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## Bach's Tempo Ordinario: A Plaine and Easie Introduction to the System

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## A Plaine and Easie Introduction to the System\*

# Robert L. Marshall

The initial impetus for this inquiry came from a question posed by Arthur Mendel during a coffee break in a Bach seminar some thirty years ago. Why, he asked, did Bach notate the last movement of the fifth Brandenburg Concerto in two-four time, with triplets (Ex. 1):

Example 1. Brandenburg Concerto No. 5, BWV 1050/3, original notation



rather than in six-eight time (Ex. 2)?

Example 2. Brandenburg Concerto No. 5, BWV 1050/3, hypothetical version



At the least, the composer could have avoided any ambiguity as to whether the upbeat was to be rendered as a strict sixteenth or assimilated into the prevailing triplet pattern. Mendel offered no definitive explanation for Bach's puzzling notation, but he suggested that the reason probably had to do with the desired tempo.

As to that tempo: Bach informs us in this case that it is to be *allegro*. But he obviously could have put the same designation above a 6/8 movement just as well. At all events, it is worth noting that Bach frequently provides tempo designations for movements in instrumental ensemble works; moreover, the markings are often quite nuanced; for example *adagio o vero*

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*Largo* (in the Concerto for Two Harpsichords *senza ripieno*, BWV 1061a),<sup>1</sup> *allegro moderato* (in the Sonata for Viola da Gamba and Harpsichord, BWV 1027), *andante un poco* (in the Sonata for Violin and Harpsichord, BWV 1015).

In other repertories, however, Bach's practice is altogether different. Tempo designations are notoriously rare, for example, in Bach's organ and keyboard compositions, apart from dance-headings in suite movements. Of the 96 movements of the *Well-Tempered Clavier*, only seven carry tempo marks: the B-minor prelude and fugue of Book I, the preludes in G minor and B minor of Book II, and the closing sections of the C-minor and E-minor preludes of Book I and of the C#-major prelude of Book 2.

In the vocal works, the very limited presence (and, implicitly, the equally limited need) of tempo indications is just as striking. They appear in the sources of about 120 of Bach's 250 extant vocal compositions.<sup>2</sup> But that number is misleading; for typically only one movement—occasionally two (hardly ever more than two)—of a vocal work has a tempo marking. Accordingly, if we take the average number of movements in a vocal composition to be seven, then Bach's surviving vocal works contain some 1,750 movements, of which well over ninety percent get by with no tempo markings.

In an earlier study I presented a preliminary compilation of tempo designations in the Bach sources and attempted to draw some practical lessons from them.<sup>3</sup> I suggested that tempo

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<sup>1</sup>The tempo designation in the surviving set of parts is autograph. In the sources for the more familiar version of this concerto, with ripieno accompaniment in the outer movements, BWV 1061 (all dating no earlier than the second half of the eighteenth century) the second movement is marked simply *adagio*. See *Johann Sebastian Bach: Neue Ausgabe sämtlicher Werke* [*Neue Bach-Ausgabe*; hereafter *NBA*], ser. 7, vol. 5, ed. Karl Heller and Hans-Joachim Schulze (Kassel: Bärenreiter, 1985), *Kritischer Bericht* (1990) [hereafter *KB*].

<sup>2</sup>The original sources that survive for approximately 225 vocal works by Bach consist of about 170 autograph scores and 175 sets of original performing parts. For some 125 compositions both the scores and the parts survive; about 50 works are transmitted only in scores, while another 50 survive only in the original parts. Finally, some 25 vocal compositions are preserved only in secondary sources. (Owing to the difficulties and ambiguities entailed in establishing a precise, definitive count, it seems prudent to present these and the following statistics rounded off to the nearest five.)

Occasional tempo marks appear in some 95 of the 175 sets of parts and in about 40 of the 170 autograph scores. (Almost half of the 40 autographs containing tempo indications, incidentally, are composing scores.) Since there is an overlap of about twenty works among these 135 "marked" sources (i.e., about twenty compositions survive in both a score and a set of parts containing tempo indications), a total of about 115 vocal compositions are transmitted with tempo indications in original sources. When one adds to this number the five vocal works containing tempo indications that survive only in secondary sources, one arrives at the number of 120 for vocal compositions with tempo indications.

<sup>3</sup>Robert L. Marshall, "Tempo and Dynamic Indications in the Bach Sources: A Review of the Terminology," in *Bach, Handel, Scarlatti: Tercentenary Essays*, ed. Peter Williams (Cambridge, 1985), 269-75; reprinted in slightly

markings were rarely necessary in keyboard works, since the choice of tempi in a solo repertory could be left to the taste and skill of the performer. I remarked further that in vocal works “character and meaning of the text normally suffice to define the *Affekt* and thereby suggest the appropriate tempo.”<sup>4</sup> I could also have mentioned that, since Bach himself normally conducted the performances of his vocal music, he was able to dictate the desired tempo of every number in every composition with complete precision and therefore really had no need to write down any tempo indications in this repertory at all. But then, why are there any at all?

There is yet another well-known reason why Bach’s music, like that of his contemporaries, makes so little use of tempo markings. The tempo of a baroque composition was not just implicit in its *Affekt*: it was embodied in the notation. Musical practice in the early eighteenth century was still predicated on the (pre)existence of a normal, relatively constant beat—a *tempo ordinario*—whose rate was linked to such natural human activities and functions as the leisurely stride and, more commonly, to the human pulse rate. This association made its first documented appearance in the *Musica practica* of Ramos de Pareia (1482), and was still invoked almost three hundred years later in Johann Joachim Quantz’s flute treatise of 1752.<sup>5</sup>

There is no doubt about the relevance of the *tempo ordinario* to a proper historical understanding of tempo in Bach’s music. Nonetheless, the composer’s own understanding of the concept does not seem to have received much systematic investigation. The possibility that Bach’s time signatures prescribe proportionally related tempi, however, has been argued by Walter Gerstenberg and Ulrich Siegele.<sup>6</sup> Most recently Don O. Franklin has reopened the issue in

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revised form in: Robert L. Marshall, *The Music of Johann Sebastian Bach: The Sources, the Style, the Significance* (New York: Schirmer Books, 1989), 255-70. Further references are to the revised version.

<sup>4</sup>Marshall, 268.

<sup>5</sup>See Curt Sachs, *Rhythm and Tempo: A Study in Music History* (New York: Norton, 1953), 202-203. Quantz writes in his famous chapter on accompaniment (Chapter 17): “The means that I consider the most useful as a guide for tempo is the more convenient because of the ease with which it is obtained, since everyone always has it upon himself. It is the pulse beat at the hand of a healthy person.” Johann Joachim Quantz, *On Playing The Flute*, trans. Edward R. Reilly, 2nd ed. (New York, 1985), 283. The original reads: “Das Mittel welches ich zur Richtschnur des Zeitmaaßes am dienlichsten befinde, ist um so viel bequemer, je weniger Mühe es kostet, desselben habhaft zu werden, weil es ein jeder immer bey sich hat. Es ist **der Pulsschlag an der Hand eines gesunden Menschen**” [Boldface in the original]. Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversiere zu spielen*, 3rd ed. (Breslau: Johann Friedrich Korn, 1789); facsimile edition, ed. Hans-Peter Schmitz (Kassel: Bärenreiter, 1953), 261.

<sup>6</sup>Walter Gerstenberg, “Die Zeitmasse und ihre Ordnungen in Bachs Musik,” *Freunde der Bachwoche Ansbach: Jahresgabe 1952*; repr. in *Johann Sebastian Bach*, ed. Walter Blankenburg, Wege der Forschung, 170 (Darmstadt: Wissenschaftliche Buchgesellschaft, 1970): 129-149; Ulrich Siegele, “Zur Verbindung von Praeludium und Fuga bei J. S. Bach,” *Kongreßbericht Kassel 1962*, 164-67; and Siegele, “Bemerkungen zu Bachs Motetten,” *Bach-Jahrbuch 1962*, 33-57.

two provocative studies that postulate the existence of specific, proportional, tempo relationships obtaining between consecutive sections or movements of a work—between a prelude and the following fugue, or between successive movements of a cantata or mass—based on the conspicuous or anomalous absence, in original or reliable sources, of a fermata between the affected movements.<sup>7</sup>

For the rest, most observers have been content merely to acknowledge the existence of the *tempo ordinario* and its pertinence for Bach.<sup>8</sup> Erwin Bodky, however, in an ambitious effort, divided the keyboard works into groups sharing the same time signatures, similar rhythmic patterns, and presumably similar affective qualities; he thereupon proceeded to assign an appropriate tempo to each group and each work.<sup>9</sup> As Bodky concedes, however, such an endeavor, even when carried out with intelligence and sensitivity, is subjective and inevitably “arbitrary” (p. 120).

What follows does not pretend to be a comprehensive study of the vast and elusive issue of tempo in the music of Bach. On the contrary, its objective is quite limited: to formulate a small number of simple propositions, or “rules,” that enunciate in concise fashion the general principles that seem to be governing Bach’s notational practices with respect to rhythm and meter insofar as they may have implications for determining the tempo—or the tolerable tempo range—of a composition. In contrast to the studies of Gerstenberg, Siegele, and Franklin, the focus here is primarily on the individual, continuous, work or movement. But, needless to say, any conclusions that may be drawn here regarding the tempo of individual movements will inevitably carry consequences for the tempo relationship that may obtain between paired or adjacent movements or among the sections of larger compositions.

The fundamental premise underlying the present attempt is that Bach’s notational practice not only assumed a *tempo ordinario*, but that it was in essence a system and, accordingly (at least in principle), that it was both rational and consistent. The assumption that Bach’s notation embodies a rational system suggests, among other things, that Bach must have had a

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<sup>7</sup>See Don O. Franklin, “Die Fermate als Notationsmittel für das Tempoverhältnis zwischen Präludium und Fuge,” in *Beiträge zur Bachforschung 9/10. Bericht über die Wissenschaftliche Konferenz zum VI. Internationalen Bachfest der DDR, Leipzig 1989* (Leipzig, 1991), 138-56; and Franklin, “The Fermata as Notational Convention in the Music of J. S. Bach,” in *Convention in Eighteenth- and Nineteenth-Century Music: Essays in Honor of Leonard G. Ratner*, ed. Wye J. Allanbrook, Janet M. Levy, and William P. Mahrt (New York: Pendragon Press, 1992), 345-81.

<sup>8</sup>See, for example, Hermann Keller, *Das Wohltemperierte Klavier von Johann Sebastian Bach: Werke und Wiedergabe* (Kassel: Bärenreiter, 1965), especially 32-33. The most extensive discussion of the topic appears in Thomas E. Hoekstra, “Tempo Considerations in the Choral Music of Johann Sebastian Bach” (Ph.D. dissertation, University of Iowa, 1974). See also the helpful review of some of the main issues in Paul Badura-Skoda, *Bach-Interpretation: Die Klavierwerke Johann Sebastian Bachs* (Laaber, 1990), 81-98.

<sup>9</sup>Erwin Bodky, *The Interpretation of Bach’s Keyboard Works* (Cambridge, MA: Harvard University Press, 1960).

"reason" for notating the Brandenburg theme as shown in Example 1 rather than in the simpler notation of Example 2; it would have been irrational, in a rational system, to choose a more complicated notation over a simpler one, if both notations had exactly the same meaning.

As to the system's consistency: here the converse should hold, i.e., the same notation should mean the same thing from work to work. But in all things human consistency has its limits. Bach's notation undeniably contains its share of idiosyncrasies, redundancies, ambiguities and arbitrary elements—as much as any other man-made system: human language, for example. Moreover, even a perfectly consistent system, in the hands of a fallible mortal, could be used less than perfectly; and we must assume that even Johann Sebastian Bach may, on occasion, have notated a work in one way when another would have been more appropriate or effective. He could have done so through thoughtlessness—or perhaps as a matter of expediency.

### I. The tempo of the *tempo ordinario*

During the baroque era the normal tempo was referred to as either *tempo ordinario* or *tempo giusto*.<sup>10</sup> According to Sébastien de Brossard, however, *tempo ordinario* primarily designated common time in contemporary Italian usage.<sup>11</sup> Handel seems to have had both meanings in mind when he employed the heading *a tempo ordinario* for movements in common time like the choruses "Lift up your heads" and "Their sound is gone out" from *Messiah*. Bach, for his part, evidently never made use of the expression *tempo ordinario*; but *a tempo giusto* appears at least three times in his compositions.<sup>12</sup> In all three instances the purpose of the term is clearly not to suggest a particular tempo but rather to prescribe strict, i.e., measured time in a recitative-like movement. That is, Bach uses the term exactly as he does *a tempo* and *a battuta*.<sup>13</sup>

By far the most common meter in Bach's music is common time. Therefore, it seems safe to designate the quarter-note in *c* time as representing the normal, "ordinary" beat. As Curt Sachs pointed out, "the metronomical value of both . . . the stride and the heartbeat lies between M.M. 60 and M.M. 80."<sup>14</sup> Since contemporary accounts testify that Bach's normal tempo was "very

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<sup>10</sup>See David Fallows, "Tempo giusto," and "Tempo ordinario," *The New Grove Dictionary of Music and Musicians*, 6th ed. (London: Macmillan Publishers, 1980), 18: 685.

<sup>11</sup>Sébastien de Brossard, *Dictionnaire de Musique*, 2<sup>nd</sup> ed. (Paris: Christophe Ballard, 1705; repr. Hilversum: Frits Knuf, 1965), 154.

<sup>12</sup>In the heading of the *Choral et Recit à tempo giusto*, "Auf sperren sie den Rachen weit," BWV 178/5 (composed for 30 July 1724); at the arioso passage (m. 13) of "Wenn einstens die Posaunen schallen," BWV 127/4 (composed for 11 February 1725); and in the heading of the recitative "Hochteurer Mann," BWV 210/9 (composed between 1738 and 1741).

<sup>13</sup>The term *a tempo giusto* should have been listed along with *a tempo* and *a battuta* in Marshall, n. 25.

lively,”<sup>15</sup> it seems historically justified to posit the speed of Bach’s normal beat—his personal *tempo ordinario*—at the high end of the normal human pulse rate: namely, M.M. = approximately 80. If we can believe Quantz’s assertion that during Bach’s generation tempi were quite a bit slower than during his own, then we can be quite certain that a basic beat of M.M. 80 would have struck Bach’s contemporaries as a “very lively” tempo, indeed.<sup>16</sup>

It cannot be emphasized sufficiently that the *tempo ordinario*, whether defined as ♩ = M.M. 80 or anything else, was by no means a fixed metronomic point but rather—like baroque chamber pitch—encompassed a fairly generous amplitude. This is already clear from its traditional association with such a variable standard as the human pulse. In Bach’s case it may have extended from M.M. 72 to 88—or even further—in each direction, depending on the acoustical conditions, the technical abilities of the musicians, and any number of ineffable subjective circumstances of the moment. Nonetheless, in light of Bach’s documented preference for “very lively” tempi, I shall adopt M.M. 80 for the calculations to follow, even though the figure 72, being readily divisible by 2, 3, 4, 6, and 12, would be more convenient.

Now to our postulates. We begin with the following six rules:

#### Time Signatures

1. The principal considerations in the choice of time signature are (a) the rate of surface motion, and (b) the grouping of surface rhythms.
2. The numerator establishes the organization of the meter (duple, triple, compound) by defining the groupings of the various rhythmic levels.
3. The denominator establishes the unit of measure—and the approximate speed—as derived from the normal binary ratios prevailing under *tempo ordinario*.

#### Time Signatures and Note-Values

4. The choice of denominator determines the usual number of subdivisions of the beat: the lower the denominator (2 or 4), the larger the number of subdivisions available.

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<sup>14</sup>Sachs, *Rhythm and Tempo*, 203. The medical profession puts the average human pulse rate at 72 per minute. See Hoekstra, 12.

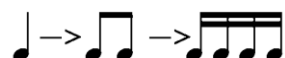
<sup>15</sup>In the words of the *Necrolog*: “und im Zeitmasse, welches er gemeiniglich sehr lebhaft nahm, [war er] überaus sicher” (“of the tempo, which he generally took very lively, he was uncommonly sure.”) Translated in Hans T. David and Arthur Mendel, *The Bach Reader*, 2nd ed. (New York: Norton, 1966), 222; original in Hans-Joachim Schulze, ed., *Bach-Dokumente, III: Dokumente zum Nachwirken Johann Sebastian Bachs* (Kassel: Bärenreiter, 1972), 87.

<sup>16</sup>“What in former times was considered to be quite fast would have been played almost twice as slow as in the present day.” Quantz, *On Playing The Flute*, 285. (“Was in vorigen Zeiten recht geschwind gehen sollte, wurde fast noch einmal so langsam gespielt, als heutiges Tages.” *Versuch einer Anweisung*, 263)

5. Conversely, the higher the denominator (8 or 16), the fewer subdivisions available.
6. By the same token, the higher the denominator (8 or 16) the larger the number of multiples (macro-groupings) of the beat available.

Rules 1 and 2 are self-evident and need no explanation. Rule 3, on the contrary, is crucial to all that will follow here. It maintains that the unit of measure established by the denominator is always derived from the *binary* ratios prevailing under *tempo ordinario*. That is: if the denominator is 4, then the unit of measure is the quarter-note; if the denominator is 8, then the unit of measure—but not necessarily the beat—is an eighth-note normally twice as fast as the quarter. That is, if the ♩ = M.M. 80, then the ♪ = M.M. 160. (The actual beat under an 8-denominator, however, is often the dotted quarter.)

The practical consequences of Rules 4, 5, and 6 regarding the relationship between the denominator and the number of subdivisions (or multiples) of the beat are these: In *c* or 3/4 time (i.e., low denominators) there are normally two active subdivisions of the quarter-note beat—eighths and sixteenths—which accommodate the prevailing units of rhythmic activity:



In 3/8 or 6/8 time, on the other hand (i.e., high denominators) there is normally only one significant subdivision of the eighth-note beat—sixteenths: ♪ → ♩. And there is generally no subdivision at all of the sixteenth-note unit under 16-denominator signatures. Rule 6, finally, attests to the phenomenon of increasing numbers of beat multiples (at the expense of subdivisions) available under the higher denominators, namely: four with denominator 8: 3/8, 6/8, 9/8, 12/8; five (theoretically six) with denominator 16: (3/16), 6/16, 9/16, 12/16, 18/16, 24/16.

In application these propositions produce the following patterns of metrical organization (Table 1):

Table 1  
Patterns of Metrical Organization

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I. Unit (Denominator) = ♩ (=M.M. “80”)

Time Signatures: 2/4, 3/4, *c*, 6/4

a. Simple binary divisions on all rhythmic levels:

Subdivision 2: ♪ = 320 (2 X 160)

Subdivision 1: ♩ = 160 (2 X 80)



Beat:  $\text{♩} = 80$

b. Ternary division of the quarter:

Subdivision 2:  $\text{♩} = 480 (2 \times 240)$



Subdivision 1:  $\text{♩} = 240 (3 \times 80)$



Beat:  $\text{♩} = 80$



c. Ternary division of the eighth:

Subdivision 2:  $\text{♩} = 480 (3 \times 160)$



Subdivision 1:  $\text{♩} = 160 (2 \times 80)$



Beat:  $\text{♩} = 80$



II. Unit (Denominator) =  $\text{♩}$  (= M.M. "160," i.e.,  $2 \times 80$ )

Time Signatures: 3/8, 6/8, 9/8, 12/8

Subdivision 1:  $\text{♩} = 320$  (binary grouping)



Beat:  $\text{♩} = 160$



Multiple:  $\text{♩} = >52$



III. Unit (Denominator) =  $\text{♩}$  (= M.M. "320," i.e.,  $4 \times 80$ )

Time Signatures: 6/16, 9/16, 12/16, 18/16, 24/16

"Beat":  $\text{♩} = 320$  (ternary grouping)



Multiple 1:  $\text{♩} = <108 [\text{♩} = 160]$



Multiple 2:  $\text{♩} = >52$



An immediate attraction of this schema is that it draws a meaningful tempo distinction between triplet subdivisions (triplet eighths) in 4-denominator meters and the eighths in compound 8-denominator meters. It thus offers an answer to our original question about the theme from the fifth Brandenburg Concerto. Example 1 is based on a quarter-note pulse. Accordingly, if  $\text{♩} = \text{M.M. } 80$ , then the triplet eighths proceed at a rate of 240, and the sixteenth notes at a quite brisk 480. This tempo is perhaps reflected in the *allegro* heading, but presumably it would have prevailed even in the absence of a tempo designation. (The primary purpose of the

tempo marking here was surely to confirm the re-establishment of the *tempo ordinario* after the *Adagio/Affettuoso* second movement.)<sup>17</sup> Had Bach notated the movement in 6/8—analogous to his choice of *Allegro* 12/8 for the final movement of the sixth Brandenburg concerto—the prevailing unit of motion, according to our model, would have been a leisurely ♩ = M.M. 160, with the sixteenths at 320—a tempo in effect too slow by a third ([♩] 160: 240 = [♩] 320: 480 = 2: 3).<sup>18</sup>

The variety of meters (and, consequently, of tempi) encountered among the final movements of the six Brandenburg Concertos is striking (Ex. 3). In addition to the curious meter of the fifth Brandenburg we find 3/4 *Menuet*, 2/4 *Allegro assai*, 12/8 *Allegro* (prevailing sixteenths), ♩ *Presto*, 12/8 *Allegro* (prevailing eighths):<sup>19</sup>

Example 3. The Final Movements of the Brandenburg Concertos: Incipits

a. BWV 1046/4

**Menuet**



b. BWV 1047/3

**Allegro assai**



c. BWV 1048/2

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<sup>17</sup>The heading of the movement in the autograph score and in the solo parts reads *Affettuoso*, but the indication in the *tacet* (but likewise autograph) ripieno parts for this movements reads *Adagio tacet*. See *Brandenburgische Konzerte*, facsimile edition of the autograph score, ed. Peter Wackernagel (Leipzig: Edition Peters, [1960]); and *Brandenburgisches Konzert Nr. 5, D-Dur, BWV 1050*, facsimile edition of the original parts, ed. Hans-Joachim Schulze (Leipzig: Edition Peters, 1975).

<sup>18</sup>As for the treatment of the dotted notes in the finale of the fifth concerto, they are to be assimilated with the triplets. According to his pupil, Johann Friedrich Agricola, Bach assimilated the rhythms "in extremely fast tempi" (bey der äußersten Geschwindigkeit). See Erwin R. Jacobi, "Neues zur Frage 'Punktierte Rhythmen gegen Triolen' und zur Transkriptionstechnik bei J. S. Bach," *Bach-Jahrbuch* 1962: 88-96, especially p. 90.

<sup>19</sup>A tempo of about ♩ = ca. M.M. >52 (♩ = ca. M.M. 160) for the final movement of the sixth concerto—or for the opening 3/8 *Allegro* movement of the fourth concerto—as implied by the use of the 8-denominator, may, admittedly, seem too slow for modern listeners accustomed to high tech tempi.



d. BWV 1049/3



e. BWV 1051/3



Our table asserts further that 6/8 and 12/16 prescribe the same rate of motion for the smallest prevailing note values, viz.,  $\text{♪} = 320$ , but grouped differently (3 X 2 instead of 2 X 3) (Ex. 4).

Example 4

a. *Well-Tempered Clavier*, Book I: Fugue in G major, BWV 860/2



b. *Well-Tempered Clavier*, Book II: Fugue in C# Minor, BWV 873/2



On the other hand, the rate of motion on the next higher rhythmic level diverges substantially: 6/8  $\text{♪} = 160$  vs. 12/16  $\text{♪} = <108$  (i.e., one-third of 320).

If Bach wanted a rate for ternary sixteenths substantially quicker than M.M. 320, then he notated them as triplet sixteenths in  $\text{c}$  time (Ex. 5):

## Example 5

a. *Well-Tempered Clavier*, Book I: Prelude in D minor, BWV 851/1



b. *Well-Tempered Clavier*, Book II: Fugue in D minor, BWV 875/2



This distinction may explain Bach's occasional use of the double time signatures  $\text{C}+12/8$ ,  $\text{C}+24/16$ , or  $3/4+18/16$ . Their purpose, presumably, is to retain the quarter-note as the unit of measure—along with its implications for the *tempo ordinario*—but with the internal organization of the compound meter. That is, the double time signature is presumably synonymous with a simple 4-denominator signature with triplet indications for the sixteenths—but spared the composer the bother of adding innumerable triplet signs (Ex. 6):

Example 6. *Well-Tempered Clavier*, Book I: Prelude in G major, BWV 860/1



Whenever duple and triple subdivisions of the same unit were to be combined, however, then Bach was obliged to choose a 4-denominator—regardless of the desired tempo (Ex. 7):<sup>20</sup>

Example 7. *Well-Tempered Clavier*, Book II: Fugue in D minor, BWV 875/2, m. 6



<sup>20</sup>Bach did not have a notation that would have enabled him to prescribe duplets in a compound meter.

## II. Modifications of the *tempo ordinario*

We must now introduce two further rules:

7. As the normal number of subdivisions of a beat is exceeded, the pulse rate is retarded.
8. Conversely, if the normal number of subdivisions of the beat is not used, the pulse rate is accelerated.

Rule 7 explains that the introduction, for example, of thirty-second notes in  $\text{♩}$  time as the prevailing unit of rhythmic activity slows the beat to below  $\text{♩} = \text{M.M. } 80$ ; and the introduction of sixteenth-notes in  $\text{♩}$  time as the prevailing unit of activity slows the beat to below  $\text{♩} = \text{M.M. } 80$ . Rule 8, for its part, reveals that in a composition in 9/8 with few or no sixteenths the beat is faster than in a 9/8 composition with prevailing sixteenth-note motion. (See below.)

Rules 7 and 8 acknowledge and confirm the importance attached by eighteenth-century theorists to the smallest prevailing note values in a composition in determining the proper tempo. According to C. P. E. Bach:

“The pace of a composition, which is usually indicated by several well-known Italian expressions, is based on its general content as well as on the fastest notes and passages contained in it. Due consideration of these factors will prevent an allegro from being rushed and an adagio from being dragged.”<sup>21</sup>

Bach’s pupil Johann Philipp Kirnberger is more specific:

“Regarding note values, dance pieces involving sixteenth and thirty-second notes have a slower tempo than those that tolerate only eighth and at most sixteenth notes as the fastest note values in the same meter . . . thus the tempo giusto is determined by the meter and by the longer and shorter note values of a composition.”<sup>22</sup>

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<sup>21</sup>Carl Philipp Emanuel Bach, *Essay on the True Art of Playing Keyboard Instruments*, translated by William J. Mitchell (New York, 1949), 151. The original reads: “Der Grad der Bewegung läßt sich so wohl nach dem Inhalte des Stückes überhaupt, den man durch gewisse bekannte italiänische Kunstwörter anzuzeigen pflegt, als besonders aus den geschwindesten Noten und Figuren darinnen beurtheilen. Bey dieser Untersuchung wird amn sich in den Stand setzen, weder im Allegro übereilend, noch im Adagio zu schläfrig zu werden.” Carl Philipp Emanuel Bach, *Versuch über die wahre Art, das Clavier zu spielen*. Facsimile reprint of the 1st edition (Berlin, 1753 and 1762), ed. Lothar Hoffmann-Erbecht (Leipzig: VEB Breitkopf & Härtel, 1957), 121.

<sup>22</sup>Johann Philipp Kirnberger, *The Art of Strict Musical Composition*, trans. David Beach and Jurgen Thym (New Haven, 1982), 377. The original reads: “In Ansehung der Notengattungen haben die Tanzstücke, worin Sechszehntel und Zweyunddreyßigtheile vorkommen, eine langsamere Taktbewegung, als solche, die bey der nemlichen Taktart nur Achtel, höchstens Sechszehntel, als die geschwindesten Notengattungen vertragen...Also wird das *Tempo giusto* durch die Taktart und durch die längeren und kürzeren Notengattungen eines Stückes

*Tempo Designations.* We may reasonably assume that Bach resorted to verbal tempo designations in order to refine or modify the tempi that would otherwise have been implied by the usual combinations of time signatures and rhythmic values. My earlier survey revealed that there are no fewer than forty-five tempo designations in the Bach sources, of which the six principal terms, in order of increasing velocity, are: *adagio*, *largo*, *andante*, *allegro*, *vivace*, and *presto*. Moreover, *allegro* could be shown, under normal circumstances, i.e. with a quarter-note unit and prevailing sixteenth-note motion, to represent—or, more commonly, to restore—the *tempo ordinario*.<sup>23</sup> Example 8 provides a representative sampling of Bach's use of the most common tempo designations.

#### Example 8

- a. Sonata in G minor for Unaccompanied Violin, BWV 1001/1



- b. Sonata in C major for Unaccompanied Violin, BWV 1005/1



- c. Mass in B minor: Opening of Kyrie I, BWV 232/1




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bestimmt." Johann Philipp Kirnberger, *Die Kunst des reinen Satzes in der Musik* (Berlin, 1776-9; facs. repr. Hildesheim: Olms-Verlagsbuchhandlung, 1968), 2:107.

<sup>23</sup>Marshall, "Tempo," 264ff.

[m.5] **Largo**

d. Sonata in C Major for Unaccompanied Violin, BWV 1005/3

**Largo**

e. Concerto in C Major for Two Harpsichords, BWV 1061a/2

**Adagio o vero Largo**

f. Concerto in the Italian Style, BWV 971/2

**Andante**

*piano*

*forte*

## g. Sonata for Violin and Cembalo obbligato, BWV 1015/3

**Andante un poco**

[Violin]

*staccato sempre*

## h. Sonata for Violin and Cembalo obbligato, BWV 1019/1

**Allegro**

[Violin]

[Cembalo]

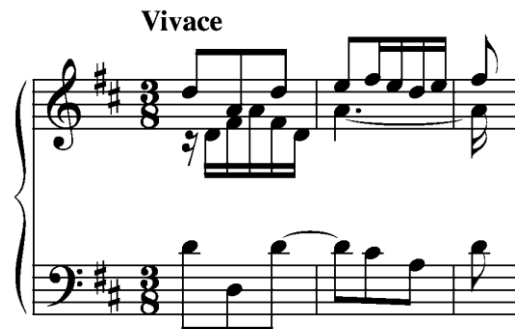
## i. Sonata for Flute and Cembalo obbligato, BWV 1032/1

**Vivace**

[Cembalo]



## j. Mass in B minor: Opening of Gloria, BWV 232/4



[m. 25]



## k. Clavier Toccata in F# Minor, BWV 910/3



## l. Concerto in the Italian Style, BWV 971/3



The frequent association of the slowest of Bach's common tempo designations, *adagio* (or its synonyms *lento* and *grave*) with prevailing thirty-second note motion strongly suggests that the term normally (but not invariably) signaled something approaching a simple augmentation or doubling of the duration (or perhaps the subdivision) of the beat. At the other extreme, too, *presto* presumably increases the speed of the beat beyond *allegro* (i.e., the *tempo ordinario*) in some simple ratio. As a matter of practicality, given the "liveliness" of Bach's *tempo ordinario*, that ratio is hardly likely to exceed 3:2. We can, then, assign the following approximate "real time" values to the mid and endpoints of Bach's tempo designations:

$$\text{adagio } \text{c} \downarrow = \text{ca. } 40 \qquad \text{allegro } \text{c} \downarrow = \text{ca. } 80 \qquad \text{presto } \text{c} \downarrow (\text{c} \downarrow \downarrow) = \text{ca. } 120$$

As for the remaining terms: Despite the occasional, inevitable, inconsistencies the basic conceptual framework—and Bach's practice in general—places *andante* between *adagio* and *allegro*, *largo* between *adagio* and *andante*, and *vivace* between *allegro* and *presto*.<sup>24</sup> Table 2 summarizes, and attempts to concretize, these relationships.

Table 2  
Bach's Principal Tempo Designations  
(with Hypothetical Metronomic Values)

Designation	Tempo Unit	M.M. Value
<i>adagio</i>	$\text{c} \downarrow$	= ca. 40
<i>largo</i>	$\text{c} \downarrow$	= ca. 50?
<i>andante</i>	$\text{c} \downarrow$	= ca. 60
<i>allegro</i>	$\text{c} \downarrow$	= ca. 80 ( <i>tempo ordinario</i> )
<i>vivace</i>	$\text{c} \downarrow$	= ca. 100
<i>presto</i>	$\text{c} \downarrow (\text{c} \downarrow \downarrow)$	= ca. 120

Once again, these metronomic values must be understood as representing the hypothetical medians of normal ranges extending perhaps as much as ten metronomic points in either direction. It is certainly clear from the extensive thirty-second note figuration in the second movement of the "Italian" Concerto (Ex. 8f), for example, that the tempo in this instance must be considerably closer to  $\downarrow = 50$  than to  $\downarrow = 60$ . The primary purpose of the *andante* designation for this movement, no doubt, is to avoid the excessively slow (*adagio*) tempo otherwise suggested by the prevalence of thirty-second notes.

<sup>24</sup>The argumentation is set forth in Marshall, "Tempo," 265-67.

Moreover, Bach did not observe these terminological distinctions rigidly. Don O. Franklin has argued persuasively that in the Organ Prelude and Fugue in G major, BWV 541, the tempo relationship between the prelude—in 3/4 time and marked *vivace*—and the fugue—in common time and with no tempo marking (i.e., implicitly *allegro*)—is  $3/4 \text{ } \underline{\text{♩}} = \text{♩}$ , i.e., 3:2 (Ex. 9).<sup>25</sup>

Example 9. Prelude and Fugue in G major for Organ, BWV 541

Praeludium  
**Vivace**

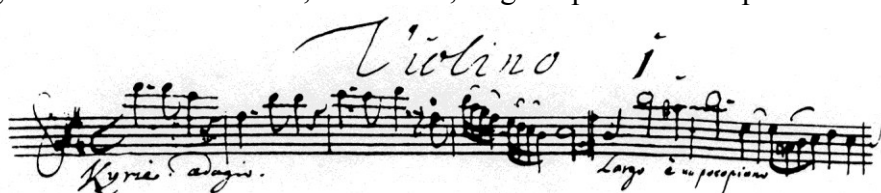


Fuga



Nor is it certain that *largo* should invariably be understood as prescribing a significantly different (i.e., faster) tempo than *adagio*. In the Concerto for Two Harpsichords, BWV 1061a, Bach seems to have equated the two. On the other hand, the successive autograph indications *adagio... largo* at the beginning of the Mass in B minor strongly suggests a meaningful distinction between them. (See Figure 1 and Exx. 8c and 8e.)

Figure 1. Mass in B Minor, BWV 232, original performance parts



<sup>25</sup>Franklin, “The Fermata,” 353 and 356.

There are, then, always exceptions. In some compositions the *tempo ordinario* undoubtedly remains unchanged despite the presence of thirty-seconds in a clearly ornamental context (Ex. 10),

Example 10

a. *Well-Tempered Clavier*, Book I: Fugue in D major, BWV 850/2



b. *Well-Tempered Clavier*, Book I: Prelude in B $\flat$  Major, BWV 866/1



or in virtuoso passage work of the sort displayed, for example, in the cadenza of the fifth Brandenburg Concerto. For its part, an *adagio* designation need not be associated either with thirty-second notes or, apparently, with anything like a strict augmentation of the *tempo ordinario*. The aria “Mein teurer Heiland” from the St. John Passion carries a double time signature: 12/8 in the basso solo and continuo parts and  $\text{C}$  in the chorus parts (and its colla parte instruments), along with an *adagio* indication in the continuo parts.<sup>26</sup> The basso and the continuo parts elaborate the 12/8 theme, while the chorus presents the chorale verse in quarter-notes (Ex. 11).

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<sup>26</sup>See the *NBA*, II/4, ed. Arthur Mendel, *KB*, 267.

Example 11. St. John Passion, “Mein teurer Heiland,” BWV 245/32, mm. 3-6

**Adagio** *p sempre*

Sop/Vn.1 Je - su,

Alto/Vn. 2 Je - su,

Tenore/Vla. Je - su,

Basso Je - su,

Basso solo Mein teu - rer Hei-land, laß dich fra - gen, laß dich fra - gen, teu-rer

Continuo *p*

der du wa - rest tot,

der du wa - rest tot,

der du wa - rest tot,

der du wa - rest tot,

Hei - land, laß dich fra - gen, laß dich fra - gen, teu-rer Hei - land, laß dich

The normal  $\text{♩} = 80$  would be readily appropriate for this chorale (as it is for virtually all of Bach's chorales), but it seems rather hurried for the obbligato parts. Yet it is difficult to imagine that the *adagio* indication—which appears only in the continuo parts—calls in this case for a tempo anything like twice as slow as the *tempo ordinario*. Most likely it prescribes only a slightly slower tempo here ( $\text{♩} = 60?$ ). Perhaps it is to be understood as an instruction to the continuo players to regard their part as “in 12”—a possibility reinforced by the movement's rapid harmonic rhythm.

At the other tempo extreme compositions in *alla breve* notation usually manifest prevailing eighth-note motion and often carry the designation *vivace* or *presto* confirming a shift of the beat to the next higher rhythmic level, i.e., to the half-note, and the adoption of a fast tempo. For true *alla breve* movements Bach seems, for the most part, to have preferred the time signatures 2 or  $\text{♩}$  rather than  $\text{♩}$ .<sup>27</sup> Indeed, the not uncommon occurrence of a  $\text{♩}$  signature in conjunction with prevailing sixteenth motion (even if combined with a quick tempo marking) surely implies—in conformity with Rule 7, above—not a literal doubling but rather only a slight acceleration of the *tempo ordinario*: that is, faster than  $\text{♩} = 80$ , but slower than  $\text{♩} = 80$ . The first movements of no fewer than five of the six Brandenburg Concertos are notated in this fashion. (Of these only the fifth carries a tempo indication: *allegro*.)

The B-minor prelude from Book 2 of the *Well-Tempered Clavier* presents a different case yet again. The movement was originally notated in  $\text{♩}$  with prevailing sixteenth-note and occasional thirty-second note motion but then rewritten in  $\text{♩}$  with the tempo designation *allegro*.<sup>28</sup> The introduction of an *alla breve* signature in this instance does not seem to have been motivated by a desire to increase the tempo. If anything, the *allegro* designation affirms the *tempo ordinario*. Bach's concern here, rather, may have been to avoid the trivialization of the quick figures throughout the prelude or perhaps to synchronize the barring and downbeat emphasis with the movement's characteristic whole-note rate of harmonic change (Ex. 12).

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<sup>27</sup>I am indebted to Joshua Rifkin for this observation.

<sup>28</sup>The original notation is preserved in a manuscript copied by Bach's pupil and son-in-law, Johann Christoph Altnikol. See Don O. Franklin, “Reconstructing the *Urpartitur* for WTC II: a study of the ‘London autograph’ (BL Add. MS 35021),” in *Bach Studies*, ed. Don O. Franklin (Cambridge: Cambridge University Press, 1989), 265, n. 48.

## Example 12

a. *Well-Tempered Clavier*, Book II: Prelude in B minor, BWV 893/1, original notation



b. *Well-Tempered Clavier*, Book II: Prelude in B minor, BWV 893/1, final version



### III. Compound Time Signatures and the *tempo ordinario*

We must consider further the case of 8-denominators, i.e., compound meters. The basic position that has been advocated here so far is that the denominator establishes the eighth-note as the temporal unit in these meters and that its normal temporal value, derived from the *tempo ordinario*, is equivalent to the ordinary, binary, eighth, namely, ♩ = ca. M.M. 160. This in turn establishes the value of the dotted quarter as ♩. = ca. >M.M. 52. This tempo is not implausible for pieces with prevailing motion in sixteenths where the beat is normally on the eighth-note, as in the Fugue in G, BWV 860/2 (Ex. 4a, above) and the Fugue in G, BWV 884/2 (Ex. 13):

Example 13. *Well-Tempered Clavier*, Book II: Fugue in G major, BWV 884/2



perhaps also the Prelude in C# Major, BWV 848/1 (Ex. 14):

Example 14. *Well-Tempered Clavier*, Book I: Prelude in C# Major, BWV 848/1



But ♩. = > M.M. 52 is surely too slow for most compositions with prevailing eighth-note motion (Ex. 15):

Example 15

a. *Well-Tempered Clavier*, Book I: Prelude in E major, BWV 854/1



b. *Well-Tempered Clavier*, Book II: Fugue in G# Minor, BWV 887/2



The beat in such compositions no doubt is not on the eighth but on the dotted quarter. According Kirnberger, in fact, the 8-denominator meters are to be understood fundamentally as triplet subdivisions of the 4-denominators:  $2/4 \text{ ♩.} = 6/8 \text{ ♩.}$  (=ca. M.M. 80). Kirnberger claims that the differences between 9/8 and 3/4 or between 6/8 and 2/4 do not involve tempo at all but only the manner of performance:

“The 9/8 meter of three triple beats that is derived from 3/4 has the same tempo as 3/4, but the eighth notes are performed more lightly than in 3/4. It is a mistake to consider this meter a 3/4 meter whose beats consist of triplets. He who has only a moderate command of performance knows that triplets in 3/4 meter are played differently from eighths in 9/8 meter. The former are played very lightly and without the slightest pressure on the last note, but the latter heavier and with some weight on the last note. The former never or only rarely permit a harmony to be sounded with the last note, but the latter do very often. The former do not permit any arpeggiations in sixteenth notes, but the latter do very easily. If the two meters were not distinguished by special qualities, all giges in 6/8 could also be written in 2/4; 12/8 would be a  $\text{c}$  meter, and 6/8 a 2/4 meter. How senseless this is can easily be discovered by anyone who rewrites, for example, a gigue in 12/8 or 6/8 meter in  $\text{c}$  or 2/4 meter.”<sup>29</sup>

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<sup>29</sup>Kirnberger, *The Art*, 396. The original reads: “Der aus dem 3/4 Takt entstehende Neunachteltakt von drey triplirten Zeiten hat die Bewegung des 3/4 Taktes, doch werden die Achtel leichter als in 3/4 vorgetragen. Man irret sich, wenn man diese Taktart für einen 3/4 Takt hält, dessen Zeiten aus Triolen bestehen: wer nur einigermaßen den Vortrag in seiner Gewalt hat, weiß, daß Triolen in dem 3/4 Takt anders vorgetragen werden, als Achtel in dem 9/8 Takt. Jene werden ganz leicht und ohne den geringsten Druck auf der letzten Note, diese hingegen schwerer und



Kirnberger's insistence on  $\text{♩} = \text{♩}$  rather than  $\text{♩} = \text{♩}$  equivalence between 4-denominator and 8-denominator time signatures, as we have seen, is quite plausible—at least for compositions with prevailing eighth-note motion. On the other hand, the assumption of eighth-note equivalence that has enabled us to posit a meaningful tempo distinction between triplet eighths in common time and the corresponding units in compound meters is corroborated by Bach's own notation of the "Gloria" from the Mass in B minor. As Arthur Mendel observed, the "Gloria," in 3/8 time and marked *Vivace*, ends with a hemiola cadence that leads directly into the "Et in terra pax" movement, notated in  $\text{c}$ .<sup>30</sup> The hemiola unambiguously defines the tempo relation between the two movements as  $3/8 \text{ ♩} = \text{c} \text{ ♩}$ . Mendel also pointed out that the 100-measure "Gloria" contains 302 eighth-notes ( $100 \times 3 (+2)$ ), the 76-measure "Et in terra" contains 606 eighth-notes ( $76 \times 8$ ), and saw this 1:2 ratio as further confirmation of the  $\text{♩} = \text{♩}$  tempo relationship (Ex. 16).

Example 16. Mass in B minor: Gloria, BWV 232/4, m. 99, to 232/5, m. 2

(Vivace)  $\frac{3}{8}$  in ex-cel-sis De-o.  $\text{c}$  Et in ter-ra pax, in ter-ra pax

As to the absolute tempo: according to the reasoning advanced earlier, the *vivace* designation would seem to call for a tempo of  $\text{♩} = \text{ca. M.M. 200}$  (i. e.,  $\text{♩} = \text{ca. M.M. 100}$ ).

In the Sanctus of the B-minor Mass we encounter the same combination of meters between the "Sanctus" and "pleni sunt coeli" sections as we found in the "Gloria" movement—but in reverse order. It would seem to follow, however, that they must be governed by the same relation. That is, the tempo relation between the opening of the movement, in  $\text{c}$ , and the "pleni sunt coeli" section, in 3/8, should, once again, as Bernard Rose suggested, be based on eighth-note equivalence:  $\text{c} \text{ (binary)} \text{ ♩} = 3/8 \text{ ♩}$  or  $\text{c} \text{ ♩} = 3/8 \text{ ♩}$ .<sup>31</sup> This, reasonably enough, would render the

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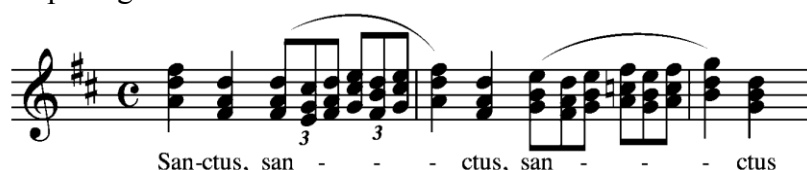
mit etwas Gewicht auf der letzten vorgetragen. Jene vertragen gar nicht oder doch selten eine anschlagende Harmonie auf der letzten Note, diese hingegen sehr oft. Jene vertragen keine Brechungen in Sechszehntel, diese aber ganz leicht. Wären beyde Taktarten nicht durch besondere Eigenschaften von einander unterschieden, so müsten alle Gigueen im 6/8 auch in den 2/4 Takt versetzt werden können, der 12/8 wäre ein  $\text{c}$  Takt, und der 6/8 ein 2/4 Takt; wie weidersinnig dieses sey, kann jeder leicht selbst erfahren, der z.B. ein Gigue in 12/8 oder 6/8 Takt dem  $\text{c}$  oder 2/4 Takt versetzt." Kirnberger, *Die Kunst*, 2:129.

<sup>30</sup>Arthur Mendel, "A Note on Proportional Relationships in Bach Tempi," *The Musical Times* 100 (1959): 683-85.

(melismatic) triplet eighths in the opening  $\text{c}$  section 50 percent faster than the (syllabic) eighths of the  $3/8$  “pleni”:  $\text{c} \text{ } \underline{\text{triplet eighth}} = \text{ca. M.M. 240}$  vs.  $3/8 \text{ eighth} = \text{ca. M.M. 160}$  (Ex. 17).

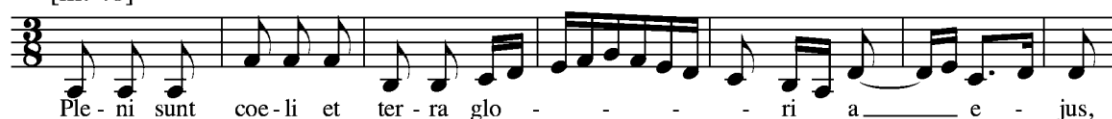
Example 17. Mass in B minor, BWV 232/22

a. Opening of the Sanctus



b. Opening of the Pleni section

[m. 48]



Furthermore, the proportions of the two sections of the movement argue in this instance, too, for the proposed tempo relation. The 47-measure “Sanctus” is the equivalent of 376 (binary) eighth-notes in length (47 mm. X 8 eighth-notes per measure); the 121-measure “pleni” 363 eighth-notes (121 X 3)—virtually a 1:1 ratio. (The binary division of the quarter-note in the “Sanctus” section is in fact represented beneath the prevailing triplets—in the timpani part with its rhythm:



Mendel discounted the testimony of these proportions and argued rather for  $\text{c} \text{ eighth} = 3/8 \text{ eighth}$  in this movement. Drawing on “the practical experience of conducting the work” he found that “Dr. Rose’s suggested proportion of  $3/8 \text{ eighth} = \text{c} \text{ eighth}$  makes either the  $\text{c}$  too fast or the  $3/8$  too slow.”<sup>32</sup> This, of course, is an explicitly personal judgment. On the other hand, some might find that declaiming the “pleni” text at  $\text{eighth} = \text{ca. M.M. 240}$  (as implied by Mendel’s suggestion, and, of course, still assuming a *tempo ordinario* of M.M. 80) is uncomfortably rushed. Moreover, since the tempo relation  $3/8 \text{ eighth} = \text{c} \text{ eighth}$  ( $3/8 \text{ eighth} = \text{c} \text{ triplet eighth}$ ) would result in an equivalence between the triplet eighths in the “Sanctus” and the eighth-note units in the “pleni,” there would be effectively no tempo change at all between the two sections and would raise the question why Bach bothered to change the meter at all.

<sup>31</sup>See Bernard Rose, “A Further Note on Bach Tempi,” *The Musical Times* 101 (1960): 107.

<sup>32</sup>Arthur Mendel, “Bach Tempi: A Rebuttal,” *The Musical Times* 101 (1960): 251.

In sum, there are evidently two different tempo norms for compositions in 8-denominator meters. In conformity with our Rule 8 (and with Kirnberger's description), for pieces with prevailing eighth-note motion the *tempo ordinario* is represented by the dotted quarter: ♩ = ca. M.M. 80 (♩ = ca. M.M. 240). For pieces with significant sixteenth-note motion, however, the *tempo ordinario* is represented by the eighth-note: ♪ = ca. M.M. 160 (♩ = ca. > M.M. 52).<sup>33</sup>

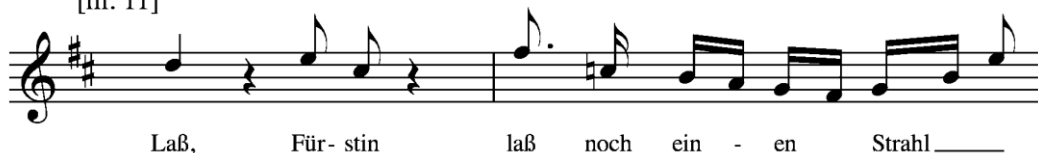
Let us consider, in conclusion, the large-scale temporal organization of a multi-movement composition. The funeral ode, *Laß Fürstin, laß noch einen Strahl*, BWV 198, composed for the ceremonies held on 17 October 1727 for Queen Christiane Eberhardine, is a ten-movement work. It survives only in a composing score;<sup>34</sup> the autograph—as usual—contains no tempo markings. But in this case—as usual—none were necessary: a consistent *tempo ordinario* of approximately 80 seems to work quite well for the entire composition (Ex. 18).

Example 18. *Laß, Fürstin*, BWV 198: Movement Incipits

1. [Chorus] [♩ = "80"]

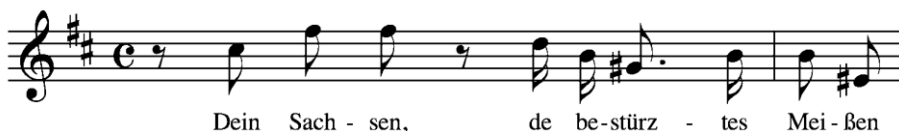


[m. 11]



Laß, Für- stin laß noch ein - en Strahl \_\_\_\_\_

2. Recit. [♩ = "80"]



Dein Sach - sen, de be-stürz - tes Mei - ßen

3. Aria [♩ = "80"]



<sup>33</sup>Don Franklin reaches the same conclusion—at least with respect to relative tempi. For the Prelude and Fugue in A major, BWV 888, from the *Well-Tempered Clavier* II, wherein the prelude, notated in 12/8 proceeds in eighth-note motion, Franklin prescribes the tempo relation: (prelude) 12/8 ♩ = ♩ (fugue). Moreover, his discussion of the Gloria and Sanctus movements from the Mass in B minor, accepts, as does ours, eighth-note equivalence between the 3/8 and C sections. See Franklin, "The Fermata," 352, 355, and 372-4, 377, n. 43, respectively.

<sup>34</sup>See the *NBA*, 1/38, ed. Werner Neumann, *KB*, 98-119.

[m. 9]

Ver - stummt, ver - stummt, ver - stummt, ihr hol - den Sai - ten

4. Recit. [ $\text{♩}$  = "80"]

Der Glock - en be ben - des Ge - tön

5. Aria [ $\text{♩}$  = "160"]

Wie starb \_\_\_\_\_ die Hel - - - [din]

6. Recit. [ $\text{♩}$  = "80"]

Ihr Le - ben ließ die Kunst zu ster - ben

7. [Chorus] [ $\text{♩}$  = "80"]

An dir, du Für - bild gro - ßer Frau - en, an dir, er - hab - ' -

8. [Aria] [ $\text{♩}$  = "80"]

9. Recit. [ $\text{♩} = \text{"80"}\text{"}$ ]10. Chorus [ $\text{♩} = \text{"80"}\text{"}$ ]

The salient point, however, is that retaining the *tempo ordinario* through the entire composition is not at all a prescription for monotony. Quite the contrary: the contrast and juxtaposition of different meters ( $\text{C}$ ,  $3/4$ ,  $\text{♩}$  12/8), and especially the diversity of surface motion prevailing from one movement to the next—from even eighth-notes in the recitatives to dotted sixteenths and thirty-seconds (Movement 1) to mixed duplet and triplet sixteenths (Movement 3), to ternary eighths of different values (Movement 5 vis-à-vis Movement 10)—produces a fully satisfying variety with respect to the perceived tempo throughout the work.<sup>35</sup> At the same time, the relation of the entire composition to a single underlying, unifying *tactus* imparts to the whole a fundamental unity that is both intellectually profound and aesthetically compelling.<sup>36</sup> But this, after all, is only what one expects of a well-regulated composition from the pen of Johann Sebastian Bach.<sup>37</sup>

<sup>35</sup>As usual there is some question as to the tempo of the 12/8 movements. The presence of sixteenths in No. 5, the aria “Wie starb die Heldin so vergnügt” (see especially mm. 43-45, 52), suggests that  $\text{♩} = \text{M.M. } 160$  ( $\text{♩} = \text{M.M. } > 52$ ) is a plausible tempo. Conversely, the unbroken eighth-note motion of the final chorus, “Doch Königen! du stirbest nicht,” suggests  $\text{♩} = \text{M.M. } 80$ .

<sup>36</sup>It does not seem that the presence or absence of movement-ending fermatas has any connection with the existence of a pervasive *tactus* and hence a rational tempo relation governing the movements of this work, as propounded in Franklin, “The Fermata.” Nor is it at all clear that the omission of concluding fermatas in four movements in the cantata autograph was deliberate or significant. There are fermatas at the ends of Movements 1, 6 and 7; 8, 9, and 10—that is, the first and two last movements of Part I, and all three movements of Part II of the cantata.

<sup>37</sup>I am indebted to Don O. Franklin for making a copy of his essay “The Fermata as Notational Convention” available to me before its publication and to Mark Kroll, Joshua Rifkin, and David Schulenberg for many valuable suggestions and comments.

## Postscript 2008

Like the Brandenburg Concertos, the concluding movements of the six keyboard partitas of the *Klavierübung*, Part One, offer a constellation of meaningfully varied and contrasting time signatures, and prevailing units of motion, from one work to the other (Ex. 19):

Example 19. The Final Movements of the Partitas from the *Klavierübung I*: Incipits

a. BWV 825/7



b. BWV 826/6



c. BWV 827/7



## d. BWV 828/7



## e. BWV 829/7



## f. BWV 830/7

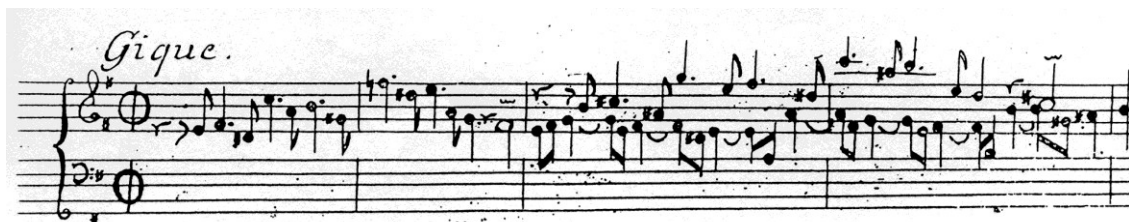


The gigue of Partita 1 in B-flat is notated in  $\text{c}$ , with prevailing triplet eighths. This notation is analogous to that found in the final movement of the fifth Brandenburg Concerto discussed at the outset of this article and calls for the same relatively rapid tempo ( $\text{♩} = 240$ ). The notation and the tempo again contrast meaningfully with those of the concluding gigue of the Partita 3 in A minor (12/8, prevailing eighths,  $\text{♩} = 160$ ).

Partita 2 in C minor, for its part, ends not with a gigue but with a capriccio, notated in 2/4 (prevailing sixteenths,  $\text{♩} = 320$ , binary grouping). The meter of the gigue of Partita 4 in D major is 9/16 (prevailing sixteenths = 320, ternary grouping), while the gigue of Partita 5 in G major is notated in 6/8 (prevailing sixteenths = 320, binary grouping).

The time signature of Partita 6 in E minor is no doubt the most mysterious—and most notorious—in the entire Bach oeuvre. As printed in the original edition of 1731—and transmitted faithfully in our most conscientious critical editions, including the *Neue Bach-Ausgabe* (NBA V/1)—the signature reads:  $\Phi$  (see Figure 2), i.e., apparently prescribing the *tempus perfectum diminutum* of the ancient mensural system, long extinct by Bach's time:

Figure 2. Opening measures of BWV 830/7, from the Original Edition (1731)



The rhythmic notation of the movement, however, with prevailing (if not running) eighths, would seem to contradict this, and to call for a duple, *alla breve*, meter (and tempo). This signature has understandably given rise to considerable speculation. In his “performer’s guide” to the partitas Fernando Valenti cites some of the pertinent literature, referring in particular to a reading in 12/8, which he characterizes, however, as a “possible but unlikely interpretation” (Ex. 20).<sup>38</sup>

Example 20. Gigue from the Partita in E minor, BWV 830/7: realized in 12/8 meter



The most plausible solution to this puzzle, though—suggested to the author by William H. Scheide decades ago in the course of an informal conversation—is breathtakingly prosaic: the signature printed in the original edition is the product of a simple misunderstanding—a misreading of a hastily drawn  $\phi$  in Bach’s (now lost) autograph. Scheide noticed that Bach, when he was writing down music in haste, sometimes inadvertently filled in the open side of the common-time signature. He pointed to the opening movement of the cantata *Nimm, was dein ist, und gehe hin*, BWV 144 (1724), where the autograph reveals that Bach “closed the circle” of the *alla breve* signature in all four staves of the score. (See Figure 3 and Ex. 21).<sup>39</sup>

<sup>38</sup>See Fernando Valenti, *A Performer’s Guide to the Keyboard Partitas of J. S. Bach* (New Haven: Yale University Press, 1989), 127.

<sup>39</sup>The first page of the autograph is reproduced in *NBA I/7*, ed. Werner Neumann, p. [vii], from which the reproduction here is taken.



Figure 3. Autograph score of *Nimm, was dein ist, und gehe hin*, BWV 144/1Example 21. *Nimm, was dein ist, und gehe hin*, BWV 144/1

Example 21 shows a musical score for the piece *Nimm, was dein ist, und gehe hin*, BWV 144/1, featuring five parts: Soprano, Alto, Tenore, Basso, and Continuo. The Soprano and Alto parts are mostly rests. The Tenore part begins with the lyrics "Nimm, was dein ist, und gehe hin, ge - hehin, ge-he hin, ge - - he". The Basso part begins with the lyrics "Nimm, was dein ist, und ge - he". The Continuo part includes figured bass notation: 6 5 6 # 6 6 5 #.

This should explain the appearance of the bizarre time signature at the beginning of the gigue of the E-minor partita to anyone's satisfaction. Indeed, the gigue, along with rest of BWV 830 (minus the air), is preserved—in Bach's autograph, and in an earlier version—in the *Klavierbüchlein* for Anna Magdalena Bach of 1725. It is notated there, with an unambiguous  $\text{♩}$  time signature, but—like the early version of the B-minor prelude from Book 2 of the *Well-*

*Tempered Clavier*, BWV 893/1, discussed above—in diminished note values, i.e., prevailing sixteenths (Ex. 22).<sup>40</sup>

Example 22. Opening measures of BWV 830/7, original notation, from the *Klavierbüchlein*, 1725.




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<sup>40</sup>This postscript is the outgrowth of a helpful comment made to the author by Charles Rosen some years ago suggesting that he call attention, in any eventual reprint of this essay, to the similarity between the notation of the final movement of the B-flat Partita and that of the fifth Brandenburg Concerto and its similar implications of a brisk tempo.