Does tempo, as a variable parameter, conform to any laws; can any general theory on the behaviour of tempo, i.e., its range and modes of change, be formulated? Was the concept of a standardized tempo unit still accepted in the Baroque? Is the tempo of a given piece directly derived from other parameters, such as its formal, rhythmic and metric structure, distribution of note values and similar factors?

Durational strata – a strategy of viewing a composition, or an entire style, through a "cross section" of its various note durations – is offered here. Its clearest example is found in the "Palestrina style", but a similar phenomenon can be observed also in Baroque styles, which has some repercussions on tempo. Other tempo-determining factors, such as time signatures and tempo words in the music of J. S. Bach are surveyed and compared against tempo theories of Bach's time, by Quantz and Kirnberger. The conclusions are used in the evaluation and critique of some present-day tempo philosophies. The aim of the present work is not to establish prescriptions for the "right" tempo in Bach's music, but rather, from the angle of tempo, to gain a perspective on the much broader field of rhythm and rhythmic texture.

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Abbreviations

Asterisked numerals in brackets (such as [1*]) before quotations refer to their English translations in Appendix 2.

- AfMw Archiv für Musikwissenschaft
- A.I.M American Institute of Musicology
- AM Acta Musicologica
- BD [BDok] Bach Dokumente, Kassel: Bärenreiter (I. 1963; II. 1969; III. 1972)
- BJ Bach-Jahrbuch
- CMM Corpus Mensurabilis Musicae
- EM Early music
- EMH Early Music History
- FS Festschrift
- HP Historical Performance
- JAMS Journal of the American Musicological Society
- JM Journal of Musicology
- JMR Journal of Musicological Research
- JMT Journal of Music Theory
- KB Kongressbericht
- Mf Die Musikforschung
- ML Music and Letters
- MJb Mozart-Jahrbuch
- MQ The Musical Quarterly
- MTO Music Theory Online
- MTS Music Theory Spectrum (The Journal of the Society for Music Theory)
- MuK Musik und Kirche
- NBR Hans T. David and Arthur Mendel (Chr. Wolff, rev.), The New Bach Reader
- PAMS Papers Read by Members of the AMS at the Annual Meeting
- PPR Performance Practice Review
- R/ Reprint, New edition $[^3/ =$ Third edition]
- RdM Revue de Musicologie
- RMI Rivista musicale italiana
- UP [...] University Press
- WTC J. S. Bach, Das Wohltemperirte Clavier

Preface

An entire study devoted to rhythm and tempo cannot be limited to the work of one composer. Thus the title of this book is necessarily somewhat misleading: the discussion actually extends to a range of composers, from Josquin to Chopin. Bach was chosen to be the central object of my study, among other reasons, for his outstanding knowledge of – and involvement with – older traditions, placing him both at the closing point of an older era and at the threshold of a new one, marked by a revolution of rhythmic texture and tempo. Another reason for my choice of Bach is not due to any lack of new literature in this domain, but because I take issue with a theme prevalent in several existing works. Quite a few studies of Bach interpretation and historical performance practice set out to rediscover the 'correct' tempo of the music of the past, and Bach in particular.* As some of the titles reveal (e.g., The Lost Tradition in Music, 'Bach and the three Tempo Puzzles'), their authors are convinced that their work has the answer to an old riddle. Despite their diverging opinions, they share the belief that within the notes there lurks a carefully encoded secret message just awaiting to be deciphered. However, these modern treatises can hardly serve as a guide to the perplexed performer, as their solutions largely contradict each other. I have strong doubts that any such secret was ever intended, either by Bach or by other composers of his time; I have even stronger doubts that any one solution is Out There. Moreover, I contend that assigning 'correct' tempi in the form "tempo X for piece A, tempo Y for piece B", is wrong in principle.

The question of tempo in early music is often relegated to the field of performance practice, assuming a very 'practical' character. The aim of this study is to gain a wider perspective on what may be termed the 'rules of tempo behaviour' in Baroque music, and in Bach's music in particular. This is achieved by approaching the question from five different angles: (a) searching for 'internal' evidence about tempo as revealed by the rhythmic texture of the music; (b) analysis of 17th- and 18th-century authors (Praetorius, Saint-Lambert, Mattheson, North, Quantz, Kirnberger, Türk and others) on the theory of tempo and its behaviour as an independent parameter; (c) discussion of modern attempts to revive the Renaissance concept of rhythmic proportion and to apply it to 18th-century composers, Bach in particular; (d) review of the controversy between so-called "prestist" and "lentist" factions about the tempi of 'old music' in light of 18th-century French metronomic data; (e) a comprehensive survey and analysis of Bach's tempo indications.

^{*} Bodky 1960, Franklin 1989–2000, Gerstenberg 1951, Mäser 2000, Miehling 1993, Rothschild 1953, Schwandt 1974, Siegele 1962–63, Talsma 1980 *et al.*

All this, in the end, will not lead us to a final answer to the question "is this tempo correct or not." But we may arrive at a better understanding of the relationship between tempo and other factors (rhythmic texture, harmonic rhythm, articulation, affectual content, degree of accentuation) and develop a theory more in tune with actual musical practice, a theory that acknowledges the performer's inherent freedom of choice and responsibility of choice, in relation to the tempo parameter.

*

The following work has undergone two main stages, first as a dissertation submitted to the University of Tel Aviv (Studies of Rhythm and Tempo in the Music of J. S. Bach, 1999), then revised into its present form. I wish here to extend my warmest appreciation and thanks to friends and colleagues, for their incomparable help and encouragement during the long process of its genesis.

First and foremost among them is Professor Dr. Werner Breig (Universities of Bochum and Erlangen), who has been involved in both phases of the present work, and whose initiative and resolve have made its publication possible. Most helpful and inspiring, and an inexhaustible source of knowledge to my research was Professor Dr. Judith Cohen (University of Tel Aviv). I also received substantial assistance in my research by Dr. Benjamin Perl and Professor Henry Wassermann (the Israel Open University), and Dr. Ronit Seter (Cornell University). The global electronic village (particularly e-mail connections and discussion lists) has yielded good advice from prominent colleagues, among whom I would primarily like to mention Dr. David Fenton, Professors Margaret Murata, Sandra Rosenblum, and Neal Zaslaw.

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Ramat Gan, 2005

Some Questions for Introduction

There is a number of questions besetting everyone interested in early music and its performance practices. Some of these look deceptively simple, that is, they are easily asked, but in the process of investigation they become so entangled, that one may end up questioning the very legitimacy – or wisdom – of having asked them at all. A question of this kind is, for instance, how fast (or slow) music of the 17th and 18th centuries should be performed. At first glance, the issue may seem purely practical, i.e., pertaining to the restricted field of performance practice; but it also evokes related questions of theoretical nature:

- 1. Does tempo, as a variable parameter, conform to any laws; can any general theory on the behaviour of tempo, i.e., its range and modes of change, be formulated?
- 2. Does the tempo of a given piece derive from other musical parameters, such as its formal, rhythmic and metric structure, distribution of note values and similar factors? This would also imply that the tempo of nearly every composition, including unmarked pieces (i.e., without tempo headings), could be rediscovered. Then a correct analysis of the relevant tempo factors should eventually lead to finding the correct tempo of the piece. If the right tempo of the piece can be deduced from the musical text itself, then conventional tempo indications become largely superfluous.
- 3. Conversely, one may contend that tempo finally depends on the performer's will and taste. Not only are performers fully entitled to take different tempi for the same piece, but they may or should be encouraged to change the tempo of the same piece in repeated performances. The convention of tempo words or headings, which spread increasingly since about 1600, indicates that the tempo factor became separated from other features inherent in the musical text. Thus tempo has become more and more a matter of a performer's subjective decision.
- 4. Was there in any historical periods, or for certain genres, an accepted standard, or "normal" tempo unit? And was this standard universal or local, nearly fixed, or flexible, shifting with changing fashions; and how long was it accepted?

The question of tempo in early music can be approached from various perspectives. One is external evidence, gleaned from contemporary treatises and textbooks, particularly some French treatises with specific metronomic data, mechanical evidence from cylinders of musical clockworks, or information about the timings of specific performances. Interesting and important as this evidence may be, it is not my main concern here. Two other aspects have attracted me more, (a) the internal evidence of the music: what can we learn about the tempo of a given piece from its musical text; (b) the possibility of a general tempo theory, or philosophy. Offering an adequate description of *tempo-determining factors* – rhythmic phenomena that have some bearing on tempo – may teach us about Baroque rhythmic texture and help us to better characterize a range of musical styles. This may finally prove to be more rewarding than prescribing 'correct' performing tempi. Thus the opening question of the introduction, which was, in a sense, the starter of this study, should be modi-fied: instead of assigning 'right' tempi for Bach, or other early music, one should rather attempt to clarify what musicians of former generations thought about tempo, and investigate its relationship with rhythmic texture and structure.

The first strategy of rhythmic description is achieved by what I term *durational strata*: viewing a piece, a genre, or an entire style, through a cross section, as it were, of its various note durations. The different durational levels are then examined as to their specific behaviour – rhythmic, melodic, and harmonic. The clearest evidence that in certain styles different note values are differently treated is found in 16th-century conservative vocal style, the so-called Palestrina style, where special rules, and even special exercises (the 'species') have been devised for each durational level. The implications of durational strata as to composition and performing tempo in 16th-century style are discussed in detail. We proceed then to the Baroque, to discover an equivalent phenomenon in 17th- and 18th-century styles and observe its repercussions on tempo.

Beside the durational strata, or the general picture of note durations used in a given piece, other significant tempo-determining indicators can be read from its notation, i.e., its prevalent note values, time signatures (or mensuration signs), and in later times, also conventional tempo headings (*Allegro*, *adagio* etc.). Their role, especially in the music of J. S. Bach, is discussed in the last chapters of the third part.

Before tempo words became common practice there was no way to indicate the tempo of a given piece isolated from the musical text. Tempo precepts found in treatises on musical notation are the only means that enables us to conclude anything about tempo in the 16th century or earlier. In Renaissance notational theory there is much discussion of a quasi-invariable 'universal' tempo unit, a standard *tactus*, or *integer valor notarum*. The actual tempo of a given piece was, in principle, derived from this unit according to mensuration signs or special proportion signs. This could mean, *inter alia*, that all tempi were theoretically related to the basic unit – and to each other – by simple arithmetical proportions, like those denoting musical consonances – although in recent research many doubts has been expressed as to the application of proportional tempi as a general practice. Since the mid-20th century, this idea has found grace again in certain musical circles.

scholars have even tried to apply the 'proportionistic' way of thought (as I term it) to later music, notably to the tempi of J. S. Bach, Mozart, and later composers. However, though tempo proportions *per se* occupy some modern-time scholars, 17th- and 18th-century authors show little interest in them.

The tempo theories nearest to Bach's time and place are those of the 18th century, in the first place, those of Quantz (1752), Court Composer to Frederick the Great, and Kirnberger (1776–9), a one-time Bach disciple, whose theory of composition was famous for its faithfulness to the teachings of J. S. Bach. Interesting observations have also been made by Mattheson (1713), and F. W. Marpurg. The relevance of these theories to Bach's music will be examined in detail.

Two opposing views on tempo are expressed by some French authors. One approach is represented by Loulié and L'Affilard, the so-called "*Chronométristes*", who proposed exact tempo data of specific pieces, based on measured lengths of a pendulum. The interpretation of these data has aroused an intense debate since the 1970's. The partisans of the other French school, Jean (1678) and Jean-Jacques Rousseau (1768), deny the value of mechanically measuring tempo in music. Instead, they offer the concept of *mouvement*, i.e., a combination of mechanical rate and the unique rhythmic character of each composition. This concept of *Bewegung* was most interestingly treated by Kirnberger, who in his theory of *Tempo giusto* tried to combine the old idea of a universal standard with the views of his time on tempo as a subjective and flexible entity. Quantz's prescriptions of tempo, on the other hand, have a formally 'proportionistic' appearance, though in other respects his tempo theory is remarkably modern.

The problems described until now, discussed in detail in Parts A and C, concern the relationship between tempo and other musical factors, as well as the possibility of a general *a priori* theory of tempo. An altogether different rhythmic problem, related to tempo only indirectly, is treated in the second part. The upbeat, an apparently commonplace, insignificant rhythmic device, became since the early 17th century a distinctive feature of certain syles and repertories. Upbeat types differ not merely in notational detail, but reflect different modes of phrase balance and symmetry, or different musical thinking. Thus upbeat varieties became in the Baroque era important indicators of national styles. Only in late Baroque do we find (in Bach and Handel) some attempts – in the spirit of *Les Goûts Réunis* – to combine German and French upbeat traditions.

Tempo is one aspect of music, admittedly a somewhat narrow one; but it seems worthwhile to examine this dimension in detail, in order to gain a perspective on the much broader field of rhythm and rhythmic structure. From the angle of tempo, one may finally also learn one thing or another about Baroque rhythmic texture and its relation to other musical styles.

DURATIONAL STRATA AND MUSICAL STYLE

1. 16th-Century Vocal Style: Counterpoint Rules and Tempo

There can be no doubt that throughout the history of music prior to 1600 the notational signs indicated not only relative values but also signified absolute temporal durations. [...] Such a line of development suggests the assumption that, in a still earlier period, the variability of tempo may have been practically unknown.¹

One way of analyzing the texture of a piece, or a genre, is observing it by means of a rhythmic cross section, as it were, i.e., noting separately the different behaviour of each durational level (breves, minims, crotchets etc.). This may yield new information, at least for certain styles. Seeing the music from the angle of its *durational strata*, as I term it, is meaningful in styles where different rhythmic levels exhibit specifically different melodic and harmonic rules of behaviour. Such differentiation is readily discernible in 16th-century music; but a similar phenomenon is seen also in late Baroque music, notably in Bach. For the music before 1600, durational strata have been succinctly described by Willi Apel (following the above quotation), when he proposed his hypothesis, namely that 'once upon a time' tempo was invariable. Apel specifies:

In looking over, for instance, the works of Orlando di Lasso or Palestrina the uniformity of the notation is striking. [...] The old masters [...wrote] all their pieces in the same note-values, chiefly *brevis*, *semibrevis*, *minima*, and *semiminima*, the *fusa* being used only in groups of two for a quick cadential ornamentation in the character of a mordent.²

1.1 The four vocal strata

The differentiated behaviour of durational strata in 16th-century conservative vocal style is not only manifest in the music of the period, but also implied by the rules of counterpoint. Far from being a modern discovery, it is already observed by 16th-century counterpoint masters such as Diruta, Zarlino, Zacconi, and later also Fux. These masters also devised the so-called *species*, that is, special types of excercise for each durational stratum, to clarify its specific characteristics and rules.

¹ Apel, The Notation of Polyphonic Music, 189f.

² Apel, *ibid*.

The above quoted passage from Apel is a nutshell description of durational strata in 16th-century conservative vocal (or motet) style. Limiting ourselves at first to this style, we see that "uniform notation", as observed by Apel, is one of its essential features. Within this uniformity, each stratum fulfills definite functions, which may be described as follows (for *tactus allabreve* [ϕ] notation):

- *I* The slow stratum (semibreve \circ and longer notes), the level of the old-style tactus beat, that is, one hand motion (either up or down) of a *tactus allabreve*. On this level alone, there is little differentiation here between lighter and heavier beats.³ Harmonically, this level is the strictest, allowing no dissonances.⁴
- II The middle stratum (minim \downarrow) allows albeit not often dissonances as passing notes; but they occur primarily as syncopated suspensions, which are also prepared and resolved at the same (\downarrow) level. The Palestrina style has often been regarded as a hovering style, free of dynamic accents, lacking differentiation between light and heavy beats; but this applies mainly to the slow stratum (I). In the middle stratum, the rules of dissonance *per se* are an adequate differentiation between weak and strong minims (even ignoring dynamic accentuation).⁵ This level is also the domain of syllabic singing, while faster strata are normally melismatic.⁶
- III The fast stratum (semiminim J), the level of melismatic 'virtuoso' singing. Fast singing imposes certain vocal melodic limitations (like avoiding ascending melodic skips from downbeat notes). Conversely, some liberties in dissonance treatment are granted (passing and auxiliary notes, anticipations, *cambiatae*, etc.). Only very limited syllabic activity is allowed.⁷

³ See Jeppesen, *The Style of Palestrina*, 27f.

⁴ The only exceptions are occasional 'augmented' suspensions (or o o o o o), a kind of written-out *ritardando*, found in some final cadences.

⁵ The 'accent-free' hypothesis, popular among scholars of the early 20th century, is debated by Knud Jeppesen (*The Style of Palestrina*, 20–23), and even more strongly, by Edward Lowinsky ("Early Scores in Manuscript", *JAMS* 13 (1960), 126–73).

⁶ Christoph Wolff (*Der Stile antico*, 39) defines minims as "Stützen der Satzstruktur und [...] Hauptsilbenträger". See also Werner Breig, "Zum Werkstil der 'Geistlichen Chormusik' von Heinrich Schütz". However, some sacred works (e.g., of Lassus and A. Gabrieli, later also Schütz) show occasional fast syllabic *parlando*-like passages, common in the chanson and madrigal style of the time. Breig (ibid., 74–7) terms them "condensed declamation" (*geraffte Deklamation*).

⁷ This rule is formulated in the early 18th century by Johann Gottfried Walther as follows: "In denen alten auf diesen Tact gesetzten *Compositionibus*, findet man einmahls eine Sylbe unter eintzelnes J geleget, es sey dann, daß ein J mit einem Puncte *immediaté* vorher gegangen sey: die neuen Componisten aber *observir*en solches nicht mehr." ("In the old compositions written in this meter one may see a syllable under a single J, this may happen if a dotted J comes immediately before; however, modern composers observe this rule no more." (*Praecepta der Musicalischen Composition*, 29–30).

IV The vocal-'ornate' stratum (fusa .) is the fastest one in 16th-century vocal style. There is practically no distinction at this level between consonance and dissonance; but melodic movement is most limited, allowing no skips at all. Its vocality is emphasized in that it is usually limited to short ornamental figures in groups of two (seldom four) notes; longer groups of *fusae* are normally avoided in vocal music.⁸

As noted before, the characterization of vocal durational strata (*I* to *IV*) follows the so-called 'motet-style' practice of the 16th century. This simplified, somewhat idealized model of durational strata, with a more or less uniform *Notenbild*, can serve as a starting point for our discussion; but the deeper one examines the repertory, the less uniform, smooth and simple the rhythmic picture becomes.

The transition from the middle (*II*) to the fast stratum (*III*) entails a certain 'quantum leap'. The different behaviour of the durational strata is manifest here in three distinct aspects:

- a) Harmonically, some liberties not allowed in the middle stratum are now granted in the fast one, such as dissonant auxiliary notes and *cambiatae*. In the middle stratum, dissonant passing notes (minims in **c**) are allowed, although they are relatively rare in late Renaissance vocabulary, and Vicentino disapproves of their use.⁹ But in the case of fast passages (*gorgia*), or diminutions, the speed lends dissonances a certain grace, as stated by the instrumentalist Ganassi (2.2, note 29).
- b) Melodic freedom, on the other hand, is restricted in the faster strata, possibly due to greater vocal-technical difficulty in producing perfect intonation.
- c) Another kind of restriction concerns not melodic vocal production, but the element of speech, or text underlay. Notes shorter than a minim cannot "carry their own syllables", in the terminology of Zarlino's first rule,¹⁰ as already stated by Lanfranco (albeit with some exceptions).¹¹ Such restrictions arise probably not due to any vocal-technical difficulty: the practice of fast syllabic activity was well-known and perfectly acceptable in secular vocal genres, such as the chan-

⁸ The semifusa (*) occurs rarely in vocal works, mostly in pieces influenced by the tradition of the modern *alla semibreve* madrigal (second half of the 16th century). Although it is listed in the note-value tables of Gioseffo Zarlino (*The Art of Counterpoint*, 5) and Listenius (*Musica*, 1549, Pars II, Cap.I), no further use of it is made in their examples. Listenius remarks on black notes (semiminim, fusa, semifusa): "...magis Musicis instrumentis, propter nimiam celeritatem, quam humanae voci competunt." ["they are more suitable for musical instruments than for the human voice, due to their great velocity."]

⁹ Quoted in Jeppesen, *Counterpoint*, 21.

¹⁰ Zarlino, Istitutioni harmoniche, Part IV, Ch. 33, p. 421.

¹¹ Giovanni Maria Lanfranco, *Scintille di musica*, Brescia, 1533, quoted in Don Harrán, "New Light on the Question of Text Underlay".

son or madrigal, but its use in the early or middle 16th century was considered improper *in ecclesia*. Instructions in this vein are given in detail, for example, by Pietro Cerone (1613), complaining about composers who "dispose of the lively parts and divisions in such a way that their compositions seem to be madrigals and sometimes canzonets; instead of the syncopated semibreve, they use the syncopated minim, suited neither to the gravity of the motet nor to its majesty."¹²

The form of "do and don't" in which the rules of conservative counterpoint have been handed down was primarily intended for beginners in composition, doing their imitatory exercises – in the twofold sense of the word. Although composition exercises and traditional counterpoint rules are often regarded as "paper music", they may reflect, even most distantly, something of past performance traditions, in the first place of its tempo. In this sense, Apel's reasoning about the uniform notational picture of the music before 1600 deserves special attention and his arguments can even be strengthened. The rules of counterpoint relating to note values must have been related, in one way or another, to actual durations as well; otherwise this would imply that these rules had no musical, but merely notational – or typographical – meaning.

1.2 'Sacred' and 'secular' text underlay

The differences of text underlay in sacred versus secular music depend mainly on the nature of the text rather than on the musical style. "Sacred" texts (here in the sense of liturgical, scriptural, or traditional) are seen, as "timeless", particularly from a Catholic or counter-reformistic point of view, in that they are given by a divine source, or at least from time immemorial. They customarily belong to the liturgy, i.e., intended to be perpetually reiterated, day by day, week after week, or every year. This trait alone sets them apart from worldly affairs, or from other 'poetic' texts, which usually portray a unique situation or comment. To further enhance their detachment from everyday experience, they often use dead sacred languages. Thus any ostentation of human affections, betokened, among other things, by intensified speech, instead of ceremonious declamation, is out of place in setting a liturgical or scriptural text, but perfectly acceptable in poetry, even of religious character. In 16th-century musical vocabulary, fast syllables mostly denoted heightened affects: joy, laughter, humour, or their contrary – anger, ardour, derision – surely intense feelings, incompatible with the very idea of eternity. However, we often encounter fast syllabic singing not only in chansons and secular madrigals, but also

¹² Pietro Cerone, El melopeo y maestro, Book XII, quoted in Strunk, Source Readings, 263f.

in Palestrina's *Madrigali sprituali*, typically on time-words, such as *sovente* ["often"] (Example 1).

Example 1: Giovanni Pierluigi da Palestrina, "Dammi, vermiglia rosa" (*Madrigali spirituali a 5 v.*, libro secondo, 1594)



Comparing chansons of Claudin or Janequin (printed by Attaignant since 1528) with those of the former generation, we see that the younger composers consistently use very fast speech, with numerous short note values (syllabic *fusae*). The intended special effect of the so-called 'patter songs' is obvious. But in the *chansons* or *frottole* of the older generation too (e.g., Josquin, *El Grillo*; Brumel, *Vray dieu d'amours*), composers certainly did not abstain from lively tempi and very fast syllabic singing, although they used semiminims for the fastest notes (Examples 2, 3).

Example 2: Josquin des Prez, El grillo



Example 3: Clément Janequin, *La guerre* ("Escoutez tous Gentilz"), Altus, beginning of 2da pars (Attaignant, 1528)



1.3 The 'chanson-canzon-ricercar' rhythm

One can distinguish three types of this rhythmic figure: (a) the slow figure, which may be labelled as motet, 'madrigale serioso', or 'chanson triste'; (b) the middle one, common both in motets and chansons; (c) the fast species, pertaining mainly to lively, humorous chansons and madrigals. The latter type is also typified by note repetitions (at least two of the first three notes). Such repetitions, even in instrumental canzonas, are obviously associated with the "Parisian patter songs," betraying the syllabic singing of the original vocal model. Fast syllabic repetition is of special interest for us in that it delimits, even defines, in a sense, the fast stratum (*III*) independently of its notation: this is the durational level that allows syllabic activity in secular music, but is predominantly melismatic in vocal church style.

1.4 Counterpoint rules as speed controls

Certain traditional counterpoint rules are clearly intended to control the flow of music to secure that it neither becomes too fast nor too slow. Thus considered, rhythmic counterpoint rules are of three different kinds, namely (a) 'not too slow';

¹³ Reese, Music in the Renaissance, 292.

(b) 'not too fast'; and (c) 'mixed' rules. The first are aimed to limit the length of dissonances. Long-drawn expressive dissonance chains, a feature of the seconda *pratica*, are rather out of place in the conservative vocal style.¹⁴ On the other hand, the demand to bring fast melismatic figures to a halt at least *one minim* [in c] before a change of syllable, sets obvious limits to speed.¹⁵ Likewise, the preparation and resolution of dissonant suspensions are limited to certain note values (a), as such occurrences demand their own share of time. A too fast resolution may arouse the impression that the previous dissonance was coincidential rather than intended. These are rules of the 'not too fast' kind. The limitation of melodic skips in the faster strata, forbidding upward skips from accented semiminims and any skips in *fusae*,¹⁶ constitutes a mixed class, belonging both to the 'not too fast' and 'not too slow' rules. It is meant indeed to spare the 16th-century singer difficulties in fast awkward skips. On the other hand, from a present-day point of view, it proves that semiminims (.) were considered some time as fast enough as to possibly cause technical difficulties. Without having concrete evidence for this, I would offer a possible reason for the rhythmic restrictions of 16th-century counterpoint. Musicians of this period were apparently highly sensitive to pitch purity in singing. Too fast singing might come at the expense of precise intonation, and therefore was avoided.

1.5 Fast strata and speed evaluation

The special status of the fast stratum (*III*) raises the question whether we could try to estimate the performing tempo of the fast stratum, or "how fast is fast?" On the one hand, the entire body of counterpoint rules definitely shows that black notes (in ϕ) were considered too fast as to be counted or marked in conducting as separate beats. Thus the nearly "traditional", nowadays often accepted norm of 16th-century *tactus* unit, of a leisurely walking pace, about the order of magnitude of M.M. 60–80,¹⁷ may be plausible, but one can hardly specify the limits more precisely.

¹⁴ Limiting the length of dissonances already preoccupied Tinctoris (*Liber de arte contrapuncti* 1477). See Alexander Blachly, *Mensuration and Tempo in 15th- Century Music*, 198–204. See also Dalia Cohen, "Palestrina Counterpoint: A Musical Expression of Unexcited Speech", *JMT* 15 (1971), 84–111.

¹⁵ As formulated by Lanfranco 1533, Vicentino 1555, Zarlino 1558, and G. Stocker 1570–80, quoted in Don Harrán, "New Light on the Question of Text Underlay", 24–56; idem, "Vicentino and his Rules of Text Underlay", *MQ* 49 (1973), 620–32.

¹⁶ The avoidance of ascending semiminim skips in Palestrina is the discovery of Jeppesen. See his *The Style of Palestrina*, 61f.

¹⁷ Apel, Die Notation, 208–9; Sachs, Rhythm and Tempo, 201–4; Machatius, Die Tempi in der Musik, 27, 47–50; Miehling, Das Tempo, 21–35. Ephraim Segerman has contested most

In the realm of secular music, the performers' attitude must have been different from their disposition to sacred music. When a polyphonic piece is being sung from the parts, the most salient details for the singer (and the listener) are not just the melody but also the text. Secular words in the vernacular – especially when it is the singer's own language – may have had a more direct appeal than a liturgical Latin text, which is often first "mentally translated". Accordingly, the performer singing a vernacular text might often have been more directly involved in the "expression" than in liturgical pieces, where matters of affect were relagated to the composer. Thus in determining the tempo of secular music, the concept of a standardized tempo, a fixed *tactus* or *integer valor* (supposing that it was accepted in sacred music) could play but a minor role, if at all. This reasoning, albeit of a very general nature, raises the question whether one could establish the tempo of music of secular – even profane - nature on procedures of tactus and proportion. Furthermore, it should be considered that the dividing line between sacred and secular music was not sharp, as we see in the common practice of *contrafactum*. This practice alone induces us to believe that secular and sacred performance styles were not too wide apart, and that any rhythmic liberty of one style was easily transferred into the other.

1.6 Double-standard notation

From Josquin to Frescobaldi, the notation of the fast chanson-canzon rhythm underwent considerable changes. The new manner of notation (smaller note values, combined with signature change from ϕ to \mathbf{e} was introduced around 1540 in the *note nere* madrigal;¹⁸ but it may have been preceded by a similar process in the French chanson of the same time (since 1528). The new Italian notation looks, in fact, like a *de jure* acknowledgment of an already existing performing practice, of singing certain chanson and madrigal types in a tempo *faster than usual*. But then we are in a difficulty to fix any definite range for the usual tempo. In other words, the affective content of the text must have been decisive in the choice of tempo already at an early stage, quite earlier than Praetorius' statement about the need to consider the expression of the text and the music.¹⁹ In the second half of the 16th

evaluations of 14th- to 16th-century *tactus* – accepted in the 20th century – as too fast ("A reexamination of the evidence on absolute tempo before 1700", *EM* 24 (1996), 227–247 and 681–689.

¹⁸ See: James Haar, "The Note Nere Madrigal", JAMS 18 (1965), 22–41; Don Harrán (ed.), The Anthologies of Black-Note Madrigals: I, Pars 1.

¹⁹ Prætorius, Syntagma musicum III, 51. See quotation and note 221 in 8.3 below.

century, notational uniformity, as claimed by Apel, no longer prevails.²⁰ Many pieces are written again in the older \mathbf{c} signature, instead of \boldsymbol{c} . Compared to 16th-century motet style, the note values are halved. The durational strata largely preserve their motet-like characteristics, but are shifted one degree lower. Thus the fast stratum (*III*) is written in *fusae* (\boldsymbol{J}), instead of semiminims, and the ornate stratum (*IV*) – in *semifusae* (\boldsymbol{J}). But, since the dividing line between sacred and secular vocal music is not clear-cut, the characteristics of the durational strata, their melodic, harmonic and syllabic functions (i.e, their role as *strata*) often become blurred too. In late 16th-century madrigals, mensuration signs are often mixed up (or "confused"),²¹ with hardly any difference of distribution of note values between \mathbf{c} and \boldsymbol{c} signatures.

1.7 Barring traces in (unbarred) partbooks

As an almost randomly chosen example, let us consider Sdegnosi ardori, the most extensive collection of settings of a single madrigal, Ardo sì by Guarini, published in Munich 1585.²² 17 madrigals (out of 31) in this book are written in ¢, 14 in c signature. Significantly, the practice of halved note values, introduced in the note *nere* madrigal, is already fully established here; semiminims (\downarrow) constitute the main syllabic stratum (II). The vocal-ornate (here not very frequent) stratum is represented by *semifusae* (). This may imply that the intended tempo of these madrigals was generally rather fast. About half of them (15) display "modern" traits of the canzo-been found between any particular rhythmic characteristics of the various madrigals (with or without canzonetta rhythms) and their respective time signatures: the small edge of 'modern' madrigals in c over c is just too slight to be of notational significance. Moreover, the 'tactus', or basic rhythmic unit, of all madrigals is the semibreve, independently of their time signatures, c or c. This is evidenced by unambiguous traces of using barlines, at some stage of the compositional (or copying) process, prior to their final format as partbooks.

²⁰ The use of halved note values – compared to motet style – was not limited to the special type of *note nere* madrigal of the 1540's, but persisted quite longer, as we shall see below, in the *Ardo sì* collection. In fact, we may say that this practice has persisted up to the present.

^{21 &}quot;Denn es sonsten mit den beyden Signis e und e so offtmals umbzuwechseln / mehr Confusiones und verhinderungen erregen möchte." (Syntagma musicum III, 51).

²² Sdegnosi ardori: Musica di diversi autori, sopra un istesso soggetto di parole, a cinque voci, raccolte insieme da Giulio Gigli da Imola, Munich: Adam Berg, 1585 (RISM 1585¹⁷; microfilm, Hamburg Staatsbibliothek); Settings of "Ardo sì" and Related Texts (including the complete Sdegnosi ardori), George C. Schuetze, ed., Madison: A-R, 1990, 2 Vols.

In the 16th century, barlines were normally found only in scores or lute and keyboard tablatures, not in partbooks. As a result, the length of the measure (*tactus*, *battuta*) in the unbarred parts was determined by the mensuration sign, which in binary sections was *one semibreve* for c, *one breve* for c. However, examining the *Sdegnosi ardori* collection shows that all rest signs conform to imaginary barlines (or any similar device), spaced *one semibreve* apart. Thus a rest of a semibreve (\neg), for example, may appear in the original partbooks divided to -, only when it would have been split in the middle by a hypothetical (semibreve) barline (-|-), as if barlines were present in an imaginary score, from which the parts could have been copied. Accordingly, combinations like - and - never come interchangeably, but conform to the placing of the hypothetical barline. All madrigals in this collection, either in c or c, 2^3 obey the same rules of rest sign grouping; but nowhere is there any indication of divisions into larger units (such as *brevis* bars).

This practice is in accordance with Zarlino's requirement that rest signs should not be 'syncopated' (i.e., extended beyond the measure).²⁴ The way that Sdegnosi ardori obeys Zarlino's rule of "non-syncopating rests" shows that the semibreve is taken in the entire collection as the *tactus* unit, disregarding the particular mensuration sign (\mathbf{c} or \mathbf{c}) of each madrigal. The apparent reason is the dissemination of notational practices of the note nere madrigals. But we should ask how strict observance of Zarlino's rule was effected in practice. It is plausible that the authors (or compiler) of Sdegnosi ardori observed Zarlino's rule intentionally; but it is no less remarkable that all the madrigals, regardless of their time signatures, show a semibreve *tactus* - not a breve, which still was considered by 1585 as as a norm.²⁵ Furthermore, as far as placing the rest signs is concerned, there seems to be no single error or exception in the entire collection. This may imply that rest signs in Sdegnosi ardori were placed by way of a quasi-automatic, or 'inevitable' process, resulting as a concomitant of compiling the partbooks. The simplest way of placing the rest signs correctly would be copying the parts directly from a score with barlines spaced one *semibreve* apart.²⁶

²³ There are no other mensuration signs in the entire book, except for a few short ternary episodes, marked by 3, designating either *tripla* (3:1) or *sesquialtera* (3:2).

²⁴ Gioseffo Zarlino, *The Art of Counterpoint*, 122: "Although rests can bring about syncopation, [...] it is not permitted or good to syncopate rests, [...] regardless or the sign or tempus. Such rests break the measure and tempus, the beginning of which should normally fall on the beginning of each pause."

²⁵ Lowinsky, "Early Scores in Manuscript", 150.

²⁶ This corroborates the position of Edward Lowinsky (see note 5) about the important role of scores in 16th-century composition. The division into semibreve units, however, is not in accordance with Lowinsky's assertion, that the barring unit was solely the breve (ibid., 169).

1.8 Palestrina the Retrospective

The clearest division of durational strata is revealed in the music of Palestrina, but its status as the main model of late 16th-century vocal style should be re-examined. Chronologically, Palestrina stands at the threshold of the 17th century, but his work reveals a puristic touch and too many retrospective characteristics. Later 16th-century vocal church music (e.g., by Lassus) was often influenced by practices of contemporary secular music – e.g., new *alla semibreve* notation, or fast syllabic passages alien to the conservative style.²⁷

Apel's description of the durational strata has served here as the point of departure, although his argument, namely that in the 16th-century "variability of tempo may have been practically unknown" seems highly exaggerated. It apparently reflects a common belief in a golden age, when truth was simple and clear-cut.²⁸ But the tendency of theorists to (over-)simplify matters – musical or otherwise – is wellknown, from the Pythagoreans through Sebald Heyden, or Quantz, up to the present. We shall return to the imaginary "invariability of tempo" later on, in discussing the role of proportions in Chapters 7 and 8.

²⁷ About the 'retrospectiveness' of Zarlino's rules, see Jeppesen, *Counterpoint*, 27: "One sees at once that Zarlino, whose work first appeared in 1558, deals principally with the practice of the Netherland composers as it developed during the first half of the 16th century in Italy, and that he does not present the actual set of rules of the Palestrina style."

²⁸ Apel later on (*The Notation of Polyphonic Music*, 189f) concedes that matters were never as simple as they were in theory.

2. Early Instrumental Rhythmic Styles

[...] tanto è neta e veloce [...] che tali mezzi benche in essi fusse qualche errori saranno per la sua bellezza tolerati ne el senso offendendo, & alcuna volta fara patire el contra ponto [...]²⁹

2.1 The passage-stratum (V)

The 16th century – when independent instrumental music was still a relatively new medium, less encumbered by traditions, conventions and sets of rules than vocal music – witnessed the coexistence of two distinct musical idioms, vocal and instrumental, within one stylistic framework. A considerable part of the new instrumental repertory was acquired by way of intabulating vocal music. In the process of adapting vocal polyphony to the new medium, many idiomatic formulas, or 'instrumentalisms', were added to the original music;³⁰ hence it was reasonable to regard the vocal medium as the primary or natural foundation, and the instrumental formulas as an added mannerism. But the consistent avoidance, in both motet and madrigal genres, of any virtuoso effect, or any liberty that might suggest an 'instrumentalism' is in itself a special kind of mannerism. In order to get an idea of how deliberately the pure, 'angelic' vocal style was cultivated, one might examine nearly any 16th-century vocal piece. Their 'vocality' is so striking, that one could almost believe that Palestrina, or his contemporary vocal composers did not know that instrumental music existed. At the same time, Palestrina's somewhat older contemporary, Andrea Gabrieli (1510-1586), to name just one, was improvising and composing keyboard versions of well-known madrigals and chansons of remarkable virtuosity, abounding in long runs of *semifusae*. These are also characterized by noble disregard of vocal counterpoint rules, not only in the fast passages, but also with blatant parallel fifths or octaves in sustained chords. Many chansons and madrigals are similarly treated by other composers, e.g., in the diminution books by Ganassi 1535, Ortiz 1553, and others. Contrary to Ganassi's above-quoted

²⁹ Sylvestro Ganassi del Fontego, Opera intitulata Fontegara, 1535 [Ch. 13], English trans. by D. Swainson: "his coloratura passes so quickly and clearly and is so lovely that sometimes a fault may occur which does not offend the ear. [...] Here also you may drop into faults which are almost impossible to avoid in rapid divisions. This is why I allow you these liberties." (ibid., 13).

³⁰ See Daniel Heartz, "Les styles instrumentaux dans la musique de la renaissance", in *La mu*sique instrumentale de la renaissance, 61–76.

explanation, it is not speed alone which justifies the laxity of dissonance treatment. This trend seems to be inherent in the genre of improvised diminution in general, vocal or instrumental alike. But we see nothing of this tolerance of 'faulty' progressions in Gabrieli's own vocal work, which in its harmonic treatment and voice leading hardly differs from other vocal music of his time.

Example 4: Andrea Gabrieli, Madrigal *Con lei foss'io (Canzoni alla francese*, Book VI), Venice 1605



This allows us to extend our inventory of durational strata by adding a fifth, faster stratum, seldom used in 16th-century vocal music – the *semifusa* ($_{6}$), as well as shorter notes – which assumes an increasingly important role in the form of scale figures and extended fast passages, written-out trills, *tirate*, and similar devices. We may term it as the *passage-stratum* (V).

The fastest passages in in the organ works of Gabrieli (and Cabezón) consist only of 16th-notes and are still rather stereotyped, being composed almost entirely of scale figures, written-out trills, *tirate*, and other diminution-like patterns, such as turns (*Schleifer*) and *cambiata* figures; these figures show very few intervals exceeding seconds. But some forty years later, we see in the keyboard work of J. P. Sweelinck a greater differentiation of the passage stratum, as compared with A. Gabrieli and his generation. Although the same formulas also occur in Sweelinck's works, here the diminution-like role is often relegated to 32nds, while the 16ths display more complicated patterns, such as repeated notes, frequent skips, as well as 'murkys', arpeggios, polyphonically broken chords and so-called 'violinistic' figures. The 32nd-note passages in Sweelinck's music imply really very fast, or even 'as fast as possible' speeds. The fact that such passages are invariably short, hardly filling one complete measure, corroborates this conclusion (Example 5). Example 5: Jan Pieterszoon Sweelinck

a) Mein junges Leben hat ein End, Var. 3



b) Fantasia No. 8³¹



2.2 Time signatures in Andrea Gabrieli's Canzoni

All Andrea Gabrieli's keyboard *Canzoni alla francese* (Book VI, posthumously published by his nephew, Giovanni, in 1605) are in either \mathbf{c} (4 pieces) or \mathbf{c} mensuration (6 pieces), barred one breve apart throughout. The note-value distribution is the same for both signatures, with 16ths as the fastest notes. The reasons for choosing one signature or the other do not concern meter alone, but other aspects as well. These intabulations (of eight French chansons and one madrigal) use either \mathbf{c} or \mathbf{c} , but not arbitrarily: in some pieces, the predominant figure is $\mathbf{c} = \mathbf{c}$, in others it is $\mathbf{c} = \mathbf{c} = \mathbf{c}$. Thus \mathbf{c} is reserved for the faster moving piec-

³¹ Numbering according to Jan Pieterszoon Sweelnick, Opera omnia I/1 (Keyboard Works – Fantasias and Toccatas), ed. Gustav Leonhardt, Amsterdam 1974; cf. Pieter Dirksen, The Keyboard Music of Jan Pieterszoon Sweelinck – Its Style, Significance and Influence, Utrecht 1997, Appendix 2 (Catalogue), No. 12.

es,³² unlike the conventions of the new *alla semibreve* madrigal. One explanation is that perhaps Gabrieli follows a different tradition here than the one later described by Praetorius.³³ Praetorius designates ϕ , which he terms the "slower" tactus, for madrigals, allegedly faster than motets, the faster tactus ϕ is prescribed for the motets, which are slower, in order to avoid extreme tempi:

[1*] Quia Madrigalia & aliæ Cantiones, quæ sub signo \mathbf{c} , Semiminimis & Fusis abundant, celeriori progrediuntur motu; Motectæ autem, quæ sub signo \mathbf{c} Brevibus & Semibrevibus abundant, tardiori: Ideo hîc celeriori, illic tardiori opus est Tactu, quò medium inter duo extrema servetur, ne tardior Progressus auditorum auribus pariat fastidium, aut celerior in Præcipitium ducat [...].³⁴

But Gabrieli, as we said, follows a different track: the faster chansons apparently move *alla breve* in the original sense of the word, i.e., one-way hand motion per semibreve, while in the slower ones ("*alla semibreve*") the hand moves with each minim. We see this practice in his French chansons, while his madrigal and ricercar on *Con lei foss*'io, both slow-moving, abounding with the motet-like rhythm $\infty \circ \circ$, are again written in ϕ , in the traditional motet mensuration.

One may question whether Gabrieli used the ϕ and c signs intentionally. Yet the Sixth Book displays four *consecutive* c pieces, the only ones in his five extant volumes of organ music.³⁵ The pieces in this book represent three distinct rhythmic types: slow and fast chanson, and motet-like ricercar. Though of a similar *Notenbild*, they derive from different vocal models and should perhaps differ in their tempi as well.

The passage-stratum (V) in all of Gabrieli's keyboard pieces invariably consists of \mathbb{A} Even if not all fast passages have to be played in one tempo, Gabrieli apparently intended similar speeds for all *passaggi* in all three rhythmic types, with a possible difference of nuance. But it would be absurd to assume a 2:1 tempo relationship here, between \mathfrak{E} and \mathfrak{C} pieces, as the *Notenbild*, abounding in 16th-note passages (but no smaller values), is much more uniform than what we see, for instance, in Merulo or Frescobaldi.

³² Pieces in ¢: Nos. 1, 2, 3, 8, 9, 10; in c: 4, 5, 6, 7.

³³ Praetorius, Syntagma musicum III, 49.

³⁴ *Syntagma musicum* III, 50. Translation in Appendix 2. Praetorius later on mentions various practices of using time signatures by leading composers of his day.

 ^{35 1.} Je prens en gré [od] (24); 2. Le bergier [looloo]]; 3. Orsu [Jacob] [dd]; 4. Qui la dira (Janequin) [looloo]]. In Pierre Pidoux's edition (Kassel: Bärenreiter, 1966), Le Bergier (No. 5) deviates from the original time signature, with ¢ instead of c.

2.3 Merulo's Canzoni d'intavolatura d'organo

Another collection of the same genre, published at about the same time and place, Claudio Merulo's three books of *Canzoni d'intavolatura d'organo*,³⁶ shows remarkable similarity of style; but some differences should be observed. Although both composers employ a typical keyboard idiom, with free treatment of dissonances, Merulo generally tends to avoid blatant progressions of parallel fifths (but he still has parallel octaves). This is achieved in cadences, for example, by using IV– $IV_6 - V - I$ progressions, instead of IV - V-I in root positions in Gabrieli.

Example 6: Claudio Merulo, Canzona La Benvenuta (Libro primo): end



Whereas all fast passages of Gabrieli, including scale figures and written-out trills, consist entirely of 16ths, the passage-stratum (*V*) in Merulo's organ work is more differentiated, using 32nds too; but these come in short groups (written-out mordents or short trills), seldom exceeding four notes. Merulo's canzoni are all in \notin signature, barred one breve apart; but they display two distinct rhythmic types – or tempo types. Nearly all pieces of the two first books (except *La Bovia*, No. 1 in Book I) belong to the fast type, displaying the rhythmic figure $\exists J J / \exists J J J$. The entire Book III, on the other hand, consists of four intabulations of French chansons (by Crequillon and Lasso), of a slow or moderate pace, with the figures $\circ \exists J / - \exists J J$ prevailing.

2.4 Frescobaldi's organ music: the binary meters

Compared to his predecessors, the music of Frescobaldi marks an emancipation in almost every aspect from the old school, where organ music was still regarded in many respects as ancillary to its vocal models. Naturally, there is a clear distinction between vocal and instrumental music in the older school too: the highly embellished intabulations of A. Gabrieli or Merulo do not look like anything vocal at first sight; but fundamentally they are still variations on a vocal model. The traces of vocal origin recede markedly in Frescobaldi's keyboard compositions, with an

³⁶ Claudio Merulo, *Canzoni d'intavolatura d'organo*, Venice: *Libro primo*, 1592; *Libro secondo*, 1606; *Libro terzo*, 1611.

instrumental logic independent of any vocal image, with complex textures inconceivable in any other medium than the keyboard. But even Frescobaldi's early Ricercari from 1615 still adhere to the vocal motet. The use of \checkmark (as the fastest note value) is limited to note pairs in the ricercari, in accordance with 16th-century vocal counterpoint rules. This restriction is discarded in the *canzoni* of the same book. Here extended eighth-note passages become the rule, while 16ths (\checkmark) become the level of short ornamentation, occurring only pairwise.³⁷

Although he uses no other binary signatures than \mathbf{e} ,³⁸ Frescobaldi clearly distinguishes in his later work (since the *Capricci* 1624) between two kinds of binary measure: the 'major' \mathbf{e} [$\mathbf{e}\mathbf{e}$] with standard *breve* barring, and the minor \mathbf{e} , barred in *semibreves*. The minor \mathbf{e} barring (one semibreve per measure) is characterized by shorter note values, eighthnotes and 16ths, and occurs in the Capricci (1624) and later works, such as the toccatas of the Second Book (1627) and canzoni of the *Fiori musicali* (1635).

Although they are not discussed in Frescobaldi's prefaces, the two kinds of binary measure are equivalent to Praetorius' *tactus maior* and *minor*, and analogous to Frescobaldi's own triple measures ("*trippole e sesquialtere maggiori o minori*"), mentioned in the preface to his *Primo libro di capricci*. In the earlier work, *Recercari et canzoni franzese* (1615), Frescobaldi uses the long \mathbf{c} [\mathbf{cc}] signature throughout, in the sense of *allabreve*. One might term the two modes of barring as *prima* and *seconda prattica* measure. The first kind (corresponding to the old allabreve ¢) is used with predominantly white note values; the other one (minor \mathbf{c}) – for black notes, often eighth- or 16th-notes. The semibreve barring does not yet appear in the *Recercari et canzoni franzese* (1615). The ten Ricercari still conform to the '*prima prattica*'.³⁹ But the Canzoni of the same book are altogether different. Their difference echoes the gap between the new- (*alla semibreve*) and old-generation (*allabreve*) madrigals, and this alone justifies the two kinds of barring, Their tempi seem to parallel Praetorius' *tactus celerior* and *tardior*.

³⁷ Modern toccata-like figuration appears once only (*Canzon quarta*, top of p. 55 in the 1615 original print; m. 29 in Pierre Pidoux's edition).

³⁸ I have marked here the major measure \mathbf{c} (of breve duration) in the following discussion as \mathbf{cc} , to distinguish it from the minor (semibreve) \mathbf{c} , although they never appear in the original in this form. \mathbf{c} and $\mathbf{c}\mathbf{c}$ are similarly used.

³⁹ With its stricter imitative polyphony and denser textures, the style of Frescobaldi's ricercari shows more affinity to vocal 16th-century style than to the organ works of the former generation (A. Gabrieli or Merulo).

In binary meters, Frescobaldi applies the one \mathbf{c} signature to a whole range of meters, and tempi.⁴⁰ His ricercari, moving in a characteristic *allabreve*, represent instrumental parallels of the 16th-century conservative motet style (in its 'intabulated' instrumental form). They are contrapuntally stricter than those of A. Gabrieli, lacking the latter's frequent written-out ornaments. Their apparent innovation consists in compact imitations and rhythmic density, even greater than in the classical motet style. These particular qualities distinguish Frescobaldi as a possible source of inspiration for the *stile antico* works of J. S. Bach.⁴¹

Another rhythmic innovation of Frescobaldi concerns his toccatas and toccatalike sections, that is, the use of 16th-notes and 32nds as a relatively slow, melodically independent durational stratum. Comparing the 16th-note passages in his organ works with those of A. Gabrieli or Merulo, we see a progressive development from a merely ornamental stratum (written-out trills and scale figures, occasional *cambiatae* and similar formulas) into thematically meaningful segments and passages.

The new function of 16th-notes, a concomitant of the *seconda prattica* use of smaller note values, parallel to the practice of vocal music of the time (Caccini, Monteverdi), creates a new tempo-genre, that is, the modern *slow movement*. The fact that in later generations, including J. S. Bach and much later, the practice of using small note values for slow movements became the norm, may be indebted in the first place to the tempo practices of Frescobaldi.

Example 7: Passages in Frescobaldi, Toccata I (Book II)



⁴⁰ Darbellay ("Tempo Relationships in Frescobaldi's *Primo Libro di Capricci*", 308–12) distinguishes four rhythmic types of binary measure in the Capricci. Adding the toccatas into the count, one might discern even more types.

⁴¹ See Nikolai Koptschewski, "Stilistische Parallelen zwischen dem Klavierwerk Frescobaldis und dem Spätwerk Bachs" *KB Leipzig 1985*, 437–47; see also James Ladewig, "Bach and the *Prima prattica*: The Influence of Frescobaldi on a Fugue from the WTC", *JM* 9 (1991), 358–75.


2.5 Frescobaldi's ternary proportions: Canzoni 1615

Etienne Darbelay has studied in detail the *Primo libro di capricci*, as part of his research on Frescobaldi's keyboard works and preparating their new edition. Being aware that Frescobaldi's performing suggestions in his preface⁴² are contrary to the classical theory of proportions, Darbellay presents a highly intricate tempo hypothesis for the Capricci. He argues that Frescobaldi uses at least two (or even four) different *tactus* for duple meters, which *cannot* relate to each other by definite proportion in any traditional sense. And yet Darbellay tries to preserve in part the practice of proportional tempo relations. He suggests that at transition points between duple and triple meters, the old 3:2 or 3:1 relationships can be maintained. As a theory, Darbellay's hypothesis complicates the problem, particularly since the Capricci are rhythmically complex in themselves. A proportional reading seems even more questionable in light of Frescobaldi's own words, which hardly speak of strict tempi, always stressing the performer's liberty, the fine nuance and the affect.⁴³ Let us first study a rhythmically simpler group of Frescobaldi's works, expecting that the insight gained by these may also be relevant for the more complex ones.

Let us recall Frescobaldi's statement in his preface to the Capricci 1624, about triple proportions: "[Nelle trippole, o sesquialtere,] se saranno maggiori, si portino adagio, se [saranno] minori [si portino] alquanto più allegre."⁴⁴ Although the Canzoni are earlier than the Capricci, we should bear in mind that the Recercari et Canzoni (Rome: Zannetti 1615) were later incorporated into the second edition of the-

⁴² See Frescobaldi's preface, *Il primo libro di capricci* (1624), Etienne Darbellay, ed.; E. Darbellay, "Tempo Relationships in Frescobaldi's *Primo Libro di Capricci*", *Frescobaldi Studies*, 301–26; Review of Darbellay's Frescobaldi edition by Frederick Hammond, *JAMS*, 1988, 527–33.

^{43 &}quot;In those places that seem not governed by contrapuntal practice, one should first search for the affect of the passage, and the composer's intention for pleasing the ear, and [thus] discover the manner of playing it." (Preface to *Primo libro di capricci* 1624, tr. By Darbellay).

^{44 &}quot;[The triple measures,] if they are major, should be played *adagio*, if minor – somewhat more *allegro*."

Capricci (1626), and thus preceded by the same preface which, therefore, pertains to the earlier works as well.

All duple sections of the *Recercari et Canzoni* (1615) are written in 'major' barring (c c, 1 breve length). This, in fact, is the only signature used in the Ricercari throughout. The Canzoni are different, not only in the predominance of black note values (λ , λ), but mainly in the interpolation of contrasting triple-meter sections (I term them 'ternary episodes'). They are formally written in proportion signs (3; 3 ($\lambda \downarrow \lambda$); 3 ($\lambda \downarrow \lambda \downarrow$), C3 ($\lambda \downarrow \lambda$). The c sections are all 'major' (except for occasional isolated halved measures, before triple sections); but the ternary sections are either 'major' or 'minor'. Here is the list of triple signatures used in the Canzoni:

I. Major tactus (3 semibreves per measure): (a) O3: (Canzoni 1-A, 1-B; 2-A, 3-A);⁴⁵ (b) simple 3 figure with coloured notes, i.e., six blackened (= four white) minims per measure (Canzon 2-B).

II. Minor tactus (3 minims per measure): (a) c3 Canzon 3-B); (b) c3 (Canzon 4-A, Canzon 5); (c) 3 with three *black* minims per bar (Canzon 4-C).⁴⁶

Canzoni 2 and 3 use two different ternary notations, and No. 4 three different ones. However, Episodes A and B in Canzon 4 constitute in fact a single triple section, with its two parts separated by a single binary measure. The second tactus sign (3) simply serves as a reminder of the former triple meter ($\mathbb{C}3$).

Canzon No.	Episode		
	А	В	С
1	O3 (0 0 0)	O3	
2	03	3 ()	
3	03	C3 (
4	C3 ())	3 (3 (,)
5	C3 (

Table 1: Ternary episodes and their mensurations in the Canzoni

^{45 &}quot;Canzon 1-A" is shorthand for "Canzon Prima, first ternary episode". Pierre Pidoux uses in his edition (Kassel: Bärenreiter, 1971), the 1626 edition, combining the books of 1624 and 1615. Pidoux erroneously prints a *dotted* \odot **3**, which does not make sense here. This would mean three semibreves and *nine* mimims per measure.

⁴⁶ The semiminims are printed as), to be distinguished from blackened minims.

Example 8: 'Major' ternary (O3) episodes of Canzoni 3, 2, 1

a) Canzon 3



b) Canzon 2



c) Canzon 1



Example 9: Canzon 2: transition from major binary to major ternary, by means of 'halved' (minor) measures



the relevance of Praetorius' above quoted admonition, "quó medium inter duo extrema servetur", in agreement with Frescobaldi's advice. A different situation is seen in Episode B of Canzon 2, where the black notation formally means equating three black minims with two (preceding) white minims. Here a proportional reading (3:2), equating the binary semibreve with a triple (blackened) measure is hinted by Frescobaldi: the transitory measure to Episode B (Example 9), 2nd to 4th barlines) is divided by a barline, so that its first half (one semibreve) is binary, and the second half marked by a **3** and a coloration, being the actual starting point of the ternary episode. A logical reading would be then equating both half-measures. Reading Example 9b in strict proportion would result in identical tempi for both ternary episodes. But the difference of notation of episodes A and B seems marked enough as to indicate different rhythms and tempi.

The essence of the Frescobaldian canzona lies in its multi-sectionality, where meter and tempo change in each section. The same principle governs the toccatas, although the toccata by definition is of a fluctuating tempo like a "modern madrigal," in Frescobaldi's own expression. Considerable freedom is also granted to other multipartite forms: *partite* (variations), passacaglia and chaconne, between – as well as within – the various sections. In both his prefaces, to the *Primo libro di toccate* and *Primo libro di capricci* (both published in 1615), Frescobaldi does not mention any strict tempo proportions:

For that kind of style must not be subject to time [...] which is beaten now slowly, now quickly, and even held in the air, according to the expression of the music, or the sense of the words.⁴⁷

Darbellay is well aware of the dissolution of proportional tempo relationships in Frescobaldi's binary meters, and also of the new dependence of tempo on the musical content of the measure (i.e, the *Notenbild*). He clearly describes the double nature of proportion, its inseparable metric and 'temporal' aspects, which by the 17th century were already divorced from each other. The same developments of the *tactus* system are also discussed by Frescobaldi's contemporary, Praetorius, in *Syntagma musicum* III (1619). The simpler solution to the ensuing tempo problems would be to admit that Frescobaldi no longer regarded tempo as dependent on strict arithmetical proportions. We see it in nearly every measure of his music. That is why he said on proportions: "*if they are major, let them be played adagio, if minor – somewhat more allegro; if they show three semiminims, more allegro; if they are six on four, let their tempo be given by an allegro beat*" [si dia il lor tempo con far

⁴⁷ Frescobaldi, Preface to *Il primo libro di toccate*, 1614; translation by A. Dolmetsch, *The Interpretation of the Music*, 5.

caminare la battuta allegra]. Moreover, Frescobaldi speaks here of "*trippole, o sesquialtere*" collectively, which obviously refers to *triple meters*, collectively, and not to specific proportions.

These words show clearly enough that Frescobaldi regarded tempo as a flexible entity, capable of being contracted or stretched at will.

Frescobaldi played a central role in developing modern instrumental idioms, the improvisatory toccata-like fabric, as well as its contrasting type, the canzon-ricercar texture – being itself an instrumental extension of the (originally vocal) motetchanson style. This dual development is clearly traced in Frescobaldi's use of binary and ternary meters, which reveal an unprecedented variety in his music.

3. Bach's Style and Durational Strata

... così la differenza di espressione ritmica indica il golfo che divide la musica barocca dalla precedente polifonia vocale. Nessun ponte sembra gettato sopra il largo golfo; nessun anello sembra allacciare I due mondi artistici le cui espressioni ritmiche sono diametralmente opposte.⁴⁸

"The age of thoroughbass" is the famous epithet given by Hugo Riemann to the Baroque era.⁴⁹ The *Basso continuo* became the main hallmark distinguishing Baroque styles from earlier periods, as well as from the following Classical era. The rhythmic concomitant of the basso continuo, the so-called *walking-bass* texture – although it is inseparably associated with the bass line, hence with harmony in general – also governs an entire *durational* stratum, the middle one (*II*), lending it particular significance. The walking bass persisted from Monteverdi's time to Bach, but still often occurs in compositions of later generations as well.⁵⁰ As we shall see, the walking-bass element was also used in Baroque *stile antico* as an additional 'modernizing' factor, whereas in the next generation, the late 18th century, it represented a 'retrospective' element. In other words, it is the same stylistic component signalling musical modernism in early Baroque, and conservatism in the Classical period.

⁴⁸ Leo Schrade, "Sulla natura del ritmo barocco", *Rivista Musicale Italiana* 56 (1954), 5–6 ("...thus the difference of rhythmic expression indicates the gap dividing between Baroque music and earlier vocal polyphony. There is no bridge laid across this wide gap, no connecting link between the two artistic worlds of diametrically opposed rhythmic expressions").

⁴⁹ Riemann (Handbuch der Musikgeschichte [1912], Vol. 2, Ch. 4) terms the period of 1600– 1700 "Das Generalbaβ-Zeitalter."

⁵⁰ Continuo-like textures occasionally still occur in *stile antico* moments one or two generations after Bach, e.g., in Mozart's 'chorale-prelude' ("Der, welcher wandert diese Straße"), *Zauberflöte* Act II, as well as in some of his youthful works. The rhythmic profile of the *basso* part of the first movement (*Adagio*) of String Quartet K. 80 (1770), as well as the Introduction to K. 465 (1785), are reminiscent of the opening movement (*Largo*) of Bach's Trio Sonata of the *Musical Offering*.

3.1 "Old" and "new" stile antico

Christoph Wolff, in his book Der Stile antico in der Musik Johann Sebastian Bachs.⁵¹ attempts to define the essence of the Baroque stile antico, relying on 17thand 18th-century sources, as well as on the best-known scholarly works up to the 1960's – the time when he wrote his dissertation – such as Jeppesen, Fellerer, and Gerstenberg. He quotes some 17th- and 18th-century authorities, as well as presentday scholars, enumerating the rhythmic hallmarks of the style: 1. *tempo allabreve*; 2. mainly "white" note values - i.e., a Notenbild similar to that of 16th-century vocal tradition.⁵² But now a new textural element, unknown in 16th-century style, was added to these characteristics, namely, the basso continuo (walking-bass). Since the 17th century, it became an all-pervading integral element of every musical genre of the Baroque, whether antico or moderno. This had an immediate effect on the profile of the 'new' stile antico. The most salient difference between both styles is the changed function of the semiminim (\cdot) : whereas in 16th-century vocal style it represented the fast, melismatic-flowing stratum (III), in Bach's stile antico pieces, notated alla breve, it stood for the middle stratum (II), the domain of the walking-bass, usually associated with a certain emphasis on each note.⁵³ But in *alla semibreve* pieces, the same function was given to the fusa (\mathcal{I}). We see this clearly, e.g., in Bach's interpolated Credo to the F major Mass by Bassani,⁵⁴ or in the Credo of his own Mass in B minor. In both pieces we have ostinato continuo parts of incessant, moto perpetuo-like I motion. The bass part of the first Credo, consisting entirely of large skips, calls for persistent *détaché* articulation, totally foreign to the Palestrina style. From a 16th-century viewpoint, the combination of walking-bass texture with the long, flowing lines of the motet style – characteristic of Baroque stile antico – is not only incompatible, but also imposes a new tempo conception on the style as a whole. In a description of Baroque durational strata - like the one previously proposed for the 16th-century style (Ch. 1.1, 2.1) – the walking bass will constitute the middle stratum (II); but now as a new, instrumental one, characterized by long stretches of notes of the same repeated duration (usually eighthnotes), like a slow *moto perpetuo*. The walking-bass stratum is a common feature of Baroque stile antico and moderno, filling the gap between 18th- and 16th-century styles. We find walking-bass passages not only in real continuo parts, but also in

⁵¹ Ibid., pp. 14, 38.

^{52 &}quot;Nicht zu geschwinde Noten" (Bernhard); "...nur ganze, halbe und viertel Tact Noten im allabreve-Tact" (Walther); "große Notenwerten" (Fellerer); quoted in Wolff, ibid., 14, 38.

⁵³ See: Gerstenberg, "Andante", KB Kassel 1962, 156-8.

⁵⁴ In Wolff, Der Stile antico, 202–3.

works with imaginary ones, such as solo instrumental pieces (for keyboard or unaccompanied violin), or purely vocal works.⁵⁵

The influence of the new durational stratum is felt not only in newly composed 'old-time' pieces, but apparently also in the way that authentic 16th-century music was read and performed, in Bach's time and later. In Bach's generation, a slow heavy motion was attributed to some traditional time signatures ($\mathfrak{c}, \Phi, \mathrm{or } \mathfrak{F}$), since using the minim (or the semibreve) as the basic beat unit was no longer considered natural. But for Palestrina's generation this was the most obvious way of notation, representing normal movement. By the 17th century, the role of the breve unit (in alla breve notation) already changed: no more a tactus of two strokes one semibreve each, but of four minim-beats. The new reading of the old time-signatures also understood traditional rhythmic proportions in an *inverted sense* (see 7.3). Later on in the 18th century, the interpretation of the allabreve notation diverged still further from its original intent, as we see in the writings of Bach's disciple, Johann Philipp Kirnberger. As an interesting example of the changed interpretation of the old allabreve let us return to the Credo of the B minor Mass. It opens with $|||_{0,0}||_{0,0}|_{0,0}$, the 'augmented' motet/ricercar rhythm. This rhythm, a common opening figure in Palestrina's motets and Mass movements,⁵⁶ is most rare in Bach. Kirnberger mentions this Credo, written in major & (cc) signature, as the "only example" in the music of Bach of meter [Zweyeinteltackt or der große Allabreve-tackt], which he condemns (together with as "eccentricities"[bloße Grillen], naming their use obsolete or faulty [verwerflich].⁵⁷ At first glance, this observation seems contrary to the facts, as J. S. Bach used this time signature and barring in so many stile antico-oriented pieces. However, as Kirnberger revered the music of. J. S. Bach and knew it thoroughly, we should examine his remarks in detail.

- a) Kirnberger distinguishes between two kinds of major ϕ , the Zweyeinteltackt $\binom{2}{1}$ and the Vierzweiteltackt $\binom{4}{2}$, but he ascribes only one Bach piece (the same *Credo*) to the first kind. Thus he regards all the other major ϕ pieces as belonging to the second kind $\binom{4}{2}$.
- b) Most of Bach's pieces in major ¢, either in autograph or in print, are written with subdivided measures (by a short vertical stroke in mid-measure).⁵⁸

⁵⁵ A relatively early example is the *Allegro* section in Buxtehude's g minor Organ Prelude, *BuxWV* 149. A 'substitute continuo' example in Bach is the Andante of the 2nd Violin Sonata II, *BWV* 1003/3. Vocal continuo-like part is the tenor in the 9th stanza of *Jesu meine Freude, BWV* 227 ("Gute Nacht, o Wesen"; m. 300).

⁵⁶ To name some examples: Kyrie from *Missa Repleatur os meum laude*; Kyrie, Sanctus, Benedictus, and Agnus Dei I from *Missa Brevis*; Motets: *Ego sum panis vivus*; *Viri Galilaei*, *Tu es Petrus*, and *Dies sanctificatus*.

⁵⁷ Die Kunst des reinen Satzes, II, 118, 122.

⁵⁸ The Credo is written in the autograph (DB Mus. ms. Bach P 180) with undivided barrring.

- c) The use of major **c** barring (either 2_1 or 4_2) is, in any case, quite exceptional in Bach's vocal music, limited to relatively late works the B-minor Mass (*Kyrie* II, *Gratias agimus* and *Dona nobis pacem*),⁵⁹ and the opening chorus of *BWV* 80 all composed after 1730.⁶⁰
- d) Among these pieces, the *Credo* is exceptional in that, unlike the *Kyrie* II or the *Gratias*, it displays flowing melodic lines of relatively long durations, without any emphasis on the J-stratum (that is, with the exclusion of the continuo part). Its rhythmic character is also very different from the marked ₂-motion prominent in other major ¢ instrumental pieces (the E major Fugue WTC II, the sixpart Ricercare of the *Musical Offering*, and the first three fugues of the *Kunst der Fuge*, autograph version).

Both movements of the 1733 Missa (Kyrie II and Gratias) deserve special attention, since we possess not only their autograph score (SBB, P 180), but also an earlier – largely autograph - set of performing parts for Dresden, copied by Johann Sebastian, as well as other members of Bach's household around 1733 (D Dl, Mus. 2405-D-21): Anna Magdalena (Violoncello), Wilhelm Friedemann (Vn I, ripieno) and Carl Philipp Emanuel (Soprano I. II), and a scribe known as "Anon. 20" (Oboi I, II, Continuo).⁶¹ Comparing the score with the separate parts may be illuminatung. The score, as well as most of the parts, is written in a major ¢, i.e., with barlines one breve apart, subdivided by short strokes for each semibreve. However, some of the parts are barred in minor & (one semibreve) throughout.⁶² Even more conspicuous are the parts where the subdivision is either mixed, unclear, or outright irregular. Some parts have occasional full barlines every three semibreves, with subdividing strokes each semibreve.⁶³ Striking in this example is not only the discrepancy of the parts with the autograph score, but primarily the divergence of the parts among themselves. Such notational variants are not the result of carelss copying, but were apparently regarded by the copyists as musically equivalent.

It seems approppriate to quote here Kirnberger's words on this issue, in the same paragraph discussing the $\frac{4}{2}$ meter [*Vierzweyteltackt*]:

⁵⁹ The chorus *BWV* 29/2, *Wir danken dir, Gott* (1731), which served as a *Vorlage* to *Gratias* and *Dona nobis pacem*, is written in minor \mathbf{c} [2].

⁶⁰ To these one should add the motet *Lobet den Herrn*, *BWV* 230, whose chronology (and authorship) are not yet fully determined.

⁶¹ Personal communication by Dr. Uwe Wolf, Bach-Institut Göttingen. The other parts are copied by J. S. Bach.

⁶² Kyrie II: Soprano 1, Soprano 2, Violino 1 (ripieno), Violoncello, Ob. d'amore 1; Gratias: Soprano 1, Soprano 2, Violino 1 (ripieno).

⁶³ Kyrie: Ob. d'amore 2; Gratias: Clarino 1 and 2, Principale (= Tromba III), Tympani.

[2*] Junge Tonsetzer müßen sich nicht irre machen lassen, wenn sie Kirchenstücke im Allabrevetackt ansichtig werden, wo vier Zweyviertelnoten zwischen zween Tacktstrichen zusammengebracht sind, und daraus schließen, daß es der $\frac{4}{2}$ Tackt sey. Dieses geschieht blos aus Bequemlichkeit des Tonsetzers um die vielen Tacktstriche und Bindungen zu vermeiden, und steht ihm ebenfalls frey. Dadurch wird aber das Wesen des ¢ nicht verändert, der immer von zwey zu zwey halben Tacktnoten sein gleiches Tacktgewicht behält, wie unter andern Händel in seinen Oratoriis oft gethan hat.⁶⁴

One should also survey Bach's use of the *minor* $\oint \begin{bmatrix} 2 \\ 2 \end{bmatrix}$ signature, which is far more common in his music. Here is Kirnberger's commentary on this meter:

[3*] Der Zweyzweytel oder besser der Allabrevetackt, der durchgängig mit ¢, oder auch mit 2 bezeichnet wird, ist in Kirchenstücken, Fugen und ausgearbeiteten Chören von dem vielfältigsten Gebrauch. Von dieser Tacktart ist anzumerken, daß sie sehr schwer und nachdrücklich, doch einmal so geschwind, als ihre Notengattungen anzeigen, vorgetragen wird [...] Beyde Tacktarten [¢ und $\frac{6}{4}$] vertragen keine kürzere Notengattungen, als Achtel.⁶⁵

This description is incomplete, identifying ϕ with *allabreve*. Actually, one should distinguish two entirely different meters of $\begin{bmatrix} 2\\2 \end{bmatrix}$ measure length: (1) the one typically used in "Kirchenstücken, Fugen und ausgearbeiteten Chören", that is, in the domain of *stile antico*. Also typical of this meter are chorales with the melody moving in minims (such as *BWV* 38/1 or *BWV* 140/7). (2) However, the *Notenbild* is a much more important indicator for the normal tempo of such pieces than the time signature. ϕ is often used in fast concerto movements abounding in 16th-notes and even 32nds, contrary to Kirnberger's above-quoted 'prohibition' on shorter values than eighthnotes. The existence of some of these pieces in different versions with different signatures (ϕ or **e**) indicates that this kind of minor ϕ is not an *allabreve* at all, but rather a variant of *alla semibreve*, with a certain preference of slightly faster tempi than **e**. But even this distinction is not at all certain.⁶⁶ Kirnberger's description of the old *allabreve* meter is apparently his own simplified interpretation. Bach's own preferences, however, seem to have undergone a change in the last years of his life.

Of special interest are Bach's compositions existing in several rhythmic versions, with changes of time signature or barring, or with changed note values. Such instances raise the question whether the rhythmic changes in the new versions were intended to signal changes of tempo. A piece of this kind (though not in real *stile*

⁶⁴ Die Kunst des reinen Satzes, 2. Teil, p. 122. For translation, see Appendix 2.

⁶⁵ Die Kunst des reinen Satzes, 2. Teil, p. 118.

⁶⁶ Well-known & examples are opening movements of some concertos (Brandenburg and others). Variants in c exist for some of them: BWV 1046/1 (c version: BWV 52/1); BWV 1047/1; BWV 1048/1; BWV 1050/1; 1051/1; BWV 1052/1 (c version: BWV 146/1); BWV 169/1 (c version: BWV 1053/1).

antico), written in subdivided major *ternary Takt*, is the opening Chorus of *Weinen*, *Klagen*, *Sorgen*, *Zagen* (*BWV* 12/2). Its $\frac{6}{2}$ measure has in the autograph a $\frac{3}{2}$ time signature, signifying here a 3:2 'augmentation' – as Kirnberger termed it – of the major *allabreve* tactus.⁶⁷ In its later version, the *Crucifixus* of the B minor Mass, the measure has been halved into regular $\frac{3}{2}$ bars. Thus the only Bach pieces written in an undivided major *Takt* are the *Credo* and the E_b Prelude and Fugue (first section) of *Clavier Übung III*. Bach's preference of subdivided measures of major meters ($_1^2$ or $_2^4$) indicates that since the 1730's they were no longer taken for granted.

Particularly noticeable – and evidently systematic – are the changes of barring and note values in the printed edition of *Kunst der Fuge*, compared to the autograph.⁶⁸ Here *minor* ϕ signatures were adopted for the four first ricercar-like contrapuncti,⁶⁹ and doubled note values used in some other fugues and canons. At some stage between the autograph and the printed version, Bach changed certain time signatures and even note values: in the first three ricercar-like Contrapuncti the measure was halved (from major ϕ to minor ϕ),⁷⁰ but note values remained unchanged; in Contrapuncti 8, 11 and 12 the note values and measure lengths were doubled; but the *Canon per augmentationem in contrario motu* has doubled note values, compared with the older version (*Canon in Hypodiatessaron al rovescio e per augmentationem*), while the measure length remained the same (minor ϕ instead of **c**).

In all instances of notational change, Bach used doubled (augmented) note values for the later versions.⁷¹ Thus his notational changes are, in a sense, one-way. It seems, however, unlikely that such changes, undertaken at various stages of revision, were all intended as tempo cues to the performer – or tempo indications in the regular sense – unless we subscribe to Schweitzer's ideas, assuming that Bach in old age always wanted to have all his earlier music played slower than before.

⁶⁷ Kirnberger terms these 'augmented' triple meters "triplirt" (Die Kunst des reinen Satzes, Part II, 123–24; 128–30).

⁶⁸ The main metric and rhythmic changes: Ctrp. 1–3 – halved measure (¢ instead of ¢¢), unchanged note values; Ctrp. 8, 11, 13 – measure doubled (c instead of ²/₄), doubled note values; Ctrp. 9, 10 and the Augmented Canon – unchanged measure (c) and doubled note values; Ctrp. 12 (mirror fugues) – doubled measure (from ³/₄ to ³/₂) and doubled note values. See the NBA edition, VIII/2.1, VIII/2.2, Klaus Hofmann, ed., Kassel, 1995.

⁶⁹ Contrapunctus 4, of the same rhythmic character as Nos. 1–3, added to the printed version, has no parallel in the autograph. The signatures of Contrapuncti 1–3 in the printed version are ϕ , not \mathbf{c} (as in Christoph Wolff's edition, Peters, 8586b, 1986).

⁷⁰ The printed edition is understood here as the *second* version.

⁷¹ Beside the pieces of the *Kunst der Fuge*, these are the third movement of the Triple Concerto (*BWV* 1044/3), as well as the third verse of the chorale *O Lamm Gottes unschuldig BWV* 656 $\binom{9}{4}$, of which 656a $\binom{9}{8}$ is most probably the earlier (non autograph) version.

There is another possible explanation why Bach needed to subdivide long measures in 'major' \mathbf{c} or $\mathbf{\dot{e}}$ in the *Art of Fugue*. As a result of the above-mentioned late-Baroque tendency to read the $\mathbf{\dot{e}}$ alla breve of the 'learned style' considerably slower than in the 16th century, the major (one-breve) barline division became practically meaningless. The accent differentiation between the first and the second semibreve, already inconspicuous in 16th-century motet style, became arbitrary. We may observe this in the example of the E major Fugue WTC II (*BWV* 878/2, Ex. 10 c). Already the first answer (*comes*) of the short theme begins on the middle of m. 2, that is, on the 'weak' semibreve. Thinking of the first note of the *comes* as less accented than that of the *dux* (i.e., an accentual differentiation between the two halves of the measure) would be absurd. Hence it is hard to see any practical difference between the undivided (or subdivided) major $\mathbf{\dot{e}}$ [$\frac{4}{2}$] and the formally divided minor $\mathbf{\dot{e}}$ [$\frac{2}{2}$].⁷²

These changes must then have had a different goal, perhaps a *visual* one, intended for a clearer and more easily legible presentation of the musical text. Moreover, for works of speculative character, such as the *Art of Fugue* or *Musical Offering*, the changes of barring also seem as an attempt to give the work an 'old-style' look, in conformity with works of didactical nature (though incomparably more modest in their artistic scope and intent), such as Fux's *Gradus ad Parnassum*, with which Bach was familiar, both with the Latin original version and the German translation by his one-time pupil, Mizler.⁷³

A deeper reason why Bach's tempo conception of his *stile antico* is different from 16th-century style will become evident by examining the main channels through which he inherited the *stile antico* tradition. The vocal/instrumental dichotomy, characteristic of 16th-century style, became in the 18th century largely irrelevant. Some of Bach's most characteristic *stile antico* works are written for an instrument (usually a keyboard), a contradiction in terms with the true Palestrina style. Essential differences between the vocal and instrumental medium obviously exist, and ever will; but much of the special idioms developed for each medium (and each instrument) became blurred in the process of 'idiom exchange' characteristic of the Baroque and of Bach's music particularly.⁷⁴ One of Bach's main channels to old-style polyphony was the keyboard music of Frescobaldi, rather than the

⁷² For the same reason, I cannot agree with Rolf Mäser's interpretation of major ϕ (²₁) and minor ϕ (²₂) as essentially different time signatures with different 'Eigentempi' (see his *Bach und die drei Temporätsel*, 273–89).

⁷³ See Christoph Wolff, "Bach and the Tradition of Palestrina Style", in *Bach: Essays on His Life and Music*, 93.

⁷⁴ The tendency of passing from vocal to instrumental medium is as early as the 16th century, or even earlier. See Heartz, "Les styles instrumentaux" (2.2, note 30).

vocal music of Palestrina. Bach acquired a copy of *Fiori musicali* (1635) in 1714 and also knew the music of Frescobaldi's German pupils, Froberger and Kerll, from early youth. Another channel is the Dutch school of Sweelinck, through his pupil Johann Adam Reincken.⁷⁵ Frescobaldi's new use of binary meter is distinguished by its rhythmic density, remarkably greater than that of the 16th-century vocal style. It is precisely this density, whose combined effect (in all parts) often comes close to a kind of *moto perpetuo*, characteristic of the rhythmic idiom of Bach's pieces – instrumental and vocal alike – either in *stile antico* or *moderno*. But walking-bass textures are hardly found in Frescobaldi, as they belong to a different stylistic stratum.

3.2 Performing tempo in Bach's stile antico

To illustrate the different readings of rhythmic notation of 16th-cetury and 18thcentury *stile antico*, let us consider the beginnings of three Bach pieces, from the list of ten works chosen by Wolff as representative of Bach's "old style":

Fugue in E_b major (1st part) Aus tiefer Not schrei ich zu dir Fugue in E major BWV 552/2 BWV 686 BWV 878/2 (Clavier Übung III) (Clavier Übung III) (WTC II).



Example 10 a: BWV 552/2





⁷⁵ See Bach's "Nekrolog" (Obituary), *BDok* III, No. 666; Christoph Wolff, *Bach: Essays on His Life and Music*, 57.



They all display as incipit the figure ||J|| = 1 the so-called 'ricercar' rhythm – but, as mentioned before, they are differently barred: the E_{\flat} Fugue is written in major \mathbf{c} (\mathbf{cc}); the chorale and the E major *WTC* II Fugue are notated in (subdivided) major *allabreve* (\mathbf{cc}); the chorale and the E major *WTC* II Fugue are notated in (subdivided) major *allabreve* (\mathbf{cc}); barred one breve apart. The two signatures are used here not in accordance with Praetorius' division of *madrigalisch* and *motettisch* style. The *stile-moderno* Prelude of the *Clavier Übung* III is in (minor) \mathbf{cc} . It should then be questioned, whether a distinction between \mathbf{c} and \mathbf{c} in Bach's printed works is always purposefully intended, or meaningful.

Speaking of tempo in stile antico, Wolff ascribes to the integer valor tactus beat an average rate of M. M. 72 (in alla breve; in alla semibreve).⁷⁶ This rate, accepted by German 'proportionistic' circles in the 1950's,⁷⁷ seems rather fast, but still acceptable for the E_b major Fugue BWV 552/2. In recordings of the 1960–70's we hear M. M. 72,⁷⁸ whereas recordings of the 1950's show preference to considerably slower tempi.⁷⁹ Interestingly, a similar shift of tempo is observed in recordings of the 1950's - or after the 1970's respectively - in Bach as well as in Palestrina.⁸⁰ But there is a major difference, in that that these metronomic data refer in Bach to the minim (), while in Palestrina they relate to the semibreve (). Naturally, a comparison of recordings cannot prove anything about the 'right' tempo, particularly when there are no few exceptions: some 'old style' Palestrina recordings of a relatively recent date still preserve extremely slow interpretations.⁸¹ Still, they are instructive in a twofold sense: (a) one becomes aware of the change in the conception of 'early music' tempo that has taken place within a surprisingly short time span of some two decades; (b) we see that *today* Bach's *allabreve* (*stile antico*) pieces are read by different tempo-schools as an approximate 2:1 augmentation of 16th-

⁷⁶ Wolff, Der stile antico, 40.

⁷⁷ Gerstenberg, Die Zeitmaβe, 20; Machatius, Die Tempi in der Musik um 1600: 37, 56, 59, 77f.

⁷⁸ Anthony Newman (1973) on Columbia /CBS M2Q 32497; M. M. ~ 69 in Helmut Walcha's recording (1964) – Archiv CD 457704–2.

⁷⁹ Carl Weinrich, $\neg \sim$ M. M. 54, Westminster, XWN 18187.

⁸⁰ The slow tempo is taken by the Netherlands Chamber Choir (Cond. Felix de Nobel, from the 1950's: Philips C3, AA 00 272 2L); the faster one is preferred by theAustrian ORF Choir (cond. Gottfried Preinfalk, 1994, CD Point Classics, 2671172).

⁸¹ For example, the Choir of King's College, Cambridge, under David Wilcox, with M.M. 63– 84 per minim; Argo (Decca) ZK 4, recorded 1964.

century classical style. But it is not necessary to rely on modern-time recordings. The slowed-down reading of 'old style' apparently took place already in Bach's own time, reflecting a process already begun with Frescobaldi. The latter's *Fiori musicali* (1635) corroborate the overall impression that he already substituted the expanded motet rhythms ($\infty \circ \circ | J \rangle$), so common in Palestrina, for the semicontracted 'ricercar' figure ($\circ | J | J \rangle$) or fully-contracted canzon form ($| J | J | J \rangle$), and his learned-style organ works are rhythmically (or durationally) much denser than their 16th-century vocal analogues. White note values, considered in the 16th century as the normal way of notation, denoted in Bach's time "slow and heavy" movement, as repeatedly confirmed by various treatises, e.g., Kirnberger's *Kunst des reinen Satzes*, or Marpurg's *Anleitungen*.

3.3 Bach's stile moderno and durational strata

Turning now to Bach's *stile moderno*, its most conspicuous rhythmic difference, as compared to the Palestrina style or the "new" stile antico, is in the fast stratum (III). Whereas in 16th-century allabreve notation this stratum is represented by semiminims (\mathbf{A}) , it is usually notated in the new *stile antico* as eighthnotes, and in the stile moderno as 16th-notes. The vocal-ornate stratum (IV), written in the motet style in *fusæ* (), is now normally notated as \mathbb{A} But the difference is of course deeper. Even from the basic notational aspect, one readily sees the fundamentally opposed time conceptions of Baroque and Renaissance in nearly every score. As stated above, nearly every moment in most middle and late Baroque musical genres takes part in a moto perpetuo on some duarational level, usually the middle (II) or fast (III) strata. A constant pulse is often perceptible on slower levels as well. This phenomenon is a principle of all measured systems, which are necessarily based on a common denominator, or a minimal recurrent time unit. However, until the 17thcentury the uniform pulse was mainly a conceptual framework of time consciousness, whereas in the Baroque it became concretely and incessantly audible. This practice is even more consistent in Bach's music than in other composers of his time. Dramatic stops and pauses (other than cadences), most common everywhere in late Baroque (e.g., in Corelli, Handel, Vivaldi, or Bach's early cantatas), are relatively rare in Bach's later music, and hence most noticeable. On the contrary, there are long stretches, or entire pieces, without any halt of movement, dominated by the uniform pulse. In Handel or Corelli, for example, even the 'motoric' movements usually allow for occasional breath pauses, which are not often encountered in Bach. Dramatic pauses or marked breath-pauses in Bach usually come at the

opening measures of toccata-like pieces (i.e, relatively early works).⁸² Then there are *concertato*, or *Devisen*-like pauses at the endings of opening phrases.⁸³ Though they are not actually rare, they still bear the mark of an exceptional occurrence, often limited to the first (or last) measures of a piece, or between sections (e.g., before a final ritornello). It is significant that such occurrences in Bach still can be counted.

The ideal of 16th-century vocal style was opposed to the concept of *moto per*petuo, reflecting the "timelessness" of liturgical texts (1.2). Extending the metaphor, the "pulse of time" of the Renaissance sacred music is external to the music itself. Thus tactus beats are not necessarily seen as accented. In principle, a musical phrase could consist entirely of syncopations, without any single note coming on the beat. The Palestrina style is not rhythmically static, or repetitive, but its tendency to gradual transition from slow to fast motion (and back) can effectively evoke an idea of continuity or 'timelessness'. Musical time in the Baroque conception, on the contrary, is an active element, inherent in the actual sounds, and therefore clearly audible in faster and slower pulse levels alike. One can metaphorically visualize the two conceptions as two clocks, one moving continuously and silently (e.g., an hourglass or a pendulum), the other loudly ticking, its sounds becoming part of the music. Moreover, these time units are concretely audible and their incessant motion is concretized as distinct sound attacks marking the beat. It is the same idea shared by Lully, thumping his measures with a baton on the floor while conducting his fateful Te Deum, and by Bach, letting all his 16th-notes be played with a glorified sewing machine aesthetic. The difference is mainly in the pulse level: it is present from quarter-notes (in kantional-style chorales) through eighthnotes (walking-bass passages), up to 16ths (preludes, concerto movements etc.), or it may reside in several levels simultaneously; but finally it is the same principle of evenly spaced sound attacks, combining in all voice parts to a kind of *moto perpetuo*, shared by secular and sacred music alike.

3.4 The middle stratum

As stated, the Baroque middle stratum is hallmarked by the walking-bass rhythms, which usually move at middle-unit pace, in continual motion throughout, like the bass line of the B minor Prelude *WTC* I. But other, more complex walking-bass patterns also occur, such as the double *basso* part (violoncello and violone) in the

⁸² E.g., Chromatic Fantasy *BWV* 903 mm. 1, 2; D minor toccata *BWV* 565, mm. 1, 2, 3 etc., and D major Toccata *BWV* 912, Adagio section, mm. 68, 69, 70 etc.

⁸³ See Examples 13 a–g.

Adagio of the 6th Brandenburg Concerto (BWV 1051/2), simultaneously pulsing on two levels, the slow (\downarrow) and middle stratum (\downarrow).

Example 11: BWV 1051/2: 6th Brandenburg Concerto



Occasionally one also finds 'fast-walking' basses moving on level III – twice as fast as the middle unit – as a diminution of an imaginary $Urba\beta$. One example is the f_{\pm} minor *Andante* of the A major Sonata for Violin and Harpsichord *BWV* 1015/3.

Example 12: BWV 1051/3: Sonata for Violin and Harpsichord in a major



The role of the bass in the above examples still conforms to the old, pre-Corellian tradition. A further stage of development was, assigning to continuo (or continuo-like) bass patterns an independent melodic role. The melodic emancipation of the *basso* took place primarily in fugato movements of 17th-century triosonatas (e.g., Corelli), where the bass part assumes thematic functions. In Bach, it often acquires a special melodic profile, notably in his Inventions and Sinfonias, where it combines both thematic and walking-bass roles.⁸⁴

As a further evolvement of this process, walking-bass rhythms affect not only the bass line, but also pervade other voices. The walking-bass element thus determines the character of the Italian Allegro, or concerto-like texture, as a whole. In Corelli, Vivaldi, Marcello, Handel, Bach, and innumerable other contemporaries, even as late as some works by Haydn and Mozart, the middle-stratum figure $\neg 3$

⁸⁴ See Inventions Nos. 6, 14, 15; Sinfonias Nos. 1, 3, 4, 9, 10, 12.

has become a current rhythmic semicadential formula of Italianate Baroque – as well as Classical – language, either in the upper-voice melody or in all parts, particularly common in opening phrases (see Examples 13 a – g).

Other distinctive phenomena of the Baroque middle-stratum can be named:

- a) Syncopations, occurring primarily (but not exclusively) on the eighth-note level (*BWV* 971/1, m. 3), or on 16th-note level in slow pieces, but seldom on faster strata;⁸⁵
- b) chromatic scale figures, which are never very fast in Bach, coming nearly always on the middle or slow strata.

Hyper-fast, cadenza-like chromatic passages, fairly common in Mozart (d minor Fantasia, *K*. 397/385g, m. 45, Ex. 13 a), are unknown in Bach, whose fastest chromatic runs (in eighthnotes) are usually the kind we find in the 3-part Ricercar of the *Musical Offering* (mm. 115–23, Ex. 14 b).⁸⁶

Example 13: Opening phrases with middle stratum endings

a) BWV 1050/1: 5th Brandenburg Concerto



b) BWV 865/2: Fugue in a minor (WTC II)



c) BWV 974/1: Concerto Transcription after Alessandro Marcello



⁸⁵ Examples of fast-level syncopations: f_# □ minor Prelude WTC II (mm. 3, 5); Corrente of Partita no.6 (E minor), mm. 49–51. It is to be noted that a very similar limitation of syncopational durations is also known from the rules of 16th-century counterpoint.

⁸⁶ Perhaps the fastest chromatic passages in Bach are those of the c minor Fantasy, *BWV* 906, mm. 14, 33 etc.

d) BWV 1041/1: Violin Concerto in a minor



e) BWV 1056/3: Harpsichord Concerto in f minor

Presto



f) BWV 120/1 Cantata Gott, man lobt dich in der Stille (Aria)



g) Joseph Haydn, Sonata in E major Hob. XVI/31-1



Example 14: Chromatic passages in Mozart and Bach

a) Wolfgang Amadeus Mozart, Fantasia in d minor K. 397 (385g)





b) BWV 1079/1: Musical Offering, 3-part Ricercar

3.5 The fast and hyper-fast strata

The fast unit in the late Baroque is normally represented by \mathbb{A} (in c), but also as \mathbb{A} (in \mathfrak{E}), or even \mathbb{A} (in slow movements). One can speak, then, of the fast stratum as an ever-present rhythmic component of many Baroque styles and genres (with relatively few exceptions – in certain recitative types, 'kantional' style chorales, and some special types of slow movements).⁸⁷ In the theoretical literature, this stratum is often referred to as the "fastest" one, although it is not. When Kirnberger (after 1770) discusses the c# minor Fugue *WTC* II, he names 16th triplets as the "fastest" notes, adding that "faster notes are impossible". He quotes two fugal themes of Bach (*BWV* 961, c minor Fughetta; and *BWV* 873/2, c# minor Fugue, *WTC* II) with the following comment:

[4*] Der alte **Bach** hat gewiss nicht ohne Ursache die Fuge **A** in dem $\frac{12}{8}$, und die andere **B** in dem $\frac{12}{16}$ Takt gesetzt. Jedermann wird in diesen Beispielen den Unterschied beyder Taktarten leicht fühlen. Die bei **A** bezeichnet eine langsamere Bewegung und einen nachdrücklichern Vortrag, auch können in dieser Taktart viele Sechszehntel angebracht werden; in der bey **B** hingegen können keine kürzere Notengattungen angebracht werden, und die Sechszehntel werden flüchtig und rund, ohne allen Druck vorgetragen. **Händel, Bach** und *Couperin* haben viele Stücke in dem $\frac{12}{16}$ Takt gesetzt. (*Die Kunst des reinen Satzes*, II, 124)

⁸⁷ In pieces such as the B minor Prelude *WTC* I, 16th notes are rare, thus the eighth notes are practically the fastest stratum, as one often sees in *allabreve* pieces. But the characteristic walking-bass motion, combined with the \mathbf{c} signature and *Largo* indication, definetely mark them as the middle stratum, not the fast one.



Example 15: Kirnberger's Examples (A, B)

Let us also note the words of Johann Mattheson (1713) about , meter:

 $^{12}_{16}$ ist ein etwas vehementes mouvement, welches entweder das Thema im Basse zu signalisiren / oder auch eine ungedultige Passion zu exprimiren / übrigens aber noch etwas spahrsam gefunden wird. 88

Mattheson's expression "das Thema im Basse" probably refers to simultaneous time signatures, where $\frac{12}{16}$ belongs to the "figural" part while the slower-moving bass or *cantus firmus* parts are written with a simpler signature, such as **c** or $\frac{3}{2}$ (see *BWV* 617, "Herr Gott, nun Schleuß den Himmel auf", with simultaneous **c**, \mathbf{c}_{16}^{24} and \mathbf{c}_{8}^{12}). Mattheson, however, takes care to separate the proportional use of \mathbf{c}_{8}^{12} , as in the *Orgelbüchlein* example, from the "*ungeduldtige* Passion *zu exprimiren*", which may correspond to Kirnberger's definition.

Turning back to Kirnberger, he sets the 16th-notes in his second example (**B**) as the limit of speed; but a few pages earlier on (ibid., 119) he has already mentioned another fugue (*WTC* II, F major, *BWV* 880/2), similar (according to Kirnberger) in notation, character and motion to the one in $c_{\#}^{\#}$ minor – but now in ${}_{16}^{6}$ (and the F major fugue), Kirnberger mentions that it is characterized "*durch die Flüchtigkeit seiner Bewegung und die Leichtigkeit seines Vortrags*" – nearly the same that he said of the $c_{\#}^{\#}$ minor Fugue. It seems therefore that Kirnberger treats both fugues as similar in character and tempo, although one (in F) is in duple, the other in quadruple meter. Kirnberger does not speak explicitly about the tempo relationship between the two kinds of meter (duple and quadruple), although he mentions that the old-

⁸⁸ Mattheson, *Das Neu-eröffnete Orchestre* 1713, Cap. 3, §12, p.85: "¹²/₁₆ is a rather vehement motion which serves either to announce the theme in the bass or to express an impatient emotion, but is otherwise rarely found."

fashioned 4_8 is of "somewhat slower movement" than the modern 2_4 .⁸⁹ He evidently regards both as similar in rhythm, character and tempo. But they have one major difference: of the c# minor Fugue he stated that "no shorter note values can be used" (*können keine kürzere Notengattungen angebracht werden*). This does not necessarily mean that faster notes are technically impossible, but that *musically* they do not belong here. Still, the coda of the F major Fugue (from m. 89) is a brilliant passagework abounding in the same "impossible" or "forbidden" fast notes.

Example 16: BWV 880/2: Fugue F major (WTC II)



b) Beginning of the coda (mm. 89–93)



3.6 Alternative readings of Kirnberger's remark

Kirnberger's remark about the difference between $\frac{12}{8}$ and $\frac{12}{16}$ meters, with the example of the two fugues, is an important hint about assigning distinctive roles to the different durational strata in 18th century style, especially for the music of J. S. Bach. We also have a statement of a similar spirit by C. P. E. Bach.

[5*] Der Grad der Bewegung läßt sich sowohl nach dem Inhalte des Stückes überhaupt, den man durch gewisse italiänische Kunstwörter anzuzeigen pflegt, als besonders aus den geschwindesten Noten und Figuren darinnen beurtheilen.⁹⁰

⁸⁹ Ibid., p. 123. See, Peter Williams, "Two case studies in performance practice and the details of notation, 1: J. S. Bach and 2/4 time", *EM* 21 (1993), 613–22.

⁹⁰ Versuch, Ch. 3, §10. See Appendix 2. See also Leopold Mozart, Violinschule, I/1/§7, 30 ("Jedes melodisches Stück hat wenigstens einen Satz, aus welchem man die Art der Bewegung, die das Stück erheischet, ganz sicher erkennen kann.").

Yet, from a present-day standpoint, Kirnberger's remark is somewhat ambiguous, allowing for two alternative tempo readings (let us designate them a, b) for the c# minor and F major fugues, or similar pieces:

- a) The two fugues, despite the similar commentaries of Kirnberger's, represent two different rhythmic types, calling for different tempi. Absent in the c# minor Fugue, the 32nd-note coda of the F major piece should be regarded as decisive for its tempo, and consequently it should be taken considerably slower than the c# minor one.
- b) Both pieces are similar in character, calling for similar tempi whether or not Kirnberger took into account that 32ds actually occur later on, at the close of the F major Fugue. His statement about excluding faster notes than .[▶] is only intended in a limited sense: The 32ds are to be understood either as occasional ornaments, or as exceptional speeds, beyond the 'normal' range, where the normal rules no longer apply.

We have already seen similar instances in 16th-century style, where the fusa (\checkmark) was the shortest note value allowed in vocal music (1.1, note 8). Zarlino includes the *semifusa* ("*semicroma*") in his table of note values,⁹¹ but he neither mentions it again nor uses it in his examples. However, in passages of purely instrumental character, the rules are simply broken, as confirmed by Ganassi (2.1, note 1). Once the bounds of 'normal' speed are transgressed, the tempo is limited mainly by the technical ability of the player, or by the mechanical limitations of the instrument.

Thus we see that the fast stratum in both fugues is delimited (in fact, defined) by the hyper-fast one, by its presence in the F major Fugue or by its absence in the c#minor piece. Playing the 'hyper-fast' passages brilliantly fast, one immediately knows how much one should restrain the former 16th-note passages. Hyper-fast sections in Bach, when they occur, seem intentionally 'unexpected', with the effect of a climax. They usually come (most often as virtuoso passages in coda sections) after the character of motion and tempo relations have already been established. One is surprised, as one might expect the piece to go on 'normally', in the same spirit as it started, and reach its conclusion without any hyper-fast passages at all.⁹² Examples that come first to mind are the F major and G major Fugues (*WTC* II), the final ${}^{6}_{16}$ fugue at the end of the D major Toccata, *BWV* 912. Similar situations of abruptly doubled speeds occur, most prominently, in concertos or in brilliant show

⁹¹ Zarlino, Le istitutioni harmoniche, Part III, Ch. 2 [= The Art of Counterpoint, p. 5].

⁹² A case in point is the presto section of the c minor Prelude (*WTC I*), still missing in its early version of the *Clavierbüchlein vor Wilhelm Friedemann Bach*. This implies that the fast passage was a second thought.

pieces, intended to display the virtuosity of the soloist. The effect of such unprepared hyper-fast passages is ostensibly dramatized, notably in the 4th and 5th *Brandenburg Concertos (BWV* 1049/1, 3; *BWV* 1050/1), or the d minor Cembalo Concerto (*BWV* 1052/1, 3).

The fact that hyper-fast passages were still regarded as a kind of special effects serves as an indicator to the character and speed limits of the 'normally fast' ones. But there are other reasons of traditional speed restraint on the 'normally fast' stratum, deriving from the difference between *vocal* and *instrumental* modes, not only in performance, but also in thinking, or listening. In the older – vocal – perception, single pitch attacks are considered as autonomous ('atomic') musical events, demanding a certain minimum of duration in order to be adequately perceived. The other – instrumental – way of listening tends to generalize very fast figures and note groups (broken chords, fast runs, ornaments etc.) as compound elements, which may (not necessarily) be further decomposed into smaller constituents. Roger North's words on arpeggio as an "improper imitation", quoted below (4.3), clearly show that certain 18th-century musicians strongly adhered to vocal conception and resented the new virtuoso fashion.

Kirnberger speaks of the rhythmic, metric and notational character of the c# minor fugue, using them mainly as illustrations of a fast *Tempo giusto*.⁹³ But he ignores its other qualities, such as its sombre key, or the chromatically descending *lamento* figure of one of its countersubjects (m. 35). These factors contribute to restrain its tempo, finally rendering the c# minor Fugue definitely slower than the F major one, contrary to the former conclusion. Preferring one of the alternative readings, (a) or (b), concerns not only the two *WTC* II Fugues, but has much wider implications:

Preferring the (b) reading means that the fast stratum (\clubsuit) is no longer the *fastest* one. One should restrain it in fast pieces, in order to 'leave room' for hyper-fast passages, whether they actually follow or not. The question depends mainly on how one understands the term "fastest notes". The hyper-fast stratum (IV/V) is formally defined as notationally twice (or even 3 times) faster than the fast stratum (i.e., \clubsuit or $3 \clubsuit$ compared to \clubsuit); but it is most often altogether absent in entire pieces, or even genres and styles, whereas the 'normally fast' stratum (III) is ubiquitous. Unlike the nearly constant presence of the fast level, the role of the hyper-fast stratum is often limited, as we have seen, to ornamental figurations ("Passagien"), only occasionally extending to longer stretches. Although the presence of two different 'fast' strata is sufficiently well-attested in 18th-century repertoty, authors of the time do not always clearly distinguish between the 'normally fast' and 'hyper-fast'. Speaking of

⁹³ For a detailed discussion of Kirnberger's Tempo giusto, see below (8.8).

the "fastest" notes, they may be referring either to the absolutely fast (IV/V) or to the relative (or predominant) fast levels – which, in many (particularly old-style) pieces are limited to strata III or even II. This ambiguity has led to the alternative readings of the above-mentioned WTC II fugues. Clear differentiation between durational levels may act as restraint on speed, but also as a reminder of the division of 'vocal' and 'instrumental' thinking as a legacy, or last vestige, of Renaissance tradition, with its widely divergent vocal and instrumental idioms. Some new Baroque musical genres, by now fully liberated from old vocal models, allowed for virtuoso speeds, while other types, preserving the old speed restraints, did not. The conservative, 'temporally' reserved kind of allegro is particularly significant in the work of Bach and some of his German predecessors, perhaps more than in other music of his time (e.g., Vivaldi). However, one should not infer that the durational strata prevalent in a given piece automatically dictate a strictly narrow tempo range in performance; they can at most serve as a general clue to the range of tempo, with a fairly broad bandwidth of speed. A variation of even 2:1 within a given range can still preserve the identity of each durational stratum. Perhaps this is what we finally learn from Quantz's apparently 'proportionistic' tempo tables, or the real sense of his tempo teachings. From the 17th to the late 18th century, the borderline between the 'normally-fast' and the hyper-fast strata was constantly shifting, in accordance to the shifting predominance of vocal or instrumental modes of thinking. The typical allegro fast stratum of the late 18th-century seems to have grown out of the hyper-fast stratum of the earlier generation.⁹⁴ As to Bach's music, one may doubt the wisdom of trying to impose any speed restraints on pieces of ostensible bravura, like the Prelude of the E major Violin Partita (BWV 1006/1), the Preambulum of the G major Clavier Partita (BWV 829/1), as well as Couperin's Le Tic Toc Choc (Livre III/18/6), or most *Presto* and *Allegro* pieces by Domenico Scarlatti. Pieces of this kind predict the instrumental idioms of the next generation; but in the first part of the 18th century they were still rather exceptional.

⁹⁴ For cumulative evidence, see Sandra Rosenblum, Performance Practices in Classic Piano Music, Ch. 9, p. 318 ("The Changing Allegro").

4. The New Tempo: Partisans and Opponents

Although the distinction between the so-called vocal-ornate and instrumental durational strata, characteristic of the 16th century, became much looser in the Baroque, the middle and hyper-fast strata (walking-bass and passage-work) have always been typical instrumental idioms. A typical vocal bravura passage-work, like the middle section of Bach's Tenor Aria "Bäche von gesalznen Zähren" *BWV* 21/5 (beginning with "*Sturm und Wellen mich versehren*"), deliberately imitates instrumental idioms. Albeit somewhat slower in performance than parallel instrumental passages, the so-called 'violinistic' figures in the Tenor, of the form \overline{J} " in the middle section [*Allegro*; c],⁹⁵ are common in music for strings, as well as in keyboard repertory. But similar passages are frequent also in Bach's vocal music: not only in bravura arias but in choral parts as well. Since the 17th century, the instrumental medium gradually became the predominant model of vocal technique, whereas in the 16th century the balance was reversed, as a major part of instrumental repertory consisted of intabulations of vocal works.

4.1 Quantz

Another reason that the borderline between fast and hyper-fast (instrumental or vocal) levels was not always clear-cut in the late Baroque is that tastes and tempi were constantly shifting. Three 18th-century testimonies are of particular interest, recflecting the changing views about musical tempo within the same century. The best known is Quantz's remark on the slow pace of the music in former times:

[6*] Was in vorigen Zeiten recht geschwind gehen sollte, wurde fast noch einmal so langsam gespielet, als heutiges Tages.⁹⁶ Wo Allegro assai, Presto, Furioso, u.d.m. dabey stund, das war ebenso geschrieben, und wurde fast nicht geschwinder gespielet, als man heutiges Tages das Allegretto schreibt und ausführet. Die vielen geschwinden Noten, in den Instrumentalstücken der vorigen deutschen Componisten, sahen alle viel schwerer und gefährlicher aus, als sie

⁹⁵ NBA (I/16) has *Allegro*; According to Paul Brainard's *Kritischer Bericht* (p. 149), one autograph part has *un poc'allegro* [BGA: *Allegro* (*un poco*)]. The tempo markings of this aria are discussed below (9.7).

⁹⁶ The expression "noch einmal so langsam" for "twice as slow" is still used by Gustav Mahler (*Im Lenz*, 1880).

klungen. Die heutigen Franzosen haben die Art der mässigen Geschwindigkeit in lebhaften Stücken noch grössentheils beybehalten. 97

The intriguing part of Quantz's testimony is his expression "vorige Zeiten": was he alluding, somewhat critically, to older German contemporaries, or was it just an impartial comment on the music of the previous generations, like Lully, Couperin, Corelli or Kuhnau?⁹⁸ The words of admiration with which Quantz mentions the organ playing of J. S. Bach exclude any critical intention here.⁹⁹ Perhaps some clue to this may be found in a similar statement earlier on in the same treatise (Ch. XIV, §.4, 137): "*Im italiänischen Geschmacke, wurden, in vorigen Zeiten, gar keine Auszierungen dazu gesetzet; sondern alles der Willkhür des Ausführers überlassen*". This seems to point to the generation of Corelli, late 17th to early 18th century.¹⁰⁰ But Quantz does not say that all old music was slow or moderate, while the modern was lively, and one should beware of interpreting his remark in this way. There have also been opposite trends before his times, as we may learn from the following sources.

4.2 Mattheson

Quantz's remark has two important, earlier counterparts. The one is Mattheson's *Das neu-eröffnete Orchestre* from 1713. Mattheson echoes the new Frenchimported gallant fashion, to which he gives expression in a highly gallant language, i.e., interspersed with a remarkable percentage of French. His language is quite different, for example, from that of some older German music treatises (from Praetorius' *Syntagma* 1619 to Walther's *Praecepta* 1708), intermixed only with Latin. Mattheson's object in writing this musical pocket-manual is frankly declared on the front-page:

[7*] Das Neu-eröffnete Orchestre, oder Universelle und gründliche Anleitung/ wie ein Galant Homme einen vollkommenen Begriff von der Hoheit und Würde der edlen Music erlangen/

⁹⁷ J. J. Quantz, Versuch einer Anweisung die Flöte traversiere zu spielen, ²/Breslau, 1789, Ch. XVII/VII/ § 50, 263.

⁹⁸ The latter possibility has been raised by Neal Zaslaw (in a personal communication), who interprets Quantz's remark as mainly referring to changing habits of notation, chiefly in French music: "Quantz's generation, especially a musician as learned as he was, was like to be aware of the shifting note values. [...] He worked alongside French musicians there at the very moment that the French were moving $\frac{3}{2}$ movements to $\frac{3}{4}$ ". Quantz's above-quoted statement seems to corroborate Professor Zaslaw's interpretation.

⁹⁹ Quantz, Versuch, 329.

¹⁰⁰ See Neal Zaslaw, "Ornaments for Corelli's Violin Sonatas, op.5", EM 24 (1996), 95-115.

seinen Gout darnach formiren/ die Terminos technicos verstehen und geschicklich von dieser vortrefflichen Wissenschaft raisonniren möge.

In the third chapter, dedicated to the basics of meter and rhythm, Mattheson discusses the difference between $\frac{6}{8}$ and $\frac{12}{8}$, but the purely rhythmic discussion rather serves as a pretext for an extended digression about the changing mores and fashions, and the related shifts of tempo, not without a smiling allusion to modern effeminate manners. Since this section is little known, I take the liberty to quote it *in extenso*. It is remarkable that both Mattheson (1713) and Quantz (1752) speak of "bygone days"; but according to Mattheson, contrary to Quantz's remark, in the "good old times" one liked everything played or sung quite fast, while "nowadays" people have acquired a more refined and earnest taste, preferring touching affects to merriment. Mattheson's "present times" (1713) seem to roughly correspond to Quantz's "vorige Zeiten" of the mid-century. But, as we shall presently see, Mattheson too has his own "Vorzeiten", and surprisingly, they are characterized by brisk tempi (see the underlined section in the following long quotation). Particularly interesting is Mattheson's interpretation on the social and educational background of this shift of taste.

[8*] $\frac{12}{2}$ ist nur/als Zwölffachtheil [recte: Zwölffviertheil]/ kleinerer proportion, sonst in numero und membris wie in Theilen / eben als der vorige Tact, das ist / sie differiren nur in qualitate nicht aber in quantitate. Dieser ist sehr geschickt vor die Sachen à la moderne, weil darinnen / obgleich die Glieder mit dem in gleicher Geltung sind das verlängte Mouvement und die doppelte Anzahl eine gewisse Ernsthafftigkeit / mit der / den Achteln sonst anhängenden / Hurtigkeit / dermassen verbindet / daß man die sonst hüpffende Mensur zu den aller tendresten und beweglichsten Sachen gar wol / es sey in Kirchen / oder Theatral-vocal-Music wie auch in Cantaten &c. zu gebrauchen weiß. Vorzeiten hat man nach dieser Mensur nichts anders / als gar geschwinde Sachen / wie es eben noch gewisser massen geschieht / gesetzet / als nemlich in Giquen und dergleichen; heutiges Tages aber dienet dieselbe vielmehr traurige und touchante Affecten denn lustige zu exprimiren. Hiebey kan ich nicht umhin / eine längst gemachte observation bekant zu machen / welche darinn bestehet / daß der gout universel in der Music seit einigen Jahren dermassen verändert und solide geworden ist / daß man fast durchgehends langsame und traurige Sachen den geschwinden und lustigen weit vorziehet. Ob nun vielleicht ein oder anders Clima dazu contribuiret / oder aber / ob die phlegmatischen Temperamente in größerer Anzahl sind / und also jetzund dominiren / davon möchte gerne einen curieusen Naturkündiger raisonniren hören. Gewiß ist es / daß dieser gout zu ernsthafften Sachen in der Music, wenn er klug und bescheidentlich secundiret wird / der gantzen Wissenschafft zu sonderlicher Aufnahm gereichen / und zu ihrem Endzweck / nemlich der Bewegung der Affecten, mehr helffen kan / als alle Sprünge und Tänze. Mir scheinet unter andern eine Ursache dieser Veränderung zu seyn / die docilité wozu die heutige polirte Welt von Jugend auf / immer mehr als vorhin / angeführet wird; denn das stehet wol fest: Eine schöne Sache findet nirgend bessern ingres[s] als in einem gleichfals schönen Gemüthe; wird aber hingegen übel tractirt / verachtet und verspottet von einem tölpischen Sinn. [...] Man erwege ferner / welcher Unterscheid unter der vor einigen Jahren und itzo üblichen education auch bey verständigen und vornehmen Leuten sey; ja vom Vater biß nur auf den Sohn / geschweige

weiter / ist so eine handgreifliche *Differentz* in der Erziehung / und wird von Tage zu Tage die Welt so viel poliret / durch den unabläßlichen Fleiß gelehrter und geschickter Männer / daß ich glaube / wenn einer nur zwey Jahr aus der Welt bleiben könte / er würde / dafern er währender Zeit aller Correspondentz und Bücher entbehren solte / bev seiner retour fast nicht wissen ob er ein Bübchen oder Mädgen sey. Aus diesem Fundament sehe man an / damit ich wieder auf mein Propos komme / wie sehr vor einigen Jahren die geschwinde und über grosse Fertigkeit / insonderheit auf Instrumenten admiriret worden / so daß fast alle Zeit daß allegro in einer Sonata oder andern specie, des Componisten so wol / als des Executoris eintziges Fort und Absehen war / das übrige aber ziemlich negligent und höckericht tractiret wurde; daher es denn auch noch kommt / daß ihrer etliche / die etwann dergleichen Meister gehabt / welche der Geschwindigkeit mehr / als der Zier- und Annehmlichkeit obgelegen / kein recht sauberes adagio hervorbringen können / und wenn sie sich auch darüber zerreissen möchten. Man erwege aber hingegen / ob nicht bey jetziger Zeit sich der gout gantz und gar verändert / zum wenigsten / so viel die Lust betrifft / die man von einer Music geniesset / und wol zu verstehen / so viel die annoch geringe Anzahl der delicaten Ohren ausmachet / also daß man eine schöne singende Mannier den geschwinden Brouillerien weit zu præferiren einen guten Anfang gemacht hat. Ich lasse es dahin gestellet seyn / ob die Geschwindigkeit auf einem Instrument eine admiration, oder gar eine Erstaunung / zu wege bringen könne / so viel ist bekannt / das die Erstaunung und Verwunderung nicht der Music Endzweck seyn / und daß / wovor sich einer entsetzet / solches nicht allemahl / oder doch sellten / ergetzet; Item daß / was man ad*miri*ret / nicht allezeit darum *charmi*ret; [...]¹⁰¹

Mattheson and Quantz are both saying, "in bygone days everything was played faster/slower than in our time", which only raises the question again, "at what time and place". Their apparently contradictory statements are not only edifying in their own right, but also add to the credibility of both authors. Since Mattheson's description evokes a strongly French cultural ambience, it may corroborate Quantz's remark about the French manners of his own day ("Contemporary French musicians have retained this style of moderate speed in lively pieces to a large extent"). Moreover, labelling French music as preferring slow or moderate tempi just indicates that about the middle of the 18th century musical taste in north Germany shifted from French to Italian orientation. Complementing each other, the evidences of Mattheson and Quantz reflect the swing of the pendulum of times and mores, and fluctuations of taste and tempo preferences which took place even within the limited span of Bach's lifetime and place. This alone may justify a relativistic view on the entire subject of tempo, and a rather skeptic disposition toward attempts to establish any universal integer valor, or normal tempo, crossing countries and eras. It will be hard enough to find one tempo standard, valid even for the music of Bach alone.

¹⁰¹ Mattheson, Das neu-eröffnete Orchestre, Cap. III, § 11, 80ff.

4.3 Roger North

Another testimony on changing tempo preferences is Roger North's manuscript treatise, *The Musicall Grammarian* 1728. Whereas Quantz refers to the slow tempo of former times, North seems to be representing musical conservatism, or Quantz's *"vorige Zeiten"*, in person, disparaging the new fashion of ostentatiously fast tempi, which he frankly resents, and surely has a lesson or two to teach the 'moderns'.

Of the allegro and its sorts: I think they [allegros] will be partable into these two sorts: 1. Such as run upon fuges, and 2. [Such] that are quasi devisions upon a ground. As for the former, it seems that fuges and swift movements does not agree well together, becaus being in many parts they will intermix and in the confusion loos the advantage of graceful repeats; [...] I guess it is for this reason that some masters write poco allegro or assai to temper the impertinent hast[e] that some self conceipted performers are apt to make more for ostentation of hand then justice to the musick. When the master is for that sport, he writes presto, or prestissimo, but never when a fuge is thought of.¹⁰²

Notwithstanding his prolific writings and his historical significance as a thinker and 'informant', North was a proverbial *dilettante*, speaking about music in an idiosyncratic amateurish, rather quaint language; but his insights are often illuminating. His remark that "fuges and swift movement does not agree well together", refers not only to the technical difficulty of performance, but arises primarily from the angle of the listener, trying to grasp polyphonic detail. Unintentionally, this observation may be especially apt for Bach's music, hallmarked by unsurpassed complexity of texture. In many respects, North represents the point of view of an amateur performer and/or listener, differently from that of professional musicians. Witness his words of praise for Corelli:

I shall conclude this reflection with an admiration of Corelli, who out of his immens abillitys in musick, hath condiscended to compose consorts fitted to the capacitys of the *minor performers*, but for musicall excellence transcending all others, and these are, and ever will be valued against gold, when the prestissimi and prestitissimi will have but little esteem.¹⁰³

North distinguishes between two main classes of Allegro: the polyphonic ones ("not a fuge... but tending to it") and the motoric, *moto-perpetuo*-like ("quasi devisions upon a ground"). His arguments against fast movements of étude-like quality, as well as star virtuosi, savour at times of socio-musical class consciousness:¹⁰⁴

Musick suffers by too much action: Now wee come to the other branch of the allegro musick, which is pure devision, with a ground attending, and often a midle part by way of ripien,

¹⁰² Roger North, The Musicall Grammarian, f. 101 (p.188).

¹⁰³ North, ibid., f. 105, p.191 [italics mine].

¹⁰⁴ North was a lawyer, his brother, Francis, also a music amateur, was chief justice.

and that is called a second treble, which distinction ariseth from an abuse in composition, that now a days is most flagrant. I mean, when the whole air of a sonnata is designed to ramp [?romp] in one part, for the sake of which, the rest are allowed to attend on foot. And this proceeds from a very usuall vanity of the masters, who by the work of their whole lives, having acquired uncommon dexteritys in performing, compose, not for musick, but for play, in that which shall best set off their owne perfections, and if possible, that none els, at least, not out of their owne fraternity, or combination, shall doe the like. Hence follows courtship to them, as essentiall to all that's relevant in musick; whilst their desciples, who might make good consortiers, are worne out with practising their whimms, and musick itself imprisoned, as it were between 4 walls, and multitudes of lovers cast off. For now what are the celebrated consorts worth without a topper for the prime part and whence should country familys, where in former times musick flourished in its best effects, be supplied with such, in case they had a mind to be troubled with them? In short the affectation of difficultys, and magnificence, hath gone a great way towards a suppression of good musick, and will soon bring it [the suppression] to perfection, unless a redicule or two more, such as the Beggar's Opera, takes down the rampant impertinence".105

However, North does not limit himself to sociologically flavoured argument, but also speaks in specifically musical terms. Most pertinent to the present discussion is perhaps North's critique of some special instrumental technical devices, in the first place, the *arpeggio* and *bariolage* of string players, a critique which highlights his characteristic 'vocal' thinking, mentioned before.

108. Arpeggio an improper imitation

In the performance of this arpeggio the usuall manner is, not to distinguish every stroke but to pass the notes with a slurr bow and rolling hand, which may be knowne but not described, and therein is the pride of the masters, whose skill and dexterity is shewed in nothing more then in this (proper) arpeggio. For they will continue it wonderfully upon a single note, and changing, (as I Sayd) you heer a full consort. And that is the designe; and it is remarkable that musicall instruments should be made to imitate each other's defects; harpsichords, lutes, harps, etc. are imperfect, becaus they cannot continue a tone, and seek to make it good arpeggiando. The violin holds out the tones in perfection; and is debased in straining to ape the defects of the others and that by tricks needless, or rather absurd. If an organist should imitate the manner, and touch of an harpsichord, he would be laught at. And when the violin is capable, by the finest tones, to move a passion in the hearers, why that should be waived to let in a faint resemblance of somewhat that in due order might be good, but as it is used, no better then a sort of humdrum devise that stirrs up onely an admiration, I know not.

This is perhaps the most outspoken manifesto advocating vocal thinking (see 3.6). Although North does not mention the human voice here, but counts the "defects" of other instruments as compared with the merits of the violin, it is a clear expression of his unqualified preference of the vocal medium. Both he and Mattheson speak against instrumental jugglery and ostentation, and Mattheson too speaks

¹⁰⁵ Ibid., f. 104 (p.190) [italics mine].

¹⁰⁶ Ibid., p. 192–3.

in favour of the new serious, contemplative style. However, Mattheson's words, mentioning the phlegmatic modern temperaments and effeminate manners, betray a slight irony, and it is finally not quite clear whether he wholeheartedly favours the new sentimental fashion. North, on the other hand, speaks on the latest, virtuoso fashion with an outright indignation. His remarks are of special interest in that he, an amateur, dared to question accepted notions which professional performers all too easily took for granted. In discussing questions of musical composition and performance, the un- (or semi-) initiated listener's point of view is indeed very seldom taken into account. But it is finally listeners – or music consumers – who dictate the destiny of music history, and their decisive role should be examined not merely from a socio-economic perspective.

5. Durational Strata on the Threshold of Classicism

5.1 The Concerto BWV 1044 and Bach's durational practice

As a concluding example of the interrelations between the various durational strata in a Bach *stile moderno* composition, let us examine the last movement of Bach's A minor *Triple Concerto* (*BWV* 1044/3). This work is a highly elaborate reprocessing of the Prelude and Fugue *BWV* 894.¹⁰⁷ The interpolation of orchestral parts to an already existing solo piece is one of the most complex examples of a re-composition process in Bach.¹⁰⁸ I have chosen to focus here on the third movement, where major metric and rhythmic changes have taken place, beside the newly composed *tutti* sections and other interpolations. The original clavier fugue has , time signature, the theme running in 16th-note triplets (or rather, threesomes), like the F major and c[#] minor fugues, *WTC* II, mentioned by Kirnberger. A similar tempo seems to be intended also here (Example 17). But in the concerto version Bach added a binary *allabreve* ritornello, built on the original series of fugue-like entries *alla quinta*. Although the original fugue is a three-part one, Bach adds a ritornello in four independent parts, displaying a deceptively new theme (Example 18).¹⁰⁹

Example 17: BWV 894/2, subject



In the concerto version, the original fugal theme comes first with the Cembalo solo entry in m. 25, now written in eighthnote triplets (Example 19). To a listener unaware of the compositional history of the concerto, this solo entry may sound like a rather sophisticated transformation – or complication – of the *tutti* theme, preserving within its triplet figuration the skeleton of the first *tutti*. But in reality the order of thematic invention is reversed. The new theme of the ritornello is a *soggetto*

¹⁰⁷ The second movement (*Adagio, ma non tanto, e dolce*) is a (transposed) rearrangement from the organ Trio-sonata *BWV* 527/2.

¹⁰⁸ See Peter Wollny, "Überlegungen zum Tripelkonzert a-moll BWV 1044", in: Bachs Orchesterwerke, 283–291.

¹⁰⁹ Also the following Cembalo solo fugal exposition (three-part in the clavier version) is quasi extended to a four-part one in the concerto, by adding a bass entry of the ritornello theme (m. 25–40).
cavato dalle note del tema,¹¹⁰ or drawn from selected notes (mostly the lowest or the highest) of each triplet of the original fugal theme (Example 20).



Example 18: BWV 1044/3, beginning

Example 19: BWV 1044/3, fugal theme, concerto version



¹¹⁰ Zarlino: "soggetto cavato dalle vocali di queste parole" (Istitutioni harmoniche 1558, Lib. III, Cap. 66).



Example 20: BWV 1044: Comparison of the fugue subject with the ritornello theme

But our main concern at present is the metric transformation from the fugue to the concerto, which underwent a note-value augmentation in the process. A twofold augmentation is a well-known practice in Bach, as we have seen, for example, in revising the *Art of Fugue* (see 3.1); but the present transformation in *BWV* 1044/3 is unusual, in that the time signature is changed not from $\frac{12}{16}$ to $\frac{12}{8}$, as might be expected, but to triplets in a binary meter (ϕ). There are at least two significant reasons for this change. The first is, that Bach has grafted two diametrically opposed elements here: the exceptional, non-concerto-like, quiet quarternote motion of the ritornello as the binary element, together with the incessantly busy triplet motion of the original fugue.¹¹¹

The other reason for moving from ternary (or composite) signature to a simple binary one, becomes clear in realizing that Bach wrote nearly all new interpolations – with the exception of the Cembalo part – in binary rhythms (apart from mm. 116–17, a triplet dialogue of the Flute and Solo Violin). According to 18th-century notational conventions, it is possible to notate triple rhythms in binary meter, by means of triplets, but not the other way round, using *duplets* in triple meter.

The *Allabreve*, here in its conventional sense of halved durations, indicates that the intended tempo of the concerto movement should not remarkably differ from that of the Fugue. Examining the *BWV* 894- $\frac{12}{16}$ version, we may recall what Kirnberger already said of this meter, namely that "no shorter note values can be used." This limitation was indeed observed in the original fugue, where the triple 16ths are the fastest note values. Accordingly, the fastest notes in the Concerto version should be the eighthnote triplets (¢). But in the new version, "impossibly fast" notes – as we termed them – appear later on:¹¹² 16th triplets (m.170ff), and binary 16th notes

¹¹¹ We have already observed (3.3) the "resultant" *moto perpetuo* of the sum of note attacks in all voices, characteristic of most works of Bach. But in this example the incessant motion already begins with the the fugal theme, remarkably enhancing the effect.

¹¹² As in the case of the F major Fugue WTC II; see 3.6.

(from m.199 on).¹¹³ Also faster figures, e.g., binary 32nds glissando-like *tirate* (m.144), make an occasional appearance.¹¹⁴ Such passage figures set perhaps the clearest speed limits to Bach's fast movements and pieces. They show that Bach did not at all shun virtuosity. Although they point to a fundamental difference between a Bach *Allegro* and a conventional Classical one, the finale of *BWV* 1044 shows quite a few modern traits, particularly repetitive figurations. Near the close of the movement, we find the nearest thing to an Alberti-bass that Bach ever wrote (mm.199–206, Example 21), although these measures seem harmlessly short, compared with the long stretches of étude-like figuration in the generation after J. S. Bach.

Example 21: BWV 1044/3, mm.199-204



5.2 Fast and hyper-fast

In the Classical style, the hyper-fast stratum gradually gained an independent status and became the norm, filling out entire sections, substituting the Baroque "normally fast" stratum. This process continued the tendency of developing purely instrumental idioms, already begun in the Baroque. Hyper-fast passages, although they are not so rare in Bach, still constitute a "special event" in his music, with some ostentatious effect. But by the following generation a remarkable stylistic change took place, namely that the hyper-fast stratum now became gradually a routine in fast pieces, inheriting the place of the 'normally' fast stratum in the older style. In other words, the Classical *fast stratum* becomes increasingly similar in character to the

¹¹³ The transition in the Harpsichord part from triplets into "quadruplets" is an isolated case where a real 4:3 proportion is explicitly indicated by Bach.

¹¹⁴ The 32ds of the final cadenza (mm. 218–20) can be ignored here, as they do not bear a necessarily determined tempo relationship with the rest of the movement.

Baroque hyper-fast one. It might be more convenient to keep the denomination "fast" for both strata, namely the Baroque "fast" and Classical "new fast" stratum, as they are usually notated as 16ths in common c allegro (or eighthnotes in c). But the similarity is, in many respects, misleading. One should find other criteria than notational ones, in order to show that these (notationally synonymous) strata are no longer of the same rhythmic function and character. Perhaps the main difference is that in the Classical *allegro* more and more 16th-note-level accompaniment figures are used in the form of various standardized formulas, the best-known being the "Alberti bass". Similar repetitive patterns were also used in the former generation, from Corelli to Bach. Let us just think of the WTC I preludes C major, c minor, C# major, or Couperin's Baricades Mistérieuses (Livre II, 6/5). However, such patterns take the place of thematic or motivic function, being assigned to the upper voices, or even used as subjects, liable to imitation or *Stimmtausch* elaboration (Preludes C#-WTC I; G-WTC II).¹¹⁵ Only rarely does Bach make use of repetitive broken chords in the accompaniment of the bass group, as a figuration of the continuo, e.g., in the Violoncello and Fagotto parts of the chorus "Du wollest dem Feinde nicht geben", BWV 71/6 [1708]). In all the above-mentioned examples, each pattern is a more or less unique invention for each piece, as far as a short musical figure can be.

Example 22: BWV 71/6, figuration of the continuo, Violocello and Fagotto



But the standardized figurations of the post-Bach generation are of a different sort. These repetitive patterns have now lost their individuality; from now on they are almost permanently relegated to the accompaniment and, instead of being newly invented for each piece they have become prefabricated, ready-made formulas, rather belonging to public domain than to any one composer. Finally, all Alberti basses, from Alberti to Beethoven, are the same: repetitive, routine, simplified versions of the old-time figuration, a kind of sonorous background (*not* in the Schen-

¹¹⁵ A rare instance, where an Alberti-bass-like figure serves as the main subject, is the short F major prelude *BWV* 927.

kerian sense of the word). The initiated listener is now expected to quasi-ignore them and a skilled performer is required to subdue them appropriately. The most common technical means to achieve this is to play them unobtrusively, softly (which in itself might have been sufficient ground to prefer the pianoforte to the harpsichord), or fast enough. This is not the only sign that repetitiousness – as a principle – has more and more permeated the lower durational levels. One feels it primarily in accompaniment figures, but perhaps not to a lesser degree in the invention of 'main' melodies and themes as well. One may find innumerable examples for this. In Mozart's C major Sonata K. 545 (1st movement, mm. 5–12; 18–21) we see that the *second* phrase of each theme is based on quasi-automatic sequential repetitions that would make Vivaldi blush. But these are based on sequences, which means that, harmonically at least, they keep on the move.

There are so many instances of static repetition becoming a policy - saying the same thing two or more times in a row. One might naïvely wonder whether the first four measures of Mozart's C major Sonata K. 279, for example, restating twice the same idea, could not be cut into two measures. All these repetitive and formulaic devices are by no means new: they are well known as early as Gabrieli or Sweelinck; but their frequency and importance, limited in the pre-Baroque era mainly to the genre of variation, has immeasurably increased. Perhaps the most distinct repetitive device used in the Classical era, still rare in the Baroque, is the principle of reiteration - immediate and exact multiple repetition of a very small element.¹¹⁶ This is most obvious in final cadences: The harmonic progression S-D-T, combined with some rhythmic "breathing-point", is no longer considered as sufficiently emphatic, and the V-I pattern, or even the tonic alone, has to be repeated again and again, long after the cadence and tonic chord has been reached (6 measures in Mozart's K. 331/1 and 331/3, up to the 40-measure long "final chord" closing Beethoven's Fifth Symphony). Of course, such devices have their own justifications, namely symmetry (in Mozart's K. 279/1) and emphasis (in the Finale of Beethoven's *Fifth*); but they also diminish the specific weight and importance of every single repeated element.

This stylistic metamorphosis should also leave its mark on performing conventions, and presumably also on tempo. This is corroborated first by Quantz's remark on "bygone days", as well as in the second (1802) edition of Türk's *Klavierschule*:

¹¹⁶ There are admittedly some interestingly reiterative Baroque fugal themes, not lacking some repetitive playfulness, such as Buxtehude's F major Fugue (*BuxWV* 145), Bach's D major Fugue *BWV* 532/2, and Toccata *BWV* 912 (final Fugue), or Handel's "one-note" theme in Concerto grosso Op. 6/7.

Bey einem vor fünfzig und mehreren Jahren componirten Allegro wird gemeiniglich ein weit gemäßigteres Tempo vorausgesetzet, als bey neuern Tonstücken mit der nämlichen Überschrift.¹¹⁷

The tempo implications of the new simplified textures mainly concern the *Allegro* and *Presto*, that is, the fast end of the tempo range. The phenomenon has been aptly termed by Rosenblum as "the changing *Allegro*".¹¹⁸ This is quite understandable, in terms of the new texture. One should remember, however, that Alberti-bass-like figures, although they are decidedly "allegro-friendly", were used not only in fast pieces – as one may see in nearly every Mozart or Haydn slow variation or sonata movement. The general texture simplification in the post-Bach generation is therefore not the only explanation for the speeding up of the *Allegro*, although it must certainly have been one of its important catalysts.

5.3 Slow tempo as function of interest

Examining a typical, randomly chosen *Allegro* of a Mozart or Haydn quartet, symphony or sonata, will show that its fast notes, usually 16ths, although looking like 16th-notes in a 'normal' fast movement by Bach, behave quite differently. The functional difference of these durations has been most aptly described by Joel Lester, who explains the difference between the old and the new style in that events of high complexity and density, capable of capturing the interest of the listener, occur in the music of Bach on smaller durational levels than in the Classical style.

In the Bach passage, on the other hand, the greater complexity of accentuation patterns at the fastest levels causes these fastest levels to become a possible focus of attention.[...] The tempo taken in this Bach prelude [A_b major, *WTC* II] largely determines whether the eighth-to-sixteeenth-to-thirty-second levels or the quarter-to-measure-to-two-measure levels receive the sharpest focus. Such a choice of focal points is possible in this piece because of interesting and complex features at many levels in the metric hierarchy. No listener would follow the eighths of the viola part at the opening of Mozart's *Fortieth* or in the melody at the beginning of Beethoven's *Fifth* the way he or she might follow the sixteenths and thirty-seconds throughout Bach's prelude. Hence, no listener would wish for a performance of these Mozart and Beethoven works at a tempo so slow that the eighth notes were brought into focus but the two-measure or four-measure units were so long that they would lose their unity.

¹¹⁷ D. G. Türk, *Klavierschule*, 2/1802, 106: "A far more moderate tempo is generally taken for granted for an Allegro composed fifty years or more ago than for a more recent composition with the same heading.", tr.by Sandra Rosenblum in her *Performance Practices in Classic Piano Music*, 319. I am indebted to Professor Rosenblum for drawing my attention to this passage.

¹¹⁸ Rosenblum, ibid., 318.

¹¹⁹ Joel Lester, The Rhythms of Tonal Music, Carbondale: Southern Illinois UP, 1986, 127-8.

Lester has rightly sensed the fundamental difference between the fast levels of the Bach versus Mozart-Beethoven styles. He had only one step more to go, to show that the seemingly equal durational levels (16ths, or eighthnotes in *allabreve*) in these respective styles, although similar in ubiquity, do not play equal roles. The change of function of the 16th-note from the early to the late 18th century largely reminds one of the transformation of the *fast* stratum from Renaissance to Baroque; even though the older style revolution, on the threshold of the 17th century, was combined with a drastic change of notational practice, namely a nominal fourfold note-value reduction. The striking difference between the Bach and Mozart generations is, at what durational level the "real action" takes place. It is remarkable that Lester's observation has at least one parallel in 18th-century musical thought, coming from a person who belonged to the close circles of J. S. Bach, Friedrich Wilhelm Marpurg, In his *Anleitung zur Musik überhaupt und zur Singkunst*, 1763 (p.70f):

[9*] Ob gleich die Bewegung des Tacts... von der Größe der Noten natürlicher Weise bestimmet, und z. E. in der zweytheiligen Tactart, derjenige Tact, wo jeder Tacttheil aus einer weissen [.] besteht, langsamer als derjenige, wo jeder Theil nicht mehr als ein Viertheil enthält, ausgeführet werden sollte: doch geschicht doch alle Augenblicke das Gegentheil. Die Ursache davon ist unter andern diejenige Eigenschaft jedes Tonstückes, vermöge welcher in selbigem mehr oder weniger Notenfiguren von verschiedener Grösse gebraucht werden; und vermöge deren dasjenige Tonstück, wo nur zweyerley Arten von Noten vorhanden sind, wenn sonst keine andere Umstände das Gegentheil erfordern, geschwinder ausgeführet werden kann und muß, als dasjenige, wo die Verhältnisse weit mehr vervielfachet sind. Diese Aufhebung des Verhältnisses zwischen der Art der Notenfiguren und der Tactbewegung hat die Musiker genöthiget, zur Bezeichnung der Grade der Langsamkeit oder Geschwindigkeit, gewisse italiänische Kunstwörter anzunehmen.¹²⁰

What Marpurg describes here is the degree of rhythmic complexity, or *rhythmic interest*, as an indicator of tempo, as mentioned by Lester. Furthermore, what Lester only suggests as an analytic observation is given by Marpurg as a general prescription, or rule of performance practice ("*geschwinder ausgeführet werden kann und muß*").

How far then is one entitled to apply Lester's (and Marpurg's) fundamentally correct observation to performance tempo? It seems that the attempt to bridge the gap between harmonic analysis and performance is not infallibly accurate and cannot be considered mandatory, or logically compelling, in any particular instance. The reason for our uncertainty is the dialectical nature of the "complexity argument", as we shall presently see. Let us examine Lester's concluding remark:

¹²⁰ Marpurg, Anleitung zur Musik, Ch. 4, §8, p.70f.

"Hence, no listener would wish for a performance of these Mozart and Beethoven works at a tempo so slow that the eighth notes were brought into focus but the two-measure or four-measure units were so long that they would lose their unity."

One should ask, precisely what tempo is so slow as to bring such figures into focus? We have already mentioned the Alberti-basses in slow movements of Mozart's piano sonatas, with tempi "dangerously" near to bring the background figures into main focus; but this hardly happens in "conventionally satisfactory" interpretations.¹²¹

5.4 Fast tempo as function of interest

In the same connection, Lester also cites an ostinato figure of a Chopin prelude:

Either the motor rhythm projects a repetitious patterning in an accompaniment at a pace far removed from the essential harmonic and phrasing activity (as in Mozart's Symphony No. 40, as well as in pieces such as Chopin's Prelude in G major, Op. 28/3) (ibid., 138).

One should reconsider whether Chopin's repetitious patterns are really "far removed from any essential activity." Of course, they are usually intended to be played in high speeds. But one should beware of automatically ascribing the change of rhythmic or durational function (or stratum) to the change of notation, or their performing tempo. The division line may become blurred at times, resulting as a combination of analysis (or rhythmic description) of the piece, its notation, and rooted tempo traditions, or habits. For example, let us take two G major preludes, the one from the Violoncello Suite No. 1, BWV 1007/1, and Chopin's op. 28/3, whose pace is "far removed from the *essential* harmonic and phrasing activity". If we apply Lester's previously developed criterion of "interesting and complex features", the kernel of the repeating melody of chopin's prelude is no less complex than the *bariolage* figure (or a transfer of the lute *style brisé* into bowed-string idiom) of BWV 1007/1. And what is interesting is, in the end, essential too. The potential of harmonic development of the repeating pattern in the Chopin Prelude may be not as great as the Bach piece, since Chopin deliberately uses it as a recurrent ostinato figure. But one take his C major Étude op. 10/1, for example, whose harmonic invention is even more sophisticated than BWV 1007/1. Yet no one would dream of playing, or hearing, the meditative violoncello Prelude at metronomic rates around the J = M. M. 160, that are generally accepted for the fastest Chopin études, and could also be adopted to his prelude. The same problem concerns Bach's C major

¹²¹ Well-known "counterexamples", disregarding conventional "figure-background" balance are Glenn Gould's recordings of Mozart piano sonatas.

prelude WTC I, which has everything one could wish for in repetitiousness. Does it mean that one should expect similar speeds for Bach's WTC I and Chopin preludes? This is not meant in any way to belittle the depth and fascination of Bach's (or Chopin's) preludes. We often feel that every single note in Bach has more "specific weight" than in much of the music of the following generations; but the reason for that is not always fully accounted for by analysis. The case of Chopin deserves to be examined more in depth. The above description of the general tendency towards simplification (or mechanization) of musical texture in the second half of the 18th century was reversed in the 19th. There sprung up a new 'art of the étude' as a training-piece for improving the mechanical abilities of the performer, which was inherently based on repetitive formulas. Chopin's - or Schumann's - études constitute a revolution of the entire genre, in that they raised them to unexpectedly high artistic levels. One means of achieveing this artistic standard was the meticulous care of inventing, or constucting, the repetitious patterns. From now on they were transformed from routine borrowed formulas into highly individualized and sophisticated figures of emblematic quality. The invention of a characteristic figure for each prelude or étude becomes in Chopin unique for every piece, its badge of identity, in total contrast to the formulaic approach of the late 18th century.

Playing Chopin's fastest études and preludes in the accepted speeds of today,¹²² one certainly loses much of his most intricate details of invention. The most blatant example is the demonic unison Finale of the B_b minor Sonata, often performed so incredibly fast that one hardly manages to give oneself a concscious account of the melody, or any detailed musical line. But I would not recommend playing such pieces with moderation, or 'rationally' fast.¹²³ Interesting as playing such pieces in 'slow motion' may be – an important stage of study and analysis – they will thus lose all their emotional, virtuosic impact by even the least sign of restraint, which will be rightly understood as a lack of élan, or courage, on the part of the performer. Thus the same argument that has plausibly served Lester in comparing Bach's textures with Mozart and Beethoven, is not valid in comparing Mozart with Chopin (Examples 23, 24).

¹²² These speeds, about M. M. = 160 per \downarrow , come very closely to the maximal speeds as recommended by Quantz. See below, Ch. 3.5.

¹²³ Some authors have actually advocated a drastic slowing down of Chopin's fast pieces (e.g., Talsma, *Anleitung zur Entmechanisierung der Musik*, p. 27).

Example 23: Alberti-bass figuration – Mozart, K. 309/3 RONDEAU



Example 24: Chopin, Prelude Op. 28/8 (Molto agitato)



5.5 Bach, Chopin, and wasted information

Is it sensible to compare rhythmic textures of Bach and Chopin? Seen from a higher level, there is no apparent contradiction between formal content and performance practice. In order to enhance the higher (long-range) levels, Chopin and Schumann often render the fastest level deliberately blurred, until one can hardly make out the separate notes. In the process, a considerable amount of fascinatingly interesting details, particularly for the musically-illiterate listener, becomes lost, or goes wasted, as it were. The situation is self-evident for Alberti-bass-like patterns which, beside their basic harmonic content, carry little additional information. But typical Chopin figurations nearly always include non-harmonic notes, as well as unpredicted harmonic progressions and deviations. It is axiomatically accepted that such a 'waste of detail' was a 19th-century innovation, unknown in the so-called 'early music'. This opinion ("fuges and swift movements does not agree well together") was already stated by Roger North (see 4.3), and in the present century by Albert Schweitzer. The principle seems plausible enough, at least for learned-style polyphony. Lester mentions various "focal planes" of attention. But a nearly axiomatic assumption about polyphonic music, i.e., Renaissance and Baroque stile antico, is that the polyphony must be at all times equally, and absolutely, transparent in all levels, and for any number of voice-parts. One has seldom questioned whether this demand has ever been realistic for any listener with human abilities. I do not know whether one has seriously examined yet how much important musical information gets wasted in the process of listening, to what extent composers are aware of it, and how far they are ready to sacrifice it. The present work will not go into this question in detail, but the answers must depend on various factors, such as period, style and genre. We do not yet have answers to this question, particularly for Bach and his time, namely what degree of concentration and awareness were expected from the listener of the time, for various circumstances and musical genres. A better knowledge of these problems could also yield a better insight about how far one could 'let go' in Baroque music. Historic metronomic data are referred to in Chapter 10; but at present they are too scant to serve as sufficiently reliable indications.

MEASURE, BEAT, AND UPBEAT

6. Upbeats, Bach, and Old Traditions

Dovemo oltra di ciò avertire, accioche alcuno non si maravigli, che ogni Compositione incominci & finisca ancora nella positione della mano, cioé nel principio della Battuta; però di sopra ho detto, che lo Iambo si può accommodare sotto la Battuta inequale; pur che la Cantilena venghi a terminare secondo il Costume de i Musici moderni.¹²⁴

6.1 Duration and accent

One of the peculiarities of musical time is that beside its durational or quantitative mode, it also involves a qualitative dimension, not reducible into terms of duration alone. First formulated by Descartes,¹²⁵ then by Printz¹²⁶ and taken from him by Walther,¹²⁷ the idea that notes of the same durations may have different value of one kind or another (weight, accent) was understood by musical theory earlier on. Thus, the down-beat of the *tactus*, or its main divisions, were the natural place of harmonic consonance in early polyphony (later, also of a specific type of dissonance, the suspension), while smaller subdivisions (in modern usage, of weaker metric value) were allocated for other dissonance species (passing and auxiliary notes).¹²⁸

¹²⁴ Gioseffo Zarlino, *Le istitutioni harmoniche* 1558, Part III, Ch. 48, 209: "Let us add, lest anyone wonder, that it is necessary for each composition to begin and end on a downbeat, that is, on the beginning of the measure. However, I said earlier that the iambic may be set in an unequal measure; this is practicable provided the piece is brought to a close according to the usage of modern musicians." (tr. Guy A Marco).

¹²⁵ René Descartes, Compendium of Music (Compendium musicæ 1656 [1618]) trans., Walter Robert, 1961, 15.

¹²⁶ Printz: Compendium musicae, in quo ... (Guben, 1668); idem: Compendium musicae signatoriae et modulatoriae (Dresden, 1689), 25; Phrynis (Leipzig, 1696), quoted by Heckmann, "Der Takt in der Musiklehre des 17.Jahrhunderts", AfMw X (1953), 127.

¹²⁷ Walther, Præcepta der musicalischen Composition 1708, Cap. 3, § 25. (p. 23).

¹²⁸ See "The Franconian law", Franco of Cologne, *Ars cantus mensurabilis*, Ch. 11 (in Strunk, *Source Readings*, 155): "Be it also understood that in all the modes concords are to be used at the beginning of a perfection ..."

Though early barlines were often used merely as auxiliary orientation signs, in Apel's admonitory words,¹²⁹ often they also indicated metrically accented places, as we see in many 16th-century lute tablatures and keyboard scores.

In a beat-dependent rhythmic language, where accented and unaccented parts are distinguished by their position in the metric system, any tune, dance, musical piece, section or sentence necessarily opens either on the heavy or on the light beat. Thus the choice between the two options may seem somewhat trivial. But Western notation has been biased in favour of the *downbeat* opening, accepted as the norm, as remarked by Zarlino's motto. Although well known in practice, beginning a tune on the upbeat was seen, until well into the 17th century as somewhat irregular, only gradually becoming an everyday occurrence in all musical genres.

6.2 Empty and straightforward upbeats

In most polyphonic pieces (14th to 17th centuries) the first voice part usually began with the *tactus* downbeat (termed here *mainbeat* pattern), in accordance with the demands of conservative music theory, as advocated by Zarlino; but there are numerous exceptions. A piece (either with or without barlines) could begin on a 'broken' *mensura*. Since vocal part-books had no barlines, this was indicated by all voice parts opening 'emptily' (*nel vuoto*), i.e., with rest signs, formally creating a complete *tactus* or measure. This was the only way to indicate an upbeat opening in an unbarred part, as we see in example 25 - a song (out of seven similar ones) of the *Mellon Chansonnier* (late 15th century); five of them homophonic, six with triple mensuration [O]), beginning with a short forebeat (one semibreve), ¹³⁰ indicated by rest signs in all voices: [O -] or [O -]).¹³¹ It seems that Zarlino, in his above-quoted passage, precisely meant this special kind of upbeat, "iambic, set in an inequal measure [ternary meter]".

Numerous examples in the *Glogauer Liederbuch*¹³² follow the same $[O - \bullet \circ]$ pattern. Such openings are rare in 16th-century motet-style repertory, but more common in folksong-like pieces or dance tunes. This 15th-century iambic upbeat has shown a remarkable durability pattern in homophonic songs. Late examples of

^{129 &}quot;Modern barring should not be understood to entail regular accent" (Apel, *The Notation*, 10); but in the examples referred to by Apel himself (e.g., the dances of Attaignant, or the *Fitz-william Virginal Book*) barlines often clearly indicate accent structure.

¹³⁰ One should distinguish between two kinds of upbeat: (a) *forebeat*, preceding the mainbeat; (b) *afterbeat*, shortly following the *mainbeat* (see 6.7).

¹³¹ *The Mellon Chansonnier*, Leeman L. Perkins and Howard Garey, eds., (Yale University Press), New Haven, 1979.

¹³² *Glogauer Liederbuch* [Erbe deutscher Musik], Heribert Ringmann, ed., Kassel: Bärenreiter, 1954.

this rhythm still preserve the 'empty' notation. We see it in numerous 16th-century chansons (Example 26), as well as in Sweelinck's chorale variations *Puer nobis nascitur* (Var. I). Such archaic upbeat morphology is still preserved, surprisingly, as late as the 18th century, in some triple-meter Bach chorales. One finds

Example 25: The Mellon Chansonnier: Caron, Accueilly m'a la belle Cantus – facsimile $[\bigcirc = - \circ \circ \circ \circ \circ \downarrow \downarrow \circ]$



Example 26: Janequin, Las, viens moy secourir¹³³



even the empty notation in an early (*unbarred*) version of Bach's organ chorale *In dulci jubilo* (*BWV* 729a, copied by J. T. Krebs; example 27).¹³⁴ The empty opening

¹³³ From: Trentiesme livre contenant XXVII chansons nouvelles, Paris: Attaignant, 1548.

is required by the unbarred notation to indicate a forebeat as a technical necessity, as well as an hommage to an old tradition; but such rare examples are in fact its late residues, or living fossils.

Example 27: BWV 729a: In dulci jubilo



Empty upbeats still occur in many pieces of the *Fitzwilliam Virginal Book*; but here, with the introduction of barlines, straightforward forebeats (i.e., not preceded by rest signs) become the norm. William Byrd's *The Maiden's Song*¹³⁵ is notated with an empty upbeat, but the two notations still coexist. A differently barred version of Byrd's piece, but with a straightforward upbeat, is found in his *My Ladye Nevells Booke* (1591).¹³⁶

Example 28: Byrd, The Maidens song

a) *Fitzwilliam* version;



b) My Ladye Nevell's version



¹³⁴ See: Peter Williams, *The Organ Music of J. S. Bach*, Vol. II, 266, 273–4. We see the same pattern of one-minim upbeat in homophonic ternary meters also in some slow transitory movements of Corelli's trio sonatas, still with the empty notation.

¹³⁵ Fitzwilliam Virginal Book, no. 126.

¹³⁶ No. 28. Beside the upbeat, there are other metric differences between the two versions: the bars in *My Ladye Nevells Booke* are halved, compared with the *Fitzwilliam* version, although the mensuration sign c is the same. The *Fitzwilliam* version has 6 minims per measure, except for the last (halved) 15 measures. *My Ladye Nevells Booke* has 3 minims per measure throughout.

tern. The first (sounding) quarter-note is a 'normal' forebeat, which might be written simply, without a rest sign.

6.3 Forebeats, short and extended

In late 17th- or 18th-century dances, upbeat patterns became stereotyped. For certain types (allemande, courante, gavotte, bourrée, passepied) they have become mandatory, while others (sarabande, minuet) are mainbeat as a rule. Upbeat dances (allemande, courante) with a single-note or triple-note forebeat (β or $\overline{\mu}$) usually never open on a double-note forebeat $(\overline{J}; \overline{J})$, which is reserved for the bourrée and passepied. But early 17th-century dances (e.g., in Besard, Gaultier or Dubut) are much less standardized: even the two sections of the same dance may have different upbeat patterns. A forebeat may be either simple (1) [1] [1] [1] or compound, i.e., anticipated by a 'secondary' upbeat, of a weaker metrical place than the 'main' upbeat group (N,) | | 1,137 One should also consider the length of the forebeat in relation to the full measure: it is usually rather short, comprising about one beat of the measure, or even a fraction of it. The longer or more complicated a forebeat becomes, the more readily it acquires a life of its own, or is even understood as a downbeat. A case in point is the characteristic rhythm of the gayotte, traditionally written with a double upbeat ($(c \downarrow \downarrow \downarrow \downarrow)$ or $(c \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow)$, taking half a measure, designated here as G-type, or gavotte-type. It is not easy to perform (or perceive) gavottes with their upbeats and mainbeats correctly understood.¹³⁸ Another dance with a relatively longer forebeat is the chaconne $(\frac{3}{4}, \frac{1}{2})$. Bach's suites have numerous gavottes, and there is his famous d minor Chaconne (BWV 1004/5). But apart from these two French dance patterns, Bach's forebeats are mostly short, rarely surpassing a single beat.¹³⁹ The G-type forebeat is discernible primarily in gavottes, but also in the

¹³⁷ Particularly interesting examples of pieces beginning with a main forebeat, preceded by a secondary one are Buxtehude, *Ein feste Burg*, *BuxWV* 184; J. S. Bach, *Wir Christenleut*, *BWV* 1090 (Neumeister Collection). Evtan Agmon interprets compound upbeats, and afterbeats, as a special category of musical

Eytan Agmon interprets compound upbeats, and afterbeats, as a special category of musical duration which he terms "anti-metrical". See his "Musical Durations as Mathematical Intervals", *Music Analysis* 16/1 (March, 1997), 45–75.

¹³⁸ The 'metric ambiguity' that D. Epstein (*Shaping Time*, 1995, p.81) observes in the *Gavotte* en Rondeau of the Violin Partita BWV 1006 is a feature of gavottes in general, since mid-17th century. See also Benary, *Rhythmik und Metrik*, 1967, p.54. But older gavottes, like the gavotte tune in Arbeau's Orchesographie 1589 (p.176) are often mainbeat.

¹³⁹ Designations for upbeat- and afterbeat types: \mathbf{M} = mainbeat; \mathbf{A} = afterbeat; \mathbf{U} = short forebeat; \mathbf{G} = half-measure forebeat; \mathbf{E} = *extended* forebeat, longer than a half-measure (G-type).

French way of notating a march, often beginning with a half-measure upbeat instead on mainbeat.

Example 29: Marches

a) Saint-Lambert, from Les Principes du clavecin¹⁴⁰



b) Bizet, L'Arlesienne, Prelude to Act I¹⁴¹



6.4 The French extended forebeat

Turning to 18th-century French repertory, such as Couperin's *Pièces de clavecin*, we find a remarkably rich variety of **E**-type forebeats, longer than a half measure, often comprising nearly an entire long measure. Pieces with a long forebeat (**G**- or **E**-type) comprise over 53% of Couperin's entire *Pièces de clavecin* (of 254 *pièces*).¹⁴² Thinking in extended forebeats leads to *end-accented* phrases, whereas mainbeat phrases (or with a short forebeat) are mostly *head*-accented. For Couperin, as for other French composers of his time, end-accented phrases are perhaps

¹⁴¹ In performances of Bizet's popular piece, the upbeat structure of the opening phrase, and of the entire movement, is ignored by most conductors.

TYPE	Α	Ε	G	М	U	A/G	M/A	Pieces
Livre I	1	22	13	13	29	-	_	78
Livre II	1	21	19	8	12	-	-	61
Livre III	5	19	14	6	14	2	1	61
Livre IV	1	14	14	16	7	1	1	54
Total	8	76	60	43	62	3	2	254

A = Afterbeat; E = extended; G = Gavotte upbeat; M = mainbeat; U = short forebeat

Pièces with changing rhythm and meter are counted here as separate *parties*. Thus our 'total' has grown to 254. 43 *pièces* start on mainbeat, 62 with a short upbeat, 8 with an afterbeat, while 136 are gavotte-like (*G*-type) and extended (*E*-type) upbeats.

¹⁴⁰ Les Principes du clavecin (1702), 26, "Exemple de Pièces où la première Mesure n'est pas entiere".

in analogy to the French language, most natural and obvious. We see this in the way he writes the most elementary scale exercises: a forebeat of seven notes, with the accent falling on the last eighthnote.

Example 30: Couperin, from L'Art de toucher le clavecin



Comparing this example with another exercise for beginners, J. S. Bach's *Applicatio* from the *Clavierbüchlein vor W. F. Bach*, shows the contrast with the French rhythmic thinking, featuring regular head-accented phrasing throughout.

Example 31: BWV 994: Applicatio



The extended-forebeat style is not limited to the exercises, but is also seen in the Allemande of *L'Art de toucher* (Example 32).¹⁴³ This is an otherwise 'normal' allemande (with a \overline{fin} forebeat), but with a half-measure shift, making all cadences masculine. An extended forebeat opening an allemande is a rarity even for Couperin. His nine allemandes in *pièces de clavecin* have short forebeats. But taking the example in *L'Art de toucher* as a model will add to the list of characteristic allemandes in the *Pièces de clavecin* at least twelve pieces such as *Les Regrets* (Example 33).

Example 32: Allemande from L'Art de toucher le clavecin



¹⁴³ Couperin, *L'Art de toucher le clavecin* 1716, 1717, Margery Halford, trans. and ed., Sherman Oaks CA: Alfred, 1974, 47–8.

Couperin's frequent use of the long forebeat deserves a detailed examination. Gavotte-like, half-measure (**G**-type) forebeats were common outside France too, as the gavotte was fashionable all over Europe. On the other hand, longer (**E**-type) forebeats, comprising anything up to a complete measure, are quite rare in non-French repertory but surprisingly common in the *Pièces de clavecin*, even more than the **G**-type.

Example 33: Couperin, Les Regrets (Livre I/3)



Couperin is one of the last composers to have shown a marked predilection to the extended (E-type) forebeat. Later French composers use this device much less often. The E-type is quite rare in Rameau's keyboard works (which also include several pieces from his operas); but the G-type forebeat, like the gavotte dance, remained longer in vogue, either as social dance or as purely instrumental music.

6.5 French precedents of the extended forebeat

A cursory survey of French sources shows that extended upbeats were common in the 17th century long before Couperin. Looking back from Couperin, their presence is prominent in Nicolas de Grigny's *Livre d'orgue* (1699). Grigny uses the old-fashioned 'empty' practice of completing upbeat measures by rests throughout his book. Thus the distinction between fore- and afterbeats is not always clear-cut. But the gavotte-like 'upbeat' (half measure, ϕ) and the 'upbeat gigue' ($\frac{9}{8}$ upbeat in $\frac{12}{8}$ meter), so common in Couperin, are present. **G**-type upbeats, as well as extended ones (**E**-type), occur more frequently in Grigny than short forebeats. Grigny's *Livre d'orgue* is of special relevance here, as it was copied (*ca.* 1709–12) by J. S. Bach. Thus long-forebeat rhythms must have been well known to J. S. Bach, who could have made use of them, if he chose to do so.¹⁴⁴ But I know of only two Bach pieces that formally open with a French *extended* forebeat, namely Soprano aria "Seufzer,

¹⁴⁴ Beside Grigny's *Livre d'orgue*, also Couperin's *Les Bergeries* (Livre II, 6^{me} ordre), opening with a **G**-type forebeat, was copied into the *Notebook of Anna Magdalena* (1725).

Tränen" (*BWV* 21/3) and the *Fantasie sur un Rondeau* in C minor *BWV* 918, discussed below (6.8).

This search takes us back to early 17th-century French lute repertory. We do not find long upbeats in the works of Chambonnières (composed before 1670), whose courantes and allemandes abound in short upbeats (up to three unaccented notes – γ , \neg ; \forall , \neg ; \forall ; \neg ; etc.). Short upbeat patterns are also found in Denis Gaultier's *Rhétorique des Dieux* (compiled 1648–52), particularly in the courantes.¹⁴⁵ But we find longer and relatively complex types half a century earlier, in Jean-Baptiste Besard's *Thesaurus harmonicus* (1603). Besard's lute anthology contains, beside his own works, music by many other authors.¹⁴⁶ A similar upbeat variety is found in Bocquet's passemezzi and galliards of the *Thesaurus*, but primarily in Besard's own works. Later examples of elaborate forebeats are found in Ennemond Gaultier ("le Vieux Gaultier"; 1575–1651), and then, later than Denis Gaultier (1603–1672), for example, in the works of Dubut (*Père & Fils*).

In his introduction to the works of Besard,¹⁴⁷ the editor, André Souris, stresses the eccentricity of Besard's compositional style, of his breaking all attachments to vocal counterpoint: "what seems to characterize Besard is his abuse of these irregularities, lending his music an extravagant style, which one may designate as 'manneristic'." Souris points out the unusual rhythmic profile of Besard's allemandes, and the fact that all of them begin with upbeats unusual for this dance.





¹⁴⁵ See, Preface to Denis Gaultier's *La Rhetorique des Dieux*, David J. Buch, ed. (Madison: A-R Editions, 1990, ix).

¹⁴⁶ French composers represented in the *Thesaurus harmonicus* have been published by the CNRS.

¹⁴⁷ Jean-Baptiste Besard (ca. 1567–ca. 1625), *Œuvres pour luth seul*, André Souris & Monique Rollin, eds., Paris: CNRS, 1981; André Souris, "Sur la musique de Besard", ibid., xxxvii.

Besard's rhythmic eccentricities are not limited, of course, to his allemandes. They characterize all the pieces in the fifth book of the *Thesaurus*: nine passemezzi, Pavana and Bergamasco. One must remember that early 16th- and 17th-century dances – the pavan, alman, and passamezzo – had no fixed upbeat (or mainbeat) incipit pattern. In Arbeau's *Orchesographie* (1589) they are written without upbeats.¹⁴⁸ In *Fitzwilliam Virginal Book*, the same dance may come either with or without an upbeat; but the usual pattern of the common dance types (pavan, galliard, gigge) is mainbeat. In Besard, on the other hand, there is an opposite trend: the normal pattern of most dance types is the forebeat, which – compared to other music of the time – becomes more varied, extended and complex. Thus Besard seems "chief suspect" in introducing complex upbeats into French music.

The ambiguous rhythmic character of the gavotte resulting from its halfmeasure forebeat, in contrast to the bourrée, is elucidated by Meredith Little and Natalie Jenne.¹⁴⁹ However, the phenomenon of half-measure and longer forebeats (**G-**, **E-**types) was not isolated, nor limited to the gavotte, or to Lully. The same phenomenon is observed in many dance types, in marches and other tunes, at least since 1603. Then it must reflect a specific French way of conceptualizing *endaccented* measure and phrase rhythm in general. This manner was adopted in gavottes composed by musicians of other nations; but it was not readily adapted by them to other genres, notwithstanding the great popularity that the gavotte (among other French dances) was enjoying outside France.

6.6 Vocal and instrumental upbeats

The rhythmic character of any piece of music is determined, among other factors, by its genre and performing medium. The rhythmic image obtained by examining Couperin's *Pièces de clavecin* is very different from that of his works for other media, e.g., his organ masses, or his chamber and vocal music. This observation particularly concerns prepared afterbeats which, as we saw, are practically absent in Couperin's keyboard works; but they commonly occur in his vocal and chamber music, as they do in the work of Lully.

Apart from gavotte- and chaconne-type, one hardly finds in Lully extended forebeats. On the other hand, bass-prepared afterbeats (see below, 6.14) are ubi-

¹⁴⁸ Thoinot Arbeau (Jehan Tabourot), Orchesographie, Lengres, 1589; English Version: Mary Stewart Evans, tr., R/ New York: Dover, 1967. One should take into account that the barring of Arbeau's dance melodies is rudimentary and not always clear. However, Arbeau knew of the 'empty' beginning and used it once (p. 44).

¹⁴⁹ Meredith Little and Natalie Jenne's, *Dance and the Music of J. S. Bach*, Bloomington: Indiana UP, 1991, 50–51.

quitous in his operas. Upbeat incipits are particularly common in his recitatives and arioso-like pieces, where the vocal part rarely starts on mainbeat. This characteristic is apparently shared by recitatives of many different styles and languages. The rhythmic style of Baroque vocal music deserves a special investigation, beyond the scope of the present study. But I would like to suggest some preliminary remarks on the rhythmic profile of different musical genres.

As stated before, afterbeats are largely out of style in dances (more precisely, in *music for dancing*, which is not the same thing). An afterbeat in dancing may pose some difficulty, as the music is supposed to precede, or cue the dancers, not the other way round. Singers, on the other hand, have different demands from their accompanying players than dancers. A bass-prepared afterbeat is a most natural cue for the singer, marking rhythm as well as intonation. On the other hand, solo music of an individual or meditative nature, particularly for the lute or keyboard, creates no problems of coordination, which may occur between heterogeneous performer groups (singers, dancers, players). Both instruments, particularly in France, are associated with common features calling for remarkable rhythmic flexibility, notably the *style brisé* and *prélude non mesuré*. Therefore some rhythmic sophistication may be aptly called for in their repertory, more than in music that demands group coordination.

6.7 Afterbeat

So often do we meet pieces in Bach's work which open neither with a full bar nor with a forebeat, but with a short rest (usually or), thus leaving the mainbeat empty. Such opening measures should not be confused either with vestiges of the old 'empty' notation or with long forebeats, although they too have the appearance of a nearly complete measure. The two kinds differ by more than formal notation. Unlike a forebeat, the opening of the C major Invention (*,) is not necessarily felt as preparatory to the next measure, but has its own metric and rhythmic weight. The following example, the C minor Organ Fugue *BWV* 575, clearly shows that its incomplete first measure cannot in fact *prepare* anything, but should be seen as an independent measure with a silent downbeat, ¹⁵⁰ i.e., with something subtracted from – rather than added to – the first beat; in other words, as measures with a *negative* (silent) downbeat of a nearly syncopation-like character, not unlike the French *con*-

¹⁵⁰ The silent downbeat becomes an audible one with the entrance of the countersubject (m.5). Such instances of an upbeat "hanging in the air" are undoubtedly rare, but not unique occurrences. Similar cases are Buxtehude's C major Prelude, BuxWV 137, and the theme of the F major Fugue, BuxWV 145. The special nature of the afterbeat has been rightly observed by Peter Benary, who termed it as "prokatalektischer Auftakt" (*Rhythmik und Metrik*, p. 53).

tretemps. The label "silent downbeat" should, however, emphasize that the accent here is not shifted, or transferred to another beat (as in syncopations), but paradoxically gives special stress to the incipit, and particularly to the opening rest.

Example 35: Organ Fugue in C minor, BWV 575



Although most common in Bach or his German predecessors, the afterbeat originated as an international device, a Renaissance vestige within Baroque style. Its beginnings stretch further back to the early 16th-century polyphonic chanson and madrigal. The afterbeat may have evolved by contracting the so-called chanson rhythm (\circ J) by a rest to to -JJ. It was later transferred to the instrumental genres of ricercar and canzona, in the form J, γ . This rhythmic contraction may indeed have been at first text-engendered, e.g., when a cadenced phrase in one voice was immediately followed by a new phrase *in the same voice*. The chanson *Monsieur l'Abbé* [1576] by Lassus may serve as a typical example. The first 7 measures of the Superius (Example 36 a) are immediately repeated, but with different texts:

A: *Monsieur l'Abé et monsieur son varlet, Sont fais egaux tous deux comme de cire,* **B:** *L'un est grand fol, l'autre petit follet: L'un veut railler, l'autre gaudir et rire:*

Example 36: Lassus, Monsieur l'Abbé

a) Superius





b) Virtual overlapping in the Superius

The opening figure in the Superius, as well as in the other voices, is the stereotyped chanson rhythm $[\downarrow \downarrow \downarrow \downarrow]$. Had the repeats A and B been given to different voices, the result might have looked like Example 36 b, where the first note of each new entry would overlap the last note of the former. In fact, however, the restatements of the opening figure are all in the same voice. In order not to lose a syllable – either at the end of the former entry or at the beginning of the next one ("*comme de ci-re* // *L'un est grand fol* // *L'un est grand fol*") – the \downarrow notes at the middle of bar 7 and the beginning of bar 8 are split into two (\downarrow / \downarrow). Thus the second and third entries of the figure are delayed, or contracted, to $\grave{\downarrow} \downarrow \downarrow \downarrow \downarrow$.

We see both forms – the full canzon-figure and the contracted rhythm – coexisting in countless 16th- and 17th-century polyphonic pieces, vocal as well as in instrumental; but they rarely come in dances. Both variants are treated within the same piece as equivalent, but at first with one limitation: the contracted form does not come at first, as an *incipit* of a piece, or of a section.

Example 37: Andrea Gabrieli, Canzon detta Qui le dira



The next development would be the emancipation of the contracted form, becoming an independent pattern in its own right, not just a variant of the unabridged figure. Indeed, later on in the 17th century we meet frequent use of afterbeat incipits, most prominently in German music, as in the works of Johann Pachelbel and Dietrich Buxtehude. Of Pachelbel's 95 *Magnificat Fugues*, 21 open with an afterbeat. All others are mainbeat, as expected of this genre, not even a single fugue opening with a short forebeat. The role of afterbeat incipits in Buxtehude's 'free' organ works is even more striking. In his 32 (mostly multisectioned) organ pieces – preludes, chaconnes etc. – the number of sections opening with afterbeats nearly equals those with mainbeat incipits, while forebeats constitute a vanishing minority. Afterbeats, more expected in genres with *stile antico* characteristics, or related to the motet-chanson tradition, are most common in preludes and fugues (also in Bach's Inventions and Sinfonias), but extremely rare in dances, where the first downbeat seems indispensable, often calling for a preceding forebeat as well.¹⁵¹

6.8 Les Goûts réunis: French-flavoured upbeats in Handel and Bach

Bach's C minor *Fantasie sur un Rondeau*, *BWV* 918, is an exceptionally rare example in Bach's work that *perhaps* opens with what formally looks like a typical French extended forebeat (five $\sqrt[3]{6}$ of a $\frac{3}{4}$ measure).



Example 38: BWV 918: Opening Ritornello ("Rondeau")

However, the lack of an autograph, as well as the unclear source transmission, hardly allow us to draw any final conclusions about the rhythmic structure of this piece, particularly of the opening measure.¹⁵²

¹⁵¹ One rare exception is a Polonaise in Handel's concerto grosso op. 6/4.

¹⁵² According to Uwe Wolf's Kritischer Bericht (NBA V/9, p. 47–51), the *Fantasia* opens with a full measure in the two extant sources. But the piece is still published nowadays with the five-♪ upbeat, either out of respect to the BGA tradition, or due to the fact that the repeat sign at m. 4 is drawn one eight-note after the barline. See also Schulenberg, *The Keyboard Music of J. S. Bach*, 144.

Handel, Air ("The Harmonious Blacksmith")

Another case of an upbeat à *la Couperin*, so rare outside French repertory, is Handel's Air *The Harmonious Blacksmith*,¹⁵³. Literally, the *Air* begins on mainbeat, with an E *tasto solo*, thus stressing the special rhythmic character of the following tune, or "explaining" its rhythm, as it were, to English or German ears. But the repeat sign and the melody always come one quarternote after the barline, and the same division remains throughout all the variations, making all phrase endings fall on the *thesis*.

Example 39: Handel, Air



Having caused one-quarternote shift, the beautiful *tasto solo* effect (*T*), hardly leaves any other trace on what follows: one could play the whole Air without it. Besides, Handel's melodic and harmonic phrasing does not fully support the three-J forebeat notation. The half-measure group A, its echo-variant B, and group C, are all somewhat ambiguous, in that they can be read either as head- or end-stressed. Only group B shows some priority to end-stressed reading, due to the suspension on the beginning of the second measure. Also the final figure $\int \int \int |J| d| = |I|$ seems metrically shifted, as the cadential 6–4 chord falls on a metrically weak position (4th quarter of the measure). The same echo-like structure is retained in all three melodic phrases of the *Air*, and through all variations, calling to mind a $\frac{2}{4}$ meter rather than c.

Perhaps the actual difference between reading Handel's Air as written (Ex. 39) or as beginning on the first beat (Ex. 40) is, finally, not as striking as it seems in theory. But even in thought alone it was significant enough to the composer, who

¹⁵³ Air with 5 Variations from the E major keyboard suite (No. 5), HWV 430/4.

kept the forward shift, not only in the E major final version, but also in two older G major versions.¹⁵⁴ I doubt if many keyboard players manage to impart the rhythmic drive of the *Harmonious Blacksmith* to the listener, with its complex upbeat structure and masculine endings, obviously inspired by French tradition.

Example 40: The Blacksmith Shifted



Bach, Sinfonia 5 in E_b major (BWV 791)

The E_b major 3-part *Sinfonia* (*BWV* 791), Bach's most interesting example of French and Italianate upbeats combined, displays a French forebeat in the upper voices, while the bass is 'Italianized' (or rather 'Germanized') in an afterbeatmanner, beginning with a 16th-note rest. Without the bass – or the opening rest signs – the rhythm of the two upper parts is identical with Couperin's *L'Atendrissante* (*Livre III, 18^e Ordre*). Comparing both pieces may be illuminating.

Couperin's piece, in the character of a slow sarabande,¹⁵⁵ is constructed in symmetric 4-measure phrases throughout. Had the forebeat been made into a whole measure (i.e., an afterbeat), the phrases would end on the 5th, 9th, 13th, 17th, 21th (Phrygian cadence) and 25th measures. Bach does precisely this by grafting onto the simple scheme a continuo-like scaffolding, not quite compatible with the phrasing of the upper parts. Bach's phrase structure adheres to the shifted four-measure scheme (*Vierhebigkeit*), with but one exception: the quasi-recapitulation of the

¹⁵⁴ See Nos. 12, 13 in Hallische Händelausgabe IV/1, Terence Best, ed. (1993). See also Channan Willner's Ph.D dissertation, p. 171, 180–85, 241.

¹⁵⁵ Most of Couperin's (and Bach's) sarabandes begin on main-beat. However, Bach's Sarabande of the G major *Partita BWV* 829 features the same upbeat figure of Couperin's *L'Atendrissante*.

opening period (mm. 1–9) in m. 29, uses a device well known from other inventions and sinfonias. At the point where we expect the return of the tonic, it turns to the subdominant, and then comes by way of an *imitazione alla quinta* back to the tonic.¹⁵⁶ The return to the tonic demands one extra measure. Thus the recapitulatory section has ten measures – the conventional eight-measure period length, plus one measure of the basso-continuo figure, plus the one added by the subdominant deviation. Bach constructs the bass on an ostinato rhythm $(\frac{3}{4} \forall J J \downarrow J)$, but avoids the uniform walking-bass rhythms. Instead of filling out the first beat of the measure, each measure now begins with a repetitive afterbeat. This Germanized variety of Italianate continuo, grafted onto a typical French, highly dotted and ornamented *dialogue*-like polyphony (in the style of French Baroque organ music) is a brilliant achievement of *Les Goûts réunis*, a worthy small-scale counterpart to Bach's amalgamation of the concerto and overture forms.¹⁵⁷

Example 41: Couperin, L'Atendrissante



Example 42: BWV 791: Sinfonia 5 in E, Major



6.9 The compound afterbeat: Bach's Capriccio BWV 992

The Arioso of Bach's *Capriccio sopra la lontananza del fratello dilettissimo*, *BWV* 992/1, opens with a special type of afterbeat, fundamentally different from the ones discussed above. The main difference between the two afterbeat types is the

¹⁵⁶ This device of "subdominant recapitulation" is common in other Bach's works, e.g., in the E_b major 2-part Invention, m. 21–24, and in the F major Sinfonia, m. 17; and *Italian Concerto BWV* 971/1, m. 103, as well as in the first movement of Mozart's Piano Sonata K. 545.

¹⁵⁷ Such as the B minor Overture BWV 831/1.

preceding rest sign: $\frac{1}{7}$ or $\frac{1}{7}$ in the *canzona-type*; $\frac{1}{7}$ in the new type, which I term *compound*. Its best-known examples, beside *BWV* 992/1, are the E major (*WTC* I) and f_{\ddagger} minor (*WTC* II) fugues, and the A major Fughetta on *Allein Gott in der Höh'* sei Ehr (*Clavier-Übung* III, *BWV* 677).

Example 43

a) BWV 677: Fughetta super Allein Gott in der Höh' sey Ehr



c) BWV 883/2: Fugue in f[#] minor, WTC II



Whereas the evolution of the former afterbeat type definitely tags it as canzonaengendered, the origins of the compound afterbeat are less clear. Instead of attempting here a 'generic' explanation of the compound afterbeat, as I have done with the canzona-type, it seems that each instance of the compound afterbeat needs its own exegesis. I will limit myself here to two cases, a) the Capriccio *BWV* 992/1; b) the f# minor fugue (*WTC* II), *BWV* 883/2.

Since the compound afterbeat is not very common in Bach's music, one may ask whether he just follows here an old-fashioned notational tradition, or uses it for an intended "special effect".¹⁵⁸ As with all afterbeat types, the opening rests (\mathfrak{r}) result in an end-accent of the entire phrase. The difference becomes clear if we compare the original notation with a rebarring of the same phrase (Examples 44 a, b).

¹⁵⁸ One precedent of compound afterbeat is Johann Kuhnau's "Sonata quarta" from *Frische Clavier-Früchte* (1696).

Example 44 a: BWV 992/1: Capriccio (Arioso) - original rhythm



Example 44 b: Capriccio BWV 992/1 - shifted rhythm



The apparent reason for opening the piece with rest signs is the end-accent of the first phrase. But we see later on that other important occurrences too – the pedal point (2nd quarternote, m.5), the tonic cadenza (3rd quarternote, m.16), or the final chord (3rd quarternote, m.17) – fall on metrically weak points. As in many slow **c** pieces, the difference between a full measure and mid-bar is blurred; a $_4^2$ meter could have served here just as well. But, following the conventions of his time (about 1704–1707), Bach seldom used the relatively modern $_4^2$ signature for *adagio*.¹⁵⁹ Beside following older notational traditions, it seems that Bach had here a certain poetic intention. Trying to convey longing, or some similar non-assertive affects, he begins the piece from mid-air, as it were. The entire Arioso closes in the same way, with the final chord on mid-bar.

As for the theme of the f minor Fugue (WTC II), the effect of the afterbeat is that none of its notes, until the very last one (on measure 4), falls on a mainbeat. Thus the compound afterbeat achieves here a syncopated, hovering feeling.

¹⁵⁹ Peter Williams, "Two Case Studies in Performance Practice and the Details of Notation: 1. J. S. Bach and 2/4 Time", *EM* 21 (1993), 613–622). According to Williams, the ²/₄ signature was relatively modern in Bach's early years, who used it only later than the Capriccio (ca. 1703), in the Weimar period (e.g., in his version of Prince Johann Ernst of Weimar's Concerto (BWV 984/2, *Adagio e affettuoso*; 1713–14).

6.10 Conclusion

The forebeat incipit, a universal device, became in the 17th century a particularly French predilection. Whereas 16th- or early 17th-century forebeats were usually limited to simple patterns, they were more developed in French circles, especially by lutenists, apparently beginning with Jean-Baptiste Besard. Compound upbeats (JI) J: 7 NI J) became a fashion in French dances and characteristic incipit of certain dance types. The one-note (or three-note) forebeat became typical of the courante and allemande, while the sarabande – later also the minuet – were usually mainbeat. Bourrée and passepied usually display one- or two-note forebeat. Since mid-17th century, the half-measure upbeat became closely associated with the gavotte. The process was at first erratic: dances of the early to mid-17th-century French lute repertory do not keep to any fixed model, and even the various repeats of the same dance may begin with different upbeat patterns. At the threshold of the 18th century, the French predilection for upbeats reached its height, with extended forebeats almost one measure long. Many long-measure (\mathbf{c} , $\frac{12}{8}$, etc.) pieces show an extended forebeat pattern through all repeats, in binary forms and in variations. As a result, the final chord, sometimes no longer than a quarter, or an eighth-note, may constitute the entire last measure. Thus the phrase structure becomes end-accented, conforming to the rhythm of the French language. This process reached its peak in the music of Francois Couperin but, with the exception of the gavotte and chaconne dance patterns, found little echo outside France. In Germany, mainbeat, as well as the short forebeat, were characteristic of many songs and dances.¹⁶⁰ On the other hand, a preferred pattern of opening abstract instrumental pieces was the afterbeat, marked by a very short rest in the beginning of the first phrase. Opening Afterbeats are most characteristic of Pachelebel, Buxtehude and J. S. Bach. However, they are largely a heritage of the stile antico tradition, probably evolved from the contracted form of chanson, canzona and ricercar rhythm, and are thus of cosmopolitan origins. They are often met in conservative French organ music (Livres d'orgue of Raison [1688], de Grigny [1699] and others), particularly in the repertory of fugues, ricercars and similar genres. Whereas afterbeats are a common hallmark of the socalled learned-style, the French-style forebeats are nearly absent in non-French repertories, although the French style was readily imitated in all countries.

The French extended forebeat and the German afterbeat are, in a way, similar. At times they are not easy to distinguish from each other, since the formal presence (or not) of a rest sign at the opening measure is not a sufficient distinction between them. But in essence they are opposed to each other. I suggest a simple criterion to

¹⁶⁰ A certain predilection for upbeats is observed also in the German traditional song, particularly noticeable in Protestant chorales, most often set to iambic verses.

distinguish between an unambiguous (canzona-engendered) afterbeat and other types of upbeat: the afterbeat is usually marked by a very short rest sign (a single γ or), whereas longer rests at the opening may designate other upbeat types, such as the French extended forebeat, or a different type (as in the example of the *Capriccio* BWV 992). While the French forebeat makes the phrase end-accented, the afterbeat may also have an opposite effect. On the one hand, both contribute to an endaccented phrase balance. The forebeat shifts the close to the accented part of the measure, while the afterbeat does the same by adding something to the phrase. The afterbeat also adds extra weight to the *head* of the phrase; indeed the missing first beat paradoxically acquires a stress of its own, lending a special emphasis to the first measure, while at the same time also enhancing the expectation of what follows. This is confirmed by a device which I term *bass-prepared afterbeat*. The bass preparation before an afterbeat, an everyday occurrence in German late Baroque, is in fact absent in Couperin's *Pièces de clavecin*, or in the French solo lute repertory; but it was often used by French composers in vocal and chamber music (Example 45).





We may explain the paradox of the accented missing beat as conditioned by the habit of the bass-prepared afterbeat. This device has become so self-evident in the Baroque musical language, that it was often expected – perhaps even heard in the imagination – without being actually played. It could be missing in one version, and present in another version of the same composition.

Example 46 a: BWV 1006/1: Preludio from Violin Partita in E major (1720)



Example 46 b: *BWV* 29/1: Sinfonia from Cantata *Wir danken dir, Gott, wir danken dir* (1731)



The special accent implied by the afterbeat, combined with the German tendency to a sturdier harmonic scaffolding than in the French style, naturally gives rise to the head- *and* end-accented phrase structure, so characteristic of Bach.

Finally, although each of the various upbeat types discussed has its own different musical significance and history, the most specific Baroque types – the French forebeat and German afterbeat – eventually shared a common fate. In the following Classical era both became obsolete with the new wave of "natural simplicity". The prevailing upbeat became again the old simple short one, already known since the 15th century.

A note on performance

The *Couperinesque* way of forebeat notation ought to have some consequence on performance practice as well; but it is not easy to define a generally recommended performing manner that makes the long forebeat understood as such. The commonest way to mark a *short* forebeat is to play it more lightly than the following mainbeat note, or to separate it from the mainbeat by articulation. But these rudimentary means are inadequate for rendering an extended forebeat intelligible, or making a phrase end-accented, particularly on the organ or harpsichord. Perhaps the differences between short-forebeat, long-forebeat and afterbeat phrases are only of nuance, or accomplished by means of thinking alone. By 'thinking forward', an end-accented phrase becomes different, of a wider scope, with a certain *élan* and lightness, with more grace and sophistication, than a head-accented one. Even the tempo may acquire a new lightness. One might wonder indeed why this French trait, well known outside France, was so rarely used, practically ignored, by composers of other nations (Germany in particular), who otherwise eagerly emulated everything French, in music and in other respects.

TEMPO: RULES OF ITS BEHAVIOUR AND CHANGE
7. *Goldberg Variations* as a Counterexample: Proportions and the Myth of Bach's Mensural Tempo

Wir opfern eher die Schönheit, um dem Werk zu seinem Recht zu verhelfen. Das Recht des Werkes aber ist, nicht nur genossen, sondern verstanden zu werden.¹⁶¹

7.1 Praetorius as a model for Bach's tempi

Ulrich Siegele's concise paper "Zur Verbindung von Präludium und Fuge bei J. S. Bach",¹⁶² deals primarily with tempo relationships for Bach's *WTC* preludes and fugues. However, in footnote 2, a complete tempo system for *Goldberg Variations* is given in a nutshell, which deserves to be examined in detail. A similar proposal in 'proportionistic' spirit has also been raised by Walter Schenkman.¹⁶³ The tempo systems proposed for *Goldberg Variations*, apart from their interest *per se*, may serve a reconsideration of a more general problem, namely of the old Renaissance proportions and their applicability for tempi of the 'post-mensural' era (after the 17th century).

Siegele's article is part of a wider project, a consistent realization in practice of proportional tempi in the music of Bach, according to theories developed in the circle of Walter Gerstenberg and his followers. During the 1950's, the Gerstenberg circle produced a substantial theoretical corpus, trying to adapt the tempi of Bach, as well as of other composers, to proportional theories of the 16th century, or to their vestiges, as presented by later theorists (e.g., Michael Praetorius). Together with the work of Machatius,¹⁶⁴ Siegele's works on Bach's tempo constitute the

¹⁶¹ Programme note of a concert in the *Stiftskirche*, Tübingen, 10 February 1968, quoted in Ulrich Siegele, "Bachs Motette '*Jesu, meine Freude*': Protokoll einer Aufführung", *MuK* 39 (1969), 170 (the author of the quotation is not mentioned): "We rather sacrifice the beauty in order to let the work achieve its rights. The rights of a work, however, are not only to be enjoyed, but to be understood."

¹⁶² Ulrich Siegele, "Zur Verbindung von Präludium und Fuge bei J.S. Bach", *KB Kassel, 1962*, Kassel, 1963, 164–167.

¹⁶³ Walter Schenkman, "The Establishment of Tempo in Bach's Goldberg Variations", BACH, July 1975, 3–10. A more recent contribution is Don O. Franklin's "Composing in time: Bach' temporal design for the Goldberg Variations", in: Irish Musical Studies 8: Bach Studies from Dublin, eds. Anne Leahy and Yo Tomita, Dublin: Four Courts Press, 2004, 103– 128.

¹⁶⁴ Franz-Jochen Machatius, *Die Tempi in der Musik um 1600* (Diss.), Berlin (FU), 1952, R/Laaber: Laaber Verlag, 1977.

epitome of 'proportionistic' thinking. Siegele's article implicitly assumes Gerstenberg's tenet that rules of strict arithmetical proportions apply not only to mensurally notated music of the 15th and 16th centuries, but also to the tempi in the music of Bach. However, no factual or historical evidence has been supplied to this hypothesis.¹⁶⁵

Some additional information is given in Siegele's article "Vortrag" in MGG,¹⁶⁶ but the philosophical background of the proportionistic approach is to be searched elsewhere, for example, in Gerstenberg's oft-quoted lecture Die Zeitmaße und ihre Ordnungen in Bachs Musik.¹⁶⁷ Proportionistic ideas seem to obsess not only German musiclological circles of the 1950's, but also some more recent authors.¹⁶⁸ Siegele's starting point is a sweeping extension of Gerstenberg's ideas: he not only unquestioningly accepts the idea of a universal *tactus* (*Grundschlag*) for the music of Bach, but simply goes on with his calculations, trying to determine this universal unit with definitive exactitude, according to prescriptions of the Syntagma musicum III (1619).¹⁶⁹ To each of several Baroque musical genres Siegele ascribes a specific fixed tempo unit of its own, proportionally related to the Grundschlag, in order to establish simple proportional relations between their various rates. The beat for liturgical music is based directly on Praetorius' precept of "80 Tempora in einer halben viertel Stunde"; the beat for "figural" music is given as 4:3 faster; the pace of the "concertant" genre, twice as fast as the liturgical tempo, or 3:2 of the figural basis. Siegele's metronomic values calculated for the liturgical, figural and concerto genres are M. M 43.2; 57.6; and 86.4 respectively.¹⁷⁰

Why is it Praetorius, some 120 years earlier than Bach, who has been taken as a model for the proportionistic approach? His chapter on tempo in *Syntagma musi*-

 ¹⁶⁵ Lack of historical evidence has been also admitted by Gerstenberg. See his "Bemerkungen zum Problem des Tempos", Kongreβ-Referat, Rothenburg ob der Tauber, 1948; *Mf* I (1948), 63.

¹⁶⁶ Ulrich Siegele, Article "Vortrag", MGG (1968), Vol. 14, Col. 16–31.

¹⁶⁷ Einbeck: Schleicher & Schüler, 1951.

¹⁶⁸ David Epstein in: Beyond Orpheus: Studies in Musical Structure, Cambridge: MIT Press, 1979; Shaping Time: Music, The Brain, and Performance New York: Schirmer Books, 1995; Don O. Franklin, "Aspects of Proportion and Dimension in J. S. Bach's 1733 Missa" (paper delivered at the 9th Biennial Baroque Conference, Dublin, 2000, later published as "Aspekte der Proportion und Dimension in J. S. Bachs Missa von 1733," in: Leipziger Beiträge zur Bachforschung 5, ed.. Ulrich Leisinger, Hildesheim: Olms, 2002, 235–72.

¹⁶⁹ Praetorius, Syntagma musicum, III, 88.

^{170 &}quot;Die Dezimalbrüche sind Zeichen eines grundlegenden Unterschiedes der Zeitauffassung" (ibid., 165). It is remarkable that Siegele's resulting tempo unit is twice slower than the one calculated by Curt Sachs (*Rhythm and Tempo*, 203), whereas Machatius (*Die Tempi*, 212f) points out the problematic nature of Praetorius' "average" data, showing that Sachs' calculations are probably the correct ones.

cum III has long been an object of debate among scholars.¹⁷¹ The equivocal nature of Praetorius' data is given special emphasis in the interpretation of G. Paine, who convincingly shows that one of Praetorius' main theoretical acheivements was precisely the *emancipation* from strict tempo proportions.¹⁷² Siegele derives the metronomic values for Goldberg Variations - and for all Bach's music - from the figures of Praetorius, relating each variation to a definite musical genre.¹⁷³ Some variations are labeled as "figural", the virtuoso ones as "concertant", while those in G minor (Nos. 12, 15, 25) are all taken as Adagio, twice slower than the "figural" ones.¹⁷⁴ However, associating each variation with a specific genre is not an objective decision but depends on subjective, or arbitrary preferences. One could argue why Siegele related certain variations to certain types of motion. Even if we accept his method in principle, we could easily arrive at different results. Also Schenkman arrives at similar results for some of the variations, but his tempo relations, and the total timing of the two parts of the work, are of course different from Siegele's. Ignoring the small difference of their respective basic units (M. M. 57.6 and 60), there are still 15 variations with distinctly different tempi.

¹⁷¹ See: Harald Heckmann, "Der Takt in der Musiklehre des 17. Jahrhunderts" (1953); Carl Dahlhaus, "Zur Theorie des Tactus im 16. Jahrhundert (1960); idem, "Zur Entstehung des modernen Taktsystems im 17. Jahrhundert (1961); idem, "Zur Taktlehre des Michael Praetorius", (1964); idem, "Zur Geschichte des Taktschlagens im frühen 17. Jahrhundert" (1974); Hans Otto Hiekel, "Der Madrigal- und Motettentypus in der Mensurallehre des Michael Praetorius (1962/63)."

¹⁷² Gordon Paine, "Tactus, Tempo, and Praetorius", 187ff.

¹⁷³ E.g., liturgical, figural, concertant (allegro = sesquialtera; andante = subdupla; Adagio = subtripla), as well as various tempo bases for dance types (allemande = \mathbf{c} basic unit; gavotte and bourrée = \mathbf{c} sesquialtera).

¹⁷⁴ It should be noted that a handwritten *adagio* indication has been added to var. 25 in Bach's *Handexemplar*, which was rediscovered, however, in 1975, 12 years after Siegele's article (see below, 9.5). The only G major variation taken in *Subdupla* proportion (half speed) is Var. 13, owing to its rhythms, abounding in 32nds.

Var.	Meter	Unit	M.M. (US)	M.M. (WS)	Proportion (US:WS)	Remarks
Aria	3/4	J	57.6	60		
1	3/4	4	57.6	120	-1:2	V. ["Virtuoso"]
2	2/4	1	57.6	60		
3	12/8	5	115.2	180	-2:3	
4	3/8	5	115.2	120		
5	3/4	1	115.2	120		
6	3/8	J	115.2	120		
7	6/8	.	57.6	60		Tempo di giga
8	3/4	-	86.4	120	-3:4	V.
9	с	-	57.6	60		
10	¢	2	57.6	60		
11	12/16	J.		115.2	120	
12	3/4	-	57.6	60		
13	3/4	1	28.8	60	+1:2;	(32ths)
14	3/4	1	86.4	60	+3:2;	V.
15	2/4	1	28.8	30		minore
16a	¢		28.8	30		Ouverture (c)
16b	3/8	J	172.8	180		Ouverture ()
17	3/4	1	86.4	120	-3:4	V.
18	¢		57.6	120	-1:2	
19	3/8	J	115.2	240	-1:2	
20	3/4	1	86.4	120	-3:4	V.
21	с	1	28.8	60	-1:2	minore
22	¢		57.6	120	-1:2	Alla breve
23	3/4	1	86.4	60	+3:2	V.
24	9/8	۵.	57.6	60		
25	3/4	1	28.8	30		minore / Adagio
26	18/16 3/4	1	86.4	60	+3:2	V.
27	6/8	J	172.8	180		
28	3/4	1	86.4	60	+3:2	V.
29	3/4	1	86.4	60	+3:2	V.
30	с	1	57.6	60		
Aria	3/4	J	57.6	60		

Table 1: Comparative Tempi by Ulrich Siegele (US) and Walter Schenkman (WS)¹⁷⁵

¹⁷⁵ The proportion-like signs (3:2 etc.) denote the ratio of tempi between Siegele and Schenkman. "+" marks the variations where Siegele takes faster tempi than Schenkman; "-" denotes the opposite case. The difference of M.M. 57.6 and 60 has been neglected.

7.2 Perfect durational symmetry: premeditation or coincidence?

Studying the tempi proposed for *Goldberg Variations* by Siegele,¹⁷⁶ or by Schenkman, it is not only their emphasis on strict arithmetic tempo relationships which is striking: Siegele goes even further, insisting on exact metronomic values down to a decimal fraction (with complete disregard to the impossibility of keeping time with such an exactitude). The basic unit M. M. 57.6 enables him to calculate the duration of the *Goldberg Variations* as exactly 45 minutes for each of its two parts (each comprising the Aria and 15 variations, with all repetitions) down to a fraction of a second.¹⁷⁷ In Siegele's opinion, such a miraculous coincidence amounts, to a *proof* that Bach actually derived the tempi of the work proportionally from the "Praetorius numbers."¹⁷⁸

On second thought, the equal durations of the two parts seem less surprising if we take into account a structural feature of the entire variation genre. Most variations keep to the same (or a proportional) number of measures throughout an entire set. We already observe this phenomenon from the earliest examples of variation sets, from Byrd (*O Mistrys Myne*, Fitzwilliam, 66), through Sweelinck (*Mein junges Leben*; *Est-ce Mars*), Handel (*Harmonious Blacksmith*) to Mozart, just to name a few examples. Since the number of measures in each variation is often equal (or proportional) to that of the original theme, applying proportional tempi in performance may expectably yield comparable results in nearly any traditional variation set. Each one of the *Goldberg Variations* consists of two repeated sections of the same number of measures (with one exception: Variation 16 – in the form of a French overture – featuring different meters for each of its sections). Perhaps this

176 These are given in a footnote of "Zur Verbindung" (ibid., p. 165, n. 2). This study deals mainly with the tempo relationships of the preludes and fugues of the *Well Tempered Clavier*. Siegele's tempi according to their proportions are: Basic unit (*Grundschlag* = M. M. 57.6) →: Aria, Var. 1, 2, 9, 12, 30, (Aria d. c.); - J: 10, 18, 22; -: 7, 24; Dupla (M. M. 115.2) - J: Var. 3, 4, 6, 19; - J: 5; - J: Var. 11; Subdupla (M. M. 28.8) - J: Var. 13, 15, 21, 25; - J: Var. 16–1st half; Tripla (M. M. 172.8) - J: Var. 16–2nd half, 27; Sesquialtera (M. M. 86.4) - J: Var. 8, 14, 17, 20, 23, 26, 28, 29.
177 Sac Table J. Schernburgers encoursed duration of the word (without respect) is about 20.5

¹⁷⁷ See Table 1. Schenkman's approximate duration of the work (without repeats) is about 39.5 minutes (instead of Siegele's 45), and its two parts are but nearly equal (first half, ca. 19 min.; second half, ca. 20 min.).

^{178 &}quot;Mit dieser Grundlage füllen Bachs Goldberg-Variationen auf den Takt genau 90 Minuten, Aria und Variation 1–15 wie Variation 16–30 und Aria je 45 Minuten. Der Ansatz des Grundmaßes mit 57,6 Schlägen in der Minute kann damit als gesichert gelten" (ibid., 165; italics mine). Since Siegele insists on the beautifully round number of 45 minutes down to the fraction of a second, it will be not irrelevant to remark that he somewhat simplified matters: his calculations are based not on 80 Tempora, as prescribed by Praetorius, but on 81, on calculational grounds, thus shortening the durations of each part in about 30 seconds.

should be the moment calling for equalizing the durations of both sections; but, according to both Siegele and Schenkman, the first section is twice as long as the second. Equal durations can result if we take the ϕ section considerably faster than proposed by either scholar, and a slower tempo for the following $\frac{3}{8}$ section, making one measure of the $\frac{3}{8}$ section equal a half-measure of the first (ϕ) section. This, however, would seem to conflict with the accepted conventions (in the 1960's) of French overture tempo, or to disturb the so-called 'figural' *tactus* model of M. M. 57.6 (Schenkman: 60).¹⁷⁹ Besides, the prospect of playing, or listening to exactly 90 minutes of *Goldberg Variations*, especially when performed on the harpsichord, lacking dynamic inflection, and without any tempo inflection, seems a rather imposing task. Audible deviations of tempo and beat from strict proportion, even minor ones, between adjacent movements or sections of a piece, are vital not only to spare the listener a ninety-minute ordeal,¹⁸⁰ but mainly to signal changes of affect, without which an *en bloc* performance of the complete cycle would be inconceivable.¹⁸¹

Keeping the unity of beat through a set of variations might be a sensible procedure for a short work, of dimensions like Handel's *Harmonious Blacksmith*. The rhythmic variety in this, or in similar short works, is achieved by means of what Landowska called an "automatic process" of "progressive division of the the note values into smaller units."¹⁸² But it is precisely the *Goldberg Variations* where Bach deliberately discarded this rather mechanical method of division, substituting it with a complex cyclic structure by arranging the variations in groups of three. Unlike Handel's *Air*, there is no apparent intention here to keep a recognizable 'theme' through all its transformations. Bach, on the contrary, tries to achieve in this definitive variation cycle maximal dissimilarity between individual variations, so that they do not sound like 'variations' at all. The *Aria* has been copied into the

¹⁷⁹ It is to be doubted whether French musicians insisted on a common beat for the two sections of the overture. For example, for the Overture to *Thétis et Pélée* by Collasse, the 'metronomic' data of Pajot (D'Onzembray) are as follows: "le commencement" – 56 *tierces* [per beat]; "et la Reprise" – 45 *tierces*." These data have been converted by Hellmuth Christian Wolff to M. M. J = 64.3 and J = 80 (see his "Das Metronom des Louis-Leon Pajot 1735", 209, 213; see Klaus Miehling, *Das Tempo*, 82, 83.

^{180 &}quot;But whenever musicians wish to accelerate the tactus, which they consider should be done when they believe the hearing is fatigued," (Glarean, *Dodecachordon* 1547, Vol. II, 234).

¹⁸¹ Another example of variation sets with marked changes of tempo and affect: Handel's Variations on the *Air* from the d minor Suite No. 3 (HWV 428). The 'original' theme itself looks like a highly evolved variation of an earlier, simpler tune. The highly ornamented version can only be played *molto adagio*. Moreover, any attempt to play it strictly in time will immediately expose its own absurdity, which also precludes any definite tempo relationship to the following variations.

¹⁸² See Landowska on Music, 1965, 214.

Notenbüchlein of Anna Magdalena as an independent piece. But let us imagine that this *Aria* were lost, only a few separate variations remaining scattered (perhaps even transposed) in several sources: then each of the 30 variations could equally well stand in Bach's *œuvre* as an independent piece in its own right, with hardly anyone suspecting them to be variations on the same ground.

However, the problem with Siegele's tempo hypothesis is not his actual tempi for this or that variation, but the very principle of his theory. One is expected to believe that Bach intentionally planned its exact durations down to the fraction of a second, but at the same time kept them secret. And do these durations tell the performer that he should practically play the work throughout without any pause or breath in between;¹⁸³ or are such precise durations intended "in theory only"? One also cannot help suspecting that Siegele modified his tempi for some variations *post facto*, in order to get these perfect results of 45 minutes 00 seconds for each part.

7.3 Proportions and their limitations as tempo determinants

An occasional remark by Apel on tempo modification reflects perhaps most tellingly modern-time misunderstanding of proportions and tempo of the 15th and 16th centuries:

In the sixteenth century there existed only one way of changing the duration of a given note, that is, by proportions. Thus the proportional signs, if used simultaneously in all parts, represent the tempo marks, nay, the metronomic marks, of the fifteenth and sixteenth centuries.

Within the system of mensural notation this was the only way to formally indicate a change of what we today call "tempo". Such a procedure could be reliable only if the basic unit, or the pace of the *integer valor* tactus, were a known constant. Indeed, a constant *tactus* is stipulated by several theoretical treatises of the 16th century, notably Sebald Heyden's *De arte canendi* 1540.¹⁸⁵ Had this method been generally adopted, proportion signs would always have the same meaning, whether written simultaneously in all parts or consecutively, within a single part. In modern times, several scholars (Schering, Apel, Hiekel, *et al.*)¹⁸⁶ believed that this require-

¹⁸³ Siegele does not take into consideration that 16 variations out of 30 end with a *fermata*. See Don O. Franklin, "The Fermata as Notational Convention in the Music of J. S. Bach".

¹⁸⁴ Apel, The Notation of Polyphonic Music, 190.

¹⁸⁵ Sebald Heyden, *De arte canendi*, Nuremberg, 1540, translated by Clement A. Miller, A.M.I., 1972.

¹⁸⁶ Arnold Schering, Aufführungspraxis alter Musik, Leipzig, 1931; Willi Apel, The Notation of Polyphonic Music; Hans Otto Hiekel, "Der Madrigal- und Motettentypus in der Mensurallehre des Michael Praetorius", AfMw 19/20 (1962/63), 40–55.

ment of the theorists was also part of musical practice. But cumulative evidence shows that this clear and logical method was not strictly observed. The validity of Heyden's prescriptions for the practice of his day has been strongly challenged in modern times.¹⁸⁷

Apel's remark appears in a passage expounding his hypothesis on the invariability of tempo.¹⁸⁸ Consciously or not, Apel may be here trying to make Heyden's demand for a fixed tactus more palatable to modern readers, by conceding some place to tempo modifications, thus showing that the proportional system was not devoid of some musical flexibility. But in fact, by means of the proportion signs, the tempo of a given piece or section could only be doubled or halved, i.e., subjected to a drastic change, not *modified* (i.e., changed by a fraction). The reason is that every proportion sign is inseparably associated with its own metric implications. This limits extremely, even precludes, the possibility of modifying tempo by means of proportions. For example, changing the tempo of a passage with a c signature by a factor of 3:2 (by means of a $\frac{3}{2}$ or 3 proportion sign) establishes a ternary mensuration; likewise, a 4:3 proportion sign would mean cancelling a previous ternary mensuration (\bigcirc , Φ etc.), and consequently cannot be applied within a section of binary signature (c or c). The only proportion signs which do not invert the *binari*ty/ternarity of a given passage are a twofold diminution (dimiditas, = 2:1), as well as augmentation (1:2).¹⁸⁹

Such limitation, even in theory alone, is a marked hindrance, especially for 17th- century music, with its typical metric emphasis. Tempo inflexibility makes the mensural system even more rigid than is generally supposed. This very rigidity was perhaps the reason why its rules could never be strictly observed in accordance with Heyden's prescriptions. Thus, strong doubts should be raised whether a strictly fixed *tactus* could become an established practice. This inherent limitation of the mensural system put tempo in an extra-compositional status, as a parameter not controlled by the composer or indicated by the notation, but inevitably left to the performer. Whereas Heyden and his followers tried to adapt practice to theory, other theorists (e.g., Glarean) conceded that variation of tempo should not be avoided in practice, although this variation was no part of mensural theory proper.

¹⁸⁷ Notably by Curt Sachs ("Proportiones were greatly a matter of pen and ink." – Rhythm and Tempo, 216), Carl Dahlhaus (see note 171), and more recently by Alexander Blachly (Mensuration and Tempo in 15th-Century Music: Cut Signatures in Theory and Practice (Ph.D. Dissertation, Columbia University), Ann Arbor: UMI, 1995).

¹⁸⁸ See above, motto to Chapter I.

¹⁸⁹ Even here, the fact that minims and smaller note values are always imperfect sets definite limits to the application of proportion signs. In fact, even ternary signatures are not unaffected by binary proportions, in that the the 'ternarity' factor is shifted from one level into another (e.g., from *tempus* to *prolatio* etc.).

The rigidity of the mensural system is paradoxically accompanied by an equally inherent *uncertainty* of tempo, as a result of the ambiguity of even the most common mensural and proportional signs. The various meanings of the signs $\mathbf{c}/\mathbf{\phi}$ and \bigcirc / Φ , as well as of some proportion signs, such as 3 – which could mean either 3:1 or 3:2, made the entire system inadequate for controlling and modifying tempo. In this sense, 17th-century tempo theories, as reflected in the writings and works of Praetorius and Frescobaldi, contributed real and far-reaching innovations.

The mensural system, like modern notation, has simple means to divide durations into 2 or 3 by simply using the next smaller note value (breve-semibreveminim etc.), but considerable difficulty in designating intermediate values, as ties, double dotting and tempo words were not yet in use. For *somewhat* shorter durations (or a faster tempo) one had to resort to the next symbol, formally denoting a halved duration, and then slow down the *tactus*. New signs for note values (from *semibrevis* downward), cut signatures (ϕ and Φ) and similar devices were used. This may explain the apparent trend of gradual diminution of prevalent note values from the 13th to the 17th or 18th centuries. This process came to an end with the introduction of more reliable devices to control finer gradations of duration and tempo – notational (precisely defined note species, ties, dots etc.), conceptual (tempo words), or mechanical (pendulum devices, or the Mälzl metronome).

Another difficulty was maintaining a fixed tactus unit. Until the threshold of the 17th century, with Galileo's discovery of the isochronous pendulum, there was no reliable means of measuring exactly small time intervals.¹⁹⁰ Another difficulty was added by the fact that even the most common proportion signs, like ϕ , Φ and 3 (either consecutively or when the same sign occurs simultaneously in all voices) became ambiguous in the 16th century or even earlier, as evidenced by Glarean and others,¹⁹¹ and convincingly demonstrated by some 20th-century scholars.¹⁹²

Nowadays, the ambiguity of 16th-century practice has become a source of further misunderstanding, by unquestioningly accepting extremely narrow interpretations of the mensural system and trying to impose it on Bach's music. Some scholars explain his system of tempi on the basis of allegedly time-honoured Renaissance practice of one common tactus, the *integer valor*; thus they extrapolate it not only to

¹⁹⁰ The phenomenon was first obseved by Galileo Galilei in the early 1580's, but written in his Discorsi only in 1638. This argument has been raised by Gordon Paine in "Tactus, Tempo, and Praetorius", 174. The first pendulum clock was patented by Huygens even later, in 1656.

¹⁹¹ See note 180 above. Curt Sachs (*Rhythm and Tempo*, 223) cites also other authors (Georg Rhaw 1518, M. Koswick 1514, and J. Cocleus) expressing similar opinions.

¹⁹² Carl Dahlhaus, "Zur Theorie des Tactus im 16. Jahrhundert"; Gordon Paine, "Tactus, Tempo, And Praetorius"; Ruth I. DeFord, "Tempo relationships between duple and triple time in the 16th century; idem, "Zacconi's Theories of Tactus and Mensuration"; Margaret Bent, "The early use of the sign Q".

all movements of the same work, but also to different pieces. In theory, this principle might be extended even to the entire repertory of the time. But these authors ignore the fact that by the early 17th century the very concept of rhythmic proportion had already totally changed.

There is a major discrepancy between the theory of rhythmic proportions, as understood in the era of mensural notation and in the period of transition in the 17th century. Along with the transition from proportional signs to modern-time signatures, the sense of the term 'proportion', from Tinctoris to Frescobaldi, became, in a sense, *inverted*.¹⁹³ According to 'classic' mensural theory, a greater numerical value of the fraction expressing the proportion (a greater numerator, or a smaller denominator) denoted a faster tempo, relative to the *integer valor*. Thus, for example, $\frac{3}{2}$ in mensural notation signified a tempo 3:2 *faster* than the basic (c) rate, while $\frac{3}{4}$ denoted a tempo 3:4 *slower* than normal. In contrast, for Frescobaldi, Walther, and even L. Mozart or Kirnberger, $\frac{3}{2}$ meant a slower tempo than $\frac{3}{4}$, though they usually did not specify how much slower. Already in J. G. Walther's Praecepta, ¹⁹⁴ proportions are explained with much detail and clarity, but only as related to intervals. But discussing *tactus*, Walther hardly mentions rhythmic proportions, and already explains modern time signatures according to their new, "inverted" meaning. Thus one may wonder whether, in Bach's time and environment, there was any theorist who still understood the original role and meaning of rhythmic proportions in mensural notation.

7.4 Proportionism as metric misunderstanding

One should ask if, under such an extreme change, the very idea of proportion could have preserved anything of its original meaning. Surprisingly, there is one characteristic of the old proportions that is still preserved even in modern time-signatures: the metric quality of *binarity/ternarity*. All common proportion signs, as already mentioned, signified not only an increase or decrease of tempo, but each also had its characteristic mensural, or metric, connotations. Proportional signs (as well as present-day time signatures) with 2 or 4 *in the numerator* indicate binary division, while 3, 6 or 12 (in the numerator) designated ternary division. Moreover, a new proportion (or mensuration) sign within a voice-part changed the binarity/ternarity

¹⁹³ This inversion, hinted by Praetorius (*Syntagma musicum* III, 51), is explicitly formulated in Wolfgang Capar Printz (*Compendium musicae signatoriae...*, 1689, 22), quoted in Harald Heckmann's "Der Takt in Der Musiklehre", 116–118.

¹⁹⁴ Walther, *Praecepta der musicalischen Composition*, Tome 2 (Pars generalis), 76–85. His *Musikalisches Lexikon* 1732, in the item "Proportio" (p. 499–500) does not mention any rhythmic aspect.

as defined by the previous sign.¹⁹⁵ Precisely this metrical property is completely disregarded in the argumentation of Gerstenberg and Siegele.

In Gerstenberg's proportionistic manifesto, Die Zeitmaße und ihre Ordnungen in Bachs Musik, which inspired Siegele's theories, the suggested basic tempo unit is a flexible one, anywhere between M. M. 60 and 80, in contrast to Siegele's rigidly fixed MM 57.6. Gerstenberg, in fact, insists on this flexibility.¹⁹⁶ But the musical examples taken to illustrate his preferred tempo relations (ibid., p. 23) are hardly convincing nowadays. Starting with a plausible pace for the C major Prelude WTC I $(\downarrow = M. M. 72)$, the tempi derived for the G major Duet (*Clavierübung* III), and particularly the d minor Prelude (WTC I), seem far from natural. Gerstenberg chooses to demonstrate proportional relationships between two disjunct preludes of WTC I, both with c signature, rather than between a prelude and its fugue. Then, instead of equalizing (or relating) the beats (- = -). Gerstenberg prefers to equalize the triplets of the D minor Prelude with the (binary) 16th-notes of the C major Prelude, thus keeping the pace of the fast notes constant and slowing down the beat by a subsesquialtera (2:3) proportion. Ignoring the triplet-like quality of the D minor Prelude contradicts the very idea of proportional tempo that it pretends to exemplify. It also shows Gerstenberg's preference of slow (or rather rejection of fast) tempi in Bach's music, characterisitc of certain "lentist" early-20th-century traditions, from Schweitzer to F. Rothschild, shared by some more recent trends (Schwandt, Talsma; see Ch. 10 below). The fact that today this tempo for the D minor Prelude seems too cautious, should remind us what a striking change our notions about Bach's tempo have undergone in the last decades.

Siegele's concise article is more detailed and systematic, and his neglecting of the metric aspects of proportion is then even more conspicuous than in Gerstenberg's work. For example, according to Siegele's tempi for *Goldberg Variations*, The *Aria* and first two variations $(\frac{3}{4}; \frac{3}{4}; \frac{2}{4})$ are of a quarter-note beat with a *Grundschlag* pace (M. M. 57.6). In Variation 3 $(\frac{12}{8})$, the beat is "ternarized" (dotted quarter instead of quarter-note), but Siegele reads it not as tripla or sesqualtera, but as dupla (per eighth-note). The same procedure is repeated in Variations 4 and 6. On

^{195 &}quot;... the tripla having the added effect of forming a triple meter. Intermediate tempo changes, both also attended by shifts in meter, were achieved by the sesquialtera (3:2), in which a binary meter was changed into a somewhat faster ternary meter by the substitution of three notes for two old ones, and the sesquitertia (4:3) which caused a ternary meter to be changed into a slightly faster binary one" (Frederick Neumann, *Performance Practices*, 20). – Although Tinctoris and Gaffurius tried to initiate a reform, in separating the mensural significance (i.e., perfection or imperfection) from the proportional fraction, this did not change the practical situation, but often necessitated an additional mensural sign with the proprotional number.

¹⁹⁶ Gerstenberg, Die Zeitmaße, 19f.

the other hand, Variations 5 and 8 are both of the 'virtuoso' genre, with meters and 16th-notes as fastest note values. Here Siegele suggests dupla tempo ($\downarrow = M. M.$ 115.2) for Var. 5, but a "sesquialtera" pace ($\downarrow = M. M. 86.4$) for Var. 8. There is no objection to this choice, except that it is obviously subjective, undermining any historical basis for the attempted revival of proportions. It is also to be noted that any 'correction' of tempo will contradict Siegele's argument for the perfect durational symmetry of *Goldberg Variations*.

7.5 Proportionism and Progress

Characteristic of the proportionistic position is the intermixture of historical reasoning and present-day quasi moralistic value judgment. Although this value judgment is nearly absent (or tacitly assumed) in Siegele, it is more than hinted in Gerstenberg's writings and most explicit in Engelhard Barthe's *Takt und Tempo*.¹⁹⁷ Even advocates of proportionistic thought, as applied to Bach, should be aware that it relies on two implicit assumptions, historic and aesthetical. These are frankly expressed in Gerstenberg's lecture. He warns against a "naïve assimilation of an older musical style" (ibid., 6f), speaking of Romantic composers who, led by the belief in *Progress in Art*, tried to 'update' Bach's music.¹⁹⁸ Gerstenberg opposes such views, but in fact he is similarly biased, only the other way round. His way of thought is typical of present-day tendencies to make 'early music' sound as widely different as possible from 'normal' music, as played according to current performance practices of Classical repertoire.

Although Gerstenberg does not openly claim his belief in progress or regression in music, he says, "our generation has an inner affinity to the late works of Bach",¹⁹⁹ which simply means, "we understand Bach better." This hardly conforms with sound scholarly skepticism, but it aptly characterizes the feeling of some avant-garde musical circles of the 50's, who were not averse to progressist ideas. Speaking of the preference of strict contrapuntal elements as common to the music

^{197 &}quot;In einer Zeit, welche keine Proportionslehre mehr kennt, muß das Prinzip einer gesunden Proportionalität der Teile schließlich zum Prinzip der Abwechslung degenerieren [italics mine], zu einem Prinzip, das der Willkür keinerlei Schranken setzt." (Barthe, *Takt und Tempo*, 2) ["In a time that no longer acknowledges any proportion theory, the principle of healthy proportionality must finally degenerate into a principle of variety, that does not set anymore limits to arbitrariness."]

¹⁹⁸ Gerstenberg mentions the name of Robert Franz, but the list can be easily enlarged, not only by the names of Mendelssohn and Schumann (with their added piano accompaniments to the d minor *Chaconne*), but also by some 20th-century figures, notably the gigantesque orchestrations by Schönberg and Stokowsky.

¹⁹⁹ Gerstenberg, Die Zeitmaße, 4.

of Bach and our 'really contemporary' music ("*jene Gegenwartsmusik, die wirklich unserer Zeit zugehört*"),²⁰⁰ evidently implies a progressist attitude. Gerstenberg may hint either at the affinity of dodecaphony or serialism to his own total proportionism, or at the neoclassical and neo-Baroque trends of his time. At any rate, 'modern' music, commonly with Bach's music, is understood here as the counterpole of the Romantic attitude.²⁰¹ But finally, both attitudes are one-sided approaches to early music. The present-day trend to present it as "exotically different", as well as the Romantic habit of making it sound "like our own", are both failed attempts to guess how people in former times experienced their own contemporary music.

7.6 Recent proportionistic thinking

The present detailed discussion of tempo proportions may seem outdated now, as Siegele's article is now over 40 years old. However, proportionistic ideas are still matter of debate, being considered attractive in the literature on tempo. This particularly applies to Bach literature, as well as to modern treatises on Renaissance music.²⁰²

A recent contribution to proportionistic interpretation of Bach's music, definitely more sophisticated than the somewhat crude original attempts of Gerstenberg and Siegele, has been made by Don O. Franklin, as a part of an extended research project on rhythmic aspects of Bach's music.²⁰³ As his point of departure, Franklin accepts the principle of tempo-proportions as expounded by Gerstenberg, Siegele and Machatius, but refines it by introducing a certain degree of freedom at definite points. Franklin draws attention to the fact that most of Bach's pieces – but not all of them – end with fermatas. Whereas fermatas are found nearly invariably at the end of the fugues of the *WTC*, or at final movements of multisectional works, it is not the case with all the preludes (or the inner movements of a sonata, *Goldberg*

²⁰⁰ Gerstenberg, ibid., 4. Similar ideas are amply met with in the literature of the 1950's. See Herbert Eimert, "The Composer's Freedom of Choice", *Die Reihe* 3 [1957], 1–9; André Hodeir, *Since Debussy*, 1961.

²⁰¹ Gerstenberg, Die Zeitmaße, 6.

²⁰² The Renaissance aspect is aptly summed up in Alexander Blachly's *Mensuration and Tempo in 15th-Century Music*, see note 187 above.

²⁰³ Don O. Franklin, "Die Fermate als Notationsmittel für das Tempoverhältnis zwischen Präludium und Fuge", Beiträge zur Bachforschung 9–10: Bericht über die Wissenschaftliche Konferenz zum VI. internationalen Bachfest der DDR, Leipzig, 1989, Leipzig: Nationale Forschungs- und Gedenkstätten J.S. Bach, 1991, 138–56; "The Fermata as Notational Convention in the Music of J. S. Bach", in Convention in 18th- and 19th-Century Music: FS Leonard Ratner, New York: Pendragon, 1992, 345–81 [enlarged and revised version of the preceding]; "Aspects of Proportion and Dimension in J. S. Bach's 1733 Missa", see note 168 above.

Variations etc.). There the fermatas "are not placed at the end of each section within the work, after what appears to be an irregular or arbitrary number of sections or movements."204 Franklin tries further to establish an entire system of tempo- and durational relationships between constituent movements or section of entire works, progressing from prelude and fugue to larger works, such as the B-minor Mass, and St. Matthew Passion. In his opinion, the fermata at the end of an inner movement or section "needs to be seen as a notational convention in its own right, a distinctive 'code' or a signal transmitted form composer to performer. [...] As in mensural practice, however, the change to a new time-sign for a new section is notated with no fermata as well as with no barlines, an indication that a direct tempo relationship should be observed between the two sections."²⁰⁵ A fermata at the end of a movement serves then, in Franklin's view, as a sign for breaking away from proportional tempo relationship with the following section; whereas the *absence* of a fermata is understood as a cue to the performer to observe a definite proportional relationships between the sections – in other words, not to stop counting (beating time). Thus for Franklin, as for the older Gerstenberg school, a simple proportional tempo relationship between movements or sections is the general rule, to be relaxed only in the presence of a fermata.

The primary significance of the fermata, as Franklin acknowledges, was "a stopping or holding of the beat", a Generalpause, or "a sign for one part to pay attention to the others rather than to the beat, and to wait until everybody is ready before releasing or going to the next note," beside several other significations.²⁰⁶ Franklin rightly remarks that the closing fermata should not be automatically added at each close, as adopted in some NBA volumes. Still, ascribing a definite positive significance to the *absence* of a sign creates a confusion of the rule with the exception. Proportional tempi are taken as the norm, although they have no historical evidence. Hence the main difficulty about Franklin's theory lies in his determined attempt to save the old proportionistic theories of Siegele and Machatius, albeit by refining and attenuating their rigidity. Already the first example of a changed time signature (without a fermata) cited by Franklin, from the B minor Mass, is open to more than one interpretation, instead of being taken as an unequivocal performance indication. This is the passage from the $\frac{3}{8}$ Gloria in excelsis Deo to c Et in terra *pax.* Franklin's solution is the simplest conceivable, namely to keep the relationship J = J between both sections. The proceeding from $\frac{3}{8}$ to c occurs within the staff, without a separating barline, even within the same word (De-o). But now we have here a new time signature as well as a completely new kind of music, with con-

²⁰⁴ Franklin, "Die Fermate als Notationsmittel", 141.

²⁰⁵ Franklin, ibid., 143.

²⁰⁶ Quoted from David Fuller, "Pause", New Grove Dictionary (1980), Vol. 14, 310.

trasting text, meter, texture, and Affekt. That such a significant change should not be expressed by at least a certain broadening of the beat, does not seem convincing: the "peace on earth" would thus simply go hardly noticed. But Franklin's second example, the transition from *Domine Deus* to *Oui tollis*, already contradicts his fermata theory. Here not only a change of affect takes place, but an explicit change of tempo, in some of the parts, though not in the score: Violini (adagio), Alto, Violoncello, and Continuo (lente; see Examples 47 and 48).²⁰⁷ The different indications in various parts are given various explanations: Franklin thinks that each of the different markings "should be understood in its own notational context";²⁰⁸ Stauffer tries to defend a presumable 'carelessness' on Bach's part, concluding that "Bach was working in haste."209 But such rationalizations cannot alter the fact that (a) Bach explicitly wrote here a change of tempo; (b) his practice of omitting tempo indications is well-known also from works that do not seem to have been prepared in haste. One must choose one of two options, namely that either (1) Bach intended a tempo change but did not mark it in the score; (2) Bach marked tempo changes in some parts but did not really intend them. The first alternative seems obvious. We must accept that Bach's tempo indications, when they are given, mean simply what they say. However, Bach never established any fixed system of marking his tempi. Adagio and lente (in other cases, adagio and largo) could have meant for him very much the same thing. The same piece may appear in various versions either marked or not, even with no apparent intention to have different tempi in each version. Like other composers of his time, Bach sometimes saw fit to be explicit in his performance indications, and sometimes less so.

But the transition *Domine Deus–Qui tollis* also raises another question, not addressed by Franklin, namely how exactly such a change of tempo is to take place in practice: it can hardly happen abruptly, on the last quarter of the last \mathbf{c} measure (i.e., the upbeat of the $\frac{3}{4}$, "*Qui*" in the alto): It must be somehow prepared, by some breath or a certain delay between the cadence on the third \mathbf{c} quarter, or a slight retardation of the entire measure before the $\frac{3}{4}$, or even a combined effect – what practically amounts to a short *unwritten* fermata. Such natural tempo relaxations at the end of a piece (also without a fermata), are inevitable. Forbidding them out of principle would be sheer absurdity. And when one takes these unwritten tempo fluctuations into consideration, strictly proportional tempo relations seem to lose much of their relevancy and importance.

²⁰⁷ Of the parts that bear tempo changes, the following are autograph: Vn 1 (principale); Vn 2; Alto. Vn 1 (ripieno, Vc and Cont. are by other hands, but revised by J. S. Bach. Manuscript information kindly supplied by Dr. Uwe Wolf, Bach-Institut Göttingen.

²⁰⁸ Franklin, "Aspects of Proportion and Dimension" (ms.), 18-19.

²⁰⁹ Gorge B. Stauffer, Bach: the Mass in B Minor, New York: Schirmer, 234.

In addition to 20th-century proportionist doctrines, Franklin bases his hypothesis on the tempo theories of Kirnberger: (a) on his remark that eight measures of a polonaise take as much as twelve mesures of a menuet;²¹⁰ (b) on the concept of *Tempo giusto*. But here Franklin seems to be in error: (1) Kirnberger's tempo theory is not proportionistic in its essence; (2) his concept of *Tempo giusto* is not devoid of inner contradictions and ambiguities and therefore cannot serve as a dependable basis for any unequivocal tempo practice; (3) it is doubtful that Kirnberger's *Tempo giusto* comes from Bach's teachings, and it cannot be systematically applied to Bach's music.

Franklin's observations on transitions between movements, on fermatas and barlines, changes of *Takt*, *Notenbild* and texture, are of great interest; but contrary to his doctrine, tempo changes seem to be 'permissible' also in transitions *not* marked by fermatas. As we shall see in Ch. 9, Bach uses tempo headings sparingly, but is surprisingly generous in indicating tempo changes within movements, particularly in his vocal works, either with or without fermatas.

Example 47: Transition from Domine Deus to Qui tollis, parts:²¹¹

a) Alto (Lente), J. S. Bach's autograph



b) Violino 1 principale (Senza sordino è adagio), J. S. Bach's autograph



²¹⁰ Die Kunst des reinen Satzes, Part I, p. 202: "Die Polonoisen, welche geschwinder als eine Sarabande, und um 1/3 langsamer, als eine Menuet gehen, so daß eine Zeit von acht Takten in einer Polonoise der von zwölf Takten einer Menuet gleich ist". See also 8.7, p. 138–40 below.

²¹¹ Sächsische Landesbibliothek Dresden, Mus. 2405-D-21.

c) Violino I ripieno (*Senza sordino è adagio*), copied by W. F. Bach; tempo indication probably in J. S. Bach's own hand



Example 48: Transition from *Domine Deus* to *Qui tollis*, autograph score²¹² (without tempo indication)



212 Staatsbibliothek Berlin, Mus. Ms. Bach P 180.

(Example 48 continued)



7.7 Did Bach use proportional tempi?

The idea that Bach, or most of his contemporaries, regarded rhythmic and tempo proportions (i.e., long-term simple arithmetic relations between the durations of a given note value), as a universal or general principle, should apparently be ruled out. But this does not preclude the use of arithmetic proportion for more limited aims and ranges, for example, over metric changes within a single piece, or even between adjacent pieces or movements. Here Bach refers to changes of the modern (17th-century) time signature ('Taktart') in its older sense of proportional sign, either simultaneously or consecutively. The persistence of a constant beat pulse

throughout such changes may be particularly conspicuous when it occurs jointly with the persistence of a *cantus firmus*, in the form of a chorale melody. Well-known examples are the transition from Verse 2 $\binom{3}{2}$ to Verse 3 $\binom{9}{4}$ or $\frac{9}{8}$ of "O Lamm Gottes unschuldig", *BWV* 656, as well as the concluding chorale of the Cantata *Herr, gehe nicht ins Gericht (BWV* 105/6), where the 'propotional retard' of the string tremolo (16ths–triplets–eighthnotes) is cued by changing time signatures in the string parts ($\mathbf{e} - \frac{12}{8} - \mathbf{e}$), while the vocal tempo remains constant.

8. Theorists of the 18th Century

Premierement si les habiles gens trouvent cette nouveauté inutile pour eux, ils ne peuvent disconvenir qu'elle ne soit très utile aux commençans.²¹³

Im übrigen aber, woferne jemand noch ein leichteres, richtigeres, und bequemeres Mittel das Zeitmaaß zu erlernen, und zu treffen, aus finden könnte; so würde er wohl tun, wenn er nicht säumete, es der Welt bekannt zu machen.²¹⁴

8.1 Theory and temperament

As we have seen, tempi prescribed for Bach's music by some scholars often reflect, or derive from, complete systems of theoretical postulates, but these conform to each scholar's individual inclinations. Similar differences of scholarly temperament are also well-known in the 18th century: we find musical treatises frankly concerned with philosophical issues, while others limit themselves to the purely practical aspects of performance, eschewing any comprehensive examination of its theoretical basis. In this respect, there are hardly two writers more diametrically opposed than Johann Joachim Quantz and Johann Philip Kirnberger; both active in the second half of the 18th century at the court of King Frederick the Great, both personally acquainted with J. S. Bach. The contrast is evident not just in their general music philosophies, but primarily in their respective models of tempo behaviour, as presented in Kirnberger's treatise,²¹⁵ or by the detailed prescriptions of Quantz. It seems appropriate to examine their observations on *Takt* and tempo, in order to see where their opinions really differ and where the differences are only apparent.

In the preceding chapter we have discussed 'proportionism', that is, my short label for the school that claims obligatory strict simple arithmetic tempo proportions between different pieces (within the same work or not). It is an open question

²¹³ Rameau, *Traité de l'Harmonie 1722*, Book II, Ch. 25, 158: "even if skillful men find this novelty useless for themselves, they cannot dispute its usefulness for beginners." (translation of Philip Gosset, p. 170).

²¹⁴ Quantz, *Versuch einer Anleitung*, XVII/vii, § 55, 268. "Moreover, if anyone can find an easier, truer and more convenient means to learn and attain the right tempo, he would do well to announce it to the world without delay."

²¹⁵ Kirnberger, Die Kunst des reinen Satzes in der Musik, Berlin, Königsberg, 1776–9, R/Hildesheim: Olms, 1968.

whether this specific issue was part of 17th- and 18th-century theoretical discourse, and, if it was, whether it had any common traits with its present-day interpretations.²¹⁶ A closely related question is the variability of tempo in general, its mode and extent, the existence (or nonexistence) of a referential tempo value ("normal tempo"), equivalent to the 16th-century *integer valor*, and what its nature was: absolutely fixed or variable. Another related question would be, how the main parameters – time signature, predominant fast note values, and tempo words – affected the change of tempo.

8.2 'Chronométristes' and 'mouvementistes'

Even the meaning of the word 'tempo', or its equivalents, is differently approached by various authors. Whereas French 'chronométristes' (Loulié 1696, L'Affilard 5/1705, Pajot 1735, La Chapelle 1737) have gone so far as to record absolute tempi of specific works, by means of a pendulum,²¹⁷ others (Charles Masson 1694, Saint-Lambert 1702 and Quantz 1752) proposed only general tempi; but their tempo systems reveal – partially at least – a 'proportionistic' appearance. One observation can be established as a rule: the stricter the demands for tempo relationships are, the less strict are the means of its control. Strict tempo proportions in former centuries have never been postulated by authors who used exact methods of time measurement; the combination of strict proportion with metronomic measurement appears in musicological writing not before mid-20th century.

Here is a schematic table of 'modern' (i.e., post-mensural, or 17th-century) relationships between tempo and time signatures, most clearly presented by Saint-Lambert, as compiled in a table form by Rebecca Harris-Warrick.²¹⁸

$in \mathbf{c} = 60$	$\int \sin \frac{3}{2} = 60$	
in c = 120	in 3 = 120	$in \frac{6}{4} = 120$ (2nd way)
$\sin 2 = 240$		J. in $\frac{6}{4} = 120$ (1st way)
$in \frac{4}{8} = 240$	$hin \frac{3}{8} = 240$	$hin \frac{6}{4} = 240$

²¹⁶ For the main exponents of 'proportionist' thinking, see in the Bibliography below the works of Apel 1953; Barthe 1960; Berger 1988, 1993; Epstein 1995; Franklin 1989, 1992, 2000, 2002, 2004; Gerstenberg 1951; Hiekel 1962–3; Machatius 1977; and Siegele 1962, 1963, 1969.

 ^{217 1.} Loulié 1696 (81ff); 2. Saint-Lambert 1702; 3. L'Affilard ⁵/1705; 4. Louis-Léon Pajot 1735; 5. La Chapelle 1737.; 6. Choquel 1759 – quoted by Miehling.

²¹⁸ See her translation of Saint-Lambert's *Principles of the Harpsichord*, 43, n. 20; see also Ralph Kirkpatrick, "Eighteenth-century Metronomic Indications", in *PAMS 1938*, 32.

However, other authors (e.g., Jean Rousseau 1678 and Jean-Jacques Rousseau 1768) doubt altogether the usefulness of mechanically measuring tempo for a musically sensitive performance. Both authors influenced in turn Mattheson,²¹⁹ and Kirnberger. Their concept of *Mouvement*, defying mechanical measurement, stands for something between tempo and affect.

8.3 Praetorius and Tact

Praetorius 1619, upon whose single, quasi-chronometric tempo prescription Siegele has based his tempo calculations, makes clear that it is not the tempo of the music in itself which is his main concern. In fact, he does not prescribe a *performing* tempo, but suggests a method of roughly estimating the timing of a piece, to secure the well-appointed proceeding of the church service.²²⁰ For this purpose he suggests to *think* of a "fairly average tempo" and indicate the total number of *tempora* at the end of the continuo part. With his expression "*einen rechten mittelmässigen* Tact", Praetorius then concedes that other tempi, fast or slow, or even "less or more average", are equally conceivable. Speaking of actual tempo, he finally discards all calculations, leaving the choice of tempo to the discretion of the performer, according to the affect of the words and of the music. "*Es kan aber ein jeder den Sachen selbsten nachdencken / und* ex consideratione Textus & Harmoniæ observiren, *wo ein langsamer oder geschwinder* Tact *gehalten werden müsse*."²²¹

Similar views are also held by other apparently proportionist authors, notably by Saint-Lambert (1702):

[10*] [...] Mais c'est particulièrement dans ce qui regarde le movement des Piéces, que les Musiciens prennent des libertez contre leur Principes. Tout Homme du Métier qui joüe la Piéce qu'un autre a compose, ne s'attache pas tant à donner à cette Piéce le movement que l'Auteur a voulu marquer par le Signe qu'il a mis au commencement, qu'à luy en donner un qui satisfasse son gout [...] car il voit bien, si le Compositeur de cette Pièce a marqué par son

²¹⁹ Mattheson (*Der vollkommene Kapellmeister*, 173ff) presents a literal translation of the tempo (*Mouvement*) section from Jean Rousseau's treatise.

^{220 &}quot;N. B. Allhier wil ich auch dieses erinnern: Daß ich den GeneralBässen allezeit am ende eines jeden verzeichnet habe/ wie viel Tempora [= breves] ein jeder Gesang/ auch ein jeder Theil oder pars Cantionis in sich hatte. Denn weil ich nothwendig observieren müssen/ wieviel tempora, wenn man einen rechten mittelmässigen Tact helt/ in einer viertel Stunde [160 Tempora] musiciret werden können: Als nemblich: [...] So kan man sich deste besser darnach richten/ wie lang derselbe Gesang oder Concert sich erstrecken möchte/ darmit die Predigt nicht remorirt, sondern zu rechter zeit angefangen/ auch die andere KirchenCeremonien darneben verrichtet werden können." (Syntagma musicum III, 87, 88).

^{221 &}quot;Anyone, however, may reflect upon such matters himself and decide, on the basis of text and music, where the beat has to be slow, where fast." (*Syntagma musicum* III, 51, trans. by Hans Lampl, 1957, p.105).

Signe qu'on la doit joüer gravement ou gayement, &c. mais il ne sçait pas précisément ce que ce Compositeur entend par GRAVEMENT ou GAYEMENT; parce que l'un peut l'entendre d'une façon & l'autre d'une autre.²²²

One should note that flexibility of the *tactus*, the idea that the *Affekt* of the music, or of the text, necessarily *affects* the tempo of performance (i.e., it cannot be mechanically fixed) is already taken for granted by early 17th-century authors. Even a conservative writer such as Agostino Pisa 1611, who otherwise just about ignores the *seconda prattica*, states that "[it is] not necessary that this tactus should go so quick, the one who controls the music governs it at his will, making it slow or fast as he likes".²²³

8.4 Normal tempo as middle value

Daniel Gottlob Türk, who in Chapter I, Section 5, of his *Klavierschule* (1789) sums up the tempo doctrines of his day, has an interesting remark about tempo classifications in general:

[11*] Alle die oben angezeigten Grade der Bewegung bringen einige Tonlehrer in vier Hauptklassen. In die erste gehören, dieser Eintheilung nach, die sehr geschwinden Arten, nämlich das *Presto*, *Allegro assai etc.* in die zweyte, die mäßig geschwinden, z. B. das *Allegro moderato*, *Allegretto etc.* in die dritte, die mäßig langsamen, wie *Un poco Adagio*, *Larghetto*, *Poco Andante etc.* und in die vierte, die sehr langsamen, z. B. Largo, *Adagio molto* u. s.w.

Andere nehmen nur drey Hauptarten der Bewegung an, nämlich 1) die **geschwinde** z. B. *Prestissimo, Presto, Allegro assai, Allegro, Allegretto etc.* 2) die **mäßige**, als *Andante, Andantino etc.* und 3) die **langsame** z. B. *Largo, Adagio* u. s. f.

Noch andere machen **sechs** Hauptklassen daraus, und rechnen zur ersten alle Tonstücke, welche eine **sehr geschwinde** Bewegung haben, zur zweyten, die **geschwinden**, zur dritten, die **nicht so geschwinden**, zur vierten, die **sehr langsamen**, zur fünften, die **langsamen**, und zur sechsten, die **nicht so langsamen**.

Auch theilen Einige alle Tonstücke in Absicht auf die Bewegung nur in zwey Hauptklassen ein. Sie unterscheiden nämlich die **geschwinde** Bewegung von der **langsamen**.²²⁴

Among these divisions, only the odd-numbered ones postulate an intermediate value, or a normal tempo, analogous to the traditional *integer valor*, or to Praetorius' "rechten mittelmäßigen Tact". The even-numbered divisions presuppose only

²²² Les Principes du clavecin, 23-24.

^{223 &}quot;... non essendo necessario che questa misura vadi tanto veloce, quello chi regge il canto la gouerna à sua volontà, et la fà larga, e stretta quando gli piace." Agostino Pisa, Battuta della musica dichiarata (Rome, 1611), 95, quoted in Walter Dürr, "Auftakt und Taktschlag in de Musik um 1600", FS W. Gerstenberg 1964, 26–36.

²²⁴ Türk, Klavierschule, §. 71, 110-11.

fast and slow, no middle categories.²²⁵ It may be asked whether Türk, who in the following paragraph presents a detailed discussion of Quantz's *Versuch*, includes him among these tempo classifications. Türk speaks of four, three, six, or two tempo classes. Of these, only the threefold division assumes an intermediate ('normal') value, such as *Moderato*, *Tempo giusto*, or *Tempo ordinario*.²²⁶

Quantz first presents *four* tempo classes (the first division mentioned in Türk), two fast and two slow ones, then he adds a fifth class, but of the *fast* category. In analogy to this mid-fast class, one could add to his table a mid-slow category as well – a plain *Adagio*, between *Adagio cantabile* and *Adagio assai*. Quantz's tempo division will thus become sixfold, but will remain even-numbered, i.e., lacking the intermediate category of *Tempo ordinario*, or *Moderato* type. Although he takes the pulse as his basic unit, Quantz does not use it in the sense of a normal tempo, but merely as a mechanical point of reference, like the ticking of a clock. Thus Quanz finally seems to belong, in Türk's formulation, to those who "infer *six* main categories: very fast, fast; not so fast, very slow, slow, and not very slow." For Quantz, these fifth and sixth classes are very real. As we shall presently see, his own compositions show many instances of plain *Allegro*, as well as *Adagio*. Examining Quantz's use of *Moderato*, *Tempo giusto* or similar terms in his own compositions (VIII.6 below) considerably weakens the weight of his tempo tables, or at least shows a discrepancy between his own teachings and practice.

Extrapolating Türk's observations, tempo theories can be divided into two types:

- a) those regarding 'tempo-space' as an unbounded continuum without preference of any specific range, and thus without a middle-point;
- b) those retaining the idea of a normal tempo, which can be stretched or contracted in either direction. In this respect, Quantz's tempo theory seems modern, discarding the idea of *integer valor*, holding no preference for any particular tempo class. In other senses, however, i.e., in emphasizing 'coarse tuning' and ignoring finer nuances, he is definitely 'old style'.

²²⁵ Even here, a middle-value may be postulated, as the hypothetical limit between the fast and slow categories.

²²⁶ Türk himself, unlike Kirnberger, does not attach great significance to *Tempo giusto*, mentioning it but once in his book (108): "*Tempo giusto*, in der rechten bewegung". He adds in a footnote: "Für einen Anfänger, welcher die rechte Bewegung noch nicht fühlen, oder aus dem Tonstücke selbst beurtheilen kann, ist dieser Ausdruck sehr unbestimmt".

8.5 Quantz's tempo classes

Another aspect of tempo behaviour raised by Quantz's 'tempo-narrative' is the extent and the mode of its variability. Particularly significant are his tempo tables, using the pulse rate to measure tempo, often quoted in modern studies of performance practice. His teachings on tempo, as well as on other issues of rhythm, have long aroused some of the the hottest debates in the field of (modern) performance practice.²²⁷ Although the tables are well-known, I quote them here, for the sake of completeness.²²⁸

For common c time

Allegro assai	one pulse beat for half a bar ($ = 80 $)
Allegretto	one pulse beat for each quarter ($\bullet = 80$)
Adagio cantabile	one pulse beat for each eighth ($\checkmark = 80$)
Adagio assai	two pulse beats for each eighth ($\checkmark = 40$)

For ¢ time

Allegro assai	one pulse beat for each bar ($o = 80$)
Allegretto	one pulse beat for each half bar ($J = 80$)
Adagio cantabile	one pulse beat for each quarter ($\bullet = 80$)
Adagio assai	two pulse beats for each quarter ($\bullet = 40$)

Quantz's tables have been criticized in his lifetime, as well as nowadays, for being rigid and schematic.²²⁹ Curt Sachs read them literally, and therefore rejected them entirely. Erwin Bodky suspects that Sachs had "taken issue too strongly" with Quantz's statements.²³⁰ He first defends Quantz against Sachs' criticism by trying to play down Quantz's statements, "which, in our opinion, are merely the formulations in plain language of a practical musician and not the carefully worded elaborations of a learned theorist." But later on, Bodky has to admit that "One cannot help thinking that Quantz elaborated his scheme for the beauty of its appearnace, without being too concerned about its practicality in performance." Actually, Bodky is

²²⁷ For detailed references see Ido Abravaya, "A French overture revisited", *EM* 25 (1997), 47–58.

²²⁸ Quantz, Versuch einer Anweisung, Ch. XVII, vii, § 51, p. 264.

²²⁹ Türk, Klavierschule (1789), 111; Curt Sachs, Rhythm and Tempo, 34; Bodky, The Interpretation, 104–7; Donington, The Interpretation of Early Music, 385–6, 390–1.

²³⁰ Bodky, The Interpretation of Bach's Keyboard Works, 106, n. 12.

mainly disturbed by the exaggerated top and bottom speed values as given by Quantz, more than by their 'proportionistic' appearance of 16:8:4:2:1. As a solution to the infinite variety of tempo suggestions to Bach's keyboard music by modern editors, Bodky tries to establish a "reformed Quantz table" of tempo classes (ibid., 115). But in light of his subsequent remarks on Quantz,²³¹ it is hard to see anything of Quantz's original intentions preserved in Bodky's exposition. One should ask instead, how consistently Quantz himself adheres to his own precepts.

Quantz estimates the pulse rate of a healthy man as 80 beats per minute.²³² He classifies tempo words, as we have seen, into four main classes, each one twice slower than the fomer. The total range of variability of one and the same note value comprised within these four classes is, accordingly, 16:1.²³³ Such a range is remarkably wider than even the most extreme metronomic values in Beethoven, and when literally observed, would easily lead to tempi exceeding technical feasibility.

Quantz admits that each of his tempo *Hauptclassen* includes different tempi. It is not impossible that the differences within each class are not great, but even Quantz himself regards, in certain cases, his own tempo-class division as inadequate. A most intriguing question raised by Quantz's *Versuch*, especially in the light of modern proportionistic thought, is whether – or in what sense – his theory is truly proportionistic. Dividing all tempi into proportionally related classes seems, at first glance, as the culmination of proportionism. Quantz is anxious, on the one hand, to justify his square-cut looking tempo tables; otherwise he is a pragmatist, constantly aware of the difficulty to get an orchestra keep time together and play in the right tempo. One cannot help doubting that Quantz's apparent adherence to his tables stems not out of proportionistic principles (witness his silence about the very term 'proportion') but rather from his practical approach to performance, nurtured by long experience. He knows too well the difficulty, not only to control tempo, but also to measure short time intervals.

There is a twofold aspect to proportion in Quantz's tempo system:

a) It constitutes a relatively simple way of determining tempo, without the need of any mechanical instrument for measuring time. The keyword is simplicity, which alone may have led Quantz to choose the binary ratio 2:1 as its single generative element. This simplicity serves a purpose, to help beginners arrive at musically plausible tempi, rather than propose a specific theory about tempo.

²³¹ Bodky: "That Quantz's recipe 'twice as slow' ($\downarrow = 40$) is complete nonsense can be proved in a minute ..." (ibid., 119).

²³² Quantz, Versuch einer Anweisung, XVII/xvii, § 47, p. 261.

²³³ The result takes into consideration both tables (\mathbf{c} and $\mathbf{\phi}$). The variability range is defined as the ratio of durations that one note value (e.g., a quarter note) can assume between the slowest and fastest tempi (from *Adagio assai* to *Allegro assai*).

b) tempo relationships may also be considered in a twofold sense, either as combined musical tempi, or *per se*, as expressions of pure mathematical ratios, independent of any actual tempo. From this point of view, related tempi in different pieces, or in different sections (movements) of the same composition, can be thought of as some kind of hyperbeats in a comprehensive hypermetric structure. This aspect has much attracted modern scholars. One of them (Machatius) has even gone so far as to hypothesize an autonomous "tempo-space", or dimension, admitting only discrete values, related to each other in simple arithmetical ratios, in analogy with musical consonant intervals.²³⁴ A similar approach, though less extreme, is represented by David Epstein.²³⁵ But interestingly, this large-scale aspect apparently had little appeal to 17th- and 18th-century theorists, or at least they were tacit about it. It also does not seem to have particularly interested Quantz.

In the beginning of his discussion of the human pulse as a means of determining tempo, Quantz does not ignore the great variety of musical tempi; for this reason he groups them in his tempo classes (*Hauptarten*): "these various categories of tempo [...] There are so many in music that it would be impossible to fix them all. There are, however, certain main categories from which the others can be derived."²³⁶

Quantz stresses time and again that his method is intended to approximate the right tempo: "How one can approximately infer the proper tempo of every piece" (ibid., 260);²³⁷ or: "My aim is simply to show how in at least two, four, six or eight pulse beats, any tempo you wish can be established, and how you can achieve a knowledge of the various categories of tempo by yourself that will lead you to further inquiry."²³⁸

By adding a fifth, *Allegro* tempo class, Quantz admits for the first time the need of a fractional tempo relationship, between 2:1 and 1:1. For a veritable proportionist, this should imply a *proportio sesquialtera*, most simply obtained by dividing

²³⁴ Machatius, Die Tempi in der Musik um 1600, 56-62.

²³⁵ D. Epstein, Shaping Time: Music, The Brain, and Performance, 1995. Particularly relevant to our discussion is a review of Epstein's book by Robert Adlington, in Music Analysis 16/1 (1997), 155–71.

^{236 &}quot;Diese unterschiedenen Arten des Zeitmaaßes [...] Es giebt zwar derselben in der musik so vielerley, daß es nicht möglich seyn würde, sie alle zu bestimmen. Es giebt aber auch gewisse Hauptarten davon, woraus die übrigen hergeleitet werden können." Quantz, XVII/vii, §49, p. 261. Reilly's translation, 284.

^{237 &}quot;...wie man, bey einem jeden Stücke insbesondere, das ihm eigene tempo *ohngefähr* errathen könne" (italics mine).

^{238 &}quot;Meine Absicht geht nur dahin, zu zeigen, wie man wenigstens durch zween oder vier, sechs oder acht Pulsschläge, ein jedes Zeitmaass, so man verlanget, fassen, und vor sich, eine Erkenntniss der verschiedenen Arten desselben, erlangen, und daher zu weiterm Nachforschen Anlass nehmen könne." Quantz, ibid., §48, 261; Reilly's translation, 284.

two full beats into three. Similarly, a *sesquitertia* is derived by dividing three beats into four, and so on. But, with his pedagogical and practical wisdom, in order to avoid any complicated divisions, Quantz prefers to let pulse beats coincide with actual note attacks, instead of letting them 'syncopate' with musical beats, and thus having to deal with pulse-beat fractions. Such a decision leads to some oversimplified procedures; perhaps it is the main reason for the rigid appearance of Quantz's tables. He even denies, for example, that the tempo of a ${}^{3}_{4}$ *Allegro* can be determined by the pulse, unless one takes two bars together and gives one pulse to each two quarternotes.²³⁹

As fractional divisions of the beat may pose a real difficulty for beginners, Quantz uses only tempo calculations with undivided pulse beats. He prefers to deal with non-duple proportions by *regrouping*, i.e., by allotting one pulse beat to note groups other than the basic tempo unit (e.g., \downarrow , \flat ; or $\neg \neg \neg$ out of $\neg \neg \neg \neg$). In this manner, actual note attacks coincide with actual pulse beats and the procedure is easier; but this precludes temporal proportions other than the most simple ones. On the other hand, Quantz does not shun 'irrational' modifications of the pulse beat, that is, taking a pace *somewhat* faster (or slower) than one's actual pulse at a given moment, according to individual temperament, the time of the day, the tonality of the piece and other factors (p. 267).

A clear indication that dogmatic proportionism was not intended by Quantz is found in §§ 52–55 (pp. 266–8), devoted to 'deviations' from his tempo tables. The strict binary tempo division is recommended "mostly and most exactly to instrumental pieces". For arias in Italian (i.e., operatic) style, Quantz qualifies his former statements, on grounds of affect ("*that each of them demands its own tempo*") and the meaning of the text, as well as technical limitations of singers, resulting from their style of tone production in fast passages. Quantz remarks that arias in general do not demand such a fast a tempo as instrumental pieces. He also recommends accelerating the repetitions in a fast piece. His words on tempo differences of various styles (church, opera etc.), or about the long experience needed in order to guess the tempo of a piece according to the intentions of the composer – all these make certain that he did not expect his tempo tables to be literally followed. These incidental remarks reveal him as a *Musikant* par exellence, far from any formalistic or philosophical inclinations.

Since practical performance is Quantz's foremost priority, one can understand his skeptical attitude to Loulié's *chronomètre* (ibid., p.261), which he apparently

^{239 &}quot;Im Dreyviertheiltacte, kann man, wenn das Stück allegro geht, und die Passagien darinne aus Sechzehntheilen oder eingeachwänzten Triolen bestehen, in einem Tacte, mit dem Pulsschlage kein gewisses Tempo fest setzen." (Quantz, Versuch, XVII/7, §51, p.264; italics mine).

knew only from the latter's treatise, *Eléments ou principes de musique* (in the 1698 edition). By 1752 it was already really old stuff, and acquiring – or constructing – one's own *chronomètre* must have been much more of a problem than buying a metronome in the industrial era. Still, there is something paradoxical about Quantz's way, compared to the methods of his contemporary – or somewhat older – French theorists: he enjoys neither the advantage of sensitive and spontaneous approach, as suggested by the Rousseaus (Jean and Jean-Jacques) – who dispensed altogether with time measurement – nor the precision of the '*chronométristes*' (Loulié, L'Affilard, Sauveur). Seen from this perspective, his method suffers from both disadvantages of the old *tactus* tradition: ambiguity and inflexibility, to which another difficulty is added, its evident exaggeration of the fastest and slowest tempi.

8.6 Tempi in Quantz's music compared with his own Versuch

Indeed, a survey of the list and incipits of Quantz's complete works shows numerous instances of plain *Adagio*,²⁴⁰ and even some examples of plain *Moderato* (or *Un poco Moderato*) headings, which are not included in his tables.²⁴¹ Moreover, *Adagio* headings seem to have a definite function in his sonatas, occurring only in opening movements. In the concertos, *Adagio* indications – either with or without modifications (*Adagio assai*, *Adagietto etc.*) – are relatively rare, being limited to middle movements.

The impressive variety and nuance of the tempo markings in his own compositions leads us to conjecture that Quantz proposed the tempo tables of his *Versuch* as an aid for beginners, rather than as a model for experienced musicains. Many of his tempo words certainly relate more to affect than to tempo; but other terms clearly denote tempo modifications, and such that could find their place only with difficulty in his own tempo tables, if we try to interpret them strictly according to his pulse data. Here are some characteristic examples:

Cantabile mà non troppo lento	(<i>QV</i> 1:78/1)
Cantabile mà un poco andantino	(<i>QV</i> 1: 78/1)
Con Affetto mà non troppo lento	(<i>QV</i> 1: 119/1)
Affettuoso mà non lento	(<i>QV</i> 1:139/1)
Affettuoso mà mesto	(<i>QV</i> 1: 126/1)
Un poco andante	(<i>QV</i> 1:110/1, <i>QV</i> 1:113/1)

 ²⁴⁰ Selected Adagio headings: QV 1: 9/1; 1: 11/1; 1: 37a/1; 1: 41/1; 1:43/1; 1: 49/1; 1:60/1; 1: 62/1; 1: 75/1 (Adagietto). See, H. Augsbach, Thematisch-systematisches Werkverzeichnis (QV) von Johann Joachim Quantz, 1997.

²⁴¹ Flute sonata QV 1: 28/3; Flute Concertos QV 5: 43/1; QV 5: 181/1.

(<i>QV</i> 1: 128/1
(<i>QV</i> 5: 191/2)
(QV 5: 195/2; QV 5: 248/2)
(QV 5: 274/2; QV 1: 158/1)
(<i>QV</i> 1: 157/1)
(QV 3: 2.3/2)
(QV 5: 137/1; QV 5: 260/1)
(<i>QV</i> 1: 81/3)
(<i>QV</i> 3: 2.3/4)
(QV 5: 203/3; QV 5: 208/3)
(<i>QV</i> 5: 168/2)
(<i>QV</i> 5: 216/3)
(<i>QV</i> 5: 236/3)

Among all these shadings, some expressions seem blatantly unfit for Quantz's own tables: A *tempo giusto*, all variants of *Moderato*, and also *Prestissimo*, which seems to exceed the tempo class of *Allegro assai*. They make one wonder, why all this care and precision, if his method of determining the actual tempo – as presented in chapter XVII/vii of his treatise – is indeed so coarse-tuned and lacking nuance. It must have been intended just for real beginners.

A partial solution to the apparent contradiction would be, rather instead of taking Quantz's tables literally as his ultimate precept, to read them with flexibility and empathy. Quantz's personality reveals the characteristic *Empfindsamkeit* of his age and place, combined with a remarkable pragmatic sense. Interpreting his tables so that they may at least approximate real musical practice finally implies that 2:1 is the "limit of tolerance" within each of his tempo classes. Within this limit, each class may show remarkable variety. This schematic division was devised as a substitute for making one's own ready-made *chronomètre*, crude and limited as it was, without any mechanical means at hand. After the first approximation of tempo, intended for absolute beginners, the primary schematic results are to be refined by intuition and experience.

8.7 Kirnberger's Bewegung

The tempo theories of Kirnberger look like the antithesis of Quantz's, but we shall see that much of the seeming difference may result from their different conceptions, or ways of description, of the same musical reality. Perhaps there is also a deeper reason for their different methods: Quantz advocated the most modern fashions and tendencies of his day without any apparent critical intention, whereas Kirnberger found himself in a defensive position, trying to conserve musical and aesthetic ideals of an already waning popularity. His endeavour to 'retro-educate' the musicians of his time, through the works of J. S. Bach, is an indirect critique of contemporary prevalent musical tastes. Kirnberger opens his discussion of *Bewegung* (motion), *Takt* and *Rhythmus* with the following words:

[12*] Daß eine Folge von Tönen, die an sich nichts bedeuten, und nur durch Höhe und Tiefe von einander unterschieden sind, zu einem würklichen Gesang wird, der seinen bestimmten Charakter hat, und eine Leidenschaft oder eine bestimmte Gemüthsfassung schildert, kommt von der Bewegung, dem Takt und dem Rhythmus her, die dem Gesang seinen Charakter und Ausdruck geben.²⁴²

The terms *Bewegung*, *Takt* and *Rhythmus* are used in different meanings than accepted nowadays. Although their effect is perceived only in combination, Kirnberger considers it as necessary to treat them separately ("an sich selbst betrachtet"). The bent to philosophize, so different from the utterly practical approach of Quantz, can be partly explained by the different objective of both treatises. Whereas Quantz's *Versuch* is intended for the basic training of flutists, as well as orchestra players (*Ripienisten*), who are primarily supposed to obey orders of their musical superiors, Kirnberger's treatise is addressed in the first place to would be composers, i.e., the musical decision makers.

The degree of speed (*Grad der Geschwindigkeit*) according to Kirnberger, largely determines – but is not identical with – motion (*Mouvement*), which in turn indicates the affect (*Gemüthslage*). The *Takt* (meter, in modern terminology) fixes the accent scheme, or the 'length' and 'shortness' of the notes. Here Kirnberger follows the already archaic terminology of Printz and Walther,²⁴³ who speak of the *quantitas intrinseca* of "internally long" notes as equivalent to accented (and "internally short" to unaccented) beats. He also distinguishes between motion and mechanical speed.

[13*] Zwey Stücke können denselbigen Grad des Allegro oder Largo haben, und doch **selbst** dadurch von sehr ungleicher Würkung seyn, nach dem der Art des Taktes gemäß die Bewegung bey einerley Geschwindigkeit flüchtiger oder nachdrücklicher, leichter oder schwerer ist.²⁴⁴

Whereas for Quantz motion is identical with measured tempo ($Zeitmaa\beta$), it means much more to Kirnberger, who equates it with the affections.

²⁴² Kirnberger, Die Kunst des reinen Satzes, Theil II, 4. Abschnitt, 105.

²⁴³ Walther, Praecepta, p. 22.

²⁴⁴ Kirnberger, ibid., p. 105.

Bewegung (motion) directly arises from *Taktbewegung*, the characteristic gait of every piece (most evident in dance pieces), which in turn depends on the meter and the most prominent note values. Time signature, and the fast note values within a given piece act, in a sense, contrary to each other: the smaller the note value of the beat (i.e., the higher the denominator of the time signature, e.g., $\frac{3}{2}$, $\frac{3}{4}$, $\frac{3}{8}$), the faster and lighter is the *Taktbewegung* (or tempo of the beat); thus ¢ indicates a slower and heavier β motion than the β in c. But if we compare two otherwise similar pieces, of identical time signatures, the frequent occurrence of smaller actual note values (like) or) will slow down the movement.²⁴⁵ About this point. Ouantz's statements are somewhat similar to Kirnberger's, but he presents his precepts en forme fixe. According to him, a piece in a given meter with 16ths as the fastest note values is to be played twice slower ("noch einmal so langsam") than one in the same meter with \mathbf{A} as the fastest notes, and thus, theoretically, the speed of the fastest notes in every composition is always the same.²⁴⁶ In other words, what Quantz – for practical purposes - interprets as fixed proportions, Kirnberger describes as a fluid process. One can imagine that they might at times agree about some practical questions; but the difference of their teachings on the concept of tempo as a musical dimension, and its behaviour, is very real.

We have already mentioned one remark by Kirnberger that might perhaps be interpreted as 'proportionistic', comparing the tempi of three dances – sarabandes, polonaises and menuets (7.6, note 210); but this evidence is much too scant for inferring any systematic application of arithmetic tempo proportions. Kirnberger says that polonaises are about 1/3 slower than minuets, but just "faster" than sarabandes. The tempo relationship of a polonaise with a sarabande remains unspecified. This single statement on durational proportion appears in the first part, but nothing more is said about it in the main chapter on *Takt* and *Bewegung* (Part II, Ch. 4), and no other tempo proportions (or absolute tempi) are mentioned again.

Everything else in Kirnberger's discussion of tempo points towards flexibility. Also his idea of *tempo giusto* does not convey any impression of a constant magnitude, in full contrast to the ideas of Siegele and Machatius.

²⁴⁵ A similar reasoning is used by J.-P. Marty (*Les indications de tempo chez Mozart*, 29–30), for a similar situation concerning the relative tempo of two *Andante* types (in Mozart), ¢ and ²/₄. Marty nearly literally repeats the words of Kirnberger, about eighthnotes, being "lighter" (*plus légères*) note values in ²/₄ than quarternotes in ¢. But Marty, somewhat paradoxically, concludes that precisely because of this, the "lighter" values should be performed more slowly, in order to achieve a similar effect.

8.8 Tempo giusto

Kirnberger's best-known contribution to the theory of tempo is his concept of *Tempo giusto*. The term (as well as *A tempo ordinario*)²⁴⁷ is not new, and occurs, for example, in the works of Handel and Telemann. Its definitions, before Kirnberger, are already found in various sources:

Walther: "der *Tact* so nicht zu geschwind, und auch nicht zu langsam, sondern eben recht ist $[...]^{n^{248}}$

[14*] L. Mozart: "Tempo commodo, Tempo giusto [...] führen uns ebenfalls auf das Stück selbst zurück. Sie sagen uns daß wir das Stück weder zu geschwind, weder zu langsam, sondern in dem eigentlichen, gelegenen – natürlichen Tempo spielen sollen. Wir müssen also den wahren Gang eines solchen Stückes in dem Stücke selbst suchen."²⁴⁹

Other sources (with the exception of Brossard) define the term similarly; but Kirnberger's detailed interpretation takes this concept further away from the quasifixed values of the old integer valor. Kirnberger identifies Tempo giusto with the (French inspired) concept of mouvement naturel, which he recommends to future composers to study diligently, particularly from various genres of dance pieces.²⁵⁰ But he extends the meaning of "natural" to include faster and slower motion. Thus *Tempo giusto* is transformed into a highly flexible concept, varying, as mentioned, according to the general character of the respective piece, and particularly its time signature and predominant fast note values. Other factors also affect the natural tempo: the general nature of the melody, the text, genre, i.e., elements not residing in the notation or tempo marks. We see this, for example, in the various dance types, each supposed to have its own tempo associations and conventions. A composer who has learned the true nature of *Tempo giusto*, will also understand how much it is varied by tempo words (*adagio*, *andante*, *allegro* etc.), which are nothing but "modifications" of the basic ('natural') Tempo giusto. In other words, the Tempo giusto of every musical piece is the image of its natural motion.

²⁴⁷ These terms are not identical. Their definition in Brossard's *Dictionnaire*, as well as the use of *Tempo giusto* in Bach's music, show their difference, but Kirnberger uses *Tempo giusto* in a similar sense to Handel's *Tempo ordinario*. Brossard: "On trouve souvent aprés le Recitatif des Italiens, ces mots, à *Tempo*, ou à *Tempo giusto*, qui marquent qu'il faut battre la mesure *juste* & en rendre tous les *Temps* bien *egaux*" (*Dictionnaire de Musique* 2/1705, 155).

^{248 &}quot;The Tact that is neither too fast nor too slow, but just right" (Walther, Praecepta 1708, 155 [55]). Similarly in Marpurg's Anleitung zum Clavierspielen (Berlin, 1765, 17), "Tempo giusto, in der rechten Bewegung, nicht zu geschwinde oder zu langsam, nachdem es das Stück verträgt."

²⁴⁹ L. Mozart, Violinschule, 2/1789, 50.

²⁵⁰ Kirnberger, Die Kunst des reinen Satzes, Theil II, 4. Abschnitt, 106.

Kirnberger's interpretation of *Tempo giusto* immediately wins one's sympathy, with its musical and affective sensitivity, widely contrasting with Quantz's rigid heartbeat tables. On the other hand, this very adavantage is also its theoretical weakness: if *Tempo giusto* is so natural and musically flexible, then either verbal tempo indications are superfluous, or else, *Tempo giusto* itself is not stable enough to serve as a point of reference, becoming simply the 'correct' tempo of the piece. In practice one cannot isolate Tempo giusto from the 'modifying' tempo words (as Kirnberger terms them), since *Tempo giusto* conforms by definition to the natural motion, equated with the affects. It is not always clear whether tempo words really modify the natural flow of a piece, or are used just to confirm its general mood, which any experienced musician should be able to read directly from the score even without them. This adds to the confusion between *Tempo giusto* and tempo words. If one seriously means that tempo words are just 'modifications' of the natural movement, then it paradoxically implies that pieces with tempo words - when played or sung correctly – are never performed in their *natural* tempo. Thus the role of tempo words in Kirnberger theory is not quite clear, perhaps even unnecessary. The ambiguity is revealed, e.g., when Kirnberger describes the "Allabrevetackt", i.e., the minor \mathbf{e} $(\frac{2}{2})$ in *Tempo giusto* as equivalent to $\frac{2}{4}$, but with an added "Grave, Adagio &c.", due to the greater (though twice diminished) note values used and the doubled value of the beat (ibid., 118). The same concept of "natural value" of the notes is mentioned by Rameau (see below), as well as in Marpurg's Anleitung zur Musik (1763). Marpurg terms it as the "ordinary" value (ordentlicher Wehrt) of the notes, adding that it must be learned from practice, i.e., oral tradition.²⁵¹

Within the same years that *Die Kunst des reinen Satzes* was being issued (1774–9), Kirnberger also wrote a practical demonstration of his tempo theory, his *Recueil d'Airs de danse Caractéristiques* (1777). These were intended, as stated in the title page and preface, primarily as models for young composers and performers. The preface to the *Recueil d'Airs* bears remarkable similarity to the opening of Chapter 4 in Part II of Kirnberger's *Kunst des reinen Satzes*, where he expounds his theory of motion, meter and phrasing. Music and spoken language are paralleled by similarity of phrase structure (which Kirnberger terms *Rhythmus*), as well as by their expression and emotional effect. The importance of the right expression and character of each piece is stressed, as well as of the appropriate tempo (*Bewegung*) and character of each meter, as is best exemplified by "characterstic dances". These elements are indicated by the predominant note values of the piece. It is understood that such indications (as well as the dance titles) are sufficient for a trained musician to attain the right performance. Kirnberger gives no tempo marks or other

²⁵¹ Marpurg, Anleitung zur Musik (1763), 74.
indications in the entire collection (except *Grotesquement*, in one piece taken from Couperin). These pieces are evidently intended to be played according to their natural movement, i.e., Tempo giusto, although the term is not mentioned. But this concept, so central in Kirnberger's theory, was by now no longer understood. Some 12 years after the publication of *Airs de danse*, Türk mentions that "For a beginner, who cannot yet feel or judge for himself the right tempo out of the piece itself, this expression [Tempo giusto] is quite indefinite." Later on in Türk's book, Kirnberger is reprimanded for having failed to indicate the tempi of these pieces.²⁵² Once again we see that Kirnberger's tempo theory was intended to be imparted by practical experience and personal guidance, rather than through writing. One should also realize that today, seen from Türk's (or Kirnberger's) perspective, we all are real beginners, lacking even the slightest concrete notion about tempo ideas of 18thcentury musicians. By the 1770s, a considerable gap must have already been formed between Kirnberger's tempo giusto and the idea of 'natural tempo' of Bach's time. This becomes obvious if one grasps the great distance between the diversity and complexity of Bach's dances and the strereotyped rhythms of Kirnberger's trifling *Airs de danse*. They have so little in common, that one can hardly infer anything from the ones about the tempi of the others. One should then beware of identifying Kirnberger's theory with Bach's tempo practices, as has been often done recently (Mäser 2000, 350ff; Franklin 2000, 10ff).

In contrast to Kirnberger, tempo words are indispensable for Quantz, since their use had by 1752 already become obvious, and a musical text without them was – in principle – meaningless. His theory leaves no longer any role for 'modifiers', such as time signatures and *Notenbild*, but makes tempo entirely depend on Quantz's tempo classes, indicated only by tempo words.

While Kirnberger was a proverbially faithful follower of Bach, his *Tempo giusto* theory did not necessarily originate in Bach's own teachings. Similar concepts, notably Marpurg's "ordentlicher Wehrt der Noten", Rameau's "valeur naturelle", or Handel's (and Beethoven's) tempo ordinario, were well-known, but Kirnberger's variety of *Tempo giusto*, the special importance he attributed to it, and his attempt to create from this general concept a nearly full-fledged theory, seem to be an original contribution of his own, and in part, also of his modern interpreters. His emphasis on *Tempo giusto* at the expense of other tempo indications may, at first glance, better suit the practice of J. S. Bach than Quantz's prescriptions, given the extremely small part of Bach's pieces supplied with tempo headings. Perhaps it is the absence of tempo words in Bach that motivated Kirnberger to propose his *Tempo*

²⁵² Türk, Klavierschule (1789), 108, 113.

giusto theory, as an apologetic explanation, felt as necessary in an era that was no longer familiar with Bach's notational habits.

It also does not follow that the majority of Bach's intended tempi are some kind of a neutral *tempo ordinario*, or *tempo giusto*. Many of them, as we shall see in the next chapter, should be read *as if* they bear definite (though unwritten) tempo indications.

8.9 Rameau's method of tempo indication

Another source of comparing tempo theories is an alternative method of tempo indication, proposed by Rameau, in his *Traité de l'Harmonie*,²⁵³ but not realized in practice. Rameau's method differs from the traditional ones, in that in all other historical notation systems the duration of a given note-value is highly variable, depending on mensural and proportion signs, modern time signatures, tempo words etc. Rameau does not propose to use fixed durations for each note-value, but to fix the value of the *beat* as following: The number of beats in a measure, 2, 3, or 4 (other numbers, for Rameau, are unthinkable), is indicated after the clef. Before the clef, a note-figure is given, denoting the note-value corresponding to the beat unit. Thus a beat of a whole-note denotes a very slow tempo, an eighthnote – a very fast one, etc. (Example 49).

Rameau adds:

It would be useless to add the words slow, fast, etc., since these are already indicated by the *natural slowness or quickness* of the notes placed at the beginning of each piece. Since both the sad and the mournful are natural to slow movements, however, the tender and the graceful to both slow and quick movements, the furious to very rapid ones, etc., these words may be added when the expression demands it.²⁵⁴

This remark is most illuminating for our discussion, since Rameau, though familiar with the works of the French *chronométristes* (Loulié, L'Affilard), abstains from mechanically fixing the note values, preferring to rely on their "natural slowness or quickness", which is nothing else but Kirnberger's *Tempo giusto*. Unfortunately, the concept 'natural', so dear to French thought of the time, could be communicated orally, or by practice, but not through the written letter alone. However, Rameau's method is not the simplest possible: he could have directly used the more or less fixed 'natural' *durations* of the note values occurring in any given piece, instead of depending on an intermediate construct – the value of the *beat*. The rea-

²⁵³ Rameau, *Treatise on Harmony* 1722, trans. by Ph. Gosset, 164–70 (Book II, Chs. 24, 25); See also Kirkpatrick 1938, 32.

²⁵⁴ Rameau, tr. By Gosset, ibid., 167f (italics mine).

son for the extra complication of Rameau's method is his recognition that musical tempo does not reside in the individual notes, but in the rate of the beat. He is, in principle, less impressed by the small note values, or the *Notenbild*, so dear to Kirnberger. Rameau tries to avoid the danger of using the inherently ambiguous tempo words; but, in his attempt to fix the number of beats per measure, he enters another pitfall, ignoring that the rate of the beat cannot be fixed *a priori*, but has first to adapt itself 'naturally' to the musical circumstances, i.e., to the performance tempo. It both defines the tempo and, at the same time, depends on it. Rameau's limits of of beat duration range between \circ and λ i.e., a relation of nearly 16:1 (the same as Quantz's tempo range). He thus ignores what later musicians have seen, namely that a practical beat rate is of a remarkably limited range. Had Rameau's idea been accepted, tempo words would indeed become superfluous, as he wished. But if one really tried to apply his method in practice, it seems that before long it would reveal the same ambiguities and uncertainties as our own traditional notation. Proposing his new tempo system apparently had a pedagogical objective. The tempo methods of both Rameau and Quantz, have common didactic goals, and therefore are deliberately oversimplifying. It is therefore not surprising that both authors close the exposition of their respective tempo methods with similar apologetic remarks, quoted as mottos at the head of this chapter. There is an enlightening remark by Peter Reidemeister (1988), that practically all treatises dealing with concrete tempo indications (Gafurius 1496, Zacconi 1592, Loulié 1696, as well as other 17/18th-century French handbooks) are mainly aimed for beginners or dilettantes, hence one should beware of taking their prescriptions too literally.²⁵⁵

²⁵⁵ Peter Reidemeister, Historische Aufführungspraxis, 108.



Example 49: Rameau's "tempo-signatures," Traité de l'harmonie (p. 153)²⁵⁶

256 p. 174 in Ph. Gosset's version.

9. Bach's Tempo Practices

Our discussion will be adequate if it has as much clearness as the subject-matter admits of $[\ldots]$ for it is the mark of an educated man to look for precision in each class of things just so far as the nature of the subject admits.²⁵⁷

9.1 Fastest note values and tempo

A general principle, already known in the 16th century, with the esablishment of two kinds of rhythmic notation (the so-called "madrigalisch" and "motetisch"), is that the pace of the beat depends on its own subdivisions: the greater the presence of small note values (including ornaments) the slower the tempo. Stated by Kirnberger, this rule is already evident in Praetorius and Frescobaldi.²⁵⁸ This means that the way of notating the fast strata (III and IV) functioned as a primary tempo indicator. Thus one usually reads pieces with frequent 32nds as slow-moving, while pieces with eighthnotes as the fastest stratum are interpreted as fast ones. This practice lasted long, reaching its culmination, paradoxically, in Beethoven. In his works, 32nds in a slow movement (e.g., the Largo of the 3rd Piano Concerto) are taken slower than *quarter-notes* in fast movements (Scherzo of the Ninth Symphony; Presto & of Quartet Op. 131). Beethoven's famous call to dispense with Tempi ordinarij²⁵⁹ is compatible with Quantz's precepts. Dispensing with 'normal', or intermediate tempi allows for an extremely wide range of tempo variability. But the distinction of the fast stratum (III) from the hyperfast (IV) in Baroque style is often ambiguous, as we see in J. S. Bach's music. In many slow pieces (B minor Prelude, WTC I; Et incarnatus and Crucifixus of the B minor Mass), the fast stratum is altogether absent. Elsewhere, 32nds often denote slow tempi, according to the prescriptions of Kirnberger. But we should remember that their original function, sometime in the late 16th century, was to signify extremely fast notes, as we have seen in the music of Merulo (1533-1604) or Sweelinck (1562-1621). Bach used the shortest note values in both contradictory roles. Accordingly, the predominance of small note values in a piece or a passage may indicate either very fast virtuoso speeds, or

²⁵⁷ Aristotle, Nicomachean Ethics, Book 1, Chapter 3, Translated by W. D. Ross.

²⁵⁸ Frescobaldi, Il primo libro di capricci 1624, Preface ("A gli studiosi dell'opera").

^{259 &}quot;Wir können beynahe keine *Tempi ordinarij* mehr haben", Letter to publisher Schott (Dec. 1826). Ludwig van Beethoven, *Briefwechsel – Gesamtausgabe*, ed. Sieghard Brandenburg, vol. 6, München 1996, 330.

denote deliberately slow tempi. The 32nds (and 64ths) in *Goldberg Variations* (Var. 25) corroborate Bach's handwritten "adagio" in his *Handexemplar*, while in other variations (Nos. 14, 23, 28) they denote fast overall tempi, or fast passages. In other words, durational strata in a given piece cannot be defined *a priori*, but mutually depend on one's interpretation, or actual performance tempo.

9.2 Bach's tempo words and tempi

In order to gain a perspective on Bach's general tempo policy as well as the correlation between tempo words, time signature and note values, I have compiled in the Appendix lists of all his tempo indications. According to Quantz, every separate piece or movement should – in principle – have at least one tempo word. The total of separate pieces (or movements, or independent sections in multipartite works) in the Bach corpus may be roughly as estimated as 3200. Anything beyond a rough estimate would be meaningless, as the authorship of many works of the BWV is not yet finally ascertained. Also the division into movements, sections etc. may be often ambiguous. This number includes over 2000 vocal pieces (300 of them with tempo indications) and ca. 1200 instrumental pieces (277 with tempo words). Tempo indications do not always come as headings. Many movements without them have tempo changes indicated later on. Taking the vocal pieces as the first example, about 15% have tempo words. In the instrumental music, there is considerably greater percentage of tempo words (about 23%). The great majority of them occurs in multi-movement Italianate forms, such as concerto and sonata, where each movement (except for some opening allegros) is always headed with a tempo indication. Bach habitually dispenses with tempo words, except for the characteristic Italianate forms. Moreover, their use in large-scale works is occasional and unsystematic, even unpredictable, as we have seen in the autograph score and parts of the B minor Mass. Tempo indications in one work not only change, but may be missing altogether in another version. This does not necessarily imply that Bach later denied, or changed his former tempo conception. When Weinen Klagen (BWV 12) of 1714 was transformed into the Crucifixus of the B minor Mass, the Lente indication was omitted. Still, it is unthinkable that Bach would have this extremely affecting *lamento* performed in some kind of a neutral *tempo ordinario*. The same holds for the following *Et resurrexit*. As in most of his other works, he did not always take care to spell out the tempo, considering it as plainly evident from the text and character of the music. Sometimes, a reverse process took place: when the Prelude of the E-major Violin Partita, BWV 1006 (1720 or earlier) was adapted in 1731 into the Sinfonia of the Ratswahlkantate BWV 29, Bach added a Presto heading, missing in the Violin version. But it would be musical blindness to deny the same (though unwritten) tempo indication in the original version, and, as far as is technically feasible, also in the lute (or theorbo) version.²⁶⁰ Comparing pieces similar in character and spirit with and without tempo words precludes the idea that Bach intended pieces of intense affects or decided virtuosity to be performed in any neutral or objective tempo, equivalent of the *integer valor*. His frequent use of combined or 'modified' tempo words (*Adagissimo, Adagio ma non tanto, Un poco Allegro, Larghetto, Molto allegro, Allegro ma non presto, Vivace e Allegro*) shows that he was also sensitive to nuance. In this respect, his approach to matters of tempo shows a certain affinity with the theories of Kirnberger. But we cannot tell, either from Kirnberger's exposition of *Tempo giusto* concept or from Bach's practice, to what extent these tempo indications divulge new information, which is not already implied by the music, or can be read from the score. Often they simply reconfirm the tempo indicated by other factors: time signature and *Notenbild*, genre and text, as well as their combined effect, and most often they are missing altogether.

One should also beware of assigning all too precise values to different tempo words, such as Adagio, Lento, Largo on the one hand, and Vivace, Allegro, Presto on the other. An illuminating example is the (da capo) Tenor Aria BWV 21/5, "Bäche von gesalznen Zähren" (Example 50). Its structure conforms to a special variant of conventional da capo form, in that (a) it has a middle section of contrasting melody, accompaniment and texture, with a tempo change from Largo to Allegro:²⁶¹ (b) the characteristic sigh-figure returns at the close, with an 11-measure preparation, continuously leading back into the the *dal segno* repetition. This repetition is marked, naturally, by a return of the initial slow tempo, which already takes place in the preparatory section. But now Bach writes Adagio, instead of Largo. Any attempt to make the *Adagio* here different from the initial *Largo* is out of question, as the first and the last measure (leading to D. S.) overlap. It does not necessarily follow that Adagio and Largo should be always understood as identical. In fact, Adagio has different meanings and traditions, depending on the context. It means one thing as a short-term tempo indication in the middle, or at the close, of a piece (or section), and another when it comes as a heading. In the middle of a section, Adagio is the most common indication, signifying any kind of short-term slowing down (nowadays usually denoted by *ritardando*, *allargando* etc.) or a written-out fermata. This is the most common usage, as early as Frescobaldi's Fiori musicali, or in Corelli's and Handel's concertos, sonatas, or Buxtehude's and Bach's toccatas and preludes, hardly employing any other term for this kind of slowing down. The difference between the various significations of Adagio is best

²⁶⁰ Klaus Hofmann, "On the Instrumentation of the E-major Suite *BWV* 1006a by Johann Sebastian Bach", *A Bach Tribute* (FS William H. Scheide), 1993, 143–54.

²⁶¹ One autograph part has un poc' Allegro (see NBA I/16, Kritischer Bericht, 149).

confirmed by the opening movement of Handel's Organ Concerto Op. 4 No. 3: its heading is *Adagio*, but the retard on the last measure is likewise marked *Adagio*.²⁶²

Example 50: BWV 21/5: Cantata Ich hatte viel Bekümmernis, Aria "Bäche von gesalznen Zähren"



b) Retransition from the Allegro middle section to the first tempo (adagio)



²⁶² The same situation occurs in the second movement of his Concerto grosso Op. 6/1.

²⁶³ The bass figuring has been omitted in all continuo parts of the music examples.

As a heading, *Adagio* in Bach becomes more specific, apparently one of the slowest types of slow movement. When he aims at an even slower tempo than *Adagio*, Bach may write *Adagio molto*, *Adagio assai* or *Adagissimo*;²⁶⁴ but he never uses *Largo assai*, *Larghissimo*, *Lentissimo* or *Gravissimo*. For Quantz, simply *Adagio* does not count among the main tempo classes, and must be further specified, either as *Adagio cantabile* or as *Adagio assai*, although he often uses the 'unqualified' *adagio* in his own music.

One may wish that Bach were more generous with tempo words. But the picture is rather inconclusive. A case in point is his *Handexemplar* of the *Goldberg Variations*: the two handwritten tempo indications are rather disappointing.²⁶⁵ Adding *Adagio* to the celebrated G minor Variation (No. 25) is obvious, as any intelligent performer might have guessed even before the rediscovery of the *Handexemplar* in 1976. The same applies to Var. 7. Wanda Landowska, for instance, identifying it with "frolicsome and capering spirit of an Italian *forlana*" (instead of giga), was not wide off the mark.²⁶⁶ One looks in vain for any significant evolution in Bach's policy of tempo marking. Except for works explicitly titled as concertos or sonatas,²⁶⁷ tempo headings in Bach's music are relatively rare occurrences. They are not more common in his late Leipzig works than in the early Weimar ones, or even in the youthful pieces, beginning with the Neumeister Chorales.

9.3 Alla breve

Surveying tempo indications in various repertories can – by way of correlating time signatures and tempo words – teach us about the changing roles of tempo factors. Perhaps the most important – and longest preserved – function of time signatures as tempo signs, the relationship of c/ϕ , has also caused most misunderstanding and ambiguity. ϕ most often denotes an *allabreve*, a twofold diminution of note durations. But it may also indicate a movement only *somewhat* faster than **c**. At the same time it was also used to mark the "*nachdrücklich*", heavy (i.e., slowed down) typical motion of the conservative learned-style, or *stile antico* pieces, as they must

²⁶⁴ Bach also uses Adagiosissimo twice (Capriccio BWV 992/3; Toccata BWV 913, m. 119). But Grave may also denote a slowing down of Adagio (see BWV 546/2).

²⁶⁵ Var. 7 (al tempo di Giga) and 25 (adagio). See facsimile of the Handexemplar (Philippe Lescat, ed.), Courlay: J. M. Fuzeau, 1990. See also Chr. Wolff, Bach: Essays on His Life and Music, 164.

²⁶⁶ *Landowska on music*, 215. However, Kirkpatrick, to take another eminent example, has apparently thought here of a quietly flowing siciliano (Deutsche Grammophon, recorded 1959, CD 439 465–2).

²⁶⁷ Even the concerto-inspired greater organ preludes, the preludes to the English Suites and Partitas, or concertato cantata choruses, normally lack the Italian-styled tempo headings.

have been interpreted in Bach's (or Kirnberger's) generation. ϕ was (and still is) used in *all* these senses, e.g., by Beethoven: (a) In the Finale of the *Appasssionata* (op. 57), where the tempo indication *Allegro, ma non troppo* changes at the coda to *Presto* ϕ . The same procedure also occurs in *Les Adieux* (Op. 81a), in the transition from the Introduction (*Adagio*,) to the *Allegro* (ϕ). (b) But the selfsame time signature (ϕ), as an allusion to Baroque 'learned style', comes in a late Beethoven passage, most probably inspired by Bach's *Goldberg Variations* No. 22 (and 18): i.e., the *Allegro, ma non troppo* following Var. IV, in the last movement of Beethoven's Op. 109.²⁶⁸

The different readings of the *allabreve* sign ϕ in Bach's *stile antico*, as compared with classical motet style, have already been discussed above (Ch. 3). But the sign pair c/ ϕ in Bach's music has a much wider range of meanings. They are often used interchangeably, or indiscriminately. The most prominent instances are in Bach's *Clavier-Übung* series, published in Bach's lifetime. In the *Ouverture* movement of BWV 831 (*Clavier-Übung* II), the two rhythmically similar binary sections, at the opening and at the end of the movement, are signatured c and ϕ respectively. The signatures do not look like an engraver's error and remain unchanged in Bach's *Handexemplar*. The opening Prelude of *Clavier-Übung* III (BWV 552/1), with a typical *alla semibreve* motion, is marked ϕ , while the typical *allabreve* opening section of the final Fugue has a c signature, contrary to common stylistic expectations (3.2).²⁶⁹

The heading *Alla breve* is a common tempo indication in Bach's music, usually inseparable from the ¢ signature, especially in *stile antico* pieces, so that it might often seem superfluous to write it out. Bach's use of it is not consistent. Writing *Alla breve* at the head of *Gratias agimus* of the B minor Mass, he did not use it in its 'contrafact' – the *Dona nobis pacem*.²⁷⁰ Perhaps the repetition of the music made this indication superfluous. But Bach's ways of using *alla breve* and ¢ are still more involved.

We read in Walther's Praecepta the following definition:

[15*] Und eben dieser *Tact* ist der alten *Italiä*ner eigentliches *alla Breve;* weil man darinne eine *Brevem* halb in *Depressione*, und halb in *Elevatione* zu *modulir*en pflegte: wird durch folgendes vorgesetzte Zeichen ϕ erkennet. [...]

NB. 2) An statt dieses *Tact*-Zeichens \notin findet man auch heutigestages folgende gedoppelte Zieffern vor an gesetzet [²₁], welche gleichfalls einen geschwinden gleichen *Tact* anzeigen, und

²⁶⁸ This is actually the fifth (though unnumbered) Variation of the movement.

²⁶⁹ The original **c** time signature of the fugue has been "corrected" by the BGA, but restored in the NBA.

²⁷⁰ Actually, both versions are contrafacts of the opening Chorus of BWV 29, *Wir danken dir*, *Gott* (1731). The cantata movement is with a different time signature (minor ϕ instead of $\phi \phi$), without the *alla breve* heading.

demnach alle Noten etwas (*in grosen Noten gar den halben Theil*) von ihrer Geltung entziehen sollen:²⁷¹

Walther's remark "*in grosen Noten gar den halben Theil*" sheds light on the apparent ambiguity of ϕ : when used with large note values (\downarrow , \downarrow as fastest notes), the notes lose half of their value;²⁷² on the other hand, when it is combined with smaller values, according to 'modern' (18th-century) usage, i.e., without *stile antico* connotations, it denotes just a certain tempo accleration, as in many opening movements of Bach's concertos (e.g., Brandenburg Concertos Nos. 2, 3, 5, and 6). Only in few instances in Bach (the *Alla Breve*, BWV 589; *Kyrie II* of the B minor Mass) are the fastest notes \downarrow , conforming to the stricter definition of *Allabreve* in Walther's *Lexicon*. This confirms our former conclusion about the heavier pace of Bach's ricercarlike pieces, compared to their 16th-century analogues.

Interestingly, *Alla Breve* may occur in Bach's work also separately from ¢ signature. Two rare examples for this are:

(1) the Aria "Es ist vollbracht" of *St. John Passion* (BGA: BWV 245/58; NBA: BWV 245/30). The middle section, in contrast to the **c** *molto Adagio* of the opening and closing sections, is marked *Alla breve* in the autograph score, having nothing to do with a *breve-tactus*, but simply denoting a considerably faster tempo.²⁷³ One cannot speak here of a doubly faster tempo, as the relationship between **c** and $\frac{3}{4}$ is rather indefinite. Such terminology seems not quite 'grammatically correct'. This may have deterred the *NBA* editor of the *Johannes Passion* (A. Mendel, 1974) from reproducing the *allabreve* indication, although it is authenticated. But this unconventional use of the *allabreve* indication is confirmed by an author of the closest Bach circle, namely F. W. Marpurg.²⁷⁴

²⁷¹ Walther, Praecepta, 29, 30; bold italics mine.

²⁷² In his 1732 Lexicon (s. v. *Allabreve*, 26), Walther relies on Praetorius' *tactus celerior*: "[dieser] Tact, welcher sehr geschwinde tractirt wurde, und hatte nur bey Motetten statt.". Walther adds, however, that *allabreve* pieces had no smaller note values than semiminims (J), and even those were infrequent. Compared to the older definition of the *Praecepta*, this definition seems "regressive", taking into account only the 16th-century motet style, but not the uses of the term (or the ¢ signature) in *stile moderno*. Here, Walther's definition of *Allabreve* coincides with Chr. Wolff's quoted descriptions of *stile antico* (3.1).

²⁷³ The Aria is No. 58 in BGA and No. 30 in NBA. The *alla breve* indication is in the autograph score, while some instrumental parts have *Vivace* or *Vivace e piano* instead. The BGA has printed the score version, while the NBA has preferred the *Vivace*. See NBA II/4, *Kritischer Bericht*, 263.

²⁷⁴ Anleitung zur Musik (1763), p. 75: "und wenn die besagte allabrevische Schreibart im ungeraden Tact, der durch Ziffern vorgezeichnet wird, gebrauchet werden soll, man alsdenn das Wort Allabreve etc. über das stück schreiben muß" [...] ("and if the above-mentioned alla breve notation is to be used in a ternary meter, as designated by numerals, one should write above the piece the word Allabreve etc.")

(2) The other example is in the first chorus of "*Christ lag in Todesbanden*" (BWV 4/2), where the *Alla breve* indication comes over an unchanged $_{\mathfrak{C}}$ meter. But one might conjecture here an implied $_{\mathfrak{C}}$ signature, as stated in the above-quoted Walther passage.²⁷⁵

9.4 Normal tempo in Bach

Perhaps the most prominent difference between the tempo theories of Quantz and Kirnberger is the concept of normal tempo, which Kirnberger terms as Tempo giusto and Quantz completely ignores. On this point, Bach's practice seems, at first glance, to agree with Quantz. Moderato occurs only twice in his entire list of works (BWV 210/2; BWV 244/14),²⁷⁶ and his a tempo giusto (or a tempo) corresponds to the definition in Brossard's Dictionnaire rather than to Kirnberger, i.e., only to indicate strict tempo, as opposed to free declamation, in (or after) recitatives.²⁷⁷ But this by no means proves that the idea of normal tempo was foreign to Bach's thought. About 90% of his music, without any tempo markings, raises the urgent question whether his intended tempi have been left *unwritten*, or implicitly marked, in a yet unknown "secret code"; or perhaps all these pieces are comprised within the domain of the Kirnbergian *Tempo giusto*, or some other normal tempo, making tempo words superfluous. Many 17th- and 18th-century treatises, beginning with Praetorius, deplore the fact that composers do not use tempo indications more meticulously. But Bach, like most of his contemporaries, did not follow the advice of textbooks. This is the grey area, where every performer must, in parody of Praetorius' words, "den Sachen selbsten nachdencken und ex [sua] consideratione observiren"²⁷⁸

Kirnberger advocates to young composers to study the natural motion by practicing all kinds of dance pieces. Bach's use of captions such as *Tempo di Menuetto*, *Tempo di Giga* might at first sight confirm Kirnberger's emphasis on characteristic dance tempi as indicators of *tempo giusto*. But this is not a reliable criterion, particularly as Bach's dances are hard to classify into rhythmic stereotypes. And when we find two dances of the same genre but different rhythmic characteristics, how are we to decide which is the 'characteristic' one? For example, the indication *tempo di Giga* is rather ambiguous, as its tempo depends on the type of gigue: an Italian *Giga*

²⁷⁵ BWV 4/2, NBA I/9, Alfred Dürr, ed., Kassel, 1985, 16, Kritischer Bericht, A. Dürr, ed., 1986, 29. The alla breve appears in the original parts of Violin 2 and Viola 1.

²⁷⁶ The *Moderato* in Recitative No. 14 of *St. Matthew Passion* is used to cancel the preceding *Vivace* indication.

²⁷⁷ See, 8.8, note 247.

²⁷⁸ For the original quotation, see 8.3 and note 221.

of even triplets (\square , as in Concerto BWV 975/3), or a typically French dotted *Canarie* (\square), or *Gigue Françoise* (Goldberg Variation No. 7).²⁷⁹ One has to look for clues in the rhythm and gestures of the dance, and thus the tempo word in itself offers little help. Such tempo words are not modifications of the 'natural' *Tempo giusto* of the above-mentioned pieces, but simply confirm what may already have been taken for granted.

Another case in point are Bourées I and II of the B minor *French Overture BWV* 831. Both are written with the French time signature 2, and the most obvious choice would be to play both in the same tempo. But one should also take into consideration their different characters and *Notenbild*. The first Bourée is closer to a danced piece, opening with walking-bass rhythms in both voice-parts, closely resembes the Rigaudon of Couperin's 2nd *Ordre (Pièces de clavecin I)*, calling for detaching the quarter notes level. The *Alternativo*, on the other hand, is of a very different type. Having lost its relation to the dance movements, it recalls an introverted French allemande-like *méditation* rather than an actual dance. The frequent ornamental figures (with 16th-notes) and traits of *style brisé* suggest a sustained hyper-legato, perhaps a 'finger pedal' throughout. From a performer's perspective, it is an open question whether to take for each bourée its own tempo, in observance of their different characters, or to regard them as an integral dance pair, traditionally played in one tempo.

9.5 Bach's tempo traditions

Italian instrumental tradition, at least since Corelli, gave nearly every instrumental piece a tempo heading. Also French 18th-century composers (e.g., Couperin) frequently prescribe tempo in detail. But other old-generation composers tend to spare with tempo indications. One reason for Bach's seeming unsystematic use of tempo words is that he concurrently follows several different writing traditions:

1. The French tradition (with French tempo words) has few examples in Bach: (a) *Piece d'orgue*, *BWV* 572: *Très vitement*, *Gravement*, *Lentement*; (b) English Suite IV (in F), *BWV* 801, Prelude: *Vitement*; (c) Suite for Lute, *BWV* 995/1, Prelude: *tres viste*; (d) Ouverture, *BWV* 1076/6, Polonaise, *Lentement*; (e) Ouverture (Chorale) in Cantata *BWV* 61/1: gai.

2. The Italian (and modern German) Corelli tradition (four- [or more] movement sonatas), with at least one tempo word to nearly each movement.

²⁷⁹ The distinction is based on Rameau, *Traité de l'harmonie*, 160. See also Meredith Little, and Natalie Jenne, *Dance and the Music of J.S. Bach*, Bloomington: Indiana University Press, 1991, 153f.

3. The Italian Vivaldi tradition (three-movement forms), with very finely nuanced tempo headings to all movements, with possible omission of the opening *Allegro* caption.

4. The Frescobaldi toccata tradition: Most tempo words in Frescobaldi keyboard works, as well as in the toccatas of Buxtehude and Bach, come not at the beginning of the piece, but within the pieces – at the head of sections or within them, marking a tempo change. In *Fiori musicali*, for example,²⁸⁰ the majority of Frescobaldi's indications (*Adasio* and *Alegro*) occur within the pieces. Only three pieces have tempo headings (*Adasio*).²⁸¹ We see a similar policy of tempo words in organ works of Buxtehude.

To all these traditions of tempo indications, one should add Bach's most common tempo practice – namely that of *not* using them. Then we can understand more readily why it is impossible to find a system in Bach's usage of tempo words. This lack of systems is by no means unique to Bach, but found in countless compositions of his contemporaries, as we see in looking over the works of Handel, or Telemann.

9.6 Time signatures as tempo indications

17th-century theory ascribed definite tempi to certain time signatures, as recorded by Saint-Lambert; but Saint-Lambert also expresses his doubts about this practice.²⁸² In Bach's music, certain time signatures may still have some general tempo connotations, while others have already become neutral, depending on the attached tempo word. The clearest metric indication of slow tempo in Bach, still in accordance with Saint-Lambert, is $\frac{3}{2}$, while $\frac{3}{8}$ usually indicates a lively one, often associated with verbal indications like *Vivace*, *Allegro* or *Presto* – albeit with some notable exceptions.²⁸³ On the other hand, $\frac{3}{4}$, $\frac{6}{4}$ and $\frac{12}{8}$ may represent anything between *adagio* and *presto*.

Another time signature with usually lively tempo connotations, often combined with *Allegro* or *Vivace*, is $\frac{2}{4}$. Only twice has Bach combined it with *Adagio (BWV 982, 984, both reworkings of works by Johann Ernst of Sachsen-Weimar)* and once with *Andante (BWV 527/1)*.

²⁸⁰ Frescobaldi's earlier organ works (1st and 2nd Books of Toccatas, and the Capricci) do not use tempo words, although he includes highly illuminating remarks about tempo in his prefaces (see. 2.4, 2.5).

²⁸¹ Messa della Domenica, Toccata cromatica per l'Elevazione; Messa degli Apostoli, Canzon dopo l'Epistola; Messa della Madonna, Toccata per l'Elevazione.

²⁸² See above, 8.2.

²⁸³ In some 20 instances of vocal and 24 of instrumental Bach works, $\frac{3}{8}$ is associated with tempo words. Only 4 of them (vocal) denote slow tempi.

 $\frac{3}{8}$ often denotes a festive joyous mood, allegro in the truest sense of the word, even beyond its association with tempo words. There are many instances of movements of a definite type, particularly choruses and arias in secular (i.e., festive) cantatas, as well as their parodies, like the *Osanna* of the B minor Mass, or some movements of the *Weihnachts-Oratorium*.²⁸⁴

Although slow tempo indications for $\frac{3}{8}$ are exceptional, we also see a slow type. Its example, the aria "Ach, schläfrige Seele" (*BWV* 115/2 [*adagio*]) should be compared to rhythmically and motivically similar pieces, such as "Erbarme dich" of the St. Matthew Passion (*BWV* 244/39, no tempo heading, $\frac{12}{8}$) and the duet "Wann kommst du, mein Heil" (*BWV* 140/3, *Adagio*, $\frac{6}{8}$). Although these are not particularly 'slow signatures', they become practically identical with $\frac{3}{8}$ when slowly performed. In other words, slow tempo blurs the difference between 'small' and 'large' (or simple and compound) measures.

To sum up, Kirnberger's *tempo giusto* theory may perhaps account for certain parts of Bach's music, but we do not know for which ones. Moreover, it leaves unclear the precise role of tempo words, which were by then gaining more and more importance. It should be noticed that although tempo words are relatively rare in Bach's music, we already find them in his earliest works (the 'Neumeister' Chorales) and his use of them did not change much up to his latest works, showing few signs of evolution with time. The differences of procedure of tempo indication in his work mainly depend on genre: concertos and sonatas, explicitly related to Italian tradition, usually reveal more tempo indications than other forms. But other genres, such as preludes of suites and partitas, or cantata choruses, even when they clearly reveal formal influences of the Italian concerto (or aria da capo) form, usually spare with tempo headings.

²⁸⁴ Choruses: BWV 206/1; 214/1 (≈ 248/1); 214/9 (≈ 248/24) 215/1 (≈ 232^{IV}/1). Arias: BWV 201/7 (≈ 212/20); 205/11; 209/5; 215/5 [Presto].

9.7 Mid-movement tempo words

"Seine Melodien waren zwar sonderbar; doch immer verschieden, Erfindungsreich, und keinem andern Componisten ähnlich."²⁸⁵

^{cc}In musikalischer Hinsicht verfügt Bach nunmehr über einen Formenreichtum, der jede Schematisierung weit hinter sich läßt.²⁸⁶

"The stylistic scope and expressive depth of Bach's recitatives far exceed the the norm for vocal music in the late Baroque."²⁸⁷

Similar epithets are often encountered in various descriptions of Bach's music, and the question suggests itself whether this uniqueness is also reflected in some way in his practice of indicating tempo. In this respect, there is a difference not only between Bach and other composers of his time, but also between various genres of his own music. The most distinctive, even unique, trait of Bach's tempo indications, found mainly in his *vocal* music, is evident in the unusually high amount of tempo changes within the movements. This is apparent from the lists of Bach's tempo indications, given in Appendix 1. Out of 300 vocal movements with tempo words, 171 (57%) show internal tempo changes, compared with only 35 instrumental movements (out of 278 - 12.6%).²⁸⁸ The best explanation of this Bachian idiosyncrasy is his imaginative treatment of the text and unique ability to find unconvetional solutions to problems of musical form, particularly in affect-laden situations. Alfred Dürr's remark, "[Bach] never lapses into the formal schematism of his contemporaries"²⁸⁹ is confirmed by surveying Bach's complete works, or by comparing these with vocal works of his contemporaries, such as A. Scarlatti, Handel, Hasse or Telemann. In their operas and oratorios there is a sharp division between aria and recitative: the recitatives are intended to be sung in a free tempo and meter, the arias - en temps mesuré. Their recitatives show seldom any tempo indications, but most of the arias have at least one tempo heading. Alternating phrases of recitative and arioso, although not unknown, are extremely rare in the work of these composers.

²⁸⁵ Obituary, *BDok* II, No. 666, p. 87: "His melodies were strange, but always varied, rich in invention, and resembling those of no other composer." (*NBR*, 306, p. 305).

²⁸⁶ Dürr, Die Kantaten von J. S. Bach, 48.

²⁸⁷ Stephen A. Crist in J. S. Bach (Oxford Composer Companions), 383.

²⁸⁸ However, instrumental works of composers such as Corelli or Handel abound in *ritardandi*, in the form of short *Adagio* passages at the ends of movements or in transitions, often closing on a dominant half cadence.

²⁸⁹ Dürr, *Die Kantaten von J. S. Bach*, 34: "Obwohl Bach niemals in den Starren Formenschematismus seiner Zeitgenossen verfällt..."

Since their arias are nearly always in pure *da capo* form, tempo changes may occasionally occur, but only at the start of the middle-section, returning to the initial tempo with the *da capo* repetition.²⁹⁰

A new tempo word on the middle-section of a *da capo* (or *quasi-da capo*) piece is a common practice also in Bach's music. We have already seen it in Bäche von gesalznen Zähren (BWV 21/5 or Es ist vollbracht (St. John Passion, BWV 245/30.291 The principle itself is not new then; what is extraordinary is the intensity of the opposing affects. The slow section of Bäche von gesalznen Zähren, marked by motives of weeping and sighs, is contrasted in the middle-section by a fast short 'scene' of a sea storm (Allegro), turning back to the opening Largo/Adagio. In Es ist vollbracht, Bach uses the words "Der Held aus Juda siegt mit Macht" for a fanfare-like motive of the Alto with a changed time signature $\begin{pmatrix} 3 \\ 4 \end{pmatrix}$, and tempo indication allabreve (vivace).²⁹² To this contrast of textual image (or 'negative-positive' word painting) Bach always finds a corresponding musical expression. Numerous other instances of middle-section tempo change occur in Bach's arias and choruses, either in pure *da capo* form or in its variants (shortened D.C. or 'Baroque recapitulation' closing first on the dominant and later on the tonic).²⁹³ The da capo (dal segno) retransition from the middle section back to the beginning is often accompanied by a short retard of a few measures, indicated by Adagio (9.2).

Another relatively simple formal relationship commonly found in midmovement tempo changes is the sectional (either bipartite or multipartite) structure. It consists of two – or more – parts joined together, that otherwise might be considered as separate sections or pieces, functionally analogue to a prelude and fugue, a recitative and aria (or arioso), or the two sections of a French overture. Most often, there is a change of time siganture at the point of transition, which may even by itself indicate a change of tempo. Multipartite forms often suggest a relation to the old Baroque motet, with its series of nearly independent sections, each with its own text, thematic material, characteristic texture, meter and tempo. Particularly illustrative examples are the choruses BWV 21/2, 21/6, and 106/2.

The types of mid-movement tempo change discussed so far serve both expressive and structural purposes, falling precisely on the division points between sections. Other types may be termed 'purely expressive', in that they do not mark en-

²⁹⁰ Rondo-like tempo alternations, such as *Presto/Un poco lento* in the aria "No, del tuo figlio il sangue" (J. A. Hasse, *Arminio*, Act III Scene IV), are extremely rare.

²⁹¹ Here too, Bach's procedure is different, in that the change of tempo often applies only to part of the middle section, according to its word imagery.

²⁹² See 9.3.

²⁹³ Additional examples of changed tempo in middle-section: *BWV* 12/2; 31/2; 42/3; 63/7; 70/10; 94/4; 115/2; 133/4; 187/5.

tire sections, or leave any traces on the formal development as a whole. Let us examine two cases:

a) The recitative *BWV* 93/5 (based on the chorale *Wer nur den lieben Gott läßt walten*) combines the original chorale text with interpolated 'tropes' of free poetic commentary. Each text category is parallelled by the music (chorale tune for the original text, free or measured recitative for the 'tropes'), as well as its own tempo indications. Particularly interesting is the second phrase, "wenn Blitz und Donner kracht und dir ein schwüles Wetter bange macht", with a different expression-tempo word for nearly each word of the text – amounting to five different indications within four measures: *allegro, furioso* and *andante* for depicting thunder, dreary weather and fear, *Adagio* for the chorale melody, and *Recit*. for the free recitative (Example 51). This example is also most exceptional in its daring harmonic treatment, where each phrase of the chorale melody is presented in different tonality (g, f, b_b, c, C-a, g).





b) Despite the heading *Recitative*, *BWV* 163/4 is imitative throughout, calling to mind a three-part invention (Soprano, Alto and Continuo) rather than a recitative. Had the short section (m. 14–19, with the words "*So will sie sich den Raub nicht nehmen lassen*")²⁹⁴ run in the same tempo as the rest of the duet, it would hardly change the overall musical course of the piece. But here we have an indication *un poc'allegro*, and then *adagio*, marking the return to *tempo I*. This temporary tempo

²⁹⁴ Z. Philip Ambrose's translation: "And will not let the spoils be taken from her."

episode seems to directly result from the associative imagery of the word "*Raub*" (spoils/prey).

As we have seen in BWV 93/5, the most original and fascinating examples of tempo changes are to be found in Bach's hybrid forms, recitative/arioso, recitative/chorale, as well as other, even more complex combinations.²⁹⁵ It is not surprising that recitatives or pieces with recitative sections, though much shorter than arias and choruses, constitute 47 of the 171 pieces with changing tempi. Alternations of recitative and arioso are not always explicitly defined, especially since the melodic line of the recitatives in Bach is of an unprecedented richness. Bach may at times supply highly detailed performing indications, marking each transition from free recitative to recitativo a tempo to arioso (or chorale) and back, as he does in BWV 92/2 and 165/4. At other times, he marks only the change of time signature. This may suffice, since recitatives invariably use only c time signature. In other instances Bach does not mention the transitions at all. For example, the four short recitatives of BWV 202 (Weichet nur, betrübte Schatten) all end in an arioso, without any explicit indication. The clearest distinction between free recitative and arioso is apparent in the bass line, passing from static, long-held tones in the recitatives to more lively (or walking-bass) rhythms in arioso phrases. Bach's accompagnato recitatives are often motivgeprägt, i.e., governed by an ostinato rhythmic figure of the accompaniment. Recitative sections are often (22 times in all) marked a tempo, a tempo giusto, or a battuta. Bach does not indicate free rhythms with words such as ad libitum, rubato or senza battuta;²⁹⁶ but the fact that only measured recitative or arioso passages are specifically marked confirms that free speechlike recitative was regrded as the norm. The lists of changing tempo indications in the Appendix naturally do not exhaust all tempo changes in Bach's works; some of them are not written but only implied by metric signs, or simply by the poetic situation. An unusual example is the chorus BWV 67/6, illustrating the contrast betwen war and peace (Kampf, Frieden; Example 52 a). Jesus' greeting to his disciples, "Friede sei mit euch" ("peace be unto you") repeats four times with a Bass solo (mostly in), answered by the other voices (S, A, T) and animated instrumental ritornelli (in c time signature), later with the choir joining with the words "Jesus hilft uns kämpfen", "Satan, weich", and similar 'warlike' expressions (Example 52 b). Although the entire movement is without tempo indications, one might ask whether the peaceful $\frac{3}{4}$ episodes demand a quieter tempo than the warlike **c** ritornelli. Such a reading is

²⁹⁵ Such as concerto, chorale, arioso and recitative, in BWV 95/1.

²⁹⁶ The only exception I know of is in isolated recitative-like passages in instrumental compositions, where *con discrezione* indicates rhythmic freedom, or modern *rubato* (Mattheson, *Vollkomene Kapellmeister*, X, § 96, p. 89). See Bach's D major Toccata, *BWV* 912, as well as Buxtehude's E major Praeludium, *BuxWV* 141.

indeed suggested by Ton Koopman.²⁹⁷ But it may create difficulties and contradictions later on, when the 'war' and 'peace' elements are no longer separated. Therefore, maintaining a fixed \downarrow beat and one tempo throughout the movement finally seems as the most plausible solution.



Example 52 a: BWV 67/6, Ritornello

Tempo changes within movements show that Bach's procedures of tempo indication are mainly governed by word-tone relations. However, the expressive intensity becomes at times 'text-independent', e.g., in episodes of very different character and affect, but on with the same text repeated. A good example are the two sections of the chorus *BWV* 24/3, relating to each other like a prelude and fugue, on the same words ("*Alles nun, daß ihr wollet, daß euch die Leute tun sollen, das tut ihr ihnen*"). Dramatic expression is also often manifest in phrases that do not readily lend themselves to be explained by word painting. Such is the magnificent opening of *BWV* 21/2, "*Ich, ich, ich*" – blatantly attacked by Mattheson²⁹⁸ – or the dramatic chords on the word "*Aber*", later on in the same movement. Looking beyond the somewhat limited scope of tempo changes alone, we see that they are subservient to

²⁹⁷ ERATO 3984-23141-2.

²⁹⁸ Mattheson, Critica musica 1725, quoted in NBR. No. 319, p. 325.

Example 52 b: BWV 67/6, Bass solo



Bach's poetic imagery. They may faithfully follow the literal meaning of the words, or at times even transcend it, rather than being determined by purely formal considerations. The role of tempo words in Bach and his contemporaries is very different from that of a metronome (or *chronomètre*). Being often so ambiguous, they can hardly help performers to obtain any practical idea about the actual speed of a composition. Thus one may wonder why composers of the time used them at all. Such doubts may have beset Bach too, who was never very consistent in his use of tempo

indications. Yet I believe that tempo words served both as guides for evaluating the pace or beat rate, as well as (admittedly stereotyped) signifiers of poetic intention. Theorists of the time ("*Chronométristes*" and "*Mouvementistes*") seem to be divided on this point; still, the double function of tempo words was never ignored.

9.8 Order versus pragmatism

Bach's music has always been regarded as an emblem of the highest intellectual achievement in music, as a combination of aesthetic perfection, ultimate sense of order, as well as supreme affective power. It is therefore understandable that many scholars have tried to extend the idea of Bach's perfection to every thinkable domain, including areas which do not concern the music alone. Their efforts may be related to a general trend, wiewing Bach's music as a superhuman achievement, verging on miracle or magic, combining mathematical perfection, encoded theological messages and the like. This new Bach image has been aptly described as "a kind of hybrid of Leonardo, Newton, Leibnitz, Goethe and Einstein, or even [...] surpassing these."299 However, with regard to notation and performance practice in particular, Bach could not afford to be totally original or unique. He had to follow the traditions, routines, habits and imprecisions of the music of his time, in order to have his music performed and understood. Therefore, ultimate metronomic precision, or extreme systematic order, would be out of place in this discussion. Even the simplest survey shows that Bach's tempo system is highly complex, transcending any theory that has been proposed as yet to 'establish order' in it, or to explain it. The field of musical tempo is delicately balanced between rigorous 'keeping time' and flexible, unwritten fine gradations. In studying this domain it is advisable not to forget Aristotle's admonition, chosen as the motto at the head of this chapter.

²⁹⁹ H.-J. Schulze, "Bach at the turn of the twenty-first Century", *Irish Musical Studies* 8 (2004): *Bach Studies from Dublin*, 248.

10. Old Tempo – New Interpretations

La mesure est l'âme de la Musique, puis-qu'elle fait agir avec tant de justesse un grand nombre de Personnes, & que par la variété de ses mouvements elle peut encore émouvoir tant de differentes passions...³⁰⁰

10.1 Diverging opinions on tempo in "bygone days"

The undecided debate, how fast or slow Bach's music – or 'early music' in general – should be, is as old as the music itself. In view of the widely diverging opinions, one could paraphrase Masson's motto: "*par la variété <u>des opinions sur</u> ses mouvements elle peut émouvoir <u>tant de passion</u>." Opinions seem to change according with the swing of the 'pendulum of history', alternating now in favour of slow, now of fast tempi.³⁰¹ There are also fluctuations in the tendency of 'normalizing' tempo, in that some styles allow for a limited range of variation, closer to a middle value, while others prefer extreme tempi, both fast and slow. Even the metaphor 'pendulum of history' seems to be an oversimplification, as contrasting opinions have existed not only in different eras, but simultaneously, within each period and style. Similar, as well as contrary opinions to Quantz's famous remark on "bygone days" have been expressed more than once. Some fifty years after Quantz, the same words were said of his own times (Türk 2/1802, G. Weber, 1813). But his system of tempo classes and the tempi he advocated had been already criticized in his own day as highly exaggerated.*

Quantz mentions not only that 'old-time' tempi were slower, but also that French music of his own day has preserved the slow manner of performance. His statement on French preference for slow tempi is partially corroborated, some 40 years earlier, by Mattheson's association of slow tempo with Frenchified gallant fashions, in his *Neu-eröffnete Orchestre* 1713 (see 4.2). We have a similar allusion by C.P.E. Bach:

[16*] In einigen auswärtigen Gegenden herrschet gröstentheils besonders dieser Fehler sehr starck, daß man die Adagios zu hurtig und die Allegros zu langsam spielet. Was für ein Widerspruch in einer solchen Art von Ausführung stecke, braucht man nicht methodisch darzutun.

³⁰⁰ Charles Masson, Nouveau traité des regles pour la composition de la musique 1694, 7.

³⁰¹ A fairly recent article (Ephraim Segerman, "A re-examination of the evidence on absolute tempo before 1700", EM 24/2 & 4 (May [p. 227–48] & November [p. 681–89], 1996) signals a return from the fast tempi now in fashion to more moderate tempo ideas.

Doch halte man nicht dafür, als ob ich hiemit diejenigen trägen und steiffen Hände rechtfertigen will, die einen aus Gefälligkeit einschläfern, die unter dem Vorwande des sangbaren das Instrument nicht zu beleben wissen, und durch den verdrießlichen Vortrag ihrer gähnenden Einfälle noch weit mehrere Vorwürfe, als die geschwinden Spieler verdienen.³⁰²

But ascribing slow movement to 'good old days', to old age, or to the French, cannot be taken as a rule. E. Borrel quotes an interesting statement, from 1719 (or 1732), about contemporary performance of Lully's operas:

[17*] Ceux qui ont vu représenter les opéras de Lulli, qui sont devenus le plaisir des nations, lorsque Lulli vivoit encore, et quant il enseignoit de vive voix, à des acteurs dociles ces choses qui ne sçauroient s'écrire en notes, disent qu'ils trouvoient une expression qu'ils n'y trouvent plus aujourd'hui. Nous y reconnaissons bien les chants de Lulli, ajoûtent-ils, mais nous n'y retrouvons plus l'esprit qui animoit ces chants. Les récit nous paroissent sans ame et, les airs de ballet nous laissent presque tranquilles. Ces personnes allègues comme une preuve de ce qu'elles disent que la représentation des opéras de Lulli dure aujourd'hui plus long-temps que lorsqu'il les faisoit exécuter lui-même, quoi qu'à présent elle dut durer moins de temps, parce qu'on n'y répète plus bien des airs de violon que Lulli faisoit jouer deux fois.³⁰³

It is hard to tell from this testimony whether the general taste changed in favour of slower tempi, or just Lully's operas – now regarded as 'old music' – were played accordingly in this way. This relatively little-known passage considerably weakens the reliability of Quantz's observations on French style. It either limits their validity to mid-18th century alone, or it shows what ideas the Germans at the court of Frederick the Great had about French music.

From about the time of Quantz and Kirnberger, there is another observation, in Friedrich Wilhelm Marpurg's two treatises, *Anleitung zur Musik* (1763), and *Anleitung zum Clavierspielen* (1765). They are of special importance, as they come from a person of the closest circle of J. S. Bach. Marpurg seems to be in partial agreement with Kirnberger's tempo theories, albeit with some qualifications, notwithstanding the dispute he had with the latter over matters of harmony; but he certainly does not share Quantz's ideas. Disqualifying the method of measuring time with pulsebeats (Marpurg 1763, p.74) is a clear allusion to Quantz. There is another remark of Marpurg which deserves special attention:

[**18***] Es fraget sich, wie man diese verschiednen Grade der Bewegung eignetlich finden soll. Diese muß man aus der Erfahrung lernen. Es geschicht allhier, daß ganze Noten so geschwinde als Viertheile, und Viertheile so lagsam als ganze Noten gespielet werden.³⁰⁴

³⁰² C. P. E. Bach, Versuch über die wahre Art, Part I, Ch. 3, § 1, p. 116.

³⁰³ Jean-Baptiste Dubos, *Réflexions critiques sur la poésie et sur la peinture*, quoted in Borrel, 173.

³⁰⁴ Marpurg, Anleitung zum Clavierspielen I/5, § 4 (p.17).

Formally, this variability range amounts to 4:1. But Marpurg evidently uses here a metaphor to describe the *maximal* range of tempo variability, and metaphors generally tend to be overstated rather than understated. Had Marpurg envisioned a range of about 16:1, as Quantz did, he could modify his statement thus, "ganze Noten so geschwinde als Sechzehntheile, und Sechzehntheile so langsam als ganze Noten". Thus Marpurg probably considers the normal range of tempo variability as remarkably narrower than given by Quantz. Similar differences of opinion about tempo equally characterize the present-day situation, just as they have occupied the entire 18th century.

10.2 Diverging opinions in the 20th century

To a present-day observer, it is striking to see how the same 17th- and 18th-century sources, decidedly limited in number, dealing with tempo are quoted and interpreted again and again, each time with entirely different conclusions. We see that musical tempo is inseparable from other factors of performance; therefore, any theoretical discussion of historical tempo is involved with the instinctive feeling of the scholar, performer or listener, and inevitably ends up trying to justify his\her own personal taste and conviction. Conversely, addressing the problem in a detached, quasi-objective manner would strike us as 'mechanistic', or 'dryly scientific', and thus would seem even less convincing.

Turning to theories of Baroque tempo in the 20th century, let us begin with the words of Albert Schweitzer, who advocated a deliberately slow performance of Bach's music, and whose recorded performances outdid even his own prescriptions. For Schweitzer, preferring a slow tempo in Bach is a general criterion of good taste:

The better any one plays Bach, the more slowly he can take the music; the worse he plays him, the faster he must take it. 305

Schweitzer subsequently makes another interesting observation:

The tempo marks, where they exist, should not be interpreted in a modern sense. Bach's *adagio*, *grave*, and *lento* are not so slow as ours, nor his *presto* so fast; therefore we are easily betrayed into making his slow movements too long-drawn and of hurrying his fast ones. The circle of possible tempi in his music is relatively a narrow one. The question is really one of varied nuances on either side of a moderato.³⁰⁶

³⁰⁵ Albert Schweitzer, J. S. Bach, trans. Ernest Newman, I, 381.

³⁰⁶ Schweitzer, ibid.

For a monograph written at the threshold of the 20th century, the expression "modern sense" might suggest that Bach's tempi here were compared with prevalent late 19th-century tempo norms; but actually Schweitzer echoes the words of F. C. Griepenkerl, written as early as 1844, in his introduction to the first Peters edition of Bach's complete organ works.³⁰⁷ Griepenkerl's statement should be judged as a critique, in 1844, on the tempo conventions of his own day, that is, as they may have been adhered to by Mendelssohn, Czerny, or Beethoven. By the time Schweitzer's *Bach* first appeared, such tempo ideas were already being challenged by Arnold Dolmetsch, who maintained that "it is unquestionable that the old music, as such, was neither slower nor quicker than the modern."³⁰⁸

The main sources that led Dolmetsch to reject the idea of restrained tempi in early music ("old music" is his term) may have been Simpson's *Compendium of Music* (1665) and the tables of Quantz's *Versuch*. The latter, as we have seen, allows for a surprisingly wide tempo range, actually exceeding the variation range of Beethoven's metronomic indications. Then, in 1934, Eugène Borrel's rediscovered the 17th- and 18th-century – surprisingly fast – French chronometric data, totally contradicting the Griepenkerl-Schweitzer Bach tempo tradition.³⁰⁹ These, combined with Quantz's tempi, and the above quoted statements of C. P. E. Bach, lead to assume that tempo aesthetics of the 1750's was anything but nuances of *Moderato*.

10.3 The new pendulum controversy

From the hinted critique of Quantz's ideas that we read in Marpurg and Türk, one might simply dare to think that his tempo theory is simply unreliable. But tempo values proposed by French *chronométristes*, e.g., l'Affilard (1705), Loulié (1696) and others, are even more embarassing, in that they fairly unanimously recommend tempi that today seem surprisingly (or impossibly) fast. Since the 1970's, the French data have triggered a new flare-up of the old tempo debate, mainly in circles of the Basel *Schola Cantorum*. Willem R. Talsma, one of the central figures of the so-called "new Langsamkeit" and author of *Anleitung zur Entmechanisierung der Musik* (1980), has been invited to the *Schola* as guest lecturer; but his ideas seem to have aroused strong antagonism. Talsma was sharply criticized (1988) by Peter

^{307 &}quot;Die Wörter, welche den Grad der rascheren oder langsameren Bewegung bezeichnen: Largo, Adagio, Andante, Allegro, Vivace etc. muss man in der alten Bedeutung nehmen, nicht in der neuen [...] Allegro heisst blos munter und Vivace lebhaft, ohne alle Uebertreibung. Das alte Adagio ist meistens nicht so langsam, wie das unsrige." (*J. S. Bach's Compositionen für die Orgel*, F. C. Griepenkerl & F. Roitsch, eds., Leipzig: Peters [1844], Vorrede, p.III.)

³⁰⁸ Dolmetsch, The Interpretation of the Music of the 17th and 18th Centuries, 28.

³⁰⁹ Eugène Borrel, L'Interprétation de la musique française (1934; R/1978).

Reidemeister,³¹⁰ Director of the *Schola*, and by Klaus Miehling, whose final thesis, and the book based on it,³¹¹ are devoted to refute Talsma's ideas, advocating a policy of fast tempi for nearly all Baroque music.³¹²

Present-day reactions to the French chronometric data have been quite diverse. Some authors-performers (Dart, Kirkpatrick) have quoted them, while their own Bach performances hardly show that they have internalized these data.³¹³ There is a similar situation with Quantz's tempi: they have been often quoted, critically or otherwise, but hardly any performer has seriously tried to put them into literal practice. This situation seems to have aroused the wrath of Miehling, who deplored that "tempo had long been the stepchild of historical performance practice."³¹⁴

Miehling's monograph is a typical example of the veneration with which present-day performance-practice circles treat historical manuals, forgetting that authors of the past had just the same difficulties and ambiguities in verbal discussion of music as we do today. In most classical music treatises one comes so often upon passages which are unclear to a present-day reader. The main reason for this is that their authors had a very definite public in mind, who directly experienced the music in question. A contemporary score was for those readers, whether experts or dilettantes, live music, and not a historical document to be deciphered, edited, or transcribed. Some authors, now as then, are biased, over-simplifying or exaggerating, and it would be erroneous to interpret them literally. The same may be said of some present-day reinterpretations of historical treatises, which often repeat the same exaggerations and errors of the originals.

The two treatises of Talsma and Miehling, although diametrically opposed in their positions, are similar in their partiality and extremistic attitudes. I shall deal with Miehling first, although his work was preceded, and actually triggered, by Talsma's work. Miehling tries to prove, for example, that the tempi given by l'Affilard to the "Airs de mouvement" in his *Principes très faciles* ($^{5}/1705$) are technically feasible and axiomatically right, and therefore should be strictly and

³¹⁰ Peter Reidemeister, Historische Aufführungspraxis, 1988.

³¹¹ Klaus Miehling, Das Tempo in der Musik von Barock und Vorklassik: Die Antwort der Quellen auf ein umstrittenes Thema, 1993.

³¹² I am indebted to Mr. Rolf Mäser and to Ms. Yocheved Schwarz for elucidating to me the *Schola Cantorum* background.

³¹³ Thurston R. Dart, *The Interpretation of Music*, London, 1954; see also his recording of the Bach French Suites (1961), Decca SA 5. Ralph Kirkpatrick, "Eighteenth-century Metronomic Indications", in *PAMS* 1938, Washington D.C.: 1940, 30–50. Bach-recordings (1959, 1960, 1961) Deutsche Grammophon, 439465–2.

³¹⁴ Miehling, ibid., 13: "daß das Tempo lange Zeit ein Stiefkind der historischen Aufführungspraxis gewesen ist."

absolutely observed.³¹⁵ Miehling's eagerness to vindicate fast tempi for the entire Baroque era mars the considerable effort invested in collecting and interpreting an impressive body of sources. But he often stumbles into pitfalls, ignoring the fundamental difference between instrumental and vocal tempo, or misreading the simple technical explanations by Jean Rousseau.³¹⁶ He tries to present tempo as a primary parameter, prior to affect, ornamentation, articulation etc. The other factors, according to him, should adapt themselves to the 'right' tempo, not the other way, contrary to the letter and spirit of 17th- and 18th-century writings. It is remarkable that nearly every 18th-century source (including a condemntation of too fast tempi, or even a testimony of how an extremely fast tempo, to prove that it was possible to achieve. In order to prove his main tenet, "fast is beautiful," Miehling leaves no stone unturned. Any evidence of any kind, historical or musical, from any time or period, from Mersenne to Schönberg, is taken into account, but its meaning is often distorted, to enable the author to arrive at the desired result.

Talsma's point of departure in his *Anleitung zur Entmechanisierung*³¹⁷ may have been based on an earlier article by Erich Schwandt.³¹⁸ They both propose a remarkable hypothesis, according to which all chronometric, metronomic, or other quantitatively defined tempo data of the 17th or 18th century have to be read doubly slow than we read them nowadays. Schwandt dicusses L'Affilard and French Baroque composers, but Talsma extends this principle until after Beethoven's time. For example, if Beethoven prescribed for the Finale of the Pastoral Symphony *Allegro* **c**, J = 60, one should put the metronome weight on the figure 60, but instead of counting each tick of the metronome (= 1 second) as the duration of one J, one should count *two* ticks, and take each second as the duration of one J. The Schwandt-Talsma hypothesis has no historical corroboration whatsoever, as has been amply shown.³¹⁹ The theory was first introduced by Schwandt, in order to explain the extremely and unexpectedly fast tempi of the French *chronométristes*.

³¹⁵ Michel L'Affil[l]ard, Principes très faciles pour bien apprendre la musique, Paris: Ballard, 1697; 1702; 5/1705; R/1970. Miehling criticizes a musical performance in the circles of the Schola Cantorum and a subsequent article in the Basler Jahrbuch für Musikpraxis (1987), because the tempi taken in the concert were one to three metronome notches slower than those prescribed by l'Affilard (Miehling, ibid., 422f).

³¹⁶ Miehling, 49. The expression "la moitié plus légérement" is erroneously read as "one and a half times faster" (instead of "twice as fast"), and practically interpreted as three times faster.

³¹⁷ Willem Retze Talsma, *Wiedergeburt der Klassiker*, Band 1: Anleitung zur Entmechanisierung der Musik, Innsbruck: Wort und Welt, 1980.

³¹⁸ Erich Schwandt, "L'Affilard on the French Court Dances" MQ 1974, 389-400.

³¹⁹ The entire work of Miehling has been written, in fact, as a refutation of Talsma's ideas. See also Wolfgang Auhagen, "Chronometrische Tempoangaben im 18. und 19. Jahrhundert", AfMw 44 (1987), 40–57; and Peter Reidemeister, Historische Aufführungspraxis, 107–35.

But accepting Schwandt's original hypothesis leaves us with incredibly slow values for slow movements, which obviously cannot be accepted. To overcome this difficulty, Talsma has proposed the idea that the "double-tick", or so-called "metrisch" way of reading of the metronome should be applied for *fast* tempi only, whereas for the slow ones the metronome is read "mathematisch", i.e., in the usual way.³²⁰ Concerning 18th-century chronometric data, Talsma's calculations thus marvelously reduce the maximal tempo variability range, as given by Quantz, for example, from 16:1 to 4:1.³²¹ If Quantz really meant such a "harmless" variation range, it should be asked why he was criticized – or misunderstood – by Türk (1789), who allegedly used the "metric" system. Perhaps the absence of historical basis for Talsma's hypothesis is less disturbing than its logic and musical consequences, particularly in the form presented by Talsma. To get such results from the Quantz tables, for one example, a remarkable measure of intellectual acrobatics is required. One cannot help asking, what exactly should happen on the borderline between "fast" and "slow": at what point exactly should one stop reading the metronome in the "mathematical" way and shift to the "metrical" one. An even stranger way of using the metronome is proposed by Talsma for fast ternary meters, such as the Beethoven scherzi. For values like $\downarrow = 116$ (Scherzo of the 9th Symphony), one should allot two metronome ticks for each ternary measure $\frac{3}{4}$!), in order to get the desired result, which Talsma terms "metrisch-musikalisch".

Beyond showing the inadequacies of both opposing tempo theories of Talsma and Miehling, it is much more interesting to understand the psychological and aesthetic motivation behind them, which within the scope of the present work will be only briefly mentioned. Slow pace has been often associated with sacred music, or with spirituality in general. We see numerous remarks to this effect, from Cerone (1613) to the present.³²² In the introduction to his *Livre d'orgue* (1688), André Raison advises to slow down the pace at cadences: "qu'il faut donner la cadence un peu plus lente à cause de la sainteté du lieu."³²³ Modern authors do not always speak in explicitly religious terms; but in view of Bach's pious image as cultivated by Schweitzer, and his advice to play Bach "the slower the better" (although the explanation given is Bach's complex polyphony), the association is apparent. Talsma uses a different spiritual terminology: In his foreword he deplores the present-day manner of rendering the Classics (mainly Beethoven) as mechanized,

³²⁰ Talsma, 109-114.

³²¹ Talsma, 114.

³²² Quotation from Cerone, see above, 1.1, note 12.

³²³ Quoted in Borrel, L'Interprétation de la musique française, 167–8. Also Quantz suggests restrained tempi for church musik, in order to render it kirchenmäβig [proper for the church]. (Versuch, p. 266).

impersonal, often even aggresssive; "Inzwischen hat die Erfahrung gelehrt, daß Kompositionen der Klassiker, wenn man sie in den ursprünglichen Tempi und mit dem dazugehörigen Vortrag spielt, eine tiefe Humanität ausstrahlen".³²⁴ Nearly every phrase in Talsma's introduction reveals his campaign not only for the "right tempo", but also of wider cultural consequences, namely that of "Humanität," as opposed to the belief in Technological Progress. Miehling, too, does not abstain from an occasional moralistic tone, for example, when he blames any call for tolerance about historic tempi as Doppelmoral.³²⁵ The 'half-speed' theories of Schwandt and Talsma, as well Miehling's critique (in common with Roger North's reasoning against fast tempi), are not devoid of a sociological background. Both reflect a struggle between two generations of 'authentic' performers. The older one is on the defense against an upcoming new generation of instrumentalists and singers, with remarkably higher technical and instrumental standards, that might undermine the traditional (now labeled as "late romantic") view of Baroque tempo, dear to semiamateurs, who dominated the early-music scene in the 1950's and 60's. There is some truth in Miehling's arguments: much of the dispute of today's "lentists" and "prestists" repeats similar ones in the 18th and 19th centuries. Some of Talsma's arguments about the "impossibly" difficult today's tempi even remind of Roger North's campaign against modern high speeds.

In conclusion, both parties seem much more convincing in criticizing each other than in stating their own positions. Perhaps the reason for the inherent error of both is their prophet-like claim on absolute truth, leaving no place for any doubt. This attitude is already evident in the titles of both monographs: Miehling's "DAS Tempo in der Musik von Barock und Vorklassik" sounds as if there can be only one right tempo, or coherent tempo system, for an entire style period, or as if there has been, in any time of history, a general agreement about tempo. But differences of tempo, temperament, taste – and age – have always existed.

 ^{324 &}quot;Meanwhile, experience has taught that Classical compositions, when played in their original tempi and with the appropriate interpretation, radiate deep *Humanität*", Talsma, ibid., 7–8.
325 Michling, Das Taumo in dar Musik, 417

³²⁵ Miehling, Das Tempo in der Musik, 417.

11. Some Doubts for Conclusion

11.1 Can tempo be defined?

Starting with a working definition of tempo, we may take Apel's formulation, "*The* speed of a composition or a section thereof, ranging from very slow to very fast".³²⁶ But then we should also ask what exactly is being measured. We may take, for example, the average density of note attacks; but the usually preferred parameter is the duration of a fixed unit, represented by one note value (commonly $_2$ or $_4$) and chosen as the "beat". Let us re-examine some examples from the Finale of the A minor Triple Concerto *BWV* 1044/3 (¢, *Allabreve*), already discussed before (5.1): (a) beginning of the first *Tutti* (Example 18); (b) first solo entrance (Example 19); (c) the 16th-note section (Example 21).

Supposing that all sections are played with the same beat rate (e.g., J = 72-80), let us then ask: should all these examples be considered of the same tempo? A positive answer would be equivalent to identifying tempo with the rate of the beat (or the *conductor's* beat). This is also tacitly assumed by Sachs (though Apel has some qualifications).³²⁷ In the estimation of both, the variability range of the musical beat rate is rather limited (Sachs: M. M. 32–132 [ca. 4:1]; Apel: M. M. 50–120 [2.4:1]). Such a narrow range is explained by the fact that we tend to adapt the beat rate into physically manageable sizes. When beats become too fast, one tends to group them together, usually by twos or threes;³²⁸ when too slow, we subdivide them. Perhaps a more accurate description would be that several beat levels coexist simultaneously; the conductor, performer or listener only has to shift his/her attention to the predominant level, according to habit and convenience, as well as the rhythmic character of the music. To further elucidate this, let us consider some more examples. The first one is Bach's D major *Allabreve* for organ, *BWV* 589 (Example 53). It bears the same tempo indication *and* time signature as *BWV* 1044/3.

Let us suggest here a beat rate, e.g., of J = 104, some 40% faster than the one suggested for the Concerto. Now we ask, which of both pieces is the faster one. It is

³²⁶ The Harvard Dictionary of Music, 2nd Edition, London, 1970, 836, "Tempo". Newer definitions of tempo are not more precise (for example, the one given by Justin London in New Grove Dictionary 2nd ed.: "TEMPO: Literally, the 'time' of a musical composition, but more commonly used to describe musical speed or pacing. Tempo may be indicated in a variety of ways").

³²⁷ Curt Sachs, Rhythm and Tempo, 33; Apel, ibid.

³²⁸ The *locus classicus* of hypermetric beat grouping is Beethoven's Scherzo of the *Ninth Symphony*.

quite clear that *BWV* 589 sounds slower then the Concerto; one may, however, object that the different *motion* of each piece does not enable us to see the ₂ of the Concerto and the organ piece as equivalent. But even if we take the ₁ as the beat level of *BWV* 589, in the spirit of "old" *stile antico*, the comparison will not be much easier. We may try a speed that will suit both the \downarrow of the Concerto and the \circ of *BWV* 589, without becoming a musical absurdity, although such tempo will be rather heavy for the Concerto or too fast for *BWV* 589: for example, $\downarrow /_{\circ} = 63-66$. Even then, *BWV* 589 is felt as slower than *BWV* 1044/3. The obvious reason for that is the constant busy motion of the concerto texture, mainly in the triplets of the Cembalo part, which still remain $1\frac{1}{2}$ times faster than the quarter-note motion of the organ *Allabreve*. Thus the surface activity decidedly contributes to the feeling of speed, or tempo, not in accordance with the definitions of Sachs and Apel.





As another example, let us take a piece with a mid-movement tempo change, the C minor Prelude, *WTC* I, at the point of transition to *Presto* (m. 28).³²⁹

Example 54: BWV 847/1: WTC I, c minor Prelude, tempo transition



³²⁹ The return to tempo I is marked in m. 36 by Allegro.

The change is probably not intended here as a doubled speed. Had Bach wished it this way, he could write the transition (m. 28) without any tempo mark, but substitute \$ by \$ This is precisely what he does in the long *cadenza in tempo* of the first movement of the 5th Brandenburg Concerto, where he first doubles the note values from \$ to \$ (m. 194–5); later on, using sextuplets (or \$ triplets; mm. 298–9), he achieves a written-out *ritardando*, leading back to the initial \$ motion. An exact *sesquialtera* (3:2) relationship in the c-minor Prelude would be out of place, or even meaningless, on metric grounds (see 7.3). Although the change of speed is probably less than 2:1, the unmistakable effect of the *presto* transition of the Prelude is of speeding up, while the *doubled* speed in the Concerto is perceived as keeping the same tempo.

In pieces that keep the same beat throughout one may disregard varying densities of texture and motion and speak of an entire movement as consisting of one beat, one meter, and one tempo throughout, until compelled by the music to acknowledge that a significant change has taken place. Time- and key-signatures are traditionally expected to remain the same throughout an entire piece, albeit with some exceptions. A reason for this habit is that tempo, meter, and key are notions derived – consciously or not – by a process of generalization which also entails, especially for 18th-century music, a certain 'inertia'. Though one traditionally tends to think of these characteristics as constant for an entire piece, one should bear in mind that tempo is perceived by way of 'extraction' from other variable parameters. While the rate of the beat is usually considered as constant for an entire movement or section, its *motion* (in the Kirnbergerian sense) usually varies. But precisely this dimension is musically the most relevant, the one normally identified with 'tempo', though it is much harder to define and measure. Thus, in reality, the tempo of the above-mentioned examples *cannot* be compared.

"Tempo may be indicated in a variety of ways." However, restricting it to the range of a physically convenient conducting beat is limiting indeed, since it deprives us of the notion of the nearly unlimited range of speeds, from the vertiginous bravura of a brilliant virtuoso to the nearly motionless one-note chanting of Bud-dhist monks. Apel has been aware of the problem, rightly defining tempo as ranging from "the very slow to the very fast". Thus one cannot ignore also the role of so-called surface activity of very fast notes as an integral aspect of tempo. Conversely, considering every note as immediately relevant to our tempo sensation would be too narrow-scoped. It appears that what we usually term (or feel as) tempo is a combination of several factors: the (short-range) speed of individual note attacks, and (middle-range) rate of the predominant beat level.

One might add other long-range parameters, such as harmonic rhythm, hypermeter and phrase structure. Other performance-dependent parameters, such as the relative weight of accents, the degree of articulation, and, notably, the rhythmic conventions and habits of performers and listeners, serve as important factors in the process of evaluating tempo. The above description brings the idea of tempo very close to Kirnberger's concept of motion, or the French *Mouvement*, whose meaning is too wide as to be comprised by a simple definition or mechanically measured. But, since we deal here with articulation, accentuation and agogics, perhaps the most sensitive aspects of performance practice, a more simplified concept or a clear-cut definition would be hardly adequate.

The feeling of tempo results from an interaction of the higher beat level with its smaller subdivisions, depending also on the relative prominence of the smaller durations in the larger metric units. This is determined by the texture of each composition, as well as the unique manner of accentuation and articulation of each individual performance. Thus the same metronomic tempo in the same piece may sound 'right' for one performer (and one occasion) and 'wrong' for another. Performers never passively choose a given tempo but actively make it, or at least 'justify' their choice by a combined adaptation of speed, articulation and accentuation. Some of the indications concomitant with tempo are implicitly denoted by the tempo words themselves.³³⁰ Therefore, tempo words are in some respects a much more sensitive tool than metronomic numbers, even if their finesse is achieved at the expense of their stability. J. P. Marty is on the right track in making a distinction between (measurable) speed and (unmeasurable) tempo. He also addresses with remarkable sensitivity the problem of the predominant beat levels, trying to establish, for Mozart's music, additional subcategories in each tempo class (Allegro, Andante etc.) and each meter, according to the relative prominence of their 'main-beat' and 'secondary-beat' levels.³³¹ But even Marty's most interesting endeavour is still a highly simplified account of rhythmic reality.

11.2 A very secret art

The first chapters of the present work have been devoted to learn to what extent we can have an idea of the tempo from the musical text alone. The art of reading the right tempo 'from the music itself', as advocated by 18th-century authors, defines the term *Tempo giusto*, as given by Walther, Marpurg, Leopold Mozart, and Kirnberger (see 8.8). Some of these authors mention the considerable knowledge and experience necessary for mastering this art. To what extent, if at all, are we able

³³⁰ For the character of *Andante*, as one example, see Walter Gerstenberg, "Andante", *KB Kassel* 1962, 156–8.

³³¹ J.-P. Marty, Les indications de tempo de Mozart, 1991, 21-30.

nowadays to read the tempo from the music alone, lacking any incontestably clear indications about the actual performance practices of the past. Many of us know the experience of looking in a score and getting an immediate, unerring feeling what the tempo of the piece should be. This happens often with the music of Bach, perhaps because we have no other clue other than the plain notation to rely on. What about other Baroque composers?

I am tempted to conduct here a thought experiment, letting the reader roughly estimate the tempo indications (fast, moderate, or slow) of the following ten incipits, all of the same genre, and by the same composer, on the basis of their incipits (Examples 55, a–j).



Example 55

а


e



f



g



170



Perhaps the most striking fact about the original tempo markings of these examples³³² is the complete lack of correlation of their genre, *Allemanda*, as well as the predominant note values, with their tempo indications. Thus the difficulty of the task seems to be objectively inherent in the music. Rhythmic texture and genre are important criteria of determining tempo, but apparently they too may be misleading. The art of reading the 'right' tempo from the music itself, advocated by 18th-century authors, was part of the definition of *Tempo giusto*. But this art is impossible to achieve without an external support to the written score. Trying to translate timeless graphic notation into durations is like inferring the dimensions of an un-

³³² All examples are from Corelli's Trio-sonatas: a) Op. 2/8, Preludio, Adagio; b) Op. 4/11, Allemanda, Allegro; c) Op. 4/1, Allemanda, Presto; d) Op. 4/6, Allemanda, Allegro; e) Op. 2/8, Allemanda, Largo; f) Op. 2/10, Allemanda, Allegro; g) Op. 2/2, Allemanda, Adagio; h) Op. 4/2, Allemanda, Allegro; i) Op. 2/1, Allemanda, Largo; j) Op. 2/4, Allemanda, Presto.

known terrain from a map, of which we do not know the scale. In this respect, the old authors spoke from quite a different perspective than nowadays, as they had at their disposal the scale to the secret map, a code provided by long practical experience, based on oral (and aural) traditions.

Even the very idea that there is *one* right tempo for every piece, either by Bach or by any other composer, old or new, may be contested or taken with some skepticism. Though it is self-evident that a composer has a clear notion of the tempo of his own piece, even the author's own idea about the tempo may be tolerant and changeable, comprising its own degrees of freedom. This is especially true for styles where essential details of performance, such as ornamentation and thoroughbass realization, were to a large extent left to the care of the performer. Since ornamentation, especially of slow movements, was assigned to the discretion and improvising abilities of the soloist, the density of the notes added to the written skeleton varied considerably, as confirmed by Quantz. Any attempt to strictly determine the tempo of an Italianate Adagio is thus meaningless.³³³ The difficulty of giving precise rules to determine 17th- and 18th-century tempo is twofold. Historically objective external data (metronomic and other) are insufficient, and their scarcity alone makes them unreliable. Our musical criteria, or internal evidence of the score, are even a less secure ground; witness the fast changing notions in the last few decades about the nature of tempo in early music. As seen in the above examples, it becomes unclear to what extent musical types and textures contain in themselves their own unambiguous tempo implications, even though some of the abovementioned 18th-century aouthors believed it to be so. In other words, the idea that similar genres, or types within a genre, necessarily imply identical tempi – a recurring proportionistic thought - has some pitfalls. The idea is not new: in fact, it is the kernel of Kirnberger's Tempo giusto theory, which, not unlike Quantz's tempo classes, reflects the period's predilection to typology and classification.³³⁴

A whole line of literature, initiated perhaps by Friedrich Smend, is characterized by a common belief in some old secret codes hidden in Bach's music, that just wait to be deciphered. These secrets range from theological messages, encoded in gem-

³³³ Quantz, Versuch, XIV, §4 (p. 137): "Im italiänischen Geschmacke, wurden, in vorigen Zeiten, gar keine Auszierungen darzu gesetzet; sondern alles der Willkühr des Ausführers überlassen". On the influence of the style of ornamentation on tempo, see Neal Zaslaw, "Ornaments for Corelli's Violin sonatas, Op. 5", EM 24 (1996), 95–115.

³³⁴ Ulrich Siegele, "Von Bachschen Modellen und Zeitarten", FS Gerstenberg, 162–5; Bodky, The Interpretation ..., p.143–5. The most outspoken in this line is Frederick Dorian: "Indications for determining the correct time are [...] furnished by the score script itself. Time signature and notation automatically provide the necessary information for the tempo" (The history of Music in Performance, p.143, quoted in Bodky, 109).

matria of measure numbers, to precepts of performance.³³⁵ Most representative of this line, as far as matters of tempo and rhythm are concerned, are the abovementioned works of the Gerstenberg circle (Siegele, Machatius, Barthe), Rothschild's *The Lost Tradition in Music* (1953), and the monographs of Talsma and Miehling, discussed above. Although each of these treatises represents a different line of thought, their common denominator is the belief in 'old secrets', as implied – or betrayed – by the titles of Rothschild's and Rolf Mäser's works (Mäser, *Bach und die drei Temporätsel*), as well as by Miehling's subtitle ("*Die Antwort der Quellen auf ein umstrittenes Thema*"). F. Rothschild speaks openly about the codelike nature of his so-called *Old Tradition* of performance:

"The markings of the composers of the 17th century and of their great successors Bach and Handel [...] were almost in the nature of a code. A great number of conventions and rules, which were faithfully observed by the composers, gave very exact directions to the performer. [...] These rules and conventions were closely connected with the time signature; they formed a tightly knit system in which the time signature denoted the value of the capital note (... equal to a whole bar) [...] the note values which appeared in the course of a composition indicated its movement."³³⁶

Although Rothschild's statements, concerning the role of time signatures and note values in determining the tempo and motion of a given composition, echo the precepts of Kirnberger and L. Mozart, as well as other 18th-century theorists, his tendency to 'prophesy the past' entails a somewhat oversimplified view of the facts. The lost tradition of performance practice was a living tradition, that is, an *oral* one. As such, it was by definition never unified or tightly knit, nor free of contradictions, ambiguities and discrepancies, abounding in local, national, and individual differences of taste and opinion. A vital part of it must have been communicated not even verbally, but by pupil imitating teacher. These reasons alone suffice, unfortunately, to regard this tradition (or rather traditions) as irretrievably lost. Its rediscovery by present-day or future research, or its preservation in some yet unearthed 18thcentury writings, are equally improbable.

11.3 The relevancy of proportion

The concept of proportion, in its Pythagorean sense, is of utmost importance in music – when precisely applied. Proportions of small whole numbers (2:1, 3:1, 3:2, 4:3), fundamental in determining harmonic intervals and known since antiquity, are

³³⁵ See Helga Thoene, "J. S. Bachs Ciaccona: Tanz oder Tombeau", *Cöthener Bach-Hefte* 6 (1994), 15–81. This is one of the glaring examples of uncritical hunt for secret messages.

³³⁶ Fritz Rothschild, The Lost Tradition in Music: Rhythm and Tempo in Bach's Time, 1953, 2f.

of utmost significance in the domain of pitch and in rhythmic short-range phenomena. One cannot think of 'measured music' or rhythmic notation of any kind, old or modern, in which the basic proportions do not play a vital role. Moreover, exact proportions (of either time or pitch) are immediately, precisely and reliably recognized by a trained ear. But in larger dimensions or extended compositions, exact proportions are hard to perceive, therefore less relevant. Our reservation concerns Pythagorean mathematical ratios of small whole numbers, as well as more complex, 'irrational' proportions (notably the Golden Section). The problem of irrational relations in music is complicated by the fact that these do not have any meaning in small-scale musical phenomena. In fact, they are never directly perceived, experienced or measured, but can only be inferred, or approximated.³³⁷

Perhaps the answer why rhythmic proportions are mainly relevant for shortrange phenomena is surprisingly simple. Our system of rhythmic notation is 'proportionistic' by definition. Simple proportions are introduced into rhythm by means of the very nature of our rhythmic notational systems, mensural or modern, by the fact that all durational relations of the basic units are generated solely by two numbers: either 2 ("imperfect") or 3 ("perfect"). This relationship has been preserved to the present day: all time symbols formally relate to each other by 1:2 (\circ , \downarrow , \downarrow etc.) or by 3:2 $(\frac{1}{2})$. It should be noted that these two numbers also generate the entire system of Pythagorean intervals (the number 5 was not accepted as a generator of musical intervals). Observing short-range musical objects, such as single measures, phrases and periods, one naturally deals with fairly small numbers, thus proportions between these numbers are a most common occurrence. The same principle may be extended to small musical forms, by phrase symmetry and repetition. But in extended pieces one has to deal with very large numbers of notes, measures and phrases, and the chances of encountering the same 'Pythagorean' ratios diminish remarkably. Such proportions in extended sections, even when they exist, are not directly detected by listening, but by measure- or note counting. The dominance of the factors 2 and 3 in traditional proportions in Western music theory is taken for granted, while proportions based on 5 or 7, common in the rhythms of Indian music, for example, have been ignored, or simply rejected. Some 'classical' scholars have even made efforts to delegitimize such proportions in the realm of music.³³⁸ Such argumentation, tacitly incorporated into modern 'proportionistic' tempo theories, considerably limits the 'universality' presumed by neo-Pythagorean trends in musical thought.

³³⁷ Ascribing the concept of Golden Section to works earlier than the 19th century is also historically problematic. See Ruth Tatlow, "Golden Number" in *New Grove* 2.

³³⁸ Decartes, Compendium of Music, 13-15.

Coda

In the introduction to the present study some theoretical questions have been posed which I will briefly restate here:

- a) Can we formulate a general theory of tempo, its behaviour and modes of change?
- b) What was the role of 'normal', or standard tempo in Baroque music?
- c) Should the tempo of the music of Bach and his contemporaries be regarded primarily as an 'objective' or 'subjective' entity: is it derived from the other parameters of the music (e.g., rhythmic and metric qualities, distribution of note values, melodic and harmonic characteristics etc.), or is it subjectively imposed by the composer or performer?

a) More than one theory of Baroque tempo has been proposed, before and after Bach's time and unto the present. However, none have proved to be historically accurate, nor to set forth any convincing esthetic imperative.

b) 'Normal' or standard tempi are of long standing in the history of notational and rhythmic theory. One of them was the *tactus* of the Renaissance, a fixed theoretical magnitude, from which other beat rates were to be derived by proportions. The related Baroque concept, *Tempo giusto*, occupying a central place in Kirnberger's theory, was well known to 18th-century theorists and composers (Rameau, Handel, L. Mozart, Marpurg, Türk); but although they mentioned it frequently, no one of them tried to set *Tempo giusto* metronomically. (it was Quantz, who did try to fix metronomic tempi, but his tempo theory ignores *Tempo giusto*.)

c) Some objective rhythmic qualities, inherent in the *Notenbild*, may influence the selected tempo of performance. I have tried to trace the role and evolution of these rhythmic factors in Part I (Chapters 1–5), from the perspective of durational strata. The weight of such qualities is particularly prominent in traditions that did without tempo indications. An analysis of durational strata in 16th- to mid-18th-century styles is often the only indicator to be relied on. But later on, with the growing use of tempo words, and then, with the development of special devices for measuring and fixing tempo (heartbeat pulse, pendulum, various *chronomètres*, and Mälzl's metronome), the significance of the rhythmic *Notenbild* as a tempo-determining factor declined: one could now have the authority of the composer speaking to us directly, bypassing the score, as it were. Still, there have always been those who doubted the value or usefulness of these methods altogether, considering them a pedantic exercise rather than a way to achieve eloquent performance. The belief in an absolutely objective and fixed tempo in some quasi-legendary period in history,

as expressed by Apel (1.1), seems nowadays like wishful thinking more than reality.

Here again we encounter the problem of musical theorizing: is it primarily intended to prescribe rules of conduct to musical practitioners, or limited to describing past and present practices? It seems that both normal tempo and the 'objective' tempo data of a musical text, though easily given, remain virtual, rarely adhered to by performers. The eternal gap between theory and practice is well-known in all music disciplines. The reasons for this have been aptly formulated by Schönberg in the opening chapter of his *Harmonielehre*.³³⁹ Schönberg rightly claims that musical 'theories' are actually not theories at all, but systems of rules or precepts. Moreover, his argument about harmonic theory rings all the more true when applied to the unsystematic collection of rules of thumb now called 'performance-practice'.

Modern performance-practice literature is largely based on quoting and interpreting old treatises and performing manuals, often with the same old didactic prescriptive tone even today. As mentioned in the introduction, this approach, originating in instruction books for beginners, is the least appropriate method of describing the practice itself. Unfortunately, too many works on performance practice from the second half of the 20th century still confuse between describing actual practice and prescribing the "right way" – which in the end is bound to prove wrong. One cannot theorize or philosophize and give orders in the same breath.

Quantz and Kirnberger represent the extreme opposites of tempo philosophy: Quantz (perhaps on grounds of practicality rather than principle) presented a rigid, quasi-proportionistic picture of tempo as a variable, whereas Kirnberger regarded it as a flexible, rubber-like entity. Equally conspicuous is the discrepancy between Quantz's precepts and the tempo indications in his own music. But it is their difference of method, ultimately leaving one with the dilemma of choosing between impractically rigid 'practical' instructions, or precepts vague enough as that may never become explicitly wrong. But examining Bach's actual policy of tempo indications is even more perplexing, as its lack of system does not even approximate any of the tempo philosophies of his time – or ours. Should we then reject all theoretical approaches to the question of tempo as inadequate?

There is another option, namely to regard these theories as philosophical *meta-phors*, or attempts to establish order and meaning in a chaotically unsystematic reality, rather than rules to be followed, or as exact representations of actual practice. Even extremely proportionistic tempo theories that, taken literally, strike us as far-fetched, may become more acceptable, even enlightening, when viewed as metaphors. 18th-century tempo theories, revealing how contemporary musicians imag-

³³⁹ Arnold Schönberg, Harmonielehre, 1-6.

ined the dimension of musical time, may serve even today as a source of inspiration to performers, whether strictly observed in practice or not. From this aspect they should not be underestimated.

Strict tempo rules are indeed not a new invention; but Saint-Lambert, who tried to formulate them as precisely as he could, wisely sums up his endeavour:

[19*] "Voila quelles sont les règles établies dans la Musique, touchant le mouvement des Pièces; mais voila des toutes les regles de cet Art, celles qui sont les moins observées par ceux qui les professent".³⁴⁰

³⁴⁰ Saint-Lambert, Les principes du clavecin, 23f.

APPENDIX

A. Collective lists of Bach's Tempo Indications

List I: Vocal Works

- A *BWV* number (year of composition, if known)
- B Genre or title
- C Tempo word or its absence, denoted by (-), (time signature, predominant fast note values). // denotes tempo and/or metric changes within a movement; m. denotes measure number. Other remarks are given in square brackets. Asterisks preceding the *BWV* numbers stand for pieces with mid-movement (internal) tempo changes.

No.	А	В	С
	CANTATAS		
1	*2/2 (1724)	Recit. T [+ Cho-	Adagio (c,) // m.2 Recit. // m.6 ada-
		ral]	gio // m.8–13 Recit
2	*2/4 (1724)	Recit. B	(−) (c , <i>I</i>) // m.8 arioso
3	*2/5 (1724)	Aria T	(−) (c ,) // m.63 adagio [m.65 D. C.]
4	3/1 (1725)	Chorale	Adagio (c, 🌒
5	*4/2 (1707/8)	Chorus]	Allegro (c, 🎝) // m.48 alla breve
6	*4/4 (1707/8)	Solo Chorale T	(−) (c , <i>𝔅</i>) // m.48 alla breve (<i>𝔅</i>)
7	5/4 (1724)	Recit. a tempo A	(–) c [+ Chorale in Ob. I]
8	5/5 (1724)	Aria B	Vivace (\mathbf{c} , $\overset{3}{\checkmark}$)
9	*6/1 (1725)	Coro	$(-) (\frac{3}{4}, \mathbf{b}) // \text{ m.80 and ante } (\mathbf{c}, \mathbf{b}) // \text{ m.114}$
			$(\frac{3}{4}, \frac{1}{2})$
10	6/3	Chorale	Allegro (ϕ , λ) [$\approx BWV$ 649, c]
11	*7/5 (1724)	Recit. B	$(-) (\mathbf{e}, \mathbf{b}) // \text{m.6-12}$ and ante
12	*9/4 (1732/35)	Recit. B	(−) (c ,) // m.14–16 arioso
13	10/1 (1724)	Chorale (concer-	Vivace (c,)
		tato)	
14	*10/6 (1724)	Recit. T	(−) (c ,) // m.7–22 and ante (T), adagio
			accomp.(Bc)
15	11/9	Chorale	Vivace $\begin{pmatrix} 6\\4 \end{pmatrix}$
16	12/1 (1714)	Sinfonia	Adagio assai (c, 🔊)

17	*12/2	Chorus	Lente $\binom{3}{2}$,) // m.49 un poc' allegro //
			m.82-89 andante/ D. C.
18	14/4 (1735)	Aria B	(−) Vivace (c , ♪)
19	16/1 (1726)	Chorale	Vivace (\mathbf{c}, \mathbf{A})
20	*18/2 (1715)	Recit. B	(−) (c ,) // m.5 and ante //
			[m.7-10 recit.] // m.11-15 and ante
21	*18/3	Recit. S, A, T, B	adagio (c ,)) // m.12 allegro //
			m.20 Recit. // m.28 allegro //
			m.30 adagio // m.32 allegro //
			m.39 Recit. // m.49 allegro // m.60
			Recit. // m.81-88 allegro
22	19/5 (1726)	Aria T	Adagio $({}^6_8, \mathbb{A})$
23	*20/1 (1724)	Overture/Chorale	$(-) (\mathbf{c}, \mathbf{A}) // \text{ m.44 Vivace } (\frac{3}{4}, \mathbf{A}) // \text{ m.90}$
			(c) tempo I
24	*20/5	Aria B	$(-) \begin{pmatrix} 3 \\ 4 \end{pmatrix} // m.52-53 \text{ adagio} / D. C.$
25	21/1 (1714?)	Sinfonia	Adagio assai (c, 🎙)
26	*21/2	Coro	(−) (c , ♪) // m.38 Adagio // m.39
			Vivace // m.55–58 Andante
27	21/3	Aria S	Molt' adagio $\binom{12}{8}$, $\overset{1}{}$
28	*21/5	Aria T	Largo (c,) // m.24 allegro
			[] // m.28 adagio [= largo]
29	*21/6	Chorus	Adagio $\binom{3}{4}$, $\binom{3}{4}$ // m.10 spirituoso // m.26
			adagio // m.43 c (–)
30	*21/7	Recit. S, B	(−) (c ,) // m.13–15 a tempo
31	*21/11	Chorus	Grave (c ,) // m.12 (-68) allegro
32	*22/1	Arioso + Coro	(-) (c, $) // m.42$ allegro ()
33	23/1 (1723)	Aria Duetto S, A	Molt' adagio (\mathbf{c} , 3)
34	23/2	Recit. T	a tempo (c, 🎙)
35	*23/4	Chorale	Adagio (c, A) // m.17 andante
36	*24/2 (1723)	Recit. T	(−) (c , ♪) // m.20–26 arioso
37	*24/3	Tutti	(−) (³ / ₄ ,) // m.37–104 (soli) Vivace e
			allegro
38	*24/4	Recit B	(-) (c, 3) // m.17 and ante //
			m.18–24 arioso

25) Chorale	Alla breve (¢,)
31) Sinfonia [$\approx BW$	WV Presto $\begin{pmatrix} 3\\4 \end{pmatrix}$
1006/1]	
Arioso A	Allegro $(2, 1)$
738) Aria B	$(-) \begin{pmatrix} 3 \\ 8 \end{pmatrix} // m.118 adagio // m.121 tem-$
	po primo
. pars) Aria S	Allegro $\binom{9}{8}$, $\overset{\$}{}$)
1737) Recit. S, A, T,	, B (-) (c, 3) // m.7–9 and ante [voices in
	simult. Rec.]
Recit. S, A, T,	B (-) (c, 3) // m.10–13 and ante [voices in
	simult. Rec.]
15) Sonata	Allegro $\binom{6}{8}, \overset{1}{\bullet}$
Chorus	Allegro (c ,) // m.43 adagio [] //
	m.51–71 Allegro
Recit. B	(−) (c ,) // m.2 allegro // m.6 adagio //
	m.7 allegro // m.8 adagio // m.11 allegro
	// m.13 adagio // m.15 andante // m.23
	adagio // m.27-30 andante
Aria B	Molt' adagio (c, 🄊)
26) Aria S	Adagio (c, 🎙)
Aria Duetto S	, B Vivace (\mathbf{c}, \mathbf{k})
Tutti [Chorus]	Adagio (c,) // m.3–88 (–)2,)
Sinfonio	
Sinionia	Presto $(\frac{3}{8}, \bullet)$
er V.] Chorale T	Molt' allegro $(\frac{3}{4}, \overset{\$}{\bullet})$
24) Recit. S	A battuta (c, .)
725) Chorale	$(-)$ (c, $\frac{1}{2}$) // m.103 adagio ($\frac{3}{2}$, $\frac{1}{2}$) //
	m 110 prosto (4, 1) // m 183 (6, 1)
Aria T	$\frac{1}{2} \frac{1}{2} \frac{1}$
Alla I	Auagio (C, •)
Dooit D / Ch.	() (a) //m 7 15 allogra
Recit B. + Cho	(-) (c, $) // m.7-15$ allegro
Recit B. + Cho rus 731) Sinfonia	$(-) (\mathbf{c}, \mathbf{A}) // \text{m.7-15 allegro}$
	25) Chorale 31) Sinfonia [≈BW 1006/1] Arioso A 738) Aria B . pars) Aria S 1737) Recit. S, A, T, I5) Sonata Chorus Chorus B Aria B 26) Aria S Aria Duetto S Tutti [Chorus] Sinfonia Sinfonia er V.] Chorale T 24) Recit. S Aria T

61	*42/5	Recit. B	(−) (c , ♪) // m.10–11 animoso
62	*43/1 (1726)	Chorus	Adagio (c, N) // m.7–132 allabreve
			(¢, ♪) [¢¢ subdiv.]
63	43/3	Aria T	Vivace $(\frac{3}{8}, \mathbb{A})$
64	43/5	Aria S	Andante (c, 🄊
65	43/7	Aria B	Vivace (c, A)
66	*46/1 (1723)	Chorus	(−) (³ / ₄ ,)// m.67 Un poc' allegro
67	46/2	Recit. T	a tempo (c, 🄊)
68	47/1 (1726)	Chorus	Allegro (¢, ♪)
69	51/2 (1730)	Recit. S	(−) (c , <i>M</i>) // m.8–24 and ante [arioso]
70	*56/4 (1726)	Recit. B	$(-)$ (c , $) // m.8$ adagio $\begin{pmatrix}3\\4\end{pmatrix}$, $\begin{pmatrix}3\\4\end{pmatrix}$ [quoting
			BWV 56/1]
71	57/3 (1725)	Aria B	Vivace $\begin{pmatrix} 3\\4 \end{pmatrix}$
72	57/7	Aria S	Allegro $(\frac{3}{8}, \bullet^{\$})$
73	58/1 (1727)	Chorale + Aria S,	Adagio $(\frac{3}{4}, \sqrt{3})$
		В	
74	*60/2 (1723)	Recit. A, T	(−) (c ,) // m.8–12 and ante
75	*60/4	Recit. A, B	(−) (c ,) // m.4 arioso // m.9 recitativo
			// m.18 arioso // m.23 recitativo // m.31
			arioso // m.45 recitativo
76	*61/1 (1714)	Coro. Ouverture	$(-) (\mathbf{c}, \mathbf{b}) // \text{m.33 gai} (\frac{3}{4}, \mathbf{b}) //$
			m.86–94 (¢, ♪)
77	*63/2 (1714)	Recit. A	(−) (c , Å) // m.9 adagio // m. 26–32
			arioso
78	63/3	Aria S, B	Adagio (c, 🔊)
79	*63/4	Recit. T	(−) (c , Å) // m.4–12 andante
80	*83/6	Recit B	(−) (c , ♪) // m.3 a tempo // m.6–14 an-
			dante
81	*63/7	Chorus	(−) (c , ♣) // m.48–67 adagio / D. C.
82	*66/1 (1724)	Chorus	$(-) (\frac{3}{8}, \mathbb{A}) // m.156$ and ante
83	68/2 (1725)	Aria S	Presto (¢, 🌖
84	*69/4 (1748)	Recit T	(−) (c ,) // m.18–26 a tempo
85	*70/10 (1723)	Aria B	Molt' adagio $\begin{pmatrix} 3\\4\\ \end{pmatrix}$ // m.25 presto $[] //$
			m.53–68 adagio

86	*71/1 (1708)	Chorus	Tutti e animoso (\mathbf{c} , \mathbb{A}) // m.16 un poco
			allegro
87	71/2	Air S, T	Andante (c, \mathbb{N})
88	*71/4	Arioso B	Lente $\binom{3}{2}$, $$ // m.23 (c, $$) // m.41 $\binom{3}{2}$, $$
89	*71/5	Air A	Vivace $\binom{3}{8}$,)/m.11 (c,)/m.18 $\binom{3}{8}$,)
90	71/6	Chorus	Affettuoso e larghetto (\mathbf{c}, \mathbf{A})
91	*71/7	Chorus	Arioso (c , $\overset{\}{})//$ m.5 allegro ($\frac{3}{2}$, $\overset{\}{}) //$ m.23
			andante (c ,) // m.33 vivace // m.40
			allegro $(\frac{3}{2}, .)$ // m.88–103 (c, .)
92	*72/2	Recit. A	(-) (c, $3 = 1/2$) // m.7 Arioso ($3/8$, $3/2$) // m.57-
			59 recit. (c , ♪)
93	72/3 (1726)	Aria A	Vivace (c,)
94	*73/1 (1724)	Chorale	(−) (c ,) // m.18–24 rec. T //
			[m.25–32 chorale] // m.33–39 Rec. B //
			[m.40–49 Chorale] // m.50 –61 Rec. S //
			[m.62–73 Chorale]
95	*76/2 (1723)	Recit. (accomp.)	(−) (c , <i>b</i>) // m.4 and ante e arioso //
		Т	m.13–17 Recit.
96	*76/5	Aria B	(-) (c ,) ³) // m.36 adagio // m.37 a
			tempo
97	*76/8	Sinfonia [≈ <i>BWV</i>	Adagio (c, \mathfrak{M}) // m.5 Vivace $(\frac{3}{4}, \mathfrak{N})$
		528/1]	
98	*78/5 (1724)	Recit. B	(−) (c , <i>I</i>) // m.7 Vivace // m.10 Adagio
			// m.17 Andante / a tempo
99	*81/3 (1724)	Aria T	Allegro $\binom{3}{8}$, \cancel{b} // m.47 adagio (c, \cancel{b}) //
			m.48 $\binom{3}{8}$,) // m.51 (c,) // m.52 $\binom{3}{8}$
			// m.55–56 (c, h) // m.57–116 ($\frac{3}{8}$, h)
100	81/5	Aria B	Allegro (c, 🄊
101	*82/2 (1727)	Recit. B	(-) (c , <i>b</i>) // m.7 arioso m.9 Recit. //
			m.13–14 arioso
102	*82/3	Aria B	(−) (c ,) // m.120–121 adagio
103	82/5	Aria B	Vivace $\begin{pmatrix} 3\\ 8 \end{pmatrix}$

104	*83/2 (1724)	Aria B	$(-) \begin{pmatrix} 6 \\ 1 \end{pmatrix} // m 30 \text{ Recit } (0, 1) // m 32$
104	03/2 (1/24)		(6, 3) //m 25 Posit $(4, 3) //m 41 (6, 3)$
			$\binom{8}{8}, \binom{3}{7}$ III.55 Rech $(\frac{6}{7}, \frac{3}{7})$ III.41 $\binom{8}{8}, \binom{3}{7}$
			$\frac{1}{m.44}$ Recit (¢, J) $\frac{1}{m.49-85}$ ($\frac{8}{8}$, J)
105	*88/1 (1726)	Aria B	Vivace $\binom{8}{8}$, $\binom{8}{7}$ // m.101 Allegro e presto
			(\mathbf{C}, \mathbf{J})
106	88/5	Aria Duetto S, A	Allegro (¢, J)
107	*91/2 (1724)	Recit. S	(-) (c, N) // m. 5 Choral // m.8 Recit. //
			m.9 Choral // m.12 Recit. // m.14 Cho-
			ral // m.17 Recit. // m.19 Choral //
100	*01/4	Deelt D	m.22-24 Recit
108	*91/4	кеси. в	$(-) (\mathbf{C}, \mathbf{N}) // \text{ffl.9-13 adagto}$
109	*92/2 (1724)	Recit. (+ Cho-	Choral (c, ♣) // m.5 Rec. // m.10 Choral
		rale) B	// m.12 Rec. // m.15 Choral // m.17 Rec.
			[Bc: Rec. A tempo] // m.24 Choral //
			m.26 Rec. // m.31 Choral // m.32 Rec. //
			m.33 Choral // m.34 Rec. // m.35 Choral
			// m.37 Rec. // m.38 Choral // m.41 Rec.
			// m.42 Choral // m.43 Recit // m.45
			Choral
110	92/8	Aria S	Andante $(\frac{3}{8}, \mathbb{A})$
111	*93/2 (1724)	Recit. B	Adagio (c,) // m.3 Rec. // m.6 adagio
			// m.8 Rec. // m.9 adagio // m.11 Rec. //
			m.14 adagio // m.16 Rec. // m.19–21
			adagio
112	*93/5	Recit. T	Adagio (c, \clubsuit) // m.2 allegro (T) // m.2
			furioso (Bc) // m.3 andante // m.4 ada-
			gio // m.5 Rec. // m.9 adagio // m.10
			Rec. //m.12 adagio // m.13 Rec. // m.17
			adagio // m.18 Rec. // m.27–29 adagio
113	*94/3 (1724)	Recit (+ Cho-	Arioso $(\frac{3}{3}, \frac{3}{2}) // m 16 (c, \frac{3}{2}) // m 28$
	> 1/3 (1/27)	rale) T	(3 M // m 42 (c M) // m 49 (3 M //
			m 64 (6) 1/m 68 (3) 1/m 76
			(a, b) //m 70 (3, b)
114	*04/4	A min A	(C, a) // III. / Y (8, a)
114	^94/4	Aria A	Adagio (C, A) // m.2/ allegro //
1			m.33–54 adagio

115	*94/5	Recit (+ Chorale)	Adagio (\mathbf{c} , \mathbf{b}) // m.2 Rec. // m.4 adagio
		В	// m.6 Rec. // m.13 adagio // m.16 Rec.
			// m.16 adagio // m.19 Rec. m.25–27
110	+0 = (1 = (1 = 2 = 2)		adagio
116	*95/1 (1723)	Chorale + Solo +	$(-)$ $(\frac{3}{4}, \frac{3}{4})$ // m.64 [Arioso T] // m.74
		Recit	$(\mathbb{R} = (\mathbb{R} = \mathbb{R} $
			constantly alternating between $\frac{3}{4}$ (ario-
			so) and \mathbf{c} (rec.) // m.89–141 [new cho-
			rale] allegro (c, .)
117	96/1 (1724)	Chorale	Vivace $\binom{9}{8}$, \checkmark)
118	*97/1 (1734)	Ouverture +	Grave $(\mathbf{c}, \mathbf{k}) :\parallel // \text{m.26 vivace} (\mathbf{k})$
110	07/4	Aria T	
120	97/4	Alla I	Largo (C, .)
120	100/1 (1/34-3)	sus I]	v ivace (¢, •)
121	100/5	Aria A [Versus	Un poc' allegro $\binom{12}{8}$, \checkmark)
		V]	
122	*101/2 (1724)	Pocit S	A tampo (3) (1/m 0 Pag. $a//m 14(3)$ (3)
122	101/5 (1724)	Keen. S	A tempo $(\frac{4}{4}, \frac{3}{4})/(11.9 \text{ Kec. C}/(11.14(\frac{4}{4}, \frac{3}{4})))$
122	101/3 (1724)	Keen. S	// m.29 c // m.31 $(\frac{3}{4}, \delta)$ // m.35 c //
122	101/5 (1724)	Keen. S	// m.29 c // m.31 $(\frac{3}{4}, \delta)$ // m.35 c // m.38 $(\frac{3}{4}, \delta)$
122	*101/3 (1724)	Aria B	// m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace $(\frac{1}{2}, \frac{3}{2})$ // m.9 andante $(\frac{3}{2})$ // m.11
122	*101/3 (1724)	Aria B	A tempo $(\frac{3}{4}, \frac{3}{4})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{4})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{4})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{4})$ Vivace (¢, $\frac{3}{4})$ // m.9 andante ($\frac{3}{4}$) // m.11 vivace // m.17 andante // m.19 adagio //
122	*101/3 (1724)	Aria B	// m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58
122	*101/3 (1724)	Aria B	A tempo $(\frac{3}{4}, \frac{3}{2})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{2})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58 adagio // m.59–74 vivace
123	*101/3 (1724) *101/4 *101/5	Aria B Recit. T	A tempo $(\frac{3}{4}, \frac{3}{2})$ // m.9 Kec. C//m.14 $(\frac{3}{4}, \frac{3}{2})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{2}$) // m.4 [Rec.] //
123	*101/3 (1724) *101/4 *101/5	Aria B Recit. T	A tempo $(\frac{3}{4}, \frac{3}{4})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{4})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{4})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{4})$ Vivace ($(\frac{1}{4}, \frac{3}{4})$ // m.9 andante ($\frac{3}{4}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{4}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{4}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a
123	*101/3 (1724) *101/4 *101/5	Aria B Recit. T	A tempo $(\frac{3}{4}, \frac{3}{2})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{2})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{2}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a tempo // m.19 [Rec.] // m.22 a tempo //
123	*101/3 (1724) *101/4 *101/5	Aria B Recit. T	A tempo $(\frac{3}{4}, \frac{3}{2})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{2})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{2}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a tempo // m.19 [Rec.] // m.22 a tempo // m.25 [Rec.] // m.27–31 a tempo
122 123 124	*101/3 (1724) *101/4 *101/5 102/3 (1726)	Aria B Recit. T Aria A	A tempo $(\frac{3}{4}, \frac{3}{4})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{4})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{4})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{4})$ Vivace (¢, $\frac{3}{4})$ // m.9 andante ($\frac{3}{4}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{4}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{4}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a tempo // m.19 [Rec.] // m.22 a tempo // m.25 [Rec.] // m.27–31 a tempo Adagio (c, $\frac{3}{4}$)
122 123 124 125 126	*101/3 (1724) *101/4 *101/5 102/3 (1726) 102/4	Aria B Recit. T Aria A Arioso B	A tempo $(\frac{3}{4}, \frac{3}{2})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{2})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{2}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a tempo // m.19 [Rec.] // m.22 a tempo // m.25 [Rec.] // m.27–31 a tempo Adagio (c, $\frac{3}{2}$) Vivace $(\frac{3}{8}, \frac{3}{2})$
122 123 124 125 126 127	*101/3 (1724) *101/4 *101/5 102/3 (1726) 102/4 *103/1 (1725)	Aria B Recit. T Aria A Arioso B Chorus	A tempo $(\frac{3}{4}, \frac{3}{4})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{4})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{4})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{4})$ Vivace (¢, $\frac{3}{4})$ // m.9 andante ($\frac{3}{4}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{4}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{4}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a tempo // m.19 [Rec.] // m.22 a tempo // m.25 [Rec.] // m.27–31 a tempo Adagio (c, $\frac{3}{4}$) Vivace $(\frac{3}{8}, \frac{3}{4})$ (–) $(\frac{3}{4}, \frac{3}{4})$ // m.101 adagio e piano (c, $\frac{3}{4}$)
122 123 124 125 126 127	*101/3 (1724) *101/4 *101/5 102/3 (1726) 102/4 *103/1 (1725)	Aria B Recit. T Aria A Arioso B Chorus	A tempo $(\frac{3}{4}, \frac{3}{2})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{2})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{2}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a tempo // m.19 [Rec.] // m.22 a tempo // m.25 [Rec.] // m.27–31 a tempo Adagio (c, $\frac{3}{2}$) Vivace $(\frac{3}{8}, \frac{3}{2})$ (-) $(\frac{3}{4}, \frac{3}{2})$ // m.101 adagio e piano (c, $\frac{3}{2}$)
123 123 124 125 126 127 128	*101/3 (1724) *101/4 *101/5 102/3 (1726) 102/4 *103/1 (1725) *104/2 (1724)	Aria B Recit. T Aria A Arioso B Chorus Recit. T	A tempo $(\frac{3}{4}, \frac{3}{2})$ // m.9 Kec. C/m.14 $(\frac{3}{4}, \frac{3}{2})$ // m.29 c // m.31 $(\frac{3}{4}, \frac{3}{2})$ // m.35 c // m.38 $(\frac{3}{4}, \frac{3}{2})$ Vivace (¢, $\frac{3}{2})$ // m.9 andante ($\frac{3}{2}$) // m.11 vivace // m.17 andante // m.19 adagio // m.21 vivace // m.38 andante ($\frac{3}{2}$) // m.58 adagio // m.59–74 vivace A tempo [chorale] (c, $\frac{3}{2}$) // m.4 [Rec.] // m.6 a tempo // m.9 [Rec.] // m.13 a tempo // m.19 [Rec.] // m.22 a tempo // m.25 [Rec.] // m.27–31 a tempo Adagio (c, $\frac{3}{2}$) Vivace $(\frac{3}{8}, \frac{3}{2})$ (-) $(\frac{3}{4}, \frac{3}{2})$ // m.101 adagio e piano (c, $\frac{3}{2}$) (-) (c, $\frac{3}{2})$ // m.6–8 andante

130	*105/4	Recit. B	a tempo (c, 🄊)
131	106/1 (1707?)	Sonatina	Molto adagio (c, 🄊)
132	*106/2a, b, c, d	Chorus	(-) (c , h) // m.7 allegro $\binom{3}{4}$, h) // m.41
			adagio assai (c, 🎝) // m.48 Lento (c, 🎝)
			// m.71 Vivace $(\frac{3}{8}, \frac{1}{8})$ // m.131–185
			and ante (\mathbf{c}, \mathbf{A})
133	*106/4	Chorale	(−) (c , ³ ,) // m.19–51 allegro
134	107/3 (1724)	Aria B	Vivace (c,)
135	108/4 (1725)	Chorus	Vivace (¢, 🎙)
136	*109/2 (1723)	Recit. T	(−) (c ,) // m.15–17 adagio
137	*109/5	Aria A	$(-) \begin{pmatrix} 3 \\ 4 \end{pmatrix} // m.119-20 \text{ adagio} / D. C.$
138	109/6	Chorale	Allegro (\mathbf{c}, \mathbf{J})
139	*112/3 (1731)	Recit. B	Arioso (c,) // m.13 Recit. adagio
140	114/1 (1724)	Chorale	Vivace $({}^6_4, \mathbb{A})$
141	*114/2	Aria T	$(-)(\frac{3}{4}, \mathbb{A}) // \text{ m.55-132 Vivace } (\frac{12}{8}, \mathbb{A})$
142	*114/3	Recit. B	(-) (c, $) // m.13-21$ and ante
143	*114/5	Aria A	(−) (c ,) // m.48–49 adagio / D. C.
144	*115/2	Aria A	Adagio $\binom{3}{8}$, $^{\text{A}}$) // m.110 allegro // m.132
			/ adagio
145	115/4	Aria S	Molto adagio (c, 🄊
146	*115/5	Recit. T	(−) (c ,) // m.7–10 arioso
147	*117/7	Aria A (Versus	Largo $\begin{pmatrix} 3\\4 \end{pmatrix}$
	(1728/31)	7)	
148	*123/3 (1725)	Aria T	Lente (c, \mathbb{A}) // m.23 un poco allegro //
			m.27-33 lente / D. C.
149	123/5	Aria B	(-) (c ,)) // m.38 adagio // 39 a tempo
150	*125/3 (1725)	Recit. B	(-) (c ,) Recit. // m.5 and ante // m.9
			Recit. // m.11 Choral // 14 Recit. // m.17
			Choral // m.18 Recit. // m.20 Choral //
			m.21 Recit. // 23–27 Choral
151	*125/4	Aria Duetto T, B	(−) (c ,) // m.63–64 adagio D. C.
152	*126/3 (1725)	Rec. (+ Chorale)	(-) (c ,) // m.4 adagio // m.6 Recit. //
		A, B	m.10 adagio // m.12 Recit. // m.14 ada-
			gio // m.16 Recit. // m.19–22 adagio

153	*127/4 (1725)	Recit. B	(−) (c ,) // m.13 a tempo giusto (Bc) //
			m.21 $({}^{6}_{8}, {}^{8})$
154	*128/3 (1725)	Aria B	$(-) (\frac{3}{4}, \frac{1}{2}) // \text{ m.61 Recit } (\mathbf{c}, \frac{1}{2}) // \text{m.72} - 88$
			D. C.
155	130/1 (1724)	Chorale	Vivace (c, 🄊)
156	130/4	Recit. S, T	A tempo (\mathbf{c}, \mathbf{b}) [voices homorhythmic]
157	*131/1 (1707)	Sinfonia (+ Cho-	Adagio (–) $(\frac{3}{4}, \frac{1}{2})$ // m.57 Vivace
		rus)	(c, ♪)
158	131/2	Duet + Chorale	Andante (c,)
		S, B	
159	*131/3	Chorus	Adagio (3, 🄊 // m.6 Largo (Fuga) //
			m.39 adagio
160	*131/5	Chorus	Adagio (c, $) // m.4$ un poc'allegro //
			m.13 adagio // m.21 allegro //
			m.69–72 adagio
161	*132/2 (1715)	Recit. T	$(-) (\mathbf{c}, \mathbf{b}) // \text{ m.11 arioso } (\mathbf{c}, \mathbf{b}) // \text{ m.17}$
			Rec. // m.24–35 arioso
162	*133/4 (1724)	Aria S	$(-) (\mathbf{c}, \mathbf{A}) // \text{m.61 largo} (\frac{12}{8}, \mathbf{A}) / \text{D. C.}$
163	*133/5	Recit. B	(−) (c , ♪) // m.7−11 adagio
164	135/4 (1724)	Recit. A	Adagio (c, 👌
165	135/5	Aria B	Allegro (¢, •)
166	*136/3 (1723)	Aria A	(-) (c , h) // m.29 presto ($\frac{12}{8}$, h) // m.38
			adagio c
167	*139/4 (1724)	Aria B	(-) (c, $(0, 0, 0)$ // m.27 vivace $((0, 0, 0))$ // m.37
			c // m.40 and ante c // m.46 vivace c //
			m.51 andante \mathbf{c} // m.57 vivace \mathbf{c} // m.84
			vivace $\binom{6}{8}$, $\stackrel{\$}{}$) // m.89 poc'allegro c //
			m.93 vivace $\binom{6}{8}$, $\binom{1}{8}$ // m.103–106 poc'
			allegro ¢
168	140/3 (1731)	Aria Duetto S, B	Adagio (⁶ ₈ ,)
169	144/1 (1724)	Coro	Alla breve (¢, ♪)
170	144/5	Aria S	Andante (¢, 🄊)
171	*145/2 (1729)	Recit. T	(−) (c , ♪) // m.10–12 adagio
172	146/2 (1726?)	Chorus	Adagio $(\frac{3}{4}, \mathbb{A})$ [$\approx BWV 1052/2$]

173	150/1 (1708?)	Sinfonia	Adagio (c,)
174	*150/2	Coro	(-) (c , <i>I</i>) // m.21 allegro // m.29 adagio
			// m.33 allegro // m.52–53 adagio
175	*150/4	Tutti	Andante ($\mathbf{c}, \mathbf{\lambda}$) // m.9 allegro ($\mathbf{\lambda}$) //
			m.13–29 andante
176	*150/6	Coro	$(-) \begin{pmatrix} 6 \\ 8 \end{pmatrix} // m.22-44$ allegro
177	*151/1 (1725)	Aria S	Molt' adagio $\binom{12}{8}$, $\frac{1}{8}$) // m.30 ($(e, \frac{3}{8})$)
178	151/3	Aria A	Andante (c, M)
179	*152/1 (1714)	Sinfonia	(−) (c ,) // m.5 allegro ma non presto
			$(\frac{3}{8}, \frac{1}{8})$
180	152/4	Aria S	Adagio (c, 🔊)
181	152/6	Duetto S, B	Andante $\begin{pmatrix} 6\\4 \end{pmatrix}$
182	*153/7 (1724)	Recit. B	(−) (c , 𝔥) // m.16–20 and ante
183	*153/8	Aria A	$(-) \begin{pmatrix} 3 \\ 4 \end{pmatrix} // m.71$ allegro
184	156/1 (1729)	Sinfonia	Adagio (c, 🔊)
185	*156/3	Recit. B	(−) (c ,) // m.17–19 arioso
186	*157/4	Aria B	(-) (c,) // m.74 Recit. // m.76 arioso //
			m.82 Adagio // m.89 Recit. //
			m.94–113 Arioso
187	*159/1	Arioso e Recit B,	Arioso (B) (–) (c ,) // m.4 Rec. (A) //
		А	m.7 Arioso (B) // m.10 Rec. (A) // m.14
			Arioso (B) // m.23–34 Rec. (A)
188	161/1	(Fassung B) Aria	Andante (c, 🄊)
		S	
189	*163/4 (1715)	Recit S, A	(−) (c , ♪) // m.14 un poc' allegro // m.19
			adagio
190	*164/2 (1725)	Recit. B	(−) (c ,) // m.3–24 arioso
191	*165/4 (1715)	Recit con stro-	(–) (c , M) // m.5 adagio
		menti B	
192	166/2 (1724)	Aria T	Adagio (c, 🔊)
193	*167/2 (1724)	Recit. A	(−) (c , ♪) // m.13–19 adagio
194	*167/3	Aria S, A	Andante $\binom{3}{4}$, $\binom{3}{4}$ // m.58 (c, $\binom{3}{4}$) // m.70
			$\binom{3}{4}$, $^{\text{h}}$) // m.93–95 and ante
195	*167/4	Recit. B	$(-) (\mathbf{c}, \mathbf{b}) // \text{ m.14-17 a tempo}$

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196	170/3 (1726)	Aria A	Adagio (c, 🎙)
197	*173/3 (1724)	Aria A	Vivace (c ,) // m.21 adagio // m.22
			Vivace
198	173a/3	Aria B	Vivace (c, \checkmark)
199	173a/4	Aria S, B	Al tempo di minuetto $\begin{pmatrix} 3\\4 \end{pmatrix}$
200	*178/2 (1724)	Chorale + Recit.	Chorale sections, <i>Presto</i> (\mathbf{c}, \mathbf{b}):
			m.1–10; 14–23; 29–33; 36–40; 45–50.
			Rec.: m.10–14; 23–29; 34–36; 41–45.
201	178/5	Chorale + Recit.	A tempo giusto (c, 🔊)
202	*178/6	Aria T	(−) (c , ♪) // m.62 adagio (Bc), ₊ (T)
203	181/1 (1724)	Aria B	Vivace (c, $)$
204	*181/2	Recit. A	(−) (c ,) // m.9 arioso // m.16 and ante
205	182/1 (1714)	Sonata	Grave. Adagio (c, J.)
206	182/5	Aria A	Largo (c, 🎝)
207	183/2 (1725)	Aria T	Molt' adagio (c, 🎝)
208	185/3 (1715)	Aria A	Adagio (c, 🔊)
209	185/5	Aria B	Vivace (c, $)$
210	*186/4 (1723)	Recit. T	(-) (c ,) // m.16–28 arioso
211	*186/7	Recit. B	(−) (c ,) // m.6 adagio // m.8–10
			Recitativo
212	*186/9	Recit. A	(−) (c , ♪) // m.6 adagio // m.8–10
			Recitativo
213	*187/5 (1726)	Aria S [≈ <i>BWV</i>	Adagio (c, A) // m.21 un poco allegro
		235/5]	$\binom{3}{8}, \stackrel{\$}{2}$ // m.58–62 adagio
214	188/1 (1728)	Sinfonia [Frag-	Allegro $\begin{pmatrix} 3\\4 \end{pmatrix}$, $\begin{pmatrix} \$ \end{pmatrix}$ [$\approx BWV$ 1052/3]
		ment]	
215	*190/2 (1728)	Chorale + Recit.	(−) (c ,) // m.3 Recitativo B
216	*190/4	Recit. B	$(-) (\mathbf{c}, \mathbf{A}) // \text{m.15-18}$ and ante
217	194/3 (1723)	Aria B	Andante $\binom{12}{8}$, $\overset{1}{}$)
218	*199/2 (1713?)	Aria S	Andante $(\frac{3}{4}, \mathbb{N})$ //m.147–144 adagio
	[1st Weimar		// D. C.
	V.]		
219	199/4	Aria S	Andante (³ / ₄ , ³) // m.147–144 adagio //
			D. C.

220	199/8	Aria S	Allegro $\binom{12}{8}$, \bullet)
221	199/6 (1723)	Chorale S	Andante (\mathbf{c}, \mathcal{N})
222	201/1 (1729)	Chorus	Vivace ed allegro $(\frac{3}{8}, \frac{3}{3})$
223	201/5	Aria B1	Largo $\binom{3}{8}, \overset{3}{\overline{}}$
224	201/11	Aria T	Allegro (\mathbf{c}, \mathbf{a})
225	*202/1	Aria S	Adagio (c, ♪♪) // m.19 ∩ [Fine] //
			m.19 –34 andante / D. C.
226	202/3	Aria S	Allegro assai $\binom{12}{8}$, \checkmark)
227	202/5		Allegro (\mathbf{c}, \mathbf{A})
228	*204/3	Recit. S	(−) (c ,) // m.12 presto // m.13–26
	(1726-7)		adagio
229	*206/1 (1736)	Chorus	$(-) (\frac{3}{8},) // m.116-171 allegro$
230	*207/1 (1726)	Chorus [≈ <i>BWV</i>	(−) (³ / ₈ ,) // m.88 Adagio ∧//
		1046/3]	m.89–130 allegro
231	207a/2	Recit. T	A tempo (\mathbf{c}, \mathbf{A})
232	*208/1 (1712)	Recit. S1	(-) (c ,) // m.6 adagio // m.7–11 presto
233	208/13	Aria S2	Più presto
234	210/2	Aria S	Moderato. Largo $(\frac{3}{8}, \mathbb{A})$
	(1738-41)		
235	210/8	Aria S	Lente $\begin{pmatrix} 3\\4 \end{pmatrix}$
236	210/9	Recit. S	A tempo giusto (c, 🄊)
237	210/10	Aria S	Vivace (c, A)
238	*211/1 (1734)	Recit. T	(-) (c , ♪) // m.3 a tempo [Bc: pomposo
239	*212/1 (1742)	Sinfonia	Presto $\binom{3}{4}, \frac{3}{4}, \frac{3}{4}, \frac{3}{4}$ // m.16 and ante $\binom{6}{8}$ //
			m.24 allegro $\binom{2}{4}$ // m.39 adagio $\binom{3}{4}$ //
			m.55 allegro $\binom{2}{4}$ // m.62 presto $\binom{3}{4}$,)
240	*212/14	Aria S	$(-) \binom{3}{8} // 143-4$ adagio / D. C.
241	*213/3 (1733)	Aria S [≈ <i>BWV</i>	(−) (c ,) // m.70–80 adagio / D. C.
		248/19]	
242	*213/7	Aria T	(−) (c ,) // m.58–59 adagio //
			m.97–98 adagio / D. C.
243	*215/3 (1734)	Aria T	Presto $\binom{3}{8}$, \checkmark)
244	215/5	Aria B	(-) (c , <i>N</i>) // m.28–41 a tempo

245	*215/8	Recit. S, A, T, B	Allegro (ϕ , \bullet)
246	216/5 (1728)	Aria A	Allegro (ϕ, λ)
	MOTETS	·	
247	*226 (1729)	Der Geist hilft	$(-) (\frac{3}{8}, \hbar) // \text{m.124} (\mathbf{c}, \hbar) // \text{m.146 alla}$
			breve ((\mathbf{e}, \mathbf{A}) // m.245 Chorale (\mathbf{c}, \mathbf{A})
248	227/8	Jesu, meine	Andante $\binom{12}{8}$, \checkmark)
		Freude	
	MASSES, MAGN	IFICAT	
		Mass in B Minor	
249	*232/I, 1	Kyrie I (Coro)	(−) (c ,) [Inst. Parts: Adagio] // m.5
	(1733)		Largo
250	232/I, 3	Kyrie II	Alla breve (¢¢, J)
251	232/I, 7	Gratias	Alla breve ((\mathbf{c}, \mathbf{c}))
252	232/I, 9	Qui tollis	Lente/Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
253	*232/I, 10	Qui sedes	$(-) ({}^{6}_{8}, \mathbb{A})$ m.74 adagio
254	232/I, 12	Cum sancto	Vivace $\begin{pmatrix} 3\\4 \end{pmatrix}$
		spiritu	
255	232/II, 3	Et in unum	Andante (c,)
256	*232/II, 8	Confiteor	(−) (c ,) m.121–145 Adagio [attacca:]
257	232/II, 9	Et exspecto	Vivace e allegro (\mathbf{c}, \mathbf{b})
		Mass in F	
258	233/4	Qui Tollis, S	Adagio (c, 🔊)
259	233/5	Quoniam, A	Vivace $\begin{pmatrix} 3\\4 \end{pmatrix}$
260	233/6	Cum sancto	Presto (\mathbf{c}, \mathbf{b})
		spiritu	
		Mass in A	
261	*234/1 (1738)	Kyrie	[Kyrie I] (–) $\binom{3}{4}$, \hbar) // m.73 [Christe]
			Lente e piano (c,) // m.90 [Kyrie II]
			Vivace $\binom{3}{8}$, (1) // m.144 (2) // m.145–48
			adagio e forte

262	*234/2	Gloria	Vivace (c,) // m.10 adagio e piano
			$\binom{3}{4}$, $\binom{3}{4}$ // m.26 Vivace e forte (c, $\binom{3}{4}$) //
			m.37 adagio e piano $\begin{pmatrix} 3\\4\\4 \end{pmatrix}$ // m.53
			Vivace e forte // m.66 adagio e piano //
			m.82 Vivace e forte (c, N) //
			m.95–111 [Gratias] Adagio (3/4, 🔊)
263	234/3	Domine Deus	Andante (c, \checkmark)
264	*234/6	Cum sancto	Grave (c, \checkmark) // m.4 Vivace $\binom{12}{8}$, \checkmark)
		spiritu	
		Mass in G	
265	236/2 (1738-9)	Gloria	Vivace (¢, 🎝)
266	236/5	Quoniam	Adagio (c, 🄊
		Magnificat	-
267	243/3	Quia respexit	Adagio (c, 🎙)
268	*243/7	Fecit potentiam	(−) (c , ♪) // m.29–35 adagio
	PASSIONS AND (DRATORIOS	
		St. Matthew Pass	ion
269	*244/11	Ev, Jesus	$(-)$ (c, $) // m.19 ({}_{4}^{6},) m.21$ c // m.24–
			$39(\frac{6}{4}, \bullet)$
270	*244/14	Ev	(-) (c ,) // m.8 Vivace // m.10–12
			Moderato
271			
	244/20	Aria T + Ch.	Andante (\mathbf{c}, \mathbf{A})
272	244/20 244/22	Aria T + Ch. Recit. B	Andante (\mathbf{c}, \mathbb{A}) A tempo (\mathbf{c}, \mathbb{A})
272 273	244/20 244/22 *244/27a	Aria T + Ch. Recit. B Aria S, A	Andante (\mathbf{c}, \mathbf{A}) A tempo (\mathbf{c}, \mathbf{A}) Andante (\mathbf{c}, \mathbf{A}) // m.65 Vivace ($\frac{3}{8}, \mathbf{A}$)
272 273 274	244/20 244/22 *244/27a 244/48	Aria T + Ch. Recit. B Aria S, A Recit. S	Andante (\mathbf{c}, \mathbf{a}) A tempo (\mathbf{c}, \mathbf{a}) Andante (\mathbf{c}, \mathbf{a}) // m.65 Vivace ($\frac{3}{8}, \mathbf{a}$) A battuta (\mathbf{c}, \mathbf{a})
272 273 274 275	244/20 244/22 *244/27a 244/48 244/56	Aria T + Ch. Recit. B Aria S, A Recit. S Rec. B	Andante (c, \clubsuit) A tempo (c, \clubsuit) Andante (c, \clubsuit) // m.65 Vivace ($\frac{3}{8}$, \clubsuit) A battuta (c, \clubsuit) A tempo (inst.)
272 273 274 275 276	244/20 244/22 *244/27a 244/48 244/56 244/67	Aria T + Ch. Recit. B Aria S, A Recit. S Rec. B Recit. S, A, T, B	Andante (\mathbf{c}, \mathbf{A}) A tempo (\mathbf{c}, \mathbf{A}) Andante (\mathbf{c}, \mathbf{A}) // m.65 Vivace ($\frac{3}{8}, \mathbf{A}$) A battuta (\mathbf{c}, \mathbf{A}) A tempo (inst.) A tempo
272 273 274 275 276	244/20 244/22 *244/27a 244/48 244/56 244/67	Aria T + Ch. Recit. B Aria S, A Recit. S Rec. B Recit. S, A, T, B St. John Passion	Andante (\mathbf{c}, \mathbb{A}) A tempo (\mathbf{c}, \mathbb{A}) Andante (\mathbf{c}, \mathbb{A}) // m.65 Vivace ($\frac{3}{8}, \mathbb{A}$) A battuta (\mathbf{c}, \mathbb{A}) A tempo (inst.) A tempo
272 273 274 275 276 277	244/20 244/22 *244/27a 244/48 244/56 244/67 *245/12a	Aria T + Ch. Recit. B Aria S, A Recit. S Rec. B Recit. S, A, T, B St. John Passion Ev	Andante (c, \checkmark) A tempo (c, \checkmark) Andante (c, \checkmark) // m.65 Vivace ($\frac{3}{8}$, \checkmark) A battuta (c, \checkmark) A tempo (inst.) A tempo (-) (c, \checkmark) // m.6-22 allegro // 23 rec. (c)
272 273 274 275 276 277	244/20 244/22 *244/27a 244/48 244/56 244/67 *245/12a	Aria T + Ch. Recit. B Aria S, A Recit. S Rec. B Recit. S, A, T, B St. John Passion Ev	Andante (\mathbf{c} , \mathbf{b}) A tempo (\mathbf{c} , \mathbf{b}) Andante (\mathbf{c} , \mathbf{b}) // m.65 Vivace ($\frac{3}{8}$, \mathbf{b}) A battuta (\mathbf{c} , \mathbf{b}) A tempo (inst.) A tempo (-) (\mathbf{c} , \mathbf{b}) // m.6-22 allegro // 23 rec. (\mathbf{c}) // m.32–38 adagio
272 273 274 275 276 277 277 278	244/20 244/22 *244/27a 244/48 244/56 244/67 *245/12a 245/19	Aria T + Ch. Recit. B Aria S, A Recit. S Rec. B Recit. S, A, T, B St. John Passion Ev Arioso B	Andante (c, \checkmark) A tempo (c, \checkmark) Andante (c, \checkmark) // m.65 Vivace ($\frac{3}{8}$, \checkmark) A battuta (c, \checkmark) A tempo (inst.) A tempo (-) (c, \checkmark) // m.6-22 allegro // 23 rec. (c) // m.32–38 adagio Adagio (c, \checkmark)
272 273 274 275 276 277 277 278 279	244/20 244/22 *244/27a 244/48 244/56 244/67 *245/12a 245/19 *245/25a	Aria T + Ch. Recit. B Aria S, A Recit. S Rec. B Recit. S, A, T, B St. John Passion Ev Arioso B Ev	Andante (\mathbf{c} , \mathbf{b}) A tempo (\mathbf{c} , \mathbf{b}) Andante (\mathbf{c} , \mathbf{b}) // m.65 Vivace ($\frac{3}{8}$, \mathbf{b}) A battuta (\mathbf{c} , \mathbf{b}) A tempo (inst.) A tempo (-) (\mathbf{c} , \mathbf{b}) // m.6-22 allegro // 23 rec. (\mathbf{c}) // m.32–38 adagio Adagio (\mathbf{c} , \mathbf{b}) (-) (\mathbf{c} , \mathbf{b}) // m.8 adagio // m.10

280	*245/27c	Ev	m.65 (–) // m.67 adagio // m.70
			recitativo (c, A)
281	*245/30	Aria A	Molt' adagio (c, \checkmark) //m.20 Vivace ($\frac{3}{4}$, \checkmark)
			[BGA: alla breve] // m.40–44 adagio
282	245/32	Aria B (Chorale)	Adagio $\binom{12}{8}$, \checkmark) [Coro c]
283	*245/34	Arioso T	(−) (c , ♣) // m.8–9 adagio
284	245/35	Aria S	Molt' adagio $\begin{pmatrix} 3\\4\\ \end{pmatrix}$
285	*245/36	Ev	(−) (c , ♪) // m.26 adagio // m.27
			Recitativo // m.28–30 adagio
286	*245/13 ^{II}	Aria T	(−) (c , ♪) // m.12 adagio // m.13 allegro
		("Zerschmettert")	– adagio // m.14 allegro m.15 adagio //
			m.16 Allegro // m.23 adagio //m.27
			allegro
287	245/40 ^{II}	Chorale	Adagio (c, 🔊)
		Christmas Orato	rio
288	*248/7	Chorale S, B	Andante, arioso (³ / ₄ ,) // m.17 Recit.
			(c,)) // m.19 andante, arioso // m.29
			Recit. // m.31 andante, arioso // m.42
			recit. // m.44 andante, arioso // m.53
			recit. m.55 anadante, arioso
289	248/21	Chorus	Vivace (\mathbf{c}, \mathbf{b})
290	*248/38	Recit. + Chorale	(−) (c ,) // m.10 a tempo arioso //
		S, B	17–28 recit.
291	*248/40	Recit. + Chorale	(-) (c ,) // m.2 arioso // m.6 recit. //
		S, B	m.7 arioso //m.9 recit. //m.10 arioso //
			m.12 recit. // m.13-18 arioso
292	248/43	Coro	Vivace $\begin{pmatrix} 3\\4 \end{pmatrix}$
293	248/57	Aria S	Largo e staccato (³ / ₄ , ³)
294	*248/62	Aria T	Vivace $\binom{2}{4}$, $\binom{3}{4}$ // m.102–3 adagio //
			m.157-8 adagio // m.159 a tempo
295	248/63	Rec. à 4	A tempo (\mathbf{c}, \mathbf{b})

		Easter Oratorio	
296	249/2	Instrumental	Adagio (³ / ₄ ,))
297	249/5	Aria S	Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
298	*249/8	Recit. S, A	A tempo (c , <i>b</i>) // m.3–13 Arioso
299	*249/11	Chorus	$(-)$ (c, $\checkmark) // m.51$ allegro $(\frac{3}{8}, \checkmark)$
	QUODLIBET		
300	*524		(−) (c ,) // m.15 adagio [Bc: tardo] //
			m.20 allegro // m.45–68 adagio ($\frac{3}{2}$,) //
			m.69 (-) (\mathbf{c} ,) // m.103 (-) ($\frac{3}{2}$,) //
			m.181(c,)

No.	BWV	Title/Genre	Tempo indications	
	ORGAN WORKS			
1	525/2	Sonata 1, E _b	Adagio $\binom{12}{8}$, \checkmark)	
2	525/3		allegro $\begin{pmatrix} 3\\4 \end{pmatrix}$	
3	526/1	Sonata 2, c	Vivace (¢, 🌖	
4	526/2		Largo (¢, Å)	
5	526/3		Allegro $(2, J)$	
6	527/1	Sonata 3, d	Andante $\begin{pmatrix} 2\\4 \end{pmatrix}$	
7	527/2		Adagio e dolce $(\frac{6}{8}, \mathbb{A})$	
8	527/3		Vivace $\binom{3}{8}, \clubsuit$	
9	*528/1	Sonata 4, e	Adagio (c, \mathbb{A}) // m.5 vivace ($\frac{3}{4}$, \mathbb{A})	
10	528/2		Andante (c, 🎙)	
11	528/3		Un poc'allegro $(\frac{3}{8}, \bullet)$	
12	529/1	Sonata 5, C	Allegro $(\frac{3}{4}, \mathbb{A})$	
13	529/2		Largo $\binom{6}{8}$, \clubsuit)	
14	529/3		Allegro (¢, 🄊)	
15	530/1	Sonata 6, G	Vivace $\begin{pmatrix} 2\\4 \end{pmatrix}$	
16	530/2		Lente $(\frac{6}{8}, \mathbb{A})$	
17	530/3		Allegro (¢, 🄊)	
18	*532/1	Pr & Fg, D	(−) (c , 𝔥) // m.16 alla breve //	
			m.96 adagio (🔊)	
19	541/1	Pr & Fg, G	Vivace $\begin{pmatrix} 3\\4 \end{pmatrix}$	
20	535/2	Pr & Fg, g	Fuga. Allegro (c,)	
21	535a/1		Passaggio (c, 🔊)	
22	535a/2		Allegro (c, \mathbb{N})	
23	550/2	Pr & Fg, G	Alla breve e staccato (¢, .)	
24	*564/2	Toccata, C	Adagio (c, M) //m.22 Grave [slower?]	

List II: Instrumental Works

25	*565	Toggete & Eg. d	Adagia (a)) // m 2 1 prostiggima
23	. 303	Toccata & Fg, u	Adagio (C, S) // III.3–4 prestissimo
			(J)// m.12/ Recitativo // m.130
			adagissimo // m.133 presto // m.136
			adagio // m.137 Vivace // m.140–41
			molto adagio (J.)
26	*572	Pièce d'orgue	Très vitement $\binom{12}{8}$, $\overset{1}{\bullet}$) // m.29 Grave-
			ment ((\mathbf{c}, \mathbf{b}) // m.186 Lentement
27	585/1	Trio, c [Fasch]	Adagio (c, M)
28	585/2		Allegro (¢, 🌖
29	*586	Trio, G	Allegro (¢,)
30	*588	Canzona, d	(-) ((ϕ, \bullet) // m.168 adagio ($\frac{3}{2}, \bullet$)
31	589	Allabreve, D	Allabreve (¢, •)
		Orgelbüchlein	
32	610	Jesu, meine Fr.	Largo (c , .)
33	611	Chistum wir	Adagio (c, M)
34	618	O Lamm Gottes	Adagio (c, M)
35	*622	O Mensch	Adagio assai (c, 🄊) // m.23–24
			adagissimo
36	BWV deest	O Traurigkeit	Molt'adagio (c, 🄊)
		(Fragment)	
		Great Eighteen C	Chorales
37	662	Allein Gott	Adagio
38	*663	Allein Gott	Cantabile $(\frac{3}{2},)$ // m.96 adagio
39	*663a	Allein Gott	Cantabile $(3, 1)$ // m.96 adagio (¢) //
			m.97 and ante $(\frac{3}{2})$
		Neumeister Chor	ales
40	1094	O Jesu, wie ist	Adagio (\mathbf{c}, \mathbf{A})
41	*1117	Alle Menschen	$(-) (\mathbf{c}, \mathbf{b}) // \text{m.25-27 adagio} (\mathbf{b})$
		Chorale Partitas,	Canonic Variations
42	766/1	Christ, der du	Largo (\mathbf{c}, \mathbf{A})
43	*767/9	O Gott, du	(-) (c , $) // m.25-6$ and ant e // m.35
		frommer Gott	presto

44	769/3	Canonic Var.	Cantabile (c, \mathbb{N})
45	770/9	Ach, was soll	Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
		ich Sünder	
46	*770/10		Allegro // m.5–6 un poco adagio //
			m.9 allegro // m.21 Passaggio // m.62
			adagio
	KEYBOARD WO	RKS	
47	809/1	English Suite 4	Vitement (c,)
48	*811/1	English Suite 6	$(-) \begin{pmatrix} 9\\ 8 \end{pmatrix} // m.37 \text{ adagio} // m.38 \text{ alle-}$
			gro
49	818a/1	Suite, a	Fort gai (¢, .)
50	829/5	Partita 5	Tempo di Minuetta (³ / ₄ ,)
51	830/6	Partita 6	Tempo di Gavotta (¢, ³))
52	833/1	Pr & Partita, F	Andante $(\frac{3}{2}, \mathbf{J})$
53	833/5		Allegro $\begin{pmatrix} 3\\4 \end{pmatrix}$
54	833/6		Allegro $\begin{pmatrix} 3\\4 \end{pmatrix}$
55	*847/1	WTC I/2,c	(−) (c ,) // m.28 presto // m.34 ada-
			gio // m.35 allegro
56	869/1	WTC I/24, b	Andante (c, .)
57	869/2		Largo (c, .)
58	885	WTC II/16, g	Largo (c, J.)
59	891/2	WTC II/22, bb	$(-)$ $(\frac{3}{2}, \bullet)$ [Version B: Adagio $(\frac{3}{4}, \bullet)$
60	*910	Toccata, f#	$(-) (\mathbf{c}, \mathbf{b}) // \text{m.19} (-) (\frac{3}{2}, \mathbf{b}) // \text{m.48}$
			presto e staccato (\mathbf{c}, \mathbf{A})
61	*911	Toccata, c	(−) (c ,) // m.12 adagio // m.33 alle-
			gro // m.85 adagio-allegro (🄊
			// m.171 adagio // m.174-175 allegro
62	*912	Toccata, D	(-) (c ,) // m.10 allegro //m.68 ada-
			gio // m.111 con discrezione // m.118
			presto // m.127 ($^{6}_{16}$, \mathbb{N})
63	*913a	Toccata, d	(-) (c , \hbar) // m.28 presto (\hbar) // m.119
			adagiosissimo // m.144 Fuga (3,)

64	*013	Toccata d	() (a) //m 28 prosto (b) //m 23
04	913	Toccata, u	(-)(0, 0)// m.20 presto(0)// m.33
			1 nema (–) // m.121adagio // m.142
			presto // m.146 allegro $\begin{pmatrix} 3\\4\\4 \end{pmatrix}$
65	*914	Toccata, e	$(-) (\frac{3}{2}, \mathbf{A}) // \text{ m.14 un poco allegro } //$
			(c , ♪) // m.42 adagio //
			m.71 Fuga. allegro
66	*915	Toccata, g	$(-) \binom{24}{16} \stackrel{\text{(}}{\bullet}) // \text{m.5 Adagio} (\frac{3}{2}, \stackrel{\text{(}}{\bullet}) // \text{m.18}$
			allegro (\mathbf{c}, \mathbf{A}) // m.68 Adagio ($\frac{3}{2}, \mathbf{A}$)
67	*916	Toccata, G	Presto (–) (c ,) // m.57 adagio //
			m.81 allegro e presto $\binom{6}{8}$, \checkmark)
68	922	Fantasia, a	Presto (c, A)
69	*950	Fugue, A	(−) (c ,) // m.94 allegro
70	*963/4	Sonata, D	Adagio (c, 🎝) // m.8 presto // m.9
			adagio // m.9–10 allegro
71	964/1	Sonata, d	Adagio (c, A)
72	964/2		Allegro $\begin{pmatrix} 2\\4 \end{pmatrix}$
73	964/3	[≈ <i>BWV</i> 1003]	Andante $\begin{pmatrix} 3\\4 \end{pmatrix}$, \mathbb{N}
74	964/4		Allegro (\mathbf{c}, \mathbb{N})
75	965/1	Sonata, a	Adagio (c, M)
76	*965/3		Adagio (c, A) // m.6 presto
77	*966/3	Sonata, C	Adagio (c, 🄊 // m.8 Allegro (🄊
78	*967	Sonata, a	Allegro (c , \mathbb{A}) // m.74 presto ($^{3}\mathbb{A}$) //
			m.75 Adagio (c, J.)
79	971/2	Italian Concerto	Andante $\begin{pmatrix} 3\\4 \end{pmatrix}$
80	971/3		Presto (\mathbf{c}, \mathbf{b})
81	972/1	Concerto, D	Allegro (\mathbf{c}, \mathbb{A})
82	972/2		Larghetto $(\frac{3}{4}, \mathbf{A})$
83	972/3		Allegro $(\frac{3}{8}, \mathbb{A})$
84	973/1	Concerto, G	Allegro assai $(\frac{2}{4}, \mathbb{N})$
85	973/2		Largo $(\frac{3}{4}, \mathbb{A})$
86	973/3		Allegro (c, \mathbb{R})

87	974/1	Concerto, d	Andante (c, M) &&&&&
88	974/2		Adagio <mark>&&&&&</mark>
89	974/3		Presto $\binom{3}{8}$, \mathbb{N})
90	975/1	Concerto, g	Allegro $\begin{pmatrix} 2\\4 \end{pmatrix}$
91	975/2		Largo $\begin{pmatrix} 3\\4 \end{pmatrix}$
92	975/3		Giga presto $\binom{12}{8}, \checkmark$
93	976/1	Concerto, C	Allegro (\mathbf{c}, \mathbb{M})
94	976/2		Largo (\mathbf{c}, \mathbf{A})
95	976/3		Allegro $\begin{pmatrix} 3\\4 \end{pmatrix}$
96	977/2	Concerto, C	Adagio (c, A)
97	977/3		Giga (-) $\binom{12}{8}$, M)
98	978/1	Concerto, F	Allegro (\mathbf{c}, \mathbb{A})
99	978/2		Largo $\begin{pmatrix} 3\\4 \end{pmatrix}$
100	978/3		Allegro $(\frac{3}{8}, \mathbb{N})$
101	*979/1	Concerto, b	$(-) \begin{pmatrix} 3 \\ 4 \end{pmatrix} // m.5$ allegro
102	979/2		Adagio (c, 🔊)
103	*979/3		Allegro (\mathbf{c}, \mathbf{A}) // m.68 adagio (\mathbf{A})
104	979/4		Andante $(\frac{3}{2}, \mathbb{A})$
105	979/5		Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
106	979/6		Allegro (\mathbf{c}, \mathbf{k})
107	980/1	Concerto, G	Allegro (\mathbf{c}, \mathbf{k})
108	980/2		Largo $\begin{pmatrix} 3\\4 \end{pmatrix}$
109	980/3		Allegro $\binom{12}{8}$,
110	981/1	Concerto, c	Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
111	981/2		Vivace (¢, 🎝)
112	981/3		Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
113	981/4		Prestissimo $(\frac{3}{8}, \mathbb{A})$
114	982/1	Concerto, B _b	Allegro $(\frac{3}{4}, \mathbb{A})$
115	*982/2		Adagio $\binom{2}{4}$, \Re) // m.32 allegro (Λ)
116	982/3		Allegro $\begin{pmatrix} 6\\8\\ \end{pmatrix}$
117	983/2	Concerto, g	Adagio $(\frac{3}{4}, \mathbb{A})$
118	983/3		Allegro $(\frac{12}{8}, \mathbb{A})$

119	984/2	Concerto, C	Adagio e affettuoso $({}^2_4, \mathbb{A})$
120	984/3		Allegro assai (3, 🎝)
121	985/1	Concerto, g	Allegro $\begin{pmatrix} 3\\8 \end{pmatrix}$
122	985/2		Adagio (c, 🄊
123	985/3		Allegro (c ,)
124	986/2	Concerto, G	Adagio (c,)
125	987/1	Concerto, d	Grave (c, A)
126	987/2		Un poco allegro $(\frac{3}{4}, \mathbb{N})$
127	987/3		Adagio (c, A)
128	987/4		Vivace $\begin{pmatrix} 3\\8 \end{pmatrix}$
129	988/ Var. 7	Goldberg Var.	al tempo di Giga $(\frac{6}{8}, ^{[k]}]$
130	988/15		andante (c,)
131	988/22		alla breve (¢, •)
132	988/25		adagio (3,)
133	989/Var. 1	Aria variata	Largo (c, 🎝
134	989/4		Allegro (c, .)
135	989/5		un poco allegro (c ,)
136	989/6		and ante (\mathbf{c}, \mathbb{A})
137	989/7		un poco allegro $\binom{12}{8}, \checkmark$
138	989/8		allegro (c, \mathbb{A})
139	992/1	Capriccio, B _b	Arioso. Adagio (c, 👌)
140	992/3		Adagiosissimo $(\frac{3}{4}, \bullet)$
141	992/5		Allegro poco (\mathbf{c}, \mathbf{A})
	LUTE WORKS		
142	*995/1	Suite, g [≈ <i>BWV</i>	(-) ((ϕ, h) // m.27 tres viste ($\frac{3}{8}, h$)
		1011/1]	
143	996/1	Suite e, Prelude	Passagio (c, M)
144	998/3	Prelude, Fugue	Allegro $\begin{pmatrix} 3\\8 \end{pmatrix}$
		and Allegro, E _b	

	CHAMBER MUSIC		
		Sonatas and Part	titas for Violin
145	1001/1	Sonata 1, g	Adagio (c, 🄊
146	1001/2		Allegro (¢, 🄊
147	1001/4		Presto $(\frac{3}{8}, \bullet)$
148	1002/4	Partita 1, b	Presto $\begin{pmatrix} 3\\4 \end{pmatrix}$
149	1002/7		Tempo di Borea (¢, 🌶)
150	1003/1	Sonata 2, a	Grave (c, 🎝)
151	1003/3		Andante $(\frac{3}{4}, \mathbb{A})$
152	1003/4		Allegro (c ,)
153	1005/1	Sonata 3, C	Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
154	1005/3		Largo (c, 🄊)
155	1005/4		Allegro assai $(\frac{3}{4}, \overset{\$}{*})$
		Suites for Violon	cello
156	1012/1	Suite 6, D (2nd	Molto adagio (c , ♪)
		version)	
		Sonatas for Violi	n and Harpsichord
157	1014/1	Sonata 1, b	Adagio $\begin{pmatrix} 6\\4 \end{pmatrix}$
158	1014/2		Allegro (2,)
159	1014/3		Andante (\mathbf{c}, \mathbf{A})
160	1014/4		Allegro $(\frac{3}{4}, \overset{\$}{})$
161	1015/1	Sonata 2, A	$[dolce](\S, \clubsuit)$
162	1015/2		Allegro assai $\begin{pmatrix}3\\4\end{pmatrix}$
163	1015/3		Andante un poco (\mathbf{c}, \mathbf{A})
164	1015/4		Presto (2, .)
165	1016/1	Sonata 3, E	Adagio (c, M)
166	1016/2		Allegro $(2, \mathbf{A})$
167	1016/3		Adagio ma non tanto $(\frac{3}{4}, \frac{3}{4})$
168	1016/4		Allegro $\begin{pmatrix} 3\\4 \end{pmatrix}$
169	1017/1	Sonata 4, c	Siciliano. Largo $({}_8^6, \mathbb{A})$
170	1017/2		Allegro (\mathbf{c}, \mathbf{A})
171	1017/3		Adagio $(\frac{3}{4}, \frac{3}{5})$
172	1017/4		Allegro $(\frac{2}{4}, \mathbb{A})$

173	1018/1	Sonata 5, f	Largo $(\frac{3}{2}, \mathbf{k})$
174	1018/2		Allegro (\mathbf{c}, \mathbf{k})
175	1018/3		Adagio (c, 🔊)
176	1018/4		Vivace $\begin{pmatrix} 3\\8 \end{pmatrix}$
177	1019/1	Sonata 6, G	Allegro (\mathbf{c}, \mathbf{b})
178	1019/2		Largo $\begin{pmatrix} 3\\4 \end{pmatrix}$
179	1019/3		Allegro (\mathbf{c}, \mathbf{A})
180	1019/4		Adagio (c, A)
181	1019/5		Allegro $(\frac{6}{8}, \bullet)$
		Sonatas for Violi	n and Bc
182	1021/1	Sonata, G	Adagio (c,)
183	1021/2		Vivace $\begin{pmatrix} 3\\8 \end{pmatrix}$
184	1021/3		Largo (c, 🄊)
185	1021/4		Presto (¢¢,)
186	1023/2	Sonata, e	Adagio ma non troppo $(\frac{3}{4}, \mathbb{A})$
		Sonatas for Viola	ı da gamba and Harpsichord
187	1027/1	Sonata, G	Adagio $\binom{12}{8}$, $\overset{1}{}$)
188	1027/2		Allegro ma non tanto $(\frac{3}{4}, \mathbb{A})$
189	1027/3		Andante (c,)
190	1027/4		Allegro moderato (\mathbf{c}, \mathbf{b})
191	1028/1	Sonata, D	Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
192	1028/2		Allegro $\begin{pmatrix} 2\\4 \end{pmatrix}$
193	1028/3		Andante $\binom{12}{8}$, $\cancel{8}$
194	1028/4		Allegro $(\frac{6}{8}, \mathbb{N})$
195	1029/1	Sonata, g	Vivace (\mathbf{c}, \mathbf{A})
196	1029/2		Adagio $(\frac{3}{2}, \mathbb{A})$
197	1029/3		Allegro $(\frac{6}{8}, \frac{3}{4})$
		Sonatas for Flute	
198	1030/1	Sonata, b	Andante (\mathbf{c}, \mathbf{M})
199	1030/2		Largo e dolce $(\frac{6}{8}, \overset{\$}{8})$
200	1030/3a		Presto (ϕ, h)
201	1030/3b		$(-) \begin{pmatrix} 12\\ 16 \end{pmatrix}$

202	1032/1	Sonata, A	Vivace (\mathbf{c}, \mathbf{A})
203	1032/2		Largo e dolce $({}^6_8, \bullet)$
204	1032/3		Allegro $(\frac{3}{8}, \mathbb{A})$
205	1034/1	Sonata, e	Adagio ma non tanto (\mathbf{c}, \mathbf{A})
206	1034/2		Allegro (\mathbf{c}, \mathbf{k})
207	1034/3		Andante $(\frac{3}{4}, \mathbb{N})$
208	1034/4		Allegro $\begin{pmatrix} 3\\4 \end{pmatrix}$
209	1035/1	Sonata, E	Adagio ma non tanto (c, ♣)
210	1035/2		Allegro (¢, ♪)
211	1035/3		[Siciliano] (–) $\binom{6}{8}$, \checkmark)
212	1035/4		Allegro assai (3, 🎝
213	1039/1	Sonata, G	Adagio $\binom{12}{8}$, $(\approx) \approx BWV \ 1027$]
214	1039/2		Allegro ma non presto $(\frac{3}{4}, \overset{\$}{\bullet})$
			[1027: – ma non tanto]
215	1039/3		Adagio e piano (c, .)
			[1027: Andante]
216	1039/4		Presto (ϕ , b)[1027: All. ^o moderato]
	ORCHESTRAL WORKS		
	Violin Concertos, Triple Concerto		
217	1041/2	Concerto, a	Andante (c,))
218	1041/3		Allegro assai (⁹ / ₈ ,))
219	1042/1	Concerto, E	Allegro (¢, 🄊
220	1042/2		Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
221	1042/3		Allegro assai $(\frac{3}{8}, \mathbb{N})$
222	1043/1	Concerto, d	Vivace (¢,♪)
223	1043/2		Largo ma non tanto $\binom{12}{8}$, $\overset{1}{}$)
224	1043/3		Allegro $(\frac{3}{4}, \overset{3}{}^3)$
225	1044/1	Triple Concerto	Allegro (c,)
226	1044/2		Adagio ma non tanto e dolce $(\frac{6}{8}, \mathbb{A})$
227	1044/3		Tempo di Allabreve ((c, Λ^3))
	Brandenburg Concertos		
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228	1046/2	Concerto 1, F	Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
229	1046/3		Allegro $\begin{pmatrix} 3\\8 \end{pmatrix}$
230	1047/2	Concerto 2, F	Andante $(\frac{3}{4}, \mathbb{A})$
231	1047/3		Allegro assai $(\frac{2}{4}, \mathbb{A})$
232	*1048/1 [+ 2]	Concerto 3, G	(−) (¢, ♪) // m.137 adagio (↓)
233	1048/3		Allegro $\binom{12}{8}$, $\overset{\$}{}$)
234	1049/1	Concerto 4, G	Allegro $\begin{pmatrix} 3\\8 \end{pmatrix}$
235	1049/2		Andante $\begin{pmatrix} 3\\4 \end{pmatrix}$
236	1049/3		Presto (¢,))
237	1050/1	Concerto 5, D	Allegro (¢,))
238	1050/2		Affettuoso (c, 🎙)
239	1050/3		Allegro $\begin{pmatrix} 2\\4 \end{pmatrix}$
240	1051/2	Concerto 6, B _b	Adagio ma non tanto $(\frac{3}{2}, \mathcal{N})$
241	1051/3		Allegro $\binom{12}{8}, \checkmark$
		Harpsichord Concertos	
242	1052/1	Concerto, d	Allegro (¢, 🄊)
243	1052/2		Adagio $\begin{pmatrix} 3\\4 \end{pmatrix}$
244	1052/3		Allegro $(\frac{3}{4}, \mathbb{N})$
245	1053/2	Concerto, E	Siciliano $\binom{12}{8}$
246	1053/3		Allegro $\binom{12}{8}, \stackrel{3}{\bullet}$
247	*1054/1	Concerto, D	(-) (¢, M) // m.121 adagio // m.123
			allegro
248	1054/2		Adagio e piano sempre $\begin{pmatrix}3\\4\end{pmatrix}$
249	1054/3		Allegro $(\frac{3}{8}, \frac{3}{2})$
250	1055/1	Concerto, A	Allegro (¢, M)
251	1055/2		Larghetto $\binom{12}{8}$, $\cancel{3}$
252	1055/3		Allegro ma non tanto $(\frac{3}{8}, \mathbb{A})$
253	1056/1	Concerto, f	Allegro $\begin{pmatrix} 2\\4 \end{pmatrix}$
254	1056/2		Adagio (c , ♪)
255	1056/3		Presto $\binom{3}{8}$, \checkmark

256	1057/2	Concerto, F	Andante $(\frac{3}{4}, \frac{3}{4})$
257	1057/3		Allegro assai (c,))
258	1058/2	Concerto, g	Andante (c, \mathbb{N})
259	1058/3		Allegro assai $(\frac{9}{8}, \mathcal{N})$
260	1060/2	Concerto, c (2	Largo ovvero adagio $\binom{12}{8}$, $\overset{}{\bullet}$)
		Harpsichord)	
261	1060/3		Allegro $\begin{pmatrix} 2\\4 \end{pmatrix}$
262	1061/2	Concerto, C (2	Adagio (⁶ ₈ ,)
		Harpsichords)	
263	1061/3		Vivace (c,)
264	1062/2	Concerto, c	Andante e piano
		[≈ <i>BWV</i> 1043]	[1043: Largo ma non tanto]
265	1062/3		Allegro assai $(\frac{3}{4}, \sqrt[3]{3})$ [1043: allegro]
266	1063/2	Concerto, d (3	Alla Siciliana (⁶ / ₈ ,)
		Harpsichords)	
267	1063/3		Allegro $\begin{pmatrix} 2\\4 \end{pmatrix}$
268	1064/2	Concerto, C (3	Adagio (c, M)
269	1064/3	Hrpicds)	Allegro (ϕ, \bullet)
270	1065/2	Concerto, a (4	Largo $(\frac{3}{4}, \mathbb{A})$
		Harpsichords)	
271	1065/3		Allegro $({}^6_8, \bullet)$
		Ouverture, b	
272	*1067/1	Ouverture	(-) (c ,) // m.20 (2,) // m.198 Len-
			tement $\begin{pmatrix} 3\\4 \end{pmatrix}$
273	1067/6	Polonoise	Lentement $(\frac{3}{4}, \mathbf{A})$
	MUSICAL OFFEI	RING	
274	1079/3-1	Trio Sonata	Largo $\begin{pmatrix} 3\\4 \end{pmatrix}$
275	*1079/3-2		Allegro $\binom{2}{4}$, $\binom{3}{4}$ // m.158. adagio
			// m.159 allegro
276	1079/3-3		Andante (c, \mathbb{R})
277	1079/3-4		Allegro $({}^6_8, \bullet)$

B. Translated Quotations

[**1***] 2.2, p. 22

Madrigals and other compositions, which have the signature \mathfrak{e} and have an abundance of semiminims and fusas, move along at a faster pace; motets, however, with the signature \mathfrak{e} and a prevalence of breves and semibreves, at a slower pace: therfore in the latter case a faster beat, in the former a slower beat, is necessary in order to achieve a mean between two extremes, otherwise the slower speed will annoy the listeners' ears or the faster speed lead to disaster¹

[**2***] 3.1, p. 37

If young composers should come across church pieces in allabreve time where there are four four half notes between two barlines, they must not let themselves be misled and conclude that the meter is 4/2. This occurs only as a convenience for the composer to avoid an excess of barlines and ties, he is free to do so. But this does not change the nature of the ¢ measure, which always has the same stress every other half note; and the upbeat and the downbeat of the measure is fixed even when four, six, and more measures are joined without barline, as Handel, among others, has done in his oratorios.²

[**3***] 3.1, p. 37

2/2 meter, or rather alla breve, which is always designate by \mathbf{e} or $\mathbf{2}$, is most often used in church pieces, fugues and elaborate choruses. It should be noted about this meter that it is very serious and emphatic, yet it is performed twice as fast as its note values indicate, [...] Both meters [\mathbf{e} and $\frac{6}{4}$] tolerate no shorter note values than eighths.³

[**4***] 3.5, p. 47

The elder Bach has certainly not written the fugue at \mathbf{A} in $\frac{12}{8}$ and the other at \mathbf{B} in $\frac{12}{16}$ without good reason. Everyone will easily perceive the distinction between the two meters in these examples. The one at \mathbf{A} designates a slower tempo and a more emphatic performance; furthermore, many sixteeenth notes can be used in this meter.

¹ Praetorius, Syntagma musicum III, 50; Hans Lampl's translation, 104.

² Kirnberger, *Die Kunst des reinen Satzes*, 2. Theil, 1. Abtheilung, 124; translation by D. Beach & J. Thym *The Art of Strict Musical Composition*, New Haven: Yale University Press, 1982, 390.

³ Die Kunst des reinen Satzes, ibid., p. 118. Beach & Thym, ibid., 386.

However, *no shorter note values can be used in the one at* **B**, and the sixteenthth notes are performed quickly and plainly, without any emphasis. Handel, Bach, and Couperin have written many pieces in $\frac{12}{16}$ meter.⁴

[5*] 3.6, p. 49

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.⁵

[6a*] 4.1, p. 53-4

What in former times was considered to be quite fast would have been played almost twice as slow as in the present day. An Allegro assai, Presto, Furioso, &c., was then written, and would have been played, only a little faster than an Allegretto is written and performed today. The large number of quick notes in the instrumental pieces of the earlier German composers thus looked much more difficult and hazardous than they sounded. Contemporary French musicians have retained this style of moderate speed in lively pieces to a large extent.

[6b*] 4.1, p. 53-4

In bygone days everything was played [almost] twice as slowly as in our time: what was called *allegro assai*, *presto*, *furioso*, etc., was written the same way but was played not faster than one writes and plays an *allegretto* nowadays. The many fast notes in the instrumental pieces of former German composers thus looked much more formidable than they really sounded. The French composers of our time have generally kept this type of medium speed for vivacious pieces even now.⁶

[7*] 4.2, p. 54

"The newly opened [founded] orchestra, or a general and thorough instruction, how a gentleman may obtain a perfect idea of the excellence and dignity of the noble art of music, form his taste accordingly, understand the technical terms and cleverly discuss this admirable science.⁷

⁴ Kirnberger, ibid.; Beach & Thym, 391.

⁵ C. P. E. Bach, Versuch, Ch. 3, § 10. Translation by W. J. Mitchell (Essay on the True Art), 10.

⁶ J. J. Quantz, Versuch einer Anweisung, Ch. XVII/VII/§ 50, 263. The passage is translated (a) by Edward Reilly (On Playing the Flute); (b) by Erwin Bodky, The Interpretation of Bach's Keyboard Works, 122.

⁷ Johann Mattheson, Das neu-eröffnete Orchestre, Hamburg, 1713, R/ Hildesheim: Olms, 1993.

[8*] 4.2, p. 55-6

 $\frac{12}{8}$ [*orig. $\frac{2}{8}$] is just like as [recte $\frac{12}{4}$; *orig. Zwölfachteltact] of smaller proportion, but otherwise, in its number and parts and beats, it is the same as the previous meter, that is, they differ only in quality but not in quantity. This measure is most suitable for pieces à la moderne, because, although its parts have the same value as in, the attenuated motion [Mouvement] and the doubled number [of beats] lend a certain gravity – notwithstanding the haste that is otherwise associated with the eighthnotes. Thus one can use this usually lilting measure for the most tender and moving pieces, even in church or in the opera, as well as in cantatas etc. In bygone times, this measure was used for nothing but quite fast pieces, as is still done occasionally, e.g., in gigues and the like; but nowadays the same may serve to express touching affects rather than merry ones. On this occasion, I cannot help divulging an observation I made long ago, namely that the public taste in music has changed so much in the last years and become so much more sound, that slow and sad pieces are now almost invariably preferred to fast and merry ones. Whether it is a change in the climate which has brought this about, or perhaps, that the phlegmatic temperaments have become more numerous, so that they now predominate, I would like to hear an inquisitive scientist's opinion of it. Indeed, this taste for serious musical pieces, when it is encouraged wisely and dicreetly, will help the entire science [of music] to have a particularly favourable reception, and better help it to its ultimate goal, namely moving the passions, more than any dances or starts and saults. The reason for this change seems to me, among other things, the docility which well-mannered people are encouraged to seek from an early age, more than any time before. Then one thing is certain: a fine quality is never better received than in a fine spirit; but it will, on the contrary, be taken amiss, and mocked by a dull mind. [...] Consider further, what a difference between the average education, even of cultured and genteel people. The difference of education is already apparent from father to son, not to mention greater age-differences, and people become more and more refined everyday, thanks to the indefatigable zeal of learned and skilled men. Thus I believe that if one could stay out of the world for two years, without being informed by correspondence or by books, when one came back, one could hardly tell if he be a boy or a girl. Back to our main subject, let us notice how much one admired, some years ago, great speed and exaggerated agility on instruments, so that composers as well as performers nearly always regarded the allegro in a sonata, or other form, as their only goal and accomplishment, while everything else was carried out carelessly and unevenly. Therefore it still happens that those who have had such teachers who appreciated speed more than grace and elegance, cannot accomplish a correct adagio, if even they would exert themselves to the end. But one should also consider, whether the present-day taste has not also changed as concerns the Pleasure that one gets out of the music. Then one will understand, as far as the still small number of delicate ears would allow, that to prefer a tuneful singing playing manner over noisy speeds is a good beginning. I leave the question open, whether speedy playing on an instrument can arouse admiration or even astonishment. We already know that astonishment and amazement are not the ultimate goal of music. What gives us fright brings no delight; or, what evokes admiration does seldom cause exhilaration.⁸

[**9***] V.3, p. 68

Although the motion of the meter [...] is determined in a natural way by the note values, for example, in the binary meter, a measure where each beat consists of a half-note may and must be performed more slowly than one where each beat is no more than a quarter-note – what actually most often happens is the opposite effect. The reason is, *inter alia*, the property of every musical piece, that it uses different note values, and that a piece where only two kinds of note values occur has to be performed, there being no other reason for the contrary, faster than one where the [note-value] relationships become more complex. This neutralization of the relationship between note values and tempo [metric-pace] has compelled musicians to indicate the degree of slow or fast pace by means of certain Italian terms.⁹

[10*] 8.3, p.121-2

It is particularly in regard to the tempo of pieces that musicians take liberties against their principles. Every trained musician who plays a piece composed by someone else [...] clearly sees that the composer of the piece has indicated by the time signature whether one should play it slowly [gravement] or quickly [gayement], but he doesn't know precisely what the composer means by gravement or gayement, because one person may mean one thing, another something else.¹⁰

[11*] 8.4, p. 122

Some theorists put the aforementioned degrees of motion in *four* main categories. To the first category belong, according to this division, the very fast tempi, such as *Presto*, *Allegro assai* etc. To the second – the moderately fast ones, e.g., *Allegro moderato*, *Allegretto* etc. To the third – the moderately slow, like *Un poco Adagio*, *Larghetto*, *poco Andante* etc. And to the fourth category – the very slow, e.g., *Largo*, *Adagio molto* etc.

⁸ Mattheson, Das neu-eröffnete Orchestre, Cap. III, § 11, 80ff.

⁹ F. W. Marpurg, Anleitung zur Musik (1763), Ch. 4, § 8, p.70f.

¹⁰ Saint-Lambert, Les Principes du clavecin, 23-24, R. Harris-Warrick's translation (p. 43).

Others accept only *three* main categories of motion, namely 1) fast – such as *Prestissimo*, *Presto*, *Allegro assai*, *Allegro*, *Allegretto* etc. 2) moderate – *Andante*, *Andantino* etc., and 3) slow - e.g., *Largo*, *Adagio*, and so on.

Still others infer *six* main categories, ascribing to the first one all pieces of a very fast tempo; to the second class – the fast, to the third – the not so fast, to the fourth – the very slow, to the fifth – the slow, and to the sixth – the not very slow tempi. Some theorist also divide all music pieces with regard to tempo just in *two* main

classes. They distinguish merely a fast from a slow motion.¹¹

[12*] 8.7, p. 130

A succession of notes that mean nothing by themselves and are differentiated from one another only by pitch can be transformed into a real melody – one that ha a definite character and depicts a passion a particular sentiment – by means of tempo, meter, and rhythm, which give the melody its character and expression.¹²

[**13***] 8.7, p. 130

Two pieces may have the same degree of Allgero or Largo, and due to this very reason have very different effects, since their motion may be lighter or heavier even at the same speed, according to their meter."¹³

[**14***] 8.8, p. 132

Tempo commodo, Tempo giusto [...] lead us back to the piece itself. They tell us that we should play the piece neither too fast nor too slow, but in its proper natural tempo. We should, therefore, look for the true movement of such a piece in the piece itself.¹⁴

[15*] 9.3, p. 144-5

And this same sign is the real Italian alla Breve, as it is performed as a breve, half of it as down- and half as up-beat. It is indicated by the following signature ϕ .

NB 2) Instead of this sign ϕ , one finds nowadays also the double numeral $[{}^2_1]$, which also denotes a fast equal tactus, and all notes lose, accordingly, something (in large note values, up to a half) of their value.¹⁵

¹¹ Türk, *Klavierschule*, § 71, 110–11.

¹² Kirnberger, *Die Kunst des reinen Satzes*, Theil II, 4. Abschnitt, p.105; English translation by David Beach and Jurgen Thym.

¹³ Kirnberger, ibid., 105.

¹⁴ Leopold Mozart, *Violinschule*, ²/1789, 50, quoted in Miehling 1993, 328.

¹⁵ Walther, Praecepta, 29, 30.

[16*] 10.1, p. 157-8

In *certain other countries* [italics mine] there is a marked tendency to play adagios too fast and allegros too slow. The contradictions of such faulty playing need not be systematically stated. At the same time it must not be assumed that I condone those whose unwieldy fingers give us no choice but to slumber, whose cantabile is a pretense which hides their inability to enliven the instrument, whose performance, thanks to their lazy fingers, deserves far greater censure than that addressed to shallow fleetness.¹⁶

[**17***] 10.1, p. 158

Those who have seen performances of Lully's operas – which have become the delight of all nations – while he was still alive, and taught in his own voice obedient actors those things that cannot be written in the notes, say that they found there an expression which they do not find anymore nowadays. "We can well recognize there the melodies of Lully," they say, "but we do not find anymore the spirit which animated these songs. The recitatives seem now without a soul, and the ballet airs nearly leave us indifferent. These persons bring as a proof of their assertion the fact that a performance of Lully's operas takes nowadays longer than it did when he performed them himself, although they should at present be shorter, as one does not repeat many violin pieces [instrumental sections] that Lully had them played twice.¹⁷

[18*] 10.1, p. 158

One should ask how to find the different gradations of tempo. These must be learned from experience. It happens often that semibreves are played as fast as semiminims, and semiminims as slow as semibreves.¹⁸

[19*] Coda, p. 177

These are the rules established in music concerning the tempo of pieces, but of all the rules of this art, these are the least observed by those who profess it.¹⁹

¹⁶ C. P. E. Bach, Essay on the True Art (trans. D. Mitchell), 147.

¹⁷ Jean-Baptiste Dubos, *Réflexions critiques sur la poésie et sur la peinture* (1719 or 1732), quoted in Borrel, 173.

¹⁸ Marpurg, Anleitung zum Clavierspielen I/5, § 4, 17.

¹⁹ Saint-Lambert, Les principes du clavecin, 23f.

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