might distract from these emphatic downbeats. In mm. 3, 5, and 9–12, Schumann does not initiate eighths on the second beat to articulate the sarabande rhythm but, rather, starts the accompanying eighths after that beat primarily to lead strongly to the next downbeat. Indeed, by his slurring, by the *marcato* chords on the last eighth in mm. 3 and 5, and by the tied Es in mm. 10 and 12 Schumann deliberately prevents even the

Example 5-9. Bach, Cantata no. 29, *Sinfonia*, mm. 1–17.



one downbeat to the next, he blots out all of Bach's characteristic rhythms. This is not necessarily unappealing. A well-known living composer once told me that he really enjoyed the swing of Schumann's version.

The rhythmic profile of Bach's orchestrated accompaniment, shown in Example 5-9, differs strikingly from Schumann's. At the very opening and again in mm. 7–9 and 11, chords occur on each beat—not solely on the downbeat as in Schumann's version. Bach ingeniously divides these chords into two groups of two chords each: one in the three trumpets, the other in the strings-plus-oboes. As a result, even within the steady quarter-note articulations of the chords, he creates a complex rhythmic as well as timbral and registral antiphony between falling motions in one instrumental choir and rising motions in the other. His orchestration thereby not only articulates each beat but also projects two separate beat groupings: ***1***–2–rest, ***1***–2–rest vs. ***1***–rest, 3–***1***–rest, 3–***1***–rest. In mm. 9 and following, when Bach, like Schumann, doubles the moving part in thirds and sixths, Bach creates an eighth-note figure in the strings whose octave leaps or sixteenth pair stresses the second beats, highlighting the sarabandelike syncopations that Schumann ignores.

As with the different metric profiles of the G-minor *Presto* versus Paganini's *Moto perpetuo*, or the C-major Prelude from the *Well Tempered* versus Gounod's "Ave Maria," the differences between Bach's and Schumann's accompaniments to the E-major *Preludio* spell out the characteristic differences between early-eighteenth-century continuous-rhythm passages and nineteenth-century perpetual motions. Bach's accompaniment to the *Preludio* stresses multiple emphases on individual beats and their groupings, granting each level of the metric hierarchy its own integrity, and re-creating his characteristic articulated rhythms in a new climate. Schumann's accompaniment primarily stresses the swing of the measure level, omitting the intermediate levels that in Bach's version link the measure level and the more local rhythmic vitality.

These differing rhythmic profiles also affect phrasing. As shown in Figure 5-5, Bach brings back the timbral and registral antiphony from mm. 1–2 in mm. 7–9, marking m. 7 as a new beginning parallel to m. 1, thereby articulating the opening measures as two groups of six: a two-measure fanfare, a repeated two-measure group, then the same again. Schumann's mm. 7–8 simply fill the gap between mm. 5–6 and 9–12, promoting regular four-measure groups: mm. 1–4 followed by a two-measure echo and a two-measure link in mm. 5–8 (adding up to a second four-group) and then another group of four. Once again, Bach's version has more vibrant articulations on several levels, whereas Schumann's accompaniment promotes greater regularity beneath the speedy sixteenth notes.

Schumann's nineteenth-century vision of the *Preludio*, with its swift surface and swinging accompaniment, is reflected in the *Preludio* performances by the great nineteenth-century violinist Pablo de Sarasate (1844–1908), whose flashy technique is reflected in his own compositions, in the

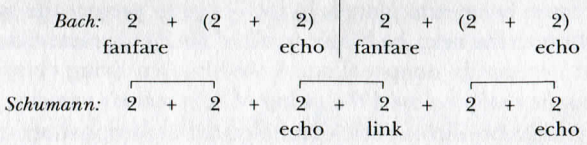


Figure 5-5. Phrasing in Bach's and Schumann's Accompaniments to the *Preludio* of the E-Major Partita.

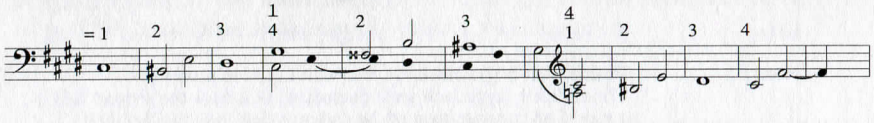
pieces he commissioned (most notably the 1875 *Symphonie espagnole* by Édouard Lalo [1823–92]), and in a few recordings he made at the very end of his life. Sarasate "took pride in rushing [the *Preludio*] to death in the shortest possible time," as in his turn-of-the-century recording.[7] There was a long nineteenth-century tradition of playing the E-major *Preludio* with accompaniment reflected not only in Schumann's accompaniment but also in performances such as that by the nineteenth-century virtuoso Dame Wilma Norman-Neruda (1838–1911), accompanied by the Berlin Philharmonic conducted by Joseph Joachim in the 1880s, and another celebrating the dedication of a new building for the Berlin Hochschule in which no fewer than forty violin pupils performed the *Preludio* in unison, backed by Schumann's accompaniment. The violinist-composer Fritz Kreisler (1875–1962) published his own accompaniment to the E-major *Preludio* early in the twentieth century.

Deciding How to Analyze Rhythm in Bach's Music

The traits that differentiate Bach's rhythms and phrasing from nineteenth-century music affect the very language and concepts—the analytical tools—we use to conceptualize music of the Baroque period. Bach's fully active metric hierarchies do not easily parse into the articulated phrasing patterns that were developed from the late eighteenth century onward to deal with music since the Classical era.

The changes in rhythmic and articulative style between the Baroque and later music have been acknowledged by candid comments of major theorists. Heinrich Schenker, for instance, in his final treatise, *Free Composition*, illustrates his interpretation of phrase rhythm in a large number of excerpts by Haydn, Mozart, Beethoven, Chopin, Mendelssohn, and Brahms.[8] Then Schenker turns to the opening of Bach's C♯-minor Fugue, *Well-Tempered Clavier*, vol.1, and suggests but immediately questions a series of continual metric reinterpretations at each subject entry, as illustrated in Example 5-10: "As long as musical content moved principally in imitations of canonic and fugal forms, it was somehow illogical to presuppose a specific metric scheme. Each of the numerous imitations, after

Example 5-10. Schenker, *Free Composition*, Fig. 149/8a.



all, involved reinterpretation. Where would we find ourselves if we were to pursue the idea of reinterpretation in the manner indicated [in Example 5-10]?"[9] Schenker does not suggest an answer to this troubling question. More recently, William Rothstein takes note in the preface to his study of *Phrase Rhythm in Tonal Music* of the "virtual exclusion of Baroque music from this book . . . I simply do not understand Baroque phrase rhythm as well as I think I understand rhythm in later tonal music."[10] The reason for these difficulties lies, as Rothstein continues, in "the profound differences that exist between the phrase rhythms of the Baroque and those of Classic and Romantic music." The analytical tools that were developed during and after the Classic period to explain Classic music—notions of periodic phrasing and the like—simply do not produce musical results when applied to much Baroque music.

A large part of the reason for this lies in the difference between the metric hierarchies of Baroque and of later music. In Paganini's *Moto perpetuo*, in Gounod's "Ave Maria," and in Schumann's accompaniment to the E-major *Preludio*, there are relatively uninteresting metric levels between the excitement of the surface rhythms and the lyrical flow of the underlying phrase rhythms, promoting the sense of a lyrical nineteenth-century texture. In the metric hierarchy of Bach's orchestration of the E-major *Preludio*, no such gap exists, since every level offers interesting activity. And Bach takes care to create such multileveled activity even in the unaccompanied version of the *Preludio*—and in his other movements that feature continuous sixteenths.

Binary Form and (vs.?) Increasing Levels of Activity

The differences in rhythm between Baroque and nineteenth-century styles extend beyond the relatively local levels of surface rhythm, meter, and phrasing to the very largest rhythmic levels of a piece: to "form" or the sequence of sections of a movement through time and the processes that motivate that sequence. Once again, the analytical tools developed early in the nineteenth century to describe and explain form in the music of the Classical composers do not work that well when applied to Baroque music.

The *Presto* of the G-minor Sonata has two repeated sections—two "reprises," as eighteenth-century theorists would have called them. When

Measures:	‖: 1 — 54	:‖:	55 — 136	:‖
Sections:	‖: *A* . . . . *B* (= cad. in v)	:‖:	*A'* . . . . *B'* (= cad. in i)	:‖
Keys:	‖: i — III — v	:‖:	on V — iv — i	:‖
Notes:	Both halves begin similarly, but with inverted motives. The cadence (approach and conclusion) that ends the second half is a modified transposition of the cadence that ends the first half.			

Figure 5-6. "Binary form" in the *Presto*.

we nowadays look at a movement like this, we categorize it as a type of binary form. Figure 5-6 lays out the outer features of this form as it appears in this movement.

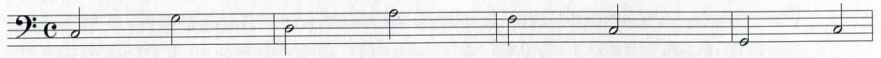
As taught by innumerable textbooks published during the past two centuries, the form is clearly binary because of the two sets of repeat signs. As in many such movements by Bach, each large section begins with the same thematic material and each large section ends with similar cadential material. The middles of each half—the material between the opening and cadence—differ somewhat between the two large reprises. Also as is ubiquitous in Bach's two-reprise movements of any substantial size, the two reprises have opposite tonal orientations. The first reprise moves from tonic to nontonic keys (here from G minor to B♭ major and then D minor), while the second moves conversely from being away from the tonic to cadence in the tonic (here from beginning on the dominant to eventually being in the tonic).

Edward T. Cone has pointed out that in such Baroque binary forms the combination of key scheme and tonal orientation creates a permutational relationship between the sections.[11] Every time the end of a reprise leads into the beginning of a reprise, the cadential material leads to some form of the opening thematic material, but with a different tonal relationship. When the first repeat is taken, the cadence proceeds to the opening music in a nontonic-to-tonic (NT⟶T) relationship; the next time the first reprise ends, the same thematic events occur as NT⟶NT. When the second repeat is taken, the same thematic events occur once again, but now as T⟶NT. As a result, three of the four possible tonal interactions occur: NT⟶T, NT⟶NT, and T⟶NT. The only possibility that does not occur is T⟶T, which would happen only if the entire movement were immediately repeated.

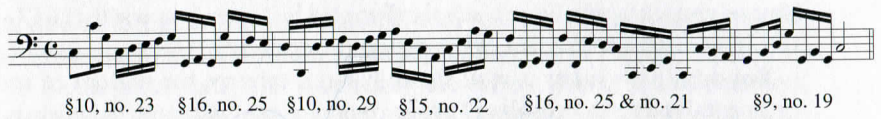
The permutational aspect of the form relates such "Baroque binary" movements to all the aspects of permutation that were frequently discussed by eighteenth-century musicians. For instance, Bach's favorite thoroughbass manual, that by Friedrich Erhard Niedt (1674–1708), teaches the transition from simple, block-chord thoroughbass realizations to the creation of real compositions by listing dozens of possible melodic variants to elaborate every interval and applying these variants to unadorned

Example 5-11. Friedrich Erhard Niedt, *Musicalische Handleitung*, 2d ed., part 2 (Hamburg, 1721), chapter 3; English translation by Pamela Poulin and Irmgard Taylor as *The Musical Guide* (Oxford: Clarendon Press, 1988), pp. 88 and 90: (a) original bass line; (b) ornamented bass line.

a.



b.



§10, no. 23 §16, no. 25 §10, no. 29 §15, no. 22 §16, no. 25 & no. 21 §9, no. 19

lines.[12] Example 5-11 illustrates how Niedt elaborates a simple bass line by applying the variants he has previously presented for each interval; the numbers refer to the numbered variant of each interval. With about 30 variants for every interval, the possible permutations that might arise from applying Niedt's approach would generate a seemingly infinite number of compositional possibilities.

Permutations crop up in the writings of another of Bach's contemporaries discussed in the preceding chapters of this book: Johann Mattheson (1681–1764). Mattheson at one point wonders aloud whether we will ever run out of new musical melodies since, he argues, there are only a limited number of musical notes. He disposes of the question by suggesting that if each note of the chromatic scale could occur only once in a melody, the number of resulting melodies would be immense: 479,001,600 (or twelve factorial). In effect, Mattheson invented a crude counting of the number of 12-tone rows that can exist—in 1725, about two centuries before Arnold Schoenberg developed his "method of composing with twelve tones."[13]

Joseph Riepel (1709–82), perhaps the first important theorist of the new musical styles of the midcentury, also was fascinated by permutations. He suggested that composers could become aware of the variety of compositional resources by working out permutations of rhythms, of bowings or articulations, and even of the notes that could join each other in chords.[14] Many musicians both famous and unknown proposed dice games by which permutations would produce a seemingly endless series of dance movements.[15] And more recent theorists have applied permutations to the analysis of Bach compositions, noting, for instance, that the C-minor Fugue in the first volume of the *Well-Tempered Clavier* presents five of the six possible arrangements of the Fugue subject and its two countersubjects.[16] In sum, Cone's application of permutational thinking to Baroque binary form joins a distinguished heritage of applying such ideas to Bach's music.

Viewing the interaction of themes and keys as permutational raises questions about the whole nature of musical "form" in such movements. The topic of musical form as we know it arose around the turn of the nineteenth century from theorists' attempts to deal with the regularities that were apparent in recent instrumental compositions. This was the historical period in which discussions about music took a decidedly new turn. Previously, vocal music was deemed a higher genre than purely instrumental music and musical meaning was often considered in terms of the expression of the words. The essence of this position is encapsulated in the famous remark of the French scholar Bernard le Bovier Fontenelle (1657–1757), who asked, "Sonata, what do you want of me?"[17]

But during the latter part of the eighteenth century, the notions of instrumental music as "absolute" music began to gain widespread credence, a development chronicled in two recent studies: one by Carl Dahlhaus (who concentrates on the notion of absolute music), the other by John Neubauer (who concentrates on the liberation of discourse about musical meaning from the belief that music's primary power was in imitation of nature).[18] A signal event in this transformation was the 1810 review of Beethoven's Fifth Symphony by the writer and composer E. T. A. Hoffmann (1776–1822), a review that speaks at great length of the meaning of the music despite the absence of a text or of specific "tone painting" or "imitation."[19]

Many forces propelled this transformation in musical aesthetics—forces that included changes in venues in which music was presented, changes in the social classes for whom concert music was important, and the new musical styles of important composers like Haydn, Mozart, and Beethoven (without whose creations there would have hardly been much impetus to redefine what purely instrumental music could mean). Although a full accounting of this transformation has yet to be written, interesting chapters have already appeared, including the studies of Dahlhaus and Neubauer just cited and the decision by Charles Rosen to precede technical discussions in his 1980 study, *Sonata Forms,* with a chapter on "Social Function."[20] But even in the absence of a full study of this aesthetic transformation, it is clear that many of our basic attitudes toward concert music nowadays derive from that transformation in musical aesthetics and its effects.

One effect concerns as mundane a matter as the examples in "harmony" texts. As music began to be respected for itself and not merely as a background to the text, individual musical works rather than abstract examples began to take center stage. Through the early eighteenth century, thoroughbass manuals had simply laid out abstract examples, apparently based on the supposition that harmonies and chord progressions existed apart from any particular musical pieces. Most early- and mid-eighteenth-century treatises on harmony did the same, such as works by Jean-Philippe Rameau (1683–1764) from the 1720s through the 1760s and by Friedrich Wilhelm Marpurg (1718–95) in the 1750s and 1760s.[21] During the years

of Beethoven's lifetime, books that resembled modern harmony texts first began to appear, analyzing musical pieces. The major harmony text published in 1771–76 by Johann Philipp Kirnberger (1721–83) (who had studied briefly with J. S. Bach in 1741) includes, among a large number of abstract examples, a comparison of 26 settings of a chorale melody by J. S. Bach.[22] Abbé Georg Joseph Vogler (1749–1814), a theorist based in Mannheim, published volumes of musical analyses beginning in the 1770s.[23] And Gottfried Weber (1779–1839), the theorist who made Roman numerals the standard symbols for analyzing harmonic progressions, illustrated all progressions he discussed with numerous excerpts from well-known works in his harmony texts beginning in 1817.[24]

At the same time, and spurred by the same aesthetic transformation, the notion of musical form began to take center stage. The theorist Heinrich Christoph Koch (1749–1816), whose multivolume treatise published in the 1780s–90s discussed harmonic progressions with abstract examples, analyzed phrasing and larger constructions with examples that resembled real compositions and quoted compositions by Haydn and others.[25] The Czech-German musician Anton Reicha (1770–1836), who knew Beethoven when they were both boys in Bonn and was a central composer and theorist in the Paris Conservatory for decades, discussed a wide range of standard musical forms in the early nineteenth century in terms that we easily recognize today.[26] Similar discussions appeared in the works of Carl Czerny (1791–1857), a pupil of Beethoven.[27] And the German theorist Adolf Bernhard Marx (1795–1866), who taught in Berlin for many decades, categorized musical forms, establishing much of the nomenclature that still characterizes textbooks on forms.[28]

The notion of musical form is predicated on the ideas of melodic/thematic contrast and on separate sections with distinct formal functions (expository, developmental, recapitulatory). As these notions became a standard part of musical knowledge, they were applied retroactively to Bach's music. But this endeavor is inherently anachronistic. Bach's music was written before the advent of the articulated phrasing that Koch and later theorists described and before the advent of large formal structures with separate sections that offered distinct formal functions. Many of Bach's movements are structured in ways fundamentally different from the Classical-era forms: as preludes built from thoroughbass patterns, as fugues, as seemingly "formless" structures (such as toccatas or movements like the *Siciliana* of the G-minor Solo-Violin Sonata), and as ritornello structures.

There are, to be sure, Bach movements that seem more amenable to being analyzed with Classical-era formal tools: especially the binary movements from suites and sonatas—movements like the *Presto* of the G-minor Sonata. As the formal diagram for the *Presto* given previously shows, there are indeed formal parallels between the sections: both halves begin with the same thematic material, both end with transposed cadences, and the portion after the double bar wanders tonally and seems to develop more thematic material than occurs in the first half of the movement.

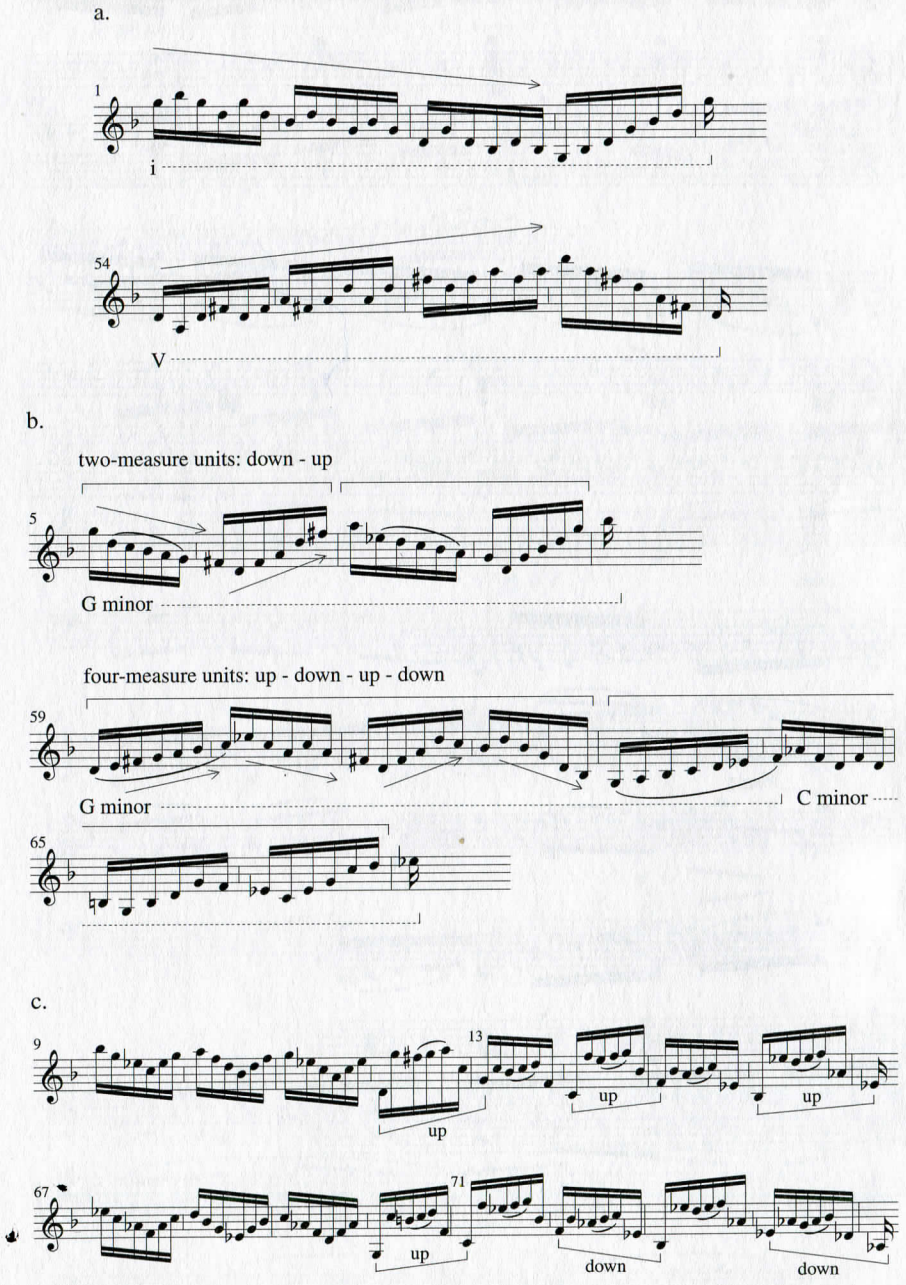
But as with the earlier three movements of the G-minor Sonata, the principle of continually heightened activity is more revealing than these rather superficial similarities between the *Presto* and later binary forms. Every musical element that appears in the first half of the movement recurs in the second half, recomposed to heighten the level of activity. And within each half, each new element is more active than its predecessors, right up to the final cadence. As a result, both on the local level (the succession of ideas within each half) and on the larger level (the way the second half intensifies recurring elements from the first half) the levels of intensity are heightened.

Example 5-12 lays out various parallel elements in the two halves of the *Presto*. In each case, the element appears in the second half of the movement more intensely than in the first half. The initial arpeggio at the beginning of the movement (mm. 1–4 in Example 5-12a) proceeds downward, spelling out the motto voicing of the tonic chord of the entire sonata; with the high B♭, this arpeggio announces the registral limits of the entire first half of the *Presto*. The corresponding arpeggio that begins the second half ascends, quickly breaking through that registral peak to attain the highest note of the entire *Presto*. The harmony is dominant, not tonic, pushing ahead.

The *Presto*'s next element, in Example 5-12b, offers the movement's first harmonic motion: tonic–dominant–tonic (imitating a perfect cadence, as Rameau would have explained in the *Treatise on Harmony* that he was writing as Bach composed this sonata), outlining harmonic stability. Its recurrence in mm. 59–67 is anything but stable: the two-measure pacing of mm. 5–9, with its single ascent and descent within each pair of measures, expands into a four-measure pacing in mm. 59–67 with several registral undulations; the key now changes from tonic to subdominant; and the dissonance level heightens as the two dominant chords (the D chord in mm. 59–61 and the G chord in mm. 63–65) display themselves as full dominant ninths (even though the ninth resolves within the dominant each time before the chord moves), not the dominant triad of mm. 6–7.

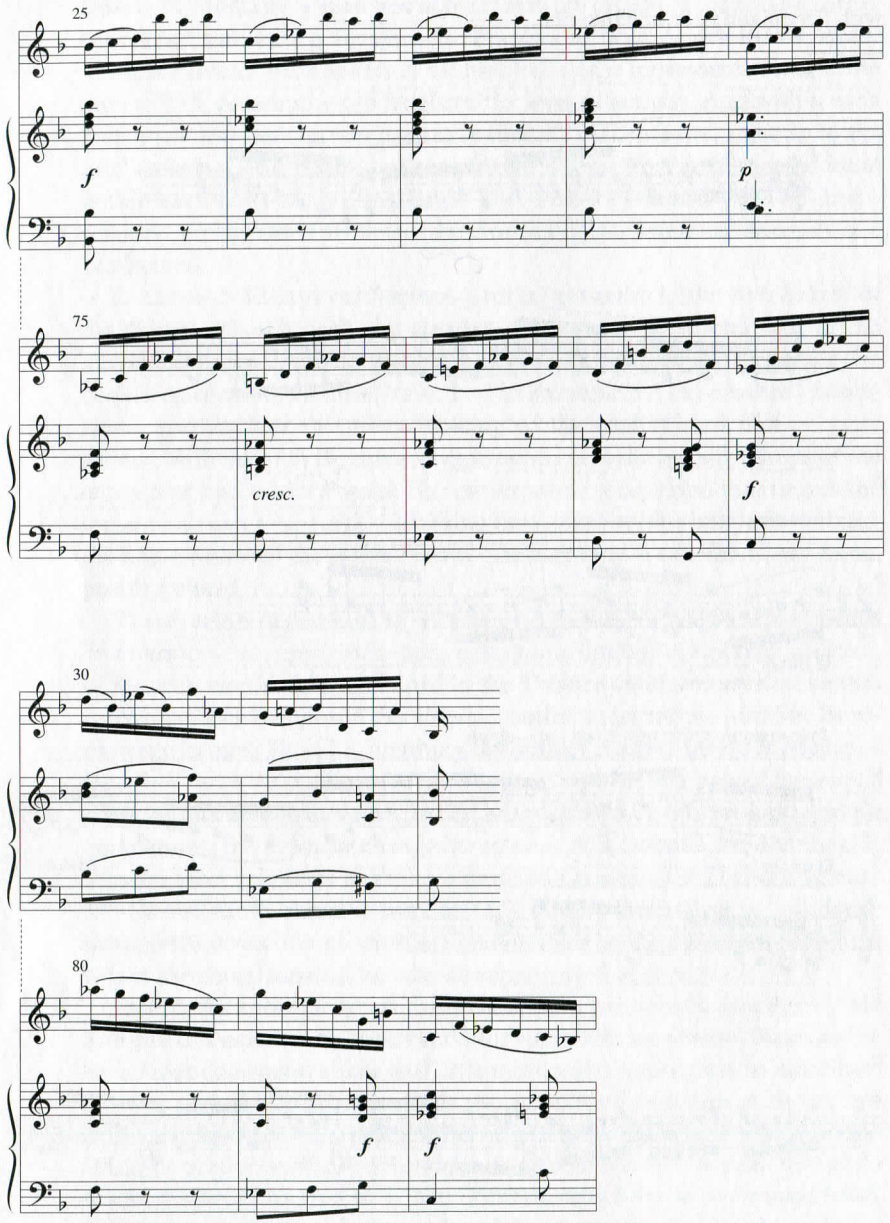
Indeed, the chord progression in mm. 59ff. corresponds exactly to what Rameau discussed as the motivation for harmonic movement. Rameau believed that consonant triads had little motivation to progress to other harmonies; only dissonances, such as the seventh of a dominant chord, impelled a chord toward a new harmonic goal.[29] According to this view, the D-major triad in mm. 54–59 adds a seventh (and ninth) in mm. 60–61 to propel it toward its goal of G; the G chord, which starts as a minor triad, transforms itself into a dominant by adding a seventh (and ninth) and raising its third to become a leading tone in mm. 64–65 to propel itself toward its C-minor goal.

Example 5-12. Bach, Sonata in G Minor, *Presto*, parallels between the two halves: (a) mm. 1–5 and 54–59; (b) mm. 5–9 vs. 59–67; (c) mm. 9–17 vs. 67–74; (d) mm. 25–312 vs. 75–82, with Schumann's accompaniment; (e) mm. 17–25 vs. 83–95; (f) mm. 43–54 vs. 121–36 (and its underlying counterpoint), with Schumann's accompaniment.



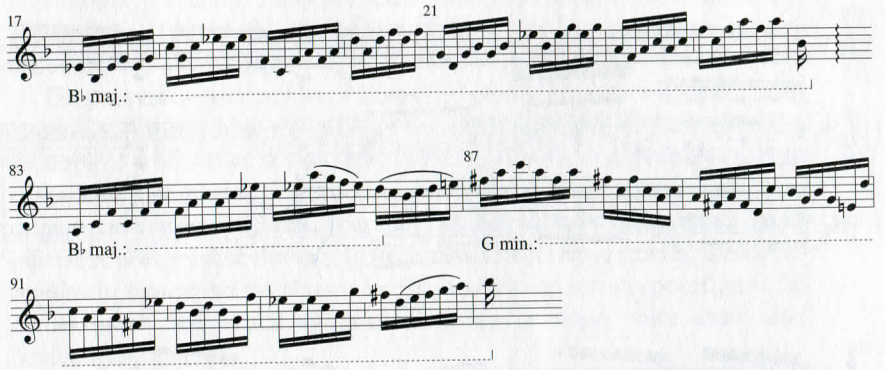
Example 5-12. (*continued*)

d.

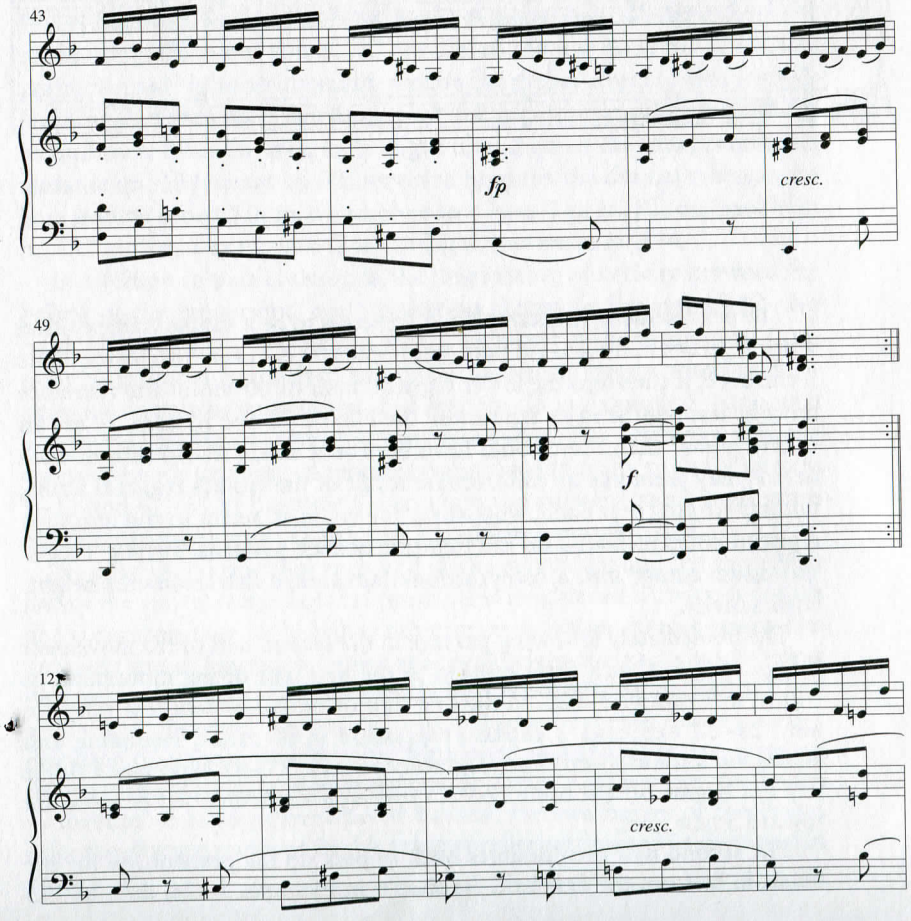


Example 5-12. (*continued*)

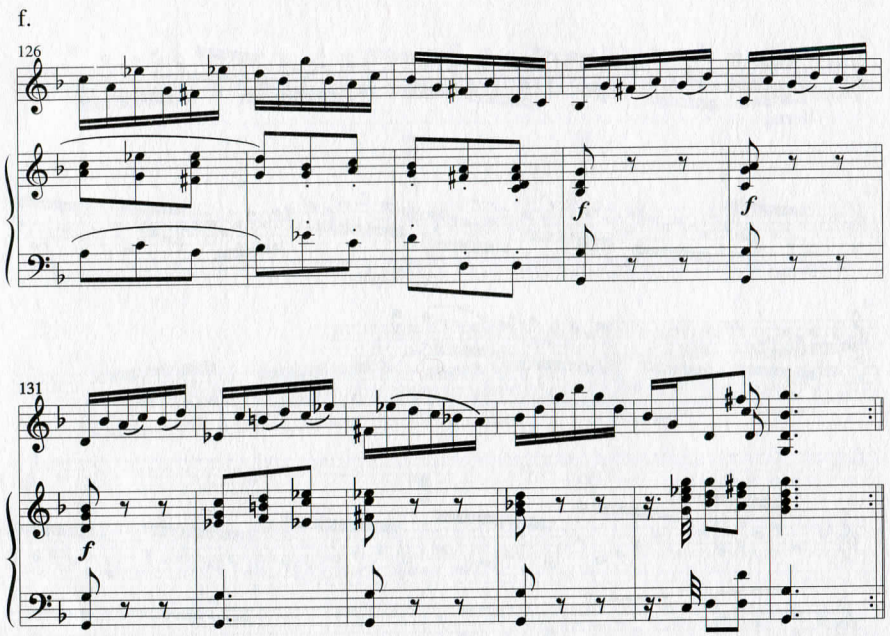
e.



f.



Example 5-12. (*continued*)



The next element, in Example 5-12c, seems to be a simple transposition when it recurs in the second half. But because it occurs a fifth lower on its recurrence, it runs into the lower registral limit of the violin and therefore must be less regular in its figuration: the F in m. 72 and E♭ in m. 74 are an octave higher than they would have been in a direct transposition. Such details may seem like an unfortunate result of the violin's registral limits, but it is striking that Bach, who was a fine violinist, seems to run into such registral limits primarily on restatements of such patterns, turning a registral disadvantage into a compositional advantage that promotes heightened activity.

The immediately following passage in the second half of the movement brings back a slightly later portion of the first half of the movement, as shown in Example 5-12d. In the first half of the movement, the music in mm. 25–32 expresses a closed progression in B♭ major, beginning and ending on a tonic chord. The recurrence in mm. 75–82 expresses a single key but begins off the tonic chord, creating a single-minded progression toward a new goal.

The second half then doubles back to pick up the preparation for the music in B♭ from the first half. As shown in Example 5-12e, mm. 83–95

greatly intensify the simpler figuration of mm. 17–25. Not only are the patterns expanded and interspersed with other figurations, but also the direction of the pattern reverses between mm. 83–85 and 87–89. Furthermore, whereas there are only consonant triads from a single key in mm. 17–25, mm. 83–95 feature a change of key and many seventh chords.

The process of bringing back intensified parallel passages is itself greatly intensified approaching the cadence that ends each half of the movement. Example 5-12f shows the sequence in mm. 43–46 that prepares for the precadential dominant pedal during the first half of the movement and its dramatically intensified return in mm. 121–27. On its recurrence, the sequence is nearly twice the length, ascends rather than descends, is more irregular in figuration (as shown by the underlying counterpoint), and includes more chromaticism—even outlining an upper-voice diminished octave from E to E♭.

The final cadence itself is also intensified on its recurrence. The dominant pedal of mm. 47–49 recurs as an ascending bass scale in mm. 129–31. Here again (as with mm. 9–17 versus mm. 67–74 shown in Example 5-12c) Bach has bumped into the lower registral limit of the violin—he could not place a low F in m. 47 parallel to the low B♭ in m. 129. Once again, he used the more dramatic version for the recurrence, with a stable pedal in the first half of the movement but an ever-ascending bass in the second half. Even the seemingly slight alteration of the antepenultimate measure (m. 134 versus m. 52) serves to heighten the drama: whereas the bass leading tone C♯ in m. 51 resolves to a bass D in m. 52, the bass F♯ in m. 133 moves, if at all, to a G in the higher octave in m. 134.

In addition to participating in the heightening of activity between the halves of the movement, each figuration shown in Example 5-12 also participates in an intensification within each half of the movement. Consider harmonic rhythm. Each half of the movement begins with five measures on a single harmony (mm. 1–5 and 54–58 in Example 5-12a); such a sustained harmony never happens elsewhere. The relatively uniform measure-long patterning of repeated figurations in many places, like mm. 9–11 and 67–69 in Example 5-12c, contrasts with the much more complex figurations in mm. 43–46 and 121–27 in Example 5-12f.

As a result, both within each half of the movement and between these halves the ruling compositional principle is heightened activity. It is thus not surprising that early-eighteenth-century treatises discuss issues like permutations of figuration (which relates to heightening activity), whereas discussions of binary musical forms (which relate to sectional balance and articulated phrasing) are largely absent. Early-eighteenth-century theory discussed only the most superficial features of such binary forms, ignoring the marriage of tonal motion and thematic design that later ages concretize as theories of form or structure.[30] In sum, the two halves of the *Presto* offer the characteristics of Bach's other parallel-section works discussed in chapter 4.

Schumann's Interpretation of the Form of the Presto

Decisions on the nature of form in the *Presto*—whether the movement is essentially in a nineteenth-century binary form or exemplifies a process of continual intensification both within and between the reprises—are by no means academic. They affect how we interpret the music as performers and how performers transmit that interpretation to listeners and analysts.

Just as Schumann's accompaniment to the E-major *Preludio* (discussed earlier in this chapter) differs from Bach's orchestration in its presentation of rhythm and meter and Schumann's accompaniment to the *Presto* of the G-minor Sonata reflects the same features, his accompaniment to the *Presto* also reflects a nineteenth-century vision of the "form" of that two-reprise movement—a vision that is at odds with the notions of continual intensification offered in this chapter.

As a mid-nineteenth-century composer, Schumann saw Bach's two-reprise *Presto* as an instance of the binary forms he frequently composed: simple binary forms and sonata form. When Schumann worked out an accompaniment of parallel passages in the two reprises, he fit Bach's music into those forms. Consider, for instance, his handling of the end of the two reprises, which diverges sharply from Bach's conception. The parallel ends of the two reprises in Bach's *Presto* appear in Example 5-12f with Schumann's accompaniment. Within both reprises, these passages in Bach's violin solo represent a higher level of activity than previous music (as discussed above); and the parallel passage in the second reprise is considerably more active than that in the first reprise.

Schumann does realize that the sequences in both passages are more active than previous music: for mm. 43–46, his accompaniment reflects the more active pattern by means of the staccato eighth-note harmonic rhythm. But where Bach's pattern is notable for its evenness (the same figuration in each measure and the implicit descent through similar harmonic changes in each measure), Schumann's accompaniment, by changing the type of harmonic progression in each measure, adds an unevenness that obscures the smoothness of the violin sequences. And whereas Bach composed the parallel passage in the second reprise (mm. 121–27) to be more active (with a more complex internal pattern and with the more dramatic ascent replacing the descent), Schumann makes it less so: legato instead of staccato, with a slower harmonic rhythm, and with regular two-measure sequences (instead of the irregular harmonic changes he provides for mm. 43–46). In the approach to the final cadence, where Bach replaces the beginning dominant pedal in the first reprise (mm. 47–49) with a relentlessly rising bass throughout the entire passage in the second reprise (mm. 129–33), Schumann obscures the driving bass ascent in the second reprise by creating a tonic pedal. In essence, where Bach saw these passages as the climax of each reprise and saw the second passage as a heightening of that climax to conclude the entire movement, Schumann saw the end of the second reprise in terms of a recapitulatory gesture—a diminution of the level of intensity appropriate to the ending of the movement.

Bach and Schumann also differ on the roles of the main keys of each reprise. Once again, Bach hears the parallel reprises that explore materials in ever more complex ways. Each reprise presents three main keys: G minor, B♭ major, and D minor in the first reprise and G minor (starting on the dominant), C minor, and G minor in the second reprise. The two composers' treatment of the middle key of each section varies the most. For Bach, the music in the middle key in both reprises intensifies previous music and the parallel music in the second reprise intensifies that in the first reprise. The main B♭ music in the first reprise is a closed phrase that begins and ends on the tonic (mm. 25–32, shown in Example 5-12d), prepared by a modulating sequence (in mm. 17–24) that leads to the tonic of B♭, and ending with a cadence in that key. The parallel music in the second reprise (mm. 75–82, also in Example 5-12d) is a phrase that modulates to C minor only in its second measure.

Schumann probably viewed these two passages in terms of their possible roles in a sonata-form structure. He probably heard the music in B♭ in the first reprise as the beginning of the second theme in a three-key exposition (**I–III–v**), whereas the music in C minor was for him part of a development section. When he gets to B♭, he adds a bass pedal to slow down the pacing, as if to make it a lyrical second theme. Instead of participating in the gradually increasing activity levels of the first reprise, the music now is a point of relaxation akin to what commonly happens at the beginning of the second theme in a nineteenth-century sonata-form movement. Schumann also suppresses the cadence on B♭ in m. 32 with a chromatic deceptive progression that reduces its independence as a key.

In the second reprise, Schumann ends the music in C minor in mm. 81–82 with a clear cadence (reinforced by the *fortes* in mm. 81 and 82). For Bach, the two reprises are parallel in structure, with the second more complex; B♭ major and C minor stand in parallel positions, but C is less stable than B♭. For Schumann, the model for a large movement with two reprises is sonata form, in which the two reprises are not parallel: the first reprise presents themes in two keys and includes transitions and other passagework, while the second reprise is a development (in which a foreign key may be established) and a recapitulation. Accordingly, Schumann both tried to enhance the sense of a relaxing arrival on B♭ in the first reprise and weakened the status of B♭ by aborting the cadence. Where Bach created progressive intensification within two parallel reprises, Schumann heard sections that corresponded to the musical forms of his age.

Performance Issues in the G-minor *Presto*

This chapter compares the *Presto* of the G-minor Sonata—and, by analogy, all the continuous-sixteenth-note movements in the solo sonatas—to nineteenth-century perpetual motions. It continues by relating the apparent binary form of the *Presto*—and, once again by analogy, the apparent binary form of all the two-reprise movements in the solo sonatas—to early-eighteenth-century compositional principles that precede the development of the notion of "form" as we have understood it for the past two centuries.

Including these perspectives in their thinking will inevitably affect violinists preparing the movement for performance. There is, of course, no single "correct" way to perform any piece of music. And any thoughts introduced in the present discussion are only intended as suggestions to stimulate a violinist's imagination.

Recordings of the movement vary fairly widely in tempo. Often violinists known for extremely different styles of playing choose nearly identical tempos. For instance, two of the slowest recordings are one of the earliest recordings (by Yehudi Menuhin in 1935) and a performance by one of the violinists most concerned with replacing the legacy of nineteenth-century violin playing by a return to greater historical authenticity (Jaap Schröder), both of whom recorded the *Presto* at just under 210 eighths per minute (just under 70 per measure). Likewise, among the fastest recordings are those by Gidon Kremer, who averages 263 eighths per minute (about 88 per measure), and Joseph Szigeti, who averages 247 eighths per minute (about 82.5 per measure).[31]

A striking feature common to almost all recordings is the uniformity of bow strokes used throughout the movement, despite all the changes in surface figuration. Exceptions are most obvious in Jascha Heifetz's 1935 recording, which includes a much wider palette of bow strokes in the second reprise, and Jaap Schröder's recording, which projects different affects for the various sections of the movement.[32]

The uniformity of bow stroke and affect of most recordings approaches the implicit ideal behind the nineteenth-century *moto perpetuo* of the performer as a machine, producing an absolutely regular consistency of great speed and control despite the varying demands of different passages within a piece. To be sure, performances that attain that ideal are hair-raising—think, for instance, of Heifetz's unsurpassable tempo of sextuplets in his 1955 recording of the first movement of the *Suite*, op. 10, by Christian Sinding (1856–1941).[33] The speedy recordings of the *Presto* of the G-minor Sonata by Kremer and Szigeti—recordings that maintain their fast pace across all the changes in figuration—evoke the same ideal. The great nineteenth-century violin virtuoso Pablo de Sarasate made a tradition of performing the E-major *Preludio* in this manner, as witnessed by a recording cited earlier in this chapter. Is that ideal appropriate, however, for this *Presto*, with its continual heightening of activity levels and its wide range of figurations?

Another quite different performance tradition of the nineteenth and early twentieth centuries embraces a great deal of tempo shift, both above and below the basic tempo of a movement. As already noted in chapter 2 of this book, bias against rubatos over the basic tempo is a fairly modern phenomenon, arising only in the twentieth century.[34] I see no reason to believe that in ages prior to the widespread use of the metronome there was any way that performers were even fully aware of their divergences over time from the basic tempo of a movement. (After all, anyone who has ever practiced with a metronome is aware of the wizardry of that marvelous invention, which seems always to speed up and slow down at exactly the same places!)

The predilection of performers for varying tempos surely extended to performances of Bach's unaccompanied violin works. As noted in chapter 2, Joseph Joachim's recording of the *Adagio* of the G-minor Sonata includes noticeable tempo changes. And Adolf Busch (1891–1952), in a 1929 recording of the *Chaconne* (as part of a recording of the entire D-minor Partita), takes different passages at a fairly wide range of tempos.[35]

The Finales to the A-minor and C-major Sonatas

Like the *Presto* of the G-minor Sonata, the last movements of the two other solo-violin sonatas are in fast tempos with fast rhythmic values throughout (sixteenths and thirty-seconds in the A-minor *Allegro* and sixteenths with occasional eighths in the C-major *Allegro assai*) and feature two reprises, the second of which roughly follows the musical materials of the first, but intensified. As a result, each second reprise is longer than the comparable first reprise (10 measures longer in the A-minor *Allegro* and 18 measures longer in the C-major *Allegro assai*), because both of expanded materials and interpolations of new materials.

As we would expect of Bach, within these overall similarities each movement offers unique material and works with that material in unique ways. In the A-minor *Allegro*, most patterns in the first reprise recur in significantly more complex forms in the second reprise. The opening figure in m. 1, for instance, is a close-position arpeggio and scale but recurs with an octave leap and a neighbor figure in m. 25 (which places the clashing interval G–D♯ on consecutive eighths on the second and fourth beats, replacing the consonant E–C in the parallel positions in m. 1). The sixteenth-plus-thirty-seconds rhythm lasts only two beats in mm. 3–4 but extends almost to the very end of the measure in mm. 27–28. The regular up-and-down arpeggios of mm. 5–6 with the low and high notes on the beats recur in mm. 29–30 as irregular arpeggios with melodic peaks consistently on the second sixteenths of the beat. Similar intensifications elaborate most of the other patterns as they recur.

On a larger scale, the first reprise lays out two tonal areas, each of which clearly expresses its tonic as soon as the key arrives: i in mm. 1–11

and v. The second reprise, by contrast, uses the same thematic material to roam through four separate tonal areas, all of which except the first avoid a strong statement of their tonic chord for a while: **v** in mm. 25–33, **♭VII** in mm. 34–36 (with a weak cadence in the middle of m. 36), **III** in mm. 37–44 (with a cadence in the middle of m. 44), and **i** in mm. 45–58. The closing key of the first reprise features two cadences (in mm. 19 and 24), but the second reprise features three cadences: in the middles of mm. 53 and on the downbeat of m. 56 and then that fantastically imaginative chromatic passage in mm. 56–58—the sole passage marked *piano* in the entire solo-violin cycle that is not part of an echo effect—that leads to a transposition of the cadence that ended the first reprise.

In the C-major *Allegro assai*, the two reprises contain more literal transpositions than in the A-minor *Allegro*. Thus the first dozen measures of the second reprise are an absolutely literal transposition of mm. 1–12. Likewise, the closing six measures of the two reprises are literal transpositions of each other—but with one significant alteration. These measures in the first reprise stubbornly insist on maintaining the minor form of the dominant, changing to the more typical dominant major only in the very last measure, as if presenting a Picardy third in a movement in the minor key that had modulated to the minor dominant (like the end of the first reprise in the G-minor *Presto*). In the second reprise, Bach changes to the major mode one measure earlier, even inserting a cautionary natural sign (one of the very few cautionary accidentals in the entire manuscript) to make absolutely clear that the sonata ends in the major mode.

But despite these parallelisms, the second reprise extends and intensifies music from the first reprise in many ways. Mm. 1–12 lead to a reinforcing cadential progression in the tonic in m. 14, whereas the subsequent music in the second reprise omits anything parallel to mm. 13–14, instead continuing the preceding material and then using parallel materials from the first reprise to move through several new tonal areas. Thus the dominant pedal in mm. 21–26 is still in the original tonic key, whereas the parallel passage in mm. 69–74 is on the dominant of **ii**. And the soaring stratospheric dominant pedal in mm. 89–92—reminiscent of several of the arpeggiating and string-crossing dominant pedals earlier—forms one of the highest and most virtuosic passages in the entire cycle of solo-violin works.

SIX

The Partitas

Bach's solo-violin cycle alternates between sonatas and series of stylized dances. Chapters 2–5 of this book study the first sonata in detail and comment on the two others, touching on a number of principles that concern the structure and aesthetics of Baroque compositions and of Bach's own style. This chapter surveys some aspects of the three solo-violin partitas.

Series of Dance Movements

Whereas the three solo sonatas all contain four movements in the same order (a slow movement and fugue that form a prelude-fugue pair, a different sort of slow movement in some sort of parallel-section structure, and a fast finale with two reprises), the three partitas differ considerably from one another in their number and type of movements. The D-minor Partita has five movements, the E-major seven, and the B-minor eight. But these numbers do not accurately reflect the variety of these pieces. The D-minor Partita has the fewest movements yet is by far the longest because it ends with the monumental *Chaconne*. (Indeed, the D-minor Partita has fewer movements than any of Bach's keyboard suites or partitas yet lasts longer than any of them.) The B-minor Partita includes the most movements yet has the fewest dance types, since four of its eight movements are "doubles" (or variations on the preceding dance).

All in all, the partitas comprise 20 movements of 11 different types: nine types of dances (two each of allemandes, bourrées, correntes, sarabandes, and minuets and one loure, gavotte, gigue, and chaconne) plus one prelude and four doubles.[1] And in those dance types that recur, the two instances often contrast significantly with each other. The *Allemande* in the D-minor Partita features a variety of steady rhythms (mostly sixteenths and sixteenth-triplets, with occasional pairs of thirty-seconds), whereas