WHICH BACH WROTE WHAT?
A CUMULATIVE APPROACH TO CLARIFICATION OF THREE DISPUTED WORKS

by

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To Marion

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INTRODUCTION

The Problem

The most direct link between an eighteenth-century composer and the present time is the record left by that composer in the form of ink on paper. Regrettably, the written record is notoriously fragile and susceptible to natural decay as well as man-made disasters. Where that record is incomplete, the historian seeking to illuminate the past is faced with a jigsaw puzzle missing key pieces. Where the record is unclear, however, the historian often faces another intractable problem: does the piece in hand even belong to the same puzzle?

The present dissertation is an attempt to return orphaned pieces from three closely related puzzles to the right boxes. It does so by applying techniques that have already proven useful for such a task, in combination with methods of computer and statistical analysis that, until now, have been difficult, if not impossible, to apply to musical research. It is thus an exercise in authentication, exploring options that might still be available once traditional methods have yielded no conclusive results.

The "orphaned pieces" are three disputed compositions—two keyboard concertos and a sextet—which all relevant sources attribute to one of Johann Sebastian Bach's sons. The sources do not agree, however, about which son wrote which piece. The two concertos were published around 1775 with an attribution to Johann Christian Bach. The first concerto seems to have no other extant source besides this publication. Two manuscript copies of it that were lost (or destroyed) in 1945 attributed the work,

respectively, to “Bach” and to “C. P. E. Bach.” For the second concerto there are four additional sources besides the 1775 publication (three manuscripts and one published edition). Two of them carry attributions to Carl Philipp Emanuel Bach, one to “Sigr. Bach of Berlin,” and one simply to “Sig. Bach.” Finally, three contemporary witnesses ascribe both concertos to a third Bach brother, Johann Christoph Friedrich. The sextet (for oboe, violin, cello, keyboard, and two horns) is attributed more or less unambiguously in all sources to Johann Christian Bach—ranging from his full name and title to somewhat less definitive abbreviations and initials ("Giov: Christ: Bach" and "GCBach"). Due to the circumstance, however, that the earliest source of the sextet is in the hand of Johann Christian's brother, Johann Christoph Friedrich, the work has also been attributed to him. The fact that all of the attributions of the three pieces refer to one or another member of the Bach family allows us to formulate the attribution question “which Bach?” The possibility that any of the pieces may have been written by someone other than the three brothers explicitly mentioned in the sources will not be considered here.[1]

The goal of this dissertation is to find the “best fit” for the three pieces under consideration, that is, to determine who among the brothers was the most likely composer for each of the works. Every effort has been made to avoid a “forced fit,” in which the available evidence is selectively applied to support *a priori* assumptions. For the purposes of the present methodological exercise, the relative obscurity of the works in question is a virtue; there can be no vested interest in the outcome, such as there might be if, say, one were attempting to establish that Beethoven did not actually write the Fifth Symphony, or that Shakespeare was, indeed, the “W.S.” responsible for the “Funeral Elegy” from 1612, or that Mozart actually did write the four-wind *concertante*.[2]

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[1]Another assumption I have made is that the disputed works were each individually composed by a single hand. There is no evidence to suggest that any of them was the result of collaboration between or among any subset of the brothers.

[2]Robert Levin, *Who Wrote the Mozart Four-Wind Concertante* (Stuyvesant, NY: Pendragon Press, 1988).

The intent here is not to rehabilitate any of the disputed pieces or their composers. Rather, this study aims solely at refining methods of authentication. What I hope to offer is a means to establish a convincing probability that a particular composer did or did not compose a particular piece.

Why Bother?

For most composed repertoires—as opposed to some improvised ones—the question "who wrote it?" plays an important role in evaluating any given piece of music. Attributions directly affect critical reception.[3] A previously unknown symphony would obviously receive more scholarly attention (and more performances) if attributed to Beethoven than it would if attributed to Friedrich Witt.[4] But beyond the question of an individual work's reception, correct attributions, including those for the works of *Kleinmeister*, help to establish the necessary context for the proper understanding of any given era. They also satisfy the "need to know" that seems to be an innate characteristic of most historians—a fervent interest in getting the facts straight. So, while the history of music will not require substantial rewriting based on who might here be established as the most probable composer for each of the three works under consideration, it is certainly a positive step to eliminate, or at least reduce, some of the uncertainty surrounding our understanding of the past. Of perhaps greater importance is the fact that this study tests a new methodology for approaching problems of conflicting attributions.

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[3]John Spitzer, "Musical Attribution and Critical Judgement: The Rise and Fall of the Sinfonia Concertante for Winds, K. 297b," *Journal of Musicology* 5 (1987): 319–56.

[4]For a discussion of the so-called "Jena" Symphony and its correct attribution to Witt, see H. C. Robbins Landon, *Essays on the Viennese Classical Style: Gluck, Haydn, Mozart, Beethoven* (London: Barrie & Rockliff, 1970), 152–59.

Source Problems in the Eighteenth Century

The eighteenth century witnessed a radical shift in the economy of music, away from patronage by the church and courts and towards a base of economic support by the rapidly growing middle classes. Music printing became increasingly important, enabling more people to acquire music at a lower cost. Indeed, it is possible to speak of a veritable flourishing of music printing during the second half of the eighteenth century.[5] At the same time composers began to enjoy considerably more freedom of movement than their predecessors had, as the new economic conditions made exclusive service to a single patron and in a single location less attractive. Such increased activity and mobility, however, inevitably led to a certain amount of confusion, as an increasing number of composers who formerly might have enjoyed only local significance could now have their works sold in music shops across the continent, often without their knowledge. In the absence of anything like modern copyright agreements, or even a general consensus about what exactly constituted intellectual property, the composer could do little to protect his interests and reputation once a work left his own sphere of control, and there was little to stop publishers from exploiting the situation. The temptation to publish works by popular composers without their permission or knowledge, or to pass off an unfamiliar and possibly inferior piece as the work of a more famous composer, was great and often indulged. In other cases publishers were sometimes careless, or were themselves the victims of deceit, and unknowingly published pieces under the wrong name. It comes as no surprise then, that the number of

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[5]One may cite the refinement in 1754 by Johann Gottlob Immanuel Breitkopf of an economically feasible method of printing music from moveable type, as well as the founding of such prominent firms as Hummel in Amsterdam (1753), Welcker in London (1762), André in Offenbach (1773), Preston in London (ca. 1774), Artaria in Vienna (1778), Schott in Mainz (1780), Hoffmeister in Vienna (1785), and Simrock in Bonn (1793). These dates are taken from the respective entries in *The New Grove Handbooks in Music: Music Printing and Publishing*, ed. D. W. Krummel and Stanley Sadie (London: Macmillan, 1990), and indicate when the firms began publishing music. Some of them had existed earlier as non-music publishers.

misattributed or multiply attributed compositions from the eighteenth century is considerable.

One of the primary tasks remaining for researchers of eighteenth-century music is the cataloguing and proper identification of the mountains of printed and manuscript sources in collections around the world. That "cataloguing" and "proper identification" are two distinct (if related) tasks is evidenced by the lists of doubtful and spurious works that are found in nearly every thematic catalogue of eighteenth-century composers. Even with such major figures as Haydn and Mozart, who themselves tried to keep track of their own creative outputs, the problem is far from being resolved. As one indication of the scope of the problem, Jan LaRue reported in 1960 that approximately 6% of the entries in his *Union Catalogue of 18th-Century Symphonies* have conflicting attributions. Extrapolating that percentage to the more than 16,000 incipits in the catalogue in its current form yields nearly 1000 symphonies with problematic attributions.[6] The situation regarding concertos and chamber music is no less confusing.[7] The problem of sheer numbers is compounded by the lack of standardized musical nomenclature and even orthography in the sources. A given piece might be transmitted under three different titles, with widely varying attributions, and with the composers' names spelled differently in each source.[8]

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[6]Jan LaRue, "Major and Minor Mysteries of Identification in the 18th-Century Symphony," *Journal of the American Musicological Society* 13 (1960): 188; and Jan LaRue, *A Catalogue of 18th-Century Symphonies* (Bloomington: Indiana University Press, 1988).

[7]Perhaps it is even more so, since there exist as yet no reference works for these genres comparable to LaRue's cataloguing of symphonies.

[8]One of the most convoluted cases involves a piece that is variously identified in the sources as a symphony, an overture and a parthia, and which is attributed to no fewer than five composers; Filtz, Fränzl, Haydn, Bach, and Pichl. The two sources that attribute the work to Fränzl give spellings of "Frenzl" and "Frentzl," while the specific identities of "Bach" and "Haydn" receive no further elaboration. See LaRue, "Major and Minor Mysteries," 186–88.

The Case of the Bachs

The problems just described naturally increase dramatically when two or more composers have the same surname. With the many members of the Bach family, particularly within the generation of Johann Sebastian's children, the bibliographic difficulties are extraordinary indeed. Not only were four of Bach's sons active as composers, but several of his nephews and more distant relatives were composing in the third quarter of the eighteenth century. Moreover, the given names of Johann, Christoph, and Christian were very popular within the extended Bach family. In the *Ursprung der musicalisch-Bachischen Familie* one finds four Johann Christians and no fewer than eight Johann Christophs listed, as well as Johann Christoph Friedrich and Johann Christoph Georg.[9] Just among the twenty children of Johann Sebastian, the name Johann (or Johanna) turns up six times, Christian (or Christiana) five times, and Christoph twice. Both Johann Christoph Friedrich and Johann Christian employed a rich and often overlapping repertoire of initials, italianizations, and spellings when identifying themselves in letters and manuscripts, and their publishers were not always as careful or diligent as they might have been in clearly identifying the brothers on title pages.[10] Even Charles Burney, who knew two of the Bach brothers personally, still managed to confuse, or more accurately, amalgamate the two remaining brothers in print.[11]

Blurring the lines of demarcation between the Bach brothers even further was their common musical training from their father. Although Wilhelm Friedemann studied

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[9]*Ursprung der musicalisch-Bachischen Familie*, compiled by Johann Sebastian Bach in 1735 based on family records. The original is now lost, but several copies of varying degrees of completeness and accuracy survive, from which a reconstruction of the original has been published in *Bach-Dokumente*, ed. Werner Neumann and Hans-Joachim Schulze (Kassel: Bärenreiter, 1963), 1:255–67.

[10]One example from many: Friedrich's collection of sacred songs to texts by Münter was published in Leipzig in 1774. The printing was done by Breitkopf, a firm with ties to the Bach family. The composer is identified as "Johann *Christian* Friedrich Bach" (italics mine).

[11] In discussing the musical situation in Braunschweig, which Burney admits to not having visited, he completely muddles the distinction between Wilhelm Friedemann and Johann Christoph Friedrich. Charles Burney, *The Present State of Music in Germany, the Netherlands, and United Provinces, or the Journal of a Tour through those Countries, undertaken to Collect Materials for a General History of Music* (1775; reprint, New York: Broude Brothers, 1969) 2:323.

violin for a time under Johann Gottlieb Graun, and Johann Christian continued his training under Carl Philipp Emanuel and Giovanni Battista Martini after Sebastian's death, it can still be said that all four brothers received their essential training as composers from the same source. For Emanuel it was even a point of honor that he had had no other teacher besides his father.[12] As a result, much of their early work displays notable similarities, that is, individual stylistic differences often only began to appear after the brothers had been removed from direct paternal influence for some time, and as each brother pursued his own independent professional career.

Since those careers developed in cities as far flung as Dresden, Halle, Braunschweig, Berlin, Rheinsberg, Hamburg, Bückeburg, Milan, Naples, London, Paris, and Mannheim, it might be expected that the present location of primary source materials could be a key to clarifying questions of authorship. Unfortunately, this is not the case for the works in question. Of the extant sources for the two concertos and the sextet, for example, the only manuscript in the hand of any one of the Bach brothers now resides in Kraków, Poland, a city that none of them is known to have ever visited, and for reasons that have nothing to do with where they were active. Furthermore, three of the four brothers spent a part of their careers in Berlin. The same forces that attracted them to that city continued to act as a cultural magnet well into the twentieth century, drawing to the German capital one of the most significant collections of music manuscripts and early printed editions to be found anywhere. The centralization of German cultural and scientific activities in Berlin resulted in the majority of the extant source material for the Bach family eventually being brought together there, so that the

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[12]This statement was made by Emanuel in his short autobiographical sketch, which was added to the German translation of Burney's travel diaries. Charles Burney, *Carl Burney's der Musik Doctors Tagebuch seiner musikalischen Reisen*, trans. C. D. Eberling and J. J. C. Bode (1773; reprint, Wilhelmshaven: Heinrichshofen's Verlag, 1980), 199–209. It has been translated into English by William S. Newman, "Emanuel Bach's Autobiography," *Musical Quarterly* 51 (1965): 363–72.

present location of surviving Bach manuscripts rarely has any relationship to their place of origin.

Before proceeding too far, it might be prudent to lay down some ground rules for referring to the various members of the Bach family. We have seen that references to family name alone, or even to the alphabet soup of initials still often used in the Bach literature, had already caused much confusion during the eighteenth century. The method adopted here—which I assume is how the Bachs themselves must have kept everybody straight—is to use only the final given names.[13] So, for example, I usually refer to Wilhelm Friedemann as just Friedemann; Carl Philipp Emanuel as Emanuel; Johann Christoph Friedrich as Friedrich; and Johann Christian as Christian. When referring to other Bach family members, I normally use their full names. Another point of usage: when translating German terms, I usually give the original word in parentheses when this helps to eliminate ambiguity. The exception to this rule is the term *Clavier*, which I invariably translate as "keyboard" without giving the original or speculating on whether clavichord, harpsichord, fortepiano, or organ is meant. For the purposes of this dissertation, "keyboard" can refer to any contemporary keyboard instrument that was capable of being used to perform the pieces under consideration.

Of Johann Sebastian's four composing sons, three come under active consideration as possible composers for one or more of the disputed works. The eldest, Friedemann, is not mentioned in any of the sources and is thus eliminated from consideration. Emanuel, Johann Sebastian's second eldest son, was born in Weimar in 1714. After studying law at the universities in Leipzig and Frankfurt an der Oder, he entered the service of the crown prince Friedrich of Prussia in 1738 as harpsichordist. Friedrich became king in 1740, and Emanuel stayed on as royal accompanist for nearly thirty years, finally leaving Berlin in 1768 to succeed his godfather, Georg Philipp

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[13]Evidence for this is that many of the known pet names in the family—e.g., Friedl for Friedemann, or Christel for Christian—are shortened forms of the final given name.

Telemann, as music director in Hamburg. Emanuel remained there until his death in 1788, providing music for the city's five principal churches and actively participating in its secular musical life as well.

Friedrich and Christian were both children of Johann Sebastian's second marriage, to Anna Magdalena, and were thus half-brothers to the older Friedemann and Emanuel. Friedrich was born in 1732 (the same year as Haydn), Christian three years later, both in Leipzig. About their regular education we know virtually nothing, although it is generally assumed that they were enrolled, like their older brothers, at the St. Thomas school where Johann Sebastian was Cantor.[14] Friedrich, after briefly studying law at the university in his hometown, accepted a position in 1749 as chamber musician to Count Wilhelm of Schaumburg-Lippe in Bückeburg (a tiny principality about thirty miles west of Hannover), where he remained for the rest of his life. He eventually became court *Konzertmeister*, and when he died in 1795 he was remembered as a solid musical craftsman, highly esteemed for his pleasant and upright personality. He survived Emanuel by seven years, and Christian by thirteen.

Christian was only fifteen when his father died in 1750, whereupon he went to live with Emanuel in Berlin to complete his education and training. In the spring or summer of 1755 he travelled to Italy.[15] His success there as an opera composer (he was the first Bach to compose for the stage) led to an invitation to compose for the King's Theater in London, and he moved to that city in 1762. He soon found favor with the royal family (who were of German extraction), and he rapidly became the most popular composer in England. Since London was also a major center for music publishing, Christian's works reached a very wide audience all over Europe. However, by the time

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[14]The records for the *Thomasschule* during the years that Friedrich and Christian would have attended it have not survived.

[15]Hans-Joachim Schulze, "Noch einmal: Wann begann die 'italienische Reise' des jüngsten Bach-Sohnes?," *Bach-Jahrbuch* 74 (1988): 235–36.

of his death in London on New Year's Day 1782, his popularity had waned considerably.

The Cumulative Approach

The "cumulative approach to clarification" adopted here is founded on two premises. The first is that there is an inverse relationship between the authenticity and the quantity of evidence: the more authentic the evidence, the less of it is required to establish secure attributions. Generally speaking, the most reliable way of establishing authorship of a musical work is to find a source in which the composer has somehow acknowledged that authorship: for example, a signed, autograph manuscript or a printed edition with corrections in the composer's hand. Usually a single source of this kind suffices to establish authorship beyond a reasonable doubt. When such an unambiguous source is lacking, one must have recourse to non-autograph sources. Only rarely does a single non-autograph source by itself provide as secure an attribution as an autograph source, so that additional corroborating evidence—such as references in contemporary letters, diaries, concert programs, reviews, publishers' catalogues, and the like—is needed to make a convincing argument. If such circumstantial evidence is either lacking or conflicting, the next step usually involves seeking internal stylistic evidence, by comparing securely attributed works with the questionable work. Such an approach requires even more supporting evidence, lest it be founded on a few subjective impressions. Indeed, the detailed statistical approach taken here requires amounts of supporting evidence that have previously proven impractical or impossible to collect. Thus, the further one must go beyond the traditional methods of assigning authorship, the more evidence must be found to support any conclusions. The conclusions depend on the cumulative effect of the evidence gathered.

The second premise is related to the first: in cases of doubt, one must exhaust all reasonable avenues of inquiry before venturing a conclusion. It is very tempting to call off the search as soon as the evidence begins to point in one direction or the other, or as soon as one has found some corroboration of a preconceived hypothesis. The best conclusions, however, are those based on the best (and the most) evidence, and in as risky a business as assigning attributions, one can never have enough supporting evidence.

There are obvious similarities between the cumulative approach proposed here and the "multifaceted" approach put forth by Barry Brook some years ago.[16] They have in common the conviction that all evidence must be carefully scrutinized before any conclusions are reached; and Brook's efforts have provided an invaluable model of how such investigations might be carried out. Yet there are significant differences of orientation and means. Brook implied that the goal of such investigations is a "certainty" that a piece is or is not by a given composer.[17] In many cases, though, the evidence can, at best, support only a probability of authorship. Moreover, Brook's approach depended upon a team effort—involving eleven graduate students from the City University of New York and the Juilliard School—which a doctoral dissertation, by definition, cannot. Brook and his students also shied away from working with many sources that did not already exist in a modern edition—a luxury that was not available in the present case. Finally, Brook considered computer assistance in analyzing musical data still (in the late 1970s) to be impractical. In the intervening time, advances both in music notation by computer and in ways to examine computer-based scores have much

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[16]Barry S. Brook, "Determining Authenticity through Internal Analysis: A Multifaceted Approach," in *Bericht über den internationalen Joseph Haydn Kongress, Wien, Hofburg, 5.–12. September 1982*, ed. Eva Badura-Skoda (Munich: G. Henle Verlag, 1984), 551–67.

[17]For example, his statement that intuitive judgements, "while often correct, must, until tested, be regarded only as probabilities, not certainties," gives the impression that he considers probabilities unsatisfactory. Ibid., 552.

reduced these obstacles. One of the significant advances of the present dissertation is the major role played by the computer.

The cumulative approach envisions a uniform method of beginning with the most general evidence and progressively narrowing the focus of the investigation while at the same time broadening the amount of evidence relied upon, before drawing any conclusions. Chapter 1 of the present dissertation examines the surviving musical sources for the two concertos and the sextet. Chapter 2 summarizes the references to these works in other sources. In Chapter 3 general background information about north German keyboard concertos, as well as eighteenth-century chamber music with obbligato keyboard, is presented, and the disputed pieces are analyzed to identify any possible large-scale stylistic traits that may point to one composer or another. Chapter 4 introduces the computer as a tool for deriving detailed information from the compositions, and describes the computer program developed specifically for this dissertation. In Chapter 5 the evidence collected in the preceding chapters is analyzed, with particular emphasis on standard statistical analyses of the computer-derived data, and conclusions about the three disputed pieces are drawn, with suggestions made about possible future applications of the overall approach.[18] One may—in fact one should—pause along the way to examine what the evidence so far suggests, as this may point to other potentially helpful avenues of investigation, but the final result must ultimately rest on the accumulation of evidence provided by all approaches.

[18]The appendices contain newly edited scores to the three disputed works, a listing of the computer source code for the routines used in Chapter 4, and the raw statistical data used in Chapter 5.

CHAPTER 1

THE MUSICAL SOURCES

The Publishing Activities of the Bach Brothers

When in 1730 Johann Sebastian Bach wrote to his childhood friend Georg Erdmann that his children were all "gebohrne Musici," he was referring specifically to the vocal and instrumental performing capabilities of his young family.[1] Had he been able to see thirty years into the future, though, he would have been able to add that the male members of the family were also born composers. Of the six sons who reached maturity, four left their mark in history as such.[2] As we have seen, three of those four come into question as possible authors of one or more of the works considered in this study. Since over half of the surviving primary sources for the disputed works are prints, it will be helpful to survey the published output of the three brothers, in order to see if any trends or patterns emerge that might prove useful in identifying printed sources of ambiguous origin.

All of the brothers learned about music engraving and printing while growing up in Leipzig by witnessing the production of their father's publications, including the four parts of the *Clavier-Übung*, the *Musikalische Opfer*, and the *Kunst der Fugue*. Leipzig had long been a center of book publishing and, through the firm of Breitkopf, also became

[1] *Bach-Dokumente*, 1:67–70.

[2] The eldest, Wilhelm Friedemann, showed great early promise as both performer and composer, but ultimately lacked the self-discipline needed to fulfill that promise completely. Johann Gottfried Bernhard, third son of Sebastian's first marriage, died at the age of twenty-four, before he could establish himself as a composer. Gottfried Heinrich, eldest son of Bach's second marriage, although a "great genius" according to the genealogy, was mentally deficient and is not known to have composed.

important for music publishing in the second half of the eighteenth century. Both Emanuel and Friedrich established personal and business ties to Breitkopf's firm after they left Leipzig.[3] Although Christian is not known to have had personal contact with Breitkopf after 1750, and Breitkopf himself apparently never published anything by Christian, the latter was certainly not unknown to the firm; Christian's publications were well represented in Breitkopf's stock of music for resale.

Emanuel Bach

One of the earliest known compositions by Emanuel is a minuet, H. 1.5, which the seventeen-year-old composer engraved himself in 1731.[4] Throughout his adult life Emanuel's compositions appeared regularly in print, culminating in 1787 when Breitkopf issued the full score to his oratorio *Die Auferstehung und Himmelfahrt Jesu*. Emanuel was also the author of one of the most important performance treatises to be published in the eighteenth century, and acted as editor for an anthology of shorter works by various composers.[5] Helm lists ninety-nine prints of Emanuel's music that appeared during his lifetime, plus another twenty or so that were published shortly after his death in 1788. Only thirteen of Emanuel's fifty-two definitely authentic keyboard concertos were printed during his lifetime; five of these editions were probably unauthorized.[6]

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[3]Hermann von Hase, "Carl Philipp Emanuel Bach und Joh. Gottl. Im. Breitkopf," *Bach-Jahrbuch* 12 (1911): 86–104; Ernst Suchalla, *Briefe von Carl Philipp Emanuel Bach an Johann Gottlob Immanuel Breitkopf und Johann Nikolaus Forkel* (Tutzing: Hans Schneider, 1985); and Georg Schünemann, "Friedrich Bachs Briefwechsel mit Gerstenberg und Breitkopf," *Bach-Jahrbuch* 13 (1916): 20–35.

[4]The numbering of Emanuel's works used here is that established by E. Eugene Helm, *Thematic Catalogue of the Works of Carl Philipp Emanuel Bach* (New Haven: Yale University Press, 1989). This catalogue divides Emanuel's works into genres and attempts to list the works within each genre chronologically. Each genre is further subdivided according to strength of attribution into authentic, possibly authentic, doubtful, and spurious. The numbering is continuous from one genre to the next.

[5]Carl Philipp Emanuel Bach, *Versuch über die wahre Art das Klavier zu spielen*, 2 vols. (1753, 1762; reprint, Kassel: Bärenreiter, 1994); and Carl Philipp Emanuel Bach, ed., *Musikalisches Vielerley* (Hamburg: M. C. Bock, 1770).

[6]Helm, *Thematic Catalogue*, 233–36. The thirteen published concertos are H. 404, 414, 417, 421, 428, 429, 444, and 471–476.

Friedrich Bach

Publication played a much less significant role in the professional life of Friedrich, perhaps due to his more isolated position in out-of-the-way Bückeburg. All of his known publications appeared during his lifetime, and in almost all cases the impetus for publication can be shown to have come from Friedrich himself. In many cases he assumed the financial risk and undertook the responsibility for distribution as well. Since he never developed an international reputation, opportunistic publishers were not tempted to sell spurious works under his name, which often happened in the cases of Emanuel and Christian.[7] Table 1 lists all of Friedrich's extant publications in approximate chronological order.[8] The two publications by Welcker almost certainly resulted from Friedrich's 1778 visit to Christian in London. Since this visit lasted only several weeks, Friedrich must have brought these works with him, perhaps with the knowledge that Christian had already lined up a publisher.[9] All of the works here listed can be performed by six or fewer players, which is in keeping with Friedrich's more modest objectives as a published composer and in keeping with the didactic character of many of the titles.[10]

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[7]See Charles Sanford Terry, *Johann Christian Bach,* 2nd ed. (London: Oxford University Press, 1967), 79, for a contemporary description of the problem.

[8]The "HW" numbers refer to the list of Friedrich's works in Hannsdieter Wohlfarth, *Johann Christoph Friedrich Bach: Ein Komponist im Vorfeld der Klassik* (Bern: Francke Verlag, 1971), 218–33.

[9]In his upcoming edition of Friedrich's London concertos (to be published by Carus Verlag), Elias N. Kulukundis dates the Welcker edition to mid-1780, on the basis of the publisher's catalogue enclosed with the edition. This suggests two possibilities: either Friedrich composed them in London and they were only published later, or he returned to Germany in 1778 with a committment from Welcker to publish six concertos yet to be composed. I am grateful to Ulrich Leisinger for providing me with this information.

[10]The Welcker concertos are scored for the typically English combination of keyboard with two violins and bass, while nearly all of Friedrich's secular cantatas, including *Die Amerikanerin* as printed by Hartknoch, are accompanied by strings alone, and were probably performed one-to-a-part in Bückeburg. See Hildegard Tiggemann, "Musikleben am Bückeburger Hofe in der ersten Hälfte des 18. Jahrhunderts," in *Johann Christoph Friedrich Bach (1732–1795), Ein Komponist zwischen Barock und Klassik* (Bückeburg: Verlag Createam, 1995), 45–70. Friedrich also composed large-scale works, e.g., the symphonies and oratorios, but chose to publish only works requiring more modest performing forces.

Place	Publisher	Work	Date	HW
Hamburg	Bock	*Musikalisches Vielerley*	1770	various
Hamburg	Bock	*Sei Quartetti a Flauto Traverso, Violino, Viola e Basso*	1770?	VI
Leipzig	Dyck (Breitkopf)*	*Balthasar Münters erste Sammlung Geistlicher Lieder*	1773	XVI/1
Leipzig	Dyck (Breitkopf)	*Balthasar Münters zweite Sammlung Geistlicher Lieder*	1774	XVI/2
Riga	Hartknoch (Breitkopf)	*Die Amerikanerin* (full score)	1776	XVIII/3
Riga	Hartknoch (Breitkopf)	*Sechs Sonaten für das Clavier, mit Begleitung einer Flöte oder Violine*	1777	VIII/3
London	Welcker	*Six Quatuor's, a deux Violons Taille, et Violoncelle*	1778?	not listed
London	Welcker	*Six Concertos for the Piano Forte or Harpsichord, With Accompaniments for Two Violins and a Violoncello*	1780?	not listed
Leipzig	Gelehrten (Breitkopf)	*Sechs leichte Sonaten fürs Clavier oder Pianoforte*	1785	XI/3
Leipzig	Breitkopf	*Ino* (keyboard reduction)	1786	XVIII/4
Rinteln	Bösendahl	*Musikalische Nebenstunden, vol. 1*	1787	various
Rinteln	Bösendahl	*Musikalische Nebenstunden, vol. 2*	1787	various
Rinteln	Bösendahl	*Musikalische Nebenstunden, vol. 3*	1787	various
Rinteln	Bösendahl	*Musikalische Nebenstunden, vol. 4*	1788	various
Rinteln	Bösendahl	*Drey leichte Sonaten fürs Klavier oder Piano Forte*	1789	XI/8

*"Breitkopf" in parentheses indicates that the titles were published under the *impressa* of the various publishers listed, but that Breitkopf did the actual printing.

Table 1. Friedrich Bach's Publications in Chronological Order

Christian Bach

Of all the composers bearing the name of Bach, none had more music printed during his lifetime than Christian.[11] Perhaps Emanuel lived to enjoy a greater degree of

[11]RISM A/I/1 and A/I/11 list a total of 304 separate prints of Christian's music. While some of these appeared posthumously between 1782 and 1800, the majority of them were printed during Christian's lifetime, when his music enjoyed its greatest popularity. Karlheinz Schlager, ed., *Einzeldrucke vor 1800*, vol. 1,

prestige, but the number of his works that were printed during the eighteenth century is less than half of Christian's total. Another sign of Christian's popularity as a published composer is the large number of unauthorized editions of his works, issued primarily by continental publishers. In England Christian received some protection against such unauthorized editions through a "Royal Licence and Privilege," issued by King George III in 1764 for a term of fourteen years; but even that was not enough to scare off the more intrepid local publishers. The publication histories of Christian's keyboard concertos and of his works for large chamber ensemble are representative of the overall picture as well as being most relevant to the disputed works.[12]

Christian's first published concertos date from just after his move to London. He issued six keyboard concertos as his Op. 1 in 1763, publishing them at his own expense.[13] Another edition of the concertos, evidently unauthorized, appeared the next year in Amsterdam, published by J. J. Hummel. The same pattern was to be followed with most of Christian's other publications: the authorized London edition served as the source for other publications, which often appeared within a surprisingly short time.[14] It is not always possible to determine exactly how many contemporary editions of a given opus there were because of difficulties in deciding what, precisely, constitutes an edition. Among the exemplars of Christian's own print of Op. 1, for example, there survive two distinct forms of the title page although the music plates are apparently identical. The same holds true for Welcker's print of the same concertos. It is often unclear whether such cases represent two separate editions or simply a single edition for

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Répertoire International des Sources Musicales (hereafter RISM) (Kassel: Bärenreiter, 1971), 168–81, and Ilse and Jürgen Kindermann, eds., *Einzeldrucke vor 1800*, vol. 11, *Addenda et Corrigenda*, RISM (Kassel: Bärenreiter, 1986), 79–84.

[12]"Large chamber ensemble" here refers to works requiring four or more players.

[13]Christian had at least one work published prior to this *opus primus*. The overture to his opera *Artaserse* was included in a collection of symphonies issued in 1761 by the Parisian publisher Venier. See Stephen Roe, "J. C. Bach, 1735-1782: Towards a New Biography," *Musical Times* 123 (1982): 25.

[14]It is still unclear whether a business relationship existed between Bach and the Parisian publisher Sieber. Sieber published a large quantity of Bach's music, and, given that Bach made at least two extended visits to the French capital, it is possible that Sieber was his "authorized" Paris representative.

which the title page was changed sometime during the print run.[15] In any case, there are currently eleven editions of Christian's Op. 1 concertos listed in RISM A/1, a clear sign of the popularity of these works in particular and of Christian's music in general.[16] His two other published sets of concertos, Op. 7 and Op. 13, appeared in London in 1770 and 1777, respectively, and, as with Op. 1, were quickly followed by many others. In what may well be a record for efficiency, Hummel issued his editions of Op. 13 (he published the six concertos in two sets of three) nearly three months *before* the authorized Welcker print was announced in the *Public Advertiser*.[17] The fourth concerto of Op. 13 achieved considerable popularity of its own, being issued separately in no fewer than eight editions by the first decade of the nineteenth century.

Christian's large-scale chamber works were also frequently published, although not with the regularity of the concertos. Here again one observes the pattern of quick republication by continental publishers. Both the Op. 8 quartets and the Op. 11 quintets were originally published by Christian's preferred London printer, Welcker, but appeared in Paris and Amsterdam within months or even weeks of Welcker's issue. Unlike the concertos, however, which all appeared in authorized editions during the composer's lifetime, there are several chamber works, including the sextet, whose earliest editions appeared only after 1781.[18]

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[15]*The Collected Works of Johann Christian Bach*, ed. Ernest Warburton, vol. 33, *Keyboard Concertos II*, ed. Richard Maunder (New York: Garland Publishing, 1985), viii.

[16]Terry, *Johann Christian Bach*, 293, cites, along with the other editions of the Op. 1 concertos, one supposedly printed in Offenbach, which is not included in RISM. There can be no doubt that the publisher referred to here is André, but no such edition of the Op. 1 concertos is listed in Wolfgang Matthäus, *Johann André, Musikverlag zu Offenbach am Main: Verlagsgeschichte und Bibliographie 1772–1800.* (Tutzing: Hans Schneider, 1973). It is very likely that Terry was confused by André's edition of Christian's six sonatas for violin and keyboard (ca. 1777), to which André also assigned the opus number one.

[17]*The Collected Works of Johann Christian Bach*, ed. Ernest Warburton, vol. 35, *Keyboard Concertos IV*, ed. Richard Maunder (New York: Garland Publishing, 1987), vii.

[18]Since Christian died on 1 January 1782, editions appearing in 1782 are posthumous.

Source confusion

With so much contemporaneous publishing activity by the Bach brothers, it is not surprising that compositions occasionally were printed with the wrong name on the title page, or with an ambiguous identification of the composer. When to this confusion is added manuscript copies of the same works carrying attributions that sometimes differ from those of the printed sources, it becomes clear that a precise examination of all available sources must take place. The extant primary sources for the two concertos and the sextet are contradictory, to say the least, and no single source inspires complete confidence in its attribution.

The Concerto Sources

Hartknoch editions

The two keyboard concertos were published in parts by Johann Friedrich Hartknoch in Riga, most probably in 1775 or 1776, with an unambiguous attribution to Christian. Neither print is dated (see illustration 1), but the edition's appearance in the Breitkopf Supplement 11 of 1776–77 provides a *terminus ante quem*. Hartknoch seems not to have had the facilities to print music in house; rather, he regularly contracted Breitkopf to do the typesetting of his music titles, including the two Riga concertos. Thus one can fairly safely assume that Breitkopf included the concertos in the first supplement following their publication.[19]

[19]Breitkopf's previous supplement, Supplement 10, had appeared in 1775. *The Breitkopf Thematic Catalogue: The Six Parts and Sixteen Supplements 1762-1787*, edited with an introduction and indexes by Barry S. Brook (New York: Dover Publications, 1966), xxiii. See also Hermann von Hase, "Beiträge zur Breitkopfschen Geschäftsgeschichte," *Zeitschrift für Musikwissenschaft* 2 (May 1920): 474.

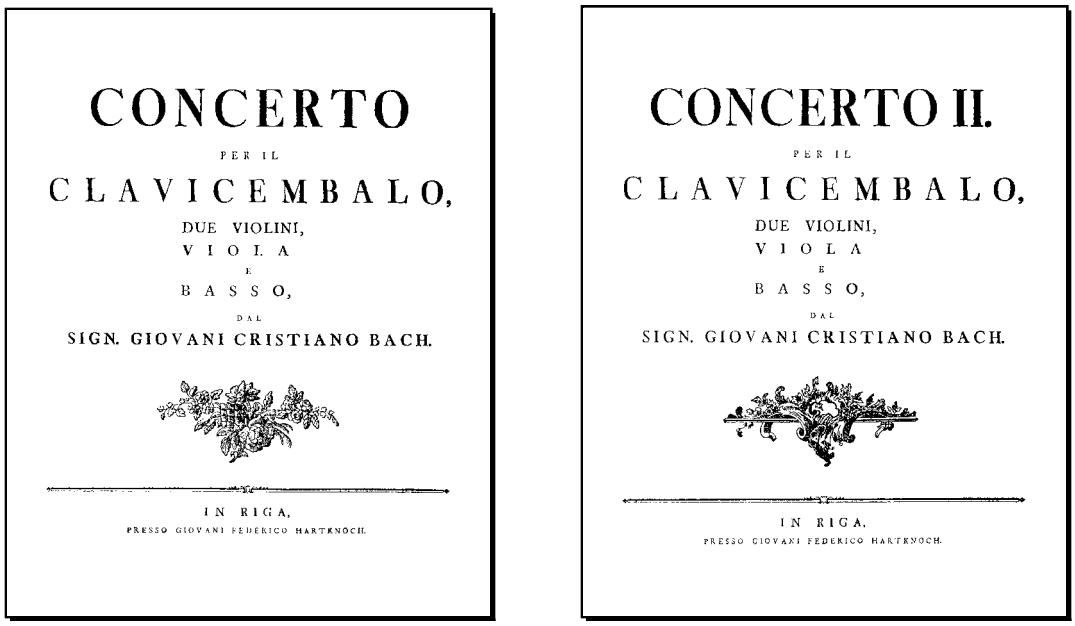

Illustration 1. Title Pages from Johann Friedrich Hartknoch's Concerto Editions

Since Hartknoch's activities as a publisher of music are not generally known, they will be briefly summarized here in order to place the Bach concertos into context. Hartknoch was born on 18 September 1740 in the East Prussian town of Goldap.[20] He studied piano with his father and theology in Königsberg before deciding to enter the book-selling and publishing business. Following his apprenticeship in Königsberg, he founded his own firm in Mitau in 1763, and shortly thereafter opened a branch office in Riga. The Riga outlet quickly became the company's main office, and the Mitau premises were closed. Hartknoch published mainly books—including some important early works by Herder, with whom he enjoyed a particularly close friendship—but also sold musical works, occasionally under his own *impressum*. Hartknoch became ill in 1777, and his son, also named Johann Friedrich, took over more and more of the responsibilities for running the company. The elder Hartknoch died in 1789, and his son maintained the

[20]The information on Hartknoch is taken from Heinz Becker, "Hartknoch, Johann Friedrich," in *Die Musik in Geschichte und Gegenwart*, ed. Friedrich Blume (Kassel: Bärenreiter, 1956), 5:1744–46.

Riga company until 1803, when he sold it and opened a new firm in Leipzig. Outlets were later added in Dresden and Erfurt before the company was sold out of the family upon the younger Hartknoch's death in 1819. In 1879 the company closed its doors for good. It is, however, only the musical publications of the elder Hartknoch in Riga and Mitau that have a bearing on the present topic. These will be treated in more detail in the next chapter.

Gerber copy

The Hartknoch prints of the two concertos were described first because they were the most widely known sources for the concertos in the eighteenth century and are the only primary sources that treat the two concertos as a pair. An earlier source, however, exists for the A-major concerto in the hand of Ernst Ludwig Gerber, the music lexicographer. This manuscript, also in parts and now in the Austrian National Library in Vienna, is the earliest known source for either of the concertos.[21] Its title page reads *CONCERTO / per il / Cembalo concertato. / Accompagnato / da / II Violini, Viola / e / Basso. / composto da / Carlo Filippo Emanuele Bach / E. L. Gerber. / Leipzig Maj: / 1768*. Gerber, whose father had once been a pupil of Sebastian Bach, came to Leipzig in 1765 to study law at the university and remained in the city until around 1768.[22] In 1768, when he copied the concerto, there were very few members of the Bach family still in Leipzig. Anna Magdalena had been dead for eight years, which left only the two youngest daughters, Johanna Carolina and Regina Susanna.[23] What sort of contact they might

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[21]Österreichische Nationalbibliothek: S.H. C.P.E. BACH 7.

[22]Details of Gerber's activities in Leipzig are taken from the article he wrote about himself in his *Neues historisch-biographisches Lexikon der Tonkünstler* (1812–14; reprint, Graz: Akademische Druck- und Verlagsanstalt, 1977), 2: 293–305.

[23]Although Emanuel's youngest son, also named Johann Sebastian, lived in Leipzig in 1770–73 while studying painting with Friedrich Oeser, in 1768 he was still living with his parents in Hamburg. It is unclear whether Elisabeth Juliana Frederica Altnikol, née Bach, the eldest daughter of Sebastian and Anna Magdalena, had returned to Leipzig by 1768. After the death of her husband, Johann Christoph Altnikol, in 1759, she remained in Naumburg until at least 1763, when her mentally deficient brother Gottfried Heinrich—for whom she had been caring—died there. Sometime thereafter Elisabeth returned to Leipzig, where she died

have maintained with their siblings, and whether they might have had manuscripts for Gerber to copy, is unknown—there is no documented contact between the sisters and any of their brothers after the division of Sebastian's estate in 1750. In any case, Gerber does not indicate the source for his copy of the A-major concerto. Despite his studies in an unrelated discipline, Gerber immersed himself in Leipzig's musical life, playing cello in the theater and attending concerts. At one such concert Gerber heard a performance of several Emanuel Bach keyboard sonatas, and this inspired him to begin collecting Emanuel's works. This task may have been made somewhat easier by the fact that Gerber seems to have had access to the Breitkopf archives during his time in Leipzig, from which he apparently copied out many works. Whether he acquired the A-major concerto from Breitkopf is not known. While Breitkopf at some point certainly had in his possession exemplars of the two Riga concertos in order to do the typesetting for Hartknoch, it hardly seems likely that Hartknoch would have sent these exemplars to Breitkopf a full seven or eight years before their publication ca. 1775. Regardless of how Gerber may have come upon the A-major concerto in 1768, some twenty-five years later he would apparently contradict his attribution of it to Emanuel by attributing both Riga concertos to Friedrich in his *Lexicon*.[24]

Thompson edition

An English edition of the A-major concerto, arranged for solo keyboard and heavily cut, appeared in 1772: *A FAVOURITE / CONCERTO / FOR THE / HARPSICHORD / OR / PIANOFORTE / COMPOSED BY / SIGR. BACH OF BERLIN / LONDON. PRINTED FOR C. AND S. THOMPSON*.[25] There are four Bachs to whom one could conceivably

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in 1781.

[24]Article "Bach, Johann Christoph Friedrich" in Ernst Ludwig Gerber, *Historisch-Biographisches Lexicon der Tonkünstler* (1790; reprint, Graz: Akademische Druck- und Verlagsanstalt, 1977), 1:85. The *Lexicon* entry will be discussed at greater length in Chapter 2.

[25]The work was listed in the *Public Advertiser* on 4 September 1772. The only other works by Christian that I have been able to find that were published by Thompson are *A Collection of Favourite Songs sung at*

assign the title of "Sigr. Bach of Berlin." In fact, from 1740, when Emanuel arrived in the Prussian capital, until 1845, when Wilhelm Friedrich Ernst Bach died there, there was always *at least* one descendant of Sebastian Bach in Berlin, with the exception of only two brief periods, the first of which was 1768–1774. That means that when Thompson's publication appeared in 1772, it was during a rare break (in over a century) when, strictly speaking, there *was* no "Sigr. Bach of Berlin." Fortunately, we can at least rule out Friedemann and Wilhelm Friedrich Ernst, since they both arrived in Berlin after 1772, which leaves only Christian and Emanuel as possibilities. Christian, however, had left Berlin nearly twenty years earlier and would have had no reason to advertise himself in London in 1772 as Bach of Berlin, nor would there have been any advantage for a London publisher to issue a work by Christian with a reference to Berlin.[26] Also, Christian had spent only about five years in Berlin during his late teens, and it may not have even been common knowledge in London that he had ever lived there. Emanuel, on the other hand, had spent nearly thirty years in Berlin and had established his reputation there. Even though he had been in Hamburg since 1768, because of his long tenure in Berlin, the London public of 1772 would probably still have taken the reference to Sigr. Bach of Berlin to mean Emanuel. Whatever the case, whoever arranged the concerto for solo keyboard removed no fewer than 136 measures, essentially destroying the balance between solo and ritornello sections—most of the cuts are in the ritornellos—so that one must seriously doubt if the composer had anything to do with this publication.

Vaux Hall by Mrs. Weichsall, printed for S. & A. Thompson [1778], and *Six Sonatas for the Harpsichord or Piano-Forte, with an Accompaniment for a Violin, Opera X, printed for S. A. & P. Thompson* [ca. 1780]. Dates from *The Catalogue of Printed Music in the British Library* (London: K. G. Sauer, 1981), 2:413, 418.

[26]Unless it was a clever ruse to circumvent the "Royal Licence and Privilege" protecting Christian from unauthorized publications in England until 1778. This could not, however, have been why Bland, another London publisher, around 1785 posthumously issued a keyboard arrangement of a symphony by Christian with the title "A favourite overture of Sig. Bach of Berlin."

Boineburg copy

In the Forschungs- und Landesbibliothek in Gotha is a manuscript of the A-major concerto in the hand of one Christoph Ernst Abraham Albrecht von Boineburg (1752–1840).[27] The manuscript—another solo keyboard version of the concerto—is not dated, but Ulrich Leisinger estimates a date between 1780 and 1785.[28] The title page reads *SONATA. Concerto / del Sigr: / Carolo Filippo Emanuel Bach*. Boineburg was a member of the minor nobility with a passion for music. He dabbled occasionally in composition, but devoted most of his musical energies to playing the cello and the keyboard. Already in his youth Boineburg had begun assiduously collecting music of the Bach family, especially Emanuel's, and his collection eventually came to include nearly all of Emanuel's solo keyboard music and several concertos arranged for solo keyboard.[29] Boineburg was able to draw on personal and familial ties to the Bach family in assembling his collection. His first music lessons in his native Naumburg were under Johann Friedrich Gräbner, the successor to Johann Christoph Altnikol (brother-in-law to the Bach sons) as organist at the Wenzelskirche.[30] Boineburg's uncle, Heinrich Abraham von Boineburg, had known Emanuel at the university in Leipzig during the early 1730s, and the two apparently remained on good terms, as Heinrich Abraham later possessed valuable Bach manuscripts. From 1784 to 1789 the younger Boineburg lived just a few miles from Bückeburg, in Rinteln, where the publisher Bösendahl was at precisely the same time issuing Friedrich's *Musikalische Nebenstunden* and *Drei Leichte Sonaten*.

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[27]Mus. 2° 21a/3, Anh. 5.

[28]Ulrich Leisinger, *Die Bach-Quellen der Forschungs- und Landesbibliothek Gotha* (Gotha: Forschungs- und Landesbibliothek, 1993), 64. The biographical information about Boineburg is also taken from Leisinger.

[29]Of Emanuel's concertos, six (H. 412, 414, 421, 422, 442, and 473) are treated this way, as well as Christian's Op. 7/5 and the Riga A-major concerto.

[30]Altnikol is known to have copied keyboard concertos by members of the Bach family, including concertos by Sebastian, Friedemann, and Christian. See Peter Wollny, "Abschriften und Autographen, Sammler und Kopisten," in *Bach und die Nachwelt,* ed. Michael Heinemann and Hans-Joachim Hinrichsen (Laaber: Laaber-Verlag, 1997), 41–42; and Alfred Dürr, "Zur Chronologie der Handschrift Johann Christoph Altnikols und Johann Friedrich Agricolas," *Bach-Jahrbuch* 56 (1970), 46–48. No copy of either of the Riga concertos exists in Altnikol's hand, however, nor can we assume that Gräbner would have had access to Altnikol's manuscripts.

Boineburg was a subscriber to the first of these publications, and it is not unreasonable to assume that he took advantage of his nearness to Bückeburg to introduce himself to Friedrich, especially given his life-long habit of seeking out the company of professional musicians. According to the entry for Boineburg in the *Neuer Nekrolog der Deutschen*

> ever since his youth he sought out every opportunity to meet with good composers, and in 1788 undertook a trip through northern Germany in order to become personally acquainted with the famous artists of the time. He went by way of Hannover to Emanuel Bach in Hamburg, whose compositions he loved very much, in order to hear his exquisite organ playing firsthand.[31]

Leisinger offers evidence that Boineburg took advantage of that meeting to fill in gaps in his collection of Emanuel's keyboard works.[32] It also would have been an ideal opportunity for Boineburg to double check the accuracy of his attributions. Unfortunately, this does not seem to have been the case as the collection contains a number of misattributions; works by Friedemann and Christian Bach, Georg Benda, Giovanni Platti, and Daniel Gottlob Türk are all attributed to Emanuel. Therefore, despite Boineburg's known connections with Emanuel and his presumed ones with Friedrich, his attribution of the A-major Riga concerto to Emanuel cannot be given full credence. It does, however, provide further support to Gerber's original attribution.

Library of Congress copy

A full set of parts to the A-major concerto in an unknown hand resides today in the Library of Congress. The title page reads *N. 27 / CONCERTO / Cembalo = Concertato. / Violino Primo / Violino Secundo / Viola / é / Basso / di Sig. Bach.* The library apparently acquired the manuscript as part of a collection formerly owned by August Eduard Grell,

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[31]"Schon in seinen früheren Jahren suchte er jede Gelegenheit auf, mit guten Tonkünstlern zusammen zu kommen und unternahm im J[ahre] 1788 eine Reise durch das nördliche Deutschland, um die berühmten Künstler damaliger Zeit persönlich kennen zu lernen. Er ging über Hanover nach Hamburg zu Emanuel Bach, dessen Kompositionen er sehr liebte, um dessen vorzügliches Orgelspiel selbst zu hören." *Neuer Nekrolog der Deutschen. Achzehnter Jahrgang, 1840. Zweyter Theil* (Weimar: Bernhard Friedrich Voigt, 1842), 1209. Quoted in Leisinger, *Bach-Quellen Gotha*, 17.

[32]Leisinger, *Bach-Quellen Gotha*, 17.

director of the Berlin Singakademie from 1853 to 1874. At least the layout of the title page and the original call number correspond closely to two other manuscripts once owned by Grell and acquired by the library at the same time.[33] The manuscript's provenance, however, is far too uncertain to place much credence in a possible connection with the Singakademie and its long Bach tradition. Even if it were to be shown to stem from the Singakademie, it still would shed little light on the authenticity question since the composer is given simply as "Sig. Bach."

Other manuscripts?

A definite connection with the Berlin Singakademie, however, can be demonstrated for two lost manuscripts of the E-flat concerto (i.e., the first of the Hartknoch concertos). Hans Uldall, as part of his research into the north German keyboard concerto, reported examining two copies of the E-flat concerto in the library of the Singakademie.[34] Both manuscripts were catalogued under the call number "D II. 1472 v," which refers to item 1472 under subheading D II (instrumental music: concertos) in the Singakademie's shelf-numbering system. The same scheme was also used in the so-called Zelter catalogue, which was drawn up upon the death of the Singakademie's second director, Carl Friedrich Zelter, in an attempt to sort out which sources had actually belonged to Zelter and which were the property of the Singakademie.[35] This fact is important since the Zelter catalogue has survived, whereas

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[33]The two Grell manuscripts have the call numbers "M1010.A2B13.L.C. 1" and "L.C. 2." The original call number of the A-major concerto was "M1010.A2B13.L.C. 3." See Rachel Wade, *The Keyboard Concertos of Carl Philipp Emanuel Bach* (Ann Arbor, MI: UMI Research Press, 1981), 47, 273, 286–87, and 297. At some point the call number of the A-major concerto was changed to "M1110.B24 A maj 17002 case," and was refiled under Christian's name, apparently after it was discovered that it is identical with the second Hartknoch concerto.

[34]Hans Uldall, *Das Klavierkonzert der Berliner Schule* (Leipzig: Breitkopf & Härtel, 1928), 66–67.

[35]The full title of the Zelter catalogue is "Catalog musikalisch-literarischer und practischer Werke aus dem Nachlasse des Königl. Professors Dr. Zelter," and is in the collection of the Stadtsbibliothek zu Berlin under the call number N. Mus. ms. theor. 30. See also Friedrich Welter, "Die Musikbibliothek der Sing-Akademie zu Berlin," in *Sing-Akademie zu Berlin: Festschrift zum 175jährigen Bestehen*, ed. Werner Bollert (Berlin: Rembrandt Verlag, 1966), 33–47; and Peter Wollny, "Sarah Levy and the Making of Musical Taste in Berlin," *Musical Quarterly* 77 (1993): 651–88.

the whereabouts of nearly all of the Singakademie's collection has been unknown since 1945. Unfortunately, the Zelter catalogue entries are not as precise as the Singakademie's shelf numbers, which apparently further subdivided each main entry through the use of small-case letters. For example, under entry 1472, the Zelter catalogue lists only "many concertos by Emanuel Bach" without identifying the individual works within the group. Thus Uldall's observations about the actual sources from the Singakademie's collection become that much more important. He noted that the first copy of the E-flat concerto was attributed to "Sign. Bach" without a given name, and had been heavily damaged by fire. The second copy had apparently been prepared from the first, but with the addition of "C. Ph. E." to the name. Sometime later another hand added "in London," which was crossed out later still! We are not the first to struggle with this attribution.

The Zelter catalogue provides another interesting detail. Under entry 1474 is listed "Bach, J. Chr. (in London.) Clav. conc. mit Quartettbegl. M[anuskript]." None of Christian's London concertos has a string quartet accompaniment (no viola part), so the reference must be either to one of Christian's five known Berlin concertos or to a manuscript copy of one of the Riga concertos that accepts Hartknoch's attribution to Christian (or, of course, to a work otherwise completely unknown). Due to the extreme uncertainty surrounding this source's identity, however, it will not be further considered in the present study.

The A-major concerto also appears in the thematic catalog of the so-called Thulemeier collection edited by Robert Eitner in 1899, under the heading "**Bach**, ohne Vorname."[36] The full entry reads: "61. Concerto a Cembalo concertato due Violini e Basso. Ms. 5 Stb. fol." and is followed by a three-measure incipit. The Thulemeier collection was later absorbed into the Preussische Staatsbibliothek in Berlin and was

[36]Robert Eitner, "Katalog der von Thulemeier'schen Musikalien-Sammlung im Joachimthal'schen Gymnasium zu Berlin," *Monatshefte für Musik-Geschichte* 31 (1899): 24.

subject to the same dispersal during the war that the rest of that library's holdings experienced. A large portion of the collection, including this set of manuscript parts, did not return to Berlin at the end of the war and carries that sorrowful remark so often encountered in the Staatsbibliothek's catalogues: "Kriegsverlust."

Modern editions

Although neither concerto is included in the *Collected Works of Johann Christian Bach*, both have received modern editions under his name. The first concerto, in E-flat, was published in miniature score in 1937 by Eulenberg, edited by Ernst Praetorius, and was reissued unchanged, except for an English translation of the title page and foreword, in 1952. The second, in A-major, was published in a two-piano reduction made by Li Stadelmann in 1935 as part of Schott's *Antiqua* series.

Richard Maunder, the editor of the keyboard concertos in the *Collected Works of Johann Christian Bach*, justifies the exclusion of the two Riga concertos with this simple statement: "Whether the two concertos were composed by Emanuel, Friedrich, or someone else, there are good reasons for doubting Hartknoch's claim that Christian wrote them."[37] Maunder does not specify what the "good reasons" might be, but they may have been based on a stylistic appraisal of the concertos, a topic which will be considered in more detail in Chapter 3. For now it suffices to note that (1) the specialist presumably most familiar with Christian's concerto style does not consider the Hartknoch attribution to be correct, and (2) if the concertos were indeed composed by Christian, they would on stylistic grounds have to be dated among his very earliest attempts in the genre, that is to say, in the 1750s. In the latter case, Christian could hardly have had anything to do with Hartknoch's editions ca. 1775, it being "inconceivable that he would have wished then to publish two youthful works, in a city

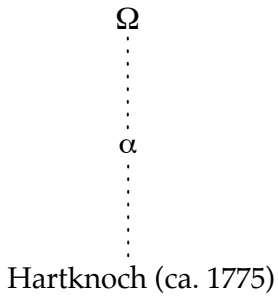
[37]*The Collected Works of Johann Christian Bach*, ed. Ernest Warburton, vol. 32, *Keyboard Concertos I*, ed. Richard Maunder (New York: Garland Publishing, 1985), vii.

that he never visited and with a publisher with whom he did no other business."[38]

Stemmata

The process of generating *stemmata* for musical sources is fraught with peril. The goal of objectively determining the relationships among various sources and between each source and the so-called "authorial original" can only rarely be fully achieved.[39] Still, a graphical representation of surviving sources, even if to some degree conjectural, can aid in visualizing the source situation as a whole and provides a compact forum for the presentation of known facts.

Only a single eighteenth-century source survives for the first of the Riga concertos—the Hartknoch print. One can probably assume that this source stands in the same relationship to the authorial original as the Hartknoch print of the A-major concerto. Since the precise relationship cannot be fully reconstructed, however, conjectural sources and speculative relationships must be introduced into the *stemmata* (represented with Greek letters and dotted lines, respectively) to fill in the gaps. In graphical form, then, the *stemma* for the first of the Riga concertos can be represented as follows:

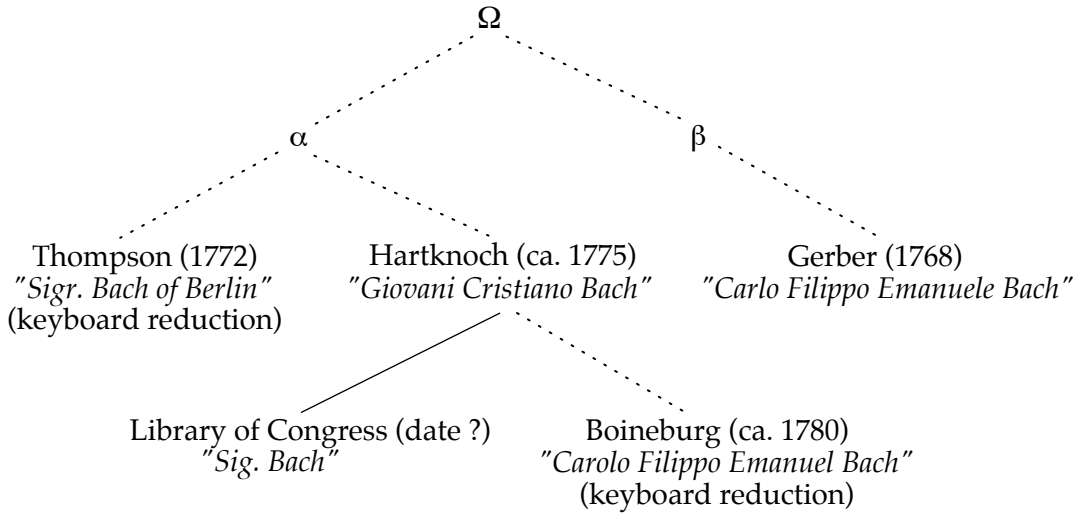


[38]Ibid., xiii.

[39]This is true even in the field of classical philology, where the techniques of stemmatic filiation were first developed. Musical texts contain additional layers of abstraction over purely literary texts, and the difficulties in determining stemmatic relationships are correspondingly greater. See James Grier, *The Critical Editing of Music* (Cambridge: Cambridge University Press, 1996), 62–95, for a discussion of the theory and conventions involved in generating *stemmata* from musical sources.

Here Ω is the authorial original and α is one or more conjectural intermediate stages between Ω and Hartknoch, whose existence is hypothesized based on the observations made below about the sources for the second Riga concerto, with the assumption that both concertos originated at the same place and reached Hartknoch in the same manner.

The larger number of surviving sources for the A-major concerto produces a correspondingly more complex *stemma*. The diagram below presents the least complex arrangement that can be postulated based on the known facts (with each source's attribution given in italics).



The justification for this arrangement begins with several deductions. First, editions that consist of full sets of parts cannot derive from keyboard reductions. Thus none of the other sources can have been copied from Thompson or Boineburg. Secondly, a copy cannot predate its source. Thus neither Thompson nor Gerber can have been copied from Hartknoch (assuming the 1775 date for Hartknoch is not more than three years too late), nor could Thompson have been copied from Boineburg. Finally, a complete source cannot have been copied from an incomplete one. Thus Boineburg could not have been copied from Thompson, from which 136 measures have been cut.

Starting now at the top of the diagram, Ω is the authorial original that

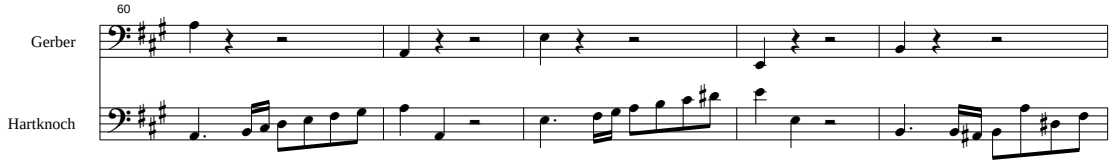
presumably remained in the composer's possession and is no longer extant. The next layer shows two conjectural copies, α and β. Hartknoch (and Breitkopf, who did the typesetting) must have had in his possession a copy on which to base his edition. While it is possible that this was Ω, it is more likely that the composer had a copy made from Ω, or, in the case that the composer was unaware of Hartknoch's plans to publish the concerto, that Hartknoch used a copy that he acquired from a third source. Whatever the case, we call the copy from which Hartknoch was presumably working α. Similarly, the copy from which Gerber was working in Leipzig in 1768 was unlikely to have been Ω, nor, as we shall see, was it likely to have been α. Therefore we posit another copy, β. That α and β appear directly below and in the same relation to Ω in our diagram is simply a matter of convenience. It is certainly possible that one or both of them was not copied directly from Ω, but from other lost exemplars, which in turn derived from Ω, but for the sake of simplicity we will limit ourselves to just two conjectural readings.

In the next layer of the diagram, the derivations of Thompson, Hartknoch and Gerber from α and β are postulated. Gerber, the earliest source, can only have been copied from one of the conjectural readings above it. Thompson, the next earliest surviving source, can only have been copied from Gerber or from α or β. While it is chronologically possible that Hartknoch could have been working from Gerber, the many significant differences between them seem to rule out the possibility. These differences, in fact, are so great that even the possibility that Gerber and Hartknoch were both copying from the same source can reasonably be excluded, thus suggesting the existence of at least two earlier readings derived from Ω.

Gerber makes several errors of omission that do not occur in Hartknoch. Measures 205–9 of the first movement are a nearly identical repetition of the five-measure unit preceding it (mm. 200–4). This occurs near the end of the third solo section and the whole passage is analogous to measures 70–79 in the first solo. In Gerber's copy, however, measures 205–9 are missing in all parts, despite the fact that the

corresponding measures in the first solo are present. This error alone, however, cannot rule out the possibility that Hartknoch was copying from Gerber. It is conceivable that Hartknoch caught and corrected the error by comparison with the earlier analogous section. It would have been more difficult, however, for Hartknoch to have corrected—or even to have found—Gerber's other omissions. Gerber omits, for example, measure 146 of the viola part in the first movement. Such an error would only become obvious in the process of creating a score from Gerber's parts (or by attempting a performance from them), and there is no indication that Hartknoch did so. The same holds true for Gerber's omissions of measure 15 in the third movement of the keyboard part, and measures 303–4 in the bass part of the same movement. One wonders, in fact, exactly why Gerber copied the concerto in the first place. If it were for his own study purposes, it certainly would have made more sense for him to have copied directly into score format. If he intended to use the parts for his own performance, however, he must never have had the opportunity, as the many uncorrected omissions would have led to chaos. The impression created by the many errors—that Gerber was copying very quickly—is reinforced by the fact that, while the first two movements are fully figured, in the entire third movement there are only two figures (and those not even at the beginning of the movement but in measures 205 and 207!).

In addition to the errors of omission, there are many other conspicuous discrepancies between Gerber and Hartknoch. One such is a passage in the bass in the first movement where Gerber has simple downbeat notes followed by rests. Hartknoch's reading on the other hand shows an active and independent bass line.



Similar discrepancies occur at measures 143–49 and 189–95 of the first movement and at measures 67–85 and 251–69 of the third movement. In each case Hartknoch's bass line is substantially more active than Gerber's. It would have required a significant compositional effort by Hartknoch to arrive at his readings had he been copying from Gerber. Further there are many isolated differences of rhythm and pitch and literally hundreds of conflicting readings in articulations, dynamics, and figured bass, all of which leads to the conclusion that not only did Hartknoch not copy from Gerber, but that the two sources derive from independent traditions.

The errors of omission and major discrepancies in the bass parts that allowed a determination that Hartknoch was not copying from Gerber, however, are of no assistance in determining whether Thompson was copying from Gerber. Since Thompson's edition is a keyboard reduction, he probably would not have even consulted the second violin and viola parts (assuming he was copying from parts), and errors in them would not have found their way into his edition. Also, the discrepancies in the bass parts between Hartknoch and Gerber all occur during solo sections, where Thompson would have only been concerned with copying the keyboard part, and thus are not a factor in Thompson's edition. Tabulating isolated conflicting readings between Hartknoch and Gerber, however, does provide some clarification. In the measures shared by all three sources (i.e., not counting the 136 measures that have been cut in Thompson), there are fifty-two differences in rhythm or pitch between Hartknoch and Gerber. Thompson's readings agree with Hartknoch in thirty-six cases, with Gerber in ten, and with neither in six. Since Thompson predates Hartknoch (and thus could not have been copied from it), it would seem that they both had copied from the same source, or at least from the same tradition. An oddity of the Thompson edition is that, even though it is a keyboard reduction, the ritornellos are figured. Granted this was not an uncommon practice, especially in England, by which a keyboard player could perform a concerto with or without an orchestral accompaniment; but had Thompson

envisioned a performance with orchestra, he would have needed to issue his own parts incorporating the same cuts as in his keyboard edition, and there is no evidence to suggest that he did.

It is tempting to assume that Boineburg copied from Gerber (or at least from β). Naumburg, Boineburg's hometown, is only about forty miles from Sonderhausen, where Gerber was active, and both attribute the concerto to Emanuel using similar italianated forms (Gerber: "Carlo Filippo Emanuele," Boineburg: "Carolo Filippo Emanuel"). Differences between the two sources, however, seem to rule out a direct line of transmission between Gerber and Boineburg. Since Boineburg's copy is also a keyboard reduction, the bass line and interior part differences between Gerber and Hartknoch offer no help here either. But Gerber's missing measures 205–9 in the first movement are present in Boineburg, and the comparison of isolated differences of pitch and rhythm shows that Boineburg agrees with Hartknoch forty-one times, with Gerber sixteen, and with neither twelve. One should also refrain from assigning too much importance to the fact that both Gerber and Boineburg used italianated forms of Emanuel's name. Italian title pages were by no means rare in Germany. In fact, of the nine sources available for the three disputed works investigated here, only the two English sources have non-Italian title pages. The high rate of concordance with Hartknoch suggests that Boineburg was copying from a source in the α tradition. I have tentatively shown a derivation directly from Hartknoch based on Boineburg's later date and the greater likelihood that Boineburg would have had access to a copy of a published edition rather than to an isolated manuscript. It would certainly not be out of the question, however, that Boineburg was also copying directly from α. It that were the case, it would be tempting to speculate that α's attribution was simply to "Bach," and that Thompson, Hartknoch, and Boineburg each interpreted it according to their own notions of who that might be. If, on the other hand, Boineburg had copied directly from Hartknoch, that would imply a conscious rejection by Boineburg of Hartknoch's attribution.

The greatest agreement between any two of the sources exists between Hartknoch and the Library of Congress manuscript (hereafter LoC), placing LoC squarely in the α tradition. In fact, with its attribution simply to "Sig. Bach," LoC could be a prime candidate for α itself, were it not for the lack of a figured bass. Thompson, as we have seen, seems to have been copying from a figured source—unless he filled in the figures himself in his keyboard reduction based merely on the melody and bass lines. So the assumption is that α was figured. LoC, however, contains a total of only three figures, two at the beginning of the first movement and one at the beginning of the third, as if the copyist absentmindedly began copying out the figures only to stop himself as soon as he remembered that he did not want (or was not required) to copy them. Thus, and with a sense of caution about raising a source with such an unknown provenance as LoC to a position of such importance, we assume that LoC was copied from Hartknoch. In any case it differs from Hartknoch in no appreciable way.

Admittedly, the entire *stemma* presented here is highly speculative. The discovery of a new source, or of important new information about a known source, could topple the whole structure. But the purpose here has not been to present an iron-clad argument of how the various sources *must* relate to each other in order to resolve conflicting readings in the process of producing a scholarly edition. Rather, the intent has been to suggest a plausible scenario of how the conflicting attributions in the sources could have arisen, under the assumption that each copyist was working in good faith and did not intentionally mislead or falsify. Thus the *stemma* suggests (at least to this observer) that α attributed the concerto to "Bach" without a given name, while β attributed it to Emanuel. All the subsequent attributions would thus become unproblematic, with the sole exception of Boineburg's if he had indeed copied from Hartknoch. As we have seen, however, Boineburg seemed particularly eager to attribute to Emanuel works by other composers.

In summary, then, there seems to have been two lines of transmission for the A-

major concerto, one centered around Leipzig and the other more widespread. How these two lines converge at the "authorial original," presumably in Berlin in the 1750s remains obscure.

The Sextet Sources

Kraków manuscript

In the Biblioteka Jagiellonska (Kraków, Poland) is a manuscript set of parts for the sextet in Friedrich's hand, with the call number "ex D Bds Mus. ms. Bach St. 277." The "ex D Bds" indicates that the manuscript was formerly in the Deutsche Staatsbibliothek in Berlin. Georg Schünemann first described the manuscript in 1914, and six years later he edited and published it, attributing the work to Friedrich.[40] The title page of the manuscript reads *Sestetto* / *per il* / *Piano Forte* / *2 Corni* / *Oboe* / *Violino* / *e* / *Violoncello* / *di G C Bach*. Schünemann passed over the apparent attribution to Christian without comment and apparently did not even entertain the possibility of Christian's authorship. Perhaps he was willing to equate "G C Bach" with J. C. F. Bach because the manuscript was found in a collection that otherwise consisted almost entirely of Friedrich's compositions, copied out in his hand. In any event, Schünemann was the first to stake a claim for Friedrich's authorship of the sextet, and this was difficult to disprove during the more than thirty years that the manuscript was missing after the war. Close examination of the now accessible manuscript in Kraków reveals that Friedrich in fact started to write "G C F," as if mechanically signing his own name, but then turned the "F" into the "B" of Bach.[41]

The Kraków manuscript actually consists of seven parts. The seventh part is a

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[40]Georg Schünemann, "Johann Christoph Friedrich Bach," *Bach-Jahrbuch* 11 (1914): 45-165; and *Friedrich Bach: Ausgewählte Werke*, Band 7, Nr. 3, ed. Georg Schünemann (Bückeburg and Leipzig: C.F.W. Siegel's Musikalienhandlung, 1920).

[41]Ulrich Leisinger, "Die geistlichen Vokalwerke von Johann Christoph Friedrich Bach—Aspekte der Entstehungs- und Überlieferungsgechichte," *Bach-Jahrbuch* 81 (1995): 116 n. 7.

viola part that duplicates the cello, with the necessary octave transpositions for notes exceeding the lower limit of the viola's range. Clearly, this part was intended as a replacement for the cello in case none was available; the work's title is "Sestetto," and the title page does not include the viola in the list of instruments.[42] The keyboard part consists of two nested bifolios, the remaining parts single bifolios, except for the two horn parts, each of which fit on single leaves. All of the parts except for keyboard and cello are written on heavy paper, 32.0 x 19.5 cm, that lacks a watermark. The two other parts are written on larger, but thinner, paper, 37.5 x 22.5 cm, with the following watermarks:

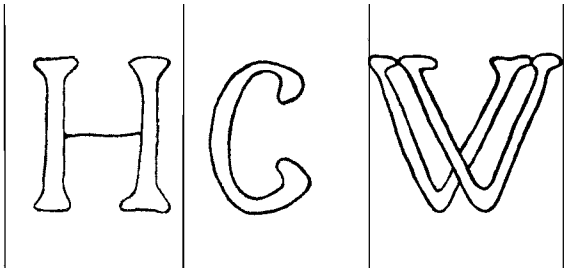

Illustration 2. Left Side Watermark, Beginning at Chain Line #3

[42]Schünemann failed to recognize that the viola part was a substitute. He scored his edition for all seven instruments and mislabelled it a *Septett*, resulting in still more confusion for the bibliographer.

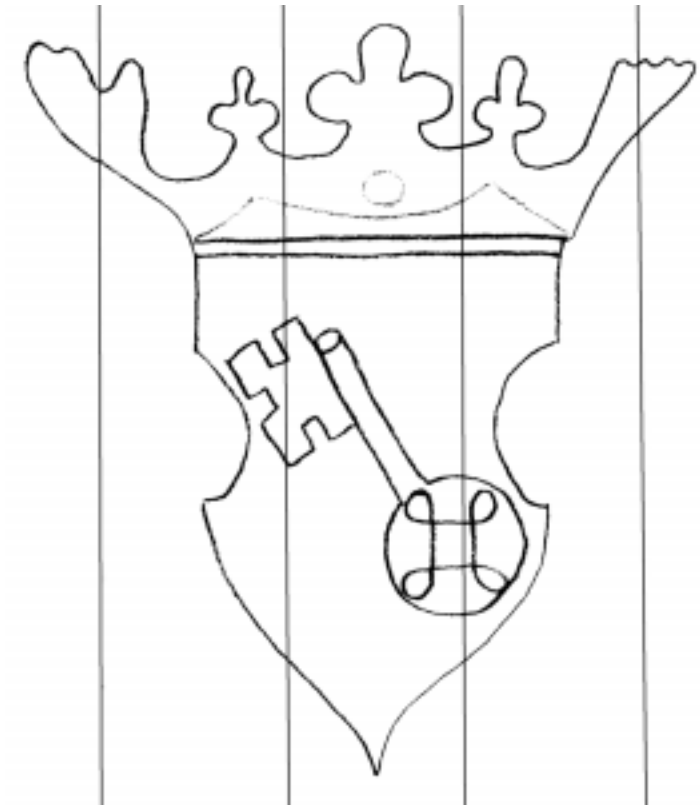

Illustration 3. Right Side Watermark, Beginning at Chain Line #14

These are watermarks from the paper mill of Henrich Christoph Weitenauer, who was active from 1753 to 1778 in Rohden, about ten miles from Bückeburg.[43] They are also found in the holographs to Friedrich's 4-hand keyboard sonata in A, HW XIII/1, and *Die Kindheit Jesu*, HW XIV/2. Although the knowledge that the Kraków manuscript was written at least partly on "schaumburgisches" paper does not prove Friedrich to be the author, it does throw some doubt upon the otherwise plausible explanation that Friedrich might have copied the parts from Christian's (now missing) score during his

[43]Eberhard Tacke, *Die Schaumburger Papiermühlen und ihre Wasserzeichen* (Bückeburg: Verlag Grimme, 1965–66), 158–65.

London visit in 1778. That the Kraków manuscript was indeed copied from a score, rather than parts, is indicated by a copying error in the violin part, where at mm. 85–86 of the third movement, two bars from the oboe part are mistakenly copied, then scratched out and replaced by the correct reading.

Copies of several works by Emanuel exist in Friedrich's hand, presumably made for his own performance or study in Bückeburg.[44] If the sextet is by Christian, however, the Kraków manuscript would be the only work by Christian known to exist in Friedrich's hand.

Other manuscripts?

The score from which Friedrich made his copy is not known to have survived. Indeed, all of the extant eighteenth-century sources for the sextet are sets of parts, but there are references to apparently lost contemporary manuscript copies that might have been scores. Terry lists two manuscript sources in Berlin for the sextet, under the call numbers *Bibl. Templin, Sammlung Thulem. 59* and *(S) ZD. 1632 b*.[45] The first of these is no manuscript at all, rather an incomplete set of the André parts.[46] The second call number again refers to a source from the now-missing collection of the Berlin Singakademie. Under the entry 1632 in the Zelter catalogue is listed just one item "Bach (aus London.) Quint. f. Flöte, Oboe, Viol., Bratsche u. Cello. St[immen] M[anuskript]," which certainly refers to one or more of Christian's Op. 11 quintets. Terry's reference, however, indicates that another work—the sextet—was also filed under this number, but with an additional letter "b" in the call number. Further confusing the issue is a

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[44]Wade, *Keyboard Concertos*, 318, lists the following keyboard concertos by Emanuel copied out in Friedrich's hand: Wq. 5 (H. 407), Wq. 7 (H. 410), Wq. 16 (H. 419), Wq. 18 (H. 421), and Wq. 20 (H. 423). Additionally, Paul Kast, *Die Bach-Handschriften der Berliner Staatsbibliothek* (Trossingen: Hohner-Verlag, 1958), 133, identifies Friedrich's hand in copies of *Die Israeliten in der Wüste*, Wq. 238 (H. 775), *Der Wirth und die Gäste*, Wq. 201 (H. 699), and the trio sonata in D, Wq. 151 (H. 575).

[45]Terry, *Johann Christian Bach,* 302.

[46]Only the cello and second horn part are available.

reference by Ernst Fritz Schmid to a third work under the same number, with the letter "c;" a sextet in C for two flutes, two violins, viola, and basso continuo attributed to Emanuel.[47] Finally, the Zelter catalogue item 1634 lists "2 Sext[ette] in St[immen] M[anuskript]" by Christian without, however, providing any information about the instrumentation. If all of these references are taken at face value, then, it is possible that the Singakademie once possessed not one, but at least three sextets attributed to Christian and one to Emanuel. Source material is only extant for the C-major sextet here under consideration, however. Most of the chamber music in the Singakademie's collection seems to have been sets of parts, but it cannot be ruled out that there were also scores.

Many of the works by the Bach sons, including apparently the pieces listed under the numbers 1632 and 1634, came into the possession of the Singakademie through Sara Levy (1761–1854), Felix Mendelssohn's great aunt.[48] Levy (a one-time keyboard student of Friedemann—evidently his only pupil in Berlin) built a large collection that was particularly rich in music of the Bach family. Unfortunately, her collection was not without misattributions, even with works where one might suspect that she would have known better.[49] Thus the attribution of the sextet to Christian (if, in fact, *(S) ZD. 1632 b* is from Levy's collection) must be treated with due caution.

According to Matthäus, a manuscript copy of the sextet "aus dem Frankfurter Raum" was extant during the period of research for his book, which appeared in 1973. My efforts to locate this manuscript have so far been unsuccessful.[50] In the catalogue of

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[47]Ernst Fritz Schmid, *Carl Philipp Emanuel Bach und seine Kammermusik* (Kassel: Bärenreiter, 1931), 176. Schmid does not accept the Singakademie attribution of this work to Emanuel.

[48]The pieces in the Zelter catalogue that came into the Singakademie's possession via Levy are annotated with the comment "No. x ist mit dem Stempel der Mad. Levy versehen" (Number x is furnished with the stamp of Mad. Levy).

[49]Among others, a London concerto by Christian is attributed to Sebastian[!], while one by Schaffrath is attributed to her own teacher, Friedemann. See Wollny, "Sarah Levy," 664–65.

[50]Matthäus, *Musikverlag André,* 127. Matthäus died shortly before his book was published, and I have been unable to locate anybody else in and around Frankfurt with any knowledge of this manuscript. It is not in the André archives, nor are the André descendants aware of any such manuscript. There is also no

music available from Johann Friedrich Hartknoch from about 1783, the sextet is offered in manuscript at a cost of "1 thl 20 fd." In the first supplement to this catalogue from approximately two years later, the André edition of the sextet is explicitly offered in place of the manuscript copy and at half the price.[51] No trace of Hartknoch's manuscript source has been found.

André edition

The earliest surviving printed source for the Sextet is the set of parts issued by Johann André in Offenbach am Main in 1783.[52] The title page reads as follows: *SESTETTO / A' / CEMBALO Ò PIANOFORTE / OBOE, / VIOLINO, VIOLONCELLO / E DUE CORNI / DEL SIGNO. / GIOV: CHRIST: BACH. / OPERA III. / Offenbach, presso GIOVANNI ANDRÉ. / NO 68. / £ 1.30 XS*. Here, as elsewhere, the abbreviations of the composer's given names could result in some ambiguity. At the very least, André would have had to spell out either "Christiano" or "Christoforo" to make his intentions perfectly clear. Nearly simultaneously with the sextet, André published a quartet for violin, two cellos and keyboard as Christian's Op. 2.[53] It is not known how André acquired copies of these works. Perhaps he made personal contact with Christian during one of the latter's trips to Mannheim in 1772 and 1774. Perhaps he was able to collect manuscripts of the Bach brothers during his tenure (1777–83) as music director of the Döbbelin Theater in Berlin, during which time Friedemann Bach also lived there. Matthäus speculates that the connection may have come about through Johann Friedrich

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manuscript of the sextet in the Frankfurt Stadt- und Universitätsbibliothek, and the RISM-Zentrale in Frankfurt has no record of any manuscript apart from the one in Kraków. In any case, it seems that the manuscript Matthäus was describing was a copy of the André print. His somewhat confusing description is "Der Druck Andrés liegt auch in einer zeitgenössischen Hs. aus dem Frankfurter Raum vor."

[51]The catalogue and supplement are discussed at greater length in the next chapter.

[52]The dating is based on an advertisement that appeared on 4 April 1783. See Matthäus, *Musikverlag André*, 127.

[53]The quartet print carries the plate no. 66, the sextet no. 68. The composer of the quartet is also identified with the abbreviation Giov: Christ: Bach. Plate no. 67 is a set of six string trios by Giuseppe Cambini.

Schröter (Schröder), the father of Christian's London pupil, and later rival, Johann Samuel Schröter. The elder Schröter, who is also known to have had contact with Christian in London, retired in 1779 to Hanau, just a few miles from Offenbach.[54] Another possibility suggested by Matthäus is the singer and pianist Franziska Lebrun, an acquaintance of Christian, whose own set of three violin sonatas, Op. 1, was issued by André with the plate number following that of the sextet.[55]

Christian's authorship of the quartet, Op. 2, has never been challenged, and its close proximity to the sextet, both in André's publications and in the Luther collection to be discussed below, indicate that the two works were circulating together shortly after Christian's death. Thus, any circumstantial evidence for the authenticity of the quartet may have some bearing on that of the sextet. A concert announcement in the London *Public Advertiser* from 2 March 1779 provides a clue based on the quartet's unusual scoring (violin, two cellos and keyboard):

> Carlisle House, Soho-Square. A Concert of Vocal and Instrumental Music…Act I. Overture, Abel. Song, Sig. Piozzi. Solo, Viola da Gamba, Mr. Abel. Song, Signora Giorgi. Duet for two Violoncellos, Messrs. Cervetto and Crosdill. Song, Signor Tenducci. Concerto, Violin, Mr. Cramer. Act II. *Quartetto, Mess. Bach, Cramer, Crosdill and Cervetto*. Song, Sig. Piozzi. Trio by Mess. Cramer, Crosdill and Giardini. Song, Signora Giorgi. Song, Sig. Tenducci. Concerto, hautboy, Mr. Fischer.[56]

The four instrumentalists listed here are exactly those needed to perform the quartet as it was published by André, demonstrating that Christian had both a motive and an opportunity to compose for this non-standard combination. It is highly unlikely that Christian's quartet for this occasion is now lost, while a similarly scored work by someone else is now falsely attributed to him.

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[54]Matthäus, *Musikverlag André,* 47.

[55]Ibid., 62.

[56]Quoted in Zaide Elisabeth Pixley, "The Keyboard Concerto in London Society, 1760–1790." (Ph.D. diss. University of Michigan, 1986), 67–68. Italics mine.

Luther edition

The first London edition of the sextet was announced in the *Public Advertiser* on 12 May 1785 under the heading "This Day is published."[57] The advertisement prints verbatim the rather long-winded and confusing title page of the curious collection that includes the sextet: *Dedicated by Permission / TO / HER MAJESTY, / Three favorite Quartetts / AND / One Quintett / FOR THE / Harpsichord / Violin, Flute, Hautboy, Tenor and / VIOLONCELLO, / BY THE LATE / John Christian Bach Esq. / Music Master to her Majesty for whom they were originally compos'd / In order to render this capital Work as useful as possible these QUARTETTS are expressly adapted for the / Harpsichord or the Piano Forte with a single Accompaniment for a Violin / BY / John Christian Luther*. The four works in this collection are (in this order) (1) the quintet in D, also published by Hummel and better known under his opus number 22/1, (2) the sextet in C, (3) the quintet in F, Hummel's Op. 22/2, and (4) the quartet in G, also published as Op. 2 by André (but with a viola part in place of André's first cello). Luther does not explain how he arrives at his count of "three quartetts and one quintett," nor does he state how he came to publish these works over three years after Christian's death. There is little reason to assume that Christian would have intended them as a set. No two of these works have the same instrumentation, and the complete set calls for nine different instruments, including viola da gamba and two horns that are not mentioned on the title page. To issue such a mixed bag of works with a confusing, even misleading, title page would not have been consistent with Christian's known practices as a businessman.

Luther's title page also lists other works by Christian that he either published or at least had for sale (it is not made clear which). Of interest is the item "A Single Sonata with Variations to the favorite French Air Ah: vous Dirai." Christian is not known to have composed variations on this tune, whereas Friedrich did. One wonders

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[57]*The Collected Works of Johann Christian Bach*, ed. Ernest Warburton, vol. 41, *Chamber Music for more than Four Players*, ed. Ernest Warburton (New York: Garland Publishing, 1985), viii–ix.

if Luther had access to Christian's posthumous papers and discovered among them unattributed works by Friedrich, which he assumed to be by Christian.

Arrangements

As Luther's title page to *Three favorite Quartetts*… indicates, the four works were also published in arrangements for violin and keyboard.[58] Since Luther claims full responsibility for these arrangements and Christian himself obviously had nothing to do with them, they provide no further clues towards clarification of the sextet's authorship. Presumably, the arrangements represent Luther's attempt to impose his own consistency on the set in order to find a larger market for it.

The first movement of the sextet exists in yet another version, as the opening movement in a three-movement sonata for harp, violin, and cello, published by the harpist Edward Jones in 1796.[59] Here, however, the arranger claims Christian's own participation by printing at the beginning of the sonata "Composed by G.C. Bach, on purpose for the editor to play." This claim must be taken with a grain of salt. In the first place, it contradicts the title page of the Luther edition, which claims that the fully-scored version of the sextet was originally composed for "her Majesty." It also contradicts its own title page, where the sonatas are said to be "now adapted for the harp." If Christian had originally written the piece for Jones to play it would hardly have been necessary for Jones to adapt it for the harp in 1796. The date itself, fully fourteen years after Christian's death, is also reason to treat the source with some

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[58]Although the title page says only that the *Quartetts* have been arranged for violin and keyboard, in fact all four works, including whichever one Luther considered to be the *Quintett*, were so arranged. The title page of the arrangement reads: *Four Sonatas originally composed as Quartets for the Harpsichord, Violin, Flute, Hautboy, Tenor, and Violoncello, by the late John Christian Bach, adapted for the Harpsichord or Piano Forte, with a single Accompaniment for a Violin, by John Christian Luther. Dedicated by Permission to Her Majesty.*

[59]Included as the sixth item in a collection entitled *MUSICAL REMAINS / or the compositions of / HANDEL, BACH, ABEL, / GIULIANI, &C; selected / from original manuscripts never before published: / and now adapted for the / HARP, or Harpsichord, / with accompaniments for / the Flute, or Violin; / Respectfully Dedicated to / his Scholars, by Edward Jones, / Harpist to the Prince of Wales. / Engraved by / Thornthwaite. 1796.*

suspicion. Only the first movement shares material with the sextet. The second and third movements are completely different from the sextet, and are otherwise unknown in the Bach canon, despite Jones's claim that they were composed by Christian. Within the first movement itself the differences between the two versions are considerable. The harp version is eight measures longer than the sextet, and often measures that correspond harmonically between the two versions contain thematic differences that go beyond what would have been necessary for a simple transcription from one medium to another. Stephen Roe not only accepts the harp version as authentic, but declares it to be the original version that was later reworked into the sextet.[60] Because of the chronological and geographical disparity of the composers represented in this collection, however, it seems more likely that Jones's print is nothing more than a *pasticcio* consisting of various teaching pieces of dubious derivation.

Modern editions

Schünemann's sextet/septet edition from 1920 was the first modern one. Since then, two further editions have appeared: Stanley Sadie's (based on the Luther parts) and Ernest Warburton's (based on the Kraków parts in Friedrich's hand).[61] Only Schünemann attributes the work to Friedrich, which he does without comment. Sadie, in his brief preface, states

> There also exists a manuscript copy in a Berlin library in the handwriting of J. C. Bach's brother Johann Christoph Friedrich; this had led to the work's attribution to J. C. F. Bach (see Geiringer, *The Bach Family*, p. 392). Much likelier, J. C. F. copied the work on his 1778 visit to his brother in London (the Berlin MS is for the cello); and internal stylistic evidence points unambiguously to the authorship of J. C. rather than J. C. F. In material and general treatment, the sextet is closely related to the quintets of J. C.'s Op. 11, and in the use of obbligato keyboard to those published as his Op. 22.

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[60]Stephen Roe, *The Keyboard Music of J. C. Bach* (New York: Garland Publishing, 1989), 283–95.

[61]J. C. Bach, *Sextet in C*, ed. Stanley Sadie (London: Musica Rara, 1968), and *Collected Works*, 41:195–230.

Sadie nowhere reveals what he considers to be the internal stylistic evidence that "unambiguously" points to Christian's authorship, except for the very general remarks just quoted. There also was no manuscript of the sextet in Berlin in 1968, so whatever significance Sadie wished to attach to the curious statement that the Berlin manuscript is for the cello is therefore irrelevant, and it suggests that he was not fully informed about the source situation. Warburton does not even entertain the notion of Friedrich's authorship, nor does he mention the fact that other scholars have attributed the work to Friedrich. That the parts upon which Warburton based his edition are in Friedrich's hand suggests to him merely "that the work was in existence by the time of [Friedrich's] visit to London in the summer of 1778."[62] The watermark evidence of the Kraków manuscript, however, undermines the theory that Friedrich copied the sextet during his London trip, unless he brought paper along with him.

Stemma

The same caveats and many of the general assumptions made while compiling *stemmata* for the Riga concertos apply to the Sextet's *stemma* as well. We assume, for example, that the authorial original remained in the composer's possession during his lifetime, and that earlier sources cannot have been copied from later ones. But because of the existence of a manuscript in Friedrich's hand that was apparently copied in Bückeburg, it is necessary to propose two *stemmata* for the sextet—one for the assumption that Friedrich is the composer and one for Christian. Assuming, for example, that Friedrich wrote the sextet, then it is logical that the Kraków manuscript would have been copied directly from the authorial original, Ω, for performance in Bückeburg. Under this scenario either Ω or the Kraków parts would have accompanied Friedrich to London in 1778 where Christian made a copy, now lost, that we call α.

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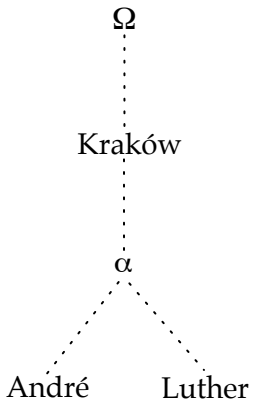
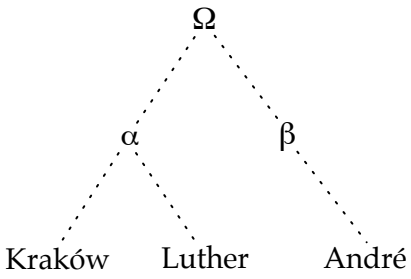
[62]*Collected Works*, 41:ix.

This copy was mistaken for a work by Christian after his death and was published as such by André and Luther. The resulting *stemma* would then look something like this:



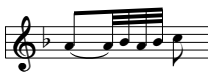
The other assumption—that Christian composed the sextet—results in a very different *stemma*. The Kraków manuscript would then no longer have been copied from Ω, but from another source derived from it. This source, which we again call α, would most likely have been a score made from Ω that Christian either sent or personally delivered to Bückeburg. André's edition, because of the variant readings to be discussed below, probably derived from another copy, β. Luther conceivably could have had access to Ω after Christian's death, but since so few autographs by Christian survive, it would be dangerous to speculate about the fate of his personal papers. In any case, it seems that both Luther and Friedrich were copying from the same tradition, if not from the same source, so we show derivations for both from α.



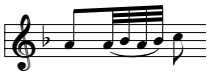
It has already been suggested that the source used by Friedrich to make the Kraków copy was a score, thus eliminating the possibility that Friedrich had copied from either Luther or André (both of which are sets of parts). Variant readings corroborate that Kraków was not derived from either Luther or André. For example, the first statement of the rondo theme in the third movement (mm. 1–8) is stated in the Kraków parts by oboe, violin, and cello. The keyboard left hand part here is explicitly marked with rests. In the Luther edition, however, the left hand doubles the cello part and is provided with continuo figures. In the second episode (mm. 73–126), on the other hand, the keyboard left hand provides continuo support (independent of the cello) in the Kraków parts whereas the Luther edition indicates rests. It is hard to imagine why Friedrich would have eliminated the keyboard left-hand continuo at the beginning but then have gone to the trouble of adding it over a newly composed part in the second episode, both of which he would have had to have done if he were copying from Luther. A similar situation obtains with the André edition. The keyboard left hand doubles the cello for the first eight measures, as in the Luther edition, but does not have continuo figures, while in the second episode the keyboard provides continuo support, as in the Kraków parts, but with the left hand essentially doubling the cello instead of providing the independent part given it in the Kraków copy. Such differences suffice also to rule out that either André or Luther were using Kraków as their source.

André's edition appeared two years before Luther's, so it is clear that he was not copying from it. Variant readings can also rule out the opposite—that Luther copied from André. André made a pair of particularly insidious errors in the oboe part in the third movement. At measures 93–94 he left out two measures but then added two extra measures at 101–2, so that the total number of measures works out with the rest of the parts. It is unlikely that Luther would have discovered this error, and less likely still that he would have come up with the "correct" reading (i.e., matching Kraków) even if he had discovered it. Further evidence is found in the second movement. In Kraków

and Luther the figure



appears a total of six times (mm. 30, 32, 55, 56, 58, and 59), played simultaneously by oboe, violin, cello, and keyboard right hand. The figure thus appears thirty times in the parts. André, however, gives a slightly different reading at all thirty appearances, namely:



Again, it seems highly unlikely that Luther would have come up with the same readings as the Kraków copy if he had been copying from André.

In summary, then, it seems that none of the surviving sources of the sextet was copied from any of the others—a situation reflected in the two *stemmata* above. In addition, Luther and Kraków are more closely related than André and Kraków: of the 153 differences in rhythm or pitch between Luther and André, Luther agrees with Kraków ninety-five times, André agrees with Kraków thirty-nine times, and for the remaining nineteen instances Kraków has readings that differ from both Luther and André. In the first *stemma*, this should probably be reflected by at least one other conjectural copy between α and André, or even a separate branch emanating from Ω, but for simplicity's sake, we show a common derivation of both Kraków and Luther from α. Similarly, Kraków contains fewer obvious errors than either André or Luther, so one might assume that it stands in a closer relationship (both orthographically and chronologically) to Ω than the other two, which would then require additional layers of complexity in the second *stemma*. Again, though, it was thought best to avoid too much

speculation, leaving the *stemmata* to reflect the simplest solutions suggested by the evidence.

Summary

For the Riga concertos there survive six sources, and we are aware of two other sources that are now lost. Only the Hartknoch prints, however, treat the two concertos as a set. The other sources transmit just one of the two concertos, with no indication of a connection to the other work. Accordingly, there may be no compelling reason to consider the two concertos as having been written by the same person. If the evidence can suggest that Hartknoch did not know exactly who wrote the concertos he was publishing, then the possibility exists that he published concertos by two different Bachs under a single name.

The single extant source of the E-flat concerto, the Hartknoch print, attributes it to "Giovani Christiano Bach." References to two now lost sources indicate attributions to "Bach" and "C. Ph. E. Bach," although the latter seems to be just a guess by the scribe who was copying from the "Bach" source. For the simple reason, then, that there are no independent sources with conflicting attributions, the results of this first stage of the investigation point, albeit somewhat weakly, to Christian as the author of the E-flat concerto.

The situation with the A-major concerto is more complicated. First there is the Hartknoch attribution to Christian. Then there are two manuscript sources with attributions to Emanuel (the Gerber copy and the Boineburg copy) and two sources with no given name supplied (the Thompson print and the Library of Congress copy). Gerber and Boineburg were conceivably in a position to corroborate their attributions with Emanuel himself. The many false identifications in Boineburg's collection, however, suggest that he did not. Gerber's later reference to the Riga concertos being by Friedrich

indicates that he may have changed his mind about the A-major concerto, but he does not tell us what might have caused him to change it. "Sigr: Bach of Berlin," from Thompson's publication, could refer to either Christian or Emanuel, but in 1772 neither one would have been likely to use such a formulation. The five independent attributions, if weighted equally, could thus be scored: 2 for Emanuel, 1 for Christian and 2 for either (or neither). The *stemma* for this concerto suggests that there may have been two lines of transmission, one attributing the work to "Bach," the other to Emanuel. A source high on the *stemma* with an ambiguous attribution to "Bach" could help to explain many of the conflicting attributions further down.

For the sextet, the source evidence points rather strongly to Christian. Luther's and Jones's publications unambiguously identify Christian as the composer. André's attribution (Giov: Christ: Bach) is perhaps slightly more ambiguous, but not much. None of the independent sources contains a "Friedrich," a "Fried.," or even an "F" in the attribution to suggest that Friedrich was the author, not even the copy in his own hand. Only the circumstance that Friedrich copied the sextet on paper from Bückeburg can support the claim that he wrote it. On the other hand, the evidence pointing to Christian is somewhat compromised by the fact that the extant sources—except possibly the undated copy in Friedrich's hand—all appeared after Christian's death.

As the foregoing discussion clearly indicates, the answer to the question "who wrote these works?" must, based on the primary source evidence alone, be deferred due to insufficient and conflicting evidence. That leads us to seek further evidence from secondary sources.

CHAPTER 2

LITERATURE REVIEW

References to the three disputed works include contemporary reviews, entries in publishers' catalogues, estate catalogues, and lexica from the eighteenth century, as well as opinions expressed by musicologists of the twentieth century. Apart from the Breitkopf and Hartknoch catalogues, which include all three of the disputed works, the contemporary references are generally confined to the concertos. The sextet, despite its unusual instrumentation, does not seem to have elicited much reaction from the contemporary press.

Contemporary Review

An anonymous contributor to the *Hamburgische Neue Zeitung* briefly reviewed the Hartknoch edition of the Riga concertos about a year after their publication.

> Concerto I. for the harpsichord, two violins, viola, and bass, by Mr. Johann Christian Bach. Printed in Riga by Johann Friedrich Hartknoch. Concerto II. These concertos, the first in E-flat major, the second in A major, appear to be older works of the composer. They are not embellished with the latest musical frills, rather they are full of correctness and propriety. And yet they are very brilliant and also not too difficult. More such works by this famous composer would certainly be well-received by connoisseurs.[1]

[1]"Concerto I. per il Clavicembalo due Violini Viola e Basso, dal Sign. Giovani Christiano Bach. In Riga presso Giovani Federico Hartknoch. Concerto II. Diese Concerte das erste Es dur, das zweyte aus A dur, scheinen von den älteren Werken des Komponisten zu seyn; sie sind nicht mit dem neumodisch-musikalischen Flitterstaate verbrämt, sondern voll sittlichen Anstandes, und dennoch sehr brilliant, und auch nicht sehr schwer. Mehreer Werke ähnlicher Art von diesem berühmten Verfasser würden gewiss den Kennern sehr angenehm seyn." Review, *Hamburgische Neue Zeitung*, 29 October 1776. My thanks to Ulrich Leisinger for directing my attention to this review.

The reviewer accepts Hartknoch's attribution of the Riga concertos to Christian—a fact of possible significance since the review appeared in a Hamburg newspaper during Emanuel's residence there. Interesting also is the recognition that Christian was no longer writing such concertos, and the implied superiority of the proper old style to the frivolous new one (presumably represented by Christian's London concertos). The review is a tantalizing piece of evidence, but cannot presently be assessed as significantly influencing the authorship debate one way or the other.

The C. P. E. Bach Estate Catalogue

Two years after Emanuel's death in 1788, his widow, Johanna Maria Bach, published a catalogue of his estate (the so-called *Nachlassverzeichnis*), including a detailed account of his musical holdings.[2] It is generally agreed that Emanuel had a hand in the preparation of this catalogue before his death (to insure a steady income for his wife through the continued sale of his works), but the exact extent of his participation cannot now be determined.[3] From his letters it is clear that Emanuel kept detailed lists of his compositions for personal and business reasons, and the estate catalogue was no doubt based on one or more of these earlier lists. For the vast majority of Emanuel's known compositions the estate catalogue provides date and place of composition—including date and place of revision if needed—as well as incipits for many of the unpublished instrumental works. As it relates to the disputed works, the evidence of the estate catalogue is negative; the Riga concertos are not listed there, neither under the section devoted to Emanuel's own music nor in the small section listing compositions by his brothers in his possession. This does not mean that the concertos

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[2]Johanna Maria Bach, *Verzeichniss des musikalischen Nachlasses des verstorbenen Capellmeisters Carl Philipp Emanuel Bach* (1790; reprint, New York: Garland Publishing, 1981). See also Heinrich Miesner, "Philipp Emanuel Bachs musikalischer Nachlaß," *Bach-Jahrbuch* 35 (1938): 103–36; 36 (1939): 81–112; and 37 (1940–48): 161–81.

[3]Wade, *Keyboard Concertos*, 5–6.

could not have been written by Emanuel, but any possible attribution of them to him must at least attempt to explain this discrepancy, especially since no other major work now accepted as genuine is missing from the *Nachlassverzeichnis*.

The Breitkopf Catalogues

The thematic catalogues of music available through Breitkopf in Leipzig, which were published nearly annually between 1762 and 1787, constitute an important source of information concerning eighteenth-century music manuscripts and publications. A work's inclusion there can often provide valuable information about authorship and chronology. The two Riga concertos are listed with incipits in Supplement 11 of 1776–77 under the heading *CONCERTI intagliati* (i.e., engraved concertos): *II. Conc. da G. C. BACH, a Cemb. conc. 2 Viol. V. e B. Riga.*[4] The abbreviating necessary to pack as much information into as small a space as possible unfortunately does not lend itself to providing precise identifications among the various Bachs. The same holds true for the entry of the sextet, which appeared in Supplement 15 of 1782–84 under the heading *SESTETTI et CONCERTINI intagliati*: *I Sestetto da I. C. BACH, a Cemb. 2 C. Oboe, Viol. e Violoncello. | Op. III. Offenbach.*[5] It is a fairly safe assumption, though, that most of Breitkopf's customers would interpret both "G. C. Bach" and "I. C. Bach" as references to Christian.

In all of the Breitkopf catalogues and supplements, Christian is represented by twenty-six entries, where his name is abbreviated as follows: "I. C. Bach," fifteen times; "J. C. Bach," five times; "Giov. Bach," twice; and "G. C. Bach," "Christiano Bach," "Bach," and "Bach, in Londra," once each. There are only two entries for Friedrich, once as "I. C. F. Bach" and once as "Bach." In his *Nacherinnerung* to the first part of the

[4]*Breitkopf Thematic Catalogue*, 618.
[5]Ibid., 822. The Luther edition of the sextet (1785) did not appear in any of Breitkopf's supplements.

catalogue, Breitkopf summarized some of the problems he faced while compiling his lists, and which today still cause headaches and dissertations.

> How many conflicts does one not have to resolve, how many concealed obstacles does one not have to surmount if one desires to give each composer his due and if one seeks to ascribe pieces appearing under *various names* to their true authors! And when inquiries do not bring clarification in such doubtful cases, which I came upon quite often, how easy it is for one's judgement to lead one astray just as often as in the proper direction![6]

To these difficulties he could have added the frustration of trying to keep straight various composers publishing under the *same name*. That all three of the disputed works seem to be attributed to Christian in the Breitkopf catalogues does not, however, provide much additional clarification beyond what the primary sources themselves provide, simply because Breitkopf presumably had to rely on a subset of those same sources for his information.

The Hartknoch Catalogues

Similar catalogues describing the musical works available from Hartknoch in Riga have also survived. The first, titled *Verzeichniss / der / praktischen musikalischen Werke, / welche / bey Johann Friedrich Hartknoch / in Riga / um beygesetzte billige Preise / zu haben sind* (Catalogue of the practical musical works to be had from Johann Friedrich Hartknoch in Riga at the low prices listed), contains seventy-six closely-set pages with nearly 1500 titles.[7] The second, *Erste Fortsetzung / des / Verzeichnisses / der / practischen musicalischen Werke / welche bey / Johann Friedrich Hartknoch in Riga / um beygesezte billige Preise zu haben sind* (First Continuation of the Catalogue…), is twenty-six pages long and contains many duplications from the first catalogue. No *Zweite Fortsetzung* of the catalogue is known to

[6]Ibid., xiii, translated by Barry Brook.

[7]The two catalogues, in the Berlin Staatsbibliothek, are bound together in a volume containing several other publishers' catalogues under the call number Ab 23/1. The Hartknoch catalogues are items 8 and 9 in the volume.

exist. Neither of the catalogues is dated, but the contents suggest dates of ca. 1783 for the first and ca. 1785 for the second.[8]

The overwhelming majority of listings are compositions published elsewhere and simply offered by Hartknoch for resale. Evidently, he took pains to keep his shop stocked with the latest from virtually all contemporary centers of music publishing, in particular Amsterdam and The Hague. As a publisher of music in his own right, however, Hartknoch's efforts appear to have been rather modest. Only twenty-eight of the titles in his catalogues are identified as coming from Riga or Mitau, and most of these are by composers that can be shown (or presumed) to have had personal contact with the elder Hartknoch himself.[9] Four works, for example, are by Johann Friedrich Reichardt, who was once Hartknoch's keyboard student in Königsberg and who afterwards maintained contact with his former teacher. Johann Gottfried Müthel, who moved to Riga in 1753 and remained there for the rest of his life, is represented by three works. The composer most frequently published by Hartknoch was a certain Franz Adam Veichtner, with five symphonies and two concertos. Veichtner came to Königsberg from his native Regensburg in 1763, and two years later became Konzertmeister in Mitau, where he remained until 1795. Carl-Gottlieb Richter, who had two keyboard concertos published by Hartknoch, studied under Emanuel in Berlin during his youth, later became an organist in Königsberg and was also once a keyboard instructor to Reichardt.[10] Hartknoch also published the vocal score to the opera *Das redende Gemälde* by Carl David Stegmann, which had been performed in Königsberg in

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[8]The first catalogue, for example, lists Breitkopf's thematic catalogues through Supplement 14, which appeared in 1781. Supplement 15 appeared in 1784. Also the Sextet, attributed to J. C. Bach, is offered only in manuscript in the first catalogue, whereas the André print from 1783 is offered in the second.

[9]Becker's comment that the catalogue shows a preference for works from the Mannheim circle is somewhat misleading. There are, indeed, many such works to be found there, but not in such numbers that would indicate Hartknoch specifically preferred Mannheim composers over those, say, from London, Paris, or Vienna. The overall impression one gets from the catalogues is rather that Hartknoch simply attempted to acquire whatever he could from whatever sources he could do business with. Of his own publications, none stems from a Mannheim composer. See Becker, "Hartknoch," 1745.

[10]The reference to Richter being a pupil of Emanuel is from Uldall, *Das Klavierkonzert*, 110. Uldall does not cite his source, and I have been unable to corroborate his information.

1775. In fact, besides Reichardt, the only composers Hartknoch published who had anything approaching an international reputation were Emanuel and Christian Bach, Johann Gottfried Eckard, and Luigi Boccherini, all of whom are represented by a single title only. These titles (with the possible exception of the two concertos attributed to Christian) are all correctly attributed. Hartknoch does not appear, therefore, to have been guilty of publishing music under false names. He seems, indeed, to have been a very generous man with a genuine interest in supporting and promoting local talent, and his probity as a publisher cannot be challenged on the basis of the known documentary evidence.[11] Hartknoch would not have published the concertos under Christian's name unless he sincerely believed that Christian had written them.

The two Bach concertos are listed in the Hartknoch catalogues under the heading "Bach, I. C.," which, along with the initials "J. C.," is used almost exclusively in the entries for Christian's works.[12] Friedrich is represented by four works, with his given names abbreviated variously as "J. Chr. Fr.," "J. C. Fr.," and "G. C. F." That the two concertos were issued as a pair, rather than in the more common groupings of three or six, conformed to Hartknoch's usual practice. He published, in addition to the two Bach works, pairs of concertos by Müthel, Richter, Johann Gottfried Wilhelm Palschau, Veichtner, and Ernst Wilhelm Wolf. Uldall has noted that the concertos by Richter and Palschau, even though published in the 1770s, still have much in common with the concertos of the Berlin composers from nearly twenty years earlier.[13] As we shall see, the same might be said of the two Bach concertos, which belong stylistically to the 1750s.

If the concertos are, in fact, by Christian, they would represent his only known contact with Hartknoch, or, indeed, with any other publisher or music dealer in the

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[11]Another sign of Hartknoch's generosity was his financial assistance to Herder, which enabled Herder to marry Caroline Flachsland in 1773. See Becker, 1744–45.

[12]Thirty-three titles in the catalogue are either partly or completely by Christian, but only the two concertos were actually published by Hartknoch.

[13]Uldall, *Das Klavierkonzert*, 104, 110.

Baltic region. We are also unaware of any travel in the area by Christian. Of course, such contact or travel in the region would hardly have been necessary if Christian's compositions were being published without his knowledge.

Hartknoch, on the other hand, is known to have had some contact with Emanuel. In addition to his (probably unauthorized) publication of Emanuel's six keyboard sonatas "*all' uso delle Donne*" (H. 184–85, 204–7) around 1773 (reprinted 1786), Hartknoch served as Emanuel's Riga agent for the sale of several of the latter's compositions.[14] Although no correspondence between Emanuel and Hartknoch survives, references to such in Emanuel's letters to Breitkopf show that Bach was at times exasperated by Hartknoch's disorganization.[15]

Friedrich, as we have seen, is also known to have had business ties with Hartknoch. Besides the two works by Friedrich that Hartknoch published himself (*Die Amerikanerin* and the six flute/violin sonatas), his catalogue lists the availability in manuscript of Friedrich's cantata *Michaels Sieg*, the text for which was written by Hartknoch's friend Johann Gottfried Herder. Herder was employed in Bückeburg from 1771 to 1776 as court pastor and adviser, and it seems likely that it was he who put Friedrich in contact with Hartknoch.[16]

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[14]From Emanuel's letters we know that Hartknoch served as agent for the following works: *Cramers Psalmen*, H. 733; the *Kenner und Liebhaber* collections I/III/IV/V, H. 244/265/276/281; and the *Heilig*, H. 778.

[15]In a letter to Breitkopf of 30 June 1787, Emanuel complains that Hartknoch had paid him twice for his copies of the fifth collection of *Kenner und Liebhaber* sonatas, but not at all yet for *Die Auferstehung und Himmelfahrt Jesu*, H. 777. Emanuel states that he has written to Hartknoch to explain the mistakes, but has not heard back from him yet. See Ernst Suchalla, *Carl Philipp Emanuel Bach, Briefe und Dokumente: Kritische Gesamtausgabe* (Göttingen: Vandenhoeck & Ruprecht, 1994), 2:1215–18.

[16]Herder had left Riga in 1769. Moving on to Weimar in 1776, he apparently continued to make recommendations to Hartknoch, for the Weimar *Kapellmeister*, Ernst Wilhelm Wolf, had works published by the Riga firm as well.

Meusel's Lexicon

In the primary sources and the secondary literature considered thus far, the two concertos have been attributed either to Christian or to Emanuel. However, Johann Georg Meusel's *Teutsches Künstlerlexicon* (1778) complicates the matter further by ascribing the two concertos to Friedrich.[17]

> BACH (Johann Christian Friedrich) *Kapellmeister zu Bückeburg, berühmter Orgelspieler: geb. zu Weimar* 1710. §§. Seine neuesten gedruckten Sachen sind: *Münters* geistliche Lieder. 2 Sammlungen. Leipzig 1773 1774 gr. 4. Die Amerikanerin, ein lyrisches Gemählde vom Hrn. von Gerstenberg. Riga 1776. fol. Due Concerti per il Clavicembalo, due Violini, Viola e Basso. In Riga 1776. fol.

The fact that Meusel got Friedrich's name and date and place of birth wrong shows that he was not dealing with first-hand information. In fact, he readily acknowledges his reliance on others, listing Burney, Marpurg, and Hiller among his sources of information about musical personalities. Even without this acknowledgement, however, one could easily trace some of Meusel's misinformation back to Burney. As we have already seen in the introduction, Burney had mixed up the persons of Friedemann and Friedrich in his travel diary in terms that are too similar to Meusel's formulation to be a coincidence.

> This city [Braunschweig, or, as Burney calls it, Brunswic] is at present likewise in possession of M. J. C. Frederic Bach, eldest son of the celebrated Sebastian Bach, and concert-master of the court of Bückeburg; he is an able mathematician, and regarded as the greatest fugist, and most learned professor in Germany. He was born in 1710, and was several years organist and music-director at Hall, in Saxony, before he entered into the service of the court at Bückeburg.[18]

The attribution of the Riga concertos to Friedrich, however, did not stem from Burney. It is not known from whom Meusel got this information, but he certainly could not have been in a position to corroborate every item about every composer listed in his book, which was in any case not intended for a specialist audience of professional musicians

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[17]Johann Georg Meusel, *Teutsches Künstlerlexicon* (Lemgo: Meyersche Buchhandlung, 1778), 4.

[18]Burney, *Present State*, 2:323. Burney, in turn, was also relying on second-hand information. The quoted excerpt comes at the end of his diaries, where he appends "a few particulars, which I have obtained from good authority, relative to the state of music, in such parts of Germany as it was not [in] my power to visit." Ibid., 317.

but rather for the general public as an overview of the arts in Germany. It contains entries not only for musicians but also for painters, sculptors, engravers, medailleurs, actors, architects, landscape architects, wax carvers, and ivory carvers among others (so Meusel claims, at least, in the preface), and includes as an appendix short travel guides to the major cities in Germany. Meusel himself was a professor of history, first at the university in Erfurt, later in Erlangen, and not a musician. The second volume of the *Teutsches Künstlerlexicon* (1789) lists additional works by Friedrich while compounding the factual errors in the first volume, by ascribing to Friedrich the Hartknoch edition of Emanuel's sonatas "*all' uso delle Donne*" and the Schiørring edition of Emanuel's *Zwey Litaneyen*, H. 780. Obviously, therefore, Meusel cannot be completely trusted as a source for attributions. Nonetheless, other authors repeated the same mistakes in their own works.

Forkel's Almanac

One such author is Johann Nicolaus Forkel. Forkel's entry for Friedrich in the "Verzeichniß jeztlebender Componisten in Deutschland" reads as follows:

> Bach (Joh. Christoph Friedr.) Concertmeister zu Bückeburg; geb. in Weimar 1732. Einzelne Sonaten fürs Clavier, im musikalischen Vielerey. Münters geistl. Lieder. 2 Sammlungen, 1773–74. Die Amerikanerin, von Gerstenberg, 1776. 2 Flügelconcerte mit Begl. Riga 1776.[19]

Forkel does not acknowledge the sources for his almanac, but it is obvious that he was here copying almost verbatim from Meusel. Only the date (but not place) of birth has been corrected, while the works listed—including their dates—are identical, save for the addition of the keyboard sonatas. We know that Forkel was in personal communication with the two older Bach brothers while researching for his Sebastian Bach biography, but the perpetuation of Meusel's error that Friedrich was born in Weimar rather than

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[19]Johann Nicolaus Forkel, *Musikalischer Almanach für Deutschland auf das Jahr 1782* (1781; reprint, Hildesheim: Georg Olms Verlag, 1974), 55.

Leipzig—a glaring mistake that Friedrich surely would have corrected if given the chance—argues against any close contact between Forkel and Friedrich, at least before 1781.[20] Thus the attribution here of the Riga concertos to Friedrich must be evaluated simply as blind acceptance of Meusel's information rather than independent corroboration of the same. Forkel's almanac appeared before either the André or the Luther edition of the sextet was published, so there is no way he could have known about them (although he also fails to mention them in his almanacs of 1784 and 1789), nor does he refer to any manuscript sources for the sextet in the entries for Friedrich or Christian.

Gerber's Lexicon

Ernst Ludwig Gerber, in his *Historisch-Biographisches Lexikon der Tonkünstler* (1790-92), also repeats the incorrect place of birth for Friedrich:

> Bach (Joh. Christoph Friedr.) Conzertmeister zu Bückeburg, Sohn des großen Joh. Sebastian, gebohren zu Weimar 1732; hat einzelne Sonaten ins mus. Vielerley geliefert, ferner herausgegeben: Münters geistliche Lieder 2te Samml. 1774: Die Amerikanerin, Part. 1776: 2 Flügelconzerte mit Begl. 1776: 6 Quartetten für Flöte und Violin, zu Hamburg: 6 Violinquartetten, zu London: 6 leichte Klaviersonaten 1785: Ino, eine Kantate, 1786, im Klavierauszuge: Musikalische Nebenstunden, 1. Heft, 1787, wird fortgesetzt. In diesen Werken nähert er sich dem Geschmacke seines ältern Brüders, Carl Phil. Emanuel.[21]

Gerber provides a comprehensive list of the sources that he consulted in compiling his dictionary—a list that includes the Burney, Meusel, and Forkel works already discussed. The similarities with especially Forkel's article on Friedrich are striking. That Gerber now accepts an attribution of the Riga concertos to Friedrich—contradicting his own copy of the A-major concerto from 1768 that ascribes it to Emanuel—suggests that he

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[20]There does exist a letter from Friedrich to Forkel from 1779, but it refers strictly and very briefly to a proposed business matter, and gives no indication whether the two maintained a more personal correspondence. The letter is now in an American private collection whose owner wishes to remain anonymous.

[21]Gerber, *Historisch-Biographisches Lexicon*, 1:85.

simply copied Forkel's information, adding whatever compositions that had appeared in the intervening eight years, but without realizing that one of the "2 Flügelkonzerte" was in fact the one he had copied over two decades earlier. Gerber's *Neues historisch-biographisches Lexikon der Tonkünstler* (1812–14) provides no additional information relevant to the Riga concertos. Nowhere does he mention the sextet.

The striking similarities and common errors of these sources lead to the almost unavoidable conclusion that Gerber had copied from Forkel, Forkel from Meusel, and Meusel from Burney. Thus the initial impact of sheer number of claims for Friedrich's authorship of the Riga concertos is undermined by the likelihood that they all derive from Meusel, the only non-musician among them, and the only one with no known personal ties to the Bach family.

Specialized Literature

In the nineteenth century, very little attention was paid to the music of the Bach sons. Only late in the century did scholars begin to turn their attention to the offspring, usually as part of researches into the life and works of the father. In their biographies of Johann Sebastian, Hilgenfeldt (1850), Bitter (1865), and Spitta (1873–80) all devote varying amounts of ink to the sons, but none of them mentions the concertos or the sextet specifically.

Three years after the appearance of his Johann Sebastian Bach biography, Bitter published another tome dedicated to the sons.[22] Although nearly three quarters of this book is given over to describing Emanuel's life and compositions, the keyboard concertos are given only the briefest mention. Bitter includes the Berlin concertos in a list of compositions derived from the *Nachlassverzeichnis* (vol. 1, pp. 36–41), but discusses in a single paragraph (p. 58) only two of them, H. 414 and H. 429, which are the two that

[22]C. H. Bitter, *Carl Philipp Emanuel und Wilhelm Friedemann Bach und deren Brüder* (Berlin: Wilhelm Müller Verlag, 1868).

were published during Emanuel's lifetime by Schmid in Nuremberg. Bitter seems not to have seen any of Emanuel's concertos in manuscript, and makes no mention of the Riga concertos. The short chapters devoted to Christian (10 pages) and Friedrich (8 pages) provide little new information beyond what was already available from Gerber, and, again, mention neither the Riga concertos nor the sextet.

In the twentieth century, books and articles devoted to the Bach sons collectively, and to each of the sons individually (particularly Emanuel and Christian), have appeared in ever increasing numbers, but none have grappled expressly with the question of the large number of Bach *incerta*. What follows is a brief overview of those studies that have explicitly mentioned the Riga concertos or the sextet (and some that perhaps should have and did not), and the conclusions regarding authorship that the writers thereof have drawn, implied, or simply repeated. As with the eighteenth century writers surveyed above, there is a large amount of borrowing among the various scholars and it is often quite clear that one is uncritically passing along what another has written.

Schwarz (1901)

At the very beginning of the twentieth century, Max Schwarz published a long article on Christian.[23] In a works list appended to the article, Schwarz included the Hartknoch print of the Riga concertos and the André edition of the sextet as authentic compositions. He also seems to have been one of the first to notice the inclusion of a work attributed to Christian in Jones's *Musical Remains* of 1796, without, however, commenting on that work's relationship to the sextet. In the body of his essay, Schwarz does not refer to the sextet at all and only fleetingly to the concertos, noting only their existence and their similarity to Christian's five Berlin concertos.[24] Schwarz makes no

[23]Max Schwarz, "Johann Christian Bach," *Sammelbände der internationalen Musikgesellschaft* 2 (1901): 401–54.

[24]Ibid., 434.

mention of having encountered sources with conflicting attributions for any of the three works.

Wotquenne (1905)

Alfred Wotquenne published a thematic catalogue of Emanuel's works in 1905, describing the large collections of Bach's music in the Conservatory and Royal libraries in Brussels.[25] Wotquenne's work relied heavily on a catalogue of Emanuel's works made by Johann Jacob Heinrich Westphal (1756–1825) that is likewise part of the Brussels collection. Westphal, who was a contemporary and acquaintance of Emanuel, strove to collect as much of Emanuel's music as he could during the composer's lifetime, and, after 1788, augmented his collection mainly by ordering copies of works he did not already own from Emanuel's widow.[26] Westphal also possessed copies of Hartknoch's print of the Riga concertos, but since the concertos do not appear in the *Nachlassverzeichnis* he had no reason to doubt Hartknoch's attribution of them to Christian. Westphal—and thus Wotquenne as well—did not include the Riga concertos in his catalogue of music by Emanuel Bach. Wotquenne's catalogue does not address the issue of questionable, duplicate, or misattributions among the sources of Emanuel's compositions.

Schünemann (1914)

Georg Schünemann was the first to assay Friedrich Bach's life and works in detail. He had access to much material, including the archives of the former Fürstliches Institut für musikwissenschaftliche Forschung of Bückeburg, which is now lost or destroyed, so his contributions are all the more valuable. Schünemann published a number of articles about and editions of music by Friedrich, beginning in 1914 with the

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[25]Alfred Wotquenne, *Thematisches Verzeichniss der Werke von Carl Philipp Emanuel Bach* (1905; reprint, Wiesbaden: Breitkopf & Härtel, 1964).

[26]*Leipziger Beiträge zur Bach-Forschung*, vol. 2, *Die Bach-Quellen der Bibliotheken in Brüssel*, ed. Ulrich Leisinger and Peter Wollny (Hildesheim: Georg Olms Verlag, 1997), 25–74.

extensive article "Johann Christoph Friedrich Bach" in the *Bach-Jahrbuch*, followed two years later with "Friedrich Bachs Briefwechsel mit Gerstenberg und Breitkopf" in the same journal. In 1917 he published the oratorios *Die Kindheit Jesu* and *Die Auferweckung Lazarus* in volume 56 of *Denkmäler deutscher Tonkunst*, to which he appended a thematic catalogue of Friedrich's music; and, finally, between 1920 and 1922 Schünemann edited a total of ten works for his series *Friedrich Bach: Ausgewählte Werke*, including the sextet.[27] In none of these publications does Schünemann indicate that he was aware of the André or the Luther prints of the sextet, or that the sextet could possibly be by Christian. He refers to Meusel's and Forkel's citations of two concertos by Friedrich published in Riga in 1776 and adds that "they appear to be lost, unless Meusel and Forkel confused them with two concertos by Christian Bach that likewise appeared from Hartknoch in Riga."[28] Thus Schünemann accepted the Hartknoch print's attribution to Christian and did not include the Riga concertos in his 1917 thematic catalogue of Friedrich's works.

Hase (1920)

Hermann von Hase, whose father and then brother headed the firm of Breitkopf & Härtel for many years, has written extensively about the firm's activities. He had access to the company archives in Leipzig before they were dispersed and partly lost during the Second World War. In his article "Beiträge zur Breitkopfschen Geschäftsgeschichte," he includes the two Riga concertos along with *Die Amerikanerin* and the six flute/violin sonatas as works by Friedrich that were published by Hartknoch and typeset by Breitkopf.

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[27]That Schünemann planned to publish many more works in this series is shown by the fact that these ten pieces were published in three volumes, numbered 1, 5, and 7. It is not known why the series was not continued; Schünemann lived until 1945.

[28]"Sie scheinen verloren zu sein, oder aber es liegt bei Meusel und Forkel eine Verwechslung mit zwei Klavierkonzerten von Christian Bach vor, die gleichfalls bei Hartknoch in Riga erschienen." Schünemann, "Johann Christoph Friedrich Bach," 127.

> [Friedrich] Bach's publisher Hartknoch in Riga entrusted the production of the works he accepted to Breitkopf, who printed in 1775–76 *Due Concerti per il Cembalo* and Die Amerikanerin, a lyrical painting by H. v. Gerstenberg. Also the *Sei Sonate per il Cembalo e Violino* that Hartknoch published came from Breitkopf's presses.[29]

Hase does not mention the fact that the title pages of the concertos refer to Christian, nor does he cite any specific documentation in support of his attribution. Two scenarios suggest themselves: (1) the archives once contained evidence that now no longer exists of Friedrich's authorship of the concertos, or (2) Hase, perhaps relying on Meusel, Forkel, or Gerber, simply interpreted "Giovani Cristiano" from the title pages as a reference to Friedrich. In the first case one would expect at least a mention—if not an explanation—of the fact that the title-page attributions were to Christian, not Friedrich. Whatever the case may be, unless more of the Breitkopf archives survived the war than is presently assumed, and documents relevant to the Riga concertos resurface, Hase's claim must be considered only potential corroboration of Meusel's attribution of the concertos to Friedrich.

Einstein (1921)

Alfred Einstein wrote a short review of the three volumes of *Friedrich Bach: Ausgewählte Werke* shortly after their publication by Schünemann, in which he points out influences of Mozart in the chamber works, including specifically a passage from the third movement of the sextet.[30] Einstein does not challenge Schünemann's attribution of the sextet to Friedrich.

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[29]"Bachs Verleger Hartknoch in Riga übertrug die Herstellung der von ihm übernommenen Werke Breitkopf, der in den Jahren 1775 bis 1776 *Due Concerti per il Cembalo* und Die Amerikanerin, ein lyrisches Gemälde von H. v. Gerstenberg druckte. Auch die *Sei Sonate per il Cembalo e Violino*, die Hartknoch verlegte, gingen aus Breitkopfs Pressen hervor." Hase, "Beiträge," 474. Many of Hartknoch's other editions carry the remark "Stich bei Breitkopf."

[30]Alfred Einstein, "Neuausgaben alter Musikwerke," *Zeitschrift für Musikwissenschaft* 3 (1921): 633–34. The passage cited by Einstein is the F-major episode before the final statement of the rondo theme in the third movement, specifically measures 120–26.

Schökel (1926)

Heinrich Peter Schökel, writing about Christian, accepts Hartknoch's attribution of the concertos and André's of the sextet without further comment. He devotes several pages to an analysis of the A-major concerto, in which he sees significant advances over the concertos of Christian's Berlin period and assigns it to Christian's Italian period, and he lists both concertos and the sextet in the thematic catalogue of Christian's instrumental works at the end of the dissertation.[31] It would seem that Schökel was only familiar with the Hartknoch print of the concertos and the André print of the sextet. In any case, due to the difficulties following World War I, his access to prints and manuscripts was limited to those in Germany and Switzerland. He cites as the only source for the sextet the incomplete set of André parts in the Thulemeyer collection in Berlin, and apparently for this reason could not include an analysis of the work in his discussion of Christian's chamber music.

Uldall (1928)

Hans Uldall, while not specifically writing about the Bach sons, did have occasion to mention the E-flat concerto.[32] It was Uldall who noted the existence of the two manuscripts of the E-flat concerto in the library of the Berlin Singakademie, which have been missing since 1945. He devotes two paragraphs to the E-flat concerto under the heading "Concertos that have been falsely attributed to Ph. Em. Bach." Uldall seems to have been unaware of the Riga print and its attribution to Christian (he does not refer to it), but he still assigns the concerto "very probably" to Christian, based on his stylistic assessment of it as a "beginner's work" (*Anfängerarbeit*). The fact that the slow movement is in the dominant is the main reason why Uldall doubts Emanuel's

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[31]Heinrich Peter Schökel, *Johann Christian Bach und die Instrumentalmusik seiner Zeit* (Wolfenbüttel: Georg Kallmeyer Verlag, 1926). The discussion of the concerto is found on pages 163–67.

[32]Uldall, *Das Klavierkonzert*, 66–67.

authorship, since none of Emanuel's other concertos has a dominant-key middle movement.

Uldall also mentions Friedrich as a concerto composer, in connection not with the Riga works, but rather with three manuscript concertos dating from the early 1760s to 1792. He concludes that none of them, not even the earliest, has much in common with the Berlin school.

Terry (1929)

In 1929, Charles Sanford Terry published the first extended study of Christian's entire life and output, including a thematic index that lists all three of the disputed works as authentic compositions by Christian.[33] Terry mentions the concertos briefly (pp. 120 and 182) and makes and even briefer reference to the sextet (p. 187) in the body of the book, but seems not to have encountered any sources with conflicting attributions.

Praetorius (1937)

Ernst Praetorius based his edition of the E-flat concerto on the Hartknoch print, for which he gives a date of 1770—but no source for that date. He never doubts Christian's authorship and seems unaware of any other sources or attributions. He suggests a date of composition of 1754/55, i.e., during Christian's stay in Italy, and, relying partly on Schökel, finds the first indications in it of Christian's "singing allegro" style associated with his works from the Italian operas on. Praetorius even goes as far as to declare it Christian's "first original work."[34]

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[33]Terry, *John Christian Bach*, 297, 302.

[34]Ernst Praetorius, foreword to *Klavier-Konzert Es Dur,* by Johann Christian Bach (1937; reprint, London: Ernst Eulenburg, 1952).

MGG (1950)

In their articles on Friedrich and Christian in *Die Musik in Geschichte und Gegenwart*, Rolf Benecke and Helmuth Wirth each cite the sextet in their work lists as an authentic composition of the respective composer, but neither mentions it specifically in their texts or otherwise indicates that there is any question concerning its authorship.[35] Benecke recites Schünemann nearly verbatim concerning the concertos, while Wirth apparently took Hartknoch's title-page attribution to Christian at face value.

Geiringer (1954)

Karl Geiringer had access to both the André and Luther prints of the sextet, and he was aware of the existence of the copy in Friedrich's hand, although this was no longer available to him during his researches in the early 1950s.[36] He relied on Schünemann's description of the manuscript as an autograph by Friedrich, and the ambiguity of André's attribution to "Giov: Christ: Bach" to reject Luther's (and Terry's) attribution of the sextet to Christian. Geiringer appraised the sextet, along with the septet for winds, HW IV, as the "climax of Friedrich's production in the field of chamber music." Geiringer considered the Riga concertos to be authentic works by Christian.

Cudworth (1955)

Charles Cudworth is the first writer in this survey to give serious consideration to the idea that at least the A-major concerto is by Emanuel.[37] Using the made-up word "spuriosity" to describe, among other things, falsely attributed compositions, he writes under the heading "Spuriosities proper, listed under their supposed composers:"

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[35]Helmuth Wirth, "Bach, Johann Christian," and Rolf Benecke, "Bach, Johann Christoph Friedrich," in *Die Musik in Geschichte und Gegenwart*, ed. Friedrich Blume (Kassel: Bärenreiter, 1950), 1:942–54 (JCB), 1:956–60 (JCFB).

[36]Karl Geiringer, *The Bach Family: Seven Generations of Creative Genius* (London: George Allen & Unwin, 1954), 378–403.

[37]Charles L. Cudworth, "Ye Olde Spuriosity Shoppe or, Put it in the Anhang," *Notes* 12 (1954–55): 25–40, 533–53.

> Concerto for harpsichord and strings in A major. This brilliant concerto, published as by Johann Christian by Hartknoch of Riga, is more in the style of C.P.E. Bach than of J.C.B., and indeed was issued in London, during the latter's residence there, as being by "Bach of Berlin." Although completely uncharacteristic of J.C. Bach, it is quoted more often in text-books than any of his undoubted works.

The statement that the A-major concerto is "completely uncharacteristic of J.C. Bach" indicates that Cudworth was not familiar with Christian's Berlin concertos. Still, the assertion that the concerto is stylistically similar to Emanuel's concertos adds at least a small amount of support to the attributions of Gerber and Boineburg. It is also interesting to note that Cudworth interprets "Bach of Berlin" to mean Emanuel.

Haag (1956)

Charles Robert Haag's dissertation considers only the fifty solo concertos listed in Wotquenne.[38] His search for musical sources was limited to American libraries only—with the exception of a single source from the British Library—and proceeded no further than the first complete source of each concerto that he could find, so it is not surprising that concertos with questionable attributions to Emanuel are not mentioned at all, and the dissertation offers no information that could be helpful in clarifying the attributions of the Riga concertos.

Stevens (1965)

Jane Stevens's dissertation also remains on *terra firma* by discussing only those of Emanuel's keyboard concertos that can be securely attributed through their inclusion in the *Nachlassverzeichnis* and Wotquenne's catalogue.[39] Important as it is as an analytical survey of Emanuel's concertos, Stevens's dissertation makes no attempt to come to grips with Uldall's category of "Concertos that have been falsely attributed to Ph. Em. Bach."

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[38]Charles Robert Haag, "The Keyboard Concertos of Carl Philipp Emanuel Bach" (Ph.D. diss., University of California, Los Angeles, 1956).

[39]Jane Stevens, "The Keyboard Concertos of Carl Philipp Emanuel Bach" (Ph. D. diss., Yale University, 1965).

Mekota (1969)

Beth Ann Mekota's dissertation from 1969 does not deal specifically with concertos, so it is not surprising that she makes no more than passing reference to the Riga concertos, merely repeating Terry's judgements about them and accepting his attribution of them to Christian. However, she rejects Terry's attribution of the sextet to Christian, with the definitive statement that the "*Sextet in C* (T302) is not by Johann Christian, but by his brother Johann Christoph Friedrich," with a footnote reference to Schünemann and the missing Berlin manuscript of the sextet.[40] Having thus disposed of the sextet, she mentions it only once again, to note the publication of Luther's arrangement for keyboard and violin, while still regarding the original as being by Friedrich.[41]

Wohlfarth (1971)

The most detailed study of the life and music of Friedrich Bach is the 1968 dissertation by Hannsdieter Wohlfarth, which was published in a slightly revised form in 1971.[42] In his review of the literature, Wohlfarth examines in considerable detail most of the sources dealing with Friedrich Bach that have already been mentioned here, plus several more, so he could not have been unaware of the inconsistent attributions for the concertos and the sextet, nor of the various positions staked out by scholars before him. It is all the more surprising, then, that Wohlfarth does not even mention, let alone try to resolve, the authorship questions surrounding these pieces. He discusses and analyzes the sextet as if there were no doubt that it was written by Friedrich, and includes it in his work list without reference to any of the sources that attribute it to Christian. Not a single word is devoted to the Riga concertos—only a very general warning that Meusel,

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[40]Beth Anna Mekota, "The Solo and Ensemble Keyboard Works of Johann Christian Bach" (Ph.D. diss., University of Michigan, 1969), 50–51.

[41]Ibid., 61–62.

[42]Hannsdieter Wohlfarth, *Johann Christoph Friedrich Bach: Ein Komponist im Vorfeld der Klassik* (Bern: Francke Verlag, 1971).

Forkel, Gerber, and others should be used with caution because of the many falsely attributed works in their articles.

Forman (1971)

Denis Forman prefaces his study of the Mozart piano concertos with a short historical overview of the keyboard concerto that focuses almost exclusively on the works of Emanuel and Christian Bach.[43] Forman twice mentions the Riga concertos, both times questioning Hartknoch's attribution to Christian and suggesting that they were more likely to have been written by Emanuel. Since his purpose, however, was to assay Mozart's concerto form rather than wrestle with conflicting attributions among the Bach sons, Forman does not pursue the matter beyond these brief statements.

> There are a number of clavier concertos attributed to Christian Bach in the period before he left Berlin. Their authenticity has, however, been questioned, for at least the two best-known (in E flat and A major) have a maturity, a seriousness of purpose and a style of composition which could seem to mark them out as the work of Philipp Emmanuel [*sic*]. Christian lived with his brother and worked as his pupil and amanuensis, and so such a confusion could easily have arisen. Whether it was he, however, or his brother who wrote these early concertos is a question of little importance, for they were in the North German style and composed by a different Bach from the Italianate young man who arrived in London in 1762.[44]

Bolen (1974)

Jane Bolen's dissertation consists of an edition and short discussion of Christian's five Berlin concertos.[45] Much of her background information on Christian's concertos is taken from Terry, but she questions his attribution of the Riga concertos to Christian.

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[43]Denis Forman, *Mozart's Concerto Form: The First Movements of the Piano Concertos* (London: Rupert Hart-Davis, 1971).

[44]Ibid., 39.

[45]Jane Bolen, "The Five Berlin Cembalo Concertos P 390 of Johann Christian Bach: A Critical Edition" (Ph.D. diss., Florida State University, 1974).

> The authenticity of the so-called "Riga" concertos, which exist in modern editions, has not been established. These concertos were published by Hartknoch of Riga (ca. 1770 and 1771) some seven or eight years after Christian Bach's arrival in London, ca. 1762. Although these concertos consistently follow the four-tutti arch plan of the "North German" concerto, they display many qualities unlike Christian Bach's later concertos, prompting Forman to question their authenticity: [Here quote from Forman, p. 39]. Establishing the authenticity of these "interim" concertos, the editing of concertos in manuscript form and the analysis of these compositions lies outside the scope of this present work, however.[46]

Wade (1979)

Rachel Wade's 1979 dissertation (published two years later) is an attempt to impose order on the mass of sources pertaining to Emanuel's keyboard concertos.[47] Wade's Appendix B identifies a large number of concertos that have been attributed to Emanuel, but that she considers spurious, including both of the Riga concertos. The E-flat concerto is listed in Wade's appendix as X5 (pp. 270–71) and the A-major as X6 (pp. 272–73), and both concertos are unequivocally identified as the work of Christian, apparently relying on Hartknoch's and Breitkopf's attributions and the fact that neither concerto appears in the *Nachlassverzeichnis*.

New Grove (1980)

The article on Friedrich Bach in the *New Grove Dictionary of Music and Musicians* was written by Eugene Helm, who relied almost exclusively on Wohlfarth's work list when compiling his own.[48] Since Wohlfarth makes no mention of the Riga concertos, they do not appear in Helm's list either. The sextet, however, which alone occupies Wohlfarth's category V (roman numeral five) as an authentic work by Friedrich, is omitted without comment by Helm, resulting in an unexplained jump in his list from IV (septet) to VI (quartets). Nor did Helm include a listing of dubious or spurious works in

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[46]Ibid., 29–30.

[47]Rachel W. Wade, *The Keyboard Concertos of Carl Philipp Emanuel Bach* (Ann Arbor, MI: UMI Research Press, 1981).

[48]Christoph Wolff and others, *The New Grove Bach Family* (New York: W. W. Norton, 1983), 309–14.

the work list—a curious omission not only because Wohlfarth does catalogue a number of such compositions, but also because the *Grove* work lists for Friedrich's father and three brothers all contain listings for "spuriosities." Helm also wrote the text and prepared the work list for the *Grove* article on Emanuel.[49] His *Thematic Catalogue of the Works of Carl Philipp Emanuel Bach* has since been published, however, and the information concerning the Riga concertos therein presumably supersedes the *Grove* article, and will be discussed separately below. Ernest Warburton wrote the text for the article on Christian, while the work list is a combined effort by Warburton, Ellwood Derr, Stephen Roe, and Richard Maunder.[50] The Riga concertos are listed as doubtful, with references to the attributions to Emanuel and Friedrich. The sextet is listed among the authentic chamber works, with references to the André and Luther prints, and with the comment that the sextet is "often missattrib. J. C. F. Bach."[51] All three of the works are briefly mentioned in the text of the article, without, however, adding to the information provided in the work list.[52]

Schmitz (1981)

Hans-Bernd Schmitz is one of the few writers to have made more than passing mention of the Riga concertos. In his dissertation he devotes an entire section of the chapter on "pre-London" concertos to them.[53] Schmitz does not, however, address the issue of authenticity (at least not for these concertos). He accepts Terry's attribution of both concertos to Christian and seems not to have been aware of any other sources for them besides the Hartknoch edition. For Schmitz, the principal question concerns the date and place of composition. He notes that other writers (Praetorius, Schökel, Terry,

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[49]Ibid., 251–306.
[50]Ibid., 315–53.
[51]Ibid., 348.
[52]Ibid., 336, 339.
[53]Hans-Bernd Schmitz, "Die Klavierkonzerte Johann Christian Bachs" (Ph.D. diss., Julius-Maximilians-Universität, Würzburg, 1981), 178–96.

Geiringer) detected Italian influences in the Riga concertos and suggests himself at one point the possibility that Christian may have written them shortly after his arrival in Milan, but later concludes that they could just as well have been written while Christian was still in Berlin.[54] Both Riga concertos are listed in Schmitz's *Werkverzeichnis* among Christian's authentic concertos.

Salter (1986)

Lionel Salter briefly discusses the A-major concerto in connection with a performance of it at the 1986 Haslemere Festival.[55] He seems—like Cudworth—to have been unaware of Christian's Berlin concertos when stating "that it is not in the least like J. C. Bach's other concertos that are known." This, and—again like Cudworth—his automatic assumption that Thompson's "Sigr. Bach of Berlin" must be a reference to Emanuel, leads him to the conclusion that the concerto is by Emanuel, or at least that "one is bound to discount the likelihood of this concerto being by Johann Christian."

Helm (1989)

In his *Thematic Catalogue* for Emanuel, Helm includes entries for the A-major Riga concerto in three different places.[56] Numbering the Boineburg solo-keyboard version of the concerto as "383," Helm lists it under the heading "Keyboard, Spurious" with the following comment:

> An arrangement for unaccompanied keyboard of a published concerto by Johann Christian Bach. . . . In view of the unreliability of attribution in Ms. mus. 21a . . . and the publication date of the J. C. Bach concerto, it hardly seems likely that this is an arrangement by CPEB of his brother's composition.

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[54]Ibid., 182 n. 20, 196.

[55]Lionel Salter, "Which Bach," *Consort* 42 (1986): 50. The similarity between Salter's title and that of the present dissertation is coincidental.

[56]Helm, *Thematic Catalogue*, 80, 107.

Neither this source, nor any other for that matter, suggests that Emanuel had arranged a concerto by Christian for solo keyboard, so there seems little reason for Helm to discount such a hypothesis in this case. The very next entry in Helm's catalogue, number 384, is the Thompson print of the same concerto, which Helm unequivocally attributes to Christian. Under the heading "Concertos and Sonatinas, Spurious," Helm's number 490 gives partial information about the Gerber manuscript of the A-major concerto that is attributed to Emanuel. It is obvious that Helm did not see this manuscript himself, for he relies on information from Wade, who "reports seeing a film copy of the Gerber-Bücken ms." For reasons unexplained, Helm then speculates that the manuscript was "incorrectly represented as genuine" at an auction in 1924 where it was bought by Ernst Bücken. The actual Gerber copy (not the film thereof) may have eluded both Helm and Wade because it is filed under Christian's name in the card catalogue of the Austrian National Library.[57] There is little reason to believe that the Gerber copy is not "genuine," but in any case, Helm does not accept the manuscript's attribution to Emanuel. He also makes no mention of the lost copies of the E-flat concerto, reported by Uldall, that attribute that work to Emanuel.

Roe (1989)

Stephen Roe, in his 1989 dissertation, acknowledges the questions surrounding the authorship of the sextet, but never seriously considers the possibility that it could have been written by anyone besides Christian. "The Sextet was clearly regarded as genuine by Christian's friends and contemporaries such as Luther and others. It displays features consistent with J.C. Bach's mature compositions and is unlike the works of his elder brother."[58] Roe's argument, however, is far from convincing. His

[57] Although the call number is S.H. C.P.E. BACH 7, and is included in the published catalogue of the Hoboken collection under Emanuel's name. *Katalog der Sammlung Anthony van Hoboken in der Musiksammlung der Österreichischen Nationalbibliothek*, vol. 1, *Johann Sebastian Bach und seine Söhne*, ed. Thomas Leibnitz (Tutzing: Hans Schneider, 1982), 132–34.

[58] Roe, *Keyboard Music*, 89.

claim that the sextet is "unlike" the works of Friedrich is somewhat disingenuous. One would expect to find in support of this claim references to specific stylistic traits that can be proven to be missing from Friedrich's compositions, as well as a clear demonstration that the person making the claim was intimately familiar with Friedrich's music. No such support is offered.

Other inconsistencies are to be found in Roe's argument. Roe places much weight on the existence of the arrangement of the first movement of the sextet for harp published by Edward Jones in 1796, and on Jones's claim that Christian wrote the harp version "expressly for the editor to play." It is certainly possible that this is true—Jones is known, in fact, to have participated in the Bach-Abel concerts in the late 1770s. The evidence provided by the Jones print cannot, therefore, be rejected outright, and I do not deny that it lends additional evidence pointing to Christian as composer of the sextet. Considering, however, the questions and inconsistencies associated with the print—especially its late date—it would be dangerous to rely too heavily on this evidence when trying to determine authorship, and it simply cannot be reasonably asserted that the Jones print "clears this matter up for ever."[59]

After declaring that the sextet must be by Christian because it "displays features consistent with J.C. Bach's mature compositions," Roe states that the "keyboard writing in the Sextet is so different from that found in the other large-scale chamber compositions as to suggest that it must have had its origins in the [harp] Sonata and not the reverse." Another plausible explanation of why the keyboard writing in the sextet differs so much from that in Christian's comparable works is that Christian did not write the sextet!

[59]Ibid., 291

Leisinger (various)

Ulrich Leisinger of the Bach-Archiv in Leipzig has indicated in several recent publications that he considers the Riga concertos to be compositions by Friedrich and the sextet to be by Christian.[60] In accepting the attributions of the concertos to Friedrich, Leisinger relies on the article by Hase: "[the concertos] are documented to be compositions of JCFB by company records of the firm Breitkopf, who undertook the printing for Hartknoch (cf. *Zeitschrift für Musikwissenschaft* 2 (1919/20), p. 474)."[61] As already mentioned, however, the Hase article cited here offers no specific documents in support of its claim that Friedrich was the author of the concertos. It is possible that the prints for the concertos were simply stored in the Breitkopf archives together with the two other publications by Friedrich because they all appeared at about the same time and were all Bach works, and that Hase just overlooked the concertos attribution to Christian, assuming all of the works to be by Friedrich.

Leisinger's assessment that the sextet is by Christian is based on the source evidence. Particularly convincing for him is the fact that Friedrich, in his manuscript copy of the sextet, seems to have begun mechanically to sign his own name on the title page, only to catch his error and overwrite the "F" in the initials GCF with the "B" of Bach, producing the final version of "GCBach." The conscious act of obliterating the "F" is proof for Leisinger that Christian is the true author.

Preliminary Conclusions

None of the hypotheses proposed so far to explain the contradictions among the source attributions is completely satisfactory. The general concensus about the sextet,

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[60]Ulrich Leisinger, "Johann Christoph Friedrich Bach - Werkverzeichnis," in *Johann Christoph Friedrich Bach (1732–1795) Ein Komponist zwischen Barock und Klassik* (Bückeburg: Verlag Createam, 1995), 120; "Die geistlichen Vokalwerke," 116; and *Bach-Quellen Brüssel*, 35 n. 42, 103, 361–62, 561.

[61]". . . als Kompositionen von JCFB bezeugt durch Geschäftsunterlagen des Hauses Breitkopf, der für Hartknoch den Druck übernahm (vgl. *Zeitschrift für Musikwissenschaft* 2 (1919/20), S. 474)." Leisinger, *Bach-Quellen Brüssel*, 362.

as articulated by Warburton, Sadie, and Roe, seems to be that it was composed by Christian and merely copied by Friedrich during his London visit. This view must be reconsidered in light of the watermark evidence of the Kraków parts. It is not likely that Friedrich took blank Bückeburg paper along with him when he knew that music paper was to be had in London, and probably more cheaply than any he could purchase at home. It is also unlikely that Friedrich copied from either of the published versions, since copying errors strongly imply that he was copying from a score. Rather, what the Kraków evidence suggests is that at some point a score of the sextet was in Bückeburg, in which case several possibilities suggest themselves:

> 1. Christian composed the sextet and sent a score of it to Bückeburg, which Friedrich copied (the Kraków parts). Christian's score was then lost.
>
> 2. Christian composed the sextet and brought it with him during a visit to Bückeburg (as yet undocumented), perhaps in connection with one of his trips to Mannheim in 1772 and 1774.[62] Friedrich copied the work for performance in Bückeburg (the Kraków parts), and Christian's score was later lost.
>
> 3. Friedrich composed the sextet and left a copy (since lost) in London, which was mistaken for a work by Christian after the latter's death in 1782.

Trying to unravel the concerto puzzle is made more complicated by the fact that Emanuel must also be considered a possible candidate. All three brothers were still alive when the concertos were published and appeared in the Breitkopf catalogue. They almost certainly would all have seen the Breitkopf reference as well as his plea for corrections printed in the *Nacherinnerung* to the first part of the catalogue:

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[62]Geiringer, *Bach Family*, 383–84, also speculates that Christian visited Bückeburg on one of his Mannheim trips, but he offers no evidence to support this suggestion. Since Geiringer considered Friedrich to be the author of the sextet, however, our possibility No. 2 could not have been one of the reasons for his speculation.

> I must therefore ask forgiveness of connoisseurs and amateurs of music, and even of a few composers themselves whose names appear in this catalogue, or will appear in the future, for certain unavoidable errors. At the same time I beseech them, if some of their own pieces or those of others have been incorrectly set down, to let me have a note to that effect so that, in case there is a new edition of the *Catalogue*, old errors may be rectified and new ones avoided. For this reason I have printed only a small number of copies of this first effort, and have gladly sacrificed profit for love of accuracy.[63]

Again three possibilities suggest themselves.

> 1. All three brothers considered the Breitkopf reference an attribution to Christian and considered it correct, even though Christian had had no other dealings with any publisher in Riga.
>
> 2. All three brothers considered the reference an attribution to Johann Christoph Friedrich and considered it correct (although potentially ambiguous), all the more so because he had published other works in Riga.
>
> 3. All three brothers considered the reference incorrect or at least misleading, but no correction was made.

The secondary sources summarized above have provided very little new information concerning the authorship of these works. It is interesting to note, however, how positions seem to fall along national lines. English writers are less likely to accept Christian as the author of the concertos. Cudworth, Forman, and Salter all suggest that at least the A-major concerto is by Emanuel. This is perhaps understandable, since English writers would naturally be more familiar with Christian's English concertos that are stylistically much different from the Riga concertos. An exception to this trend is Terry, who accepted the attribution to Christian, but Terry seems to have uncritically accepted virtually all attributions to Christian, and his thematic catalogue is full of incorrectly attributed works.

The same national divisions hold true for the sextet, with the Germans Schünemann, Einstein, and Geiringer willing to make or accept a claim for Friedrich's authorship, while Sadie, Warburton, and Roe unequivocally claim the work for the "English" Bach. While there are some Germans who accept Christian as the sextet's

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[63]Translated by Barry Brook in *Breitkopf Catalogue*, xiii.

author (Schwarz, Schökel, Leisinger), there are no British writers willing to accept Friedrich's authorship—the American Mekota is the only non-German to do so.

What *is* a certainty, however, is that, barring the discovery of unambiguous new sources, methods other than the traditional source-critical ones must be called upon if the question of authorship in these works is to be further clarified. The rest of this study will be an attempt to see what the music can tell us.

CHAPTER 3

ANALYSES OF THE DISPUTED WORKS

Development of the North German Keyboard Concerto

Johann Sebastian Bach

While concertos for solo instrument (most often violin) and orchestra were written in large numbers from the beginning of the eighteenth century, the keyboard concerto did not receive similar attention until nearly forty years later.[1] By the end of the century, however, keyboard instruments (first harpsichord, then piano) had surpassed all others as the preferred solo part in concertos.[2]

The early history of the orchestral concerto with solo keyboard is intimately connected with the name of Bach. Certainly Bach's efforts were significant both in the number of keyboard concertos produced and in their influence on the later development of the genre in northern Germany. It is also clear, however, that the keyboard concerto was being developed at nearly the same time in Austria, Italy and England by composers who more than likely knew nothing of Bach's works.[3]

Bach's influence was most keenly felt by his students, including, of course, his own sons. All four of his composing offspring wrote keyboard concertos, inspired by

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[1]Eugene K. Wolf identifies the earliest known solo concertos as Torelli's Op. 6, nos. 6 and 12, from 1698. *New Harvard Dictionary of Music*, s.v. "Concerto."

[2]Chappell White, *From Vivaldi to Viotti: A History of the Early Classical Violin Concerto* (Philadelphia: Gordon and Breach, 1992), 22. White's figures are based on the Breitkopf catalogues and supplements.

[3]Hans Uldall, "Beiträge zur Frühgeschichte des Klavierkonzerts," *Zeitschrift für Musikwissenschaft* 10 (1927–28): 139; Daniel E. Freeman, "The Earliest Italian Keyboard Concertos," *Journal of Musicology* 4 (1985): 121–45.

the works composed or, more correctly, arranged by their father for the concerts of the *Collegium musicum* under his direction in Leipzig. It can also be assumed that the Bach sons participated as soloists in these concerts, at least in the concertos for more than one keyboard. Although few of the originals survive, it seems likely that nearly all of Sebastian's solo and multiple keyboard concertos were arrangements of violin or oboe concertos composed earlier by Bach or others. This fact does not, however, detract from the impact they must have had on their audiences and their performers.

Johann Sebastian Bach's own model for concertos was the Venetian solo concerto, particularly those of Antonio Vivaldi.[4] Vivaldi's works first achieved wide circulation outside of Italy during the second decade of the century, and they quickly became tremendously popular in most of Europe, leading to the adoption of many of their techniques and forms by non-Venetian composers (the notable exception being in England, where the concerto grosso tradition held on until well past mid-century). Bach's own encounter with Vivaldi is documented in the series of violin concertos that Bach, between 1713 and 1716, arranged for solo keyboard from Vivaldi's orchestral originals (BWV 972–987). Sebastian Bach's capacity for absorbing and assimilating elements from all styles with which he came into contact insured that his concertos would not simply be imitations of Vivaldi's, and the resulting synthesis found enthusiastic supporters among Bach's students, who then carried it beyond Leipzig, in particular to Berlin.[5]

Quantz

Vivaldi was a model for another composer important in the development of the north German concerto, Johann Joachim Quantz. Quantz's first contact with Vivaldi's

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[4]Vivaldi's influence on Bach was already pointed out by Forkel; see Malcolm Boyd, *Bach: The Brandenburg Concertos* (Cambridge: Cambridge University Press, 1993), 7–8.

[5]Hans Uldall, *Das Klavierkonzert der Berliner Schule*, Sammlung musikwissenschaftlicher Einzeldarstellungen, vol. 10 (Leipzig: Breitkopf & Härtel, 1928), 10.

concertos came by way of the Dresden Konzertmeister Johann Georg Pisendel, who had studied with Vivaldi in Venice and maintained contact with him after returning to the Saxon court. Within a very short time something of a Vivaldi cult had developed in and around Dresden, where Quantz, still at this time primarily a violinist, was trying to establish himself. In an autobiographical sketch Quantz readily admits his reliance on Vivaldian models in his own concertos.

> At this time [summer 1714] in Pirna [a town near Dresden] I got my first look at Vivaldi's violin concertos. As a then completely new species of musical pieces, they made more than a slight impression on me. I did not fail to collect a considerable assortment of them. In the future the splendid ritornellos of Vivaldi provided me with good models.[6]

From 1724 to 1727 Quantz travelled extensively throughout Europe, including long stays in Italy and France and shorter visits to England, Holland, and central Germany. During these travels Quantz encountered firsthand virtually all of the current musical styles and he met many prominent musicians as well, including Johann Adolph Hasse, Alessandro Scarlatti, Carlo Broschi (Farinelli), Michel Blavet, and Handel, all of whom influenced him to a greater or lesser degree. Quantz served the Saxon court for twenty-five years (1716–41) before moving to Berlin, where he assumed a position of enormous influence as flute teacher and flute maker to the king. His championing of Vivaldi's style and techniques in the large output of flute concertos he composed for his royal patron naturally did not go unnoticed by other composers in Berlin.

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[6] "In Pirna bekam ich zu dieser Zeit die Vivaldischen Violinenconcerte zum erstenmale zu sehen. Sie machten, als eine damals gantz neue Art von musikalischen Stücken, bey mir einen nicht geringen Eindruck. Ich unterließ nicht, mir davon einen ziemlichen Vorrath zu sammeln. Die prächtigen Ritornelle des Vivaldi, haben mir, in den künftigen Zeiten, zu einem guten Muster gedienet." "Herrn Johann Joachim Quantzens Lebenslauf, von ihm selbst entworfen," in *Historisch-Kritische Beyträge zur Aufnahme der Musik*, ed. Friedrich Wilhelm Marpurg (1754; facsimile reprint, Hildesheim: Georg Olms Verlag, 1970), 1:205. The English translation is taken partially from Quantz, *On Playing the Flute*, trans. Edward R. Reilly (New York: Norton, 1966), xiii.

Tartini

By the late 1730s, when north German composers began writing keyboard concertos, the violin concertos of Giuseppe Tartini had become fashionable, and a younger generation of composers had begun writing concertos "nach Tartini's Manier."[7] Tartini's so-called "School of Nations" attracted students from all over Europe, including among other Germans Friedrich Baum, Johann Gottlieb Naumann, and Friedrich Wilhelm Rust.[8] Tartini had refined the rather free Vivaldian approach to ritornello form, wherein the number of ritornellos was somewhat flexible and each individual section was relatively short, by introducing a more standardized structure consisting of (usually) four ritornellos and three solos, each of which was longer and more complex than its Vivaldian counterpart.[9] The north German composers active during the middle third of the eighteenth century adopted this structural approach almost exclusively in their concertos. Tartini also supplanted the angular triadic motives of Vivaldi with a smoother, more *galant* melodic style—a characteristic also favored by the north Germans.

Friedrich the Great

The individual threads discussed thus far came together through the efforts of Friedrich, crown prince and, after 1740, king of Prussia. Friedrich was a passionate musician, especially as a performer on the flute, and a serious dilettante composer. He made the acquaintance of Quantz during a trip to Dresden in his youth, and in 1728 obtained explicit permission from the Elector of Saxony to receive further training on his favorite instrument from Quantz, who was by then a flutist in the Saxon Kapelle.

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[7] A keyboard concerto by Christian Bach, now apparently lost, is so designated in Emanuel's *Nachlassverzeichnis*, p. 82.

[8] A list of all of Tartini's known pupils is given in Minos Dounias, *Die Violinkonzerte Giuseppe Tartinis als Ausdruck einer Künstlerpersönlichkeit und einer Kulturepoche* (1935; reprint, Wolfenbüttel: Möseler Verlag, 1966), 200 n. 2.

[9] White, *Violin Concerto,* 103.

Friedrich's own taste in music leaned heavily toward the modern Italian style, and he seems to have had some direct contact with Tartini. Friedrich, apparently as a sign of admiration for Tartini, sent him an aria he had composed himself, and Tartini returned the favor by dedicating one of his concertos to Friedrich. Minos Dounias also notes that there were autographs by Tartini in the Berlin royal library after Friedrich's death—another sign of direct contact between the two men.[10] Even before Friedrich ascended the Prussian throne, he began to gather musicians around him who would later form the core of his court orchestra. Among these were the Graun brothers, Johann Gottlieb and Carl Heinrich; Johann Gottlieb had studied violin under Tartini in Prague. In 1738, Emanuel Bach entered Friedrich's service as harpsichordist.

Following Friedrich's accession Berlin quickly became known as an active and potentially profitable musical center, and it attracted many musicians, among them several pupils of Sebastian Bach: Christoph Nichelmann (1739), Johann Friedrich Agricola (1741), and Johann Philipp Kirnberger (1751).[11] Quantz himself was lured away from Dresden with a very lucrative contract in 1741. In 1747 Sebastian Bach made his famous visit to Berlin and performed for Friedrich, although it is not known that he played any concertos. So, with the exception of Vivaldi, all of the major figures involved in the development of the north German keyboard concerto were known to Friedrich the Great, and the fertile musical climate he created in Berlin allowed the north German keyboard concerto to take form and flourish. Ironically, Friedrich himself was little interested in keyboard concertos, rather the royal soloist devoted himself exclusively to flute concertos, and, since no one dared upstage him, keyboard concertos were rarely

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[10]Dounias, *Tartini,* 201 n. 2.

[11]Nichelmann studied at the *Thomasschule* in Leipzig beginning in 1730. There he received the general musical training given to all of the students by Sebastian Bach, but he seems to have received private instruction in keyboard playing and composition only from Friedemann Bach. "Lebensläuffe verschiedener lebenden Tonkünstler," in Marpurg, *Historisch-Kritische Beyträge*, 1:431–39. Translated in Christoph Nichelmann, *Clavier Concertos in E Major and A Major*, ed. Douglas A. Lee (Madison, WI: A-R Editions, 1977), vii–viii.

performed at court. Still, the active musical life of the Prussian capital afforded ample opportunities for keyboardists to perform concertos at private musical gatherings.

C. P. E. Bach

By far the most active and historically significant proponent of keyboard concertos in Berlin was Emanuel Bach, who composed an average of two per year between 1738 and 1751, and who continued composing them, albeit at a somewhat slower rate, until he died in 1788. During his thirty years in the Prussian capital (1738–68) he composed thirty-eight original keyboard concertos, and he also revised three concertos composed before his arrival in Berlin. Emanuel combined structural elements from Tartini with a more contrapuntally active accompaniment inherited from his father and a personal, expressive style to produce the prototypical north German keyboard concerto. It is, in fact, this combination of elements that distinguishes the north German concerto from its predecessors and sources. This is not to imply, however, that Emanuel's concertos all adhere to a single formula. Indeed, the expressive variety displayed from one concerto to the next is often astounding. But the general features are consistent enough among these works, and also among the works of many other composers active in Berlin, that certain characteristics can be distilled out and assigned to a distinctive north German approach to concerto composition.

C. P. E. Bach's Contemporaries

Other composers besides Emanuel Bach who were writing keyboard concertos in and around Berlin during the reign of Friedrich include the court *Kapellmeister*, Carl Heinrich Graun, and his brother Johann Gottlieb, as well as Emanuel's colleague as court accompanist, Christoph Nichelmann. Christoph Schaffrath seems to have been the most prolific composer of keyboard concertos after Emanuel, composing perhaps as many as forty—Uldall claimed to have seen about thirty—although only seventeen are still

available today.[12] Uldall also describes concertos by Christian Friedrich Schale, Johann Gottlieb Janitsch, Johann Philipp Kirnberger, the Benda brothers, and a few other minor composers.[13] Notable for their absence among the Berlin keyboard concerto composers are Quantz, who seems to have limited himself to flute concertos, and Agricola, who, despite having been a pupil of Sebastian Bach, is not known to have written any keyboard concertos. Johann Christian Bach, of course, composed at least five keyboard concertos during his five-year residence in Berlin, but he abandoned the north German concerto type as soon as he left Berlin.

Descriptions of the Genre

The following general description of the north German keyboard concerto is largely based on the writings of three musicians from the eighteenth century and three German musicologists from early in this century. Johann Adolph Scheibe's description of the concerto (1739) was written when the keyboard concerto was just beginning its ascendency. Quantz's writings on the subject (1752) came closer to the heyday of the north German variety of keyboard concerto. Heinrich Christoph Koch's pertinent ideas (1793) were published closer to the end of the eighteenth century, when the concertos of italianized Germans such as Christian Bach and Mozart had superseded the north German type. During the first three decades of the twentieth century, Arnold Schering, Hugo Daffer, and Hans Uldall all made significant contributions to our understanding of the north German keyboard concerto. Uldall concentrated in particular on the composers active in Berlin during the first half of Friedrich's reign, while Schering and Daffner both treated the north German keyboard concerto in more general studies of all manifestations of the keyboard concerto. Contributions by more recent scholars will

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[12]Uldall, *Das Klavierkonzert*, 12; and Karyl Louwenaar, "The Keyboard Concertos of Christoph Schaffrath" (DMA diss., University of Rochester, 1974), 1:65–70.

[13]Schale, Janitsch, and the Benda brothers were all members of Friedrich's *Kapelle*.

also be considered here as appropriate. Before venturing too far into the realm of theoretical descriptions, it is perhaps appropriate to repeat a cautionary note concerning theory and practice. In handling any theoretical source, one must ask for whom the author is writing, what music he is describing, what music he holds up as exemplary, and whether his description actually squares with the music.

> While any study of eighteenth-century music may be deepened by some attention to contemporaneous theoretical or literary sources, it is worthwhile to bear in mind the problems inherent in applying any theory or criticism to the works of art that appeared at the same time. Writers may express outdated ideas or uninformed prejudices, and their interests or aesthetics may differ greatly from those of the modern reader. Much of the eighteenth-century musical literature . . . is directed toward a reader who is liberally educated but not necessarily well-versed in music. The writer may be attempting elementary instruction in composition or performance, or in both, but in any case cannot be expected to write at the sophisticated level necessary to explain the subtleties of, say, a rondo by Emanuel Bach.[14]

The goal here, therefore, is simply to provide an overview of the form and techniques employed by the above-mentioned composers as described by the writers cited. The commentators chosen here—primarily Quantz, Koch, and Uldall—are those who have directed their energies most directly to describing the most consistent features of keyboard concertos in the north German manner. Against this background, idiosyncrasies of individual works can emerge more clearly.

Quantz

In Quantz's famous treatise, the description of the concerto is part of chapter eighteen entitled "How a Musician and a Musical Composition Are to Be Judged."[15] To furnish the general musical education that anyone serious about learning to play the

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[14]David Schulenberg, *The Instrumental Music of Carl Philipp Emanuel Bach*, Studies in Musicology, no. 77, ed. George Buelow (Ann Arbor: UMI Research Press, 1984), 17.

[15]Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversière zu spielen* (1752; facsimile reprint, with a foreword by Hans-Peter Schmitz, Munich: Deutscher Taschenbuch Verlag, 1992), 294–300. The original title of the chapter under discussion is "Wie ein Musikus und eine Musik zu beurtheilen sey." All English translations from Quantz's *Versuch* are from Quantz, *On Playing*.

flute must possess, Quantz surveys genres and styles of vocal and instrumental music. Consideration of the latter begins with concertos, which Quantz divides into two types: *concerti grossi* and *concerti da camera* (i.e., solo concertos). After two paragraphs on the *concerto grosso*—reflecting the decline that the genre had experienced by the middle of the century—Quantz concentrates his discussion on the chamber concerto (*Kammerconcerte*), which he further divides by expressive character into "serious" (*ernsthaft*) and "light" (*scherzhaft, tändelnd*) types. While he gives only very general guidelines for distinguishing between the two, it is clear that he considers the serious concerto more important, as he devotes even less ink to the "light" chamber concerto than he did to the *concerto grosso*.[16] Nowhere does Quantz specifically describe the keyboard concerto—his remarks apply equally well to all kinds of solo concertos, regardless of instrument.

The serious chamber concerto requires a strong (*stark*) accompaniment, which, by analogy to Quantz's description of the concerto grosso, most likely indicates that the string accompaniment should be played by more than one to a part, rather than that strings should be augmented with wind instruments, as Uldall surmises.[17] The serious concerto is further distinguished by a more harmonic than melodic setting, by a penchant for unison passages, and by a slow harmonic rhythm of one or two changes per measure.[18] These are characteristics common not only to Quantz's own concertos but also to a large number of the keyboard concertos by Emanuel Bach and his colleagues. While Quantz gives detailed recommendations about the ritornello, the solo sections, and their interaction, he apparently assumes the reader's familiarity with

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[16]The distinction between "serious" and not-so-serious depends primarily on the character of the ritornello (§33). In the latter style, the ritornello "consists of fleeting, jocular, gay, or singing melodies" over quick changes of harmony, for which a lighter accompaniment is appropriate. Quantz, *On Playing*, 311.

[17]Uldall, *Das Klavierkonzert*, 24.

[18]Quantz, *Versuch*, 295.

overall movement structure; or perhaps he remains beholden to Vivaldi's more flexible treatment of ritornello form, rather than to Tartini's more standardized approach.

C. P. E. Bach

One might expect, from Quantz's wide-ranging discussion of musical topics in a treatise ostensibly concerned with flute playing, that Emanuel Bach would have devoted part of his own treatise, the first part of which was published the year after Quantz's, to a thorough discussion of keyboard concertos.[19] However, this is not the case. The very few references to concertos are almost exclusively practical advice about how a keyboard player should accompany. Of the composition or evaluation of concertos there is hardly any mention.

Koch

Heinrich Christoph Koch's *Versuch einer Anleitung zur Composition* is particularly well known today for containing one of the first theoretical descriptions of sonata form. It also contains one of the earliest detailed descriptions of ritornello concerto form. Koch's three volumes are a progressive introduction to the craft of composition, beginning with the rudiments and culminating in rules for composing complex multi-movement forms.

Koch discusses the concerto in his third volume. In the forty years since Quantz's treatise, the symphony had replaced the concerto as the preeminent instrumental genre—reflected in the fact that Quantz had treated the concerto first among instrumental works while Koch treats it last, and feels compelled to attempt a rehabilitation of its bad reputation. Koch begins by explaining that a concerto, in contrast to a symphony, has no particular character, but can assume any character that

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[19]Carl Philipp Emanuel Bach, *Versuch über die wahre Art das Klavier zu spielen*, 2 vols. (1753, 1762; facsimile reprint, Kassel: Bärenreiter, 1994).

the composer is capable of expressing.[20] He continues with a long-winded defense against the charge (made in Sulzer's *Allgemeine Theorie der schönen Künste*) that the concerto is nothing more than empty virtuosic display devoid of redeeming value. Koch argues that, in the hands of a sensitive composer, the concerto can indeed be more than a display piece, and he makes unmistakably clear whom he considers worthy of emulation in this regard, and upon whose works he has based his discussion:

> Ponder these ideas further, listen to most of C. P. E. Bach's concertos, which so completely correspond to this ideal, or better, from which this ideal is derived, and then judge whether the concerto is no more than mere exercise for composer and player, aiming at nothing else.[21]

Koch compares a properly composed concerto to a Greek tragedy, where the soloist expresses his feelings to the orchestra (i.e., the "chorus" of ancient tragedies) rather than to the audience. The orchestra thus receives justification to participate with the soloist in developing the "drama." It is hardly possible, therefore, that a proper concerto, which is primarily concerned with the relationship between orchestra and soloist, can degenerate into an empty vehicle for virtuosity.[22] After having thus established that the concerto is worthy of attention by serious composers, Koch continues with the details about how to compose one, which will be considered individually in the discussion of ritornello form to follow.

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[20]Heinrich Christoph Koch, *Versuch einer Anleitung zur Composition*, 3 vols. (1782, 1793; facsimile reprint, Hildesheim: Georg Olms Verlag, 1969), 3:327. Koch had earlier assigned a specific character to each of a symphony's three movements.

[21]"Man bilde sich diesen Gedanken weiter aus, und höre dann die mehresten Concerte von C. P. E. Bach, die diesem Ideale so ganz entsprechen, oder besser, von denen dieses Ideal abgezogen ist, und dann urtheile man, ob das Concert nicht mehr als bloße Uebung für Setzer and Spieler, nicht mehr, als bloße, auf weiter nichts abzielende Ergötzung des Ohres sey." Ibid, 3:332–33. The last two volumes of Koch's *Versuch* have been translated into English by Nancy Kovaleff Baker as *Introductory Essay on Composition: The Mechanical Rules of Melody, Sections 3 and 4* (New Haven: Yale University Press, 1983). All translations from Koch in this study have been taken from Baker. The above quotation appears on pp. 209–10. The last phrase in Koch, beginning with "nicht mehr als bloße Uebung. . ." is a direct quote from Johann Georg Sulzer, *Allgemeine Theorie der schönen Künste* (Leipzig, 1771–74), 1:299.

[22]Koch, *Versuch*, 332–33.

Uldall

Hans Uldall was the first modern scholar to review the repertoire of surviving north German keyboard concertos and to summarize the stylistic traits that they more or less have in common. His first article, which appeared in 1927, is a general summary of the early development of the keyboard concerto, including, but not restricted to, the north German school. This article had been extracted from the author's doctoral dissertation, which was published the following year. The monograph is more centrally focused on the keyboard concerto as practiced by mid-eighteenth-century composers in and around Berlin, especially Emanuel Bach, and provides summary analyses of all of Emanuel's keyboard concertos known to him (49 of the 52 listed in the *Nachlassverzeichnis*) and a significant number of concertos by other north German composers.[23] Not only are Uldall's contributions important on their own merits, but, as we have seen, he had access to manuscripts that were later lost or destroyed.

General Characteristics

Tutti/Solo Contrast

The basic principle in the eighteenth-century concerto is the contrast between two sound sources. The two sources can differ in volume, timbre, or both. In solo concertos for keyboard the two are (1) the orchestra—a string-dominated or string-only sonority with continuo support from the keyboard—and (2) the keyboard in a solo capacity. While some early composers of keyboard concertos treated the contrast between sound sources at its most elementary level by simply alternating them, nearly all mid-century north German composers preferred a more complex treatment that

[23]Hans Uldall, "Beiträge," 139–52; and *Das Klavierkonzert*, which is the published version of his "Das Klavierkonzert der Berliner Schule und ihrers Führers Philipp Emanuel Bach, sowie neue Beiträge zur Geschichte des Klavierkonzerts" (Ph.D. diss; Marburg, 1928).

included a judicious use of the orchestra during sections where the solo keyboard sonority predominates.[24]

Individual Movements

In its large-scale structure, the keyboard concerto of the Berlin School assumes the three-movement fast-slow-fast arrangement of the Italian solo concerto. Like most music written in the second half of the eighteenth century, the north German keyboard concerto falls within a range of keys requiring no more than four accidentals.[25] Major keys predominate by approximately a two-to-one margin.[26] The first and third movements are always in the same key, although Quantz stipulates that the third movement should follow a different plan of modulation than the first. The principal melodies of each movement should not all begin on the same pitch. Quantz also specifies that the slow movement be in a different key than the first and third, and suggests the keys of i, iii, vi, IV, V, or v for concertos with major-key outer movements, and III, iv, v or VI for those with minor-key outer movements.[27] It was Emanuel Bach's practice to write slow movements in the opposite mode from the outer movements. In his first 26 concertos, only two do not follow this trend.[28] Uldall notes that Emanuel wrote no middle movements in the major dominant.[29]

The three movements of a concerto should never all be set in the same meter. Quantz devotes an entire paragraph to the choice of meter for a first movement that is

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[24]In the first movement of Platti's keyboard concerto in F, for example, the orchestra remains silent during each of the three solo sections. See Giovanni Benedetto Platti, *Two Keyboard Concertos*, ed. Daniel E. Freeman (Madison, WI: A-R Editions, 1991), 3–14. See also Freeman, "Earliest," 138.

[25]Uldall, *Das Klavierkonzert*, 15.

[26]Jane Stevens, "The Keyboard Concertos of Carl Philipp Emanuel Bach" (Ph.D. diss., Yale University, 1965), 20. Stevens applies this proportion only to Emanuel Bach's concertos, but it applies equally well to other north German composers of keyboard concertos.

[27]Quantz, *Versuch*, 298–99.

[28]Stevens, "Keyboard Concertos," 20.

[29]Uldall, *Das Klavierkonzert*, 15. The slow movement of the four-movement concerto, H. 475, is in the major dominant, but is no longer the "middle" movement. H. 475 was also composed after Emanuel had left Berlin.

appropriate to its character. In practice his suggestions boil down to a choice between common time or *alla breve*, as these two meters are best suited to the expression of serious thoughts. He admits the possibility of 3/4 meter for a first movement but notes that it is very rare.[30] Quantz also dictates that slow movements be in a different meter from first movements. The same holds true for third movements, which must also have a very different "style and nature" (*Art und Natur*) than the first. Appropriate meters for third movements would be 2/4, 3/4, 3/8, 6/8, 9/8, and 12/8, while 4/4 must never be used, as this would be too serious for the lighter closing movement.[31]

In addition to his recommendation of a duple meter for first movements, Quantz also suggests that a serious first movement display the following characteristics: a pleasing and comprehensible melody, proper imitation, a bass line (*Grundstimme*) that sounds well and is bass-like (*wohlklingend und baßmäßig*), a transparent texture (it is often better to double voices than to force a full-voiced texture), an accompaniment that does not impede or suppress the soloist, proper and natural modulations that do not stray too far from the tonic (lest the ear be offended), strict observation of the meter,[32] and sequences that are not too long. Finally, Quantz also specifies a length of approximately five minutes as being appropriate for a first movement.[33]

Slow movements, according to Quantz, afford greater opportunity to arouse and still the passions than do the outer movements. His directions for composing slow movements include ritornellos and solos that are as short as possible, ritornellos that are melodious, harmonious, and expressive rather than "brilliant" (*prächtig*), a solo part that is able to accept some ornamentation but which is sufficient without any, a solo part that is set as calmly and expressively as if it had a text, and an accompaniment that allows

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[30]Quantz, *Versuch*, 298, 299.

[31]Ibid., 299.

[32]Quantz uses the term *das Metrum*, meaning here perhaps "phrase structure." See Quantz, *On Playing*, 312 n. 2.

[33]Quantz, *Versuch*, 295–97, 300.

the solo freedom to ornament the melody.[34] An appropriate heading must be given to the movement that properly expresses the affect and aids in determining the proper tempo, and the duration should be between five and six minutes.[35] In slow movements either the violins or the entire string section often are instructed to play *con sordini*.[36] Emanuel calls for mutes in over a third of his slow movements, and the practice was also followed by other north German composers.[37]

The last movements of north German concertos are lighter in character and shorter in duration than the other movements, and are seen to counterbalance the more serious first movements.[38] Nearly all commentators note that third movements contrast with first movements by their more folk- or dance-like tendencies and their use of "lighter" meters. Occasionally characteristics of the rondo are introduced (symmetrical, periodic, and harmonically closed head motives, sectional lead-ins, etc.) but true rondos are not at all characteristic of the north German concerto.[39]

Quantz again provides a list of features for final movements, which includes ritornellos that are short, cheerful (*lustig*), fiery (*feurig*), and somewhat trifling (*tändelnd*), solos that have a pleasing, fleeting, and light melody, passagework that is "easy" so as not to slow things down, and which should also be different than the passagework of the opening movement (e.g., scales instead of arpeggios, etc.). Also, the meter must be observed most strictly, and the accompaniment should not be too full-voiced, because

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[34]Scheibe, *Critischer Musikus*, 632, also states that slow movements should not contain excessive written ornamentation in order to allow the player the freedom to add his own ornamentation according to his ability.

[35]Ibid., 298–99. Koch, after dedicating seven pages to a description of first-movement ritornello form, devotes but a single page to second movements. The two possibilities he suggests for slow movements are an adagio in the form of an aria and a romanze in the form of a rondo, both of which he had described in detail earlier in the treatise. Koch does not rule out the possibility of a ritornello-form slow movement, but also does not explicitly recognize it. His acknowledgement at the end of the century of the primacy of other forms indicates his awareness of newer developments (the third volume of his treatise was published after Mozart's death) and indicates that Emanuel Bach served as Koch's model and inspiration perhaps only for ritornello form movements. Koch, *Versuch*, 3:240.

[36]Uldall, *Das Klavierkonzert*, 16.

[37]Leon Crickmore, "C. P. E. Bach's Harpsichord Concertos," *Music & Letters* 39 (1958): 230.

[38]Quantz, *Versuch*, 299; Scheibe, *Critischer Musikus*, 636.

[39]Uldall, *Das Klavierkonzert*, 15.

third movements are generally rather fast. For an estimated length Quantz gives three to four minutes.[40]

Orchestra

Nearly as consistent as the three-movement form of the north German concerto is the make-up of the orchestral accompaniment. It almost always consists of strings alone—two violins, viola and basso continuo. Emanuel Bach does call for wind instruments—usually pairs of horns and flutes or oboes—in his Hamburg concertos, as well as in some of his Berlin concertos that were later revised in Hamburg; but in the original versions of all his pre-Hamburg concertos, the accompaniment consists of strings only.[41] As has been already noted, it seems likely that Quantz considered most Berlin keyboard concertos to fall under his "serious" heading, for which a "strong" accompaniment of more than one to a part would be most appropriate. Scheibe assumes a core group of one to a part but adds that these may be doubled or further strengthened based on the number of players available and the circumstances of the performance.[42]

The orchestral texture is usually two- or three-voiced, more rarely four-voiced.[43] The occasional four-voiced texture is a holdover from the full-voiced textures of Sebastian Bach, but in the *galant* era during which most of the north German concertos were written, active inner voices were considered a distraction from the primacy of the outer voices. Thus, in most cases,

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[40]Quantz, *Versuch*, 300. Koch, *Versuch*, 3:241, treats concerto third movements in the space of two sentences. They can be ritornello-form movements like the first movement, as in nearly all north German concertos, but they can also take the form of rondo or variation movements, as found in a majority of the concertos written in the last third of the century.

[41]Jane Stevens, "Formal Design in C.P.E. Bach's Harpsichord Concertos," *Studi Musicali* 15 (1986): 263–64.

[42]Scheibe, *Cristischer Musikus*, 631. Hans Engel, *Das Instrumentalkonzert: Eine musikgeschichtliche Darstellung* (Wiesbaden: Breitkopf & Härtel, 1971), 1:197, recommends a normal accompaniment of a solo string quintet for Emanuel Bach's concertos; he also allows for the possibility of two (but no more than two) on a part.

[43]Uldall, *Das Klavierkonzert*, 24.

> an underlying two-part skeleton is fleshed out with a viola line that usually fills in chords rather than merely doubling the bass, and with a second violin line which, while often doubling the first, can also move in parallel with it, or even (in special circumstances) play counterpoint against it.[44]

There will be more to say about orchestral texture in connection with the solo sections.

Ritornello form

General

The term "ritornello" (little return) has had various meanings throughout history. It originally referred to a form of folk verse, later more specifically to the summation at the end of a poem, in which the moral of the verse was reiterated. In the latter case it was often treated as a separate musical section in fourteenth-century madrigals. Later the term came to designate the instrumental passages coming before, between, and after sections of sung text in arias. Because of their similar function, sections in concertos for full ensemble (tuttis) that separate the solo sections also became known as ritornellos. In fully developed arias and concertos, each occurrence of the tutti usually repeats material from the opening section, thus the little return.[45] Purists might argue that only those sections that actually repeat previous material should be called ritornellos—therefore whatever happens at the beginning of a piece must be called an introduction or an exposition or the like—but it has become standard practice to refer to the beginning of an aria or a concerto as the opening ritornello. In fact, the opening ritornello is often somewhat confusingly designated as *the* ritornello, since the subsequent tuttis usually repeat only parts of it. The term will be used here to refer to the structural pillars, wherever they occur, that establish the framework within which the soloist provides contrast. Luckily, as practiced by north German concerto composers, these pillars are usually clearly defined and articulated, so that they can be

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[44]Stevens, "Formal Design," 263–64.
[45]*The New Grove Dictionary of Music and Musicians*, s.v. "ritornello."

easily identified and sequentially labelled: R1 for the first ritornello, R2 for the second, and so on.

In its simplest guise, then, ritornello form is the alternation of ritornello and solo sections: R1, S1, R2, S2, and so on. Contrast is provided by the opposing sonorities while unity is maintained by the recurrence of familiar material in the ritornellos. This simple plan, however, is capable of great variation and subtlety through motivic interaction between the soloist and the orchestra as well as through the diverse tonal arguments it allows.

One of the distinguishing characteristics of the north German concerto is the use of ritornello form in all three movements. Uldall goes so far as to state that the mere presence of ritornello form in a slow movement suffices to indicate a concerto of north German provenance, and Stevens confirms Emanuel's consistency in this respect: "All three movements are always in ritornello form."[46] The majority of north German concerto movements comprise four ritornellos separated by three solo sections. While five-ritornello movements are not uncommon in north German concertos, movements with just three ritornellos are relatively few in number. These are usually slow movements in which the second solo modulates back to the tonic and the third ritornello assumes the closing function associated with R4 in four-ritornello plans.[47] Movements with more than five structural ritornellos are extremely rare in the north German concerto.[48]

The violin concertos of Giuseppe Tartini served as the direct models for concerto composers in and around Berlin at mid century. Especially in the concertos of his

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[46]Uldall, *Das Klavierkonzert*, 17, and Stevens, "Keyboard Concertos," 20.

[47]Crickmore, "Concerto," 232, points out an exception to this generalization in one of Emanuel's Hamburg concertos. In the slow movement of H. 472, all three ritornellos are in the tonic, which actually transforms the ritornello form into a rondo.

[48]Uldall, *Das Klavierkonzert*, 67, discusses an E-flat concerto that is falsely attributed to Emanuel Bach, in which the outer movements each have six ritornellos. Because of its weak motivic development (*schwache Motivik*) and its general immaturity, Uldall leans toward assigning the work to a "kleinere Berliner Meister" of the 1740s.

middle period, Tartini adopted a consistent formal scheme of four ritornellos and three solo sections.[49] His ritornellos, despite sometimes energetic harmonic activity and coloring, are usually tonally stable, although R3 sometimes modulates.[50] Structural modulations are generally accomplished during the solo sections, and the ritornello immediately following a modulatory solo usually serves to confirm the new tonality.

A typical example of Tartini's middle period, the G-major concerto, Dounias 78, is a clear demonstration of four-ritornello structure.[51] The ritornellos are articulated through rests in all parts before most of the solo entries, which are always accompanied by the orchestral violins alone—a solo texture that Tartini used to the virtual exclusion of all others in his middle and late period concertos. R1 (mm. 1–13) begins and ends in the tonic, with a few secondary dominants and mode changes. The opening motive is repeated by the solo violin at the start of S1—a departure from Vivaldi's usual practice—where it is already subjected to variation. Then comes virtuosic figurative material that only occasionally relates to anything heard previously. During these figurative passages the modulation to the dominant is accomplished. Tartini nearly always modulates first to the dominant in his major-key concerto movements—in contrast to Vivaldi, for whom the dominant was just one choice among several. S1 also comes to a full stop to articulate the return of the ritornello (R2), which repeats the opening motive in the dominant. A surprising jump in the direction of the mediant is quickly brought back to the dominant, and R2 cadences in the same key in which it began. S2 begins, again, with the opening motive, only this time even more varied, and it breaks even sooner than S1 did into virtuosic passagework. Almost as consistent as the modulation to the dominant

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[49]Dounias, *Tartini*, divides Tartini's career into first (pre-1735), second (1735–50), and third (1750–70) periods.

[50]R3 is the most tonally flexible of the ritornellos in Tartini's concertos and in the Classical concerto in general. Sometimes it is stable like the other ritornellos, but it often modulates, generally from the submediant to the tonic. See Shelley Davis, "H. C. Koch, The Classical Concerto, and the Sonata-Form Retransition," *Journal of Musicology* 2 (1983): 45–61.

[51]Giuseppe Tartini, *Concerto in sol maggiore,* ed. Claudio Scimone, *Le opere di Giuseppe Tartini*, vol. 5 (Milan: Edizione Carisch, 1972).

in Tartini's first solos is a modulation to the submediant in S2. This is accomplished by the end of the solo, where the final cadence is elided with the beginning of R3, the only instance in the entire movement where a major structural division is not articulated by a full stop. R3 modulates back to the dominant—unusual because when R3 modulates it almost always brings back the tonic.[52] S3 begins in the dominant and provides the modulation back to the home key. The last ritornello is an exact repetition of the second half of R1.

This quick overview may serve as a starting point for an investigation of the north German keyboard concerto. There are, of course, differences between writing a violin concerto and a keyboard concerto, and what was successful in Padua may not always have been so in Berlin, but Tartini's treatment of overall form and the relationship between orchestra and soloist was taken over and developed by the north German composers.

Ritornello 1

While reducing the number of ritornellos to four (as opposed to five or more in Vivaldi's concertos), Tartini also took measures to increase their structural weight. The opening ritornello in particular he expanded into several more or less distinct sections, each with its own function—a refinement that was influential in Germany. Quantz, for example, spoke of the first ritornello taking on a proportionally appropriate length: it should comprise at least two major sections, the second of which must contain ideas fit to close the whole movement.[53] Differentiating still further, Uldall found four distinct

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[52]Davis, "Koch," 45–48.

[53]"Im Ritornell muß man eine proportionirliche Länge beobachten. Es muß dasselbe wenigstens aus zweenen Haupttheilen bestehen. der zweyte Theil davon muß, weil man ihn am Ende des Satzes wiederholet, und damit schließet, mit den schönsten und prächtigsten Gedanken ausgekleidet werden." Quantz, *Versuch*, 296. In the Tartini example above, the last five measures of R1 were repeated at the end of the movement as R4.

subsections in the opening ritornellos of most north German concertos, from which he abstracted the following model:[54]

A. head motive, approximately eight measures, ending in a half cadence;

B. contrasting section, four to eight measures;

C. chain of sequences, approximately eight measures;

D. cadential phrase(s); frequent references to the head motive,

approximately eight measures.

Naturally, not all of the concertos that Uldall examined follow this model exactly, and he points out exceptions where he finds them; but this scheme seems to have been the starting point for the composers of the Berlin school.

None of the theorists go into much detail about the exact nature of the head motive. Uldall states that the rigid triadic motives of Vivaldi have given way to the sensual sweet melodies of Tartini, but one does not have to look far to find examples of triadic head motives in the north German concerto (see the discussion of the E-flat Riga concerto, below). Freeman states, in fact, that Italian concerto composers were quicker than their German counterparts in adapting in their opening ritornellos thematic types and rhythmic patterns associated with the aria, while the Germans preferred more instrumental motives "characterized by large ranges, broad arpeggiations, and idiomatic string effects."[55] Quantz mentions that the first movement of a serious concerto should have a "brilliant" (*prächtig*) ritornello—one assumes that the head motive would therefore need to be appropriately "brilliant" as well—but that "if the opening idea of the ritornello is not sufficiently singing or is not appropriate for the solo, a new idea quite unlike it must be introduced" at the beginning of S1.[56] Thus the opening idea of

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[54]Uldall, *Das Klavierkonzert*, 19.

[55]Freeman, "Earliest," 139–42.

[56]"Sofern der Anfangsgedanke vom Ritornell nicht singend, noch zum Solo bequem genug ist: so muß man einen neuen Gedanken, welcher jenem ganz entgegen ist, einführen. . ." Quantz, *Versuch*, 296; quoted in Jane Stevens, "Theme Harmony, and Texture in Classic-Romantic Descriptions of Concerto First-

the ritornello may be less "singing" than that which is required for the soloist's first entrance. Koch's statement about the flexible character of a concerto indicates that he considered various approaches to be acceptable. In practice, most head motives in north German concertos are striking (as befits an opening gesture that will be repeated frequently) with a tendency toward greater periodicity than elsewhere in the movement.

The contrasting section of north German opening ritornellos (Uldall's "B" section) is also appropriated from a Tartini practice, which encompasses one or more of the following traits: the dynamic level drops to *piano*, the violins introduce a new idea in parallel thirds or sixths, and the basso continuo drops out leaving the viola to provide the bass line—which usually consists of a tonic or dominant pedal point. Uldall shows several examples, and we shall encounter several more in concertos by Emanuel and Christian.[57] The chain of sequences that comes next in Uldall's model ("C") provides a sense of tonal movement while not straying too far from the home key. The material used here can be derived from the head motive or from the contrasting section, or it can be new material, usually of stereotypical transitional character (scales, arpeggios).

The final part of a typical opening ritornello is the cadential section, the length of which varies according to the length of the ritornello as a whole and the degree of harmonic destabilization therein. Especially in Emanuel's concertos, this section takes on greater significance than in the earlier models or even in the works of his Berlin colleagues:

Movement Form," *Journal of the American Musicological Society* 27 (1974): 28. The translation is from Quantz, *On Playing*, 312.

[57]Ibid., 19–20.

> The successive cadential repetitions which were typical of Italian concertos of the 1720's and 1730's, and often before, have here been expanded and heightened by more organic harmonic procedures, still apparently with the goal of increasing the effect of the final cadence and the first entrance of the solo. . . . The expansion of the cadential section is accomplished not through a simple series of phrases each ending in a full cadence (as is common, for instance, in the concertos of Graun and Schaffrath), nor through a retardation of the harmonic rhythm of the cadential progression (a procedure of later Classic style), but by embellishments and digressions that delay and intensify the tonic resolution.[58]

Such techniques are in keeping with Quantz's advice to save some of the best material in R1 for its second half, since that is what eventually will close the movement as a whole. Another common feature of the cadential section is a reference to the head motive. This often takes the form of a unison restatement at the very end of the ritornello, which serves the dual purpose of uniting the whole—both horizontally (the opening motive returns at the end), and vertically (the multi-voiced texture of the orchestra becomes a single line)—and of providing a sonority against which the entering solo voice will stand out distinctly. The practice of coming to a full stop at the end of the ritornello (observed in Tartini's G-major concerto) serves the same purpose. Koch explicitly recommends this procedure for the end of R1, but indicates that the other structural boundaries are usually elided.[59] Since, as Quantz noted, the end of R1 is normally repeated at the end of the movement, a strong unison cadence here also serves as an effective closing to the movement.

One of the most common deviations from Uldall's "ABCD" model is a ritornello with only three sections usually consisting of the head motive, the chain of sequences, and the cadential section (i.e., ACD). The two inner parts of the four-part model may also be interchanged, so that the contrasting section follows the sequencing (i.e., ACBD). Indeed, some ritornellos do not divide at all easily into subsections, while others (particularly those of Emanuel) show a

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[58]Stevens, "Formal Design," 268, 267.

[59]Koch, *Versuch*, 3:336. As was the case with the Tartini example above, in the north-German concerto there are often full stops at other structural boundaries besides R1/S1.

> variety which seldom challenges the underlying sectional structure, but produces complications within the context of that structure not clearly addressed by Uldall. While a contrasting passage, for instance, is a typical part of a Bach ritornello, it only occasionally appears as the kind of extended, clearly articulated section described by Uldall.[60]

Although Koch states that he developed his ideas about the concerto based on the examples of Emanuel Bach, his description of the opening ritornello indicates that he was aware of more recent developments. He lays out three possible constructions.[61] The first comprises a single period (*Periode*) that remains in the tonic throughout. The second and third options both consist of two periods with new material in the dominant, with the difference being that Koch's type two actually modulates to the dominant before returning to the tonic, while his type three has no cadence in the dominant.

It is unclear, however, how Uldall's four sections correlate with Koch's periods. Stevens, for example, places all of Emanuel Bach's concertos that were available to her in modern editions, and most of Mozart's and Christian Bach's concertos as well, into Koch's first category.[62] Thus Koch's single period, by implication, should be capable of subdivision into as many as four sections (ABCD). But Koch's second and third types, each with two periods, could also be interpreted as ABD variations of Uldall's model, so that two periods would somehow be divided into just three sections. Since Koch's periods are largely determined by harmonic function, and Uldall's sections by motivic function, it is not surprising that the two do not seem always to correlate. Koch even recommends that the first solo section be composed before the first ritornello, with the ritornello then consisting of the best material from the "Anlage" (the solo), to which may be added appropriate secondary ideas (*Gedanken*). Koch's theory appears to rule out the possibility of fully independent ritornellos and solos; or, if it does allow for it, then the ritornello must only consist of "secondary" ideas, surely a misnomer for an idea (the

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[60]Stevens, "Formal Design," 267 n. 15.

[61]Koch, *Versuch*, 3:334.

[62]Jane Stevens, "An 18th-Century Description of Concerto First-Movement Form," *Journal of the American Musicological Society* 24 (1971), 89–90 n. 16.

head motive) that often both opens and closes a movement. Yet both Emanuel and Nichelmann often kept solo material completely separate from ritornello material.[63]

The difficulties in squaring Koch's description with mid-eighteenth-century practice in Berlin can be somewhat explained as follows. Koch originally invokes Emanuel's concertos as models first and foremost when defending the *dramatic expressive potential* of the concerto against a critique of the genre in Sulzer. He also invokes Emanuel as a model of how to handle the orchestral accompaniment in a manner consistent with that dramatic ideal. Koch's detailed account of the first ritornello, however, does not really square with Emanuel's usual practice; rather it seems modelled on Italians like Platti and Italianized Germans like Christian Bach and Mozart. While Koch's comparison of the overall plan with symphonic structure sheds much light on the concertos of Christian Bach and Mozart, there is little to suggest that north German composers viewed the first solo as the "Anlage" from which the rest of the movement was derived. Finally, in his *Lexikon* (1802) Koch changes most terms of his description anyway: the model is now Mozart (instead of Emanuel), the structural plan now involves three ritornellos and two solos (instead of the four-ritornello/three solo plan), and the comparison is now with the keyboard sonata (instead of the symphony). In sum, Koch was probably grateful to Emanuel for showing what the keyboard concerto could be in expressive terms; but his description of concerto structure seems largely irrelevant to Emanuel and his Berlin colleagues. The following statement by Stevens seems to get closer to the heart of the matter: "The opening ritornello of a concerto movement sets forth the premise of the piece, the material to which everything that follows will refer."[64]

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[63]Uldall, *Das Klavierkonzert*, 14–15.

[64]Stevens, "Formal Design," 266. Note that this is directly the opposite of how Koch envisions the opening ritornello.

Solo 1

After the final cadence of the opening ritornello and, usually, a beat or two of rest in all parts, the soloist enters. There were no hard and fast rules about what the soloist should play at its first entrance. Already in 1739, Johann Adolph Scheibe described the flexibility of this important juncture: "It [S1] can however begin either with the repeated main theme that the ritornello had played before, or with a completely new theme."[65] Such flexibility can indeed be found in Vivaldi, who "sometimes opens his first solo episode with the same motive that opened the ritornello."[66] Quantz confirms this flexibility in his admonition that the solo begin with new material if the opening ritornello is not "singing" enough or otherwise not appropriate for the solo.
For Koch, of course, the question would be reversed; the solo *always* begins with "new" material in the sense that the composer conceived of it initially for the soloist.

When S1 begins with material other than the head motive, it often takes the form of a quiet cantilena with two- or three-voiced chords.[67] On rare occasions it will use other R1 material besides the head motive.[68] After the soloist's first phrase, whether it be the head motive or new material, the orchestra usually re-enters with a short motive from R1. The active participation of the orchestra during the solo sections represents the most radical departure made by some north German composers from Tartini's models. Emanuel Bach and Christoph Nichelmann, both pupils of Sebastian Bach, made the most significant use of this technique, while others less directly influenced by Sebastian Bach, such as the Graun brothers, adhered more closely to Tartini's practice, in which the solo is rarely interrupted.

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[65]Scheibe, *Critischer Musikus*, 631–32; quoted and translated in Jane Stevens, "Theme, Harmony, and Texture in Classic-Romantic Descriptions of Concerto First-Movement Form," *Journal of the American Musicological Society* 27 (1974): 26.

[66]White, *Violin Concerto,* 6.

[67]Uldall, *Das Klavierkonzert*, 22.

[68]For example, in the opening movement of Emanuel's G-minor concerto, H. 409/W. 6, the first solo begins with the second theme from the ritornello. Stevens, "Formal Design," 269 n. 17.

Especially in Tartini's middle and late period works the orchestral texture during the solo sections consists of non-thematic accompanimental support of only two violins. Because a keyboard instrument, unlike a violin, can easily provide its own accompaniment, it is theoretically possible to dispense with the orchestra entirely during the solo sections of keyboard concertos, and this is, indeed, the case with some concertos by the Grauns and some of the early Italian keyboard-concerto composers.[69] But the active participation of the orchestra in Sebastian Bach's concertos left its mark on those who experienced it firsthand, and its adoption by his pupils was a significant development in making the north German keyboard concerto a new genre.[70]

There are essentially three functions the orchestra can assume during the solo sections (apart from doing nothing). It can interrupt the soloist, it can accompany the soloist, and it can engage in a dialog with the soloist.[71] In the first instance the orchestra asserts its presence with a recognizable motive from R1, usually the head motive, during which the keyboard reverts briefly to its continuo function before resuming its discourse. Such interruptions are commonly referred to as "tutti interjections." The second instance—accompaniment—can occur almost anywhere in a solo section, and usually takes the form of long sustained chords in the orchestra against which the soloist projects its virtuosic passagework, although sequential treatment of a ritornello motive is also often used as a background for passagework. Quantz specifically recommends such a practice.[72] The third instance—Koch's so-called dialog between soloist and orchestra—results from rapid alternations of motivic elements between them. Such dialog, according to Koch, usually takes place in the last solo, but can also occur

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[69]Uldall, *Das Klavierkonzert*, 21; Stevens, "Formal Design," 262; and Freeman, "Earliest," 138.

[70]Even Scheibe, who had his problems with some of the complexities of Sebastian Bach's music, praises well-worked contrapuntal middle voices in concertos, since otherwise the effect would be too empty (*allzuleer*) and dull (*matt*). Scheibe, *Critischer Musiker*, 632.

[71]Crickmore, "Concertos," 231; Scheibe, *Critischer Musikus*, 636.

[72]Quantz, *Versuch*, 296. Stevens, "Formal Design," 261, refers to this type as "linear orchestral accompaniment."

elsewhere. Specific examples of all three functions will be pointed out in the detailed analyses of the Riga concertos below.

Regardless of the degree of orchestral participation, the first solo always has two important functions. It affords the soloist opportunity to demonstrate command of the instrument, and it provides the modulation to the new tonality. In major-key movements the new tonality is almost always the dominant, in minor-key movements the relative major, but the minor dominant or other closely related keys are also possibilities. The modulation is normally accomplished by about the mid-point of the solo, with this harmonic goal punctuated by another tutti interjection. The soloist then continues with either more virtuoso passagework, or, occasionally, with a new motive, which also then quickly reverts to passagework. The new material in the new key is not yet, however, a full-fledged second theme as in the later concertos of Christian Bach and Mozart. It is neither periodic nor further developed, rather more a simple acknowledgement that an important harmonic goal has been reached.

The soloist is usually differentiated from the orchestra by more than just sonority; the character of the soloist's material also differs from the orchestra's. North German composers maintained such a differentiation longer than Italian and south German composers, whose orchestral writing more often reflected thematic types and rhythmic patterns associated with Italian opera. Solo/orchestra differentiation in north German concertos is apparent, for example, in movements where the soloist begins with new material, usually, as mentioned, more cantabile than what has gone before. Koch describes the melody of the soloist as being more like that of a sonata, as opposed to the orchestral style of the ritornellos.[73] Stevens sums up the importance of this distinction:

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[73]Koch, *Versuch*, 3:336. See also Michael Broyles, "The Two Instrumental Styles of Classicism," *Journal of the American Musicological Society* 36 (1983): 210–42.

> The vocal style of the harpsichord's entrance [in Emanuel's concerto, H. 440.i] enhances our perception of the solo as an individual voice confronting the orchestral tutti. The immediate re-entrance of the orchestra requires that some kind of relationship exist between this individual and the much less personal group with which it shares this piece.[74]

Differentiation between solo and orchestra may also be achieved by other means: through the soloist's use of syncopated or triplet figures when such figures are lacking in the ritornello, and, of course, through the idiomatic passagework that makes up a large proportion of the solo sections.

Near the end of the solo section there is usually a passage of some length in which the orchestra does not play at all. This not only gives the soloist one more opportunity to dazzle, but also ensures the greatest contrast to the orchestral sonority that follows in the next ritornello. In most of Emanuel's concertos, the ritornello enters on the resolution of the soloist's final cadence (elided) so that its entrance "takes on the effect of an emphatic goal."[75]

The concerto, according to Koch, consists of three principal periods (i.e., the solo sections) that are surrounded by four secondary periods.[76] He likens the three solo sections of a concerto to the three principal periods of a symphony: what we would call exposition, development, and recapitulation.[77] S1 does, indeed, function similarly to a symphonic exposition by presenting material in the tonic key, by modulating to the secondary key area, and sometimes by presenting new material in the new key. Koch's view, however, is quite different from the later theoretical construct of the double exposition in concertos.[78] For Koch, the opening ritornello is of secondary importance,

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[74]Stevens, "Formal Design," 271.

[75]Ibid., 265. Stevens points out that Emanuel was relatively consistent in coming to a full stop at the end of his ritornellos and in eliding the ends of solos with the beginning of the next ritornello. Other Berlin composers made use of "a more or less random succession of elided and non-elided transitions." Ibid., 264.

[76]Koch, *Versuch*, 3:333.

[77]Ibid., 3:336.

[78]Edwin Simon, "The Double Exposition in Classic Concerto Form," *Journal of the American Musicological Society* 10 (1957): 111–18.

acting more as an introduction to the first solo, and thus not an active participant in the thematic and harmonic arguments.

Ritornello 2

The structural function of the second ritornello is very simple: it affirms the new tonality established in S1 using material from R1.

> After the end of the opening tutti, the orchestra's function thus declines (even more than in the late Baroque concerto) to one of unifying and articulating the movement by recalling earlier events, so that the listener's attention is focussed primarily on the solo.[79]

Rarely does R2 repeat all of R1, so it is invariably shorter. It either leaves out one or more of the R1 sections or it shortens the sections themselves. Occasionally this requires that transitional material between sections be slightly rewritten, but at no time does R2 present significant new material, nor is it ever modulatory. Koch observes that the second ritornello enters with the head motive, but this is by no means the only possibility; Stevens states that both Emanuel and Christian use cadential material from R1 more often than the head motive.[80]

Solo 2

The second solo can, like the first, begin with new or old material, and it consistently begins in the same key as R2. Koch recommends beginning S2 with a motive not contained in S1, rather with a conspicuous (*hervorstechend*) and suitable (*passend*) secondary idea.[81] In north German concertos, however, S2 often begins with the same motive that began S1. S2 then continues, according to Koch, in the same fashion as the second principal period (development) of a symphony, modulating

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[79]Stevens, "Formal Design," 268.
[80]Koch, *Versuch*, 3:338; and Stevens, "An 18th-Century Description," 90 n. 20.
[81]Koch, *Versuch*, 3:338.

through various keys and ending in vi (or ii or iii).[82] For Uldall, "development" in S2 meant more than just a presentation of various motives in different keys; it also featured what he called "Konzertatdurchführung," in which increased interaction between orchestra and soloist contributed to the sense of competition (*Wettstreiten*).[83] Uldall was certainly influenced here by the nineteenth-century view of Beethovenian development, particularly when he speaks of "wahre Orgien" between soloist and orchestra in the second solo. In general, however, Uldall overstates the degree of development (as he understood it) that normally occurs in north German concertos, and even admits that the second solo could take on many guises, some of which involved no "development" at all. In fact, apart from occasionally increased solo-tutti interaction, there is very little that distinguishes S2 from S1 (apart from their different harmonic goals). S2 also consists for the most part of virtuoso passagework, usually different from that in S1, but equally "non-thematic."

Ritornello 3 and Solo 3 as "Recapitulation"

The third ritornello and the third solo will be treated together here, since what happens after S2 in the north German concerto is highly variable. Both R3 and S3 by themselves can modulate back the tonic, or they can collaborate to effect or to delay the tonal return.[84] As sonata ideals began to emerge in increasingly diverse manifestations, mid-eighteenth-century composers began to experiment with recapitulatory elements in their formal designs, and such experiments in concertos led to a variety of approaches to handling the second half of the formal plan. Still, R3 does exhibit some consistencies

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[82]Ibid., 3:307–9, 338.

[83]Uldall, "Beiträge," 148, and *Das Klavierkonzert*, 14. See also Stevens, "Formal Design," 274. Scheibe, *Critischer Musikus*, 635, also speaks of competition, not between solo and orchestra rather between two or more soloists in a concerto for multiple soloists.

[84]Shelley Davis, "Bach and the Recapitulatory Tutti in Germany," in *C. P. E. Bach Studies*, ed. Stephen L. Clark (Oxford: Clarendon Press, 1988), 65–82.

among a great many concertos of the period: it is usually the shortest ritornello[85] and the least likely to repeat the head motive, especially if the head motive had been prominent in either of the preceding solos. Further generalization is difficult, however, because of the several different possibilities for bringing back the home key, each of which affects the disposition of R3.

The standard approach in ritornello form, that is, the approach most directly inherited from the Baroque concerto, was to treat R3 essentially the same as R2. It would begin and end in the same key as the close of the preceding solo, affirming that key with material first heard in R1. Already in Vivaldi's later concertos, though, there was some movement away from this procedure, with R3 sometimes modulating, either to the tonic or to its dominant, or even beginning directly in the tonic with the head motive.[86] The north German composers moved even further away from a pure ritornello function and towards one of recapitulation at this point in their movements. Given the rather specific implications of the term recapitulation in association with sonata form, however, it would be wise to heed Stevens's words of caution:

> The word 'recapitulation' has been used here advisedly. . . . Whereas the first part of a sonata embodies a logical, coherent continuity, the two initial sections of a concerto movement, T1 [*sic*, our R1] and S1, are often a patchwork of relatively discrete sections arranged in plausible order. A recapitulation which tries somehow to refer to both these relatively discontinuous sections is unlikely to achieve a high level of coherence. . . . Bach's concerto-form recapitulation is not a device taken over from the sonata, but seems conceived in terms of the concerto itself, as just one element in the evolution of a quintessentially Baroque form as it responded to mid-eighteenth-century aims.[87]

A safer designation might be simultaneous return. Since such a designation, however, only addresses the beginning of the process—a process that in the concertos under consideration does indeed sometimes come very close to a modern understanding of recapitulation—the latter term will be used here.

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[85]Uldall, *Das Klavierkonzert*, 17.
[86]Freeman, "Earliest Concertos," 127
[87]Stevens, "Formal Design," 278–79.

In Koch's comparison of the three solo sections of a concerto with the three principal periods of a symphony, R3 assumes the function of the retransition from the "development" of S2 to the "recapitulation" of S3.[88] It modulates, usually by sequencing, from the "point of furthest harmonic remove" back to the tonic, which is finally reached with the reentry of the soloist in S3.[89] The ritornello thus sets up the return of the tonic but allows the soloist to complete the process, so that there is a double return of harmony and texture at the structural boundary between R3 and S3. One may even speak of a triple return, when the third solo begins by repeating the opening of S1, a procedure that Davis calls a "solo restatement."[90]

In order to make the start of the recapitulation even more dramatic, composers experimented with allowing the orchestra to present this simultaneous return, and two further possibilities emerged, neither corresponding to Koch's description. The first possibility was simply to shift the restatement to the beginning of R3 (what Davis calls the "tutti restatement: four-ritornello plan").[91] Under this plan, the retransition was shifted to the end of the second solo or was eliminated altogether, in which case S2 cadenced in its final key (usually vi) and R3 entered directly in the tonic.[92]

A more complex variety of the tutti restatement involves a five-ritornello, four-solo plan.[93] Here, the ritornello form proceeds normally through the beginning of the third solo, that is, S2 modulates to the point of furthest harmonic remove, R3 affirms the new tonality, and S3 begins in the same key. Instead of modulating directly back to the tonic, however, S3 continues in a developmental vein, culminating in a retransition that sets up the beginning of the recapitulation with the entrance in the tonic of R4. Delaying

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[88]Koch, *Versuch*, 3:338–39.

[89]The phrase "point of furthest harmonic remove" was coined by Leonard Ratner in his *Classic Music: Expression, Form, and Style* (New York: Schirmer Books, 1980), 225–27. In his two articles, "Recapitulatory Tutti," 70, and "H. C. Koch," 46, Shelley Davis applies it to Emanuel Bach's keyboard concertos.

[90]Davis, "Recapitulatory Tutti," 69–71.

[91]Ibid., 71–75.

[92]See, for example, the third movement of Emanuel's A-major concerto, H. 411.

[93]Davis, "Recapitulatory Tutti," 67–69.

the start of the recapitulation thus heightens the tension leading up to it, which the full sonority of the tutti restatement effectively relieves. The five-ritornello plan also provides greater symmetry than any of the others: three sections of approximately the same length (R1-S1-R2), (S2-R3-S3), and (R4-S4-R5) each assume a distinctive function. The opening ritornello is often repeated in its entirety in this scheme by simply splitting it in half and assigning the first half to R4 and the second half to R5.[94]

A recapitulation is, of course, more than just a simultaneous return of the tonic key and primary thematic material. It is also the resolution of the long-term tension originating from material (much of it new material) being presented in keys other than the tonic. As we have seen, such new material is often found in the second half of S1, and this material is usually repeated in the tonic in the second half of S3. Quantz also speaks of repeating material from the first solo in the last, but not directly in terms of a recapitulation. He suggests that the "most pleasing" ideas from the beginning be brought back again at the end in order to "solidify" the whole.[95] Uldall notes occasional motivic relationships between S2 and S3 as well, in which the virtuosic passagework from the second solo is brought back in a recognizable form in the last solo, a technique that he specifically associates with Emanuel Bach.[96]

At the end of the last solo one typically finds the fermata for the cadenza. Quantz devotes an entire chapter to performing cadenzas, but since they were rarely composed—rather left to the discretion of the performer—their proper performance has little bearing on questions of authorship. More important for purposes of the present topic is the location where the composers provided opportunities for cadenzas. Quantz indicates that cadenzas occur "at the close of a piece on the penultimate note of the bass,

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[94]Stevens, "Theme, Harmony, and Texture," 28 n. 11.
[95]Quantz, *Versuch*, 297.
[96]Uldall, *Das Klavierkonzert*, 18.

that is, the fifth of the key of the piece."[97] By this he means at the end of the last solo, before the orchestra enters with the last ritornello. Koch, on the other hand, indicates that the orchestra first plays a few measures following the end of the last solo as an "introduction" to the cadenza.[98] Occasionally the cadenza occurs at the end of the second solo, and it is not uncommon for a composer to provide no opportunity for a cadenza at all.

Ritornello 4

The last ritornello nearly always repeats verbatim a long passage from the end of the first ritornello, naturally in the tonic. Quantz speaks of the "second part" of R1 being repeated to close the movement "as briefly as possible," and Koch describes the last ritornello as consisting of "the last melodic elements" (*melodische Theilen*) from the first ritornello.[99] In practice R4 can be as short as a few phrases or as long as a complete repetition of R1, but it is usually kept relatively short. In rare cases the repetition is full but not exact.

The following chart summarizes the formal characteristics of ritornello form discussed so far.[100]

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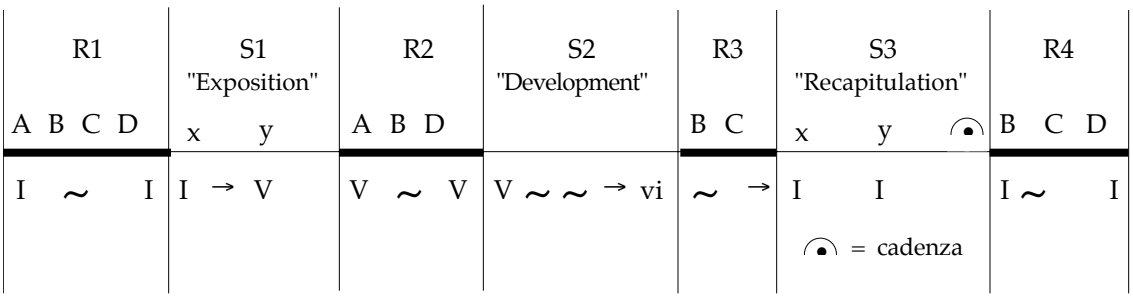
[97]". . . beym Schlusse des Stücks, über der vorletzten Note der Grundtstimme, nämlich über der Quinte der Tonart woraus das Stück geht." Quantz, *Versuch*, 151. Translated in Quantz, *On Playing*, 179. See also Scheibe, *Critischer Musikus*, 636.

[98]Koch, *Versuch*, 3:339.

[99]Quantz, *Versuch*, 297, Koch, *Versuch*, 3:339.

[100]Cf. Stevens, "An 18th-Century Description," 92.



The letters for the various sections of the ritornellos are taken from Uldall, and here represent only one possible permutation (and no particular one). The lowercase letters in the solo sections represent recognizable material that stands out against sections of relatively undifferentiated virtuosic passagework. Any solo can begin with the head motive, in which case "x" and "A" would be equivalent. Harmonic activity is indicated below the horizontal axis. Arrows represent modulations and tildes (~) harmonic motion lacking clear modulatory cadences (e.g., circle of fifths activity or sequences). The terms "exposition," "development," and "recapitulation" refer to Koch's comparison of the three solo sections to the three principal periods of the symphony. Koch, of course, did not use the modern terms, but their use here allows the concepts to be conveyed as compactly as possible. The cadenza is not always present and not always placed at the end of S3, but this is its most common position. The space between the vertical lines indicates the approximate relative lengths of the sections. The charts provided for the actual movements below will also give the starting measure numbers for each section to provide absolute lengths as well.

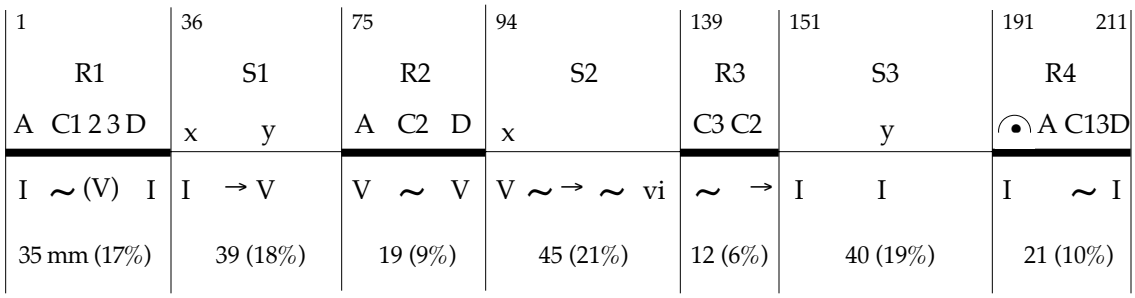
Riga Concertos

For the following analyses of the three disputed works, the reader is referred to the scores in Appendix 1. The first analysis, of the first movement from the E-flat concerto, is rather detailed. Those for the remaining five movements of the Riga

concertos are more summary and restrict themselves more to pointing out unusual features not encountered in the first analysis.

First Movements

Riga 1



Riga Concerto I, first movement
Allegro di molto, E-flat major, *alla breve*, ritornellos = 42%, solos = 58%

The first movement of the E-flat Riga concerto shows no significant deviations from the typical Berlin keyboard concerto outlined above, including the standard scoring of solo keyboard with four-part string accompaniment. The first ritornello is built up of three sections, ACD.[101] The A-section here consists of the first seven measures, comprising the head motive and an elaboration of a cadential passage. There is no clear division into sub-phrases, although measures 6–7 are a varied repetition of measures 4–5. The internal cadence at measure five, however, is weakened by the immediate continuation of the melodic activity and the change of harmony in the middle of the measure. Noteworthy is the variety of rhythms introduced in these seven measures. With but one exception (m. 4), each measure displays a unique rhythmic identity. Such a varied rhythmic palette in so short a space is indicative of *galant*

[101]I will use the letters established by Uldall for the different sections of the ritornello, so even though there are only three sections in the current example, they are labelled A, C, and D. B is the designation for a contrasting section, which is not represented in the present instance.

tendencies and provides the composer with a rich source of motives with which to help unify the movement. Of course, an overabundance of rhythmic variety can lead to precisely the opposite effect, namely incoherence, but that danger is here avoided. In addition to the varied repetition already mentioned in the last four measures, the melodic span of measure two duplicates that of the first measure (and is repeated in the bass and viola in measure seven), and the lack of melodic activity on the downbeat of measure two (a rest) is imitated in measure four (downbeat tied from previous measure). The opening drop of an octave prepares the listener for further wide melodic leaps, such as the tenth and the sixth in measure three, the ascending octave in measure four, and the thirteenth in measure six.[102]

The C-section (Uldall's chain of sequences), beginning in measure eight, comprises three sequential passages, which can be labelled C1, C2, and C3. The sequencing serves to loosen the harmonic stability of the A section while avoiding outright modulation, which is usually reserved for the soloist. While the key of the dominant is certainly approached in this section (see mm. 12–13) and the next (see m. 20), there are no strong cadences. The melodic material of C1 (m. 8) is clearly derived from that of the opening (m. 2), complete with the downbeat rest and arpeggio figure alternating with the dotted descending scale passage from measure six. The two-measure group is played twice (mm. 8–9 and 10–11), followed by two one-measure units of just the dotted scale passage. The telescoping effect thereby created contributes to the overall effect of motion, in contrast to the relatively stable A section. A new, six-measure sequence, C2, begins in measure fourteen, now with the added device of *Stimmtausch* between the upper and lower strings. The arpeggio figure (from m. 2) now alternates

[102]Such wide intervals contribute to a fiery (*feurig*) and brilliant (*prächtig*) ritornello, which Quantz indicates is appropriate for serious concertos.

with a new rhythmic idea—tremolo sixteenths—in one-measure units.[103] A short bridge (mm. 20–21) leads to the third sequential passage, C3, (mm. 22–26/2), which also alternates wide leaps and stepwise motion. An imperfect cadence at 26/1 is as close as the first ritornello comes to establishing the key of B-flat, but the A-flat in the bass even before the cadence has run its course pulls the harmony quickly back toward the tonic.

The D-section, beginning at 26/3, then provides the drive to the tonic cadence by means of an increase in the dynamic level, an increase in rhythmic activity (return of the tremolo sixteenths), a repeated harmonic progression associated with a rising bass line, and finally, the tonic six-four to dominant to tonic progression with cadential trill. The trill resolves abnormally, an octave higher than expected, and this surprise serves as a springboard to the final utterance of the first ritornello: a unison statement of the full head motive (its first complete restatement since mm. 1–2) followed by a trill (borrowed from mm. 26–27), emphatic V–I hammer-strokes, and a half measure of rest in all voices. These last four measures both consummate the ritornello and set the stage for the entrance of the solo keyboard. The former is achieved by re-establishing the tonic, by combining the last new melodic material (the trill from mm. 26–27) with the very first motive, and by providing a clear articulation to signal that a major boundary has been reached. The entrance of the soloist is prepared by abruptly halting the driving eighth-note pulse that has been propelling the piece forward in every measure (except m. 21), and by thinning out the orchestral texture. The brakes are applied further with the half-measure rest before the solo entrance. With the momentum of the ritornello having been cancelled and the texture having been reduced to a single line, the solo can now begin on its own terms with a fresh timbre, a fresh texture, and at a new pace. The arguments, both melodic and tonal, of the ritornello have been presented, the orchestra has

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[103]True *Stimmtausch*, of course, involves exact replication of parts with no octave displacement, but to call what is happening here invertible counterpoint, which technically it is, is to overstate the contrapuntal interest of repeated notes.

demonstrated a variety of dynamics and textures (including tutti unison), and now the half-measure rest heightens the sense of expectancy. What will the soloist tender as a counteroffer?[104]

The first solo statement begins, not surprisingly, with an unaccompanied phrase, five-and-a-half measures cadencing in E-flat. The sound of the unaccompanied harpsichord offers the greatest contrast to the orchestral timbres heard in the ritornello. To heighten the differences further, the phrase proceeds at a quarter-note pulse instead of the frenetic eighth notes of the ritornello, an example of the quiet three-voiced cantilena described by Uldall, and a reflection of Quantz's counsel to begin the solo with new material if the ritornello is not sufficiently cantabile. It introduces syncopations for the first time in the piece (m. 38), and it initiates new thematic material including idiomatic figuration (mm. 39–40). About the only feature that has not changed is the harmony, which remains for the time being firmly in the tonic. At the cadence (m. 41), the orchestra reenters with the head motive played *forte*, complete with its driving eighth notes in viola and bass, which are incorporated into the left hand of the solo part and are carried over into its next phrase.

The second solo phrase also consists of entirely new material, so that the tutti insertion serves not only to help disguise the seam between the first two solo phrases, it also provides a welcome reference to familiar material.[105] Another new rhythmic element, the *stile lombardo*, is introduced as well (m. 42). The move away from the tonic begins immediately thereafter (signalled by B-natural, mm. 43–44) and leads to a cadence in C minor (m. 45)—as if to foreshadow the structurally important modulation

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[104]Charles Rosen, *The Classical Style*, 189–90, cites this passage as an example of maximizing the contrast between orchestral and solo timbres by suspending the continuo function of the soloist a few measures before the end of the ritornello (by means of the *unisono* passage). Rosen's comments are restricted to this aspect of the music, however, and he does not address the issue of the concerto's disputed authorship—he presents it as a work by Christian.

[105]The lower strings continue in mm. 45–46 and 49–51 to accompany using parts of the head motive—a technique recommended by Quantz, *Versuch*, 296.

to the submediant in the second solo. The entire four-measure phrase (mm. 42–45) is sequentially repeated a second lower, so that the drop of a third in the bass (E-flat to C) in the first four measures leads to the dominant (D to B-flat) in the second four. Again, a tutti insertion (this time violas and basses only) bridges the gap between phrases. The scale passage in measure 49 helps to solidify the modulation. The trills in the following two measures are reminiscent of those from the opening ritornello (mm. 26–27) and represent the only obvious borrowing by the soloist of any ritornello material. The trills also help to solidify the new key (similar to their role in the ritornello). Measures 52–56 bring back the syncopation from measure 38 and add a touch of harmonic interest with the fully diminished seventh sonority in measure 55. The phrase ends with a half cadence in the dominant, and the keyboard right hand part drops out simultaneously with the entrance of another tutti insertion of the head motive. This is the mid-point of the first solo, not only physically (22 measures out of 39), but also harmonically (extended V/V).

The second half of the solo begins tentatively in the dominant (first inversion) with the presentation of a new thematic idea. The octave drop in the right hand at the start of this passage clearly refers to the beginning of the head motive—now in quarter notes rather than the original half notes—but the reference is not continued beyond this single gesture. The soloist now plays a full nine measures during which the orchestra is silent. In the course of these nine measures, dotted-quarter-note trills make their fourth appearance in the piece (mm. 62–63), and the fully diminished seventh chord, first heard in measure 55, returns in measure 65. The sixteenth-note scalar passage beginning in measure 67 is similar in form and function to measure 49, complete with the tutti insertion of the head motive on B-flat. This fifth and last tutti insertion differs from the previous ones by virtue of its imitative entrances and the fact that the octave-drop head motive appears in all four parts. The staggering of the head motive extends this tutti insertion over four measures, during which time the soloist continues with the sixteenth-

note scale passages begun at measure 67. The last four measures of the section are given over to the soloist alone, evidently to sharpen the sonorous contrast of the next ritornello. The soloist uses these four measures to reaffirm its independence by once again offering a syncopated passage in contrast with the rhythmic regularity of the orchestra. The syncopated phrase also traces (m. 72) the full two-octave range within which the right hand of the solo part (and the violins) operated during S1. From its high B-flat the phrase returns down to its starting point, again to allow for maximum contrast to the ritornello, which begins *forte* on the high B-flat. The soloist's final cadence elides with the entrance of R2 at measure 75.

The second ritornello begins with the first six measures of R1, transposed into B-flat as expected. The continuation after the cadence in measure 81, however, leads to the sequential passage C2 (from mm. 14–19), which can be repeated here unchanged because it was with this section that the initial move to the dominant in R1 took place. Whereas in R1 the passage was merely on the dominant and served to loosen the original tonic, in R2 it functions within and helps to affirm the new tonic. A bridge passage in the first half of measure 88 leads directly to the chain of trills first heard in measures 26–27, now transposed into B-flat, and continues accordingly up to the cadential trill in measure 93. In R1, this trill resolved with an unexpected leap up an octave. Here, however, it resolves normally, leading directly to the soloist's elided entry (m. 94). The unison statement of the head motive (and general pause) that concluded R1 is not found in R2.[106] This allows for a fresh approach to S2, since otherwise the R2-S2 articulation would be identical (except transposed up a fifth) to the R1-S1 articulation. Also, the many tutti insertions of the head motive in S1 have kept it continually exposed, so its repetition here would seem redundant rather than unifying. Furthermore, since

[106]See Koch's statement that often only the R1-S1 boundary is articulated with a general pause, while the other sectional boundaries are usually elided. Koch, *Versuch*, 3:336.

R2 is much shorter and not as organically developed as R1, the “rounding off” achieved by the final statement of the head motive in R1 would not have the same effect in R2.

The second solo begins with the same material as S1 did (now in B-flat), including the cadential interjection of the head motive. It continues, however, with a repetition of the phrase a whole step higher. Such a “developmental” function is typical of the second solo. The harmonic motion leading to C minor is sealed with a cadence (mm. 105-6). Again, the tutti insertion of the head motive solidifies the cadence and provides a connection to the soloist's next phrase, but instead of the orchestra dropping out once the soloist resumes, it continues with material that neither orchestra nor soloist had played before. Instead of asserting the head motive and thereby competing with the soloist for the foreground of attention, the orchestra now, for the first time, provides a subsidiary, supporting accompaniment. Thematically, the keyboard maintains its unique identity (syncopations), while the violins engage in a loose form of canonic imitation. Violas and basses play pizzicato for the first (and only) time in the movement, and the entire orchestra accompanies *piano*. Harmonically, the passage is a straight circle-of-fifths progression, with the tritone "jump" across the circle occurring in measures 111–12, thereby allowing the progression to end up where it started (C minor). The orchestra’s *forte* jolt (m. 114), propels the soloist into two measures of sixteenth-note scales on the dominant of C minor before cadencing in measure 116. The whole process then starts over: the tutti insertion of the head motive (mm. 116–17) reinforces the cadence, the orchestra reverts to *piano* accompaniment, the soloist steps to the foreground, and the harmony circles through another round of fifths, cadencing in C minor (mm. 122–23). This time, though, the soloist does not play the syncopated passage but resumes the sixteenth-note scalar figuration introduced in measure 114, which continues for a full thirteen measures against the orchestra’s graded crescendo. Such an increase in virtuosity is also a typical feature of the second solo, not only in north German concertos but also in other concerto traditions as well. At the end of the

sixteenth-note runs, the orchestra drops out and the soloist reestablishes its syncopated identity with a passage very similar to the one at the close of S1 (mm. 72–73), and concludes the solo with more virtuosic passagework.

The end of S2 does not overlap with the start of the next ritornello, if only because R3 begins with a variation of measure 2, that is, with a rest on the downbeat. The effect is even more startling in that the soloist's left hand also rests on the downbeat, leaving the single C in the keyboard right hand as the only sounding element on the structurally important downbeat to measure 139. The ritornello continues as a slightly altered version of C3 (cf. mm. 22–25), which had not been heard in R2. The *Stimmtausch* passage (C2) follows, transposed up a fourth from its original appearance, enabling it to move back towards E-flat, rather than towards B-flat as in R1 (mm. 14–19). The two-measure scale passage (cf. mm. 20–21) is also slightly rewritten so that it emphatically leads back to the dominant in E-flat, setting up the return of the original tonic to coincide with the entry of the soloist in S3 (m. 151). The third ritornello is thus an example of a modulating R3, serving as a retransition to the third solo's recapitulation.

To the simultaneous return of solo and tonic to start S3 is added the return of the head motive. Such a triple return indicates the composer's responsiveness to nascent sonata procedures and their possibilities for use in the concerto. The sense of recapitulation is all the more striking because the head motive, until now, has been the exclusive property of the orchestra. The solo part not only takes possession of the head motive but also translates it into idiomatic terms; for the eighth-note arpeggio (cf. m. 2) it substitutes a scalar sixteenth-note undulation. Moreover, the change in thematic roles entails a quickened pace of exchange between soloist and tutti. The orchestra directly continues the phrase (the original mm. 3–5)—the first tutti insertion that does not "wait" for the soloist to cadence. (In S1 and S2 the soloist has five unaccompanied measures before the orchestra enters). The soloist completes the restatement of the seven-measure phrase from R1. At the cadence (m. 157) the orchestra enters with the head motive,

continuing first with sixteenth-note scales then with eighth-note arpeggios—as if unable to decide between the soloist's version and the original—while the soloist takes off on another virtuoso passage of sixteenth-note runs. The passage beginning in measure 159 initiates another sequence, similar in some respects to C1 (mm. 8 ff.) in R1. They are equal in length (2+2+2), and both sequences unfold above a stepwise descending bass (E-flat, D, C, B-flat). The phrase-units are similar in motive and melodic contour. The main difference is that in S3 the soloist is actively participating in a dialog with the orchestra, maintaining and asserting its identity through the continuous virtuosic keyboard figuration. Once the secondary dominant is reached (m. 164), the orchestra drops out and the soloist continues its runs for four measures over repeated cadential patterns. E-flat is thereby reaffirmed as tonic, cancelling any modulatory tendencies of the preceding sequential passage. The head motive in measure 172 signals the return of material from the second half of S1, now, of course, in the tonic, and from here until the end of S3 measures 56–74 are recapitulated with only very minor changes (mostly octave displacements, but twice—in mm. 178 and 179—dotted rhythms have been smoothed out to straight eighth notes).[107]

The last ritornello begins exactly like the first, but after the two-measure head motive continues with an augmented sixth chord leading to a fermata over a tonic six-four chord. Although this would be the usual place for a cadenza in the concertos of Mozart and Beethoven, the north German school tended more often to provide for cadenzas directly at the end of S3 (when at all), before the orchestra reenters with the last ritornello. In this respect, the movement conforms more to Koch's description than to Quantz's. There follows yet another surprise when, after the cadenza, the orchestra continues with R4, but with some changes. The expectation is that the last ritornello will

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[107]The repetition of the second half of S1 in S3 (transposed to the tonic) is consistent with Koch, *Versuch*, 3:339, where S3 is compared to the recapitulation of a symphony complete with tonic recapitulation of material first presented in the dominant.

simply repeat the second half of R1,[108] and in most north German concertos that is indeed the case. Here, however, the ritornello resumes with C1 (mm. 195–97; cf. mm. 8–10) then jumps to C3, but transposed up a fourth (cf. mm. 23–26), before finally continuing with D unchanged to the end (cf. mm. 26–35). In other words, the one passage in R1 that threatened to establish the dominant now sits squarely in the tonic. The final gesture of the movement is once again the unison statement of the head motive that has not been heard since the close of R1.

Uldall referred to the E-flat Riga concerto as "beginner's work" (*Anfänger-arbeit*).[109] He gives no reasons for this evaluation, and one suspects it is based on faulty reasoning: (1) Uldall assumes the concerto to be a work by Christian from ca. 1750; (2) in 1750, Christian was indeed an *Anfänger*; therefore (3) the concerto is *Anfängerarbeit*. As Spitzer has argued in another context, attribution affects critical reception.[110] Yet, the subtle and forward-looking elements in the first movement point toward an experienced hand. The melodic references in the opening ritornello become a unifying force throughout the movement. The orchestra is handled with some sophistication, particularly in the second and third solos. The secondary ritornellos not only repeat material from the opening, they often change it in a developmental manner. The tonic returns simultaneously with opening thematic material at the beginning of the third solo—all aspects of the dramatic sonata style that would increasingly encroach upon the concerto in the second half of the century. The cadenza is moved from its (for Berlin) usual position to increase its dramatic effect by interrupting the last ritornello. These features hardly indicate a composer just learning his craft. More importantly, they are

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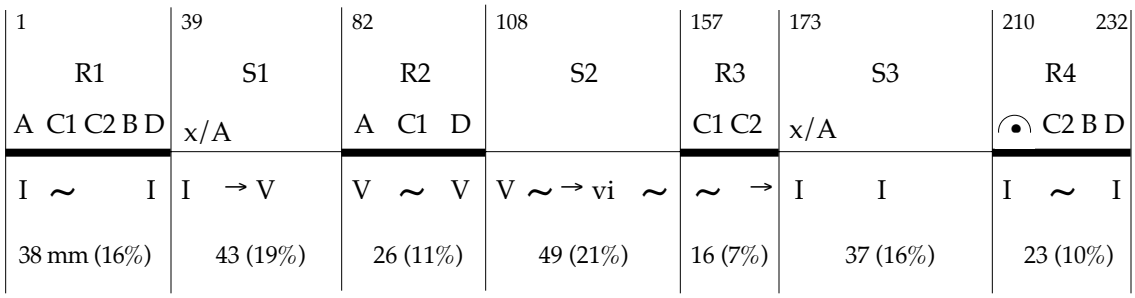
[108] See Quantz, *Versuch*, 297; and Koch, *Versuch*, 3:339.
[109] Uldall, *Das Klavierkonzert*, 67.
[110] See n. 3 in the introductory chapter to this dissertation.

not found in combination in the concertos that we know were written by Christian in Berlin.[111]

Riga 2

The opening movement of the second of the Riga concertos is very similar in form and layout to that of the E-flat concerto. The relative lengths of the four ritornellos and three solos are nearly identical, as is the overall modulatory plan, and the cadenza again interrupts the last ritornello.



Riga Concerto II, first movement
Allegro, A major, *alla breve*, ritornellos = 44%, solos = 56%

There are differences, however, in the treatment of material, particularly with regard to repetition between and within sections. While the later ritornellos in the E-flat concerto, for example, do reuse most of the material from R1, the effect there is of skillful reshuffling (a few measures of the head motive followed by a recomposed transition leading to a section taken from near the end of R1, etc.). The ritornellos of the A-major concerto contain much more wholesale repetition. The entire first half of R1 (A–C1) is repeated (transposed, of course) in R2. After the cadenza, R4 picks up the repetition at the exact place where R2 had stopped and repeats the remainder of R1 in its entirety (C2–B–D). R3 also contains a long contiguous section from R1 (C1–C2). There is

[111]Christian, in his Berlin concertos, does regularly begin S3 with the head motive in the tonic (i.e., after a modulatory R3), but none of them consistently demonstrate the assured hand evident in the E-flat Riga first movement. See Davis, "Koch," 51.

likewise more repetition within sections. In the first movement of the E-flat concerto, there is only a single instance of direct repetition of a phrase: in S3 where measures 167–168/3 are identical with 165–166/3. In the second Riga concerto, such direct phrase-repetitions are built into the basic material (e.g., R1, mm. 5–8; S1, mm. 70–80), and they are duplicated in subsequent larger-scale repetitions of that material (e.g., S3, mm. 200–10).

The opening ritornello of the A-major concerto does not divide into sections as cleanly as that of the E-flat concerto. One way to parse it would reflect Uldall's four basic sections in the order ACBD. The A-section would then contain the head motive plus a continuation that leads to a cadence on the dominant (m. 12). The C-section that follows does not, however, build upon this move toward V; rather it initiates an approach to the subdominant before two sequential passages (mm. 18–21 and 22–25) both return decisively to the tonic. The latter passage pits the head motive against its inversion. Unlike the E-flat concerto, the A-major does exhibit a contrasting B-section (mm. 30/2–34/2) with most of the characteristics that Uldall cites as having originated in the violin concertos of Tartini: the basso continuo drops out, leaving the violas to provide the bass; the dynamic is reduced to *piano* in the remaining voices, and the violins play in parallel thirds and sixths. Since both of the internal sections, C and B, reinforce the tonic, the D section is not required to offset any modulatory tendencies and is correspondingly short, consisting of one brief cadential passage (mm. 34/2–35) and a repetition of the head motive. Such an analysis, however, glosses over numerous complexities and subtleties that incline to distend Uldall's model considerably, perhaps beyond the point of usefulness.[112] Measures 9–12, for example, are sequential and thus could be subsumed under Uldall's section C, rather than A. There follow five measures (13–17) of non-sequential contrasting material (B) leading seamlessly to three measures

[112]Stevens, "Formal Design," 267 n. 15, quoted above, p. 104, indicates that many of Emanuel's opening ritornellos exhibit complexes not easily accommodated by Uldall's four-section model.

(18–20) of sequences (more C) that are based on the contrasting passage. Parsing the entire ritornello in this more detailed fashion would produce the sequence A (mm. 1–9), C1 (9–12), B1 (13–18), C2 (based on B1, 18–21), C3 (based on A, 22–25), D1 (based on A, 26–30), B2 (30–36), D2 (based on A, 36–39). Clearly this exceeds the boundaries of what Uldall intended with his four-section paradigm, while at the same time it demonstrates the increased complexity of R1 in the second Riga concerto over that of the first.

The solo enters with the head motive—soon translated into idiomatic passagework—and its entrance is elided with the end of the ritornello, neither of which had occurred in the E-flat concerto. The soloist's first two phrases are again bridged by a tutti insertion of the head motive (mm. 44–47), and the remainder of S1 exhibits interactions between solo and orchestra similar to those already witnessed in the first concerto—frequent insertions of the head motive plus sustained chordal accompaniment to virtuoso passagework. The soloist's second phrase (beginning in m. 47) alludes to the B-section from the ritornello (cf. mm. 30–31).

The formal and motivic characteristics of the rest of the first movement of the A-major concerto do not differ substantially from those seen in the E-flat concerto. Similarities include the following: a passage of keyboard figuration accompanied by the orchestra with a motive from R1 treated imitatively (S1 mm. 140–49; cf. Riga 1.i, S1, mm. 67–71); a modulatory R3 that does not begin with the head motive; a "recapitulation" with both the tonic and the head motive returning to start S3 and with S1 material first stated in the dominant returning in the tonic (mm. 60–79 returning at 190–209); a solo cadenza just after the beginning of R4, introduced with the head motive; and a literal repeat of the second half of R1 to close R4 and the movement.[113] Both movements are firmly in the tradition of the north German concerto and place moderate demands on the skills of the soloist.

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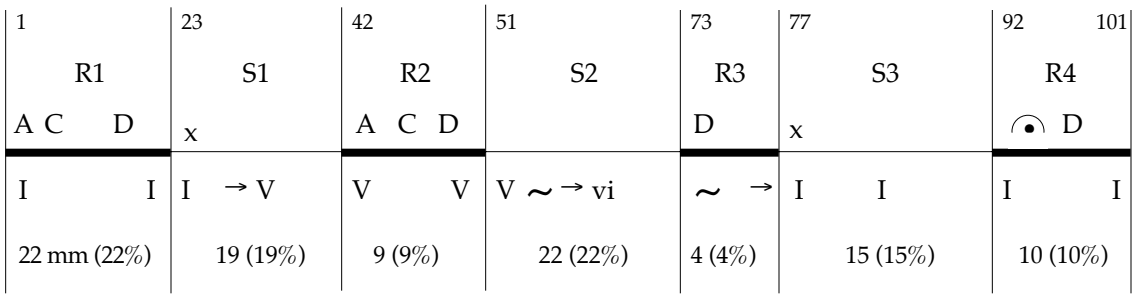
[113]These characteristics are nearly all described by Quantz and Koch.

Second Movements

The slow movements of both Riga concertos are cast in the same four-ritornello, three-solo scheme as the outer movements, a characteristic that Uldall found to be nearly exclusive to north German concertos. The ritornellos, however, are much shorter and have less internal differentiation in the slow movements than in the outer movements. There are also fewer points of articulation within the ritornellos; the opening ritornellos of both in particular are more continuous than was the case in the first movements. Both slow movements are in the key of the major dominant of their respective first movements. While the major dominant is, in fact, one of the keys suggested by Quantz for slow movements, we have seen that Emanuel Bach very much favored slow movements in the modal parallel of the outer movements, and in no case in his fifty-two undisputed concertos did he write a middle movement in the major dominant.

Riga 1



Riga Concerto I, second movement
Adagio, B-flat major, 3/4, ritornellos = 45%, solos = 55%

In the second movement of the first concerto, the composer evokes an *empfindsam* character, which accords with Quantz's assessment about slow movements being better suited to stirring and stilling the passions. Already in the second measure, a fermata over a diminished seventh chord disrupts expectations and throws the listener slightly off balance, and the unison figure at measure 13 is equally disruptive. Additionally, the syncopations of the head motive, the many sighing figures (beginning in m. 4), and the

fine dynamic shading (mm. 17–22), are all characteristics of an *empfindsamer Stil*. The strings play *con sordini* for all but three measures (mm. 69–71).

The harmonic palette of the slow movement is also richer than that of the first movement. In addition to the diminished seventh chord of measure two (repeated at mm. 29 and 43), augmented sixth chords (mm. 46 and 89—both with irregular resolutions) and a Neapolitan sixth chord (m. 67) enliven the harmonic sphere of the movement. Especially pungent are the simultaneous cross relations in the solo part in measures 59 and 61.[114]

A texture is introduced in the first solo (mm. 32–36/1) that we have not seen in either of the first movements: the right hand of the keyboard part and the first violin play in parallel thirds and sixths. This recalls Tartini's practice of accompanying solos only with violins. However, the texture here is fleeting and does not return when the motive itself does (mm. 55–56).

Near the end of S3 (m. 88) a tutti interjection repeats measure 13. The soloist then continues with the variation of this passage introduced in R2 (m. 46), complete with the same abnormal resolution of the augmented sixth chord. Not only is it unusual for the soloist to use any orchestral material besides the head motive, it is also uncommon for a secondary ritornello to be involved in developmental activity to the extent that R2 here develops material from R1. More standard structural features include the tutti interjection of the head motive after S1 has begun with new material (mm. 28–31); a modulatory R3 that does not reuse the head motive; the return to the tonic at the beginning of S3; the placement of the cadenza after the beginning of R4; and the repeat of the second half of R1 to conclude the movement. Interestingly, the tutti interjections during the solos more often use the rhythmically distinctive ideas from measures 13 and

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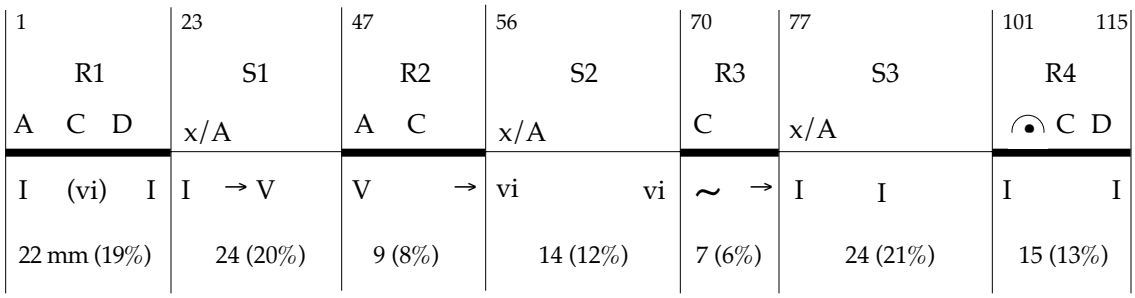
[114]Pippa Drummond, *The German Concerto: Five Eighteenth-Century Studies* (Oxford: Clarendon Press, 1980), 329, suggest that such cross relations are typical for Emanuel. However, Christian also makes extensive and exposed used of them in the first movement of his B-flat Berlin concerto.

18 than the syncopated head motive (which only shows up twice—at mm. 28–31 and 54–55).

Riga 2



Riga Concerto II, second movement
Andante ma non troppo, E major, *alla breve*, ritornellos = 46%, solos = 54%

Without showing the *empfindsam* eccentricities of the slow movement in Riga 1, the Andante ma non troppo reveals an even greater concern for special effects of string sonority. The upper strings are muted through much of the movement, but the mutes come off for a vigorous interjection in mm. 26–28 and stay off for the rest of S1 (likewise when the material is repeated in S3). The dynamic range is greater than in the E-flat concerto—from muted pp to unmuted f—and the timbral palette is enriched through pizzicati, both muted (mm. 37–41) and unmuted (mm. 30–33), and *portato* bowing in the lower strings (marked in the initial measures, then left to the discretion of the players). Such a wide range of string sonorities is unusual for north German keyboard concertos.

The movement exhibits other forward-looking characteristics not often encountered in the relatively conservative north German concerto. For example, the entire S1 recasts the entire R1—in other words, R1 and S1 work with basically the same material at the beginning, middle, and end (as in a Mozart concerto), with the solo profiling itself mainly during the modulation to the dominant (mm. 40–43, also as in a Mozart concerto). Also, R2 modulates from the dominant to the submediant—the only instance of a modulating R2 we have yet encountered—and it neatly joins the initial

material from R1 (mm. 1–6) with the sequential material (mm. 10–14), so that the structure of R1 foreshadows larger-scale structure. S2 really does seem like a development of the head motive, although it does not modulate. S3, which recapitulates the beginning and ending of S1, engages in a more thorough recomposition of the S1 transitional passage than would have been necessary simply to avoid the modulation. Whoever wrote the Riga concertos, he showed in this movement that he was not entirely indifferent to the fresh winds blowing from the south.

Third Movements

Riga 1

1	38	80	108	140	154	194 212
R1	S1	R2	S2	R3	S3	R4
A B C D	x	A B D		C D	x	C D
I ~ I	I ~ → V	V V	V → vi	~ →	I ~ I	I I
37 mm (18%)	42 (20%)	22 (13%)	32 (15%)	13 (6%)	40 (19%)	19 (9%)

Riga Concerto I, third movement
Allegro con spirito, E-flat major, 3/4, ritornellos = 46%, solos = 54%

The third movement of the E-flat Riga concerto is a nearly textbook example of ritornello form as treated by north German composers of the middle of the century. For the only time in either concerto, all four of Uldall's R1 sections are present in the order ABCD. The second ritornello repeats R1 in the dominant except for the sequential passage (the C-section), which is saved for the modulatory R3. The last ritornello repeats the last half—exactly half—of R1, and the head motive is repeated in unison at the end of R1, R2, and R4.

All three solos begin with the same material, immediately bracketed by a tutti interjection of the head motive (as Quantz recommended). The head motive does

eventually enter the keyboard part in S1 (mm. 55–62) to mark the modulation to the dominant, before passing back into the orchestra as a polyphonic backdrop to brilliant keyboard figuration (mm. 63–69). Indeed, the head motive remains the orchestra's chief contribution to the solos until the middle of S2, where a striking synthesis is achieved (mm. 131 ff.). While the keyboard takes up the figuration pattern from S1 (mm. 63–69), the orchestra recasts material from the contrasting section of R1 (mm. 9 ff.) as a suspension-laden accompaniment, including the ubiquitous head motive as a pseudo-bass part in the viola. The third, recapitulatory solo is also synthetic, restating the beginning, middle, and end of S1 (cf. mm. 38–45 with 154–161, mm. 55–62 with 162–70, and mm. 63–79 with 177–93) but also interposing a passage from S2 (cf. mm. 122–26 with 171–75). For once, there is no solo cadenza in R4, so that the last tutti may conclude (as Quantz would say) "as briefly as possible . . . with the second part of the first ritornello."

Riga 2

1	42	99	140	199	223	283 324
R1	S1	R2	S2	R3	S3	R4
A C A B D	x/A	A C A B D	x/A	ACBD	x/A	A C A B D
I ∼ I	I → V	V ∼ V	V iii	∼ →	I ∼ I	I ∼ I
41 mm (13%)	57 (18%)	41 (13%)	59 (18%)	24 (7%)	60 (19%)	42 (13%)

Riga Concerto II, third movement
Presto, A major, 2/4, ritornellos = 46%, solos = 54%

It may be worthwhile to step back a bit here and recall that Quantz recommended various things in the interest of variety. The final Allegro should be light and jocular to contrast with the first Allegro, and it should be in a different meter. In the first Riga concerto, the final Allegro was in a brisk triple time (3/4), which contrasted with the *alla breve* in the first movement. The second Riga concerto, however, seems to reflect disregard of Quantz's advice: "If the first two movements are in duple time

[which is the case in the A-major concerto], the last must be set in triple."[115] It is not. Quantz also recommends that each movement begin with a different tone of the tonic chord; but the finale of the A-major concerto begins, like its first movement, with "the fundamental note." The chief elements of contrast are (1) a triadic head motive as opposed to a scalar one, and (2) an even greater reliance than in the first movement on wholesale repetition. Although there is not as much repetition within sections as in the first movement (notwithstanding the only occurrence in either concerto of one measure played three times in succession—mm. 13–15), the amount of repetition nonetheless gives one pause. The opening ritornello is transposed *whole* into the dominant to form R2, which is unusual enough. Its second half (mm. 18–41) is exactly repeated (i.e., in the tonic) to form R3—a strategy one would expect only in R4, which instead winds up as another exact repetition of the *whole* R1. It may be that the composer wished to expand the area of tonic stability at the end of the movement (of the six movements in the Riga concertos, this is the only one without a modulatory R3). At the same time, one can hardly help but to observe that the 41 measures of R1, without requiring any effort beyond literal transposition in R2, supply the composer with 146 measures of music, nearly half the movement. There is no reshuffling of material in the later ritornellos nor any attempt to vary the sectional boundaries, as was the case in the last movement of the E-flat concerto. All four ritornellos end with a unison statement of the head motive, and all three solos begin with the same slightly varied version of the head motive as well, each time elided with the end of the ritornello. Thus the R1-S1, R2-S2, and R3-S3 articulations are identical.

There is also more repetition between the first and last solos than in any of the other Riga movements. That the opening measures from S1 are repeated at the beginning of S3 comes as no surprise; we have witnessed the same procedure in four of

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[115]Quantz, *On Playing*, 314.

the five other movements. What is different about the present movement, however, is the amount of additional material from S1 (mm. 64–98) recapitulated (or mechanically transposed) in S3 (mm. 248–82)—a full 61%—considerably more than its closest counterpart (the first movement of the E-flat concerto with 49%), and more than double the average of the five other movements (28%).

Compounding the sense of sameness caused by so much repetition is the fact that the orchestra does little more by way of accompaniment during S1 and S3 than repeat the head motive. In both cases one encounters passages of twenty-three continuous measures containing nothing but various permutations of parts of the head motive (mm. 64–86 and 248–70). Only during the virtuoso passagework of the second solo does the orchestra accompany with material from another part of R1, beginning at measure 158 with a variation of the end of the C1-section (mm. 13–17). At the same time, the passage at measures 158–63 is another example of dialogue technique (also evident in S3 of the first movement of the E-flat concerto), whereby a phrase begun by the soloist is continued by the orchestra.

This movement is also the only example in the Riga concertos where R3 does not provide the modulation back to the tonic. It does not need to modulate since it actually begins in the tonic. In fact, the return to the tonic is accomplished not through a smooth, common-chord type of modulation, but rather by means of a "bifocal" harmonic relationship.[116] S2 modulates from the dominant to the mediant (also unique to this movement—S2 otherwise modulates to the submediant), C-sharp minor, and cadences in that key with a single unaccompanied C sharp in measure 198. The ensuing ritornello then simply enters with the head motive in the tonic. This is a perfect example of what Davis has called the "tutti restatement: four-ritornello plan."[117]

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[116]Davis, "Recapitulatory Tutti," 73.
[117]Ibid., 71–75.

The Control Group

The ideal control group against which to test the Riga concertos would, of course, be all of the undisputed concertos written in the north German tradition by the three Bach brothers under consideration. From a statistician's viewpoint, such an ideal control group would also consist of approximately the same number of works from each brother. Unfortunately, the Bach brothers left behind widely varying numbers of concertos that fit the bill. Emanuel wrote thirty-eight of his fifty-two keyboard concertos during his tenure in Berlin. The three concertos composed before his arrival in Berlin were also all subsequently revised by the composer in Berlin, bringing the total to forty-one. (The eleven concertos Emanuel composed in Hamburg are different enough from his Berlin works that they can be eliminated from consideration.) Against these forty-one works by Emanuel, however, only five concertos by Christian are of the north German type—the five he composed during his residence in Berlin between 1750 and 1755. Christian's concertos beginning with his Op. 1 from 1763 point in a radically new direction. The selection for Friedrich is even more meager. Of his eleven surviving keyboard concertos, only the earliest—from ca. 1760—comes anywhere close to the probable date of composition of the Riga concertos, and it displays only a small subset of features common to most north German concertos. His later concertos abandon the north German approach altogether, following instead the examples of Christian's London concertos and those of Mozart.

For the present dissertation, the author has decided to use Christian's five Berlin concertos to set the sample size for each composer. In Emanuel's case, five concertos were more or less randomly selected from the forty-one possibilities:[118] those in G,

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[118]For the sample to be statistically representative of the entire population, the five concertos by Emanuel should have been chosen completely at random from the available pool of forty-one. That pool, however, was made slightly smaller due to the unavailability of sources for a few of Emanuel's Berlin concertos during the author's residence there. For all intents and purposes, though, the five concertos each by Emanuel and by Friedrich were chosen at random.

H. 405/W. 3; in D, H. 414/W. 11; in D minor, H. 427/W. 23; in D, H. 433/W. 27; and in G, H. 444/W. 34. Although the earliest of the five concertos, H. 405/W. 3, was composed in 1737 (that is, before Emanuel arrived in Berlin), it exists today only in the revision Emanuel undertook in 1745, so the time span for the five concertos is 1743–55. This complements nicely the five by Christian that were composed before he left Berlin for Italy in 1755. Joining Friedrich's earliest known concerto, in E major from the 1760s, are two from the set published in London, presumably around 1778 (Nos. 1 in G and 4 in E-flat), the concerto in D from ca. 1787, and his last concerto, in E-flat, from 1792.

The near total lack of concertos by Friedrich in the north German tradition poses a difficulty in a comparative study such as this one. On the one hand, it could be argued that this very lack speaks forcefully against Friedrich's possible involvement in the composition of the Riga concertos, since he is not known to have written anything strikingly similar. On the other hand, it cannot be entirely ruled out that the Riga concertos were early efforts in the genre by Friedrich, written perhaps even before his departure from Leipzig—he left in late 1749 or early 1750—when he might conceivably have had a use for them in the *collegium musicum* concerts directed by his father (although Sebastian's last documented involvement with the *collegium musicum* was in 1741, when Friedrich was only nine years old). It is unlikely that he might have written them for his own use during his first years in Bückeburg, since as a very young *Kammermusikus* (18 in 1750) he would hardly have been in a position to expect performances of his own compositions at court, nor would he have likely to have been financially able to assemble an orchestra for a private performance. The earliest documented public performance of a keyboard concerto by Friedrich was in 1766,[119] and, as shall be shown below, by around 1760 he was already writing concertos quite

[119] According to an advertisement in the *Hannoversiche Anzeigen von allerhand Sachen*, Friedrich performed on 1 November 1766 in Hannover a vocal piece composed to a text from *Pastor fido* and a keyboard concerto.

different from the north German prototype that was established by the Berlin composers and that was so faithfully copied in the Riga concertos. One might also advance the hypothesis that Friedrich simply wrote the Riga concertos as composition exercises—without any specific performance in mind—trying to imitate the north German approach based on the concertos of Emanuel that were known to him.[120] The various arguments for and against each of the brothers as the possible composer of the Riga concertos will be explored in detail in the final chapter. For the present purposes, though, it is hoped that statistical methods eventually will be able to overcome the lack of any directly comparable works by Friedrich—that is, that certain compositional tendencies might be discovered that are not genre specific.

The scores prepared for the fifteen concertos in the control group are based upon the following sources: autograph manuscripts of Emanuel's five concertos contained in Berlin, Staatsbibliothek zu Berlin *Ms. mus. Bach P. 352* (H. 405), *354* (H. 414, 427, 444), and *355* (H. 433); autograph manuscripts of Christian's five Berlin concertos contained in Berlin, Staatsbibliothek zu Berlin *Ms. mus. Bach P. 390*; autograph manuscripts of Friedrich's concertos in E, D, and E-flat in Berlin, Staatsbibliothek zu Berlin *Ms. mus. Bach St. 274*, *272*, and *273*, and the Welcker edition of Friedrich's London concertos in G and E-flat in London, British Museum, *g.397.b*. Thirteen of the concertos are in three movements, two are in two movements—yielding a total of forty-three movements—with Emanuel and Christian each represented by fifteen movements and Friedrich by thirteen.[121]

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[120]It can probably safely be assumed that Friedrich knew virtually all of Emanuel's concertos, but it is certain that he knew H. 414/W. 11, because he is listed among the subscribers to the published edition. Also there exist copies wholly or partly in Friedrich's hand of H. 407/W. 5, H. 410/W. 7, H. 419/W. 16, H. 421/W. 18, H. 423/W. 20, and H. 470/W. 42. See Wade, *Keyboard Concertos*, 318, and her Appendix A.

[121]Friedrich's two London concertos in the control group conform to the English preference for two-movement concertos.

All of the movements by Emanuel and Christian are in ritornello form, a true indication of their north German origin.[122] Both prefer the four-ritornello/three-solo variation to the five-ritornello/four-solo one: Christian exclusively; Emanuel by a margin of nine-to-six. Friedrich's concertos, on the other hand, reflect a greater degree of Italian and French influence in his choice of movement types. While his opening movements all are ritornello structures, his middle and last movements rarely are. The slow movements in his three-movement concertos are usually simple or rounded binary forms. Occasionally the keyboard plays obbligato throughout these movements. Friedrich's final movements are usually rondos, often with the unaccompanied keyboard playing the first statement of the rondo theme. The last movement of the two-movement concerto in E-flat, however, is a minuet, while the final movement of the E-major concerto is an example of ritornello form, but with a repeat sign indicating the repeat of R1 and S1. Other "non-standard" features found in Friedrich's ritornello movements include full-blown second themes in R1 in the dominant (first movements of both London concertos and the D-major concerto), the reuse of virtually all significant ritornello material in the solos (D-major), and a change of tempo for the keyboard entrance (the late E-flat concerto). In fact, the only one of Friedrich's thirteen control-group movements that comes very close at all to the standard north German handling of ritornello form is the first movement of the E-major concerto, the earliest known concerto movement that he wrote.

The concertos by Emanuel and Christian also adhere to the north German tendency of accompanying the keyboard with strings only—first and second violins, violas, and bass. Emanuel later added brass and wind instruments to H. 433, but this revision was almost certainly undertaken only after his move to Hamburg in 1768.[123]

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[122]Uldall, *Das Klavierkonzert*, 17; and Stevens, "Keyboard Concertos," 20.

[123]Elias Kulukundis, in the preface of his edition of H. 433, speculates that Emanuel added the wind parts no earlier than 1775. Carl Philipp Emanuel Bach, *Harpsichord Concerto in D Major, W. 27*, ed. Elias N.

Again, Friedrich's practice is not consistent with the north German tradition. Only his earliest concerto has an accompaniment of two violins, violas, and bass. In Friedrich's London concertos the accompaniments are for just two violins and bass, and the later D-major and E-flat concertos add both oboes and horns to the string orchestra.

Sextet

The following discussion of the sextet is more compact than the foregoing about the north German keyboard concerto. One reason for this is that the formal structures involved—sonata, rounded binary, rondo—are more part and parcel of modern musical training and thus more generally familiar than ritornello form as practiced in Berlin at mid-century. Also, contemporary writers devoted considerably less attention to large-scale chamber music than to solo or orchestral genres, and none wrote specifically about sextets.[124] Finally, the source evidence has suggested only two possible composers as author of the sextet—Friedrich and Christian—so the control group of compositions is correspondingly smaller than that used for the concertos, where works by three composers formed the control group.

Large-scale Chamber Music with Obbligato Keyboard

Neither Friedrich nor Christian is known to have composed any other works with the same scoring as the sextet. In fact, I have been unable to identify a single work by any composer with the exact instrumentation of obbligato keyboard, oboe, violin, cello, and two horns. Although an exact dating of the sextet is not yet possible,

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Kulukundis (Madison, WI: A-R Editions, 1970), vi–vii. The autograph score consulted for this dissertation contains no indications for brass or wind parts.

[124]Quantz, for example, devotes twelve paragraphs to describing the concerto but only one each for quartets and trios, and none at all to larger chamber ensembles. Moreover, both Quantz and Scheibe, *Critischer Musikus*, 675–83, consider only the more strictly contrapuntal forms of chamber music popular during the first half of the century, and as exemplified by the works of Telemann. Koch also devotes but a single paragraph to the quartet, directly before his lengthy discussion of the concerto.

Christian's death on 1 January 1782 establishes a *terminus ante quem* (even if turns out to be by Friedrich, the sextet would have somehow had to have found its way into Christian's possession in order for it to have been mistaken by André and Luther for a work of his after his death). Thus the composition of the sextet most likely falls somewhere within the decade and a half (1767–82) that witnessed the first flowering of large-scale chamber music publication.[125] During this initial period composers experimented with many different instrumental combinations before the modern piano trio, quartet, and quintet emerged as the standards of keyboard chamber music.[126] Part of this experimentation involved mixing wind and string instruments with the obbligato keyboard. Christian's quintet Op. 22/1, for example, is scored for flute, oboe, violin, cello, and keyboard—also a combination not found anywhere else. One wind/string/keyboard combination that did seem to enjoy a brief period of popularity was flute, violin, cello (or bass), and keyboard. Composers writing for this combination included Joseph Bauer (four sets), Giordani, Grétry, Nathanael Gottfried Gruner, Johann Christoph Kellner, Johann Georg Lang (two sets), Joseph Schmitt, Joseph Alois Schmittbauer, and Lebrecht Schultz.[127] The most similar scoring to the sextet that was found was a set of four "quartets" for two violins, cello, keyboard, and two horns (*ad libitum*), Op. 4, by Leontzi Honauer, published in Paris in 1765 and reissued by Bremner in London in 1778. This latter publication, in fact, could well have been a catalyst for Christian to compose a work with similar instrumentation.

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[125]Nicholas Temperley credits Tommaso Giordani with publishing in 1771 the first piano quintets with the now standard instrumentation. Felice Giardini had published the earliest keyboard quintets to appear in England in 1767, with a scoring for keyboard, two violins, cello, and bass. See Tommaso Giordani, *Three Quintets for Keyboard and Strings*, ed. Nicholas Temperley (Madison, WI: A-R Editions, 1987).

[126]Basel Smallman, *The Piano Trio* (Oxford: Clarendon Press, 1990), 2, sets the date of the first modern piano trios (Mozart's K. 496 and 502) at 1786. Christian made his own contribution to the development of the piano quartet with the work published by André as Op. 2. As published later by Luther, with a viola replacing one of the two cello parts of the André edition, it is one of the earliest works in the combination keyboard, violin, viola, and cello. See also Basel Smallman, *The Piano Quartet and Quintet* (Oxford: Clarendon Press, 1996), 7–10.

[127]This list has been extracted from Brook, *The Breitkopf Catalogues*.

Honauer's optional horn parts allowed these works to circulate under the title of quartet, which is reminiscent of Luther's reference to the disputed sextet as a quartet in his publication from 1785. Nomenclature in general was rather flexible is this repertoire, with titles such as sonata, quatuor, concertino, divertimento, and sinfonie providing little information about the actual make up of the pieces.[128] None of the sources of the disputed sextet makes explicit that the horn parts are optional, but their purely harmonic function in the outer movements, and their absence from the second movement, makes a performance without them quite possible.

While the instrumentation of the sextet appears to be unique, the specific instruments called for would certainly have been readily available to both Friedrich and Christian. Friedrich, as we have already seen, calls for oboes and horns in some of his concertos, and Bückeburg was home to enough string players to supply the court there with a small, but highly rated orchestra.[129] Perhaps more intriguing is the situation at the court in London during Christian's residence there. Four musicians made up the permanent members of the Queen's Chamber Band: Christian Bach, keyboard; Frederick Nicolai, violin; Redmond Simpson, oboe; and Carl Friedrich Abel, viola da gamba (presumably cello as well).[130] With the addition of two horns the Queen's band would have been able to perform the sextet, and even without horns they could still play the "quartet" version. Certainly, though, one should not place too much emphasis on such speculations, as the requisite musicians for a performance of the sextet could certainly be found in any European musical center of the time.

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[128] Honauer's Op. 4 are listed as "IV Sinfonie ou Quatuor" in the Breitkopf Supplement XV, 822.
[129] Forkel, *Almanach 1782*, 130, lists the Bückeburg *Kapelle* as one of the best in Germany.
[130] Terry, *Christian Bach*, 151.

First Movement

The first movement of the sextet (*Allegro*, C major 4/4) begins with a fairly standard sonata-form exposition: an eight-measure (4 + 4), harmonically stable phrase that is repeated; a transition to the dominant; a new, harmonically stable theme in the dominant; and harmonically emphatic closing material. The first eight measures are played tutti, with the oboe and violin presenting the thematic material in parallel thirds and sixths (oboe on top), the keyboard providing an arpeggiated accompaniment, the horns alternating sustained chords and rhythmic punctuation, and the cello providing a bass line more active than the keyboard's. The phrase ends with a half cadence, and the keyboard right hand provides a half-measure lead-in to a varied repeat of the first eight measures. The horns drop out temporarily, the overall dynamic level drops to *pianissimo*, the oboe and strings take on the sustained chord and rhythmic punctuation duties while the melody is played by the keyboard. The repeated phrase also ends with a half cadence (m. 16) leading to the first transitional maneuver: all voices drop out except for the cello, who in the course of a sixteenth-note scalar passage introduces the first non-diatonic note of the piece—an f-sharp pointing in the direction of the dominant. The violin reenters in the next measure, picking up on the cello's scale, and the two continue in parallel tenths for a full six measures, during which the keyboard left hand, oboe, and horns all rejoin the action. The oboe takes over the melodic lead at measure 19 with material derived from the opening phrase, while the harmony settles on a dominant pedal. The pedal resolves deceptively in measure 24, and a chromatic slip in the bass provides the springboard to the secondary dominant and the reentry of the keyboard right hand in the following measure. The keyboard now provides the rhythmic drive while the other voices crescendo from *piano* through *mezzo-forte* to *forte* over four measures. The harmonic and dynamic tension reaches its climax at the downbeat to measure 29, with a two-measure "cooling off period" before the start of the secondary theme at measure 31.

In these opening thirty measures, the composer has shown a remarkable variety of textures—accompanied keyboard sonata (mm. 1–8), concerto-like solo keyboard with orchestral accompaniment (mm. 9–16 and 25–29), and instrumental chamber music with keyboard continuo (albeit without bass figures, mm. 18–24). Each instrument (except for the horns) has had a share in the presentation of melodic material and each has done its stint at accompanying. The texture has run the gamut from single voice through full tutti. There has been leading woodwind (mm. 1–8), leading strings (mm. 16–18), and leading keyboard (mm. 9–16). The composer seems set on taking full advantage of the timbral palette at his disposal.

The second key area begins with a more lyrical theme than the opening, although the keyboard continues the sixteenth-note accompaniment that has been nearly unbroken from the very beginning. This theme is immediately repeated, played by the oboe instead of violin, and elided so that the second theme parses into 3 + 3 measures. The violin, in the repeat, takes over the sixteenth-note surface rhythm from the keyboard right hand, projecting it into the foreground with a *forte* dynamic against the *piano* of the other voices. The closing group consists of ten measures broken into five two-measure groups, first alternating *forte* and *piano*, and then gradually fading to a *pianissimo* before the three *forte* chords in measure 46 signal the end of the exposition.

The second half of the movement begins with the opening material in the dominant and continues in close conformity to the first of two options that Koch describes for this point in an extended rounded-binary structure. Koch is specifically describing the symphony, but later says that the same description applies to the sonata as well—under which he includes trios, quartets, and, presumably, sextets.

> The first and most usual construction of the first period of the second section begins in the key of the fifth with the theme. . . . After that it . . . modulates back into the main key by means of another melodic idea, and from this to the minor key of the sixth.[131]

In the sextet, the opening material in the dominant (mm. 47–50) is followed by the opening material in the tonic (mm. 51–54), and a development of transitional material over a quasi circle of fifths progression (mm. 54–63) leading to a cadence in the submediant. Here new material is presented (mm. 64–71) that brings the harmony back to the dominant of C, at which point (mm. 72–74) more material from the transition (mm. 21–23) is brought back—repeated nearly literally—but altered slightly to lead back to the tonic instead of the dominant as it had in the transition. The end of the transition (mm. 25–30) is transposed down a fifth, which leads to a recapitulation of the second theme group in the tonic starting at measure 85. From here to the end of the movement the recapitulation is analogous to the end of the exposition, but with slight changes in instrumentation (cf. mm. 31–36 and 82–87), and to the closing group (cf. mm. 41–44 and 92–95). The second half of the movement is repeated.

This type of movement—in which the second half begins with opening material in the dominant, moves through the main key on the way to "development," and begins the recapitulation with second group material—is one of two types that Steven Roe identifies as the most common in Christian's keyboard chamber music.[132] He labels this type a binary sonata form as opposed to a tripartite version that includes little or no opening material in the development and a recapitulation that includes both primary and secondary material.

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[131]Koch, *Essay*, 200. Galeazzi, on the other hand, writing just a few years after Koch, suggests that beginning the second half of a sonata-form movement with the main theme is falling into disuse, because "it does not introduce any variety in compositions, which is always the purpose of all the skill of genius." Bathia Churgin, "Francesco Galeazzi's Description (1796) of Sonata Form," *Journal of the American Musicological Society* 21 (1968): 194–95.

[132]Roe, *Keyboard Music*, 107–8.

Second Movement

The slow movement (Larghetto, F major, 3/4) follows a structural pattern similar to that of the first, but here neither half is repeated. The keyboard is relegated to a purely accompanying role throughout, often providing rhythmic momentum for the other voices. The horns do not play in the movement. While oboe, violin, and cello all participate in the thematic argument, the oboe clearly leads, usually presenting its thematic statement first, and consistently playing in a higher range than the violin.

The exposition begins with an eight-measure, harmonically closed phrase, built up of a series of step-wise descending motives, that starts *piano*, crescendos to *forte* at measure 4 to underscore a dominant harmony of the submediant, and then reverts back to *piano* for the second half. The transition begins *forte* in measure 9 but continues *piano* from measure 10 through 21. The melodic motion remains primarily stepwise, but now with a few triadic passages (m. 10 beats 1–2, m. 13 beat 3, m. 15 beat 3) and octave leaps (m. 10 beat 2, m. 16 beat 3). The cello emerges briefly as the principal melodic voice at measures 19–21 leading to the cadence into measure 22 and the start of the second key area. The new theme in the new key consists of canonic entrances by the three melodic voices of a motive outlining the new tonic triad. This theme, like the opening material, starts *piano*, crescendos to *forte* near the middle, and reverts back to *piano*. Four measures of closing material (mm. 30–33) bring the exposition to an end.

The second half of the movement begins with a three-measure bridge passage (mm. 34–36) that modulates directly back to the original tonic. Here the keyboard comes as close as it ever does in the movement to providing the melodic lead, but does so only using material first heard as an accompaniment to the second theme by the violin and cello in measures 27–29. Interestingly, these three measures also reflect the *piano-forte-piano* dynamic progression already witnessed twice in the exposition. With the return of F-major at measure 37, the recapitulation begins with an exact restatement of the opening six measures, followed by a shortened transition (four measures instead of

thirteen in the exposition), and a slightly changed secondary theme transposed to the tonic (cf. mm. 26 and 51). The closing material is expanded from four measures to six, and an eight-measure coda leads from the harmonically closed recapitulation to a half cadence setting up the return of C-major in the third movement. All three sources of the sextet provide a virtually identical written-out lead-in by the oboe into the rondo third movement.

Third Movement

The third movement (no tempo designation but with the character of an *Allegretto*, C major, 2/4) is a five-part rondo—ABACA—with coda. Both Friedrich and Christian preferred rondo closing movements in their chamber works, reflecting the general trend of their contemporaries. The refrain is a sixteen-measure double period. The first eight measures (4 + 4) are played *piano* by oboe, violin, and cello. The following period (mm. 9–16) repeats the first eight measures with a full tutti during which the keyboard—apart from a small bit of melodic doubling in mm. 9–10 and 15—provides accompaniment. The rondo refrain is repeated verbatim on its two subsequent appearances (mm. 57–72 and 127–42). In fact, its second and third appearances are simply marked with *da capo* signs in the Kraków and Luther sources.

The real interest in the movement is provided by the two episodes. The first episode, B (mm. 17–56), is nearly analogous to the first solo and second ritornello of a keyboard concerto. The keyboard begins alone in the tonic with a new rhythmic figure—triplet sixteenths—answered by the "orchestra" (minus horns) in mm. 18 and 20. Four-and-a-half measures of solo keyboard (the longest stretch of solo keyboard in the entire piece) follow, which begin the modulation to the dominant. The ensemble rejoins the keyboard in measure 25 to cement the modulation. When the new key is reached at measure 32, the refrain theme is brought back in the new key (similar to R2 in a concerto). The analogy to the concerto ends here, however, as the rest of the episode is

used to return to the original tonic in preparation for the "real" repeat of the refrain at measure 57. The episode ends on a half cadence, providing the oboe with another opportunity for a lead-in into the refrain.

The second episode, C (mm. 73–127), is a mini-movement within a movement. The key signature changes from C major to F major (the same key relationship as between the first movement and the second). The horns remain silent throughout the episode (also as in the second movement). The texture changes from the quasi accompanied keyboard sonata of the refrain to that of a continuo chamber sonata (this time complete with bass figures), and the triplet sixteenths from the first episode are brought back, but this time arpeggiated rather than conjunct. The opening of the section is periodic, 8 + 8 measures, each broken down into 4 + 4 phrases. A transitional passage begins at measure 89 that leads towards the dominant of F, but never quite succeeds in establishing it completely, all the while continuing with the triplet-sixteenth pattern. The modulation eventually loses steam on the dominant and the triplet sixteenths revert to the stepwise motion of the "B" section rather than the more energetic arpeggios, and they eventually peter out altogether. The transition thus leads not to a new tonality and new thematic material, but ends up serving only to reintroduce the section's original material in the tonic (F major) at measure 108. This material is slightly varied and extended, but it eventually cadences in F major at mm. 118–19, before an eight-measure bridge passage again leads the harmony back to a half cadence in C major in preparation for the return of the refrain in measure 127.

The coda, marked "finale" in the sources, begins with four measures of triplet sixteenths played by the keyboard alone that are closely related to mm. 23–25 from the first episode. In the remaining fourteen measures of the coda, the full ensemble drives home the tonic with material taken from mm. 3–4 of the refrain, and finally with repeated tonic and dominant chords over triplet-sixteenth runs in the keyboard.

The Control Group

The scores of the control group pieces are again based on eighteenth-century sources. Autograph manuscripts exist for Friedrich's chamber works in Berlin and Kraków: for the sonata for flute, cello, and keyboard in D, HW VII/4, Berlin *Mus. ms. Bach St. 282*; for the two sonatas for violin, viola, and keyboard in G and A, HW VII/5 and 6, Berlin *Mus. ms. Bach St. 280 and 279*, respectively; and for the sonata for flute, violin, and keyboard in C, HW VII/7, Kraków *ex D Bds Mus. ms. Bach. St. 281*. Christian's chamber works are all based on early printed editions: for the quartet for violin, two cellos, and keyboard, the André edition, Op. 2; for the quintets in D and F, the Hummel edition, Op. 22; and for the two piano trios, the Welcker edition, Op. 15. All four works by Friedrich are in three movements, while all of Christian's are in two movements with the exception of the quintet, Op. 22/1, which is in three. The control group thus consists of twelve movements for Friedrich and eleven for Christian.

Of the twenty-three control-group movements, fourteen are in some form of sonata/rounded binary and nine are rondos. The first movement of the sextet was labelled a "binary" sonata form, in which the second half begins with opening material in the dominant and the recapitulation begins with the second theme group. Half of Christian's six sonata form movements in the control group show this type of structure, while none of Friedrich's do. Friedrich's eight sonata forms occasionally start the second half with primary material in the dominant, but all of his recapitulations in the control group begin with the opening material and include most of the significant secondary material as well, thus falling under Roe's "tripartite" variation of sonata form.

One of the unusual aspects of the rondo of the sextet was the presence of refrain material in the first episode in the dominant. This technique does not show up in any of Christian's other control group rondos, while Friedrich uses it in three of the four rondos in the control group.

The keyboard was used in various guises in the sextet: as a soloist in a concerto-like framework; as an equal partner with the other instruments; as an obbligato accompaniment to them; and as a simple continuo accompaniment (both with and without bass figures). In Friedrich's control group movements, all of these are common with the exception of continuo accompaniment with bass figures. Christian's control group movements also show similar uses of the keyboard, including continuo with bass figures in the quintet Op. 22/1. It must be remembered, however, that the bass figures could have been added to this edition by the publisher without the knowledge of the composer (especially since it is not known whether Hummel was authorized by Christian to publish his music).

The control-group chamber compositions by the two brothers display much closer similarities among themselves than their control-group concertos did. Thus attributions based on structural or formal analyses of the chamber music are even more dangerous than usual. Neither composer can be absolutely ruled out as the composer the sextet, nor is it possible to claim that one was significantly more likely to have composed it than the other. If the question of authorship is to be resolved one must look beyond standard analytical techniques—techniques that were not necessarily developed to answer such questions in the first place—and towards new ways of analyzing music.

CHAPTER 4

COMPUTER ASSISTANCE

Previous Studies

Computer-Assisted Authentication

Over the last three decades, the computer has been used only sparingly as a tool for clarifying attributions of musical works. In the late 1960s, Alfred Mendel and Lewis Lockwood at Princeton University transcribed all of the masses and some eighty motets of Josquin Desprez into a computer-readable format.[1] Although the main purpose of their investigation was not authentication, they were aware of the possibilities the computer might open in this direction:

> It is conceivable that our techniques of question-asking may some day develop to the point where we can program the computer to tell with a high degree of probability Josquin from Pierre de la Rue.[2]

Mendel and Lockwood were able to uncover some evidence supporting the suspicion that a portion of the *Missa L'homme armé super voces musicales* found in only one of its sources is not by Josquin. The mass lacks the section *Et in Spiritum* in all of the printed and manuscript sources except one, which was copied many years after Josquin's death.

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[1]Arthur Mendel, "Some Preliminary Attempts at Computer-Assisted Style Analysis in Music," *Computers and the Humanities* 4 (1969): 41–52; and Lewis Lockwood, "A Stylistic Investigation of the Masses of Josquin Desprez with the Aid of the Computer: A Progress Report," in *Musicology and the Computer. Musicology 1966–2000: A Practical Program,* ed. Barry Brook (New York: The City University of New York Press, 1970), 19–27.

[2]Arthur Mendel, "Toward Objective Criteria for Establishing Chronology and Authenticity: What Help Can the Computer Give?," in *Josquin des Prez: Proceedings of the International Josquin Festival-Conference held at The Julliard School at Lincoln Center in New York City, 21–25 June 1971*, ed. Edward E. Lowinsky (London: Oxford University Press, 1976), 308.

The sources would suggest, therefore, that this *Et in Spiritum* found in the late manuscript is a spurious addition to the mass. Lockwood and Mendel wished to corroborate the source evidence with stylistic evidence. Noting that mid-sixteenth-century composers tended to use complete triads more often than early sixteenth-century composers, Mendel and Lockwood compared the *Et in Spiritum* with the rest of the mass and found a marked increase in the frequency of complete triads. Such a result by itself, of course, does not prove that the *Et in Spiritum* must have been added later by another composer, but it does lend support to the source evidence.

Also in the 1960s, Joseph Youngblood of the University of Miami (Florida) attempted to discover if statistics concerning root progressions could provide a means to differentiate between composers' styles.[3] He chose as his test pieces the first movements of string quartets by Hindemith, Bartók, and Schoenberg, as well as of the Clarinet Quintet by Hindemith. Youngblood programmed a computer to calculate the root of every vertical simultaneity consisting of at least two pitch classes, using the method described in Hindemith's *The Craft of Musical Composition I*, and to compare each root with the one following it. The resulting data were analyzed using standard statistical procedures for frequency and probability. The experiment demonstrated that a study of root progression frequencies could help to point out differences among composers, but that much more refinement of the technique was needed before the degree of that differentiation became statistically meaningful.

Lynn Trowbridge's computer-assisted study of fifteenth century French chansons sought in part to clarify questions of authenticity.[4] Trowbridge programmed the computer to compare ninety-two chansons by Binchois, Dufay, Busnois, and Ockeghem.

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[3]Joseph Youngblood, "Root Progressions and Composer Identification," in *The Computer and Music*, ed. Harry B. Lincoln (Ithaca: Cornell University Press, 1970), 172–78.

[4]Lynn Mason Trowbridge, "The Fifteenth-Century French Chanson: a Computer-Aided Study of Styles and Style Shange" (Ph.D. diss., University of Illinois, 1982); and Lynn M. Trowbridge, "Style Change in the Fifteenth-Century Chanson," *Journal of Musicology* 4 (1985): 146–70.

Based on his observations of characteristics such as pitch, rhythm, voice direction, and chords, Trowbridge was able to take a statistical approach to questions of authenticity in this repertoire, as well as to track stylistic changes of the individual composers over time.

Even in authenticity studies that do not make use of computers, one commonly encounters such statements as "because of the large number of calculations that would be required, the application of the above method to a large body of music would undoubtedly best be performed by computer."[5] The computer can provide many advantages to the analyst—advantages that otherwise would be difficult, if not impossible, to achieve by any other means. But realizing the advantages was beset by a number of difficulties.

Advantages and Disadvantages

One of the major advantages of a computer is its consistency. Given the same data and the same circumstances, it will always produce the same results. This allows faster and more accurate checking of data, and the ability to repeat operations without introducing unwanted variables that inevitably creep in with hand checking. It also allows independent verification of the results by interested researchers, who can reproduce the exact steps taken by the person or team responsible for the original research. Closely related to repeatability is reliability. Of course, a computer can only be as good as its programming, but once a procedure has been verified to function as intended, it can also be counted on to produce usable results from data collected at a later time (assuming, of course, that the data themselves are reliable). The converse is that once data have been collected and verified, those data remain available for whatever different tasks the computer might be programmed to perform in the future.

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[5]Marvin E. Paymer, "The Instrumental Music Attributed to Giovanni Battista Pergolesi: A Study in Authenticity" (Ph.D. diss., City University of New York, 1977), 171.

New avenues of inquiry can be easily implemented, regardless of their obvious potential. The specter of having to sort manually through mountains of data at every turn is lifted, allowing exploration in seemingly less-than-promising directions. New procedures can be developed and tested using small data samples, and then very quickly applied to the entire database.

Considering the obvious advantages of using computers to manipulate and tabulate data, it is perhaps surprising that they have not been employed more often to help clarify questions of musical attributions. The reasons for this are certainly varied and complex, but a principal one must surely be that computers are inherently non-musical. Or—to view the matter from the other perspective—the extremely flexible, sometimes amorphous world of music does not readily lend itself to analysis according to the strict rules of binary logic, which are the only rules that a computer observes. But as computers have become more powerful, and the techniques for programming them have evolved, it has become possible to assign certain tasks to computers that just a few years ago required tedious work by hand.

As a case in point, consider the issue of how one "teaches" a computer to read music. Before the advent of reliable, relatively easy-to-use music notation programs for personal computers, encoding music into a computer-readable form required that an operator translate the notational information into some other symbolic code. The Lockwood/Mendel project, for example, used an alpha-numeric input code called IML (Intermediary Musical Language). A line of IML code looks like this:

$1$145$ R2 R2 R4 *G4,DUL,/ G4* F4, CE, G2, RE, A2/ G2,FRI, F4,GE, G4.

To the layman it is not immediately obvious that this has much to do music at all. What is worse, even for those who invented the code, it was extraordinarily difficult to proofread the data. For example, IML provided no convenient way to indicate changes in register, so even after repeated proofreading, Lockwood and Mendel discovered

octave errors at every turn.[6] The ease with which errors could be introduced while entering hundreds of lines of such code was matched only by the difficulty of detecting and correcting them.

The situation is not noticeably better with the DARMS (Digital-Alternate Representation of Musical Scores) code, which Youngblood used in his investigation. A line of DARMS might look like this:

!M3:8/4QDL1,8RE 8QU 33QU 31QU 8QU 6*QUL2 4QJ 1QJ/

Granted, once one has worked with alpha-numeric codes for a while, they no longer look so formidable, and the possibility that each provides of aural playback provides another means of error checking. Still, those who have spent a lifetime dealing with musical notation tend to prefer a system that allows music to be entered and reported back in that form, and to have the computer take care of the conversion from notation to computer-readable code. This approach has become available in recent years, and it is used in the present study.

Musical notation has evolved over many centuries to the point of being (more or less) standardized in the greater part of Western society. Concertos that were published in the second half of the eighteenth century in what is now Latvia (Riga) pose few notational difficulties for modern researchers working halfway around the globe. Such standardization, however, is still very much lacking among commercial music-notation software programs. The goal of all such programs is to reproduce standard musical notation as closely as possible, but the ability of any one program to use the data of another is limited at best. The problem is as old as computing itself. Had the need ever arisen, for example, for Mendel/Lockwood and Youngblood to exchange data, someone would have had to devise a third program to translate one code into the other, since IML and DARMS were incompatible. In fact, IML originally worked only on the computer for

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[6]Mendel, "Toward Objective Criteria," 300.

which it was written, as Mendel and Lockwood, much to their dismay, discovered when Princeton decided to upgrade its computer system.[7] Fortunately, recent trends have been towards more compatibility rather than less among computer hardware platforms, programming languages, and commercial software. A specific manifestation of this trend with direct implications for the present study was the establishment in 1994 of the Notational Interchange File Format project (NIFF). The goal of NIFF is to provide an open, non-proprietary standard for the easy exchange of music notation data among various software programs running on any of the major hardware platforms.[8] The specifications for NIFF are now essentially complete, and the first commercial products to support the standard have been released. Widespread support for the standard will significantly mitigate the problem of music researchers working in isolation.

Methodology of the Present Study

Data Entry, Edition, and Conversion

The notation program used in the present study is *Finale* from Coda Music Technologies. Although *Finale* does not yet comply with NIFF standards, Coda has announced plans to publish the proprietary *Finale* file format, which will allow *Finale* data to be converted to a NIFF-compliant form and, more importantly for future progress involving this study, will allow the importation into *Finale* of data created by other programs.

To the best of my knowledge, none of the works used in the present study was available in computer-readable form before this investigation. In fact, many of them are still unavailable in modern editions. The twenty–nine pieces (the three disputed works and twenty–six in the control groups) were therefore entered into *Finale* specifically for

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[7]Mendel, "Some Preliminary Attempts," 44.

[8]"NIFF - An Introduction," electronic document received by the author from Alan Belkin, technical advisor to the NIFF project, on 9 March 1995.

use in the present study. Once the data are entered into the computer, they can be subject to as many sorts of analysis as one can program the computer to conduct. The value of this approach lies in the fact that the effort required to transcribe a musical score into computer-readable code must be expended only once. A danger lies in the fact that if the data are incorrectly entered, all of the analyses will be flawed to some degree. Data integrity is essential for drawing reliable conclusions. For the purposes of the present study, data integrity is measured by two benchmarks: what the composer wrote (or the best guess as to what he meant to write), and the correctness and consistency with which those notes are transcribed into computer readable form.

The first benchmark represents nothing less than the evaluation of sources and the production of an edition for each of the works. These are standard tools of the trade for musicologists. Even for works already available in modern editions, I based the computer scores on primary sources. Except for the three questionable works, which have here been fully edited (see Appendix A), the editions produced for this study are perhaps more correctly called near-diplomatic transcriptions of the most reliable sources, with obvious scribal errors corrected. In cases where two or more sources for a work seem equally authoritative, the earliest source was generally chosen as the basis for the edition. For the keyboard concertos by the Bach brothers, the composers' autographs were available for all but the Riga concertos and Friedrich's and Christian's London concertos. For the chamber works in the control group, no manuscript copies of Christian's works have survived that can reliably be associated with the composer himself, only prints. The opposite applies for Friedrich's chamber works: none of them was published during his lifetime, and they only survive in manuscript (mostly autograph) sources.

The paramount concern in editing the scores was accurate transcription of the notes. Dynamics and articulation, while potentially indicative of a composer's habits, were not taken into account in the statistical stage of this investigation because they

pose greater difficulties in establishing the composer's intentions (e.g., should parallel passages be normalized?). Especially challenging are cases where the best source cannot with certainty be traced back to the composer. While such issues certainly must be addressed when one is preparing scholarly editions, to do so here for all of the works would have either severely limited the number of works used in the control groups or sidetracked the investigation. It is, on the other hand, generally somewhat easier to determine with a relatively high degree of probability the actual notes that the composer intended, even in non-autograph sources, and the number of cases that cannot be so resolved do not represent a statistically significant total.[9] Fortunately, the Bach brothers were all relatively neat and accurate copyists (they had been trained in that capacity from an early age), so that determining what notes they actually wrote is seldom a problem.[10] For all of the pieces examined here, therefore, the scores have been redundantly proofread against the original sources and have also been aurally checked for stylistic anomalies. That such a process is necessary even for works already available in scholarly, modern editions is confirmed by Lockwood and Mendel's experiences working with the respected Smijers Josquin edition. The researchers (and their computer) were able to uncover "a fair-sized list of errata traceable to errors of transcription or typography in the Smijers edition."[11]

The second benchmark is the accuracy and consistency with which the readings arrived at in the editions are converted into a form that can be analyzed in the computer

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[9]The few well-known exceptions help to prove the rule. See Grier, *Critical Editing*, 1–2, for a summary discussion of the A/A# debate in the first movement of Beethoven's *Hammerklavier* Sonata, Op. 106 (mm. 224–26).

[10]It is true that many concerto autographs by Emanuel Bach present significant challenges to any editor trying to determine what actually was written. This occurs mostly, however, in those concertos that Emanuel later revised or rearranged for a different solo instrument, usually by scratching out the original reading and adding the revisions directly into the score, or by pasting over a section of the original with new paper and adding the revisions to that. The manuscripts for the five concertos considered here present few such problems. See Rachel W. Wade, *The Keyboard Concertos of Carl Philipp Emanuel Bach* (Ann Arbor, UMI Research Press, 1981), 66–83.

[11]Lockwood, "A Stylistic Investigation," 21. See also Mendel, "Some Preliminary Attempts," 45.

routines. Because the conversion is here done by the computer itself, systematic confirmation of accuracy seems only prudent. The computer routines provide two such checks (the present author has tested them both and invites readers to do so as well). (1) One can follow the logic of the computer code used to make the conversion (see Appendix B), or (2) one can utilize a capability written into the routines themselves to check the results of the conversion manually. The first method requires knowledge of specialized computer languages and familiarity with the file formats supported by *Finale* and StatScAn, the program specially written for this dissertation. The source file entitled "IMPORT.C" contains most of the pertinent algorithms. Those who can compile the source code on their own computers may prefer to do spot checks on the converted data itself, by referring to any place in the score and having the computer identify relevant information for all instruments at that point. By checking the beginning, ending, and several places in the middle of the score, it is possible to determine that the computer is indeed working with the same information as that found in the score. This provides a much easier method of confirming the integrity of the data than studying the source code of the computer routines. It also provides the capability—albeit an exceedingly time-consuming one—to check every note in the score.

Tabulation (StatScAn)

Statistical Score Analysis (abbreviated StatScAn) is a set of computer routines written by the author to extract statistical data from the scores of the three disputed works and of those used in the control groups. StatScAn is written in the C programming language, using Symantec Corporation's THINK C (version 5.0.4) development environment on a Macintosh computer. The program consists of a series of small modules, each designed to accomplish a specific task or related series of tasks. The modular nature of the program enables one to pursue new directions of investigation

without affecting the data or the results already obtained in the other modules. The modules are (1) Import a New Score, (2) Open a Saved Score, (3) Save a Score, (4) Display General Compositional Information, (5) Check Score, (6) Calculate Range and Tessitura, (7) Tabulate Doublings, (8) Tabulate Triads, and (9) Calculate Texture.

Before StatScAn is run, the data have been entered, edited, and proofread as described above. Once the scores are in their final edited form, *Finale* extracts the individual parts from the scores, and at the same time converts the data from their internal binary format to ASCII format, in which form they can be imported into StatScAn.

When StatScAn is started on the computer, its main menu appears showing two choices. One can either import a new piece of music consisting of a set of parts in ASCII format (accomplished by module one), or one can load a piece into the computer's memory that has already been converted into StatScAn's internal format (module two). When starting with a new piece that has not yet been converted, running module one causes StatScAn to read in the individual parts of the score one at a time and to verify that each measure contains the expected number of beats according to the time signature. If StatScAn finds no data entry errors, it then converts the ASCII data of the *Finale* files into its own internal format.

StatScAn treats the score as a matrix in which the vertical axis represents the number of parts in the score and the horizontal axis represents time. For the north German keyboard concertos examined here the number of parts is usually six: first violin, second violin, viola, bass, keyboard right hand, and keyboard left hand. The chamber works, and some of the concertos by Friedrich, are more variable in their instrumentation. All pieces examined here have an obbligato keyboard part, and the two hands are considered separate parts. This occasionally necessitates arbitrary decisions about which hand should take a given note, particularly in the middle range,

but as none of the computer routines relies on absolute placement of the keyboard notes between the hands, this is not crucial for the present purposes.

Time is measured in the matrix relative to the basic rhythmic unit of the piece. This is usually a quarter note, but in certain slow movements and for movements in 3/8 or compound meters it can instead be an eighth note. StatScAn divides the basic unit into twenty-four subdivisions (what I shall call time slices or ticks) and for each subdivision records what is happening at that point in all of the voices and saves the information to the appropriate place in the matrix.

It is easy to see that the matrix quickly becomes quite large: for example, the first movements of the concertos examined here average just over 200 measures in length. Assuming four beats per measure, the total number of ticks equals 19,200 (200 x 4 x 24), and for each tick the matrix stores information for (usually) six different voices. It is important, then, that the information be stored as compactly as possible. StatScAn records the following information for all voices at each tick: the number of notes sounding in the voice (i.e., single note = 1, double stop = 2, four-note chord = 4, up to a maximum of six for each voice); the number of sounding notes in the previous tick (for purposes of searching backwards through the matrix); whether there is an attack on any of the sounding notes; the octave register for each note (0 = CC octave, 3 = c' or middle c octave, etc.);[12] the pitch class for each note (1 = c, 2 = d, etc.); and the inflection of each note (1 = double flat, 2 = flat, 3 = uninflected, 4 = sharp, 5 = double sharp). Since all of the information is converted to numerical data, the storage requirements are reduced considerably. For example, attack information is binary—either there is an attack on note x in voice y at tick z, or there is not. Such binary information can be stored in the smallest possible memory unit, the bit. When there are more than two possible choices, such as the seven possible pitch classes, more memory is required to store that

[12]The octave designations C0, C1, etc., have become standard in the literature on computers and music.

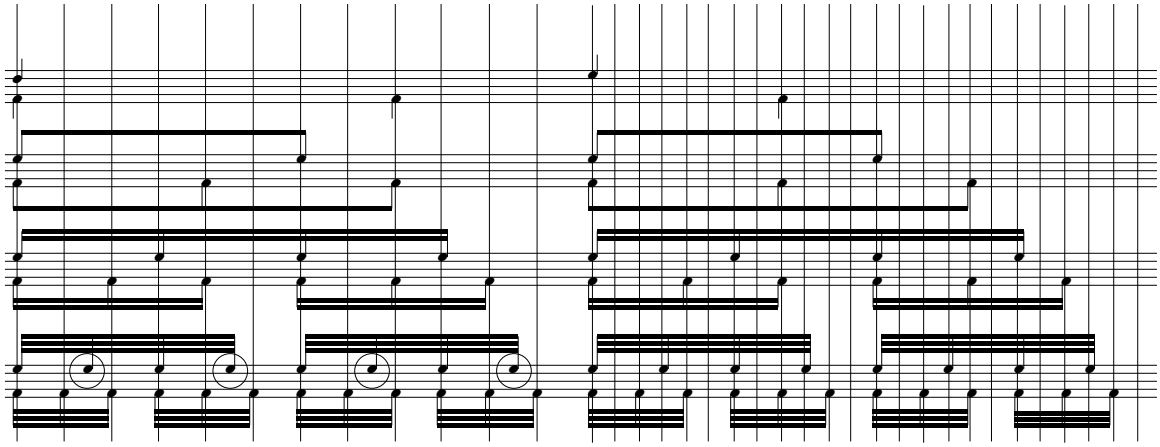
information. Here again, though, by converting the information into numerical data, those requirements can be minimized. A one-bit sized memory unit can store two values: 0 and 1. A two-bit sized unit can store four: 00, 01, 10, and 11, representing the numbers 0 through 3. A three-bit sized unit can store eight, representing the numbers 0 through 7. Conveniently, eight values are all that are required to represent the seven pitch classes (1–7), with the value 0 reserved for no pitch class, that is, a rest. Each of the remaining categories (octave, inflection, etc.) can also be stored in three-bit units, so that all the information for a single note can be stored in sixteen bits (= two bytes) of memory, and the matrix as a whole is kept within manageable limits for personal computers. A movement with 19,200 ticks and six single-note voices throughout requires 230,400 bytes, or roughly 230 KB (kilobytes), of computer memory.

The information that is stored for each note (except for what is required to navigate the matrix) consists of pitch and attack values only. A great deal of other musical information is not taken over into StatScAn. This was done not only to reduce the memory requirements, but also because including such attributes as dynamics, articulations, ornaments, grace notes, and slurring would have required a greater degree of editorial intervention than was possible or even prudent for such a study (such information would often reflect the editor's choices rather than the composer's, since certain features were often left to the discretion of the performer).

Parsing the pitch information into three separate categories (octave, pitch class, and inflection), while helping to minimize memory requirements, also serves to simplify some of the calculations used later in the program. In checking for doublings, for example, only the pitch classes must be compared to find, say, all the doublings at the interval of a third. One is usually not concerned whether the thirds are major or minor, but if pitch class and inflection were not separate, one would have to search twice—once for major and once for minor thirds. It is still possible, of course, to search for

specific interval qualities—augmented sixths, for example—in one pass through the matrix.

The resolution of the time slices, twenty-four per basic rhythmic unit, provides accurate information down to the level of triplet thirty-second notes (when the basic unit is a quarter note). This is best explained by means of an illustration. In the first quarter-note beat depicted below, the resolution (represented by vertical lines) is twelve divisions per beat. (The eight note values are—from top to bottom—quarter notes, triplet quarters, eighths, triplet eighths, sixteenths, triplet sixteenths, thirty-seconds, and triplet thirty-seconds.) One can see that a resolution of twelve divisions per beat is not precise enough to provide accurate information for thirty-second notes—the attack on every second note would be missing (the circled notes). The second beat shows a resolution of twenty-four divisions per beat, where each thirty-second note is properly registered.



A resolution of twenty-four divisions, of course, simply transfers the problem to the level of sixty-fourth notes. In the repertoire under consideration here, however, sixty-fourth notes occur only rarely, and usually take the form of written-out trill endings. Should a movement turn up that does contain a significant number of sixty-fourth notes,

the problem can be circumvented by choosing the eighth note as the basic unit, effectively doubling the resolution. Doubling the resolution, of course, results in a doubling of the file size as well, so one should always choose the largest resolution that still yields accurate statistical data.

Once the data have been converted into StatScAn's internal format, they can be used by the other modules. It is important to remember that *Finale's* and StatScAn's internal formats, as well as the conversion process itself, remain invisible to the user, thus eliminating the need for that person to deal with cryptic and non-musical codes. After the data have been saved in StatScAn's internal format, running module two causes the data for the selected movement to be read back into the computer's memory, where it is available to the other modules. The third module simply writes the information that was converted in the first module to the computer's hard disk drive, so that it is available for later use without needing to repeat the conversion process. StatScAn can operate on data for only a single movement at a time, so it is useful to have the converted data for each movement readily available on the hard disk.

The information provided by module four is of a very general nature, and serves chiefly as a check that all the parts of a movement have been properly converted and saved. The facts displayed here include the total number of ticks for the movement, the number and order of voices, the prevailing time and key signatures, the presence and duration of an anacrusis, the size of each voice (in bytes), and the size of the movement as a whole (in bytes and ticks).

The fifth module enables precise checking of StatScAn's data. At any selected point in the matrix it provides the abbreviated voice name (e.g., 414iiV1 refers to the first violin part in the second movement of Emanuel's concerto, H. 414), the presence or absence of an attack, the pitch class(es), and octave(s) for each voice in the following form:

```
Event #1560 = Measure #22 Beat #3 Tick #0

414iiV1     attack      f natural   3
414iiV2     attack      f natural   3
414iiVa     attack      a natural   2
414iiB      no attack   b flat      1
414iiRH     no attack   rest
414iiLH     no attack   b flat      1
```

In this way the entire matrix can be compared against the score to confirm that all the data have been accurately converted into StatScAn's internal format.

The first five modules were concerned with converting the musical information of the scores into StatScAn's internal format and with confirming the accuracy of the data. The following modules produce the actual statistical criteria upon which the determination of authorship will be based. Each module searches through the entire matrix tabulating occurrences of specific circumstances.

Module six calculates range and tessitura data for a single voice (see example below). It first lists the pitch names and octaves of every note played by the selected voice as well as the combined total of ticks that each note sounds, and also displays the same data in graphical form. It then provides the number of beats that the voice rested, both as an absolute value and as a percentage, the highest and lowest notes played, and the total range size in octaves and steps. It derives an "average" pitch for the voice by multiplying the number of ticks for each note by that note's numeric value (based on pitch class and octave), summing the values for all notes in the range, and then dividing that total by the number of notes in the range. The resulting numeric value is then converted back to its representation as a pitch class and octave. The average value is used to approximate the tessitura by tabulating first the percentage of time the voice plays the average pitch, then the percentage of time the voice plays within a range of one whole step below the average pitch to one whole step above, and so on, increasing the range of pitches included by one whole step in each direction until 100% of the notes played by the voice are accounted for.

```
Note Name     Oct Ticks   Beats
---------     --- -----   0....10....20...30...40...50...60...70

g natural      4    18     .
f natural      4    18     .
e flat         4   132     xx.
d natural      4   270     xxxxx.
d flat         4    48     x
c sharp        4    72     x.
c natural      4   558     xxxxxxxxxxx.
b natural      3   288     xxxxxx
b flat         3   828     xxxxxxxxxxxxxxxxx.
a natural      3   750     xxxxxxxxxxxxxxx.
g sharp        3   120     xx.
g natural      3   684     xxxxxxxxxxxxxx.
f sharp        3    72     x.
f natural      3   636     xxxxxxxxxxxxx.
e natural      3   384     xxxxxxxx
e flat         3    54     x.
d natural      3   780     xxxxxxxxxxxxxxxx.
c sharp        3   204     xxxx.
c natural      3   282     xxxxx.
b flat         2   102     xx.
a natural      2   234     xxxx.
g natural      2   114     xx.

    185.00 beats rest out of 462.00 total beats
    414iiV1 rests 40.04 % of the time

    highest note = g natural     4
    lowest note  = g natural     2

    total range is 2.00 octaves
    total range comprises 15 pitches

    'average' pitch = f 3

    tessitura @ 0 = 11
    tessitura @ 1 = 29
    tessitura @ 2 = 52
    tessitura @ 3 = 76
    tessitura @ 4 = 87
    tessitura @ 5 = 96
    tessitura @ 6 = 99
    tessitura @ 7 = 100
```

The seventh module calculates the percentage of time that any selected interval exists between any two voices. In this way one can check the occurrence of, say, the interval of a third between first and second violins, or the amount of time that violas double the bass line at the unison or octave. One can choose to evaluate an entire movement or specific portions of a movement. The option is an important one. The

concertos by Friedrich and Christian that were printed in London, for example, follow the convention (prevalent at the time in England) of duplicating the first violin part in the keyboard right hand during the ritornellos, so that the concertos could also be played as keyboard solos. To produce statistically useful results in such cases, one must be able to check for first-violin/keyboard-right-hand doublings only during the solo sections.

```
=====>>   D O U B L I N G S   <<=====

Check doublings for which two voices?
          Voice #1: 414iiV1
          Voice #2: 414iiV2
          Voice #3: 414iiVa
          Voice #4: 414iiB
          Voice #5: 414iiRH
          Voice #6: 414iiLH

First voice? 1

Second voice? 2

Which interval to check?
        1 = unisons and octaves
        2 = seconds and ninths
        3 = thirds and tenths
        4 = fourths and elevenths
        5 = fifths and twelfths
        6 = sixths and thirteenths
        7 = sevenths and fourteenths
Interval? 3

Check: <1> = whole piece, <2> = region 1

counter = 732       total ticks = 11088

414iiV1 and 414iiV2 are in '3's for 6.60 percent of the time
```

Module eight calculates the percentage of full triads (all inversions) occurring on selected beats (e.g., all of the downbeats, all of the second beats, etc.), and also tabulates the number of instances that no attacks were recorded for the first tick of a beat (i.e., all voices were resting or were tied over from the previous beat). An option is also provided to display the location of each such occurrence.

```
Check for triads on which beat of every measure? 1
Would you like to confirm each occurrence? <1> = yes, <0> = no 0

There are 49 triads on 154 beat 1s
31.82 percent

0 beat 1s have no attacks in all voices
```

The ninth module provides statistics pertaining to sonorities, either for an entire movement or for a specific region of a movement. Specifically, it tabulates the number of sounding voices and the number of discrete chord tones at each tick. The location of simultaneities consisting of more than four discrete chord tones can optionally be provided as well.

```
=====>>   T E X T U R E    <<=====
Check: <1> = whole piece, <2> = region 1

        sounding notes                  discrete chord tones

        ticks           %               ticks           %
0       258             2.33            258             2.33
1       354             3.19            1011            9.12
2       2286            20.62           3861            34.82
3       1380            12.45           5196            46.86
4       408             3.68            690             6.22
5       5244            47.29           72              0.65
6       1152            10.39           0               0.00
7       6               0.05            0               0.00
8       0               0.00            0               0.00
9       0               0.00            0               0.00
10      0               0.00            0               0.00
11      0               0.00            0               0.00
        _____           _____           _____           _____
        11088           100.00          11088           100.00

total ticks = 11088

<1> = Check chords with more than 4 chord tones; <2> = main menu:
```

Storage (Main Database)

StatScAn's various modules generate large quantities of raw data, data that need to be collected together in order to be subjected to standard statistical analyses. This occurs in a main database constructed using the program *Filemaker Pro* 4.0 from

Filemaker, Inc. In the main database each record represents one movement from a single piece, and the fields within those records receive the data generated by StatScAn. It is finally in this form that the data can easily be sorted and circumscribed and summarized (e.g., looking at only first movements of the concertos instead of the whole database). Here, for example is one summary layout (containing a subset of the data that will be explained in the next chapter).

CPEB	Concerto for Keyboard H. 414	Mvt 2
	V1/V2 in 3rds & 6ths	6.60
	Va/B in unisons & octaves	13.74
	RH/top in unisons & octaves	5.14
	Tessitura@3	76
	Downbeat Triads	31.82
	Texture0note	2.33
	Texture1note	9.12
	Texture4note	6.22
	Texture5andMore	0.65
	Solopct	57.14

Now that all the data for each movement from the Riga concertos and the control group pieces have been gathered together in one place, they can be collectively subjected to statistical analyses. The final chapter is devoted to such analyses and to the interpretation of the cumulative evidence supplied by all of the previous chapters.

CHAPTER 5

STATISTICAL EVALUATION OF THE DATA

Introduction

Concertos

The conflicting primary source material examined in Chapter 1 provides little basis upon which to assign authorship of either Riga concerto with any degree of confidence. The sources are, in fact, the very reason that that authorship is disputed in the first place. They do, however, afford fairly strong indications that the concertos stem from a member of the Bach family—probably either Emanuel or Christian.

The references to the concertos in the secondary literature do not supply any clarification. Indeed, they muddy the water even further, as it is only due to the citations by Meusel, Forkel, and Gerber that Friedrich becomes a candidate for authorship. Most of the more recent monographs and articles display little concern or even knowledge of the authorship problems—let alone attempt to solve them. Rather, they pass along received opinion or simply ignore the issue. Those authors who do grapple with the authenticity question have not done so in a convincing or complete manner.

The analysis of the internal evidence in Chapter 3 serves at least to show that both Emanuel and Christian were writing concertos very similar to the Riga examples during their tenures in Berlin. Friedrich's concertos, on the other hand, differ from the disputed concertos in large-scale form—especially in the second and third movements—

and instrumentation, so that any attribution of the Riga concertos to Friedrich would at least require an acknowledgement that none of his other surviving concertos are directly similar. The internal evidence also suggests that the Riga concertos were composed in the 1750s, despite their publication in the mid 1770s. One cannot, however, make a confident assignment of authorship based on traditional analytical techniques.

Sextet

The eighteenth-century musical sources of the sextet contain only minor ambiguities to suggest that Friedrich might have composed it instead of Christian. The various positions staked out for Friedrich's authorship in the secondary literature all rest essentially on Schünemann's interpretation of the title page of the Kraków source, which was unavailable to scholars for nearly forty years. Careful examination of the resurfaced Kraków manuscript, however, calls into question Schünemann's attribution by suggesting that Friedrich corrected himself; he changed his signature "GCFBach" to "GCBach." By the same token, those who reject Friedrich's authorship on stylistic grounds have not demonstrated sufficient familiarity with Friedrich's chamber music to support their claims. Indeed, Friedrich's activities as a composer of chamber music with obbligato keyboard show him to have been quite capable of writing such a work. Of course, this is a far cry from proving that Friedrich *must* have written the sextet, especially in light of the source attributions, but enough doubt remains to warrant further investigation.

Statistical Evidence

Measuring musical data

With none of the traditional methods for assigning authorship yielding conclusive results, it is only logical to seek new ways of evaluating what evidence there is.

Statistical methods have long been used in literary studies to clarify authorship questions.[1] In most of these investigations the statistics are generated by using word counts. To put it statistically, frequency of word usage is the variable that provides the basis of comparison among various authors. For most authors words represent the fundamental carriers of meaning. Naturally, investigators tend to avoid most contextual words, since authors rarely confine themselves to a single subject: the word "whale," for example, appears far more often in *Moby Dick* than it does in *The Confidence Man*, and is not a good indicator of overall "Melvilleness." In their examination of the disputed *Federalist Papers*, Mosteller and Wallace relied heavily on such non-contextual words as "by," "from," and "to." Word counts offer several advantages: they lend themselves well to statistical analysis, and they are easily generated from texts that are stored in computer readable form (and a large and rapidly increasing amount of the world's literature is available in this form).

The main problem in applying similar techniques to questions of musical authorship lies in finding appropriate variables corresponding to words in literature. Musical pitch classes cannot assume such a position, simply because there are too few of them. Choosing from an almost unlimited supply of words (with the artistic license to create new ones) is vastly different than choosing among the twelve tones of the Western chromatic scale, even given the nearly infinite available combinations of notes possible within a tonal system. In fact, no single musical attribute has the same fundamental function as do words in literature.

Nonetheless, a *combination* of musical attributes may yield fruitful statistical results. The choice of specific attributes was guided by two desiderata: (1) they should reflect as closely as possible sub- or semi-conscious compositional choices; (2) they

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[1]Mosteller, Frederick and David L. Wallace, *Applied Bayesian and Classical Inference: The Case of the Federalist Papers* (New York, Springer Verlag, 1984) is perhaps the best-known and most thorough such study, and it also provides a discussion of several other key statistical studies in literature.

should rely whenever possible on earlier work done in quantitative authorship studies. The first concern reverberates throughout authenticity studies in art history and literary history as well as music history.[2] The concept was first clearly articulated by the art historian Giovanni Morelli near the end of the nineteenth century. Morelli argued that any competent forger would be able to copy significant features of a master's style; only the seemingly insignificant details—ears, fingernails, pebbles, etc.—were good indicators of authorship. In the *Federalist Papers* study mentioned above, Mosteller and Wallace corroborated Morelli's thesis by discovering that the best discriminators in these literary texts were non-contextual function words such as articles, prepositions, adverbs. In musical studies, such "minor encoding habits" are compositional choices that one assumes the author made more or less mechanically "with little feedback from self-criticism."[3] Thus an investigation into artistic authorship, musical or otherwise, is comparable to a forensic investigation of a crime, where the most important evidence is often that which the perpetrator could not hide or disguise—fingerprints, microscopic fibers, genetic blueprints from DNA, and the like. Such details can rarely tell us much about the motive for the crime; their importance is in helping to identify the culprit. The second concern is to benefit from authenticity studies that have already been undertaken in eighteenth-century music. While the investigations by Brantley, LaRue, Steinberg, Wolf, and Paymer make use of often widely varying techniques, almost all have found texture and textural change to be relatively good discriminators between composers. The emphasis on texture (often in its simplest guise of "how many independent voices are playing?") in the following list of attributes reflects these findings. Admittedly, many more attributes could have been considered, including ones dealing with rhythm,

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[2]For a fuller discussion see William J. Paisley, "Identifying the Unknown Communicator in Painting, Literature and Music: The Significance of Minor Encoding Habits," *Journal of Communication* 14 (1964): 219–37; and Scott Fruehwald, *Authenticity Problems in Joseph Haydn's Early Instrumental Works: A Stylistic Investigation* (New York: Pendragon Press, 1988), 17–23.

[3]Paisley, "Identifying," 227.

harmony, and their interaction—along the lines of LaRue's and Wolf's "activity analysis." It was decided, however, that, in a pilot project such as this, quality of data should take precedence over quantity of data. Thus the present study measures ten attributes extracted by the computer routines described in the previous chapter from the body of known works, and compares them to their frequency of usage in the disputed works. The ten attributes are:

1. Percentage of time that the interval of a third (or tenth) occurs between first and second violins (abbreviated "V12in3s").
2. Percentage of time that a unison (or octave) occurs between viola and bass ("VaBuni").
3. Percentage of time that a unison (or octave) occurs between keyboard right hand and first violin ("V1RHuni").
4. Percentage of notes found within three whole steps of the "average" note of the tessitura of the top voice ("Tess@3").
5. Percentage of downbeats with complete triads ("Triads").
6. Percentage of texture consisting of zero discrete pitch classes (i.e., rests in all parts, "Text0").
7. Percentage of texture consisting of only one discrete pitch class ("Text1").
8. Percentage of texture consisting of four discrete pitch classes ("Text4").
9. Percentage of texture consisting of five or more discrete pitch classes ("Text5+").
10. Percentage of length of solo sections (abbreviated "Solo%").[4]

Three techniques are used to analyze these attributes. The first compares the average values for each composer of the known works to those of the disputed works

[4]For the attribute "Percent solo" only first movements are considered. In the second and third movements of his concertos, Friedrich does not employ ritornello form, so there is no adequate basis for comparison.

(once using unweighted means and once using means weighted by standard deviation).[5] The second creates a "similarity index" based on mean values and standard deviations. Finally a commercial statistical analysis program, *SPSS*, is used to perform discriminant analyses for each of the disputed movements. These techniques will be introduced and explained in the discussion of the concerto movements that follows directly, and then applied with less discussion to the chamber movements.

Statistical Procedures

Comparing means

In the first and simplest of these techniques, each composers' mean values and standard deviations are calculated for each of the ten attributes according to movement types (i.e., all first movements, all middle movements, and all final movements) and also for each of the disputed movements. Standard deviation is traditionally defined as a measure of how individual values of a data sample cluster around the mean. For example, the two series of numbers "9-10-11" and "0-10-20" both have a mean of 10, but the second series is obviously much more spread out than the first, and its standard deviation is correspondingly greater (7.07 as opposed to 1.00). As it applies to the current problem, for any compositional attribute *a*, the standard deviation can be rephrased as "how consistently does the composer do *a*." That is, the standard deviation helps to determine whether the mean represents simply the average of a seemingly random series of numbers or the central point of a compositional tendency manifested in the movements being examined. The lower the standard deviation, the more consistently the composer applied the attribute in the sample movements.

[5]The terms "mean" and "average" are synonymous and are used interchangeably throughout. The "median" is a statistical value that is similar to but not identical with the mean, and is not employed in any of the statistical analyses.

Attributes exhibiting a low standard deviation are better indicators of a composer's "usual" working method than those with high standard deviations.

An ideal indicator of authorship would be an attribute for which each composer's standard deviation is very low, while the corresponding mean values are quite distinct and representative of a large sample. In other words, any given value (say, a value from one of the Riga movements) would fit just one mean/standard deviation profile. Unfortunately, such ideal cases are hard to come by, and none has been found in the present study. There are cases where perhaps two of the three apply (for example, low standard deviations and distinct means, but coupled with a small sample size), but never all three. This does not, however, invalidate the method.

By way of example, the means and standard deviations for the first attribute (violins in thirds) are given below in Table 2 (the data for all ten attributes are given in Appendix C). The first two numbers in the first row, 8.80 and 6.93, indicate that, for the first movements of the five concertos by Emanuel, first and second violins play in thirds or tenths an average of 8.8% of the time, with a standard deviation of 6.93. The columns labelled "best" under the Riga concertos show the composer whose mean value most closely matches the corresponding Riga values.

	CPEB		JCB		JCFB		Riga 1		Riga 2	
Mvt	mean	sdev	mean	sdev	mean	sdev	mean	best	mean	best
First	8.80	6.93	16.92	6.13	21.02	5.37	5.28	CPEB	10.08	CPEB
Middle	13.04	7.87	21.46	13.87	28.71	7.67	10.96	CPEB	28.04	JCFB
Last	4.12	2.30	12.90	7.37	21.18	3.73	10.53	JCB	11.46	JCB

Table 2. Violins in Thirds: Means and Standard Deviations

The mean values in the first row of the table demonstrate clear distinctions between the three composers (8.80, 16.92, and 21.02) with acceptably large sample sizes (the smallest, 8.8%, still represents approximately 344 beats of parallel motion in thirds and tenths between the two violin parts in the five movements by Emanuel). What prevents this from being an ideal statistical case, however, are the mid-range standard deviations, which preclude making absolute distinctions between Emanuel and Christian on the one hand and between Christian and Friedrich on the other. Still, the values from the first movements of the Riga concertos are substantially closer to Emanuel's average than to either Christian's or Friedrich's.

The relatively strong indications for Emanuel found in the first movements are not confirmed in the middle and last movements, however. This is partially because the second Riga concerto has a much higher value for its second movement than any of the other Riga movements, but also because of Emanuel's own variations from movement to movement (8.80, 13.04, and 4.12 respectively). It is clear from the descriptions of concerto form by Quantz and others that such movement-to-movement variations are not only unavoidable but are, in fact, desirable, and they may even be a characteristic feature of a given composer's stylistic profile. Thus it should come as no surprise that a single attribute (here violins in thirds) does not produce the same results over all three movements. Remembering the assumption made in the introduction, though, that the Riga concertos were each written by a single composer, the cumulative evidence of all of the variables considered together should point to a single composer, if not for both Riga concertos, then at least for each of them.[6]

[6]Since the present study is a methodological exercise in clarifying attributions of works composed by a single hand, the improbable—although admittedly not impossible—case that either of the Riga concertos was a joint effort, with different composers responsible for individual movements or with multiple composers collaborating on the same movement, will not be considered. Developing tests to determine such collaborative efforts is beyond the scope of this dissertation.

In the first test, the composers' means for each attribute are compared to the Riga values (without considering standard deviations), and the composer with the mean closest to the corresponding Riga movement is awarded one point. In the first movement of Riga 1, for example, first and second violins play in thirds and tenths 5.28% of the time. Emanuel, whose mean for this attribute in his first movements is 8.80%, comes the closest of the three brothers, so he receives one point for being the putative composer of the first movement of Riga 1. After all of the attributes have thus been evaluated, the composer with the most points for each Riga movement becomes the most likely candidate for having written that movement. The tabulated results for the closest matches of all attributes are given below in Table 3. In one instance Emanuel and Christian have identical values (last movements—keyboard right hand and first violin in unison or octaves), so the point for being the closest is split between them. Also, since the tenth attribute (Solo%) is only applied to first movements, the column totals for second and third movements will only be nine.

	R1i	R1ii	R1iii	R2i	R2ii	R2iii
CPEB	6	5	4.5	6	3	6.5
JCB	2	2	3.5	3	3	2.5
JCFB	2	2	1	1	3	0

Table 3. Results of Comparing Unweighted Means for the Concertos

Emanuel's scores are the highest for five of the six movements, and the remaining movement is a tie between all three brothers. Christian generally occupies the middle ground while Friedrich consistently has the lowest score. These data would appear to support the statement: "Based on the specific sample of known concertos and using

statistics derived from the ten attributes, Emanuel is the most likely of the three composers to have written the majority of the Riga movements and thus is the author of both Riga concertos."

Means and standard deviations

Simply comparing the means of all of the attributes, however, is not the optimal method for determining authorship because it fails to consider whether the mean values are representative of consistent usage. To help determine consistency, we need to factor the standard deviations into the process to provide some weighting of the evidence. One method of achieving such weighting is to set an upper limit for the cumulative standard deviations of all three composers for each attribute and movement, and reject those attributes whose standard deviations exceed that limit as being too variable to discriminate precisely enough. The remaining attributes are then reevaluated using the same point-system as above.

For example, the standard deviations for the attribute "violins in thirds" for concerto first movements in Table 2 are 6.93 for Emanuel, 6.13 for Christian, and 5.37 for Friedrich. Adding the three of them together yields a combined standard deviation of 18.43. We set an arbitrary limit of twenty for this sum. All attributes whose combined standard deviations are less than twenty are retained, all others are discarded. Thus, the attribute "violins in thirds" for first movements is retained in this method of weighting, but "violins in thirds" for second movements, with a sum of 29.41, is not retained. Appendix C lists the ten attributes, along with the combined standard deviations for each movement (indicated by the Greek letters $\Sigma\sigma$), whether the attribute has been rejected or retained for this test, and the composers receiving the points for the retained attributes. Tallying the results yields the following:

	R1i	R1ii	R1iii	R2i	R2ii	R2iii
CPEB	5	3	2.5	5	2	5.5
JCB	1	0	3.5	2	1	1.5
JCFB	1	1	1	0	1	0

Table 4. Results of Comparing Weighted Means

Although this second test considers fewer attributes than did the first, those attributes are better discriminators among the three composers because of their lower standard deviations, so the results are theoretically more secure. Once again Emanuel scores highest in five out of six movements and usually by a considerable margin. Only in the third movement of Riga 1 does Christian now have the highest score, while Friedrich never does. This method of analyzing the data, therefore, again clearly points to Emanuel as the composer of all of the Riga movements except R1iii and possibly R2ii.

Similarity indexes

While weighting the data as above seems to provide a more secure basis for assigning authorship to most of the Riga movements than the first method, there are some limitations to the procedure that compel us to search for other methods as well. In the first place, the cut-off point of 20 for $\Sigma\sigma$ was set to eliminate attributes whose discriminatory powers were obviously inadequate, while still retaining enough "good" attributes to show cumulative trends. Had $\Sigma\sigma$ arbitrarily been set at 21 instead, three more attributes would have made the cut and the cumulative totals would have been different, but with a lesser degree of confidence since a larger $\Sigma\sigma$ indicates less consistency by the composers. By choosing a smaller limit for $\Sigma\sigma$, the totals would have had a greater degree of confidence from the point of view of standard deviations, but a

more limited basis of comparison due to the smaller data sample. A second limitation is that the method of determining which composer scores highest for a given attribute is somewhat rigid: it answers the question 'who is the closest?' but does not consider by how much. As long as a composer is closer than the other two to the Riga value, that composer receives the point for that attribute, regardless whether he is very close or not. Thirdly, one composer with a high standard deviation can cause an attribute to be rejected, even if the other two composers have relatively low standard deviations for it, and thus eliminate a potentially good discriminator between two of the three composers. Finally, attributes that occur relatively infrequently tend to have low standard deviations, and thus assert a greater influence on the outcome than they perhaps should. In order to minimize the effects of these limitations, yet another method of weighting the data was formulated to produce what I have called a "similarity index."

The similarity index takes into account all of the attributes for each movement, thus eliminating the need to set an arbitrary cut-off point. It is so derived that the lower the index the greater the similarity between a composer's values and those of the disputed movements. A composer whose mean for a particular attribute is far removed from a disputed work is penalized without affecting the scores of the other composers. The index also recognizes consistency by factoring the standard deviations into the equation.

To derive the similarity index (SI) for a single attribute one calculates the absolute value (since it is immaterial whether the mean is less than or greater than the disputed value) of the difference between the composer's mean value (x) and the value for the Riga movement (R). This number is then divided by the Riga value (to yield a ratio), and multiplied by the composer's standard deviation for the given attribute (σ). This can be represented by the formula

$$SI = (|R - x| / R) * \sigma$$

Turning the difference between R and x into a ratio (by dividing by R) serves to even out variations of scale between the attributes. The summed indexes for the ten individual attributes produce the final index for each composer, and the composer now with the smallest index is the most likely to have written the corresponding Riga movement.

The following example demonstrates the calculation of similarity indexes for the attribute "violins in thirds," considering only the data for the first movement of Riga 1 as shown in Table 2 above. The difference between Emanuel's mean (8.80) and the Riga value (5.28) is 3.52. Dividing this total by the Riga value (5.28) yields 0.67, which, when multiplied by Emanuel's standard deviation (6.93) gives an index of 4.62. Christian's mean (16.92) and standard deviation (6.13) yield an index of 13.51, and those for Friedrich (21.02 and 5.37) produce an index of 16.01.

The similarity indexes for each of the individual attributes are given in Appendix C, and the cumulative index for all of the attributes is tabulated below in Table 5 (with the lowest value in each column underlined):

	R1i	R1ii	R1iii	R2i	R2ii	R2iii
CPEB	<u>9.49</u>	<u>14.48</u>	19.60	<u>3.92</u>	26.05	<u>10.15</u>
JCB	17.73	24.56	<u>19.32</u>	9.39	<u>18.98</u>	13.58
JCFB	56.97	96.62	41.56	37.84	136.98	53.19

Table 5. Cumulative Similarity Indexes for the Riga Concertos

The results are similar to those derived through the other methods: Emanuel is the most likely candidate for the majority of the movements. The third movement of Riga 1 once again narrowly falls into Christian's purview. The second movement of Riga 2, which in the first two tests was assigned to Emanuel (but with Christian a close second), is here

assigned to Christian. Perhaps the most striking aspect of these similarity indexes is the degree to which Friedrich differs from the other two. For each movement, Friedrich's indexes are at least more than double the next nearest value, and in the extreme case (R2ii) Friedrich's value is over seven times the lowest value. While there may still be some question whether the Riga concertos belong to Emanuel or Christian, the similarity indexes seem to rule out Friedrich emphatically.

Discriminant analysis

The similarity indexes, while seemingly good discriminators because they consider all of the attributes and factor in standard deviations, are, however, unique to this dissertation and perhaps open to the criticism that they are not standard statistical procedures. There is, however, a branch of statistical studies dedicated specifically to problems similar to ours, called discriminant analysis. Discriminant analysis attempts to match unknown quantities with those known quantities that display the most similar characteristics. Many different algorithms have been developed for such analyses, and because of the complexity of the mathematics involved, it becomes necessary to employ statistical computer software to do the calculations. For this study, the commercial software program *SPSS* is used.[7]

Discriminant analysis permits even greater confidence in the final results than do the previous methods, because it calculates the actual predictive power of each attribute, so that analysis may focus on the best predictors. This is accomplished by treating each of the known cases (here, each of the known concerto movements) in turn as an unknown and seeing if the algorithm correctly determines the composer. Those attributes or combinations of attributes that best predict the known composers are then applied to the unknown movements. The following table lists the ten attributes along with the percentage of known movements correctly predicted by them.

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[7]Statistical Package for the Social Studies Ver. 6.1 (SPSS), SPSS, Chicago.

Attribute	1st mvts	2nd mvts	3rd mvts
V12in3s	46.67	53.85	86.67
VaBuni	83.33	58.33	58.33
V1RHuni	46.67	61.54	53.33
Tess@3	60.00	53.85	73.33
Triads	46.67	38.46	73.33
Text0	53.33	53.85	60.00
Text1	40.00	61.54	80.00
Text4	40.00	53.85	66.67
Text5+	60.00	69.23	60.00
Solo%	26.67		

Table 6. Percentage of Known Concerto Movements Correctly Predicted

All of the attributes except Solo% possess at least a modicum of predictive capability, since randomly assigning the movements to composers would theoretically result in success rates of 33.33%. Of most interest, however, are the attributes with the greatest accuracy, say 80% or greater, since these should yield the most conclusive results. For first movements, only the attribute violas and bass in unison (VaBuni) falls into this category. Performing discriminant analysis on the two Riga first movements using VaBuni as the predicting attribute yields a prediction that Riga 1 first movement is by Christian and Riga 2 first movement is by Emanuel. Similarly, the two best predictors of third movements (V12in3s and Text1), when applied individually to the Riga concertos, suggest Christian for both concertos (V12in3s) and Christian for Riga 1 and Emanuel for Riga 2 (Text1). This may seem to confuse matters, since the results tend to contradict those of the earlier methods employed, by suggesting Christian more frequently than

Emanuel, but these preliminary results are all based on single attributes only. By methodically testing all possible permutations of attributes, it is possible to isolate combinations of attributes that increase the accuracy of predictions to over 90%. Also, since none of the attributes alone achieved even 80% accuracy for second movements, it is only through such combinations that usable accuracy rates (≥90%) have been achieved for second movements.

By combining, for example, the three best predictors of first movements (VaBuni + Tess@3 + Text5) the accuracy of predicting known composers increases to 91.67%, but the two Riga first movements are still assigned to Christian and Emanuel respectively. The combination VaBuni + V12in3s + V1RHuni + Tess@3 yields the same accuracy (91.67%) and the same predictions for the Riga movements. No other combinations of attributes tested produced a higher accuracy rate for first movements. For second movements, the combination VaBuni + V12in3s + V1RHuni + Triads correctly predicted 100% of the known works. The same combination assigned both Riga slow movements to Emanuel. The combination VaBuni + V12in3s + V1RHuni + Triads was also able to predict correctly 100% of the known third movements. Applied to the Riga third movements, this combination again assigns both of them to Emanuel.

At this point it is necessary to discuss an aspect of discriminant analysis that directly impacts the findings so far. Because of the complexity of the mathematics involved, discriminant analysis tends to work best when there are only two possible categories to which the unknown quantities can be assigned. With the Riga concertos, however, the sources and secondary literature suggest three possibilities: Emanuel, Friedrich, or Christian. We have seen that the basis for an attribution to Friedrich is shaky indeed, and the statistical analyses up to this point have forcefully confirmed the suspicion that the attributions to Friedrich are incorrect. The similarity indexes, especially, have shown Friedrich's concertos to vary much more from the Riga concertos than do either Emanuel's or Christian's. The discriminant analyses offer further

confirmation. None of the attributes, either singly or in any of the combinations tested, ever once predicted that a Riga movement was by Friedrich. Eliminating Friedrich from the equation allows for a simpler two-group discriminant analysis, which effects a significant change for the combination VaBuni + Tess@3 + Text5 when testing first movements. The same number of known works by Emanuel and Christian are correctly predicted, but instead of predicting Christian for Riga 1 and Emanuel for Riga 2, both are now assigned to Emanuel. None of the other predictions changed based on repeating the discriminant analyses without Friedrich. Thus, in the final tally, the best predictors assigned five of the six Riga movements unequivocally to Emanuel, while the sixth movement is a borderline case between Emanuel and Christian.

Testing the sextet

The ten attributes used in the statistical studies of the concertos cannot all be used in the chamber works because of the variable instrumentation from work to work. One cannot test for parallel motion between first and second violins, for example, when there is only one violin playing. Thus for the chamber works we use only the six attributes from the concertos that are meaningful in a chamber context:

1. Percentage of notes found within three whole steps of the "average" note of the tessitura of the top voice (usually first violin).
2. Percentage of downbeats with complete triads.
3. Percentage of texture consisting of zero discrete pitch classes.
4. Percentage of texture consisting of only one discrete pitch class.
5. Percentage of texture consisting of four discrete pitch classes.
6. Percentage of texture consisting of five or more discrete pitch classes.

Otherwise, except for the fact that only two composers are candidates, the analyses performed on the chamber works are the same as those used for the concertos.

Table 7 shows the cumulative results for the three movements of the sextet when unweighted means for all attributes are compared with the sextet values and one point is awarded to the closest composer for each attribute.

	1st mvt	2nd mvt	3rd mvt
JCB	3	3	4
JCFB	3	3	2

Table 7. Results of Comparing Unweighted Means for the Chamber Works

These results are not entirely helpful in clarifying the authorship of the sextet, providing as they do only the slightest hint that Christian is the more likely author.

For two reasons, the second test (using weighted means) will be skipped over. In the first place, the pool of attributes has already been whittled down from ten to six, so that rejecting additional attributes with high cumulative standard deviations might reduce the total data sample to an unacceptably small size. Secondly, of the five known chamber works by Christian in the control group, only one is in three movements. Thus, when testing middle movements, Christian is represented by just a single value. This is not a problem calculating means, since a single value is identical to its mean, but the standard deviation of a single value is undefined.

Undefined standard deviations, of course, create problems for the calculation of similarity indexes as well, so they will only be calculated for first and third movements. Additionally, the value for the attribute Text5+ for the sextet third movement is zero, resulting in a division by zero in the formula to calculate the similarity index. Since division by zero is also undefined, Text5+ has been left out of the similarity index for the third movement.

	1st mvt	3rd mvt
JCB	11.22	4.81
JCFB	8.93	3.26

Table 8. Cumulative Similarity Indexes for the Sextet

Here, Friedrich emerges as the most likely composer for both first and third movements, but only by a slim margin in the third movements.

Luckily, the discriminant analyses provide some much needed clarity in what, up to now, has been for all practical purposes a statistical tie between Friedrich and Christian. The discriminant analyses make use of all six of the attributes and are not affected by the undefined standard deviations that hampered the similarity indexes for the second movements. The percentage of correct predictions by each of the individual attributes is given in Table 9.

Attribute	1st mvts	2nd mvts	3rd mvts
Tess@3	66.67	75.00	55.56
Triads	66.67	75.00	77.78
Text0	55.56	100.00	77.78
Text1	55.56	80.00	100.00
Text4	77.78	80.00	44.44
Text5+	55.56	75.00	44.44

Table 9. Percentage of Known Chamber Movements Correctly Predicted

Here, by contrast with the discriminant analyses of the concertos, the combination of all of the attributes correctly predicts 100% of the known chamber movements by both composers. Running discriminant analyses on the sextet using the full gamut of attributes results in a prediction that Christian composed all three movements, a result that corroborates the source evidence in favor of Christian.

Conclusions

General

Before drawing specific conclusions about the authorship of the disputed works, a few words of caution are perhaps in order. The underlying premise of the entire dissertation has been that any single work by a given composer will likely be more similar to other works by the same composer than it will be to works by other composers. Of course, one can imagine a composer writing in widely (or even wildly) differing styles from one piece to the next or trying to imitate the writing of other composers or otherwise attempting to disguise his authorship. By basing the statistical investigation on "minor encoding habits," however, even attempts to write in the style of somebody else should still point to the true authors. Certainly, based on our knowledge of their lives and music, the Bach brothers can hardly be charged with such arbitrary stylistic fluctuations. Whatever fluctuations are evident seem to have resulted mainly from change of location—Emanuel moving from Berlin to Hamburg, for example, or Christian moving from Berlin to Milan to London. Originality was highly prized, yes, but not at the risk of eccentricity.

Certainly the conclusions drawn in this study remain open to debate. The methodology is new and there is undeniably much room for improvement. I make no claim to have proven anything, but I do think the statistical evidence provides a reasonable basis upon which to assign preliminary attributions. To those who might

reject the underlying premise, however, I can offer little response except perhaps to quote Jan LaRue: "it is obviously very difficult to prove that a composer could not under any circumstances—torture, for example—have written a given piece."[8]

Concertos

The statistical analyses point rather clearly to Emanuel being the composer of most of the Riga movements. The borderline movements (R1iii and R2ii), while they are sometimes assigned to Christian in the analyses, are cases for which the values for Emanuel and Christian are so close that an attribution to Emanuel remains tenable. Keeping in mind our assumption that the Riga concertos are not collaborative efforts we therefore attribute both Riga concertos to Emanuel.

The major difficulty with attributing the Riga concertos to Emanuel is their absence from the so-called *Nachlassverzeichnis* (and the subsequent catalogues based on it). This is not, however, an insurmountable difficulty. Rachel Wade addresses this very issue:

> [A]ny concerto attributed to C. P. E. Bach but which is not in the *Nachlassverzeichnis* must be regarded with some suspicion. The composer's own record-keeping efforts, as well as the writings of those close to him, present quite a consistent overview of his activity. Of course, in listing his works even a composer might be guilty of inaccuracies or omissions, especially if his career extended over five decades, as Bach's did. He might also deliberately suppress some of his early compositions, if he later judged them to be unworthy. C. P. E. Bach did write, in a letter of 1786, that he had burned several of his old works. Accordingly, even the authority of the *Nachlassverzeichnis* cannot be absolute. . .[9]

In the letter cited by Wade Emanuel writes: ". . . but still I have just burned a ream and more of old works of mine, and rejoice that they are no more."[10] It is certainly not

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[8]Jan LaRue, "The Gniezno Symphony not by Haydn," in *Festskrift Jens Peter Larsen*, ed. Nils Schiørring, Henrik Glahn, and Carsten E. Hatting (Copenhagen: Wilhelm Hansen Musik-Forlag, 1972), 256.

[9]Wade, *Keyboard Concertos*, 14.

[10]". . . doch habe ich vor kurzem ein Ries u. mehr alte Arbeiten von mir verbrannt u. freue mich, daß sie nicht mehr sind." Emanuel to Johann Joachim Eschenburg, 21 January 1786, Suchalla, *Briefe und Dokumente*, 2:1135. Translated in Stevens, "Keyboard Concertos," 16.

unthinkable that copies of some of these old works existed that Emanuel had forgotten about or, indeed, never knew about, and that original works may thus have survived that did not find their way into the *Nachlassverzeichnis*.

In the present case, one could imagine the following scenario: Emanuel decides at some point to disavow the two Riga concertos and burns his copies. He is unaware of or no longer remembers the existence of one or more copies of these works. One such copy was located in Leipzig, from which Gerber then copied in 1768. Other copies could have been made as early as 1750 by Johann Gottfried Müthel, who in May of that year, at the age of 22, came to Leipzig to study under Johann Sebastian. At the end of July Sebastian Bach died and Müthel, after remaining for several weeks with the Bach family in Leipzig, moved on first to Naumburg, where he continued his studies for almost a year under Sebastian's son-in-law Johann Christoph Altnikol, and then to Potsdam and Berlin to visit Emanuel. According to Bode, Müthel and Emanuel maintained a friendly correspondence for some years thereafter, and Müthel also occasionally acted as Emanuel's agent in Riga.[11] It would certainly have been possible at any of these stations for Müthel to have copied early keyboard concertos by Emanuel. In 1753 Müthel moved to Riga, where he remained for the last thirty-five years of his life, enjoying the atmosphere of the middle-class artistic circles that also included Hartknoch and Herder.

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[11]Johann Joachim Christoph Bode (1730-93) was the publisher and partial translator of Burney's travel diaries into German. He added much commentary in footnotes when he felt Burney's information was inaccurate, when he thought Burney was being unfair in his treatment of German composers or culture, or when he had additional information that was unavailable to Burney, as was the case with the long footnote describing Müthel's circumstances. Concerning Müthel's correspondence with C. P. E. Bach, Bode writes "und nachdem er sich einige Zeit in Potsdam aufgehalten hatte, ging er nach Berlin. Hier hielt er sich besonders zu seinem Freunde, dem hamburgischen Bach, der damals Kammermusikus beim Könige von Preußen war und mit dem er noch in einem freundschaftlichen Briefwechsel steht" (and after he had spent some time in Potsdam, he went to Berlin. Here he visited particularly with his friend, the Hamburg Bach, who at that time was chamber musician to the Prussian king, and with whom he still maintains a friendly correspondence). *Carl Burneys der Musik Doktors Tagebuch seiner musikalischen Reisen.* (1773; reprint, Wilhelmshaven: Heinrichshofen's Verlag, 1980), 3:471–72 n. 48.

The scene now shifts to twenty years later. Hartknoch, having had some success with his publication of Emanuel's sonatas *"all' uso delle Donne"* in 1773, is encouraged to publish more works by members of the Bach family. Herder provides him the necessary contact with Friedrich in Bückeburg, and for other works he turns to Müthel, who digs around in his pile of old manuscripts and comes across two concertos labelled simply "Bach," remembers incorrectly and presents them to Hartknoch as concertos by Christian. Hartknoch is delighted to be able to offer works from yet another Bach, especially concertos in the north German tradition from the middle of the century that were still popular in the Baltic region, and publishes them in good faith as works by Christian. Hartknoch's attribution then finds its way into Breitkopf's catalogue supplement of 1776. The attributions of the remaining primary sources are either direct attributions to Emanuel or could be interpreted as such and, since we also attribute both concertos to Emanuel, are no longer problematic. Two questions remain however. Why did Boineburg, if he indeed was copying from Hartknoch, reject the attribution to Christian, and what source did Thompson use for his 1772 (i.e., pre-Hartknoch) publication? For the first question, it is possible that Boineburg was in possession of "inside" knowledge from his various contacts with the Bach family, or perhaps he felt that the Riga concertos were more like the other concertos he knew by Emanuel than they were to any he might have known by Christian. For the second question, the most likely source for Thompson's edition would have been Christian himself, still in possession of Berlin concertos by Emanuel, but, since there was a steady flow of foreign musicians in and out of London, it certainly could have been brought to England by someone else.

Sextet

The results of the statistical tests on the sextet were perhaps less decisive than the source situation might have led one to believe. In the end, though, the discriminant analysis did provide corroboration of what the sources suggested, namely, that

Christian is the composer of the sextet. That Friedrich copied out the work in his own hand indicates that a score of the sextet was in Bückeburg at some point, providing indirect evidence that Friedrich and Christian maintained contact with each other between the time Friedrich left Leipzig in 1749 and the only other documented occasion when the two met, during Friedrich's visit to London in 1778. Though little direct evidence for it exists, such contact would not be surprising, given that the two brothers were only three years apart in age and that Friedrich later entrusted his son to Christian's care and training.

Further Application of the Methodology

The most immediate application of the methodology developed here would be to extend the investigation to other conflicting concerto and chamber attributions within the Bach family. Expanding the scope to the study to include concertos by Sebastian and Friedemann would no doubt provide clarification for the several other concertos now lumped together under the heading "Bach incerta." A next possible step would then be to expand the scope to works that have been attributed both to a member of the Bach family and to a non-family member.

As the number of scores available to researchers increases, and as the incompatibilities encountered by the pioneers of computer technology in musicological studies diminish, the goal of easy access to a critical mass of information about eighteenth-century composers seems to be getting ever closer. Having methodologies in place to parse and interpret that information in new ways can certainly go a long way towards increasing our knowledge and understanding of the period. Of course, there is no reason why the methodologies developed here cannot be used for music from other periods as well. Conflicting attributions are by no means unique to the eighteenth century. The techniques could also conceivably be employed in addressing questions of

chronology. It is hoped in any case, that the current development of open standards in computer hardware and software, and the opportunity of easily exchanging information and data over the Internet, will encourage cooperation and a pooling of resources among researchers, so that the cumulative effect of studies such as this one will be greater than the sum of the individual parts.