A

MOZART'S HARMONIZATION EXERCISES FOR BARBARA PLOYER

by

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Contents

Introduction

Mozart's "Ployer Studies" are the extant portion of the composition lessons he gave to Barbara Ployer in Vienna, probably during the spring of 1784. Sometime early in the nineteenth century, they were bound together with an unrelated set of contrapuntal exercises. The resulting aggregate (now in the possession of the Austrian National Library in Vienna) is known as K453b.

This dissertation discusses Mozart's pedagogical process as displayed in the harmonization exercises, those in which Mozart set Ployer the task of determining a suitable bass line to a melody of his own invention. The other exercises in the manuscript, those in species counterpoint and string quartet and chorale settings, are related tangentially to the harmonization exercises but reveal less about Mozart's pedagogy. Consequently, I discuss them only in terms of their relationship to the course of the lessons and their similarities with the harmonization exercises.

Had Mozart written his own treatise on composition, the present study would have begun with a description of the treatise's principles and proceeded to highlight these in the exercises that Mozart gave to Ployer. No such composition treatise exists, of course, and the principles on which it might have been based must be gleaned from the examination of the details of the exercises themselves. Consequently, the current investigation proceeds from the surface characteristics of the exercises to the principles that lie at the core of Mozart's approach. Thus, rather than lay out the foundation of Mozart's pedagogy at the outset, I gradually deconstruct the exercises to reveal the theoretical and compositional motivation behind the set of lessons as a whole.

I examine several elements of this pedagogical process in detail. The first is the general course that the lessons took—the types of exercises that Mozart gave at the beginning, middle, and end of Ployer's study. I establish a hypothetical order in which the exercises were assigned and completed that provides an overview of the entire manuscript

and of the general pedagogical approach taken by Mozart. The second concerns the relationship between two of the most visible pedagogical tools at work in the manuscript—fundamental bass, which Mozart either provided for Ployer or asked her to determine herself, and continuo bass, which Mozart sometimes displays in models to which Ployer could refer and which he always requires Ployer to provide. Mozart graduates the level of difficulty by providing the entire fundamental bass in early exercises and none at all in the final ones. The complexity of the figures in the continuo similarly increases throughout. Most significantly, Mozart uses fundamental and continuo bass to convey the structure of the exercises to Ployer. In this regard, the fundamental bass suggests the root progressions that organize a phrase while the continuo often stipulates the contrapuntal relationship between the outer voices. These basses working in tandem lead to the third element, which concerns structure in general and the role played by recurring contrapuntal/harmonic patterns in particular. These *voice-leading paradigms*, as I call them, permeate the exercises and bear the greatest responsibility for communicating the structural organization at the highest level. The dissertation concludes by showing that these paradigms are the natural outgrowth of several interrelated disciplines of compositional theory that flourished before and during the eighteenth century.

Past Scholarship and Approaches

The collection of exercises, as it now exists, is incomplete and out of order, providing neither an entire picture of the lessons nor a satisfactory sequence in which the exercises were assigned and completed. Though I postulate, after close scrutiny of the manuscript, the existence of specific portions of exercises separated from the collection, the exact amount of missing material will undoubtedly remain unknown. Since their collection, scholars have organized the exercises primarily by genre, of which there are five, representing the tasks that Ployer had to perform. The largest block consists of string quartet settings in which Ployer had to provide the inner parts to a melody and figured bass supplied by Mozart. Exercises in which Ployer had to determine a bass to a given melody

are the next most numerous. Two-part counterpoint exercises in first and second species constitute the third main group. Exercises in chorale setting and figured bass realization play a smaller, though significant, role in the lessons.

Traditionally, the Ployer Studies have been linked with other material to provide a view of Mozart's theory pedagogy as a whole. Scholars have consistently sought answers to the following questions: How do the Ployer Studies reflect the pedagogical tradition of which Mozart was a part? What relation is there, if any, between the material in the Ployer Studies and Mozart's own compositional practice? Can the identity of the student for whom the exercises were written and the provenance of the manuscript itself be determined with any degree of certainty?

These questions were first asked by Robert Lach in his 1918 monograph, *W. A. Mozart als Theoretiker*, which, standing at the beginning of the twentieth century, initiates the way in which the manuscript has been viewed for nearly eighty years, up to and including the publication of the Ployer Studies in the *Neue Mozart Ausgabe*.[1] Lach's is the first attempt at a comprehensive understanding of Mozart's theory pedagogy and its origins. He considered the Ployer Studies along with the unrelated contrapuntal studies and with the spurious *Kurzgefaßte Generalbaß-Schule* as the primary sources exemplifying Mozart as theorist.[2] Lach provides a transcription of K453b as well as several pages in facsimile.

Lach states several important theses that have had far-reaching consequences for the subsequent study of the manuscript. For Lach, the manuscript reflects both Mozart's own musical education as learned from his father Leopold, and also the description that Mozart wrote of lessons that he himself gave to a duke's daughter in Paris in 1778. Lach provides both direct and tangential evidence linking the material in the lesson book to Mozart's own

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[1]Robert Lach, *W. A. Mozart als Theoretiker* (Vienna: Kaiserliche Akademie der Wissenschaften in Wien, 1918).

[2] W. A. Mozart? *Kurzgefaßte Generalbaß-Schule* (Vienna: Anton Strauss, 1818).

compositions. Later publications such as Eric Lauer's *Mozart, wie ihn niemand kennt* expand on this point.[3] Lauer states that similarities between the melodies of the lessons and Mozart's actual compositions go beyond thematic resemblance and that the general nature of the tonal language and melodic gesture of the exercises for Ployer resemble that of Mozart's own compositions and, at times, bear striking similarity to the fugues of J. S. Bach.

Lach's study contains extremely astute observations about the Ployer Studies. Nonetheless, several issues that appear only in passing in his work are of great significance and have yet to be explored in detail. In his pithy discussion of the general content of the exercises, Lach alights on three issues in particular that have great significance for the understanding of the harmonization exercises. The issues concern the *procedure* by which the exercises were to be completed, the *design* for which they were intended, and the *content* in which much about Mozart as a theorist is revealed.

§ Lach refers to a two-step procedure by which Ployer completed the harmonization exercises. He writes that Ployer, after she invented a bass, was to indicate, in a third system, the general harmonic framework that resulted between her part and Mozart's.[4] Mozart refers to the line that contains the harmonic analysis as the *fundamental bass.* Lach states further that the harmonic framework gleaned from the initial setting provides the foundation on which other bass lines were built.[5]

§ Lach surmises that Mozart designed the exercises specifically to suit Ployer's needs. This is significant because, despite many of his own statements to the contrary (some even quoted by Lach), it suggests that Mozart was a conscientious teacher, sensitive to the needs of his student.

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[3]Eric Lauer, *Mozart, wie ihn niemand kennt. Mozart als Lehrer im Kontrapunkt. Mozart als Schüler Bachs in der Fugentechnik. Ein anonymes Stammbuchblatt. Nach einem fast vergessen Übungsheft* (Frankfurt am Main: Friedrich Hofmeister, 1958).

[4]Lach, 26.

[5]Ibid.

§ Lach recognized thematic similarities between different exercises. This observation concerning the contents of the exercises has great significance for him, for it allows him to assert that the method that Mozart used to teach Ployer is essentially the same that he used in the composition lessons that he gave in Paris in 1778 and that his own father sanctioned. In an endnote, Lach quotes a letter from Leopold in which he writes, "mit Variationen hast du einen guten Weg genommen" (you have found a good method with variation).[6]

However, the issues concerning procedure, design, and content in the harmonization exercises, as with many other of Lach's keen observations, come and go in a few sentences. Lach does not investigate these important issues in any detail, nor does he provide significant findings past these bare assertions to enlighten the reader about Mozart's pedagogy.

The complete Ployer Studies were published in both facsimile and transcription for the first time in the *Neue Mozart Ausgabe* in 1989, edited by Alfred Mann and Hellmut Federhofer.[7] This edition significantly contributes to the scholarship concerning the manuscript. First, it summarizes the document's provenance and relation to Ployer. Second, it contains a fair number of bibliographic references to the literature surrounding the manuscript, including Attwood's study with Mozart, Lach's, Lauer's, and Federhofer's work on Mozart as theorist, and biographical studies on Ployer and Maximilian Stadler (in whose possession the manuscript first appeared). Third, and, perhaps, most importantly, it transcribes and presents a complete facsimile. Unlike Lach's transcription, this one is published, as is the whole volume, in oblong format, which allows direct correspondence between the facsimile and the clear notation of the transcription. Fourth, it includes a critical

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[6]Letter of May 28, 1778, in Emily Anderson, *The Letters of Mozart and His Family*, 2nd ed. (New York: St. Martin's Press, 1966), 103.

[7]Hellmut Federhofer, ed. *Barbara Ployers und Franz Jakob Freystädtlers Theorie- und Kompositionsstudien bei Mozart* (Kassel: Bärenreiter, 1989).

commentary that contains a thorough physical description of the document—its dimensions, rastration, etc.—as well as a description of the form of each exercise, the task that Ployer had to perform, its relation to exercises preceding or to earlier or later versions that appear elsewhere in the manuscript, a listing of Ployer's errors, and an explanation of corrections.[8]

As one would expect from a scholarly edition, the volume dedicated to the Ployer Studies in the *Neue Mozart Ausgabe* is essentially descriptive, rather than analytical. The approach is not significantly different from that taken by Lach seventy years earlier. As such, it stands as the culmination of Lach's work and the starting point for further research into the specific nature of the exercises themselves and what their design and content suggests about Mozart's pedagogical approach.

Issues Raised in the Current Study

The present study focuses on the harmonization exercises, for it is here that Mozart displays his pedagogical technique and theoretical imagination most clearly. The other types of exercises, those in species counterpoint, four-part figured bass harmonization, and string quartet settings, are tangential to these in logical and creative ways. These latter tasks focus primarily on mechanical skills like chord construction and voice leading. The harmonization exercises, on the other hand, require an understanding and integration of more sophisticated compositional elements, raising the following issues.

§ *What did Mozart want Ployer to do in the harmonization exercises and with what tools did he expect her to do it?* Lach's answer to this question is clear: Mozart wanted Ployer to invent a bass beneath his given melody and then determine from the resulting combination the harmonic framework that would provide the foundation for further settings in which she could improve her bass line. Thus, thoroughbass and fundamental bass interact to produce a series of settings.

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[8]Hellmut Federhofer, *Kommentar* (Kassel: Bärenreiter, 1989).

Several problems and questions arise from this hypothesis. First, Ployer's initial settings, upon which Lach assumes she establishes a harmonic foundation, are often drastically flawed. Would Mozart allow her to write a group of settings upon a faulty harmonic progression? Second, Ployer's basses do not merely improve from one setting to another, as Lach asserts; rather they frequently evince a graduated increase in the level of figuration. Thus, they represent variations, not simply improvements. Third, due to the reciprocal nature of the thoroughbass and fundamental bass (by which either might provide the basis for the other), how could Lach be sure that Ployer wrote the thoroughbass first and afterward determined the fundamental bass?

The present study argues that the function of either type of bass is determined primarily by the specific design of each harmonization exercise. Once the harmonic framework is established, it does indeed act as a foundation, providing a framework for variation or diminution basses. I examine each harmonization exercise seeking evidence that suggests a cause and effect relationship between the two basses. Such evidence includes a limited number of circumstances in which aspects of the individual basses point to one or the other as being generative or derivative.

§ *How do the harmonization exercises differ from each other?* Mozart fashioned three types of harmonization exercises, each tailored to accommodate Ployer's abilities. In the simplest exercises, Mozart provides his own fundamental bass, in addition to the melody, leaving Ployer to determine a continuo bass founded on Mozart's harmonic guide. In intermediate exercises, Mozart provides the fundamental bass to portions of the exercise and leaves the rest for Ployer to determine on her own. In the most advanced harmonization exercises, Mozart provides only the melody, leaving all the decisions to Ployer. Though Mozart clearly regulated the level of their difficulty, the exercises were not all presented from easiest to hardest.

§ *In what order were the exercises completed?* The evidence suggests that Mozart, after assigning one or more diagnostic exercises, provided Ployer with tasks of increasing

complexity in accordance with her development. However, determining the order in which the exercises were completed is a formidable undertaking for several reasons. First, the collection contains a variety of different types of exercises, which lend themselves to no logical ordering in particular. For example, did Mozart assign the string quartet settings before, after, or concurrently with the harmonization exercises? Second, the unknown amount of missing material complicates the issue of how the exercises were assigned and completed. Third, the manner in which the folios were filled complicates the process of ordering the exercises. Some folios, fortunately, appear to have been filled from top to bottom and front to back in a single, uninterrupted sequence. However, on many folios, Ployer wrote something at the top of the page then left the folio to write elsewhere, returning to fill in the remaining portion of the first folio only later. The fact that several versions of the same exercise appear separated by many folios attests to the haphazard manner in which Ployer filled the pages.

§ *How did Mozart determine what Ployer knew at the beginning of her studies and how did he tailor the lessons to her abilities?* Regardless of his familiarity with Ployer's abilities as a piano student, Mozart, at some point, had to find out what Ployer knew about theory. In order to accomplish this, Mozart gave Ployer a set of diagnostic exercises. From Ployer's poor completion of these exercises, it appears that Mozart initially overestimated her abilities.

A detailed discussion of one diagnostic exercise in particular indicates that Ployer was seriously deficient in voice-leading, chord construction, and basic thoroughbass syntax. To remedy her poor voice leading, Mozart assigned species counterpoint exercises. To fortify her uneven knowledge of figured bass, he assigned figured bass chorales in which Ployer had to label all the intervals formed between the bass and the upper parts. Mozart's logical and creative approach to Ployer's education extends beyond the simple application of remedial exercises to subtle and sophisticated approaches that are detailed below.

§ *What is the significance of the melodic similarities between the various exercises?* As mentioned above, Lach noticed thematic resemblance between several of the melodies that Mozart gave to Ployer. For Lach, this is proof that Mozart followed a type of variation technique sanctioned by his father. However, the significance is deeper. This issue leads to a central focus of the present study and to the heart of Mozart's pedagogical process and its relationship to other practices.

The melodic similarities between numerous portions of various exercises belong to larger structural entities that I call voice-leading paradigms—contrapuntal/harmonic formulae that organize material at the phrase level and beyond. In many ways, the paradigms are synonymous with the rhetorical concept *inventio*, for they provide the seed from which the passages themselves grow. Melody, thoroughbass, and fundamental bass can be seen in the larger context as the outward manifestation of the paradigms. A satisfactory completion of a setting involves the convergence of these elements into a unified whole in which various paradigms are integrated.

The nature of the paradigms, perhaps, can be best understood by analogy to the jigsaw puzzle. All jigsaw puzzles, even when completely disassembled, have a predetermined form in which all the pieces fit together to form a whole. In each of the harmonization exercises, Mozart connected certain pieces of the puzzle and asked Ployer to find the other pieces that complete the picture: he always gives the melody, which contains important elements of the voice-leading paradigm; he sometimes provides the fundamental bass; and occasionally he provides the continuo bass. Each configuration of given elements required Ployer to look at the exercise in a different way and provide different complementary information to complete the puzzle or paradigm.

The investigation of thematic similarities and the voice-leading paradigms of which they are a part originates in a survey of all the melodies that Mozart composed for the harmonization exercises and related material. From this survey, I catalog a number of passages that contain similar melodic material and assign labels that correspond to the

voice-leading paradigms to which the patterns belong. Each paradigm is examined for the individual traits that make it distinct from others.

After identifying the various melodic patterns, I examine the ways in which the patterns are set. This portion of the investigation centers on Mozart's settings of one melodic pattern in particular. A comparison of these settings indicates that certain elements of Mozart's harmonizations recur. The points of congruence between each setting form the voice-leading paradigms that organize the phrase as a whole.

§ *What purpose do the paradigms have in the exercises? How are the paradigms made manifest in the context of the lessons?* The correct completion of a harmonization exercise requires that Ployer identify from the given material what paradigm was appropriate in any given circumstance. The lack of a verbal text to the exercises makes it difficult, but not impossible, to ascertain the extent to which the paradigms entered into the actual discussion at the lessons. Since the mere presence of the paradigms is not enough to establish that Mozart used them as an overt pedagogical tool, other evidence must be sought. To this end, I investigate Ployer's settings and Mozart's corrections of the phrases that contain the same melodic pattern. Corrections that bend Ployer's settings to conform with the governing voice-leading paradigm suggest that they play a significant role in Mozart's pedagogy. This study seeks evidence that indicates Mozart's intent to design his exercises with the paradigms in mind. Such exercises may suggest that Mozart expected Ployer to identify the melodic patterns and set them according to the proper paradigms.

§ *What is the relationship between Mozart's theory pedagogy and other eighteenth-century approaches?* The evidence suggests Mozart's pedagogical approach is a synthesis of the primary eighteenth-century theoretical tenets. I take the work of several theorists, including Riepel, Rameau, and Kirnberger, as points of comparison and show how the voice-leading paradigms are related to the disciplines of counterpoint, thoroughbass, harmonic theory, and contrapuntal theory.

These questions are answered by dissecting the manuscript itself, which offers easy solutions to some questions while keeping its most important secrets hidden beneath the surface of the music. Of course, the most valuable information will never be known with certainty: what did Mozart and Ployer actually talk about during their lessons? The conversation books of Beethoven (those that are genuine) reveal much about the composer and his relationship to other people. No such transcript, however, of the dialog between Mozart and Ployer exists. While Mozart wrote many letters, only a notable few (and none to Ployer that are extant) contain much in the way of information about his pedagogical process. Therefore, the remains of the manuscript alone must suffice to answer our questions.

The dissertation is divided into three parts. The first describes the history of references to the manuscript, presents the accumulation of circumstantial evidence that links the manuscript to Barbara Ployer, determines a hypothetical order in which the exercises were assigned and completed, and details the diagnostic period with which the lessons began. The second investigates the melodic material that recurs throughout the exercises, establishes the voice-leading paradigms to which this material belongs, and discusses the role played by fundamental bass and paradigms in Mozart's concept of structure. The third part presents the conclusions gleaned from the first two parts and relates Mozart's theoretical pedagogy to that of his contemporaries.

PART 1

Chapter 1

The Genesis of KV453b and Its Relationship to Barbara Ployer

Several sources relate the genesis of KV 453b, which is now in the possession of the Austrian National library.[1] The facts center around two interrelated questions: What is the earliest record of the manuscript? And for whose lessons was it compiled? The following discussion summarizes the relevant information.

Early References to the Manuscript

The first reference to the manuscript appears in the 1823 biography of Mozart by Georg Nicolaus von Nissen (1761-1826): "Abbé [Maximilian] Stadler [1748-1833] has in his possession a very valuable work, namely a lesson in composition, which Mozart gave to his [the abbé's] cousin and which he then got from her as a keepsake. 'As often as I go through these pages,' says Stadler, 'I remember the great master and am glad to find out how he taught.'"[2] Stadler himself mentions the manuscript in his 1826 monograph on Mozart's *Requiem*.[3]

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[1]The most important of these are as follows: Robert Lach, 1918; Eric Lauer, 1958; John Hind Chesnut, *Mozart as a Teacher of Elementary Musical Theory* (Ph.D. diss., University of Chicago, 1976); Walter Senn, "Barbara Ployer, Mozarts Klavierschülerin," *Österreichische Musikzeitschrift* 33 (1978) and "Abbé Maximilian Stadler: Mozarts Nachlaß und das 'Unterrichtsheft' KV 453b," in *Mozart-Jahrbuch 1980-83 des Zentralinstitutes für Mozartforschung der internationalen Stiftung Mozarteum Salzburg* (Kassel: Bärenreiter, 1983); and Hellmut Federhofer, *Barbara Ployers und Franz Jakob Freystädtlers Theorie- und Kompositionsstudien bei Mozart: Vorwort* (Basel: Bärenreiter, 1989).

[2]"Abbé Stadler besitzt ein sehr schätzbares Werk, nämlich einen Unterricht in der Composition, welchen Mozart seiner Cousine ertheilte, und den er von ihr als Andenken erhielt. So oft ich diese Blätter durchgehe, sagt Abbé Stadler, erinnere ich mich an den grossen Meister, und freue mich, daraus zu ersehen, wie er im Unterrichte zu Werke ging." Georg Nicolaus von Nissen, *Biographie W. A. Mozarts nach Originalbriefen, Sammlungen alles über ihn Geschriebenen, mit vielen neuen Beylagen, Steindrücken, Musik Blättern und einem Facsimile* (Leipzig: Breitkopf and Härtel, 1823), 671.

Vincent Novello (1781-1861) describes a manuscript shown to him and his wife by Stadler upon their visit to him in Vienna on July 24, 1829.[4] According to Novello:

> "He [Stadler] received us in the most kind and friendly manner. Our conversation of course turned upon his friend Mozart and soon he produced some of his treasures. They were several exercises and lessons in Thorough Bass and composition which Mozart had given to a lady, the cousin of the Abbè. The greater part were in Mozart's own handwriting, in some places he had written only the Melody, and the lady had to try her skill in adapting a bass and marking the Roots of the chords. In other specimens he had written the Melody, the Bass and had added the figures, the lady was to fill up the intermediate parts according to the harmonies he had indicated. Next followed his remarks and corrections of the defects, and what was still more interesting, his own mode of scoring and treating the same subject, so as to make it 'a little better' than what had been accomplished by the lady."

Novello's description of one page in particular matches the exercise in G minor from folios 7b and 8a of the lesson book and suggests that the manuscript in Stadler's possession was indeed the Ployer Studies. "One [exercise] in G minor, beginning on a Pedal Bass for several bars with a most numerous and elaborate collection of figures for the Thorough Bass, struck me as being particularly beautiful."[5]

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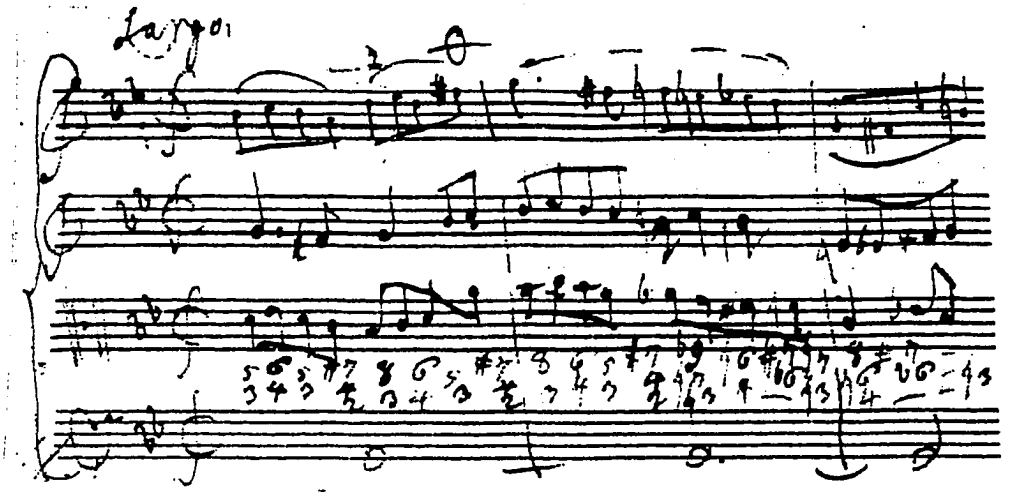
[3]Maximilian Stadler, *Vertheidigung der Echtheit des Mozartischen Requiem* (Vienna: 1826), 13f.

[4]Rosemary Hughes ed., *A Mozart Pilgrimage. Being the diaries of Vincent and Mary Novello in the year 1829.* Transcribed and compiled by Nerina Medici di Marignano (London: 1955), 154.

[5]Ibid.

Illustration 1-1. The Ployer Studies; Folio 7a, measures 1-3. G-minor exercise beginning with pedal bass, hereafter, the "Novello."



During his visit, Novello also saw the sketches and contrapuntal studies unrelated to those given to Stadler's cousin.[6]

> "In another parcel of manuscripts, all in Mozart's handwriting, were some very curious and erudite studies and exercises of his own: several were in Canon of the most difficult and complicated construction, but he seemed to have the same intuitive perception of the capabilities of every interval, both as to its position in the scale and its duration as to time, as that which was possessed by Sebastian Bach and other great writers in Canon."[7]

Novello's description of the manuscripts in Stadler's possession suggests that they were not bound at the time when he examined them. By indicating that the sketches and contrapuntal studies were "in another parcel of manuscripts," Novello implies that the lesson's for Stadler's cousin were similarly contained. Stadler may have placed these pages in some sort of box or envelope so that the manuscript's pages would not be separated from each other. Lach, in passing, seems to draw a distinction between the state of the

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[6]In note 114 on page 346, Hughes, the editor of the Novello diaries, states erroneously that "these contrapuntal exercises written by Mozart in 1782 [sic] for Maximilienne Stadler [sic], the Abbè's niece (not his cousin), are described and discussed by Robert Lach in *W. A. Mozart als Theoretiker*." Hughes' statement depicts the confusion concerning the dating of the manuscript (though Stadler himself wrote 1784 on the first page of the manuscript) and the identity of the student and her relationship to Stadler.

[7]Ibid.

Ployer Studies and the contrapuntal studies. In his description of the handwriting found in the latter studies, he writes: "on the originally loose pages, folios 14 to 19, [handwriting different from Stadler's appears]."[8] The fact that the pages of the manuscript were bound sometime after the completion of the lessons might account for the rather haphazard arrangement of the exercises.[9] There is no record indicating when the manuscripts came into Stadler's possession nor from whom he received them.

The commentary to the Ployer Studies in the *Neue Mozart Ausgabe* describes the manuscript as a whole, in which, as of 1989, the lesson's for Stadler's cousin were bound together with the sketches and contrapuntal studies:

> The book comprises thirteen folios from Mozart's and the student's hand, written with brown ink on folios in the oblique format 31.5 x 22.8 cm and has been bound together a long time ago (in a leatherboard with brown-red marbled cardboard without title) with six additional folios, which do not belong to the lesson book, but comprise sketches and studies of Mozart. The heading on folio 1a, which in darker ink—probably originating from Abbè Maximilian Stadler—reads: "Mozart's Teaching in Composition 1784." Probably the third digit of the date originally was the numeral 7, which was changed to 8. However the correction—considering the writing and the color of the ink—came from the same hand.[10]

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[8]"Auf dem ursprünglich losen Blättern..." Lach, 6 (translation mine).

[9]In a personal correspondence, Prof. Dr. Günter Brosche of the Austrian National Library informed me that the binding of the lesson book had been separated so that the individual pages could be displayed in the State Hall of the library as part of the commemoration of the 200th anniversary of Mozart's death.

[10]"Das Heft umfaßt dreizehn von der Hand Mozarts und der Schülerin mit brauner Tinte beschriebene Blätter im Querformat 31,5 x 22,8 cm und ist bereits in alter Zeit mit sechs weiteren Blätter, die nicht zum Unterrichtsheft gehören, aber Skizzen und Studien Mozarts enthalten, in einen Halblederband mit braunrot marmoriertem Pappbanddeckel ohne Aufschrift zusammengebunden worden. Die Überschrift auf Blatt 1a, die in schwarzer Tinte wahrscheinlich Abbè Maximillian Stadler hinzufügte, lautet: 'Mozarts Unterricht in der Komposition 1784.' Vertumlich stand an dritter Stelle der Jahrezahl ursprünglich die Ziffer '7', die in '8' verbessert wurde. Jedoch erfolgte die Verbesserung—nach Schrift und Tintenfarbe zu schließen—von derselben Hand." Federhofer, *Kommentar*, 3.

When the Manuscript Came into the Possession of the Vienna Court Library

Apparently, Stadler donated several of his Mozart manuscripts, the lesson book and the contrapuntal studies included, to the Vienna court library sometime before his death in 1833. According to Novello, Stadler gave Mozart's manuscript of the *Dies irae* and his copy of the *Requiem aeternam* and *Kyrie* to the library by 1829.[11] However, the library records indicate that the donation was made in 1831.[12] It is likely that Stadler donated all his manuscripts to the library at once; in this scenario the lesson book, contrapuntal studies and sketches, and the manuscript copy of the *Requiem* would have entered the libraries collection at the same time. According to Senn "when and from whose hand the lesson book came into the collection of the court library can not be established."[13] Senn writes: "through friendly correspondence with the director of the music collection of the Austrian National library in Vienna, Prof. Dr. Franz Grasberger, on April 15, 1977...it is not known when and from whom the lesson book was acquired."[14] Lach states that Stadler himself placed the lesson book in the Court library.[15]

An examination of comments made by Aloys Fuchs in 1846 suggests that at that time the Ployer studies were indeed in the library's collection and bound together with the six unrelated folios containing sketches. Fuchs registered the sketches under 626b/3 with the comments: "this notebook comes from a [female] student of Mozart's whom he instructed in composition. Mozart wrote for her in his own hand the first voice (first violin)

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[11]Hughes, 124.

[12]Franz Giegling, Alexander Weinmann, and Gerd Sievers, eds., *Chronologisch-thematisches Verzeichnis sämtlicher Tonwerke Wolfgang Amade Mozarts...etc.* 6th ed., (Wiesbaden: 1964), 729.

[13]Senn, 1983, 296.

[14]Ibid., note 49, 296.

[15]Lach, 14f.

and the student had to add the two accompanying voices and figure the bass...Vienna, June 1846."[16]

Senn supposes that Fuchs learned after Stadler's death that Mozart had in fact a female theory student. Senn suspects that Fuchs believed as well that the sketches and contrapuntal studies of KV 626b/3 should be attributed to Stadler's cousin because they were bound together with that manuscript. Novello's description, which states that the sketches came from a parcel of manuscripts different than the lesson book, suggests that the sketches and the lessons were not joined together in Stadler's collection. Perhaps, they were bound together when they came into the court library's possession. It appears that Fuchs may have been familiar with the Ployer studies being grouped with the contrapuntal sketches as early as 1842.[17]

Documentation of Mozart's Connection with Barbara Ployer

The search for the identity of the student for whom the lesson book was compiled begins with Stadler's assertion that the manuscript originally belonged to a female cousin of his. Johann Evangelist Engl (d. 1921) was the first to state that Stadler's cousin, hence the student to whom the manuscript belonged, was Barbara Ployer.[18] Ployer had been sent by her father, Franz Cajetan Ployer, from her hometown, Sarmingstein (what is now Bezirk Perg) to Vienna to live with her uncle, Gottfried Ignaz von Ployer, after her mother's death

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[16]"Dieses Notenblatt stammt von einer Schülerin Mozarts her, welcher Er in der Composition Unterricht gab. Mozart schrieb ihr die 1te Stimme (Violino 1mo) eigenhändig auf, und die Schülerin mußte die 2 Begleitungsstimmen hinzufügen und den Baß beziffern...Wien im Juni 1846." Senn, 1983, 296.

[17]See Senn, 1983, note 51, 296.

[18]Johann Evangelist Engl, *Festschrift zur Mozart-Centenarfeier in Salzburg am 15., 16. und 17. Juli 1891* (Salzburg: 1891). Engl, however, confuses the lesson book with material regarding rules of thorough bass attributed to Mozart, published in two separate but nearly identical volumes after Mozart's death. The *Kurzgefasste Generalbass-Schule* (Vienna: Anton Strauss, 1818) and the *Fundament des Generalbasses* (Berlin: Schüppelschen Buchhandlung, 1822) have nothing whatsoever to do with the Ployer Studies.

in 1779.[19] Engl, however, offers no proof of either the familial relation between Stadler and Ployer nor of their musical association during which she may have studied composition with Mozart.

Lach corresponded with Engl, asking him to provide evidence supporting both these assertions. Engl responded by citing Mozart's letters that refer to Ployer in connection with the piano concertos that Mozart dedicated to her and the social company that they shared.[20] Engl, however, provided no information proving that Ployer was indeed Stadler's cousin.

Letters from Mozart and His Father Mentioning Contact with Ployer or Her Family

There are 3 letters in which Mozart mentions Barbara Ployer. The first is dated February 10, 1784. In the letter, Mozart tells his father that he is dedicating to Ployer the Piano Concerto in E♭, KV 449, the very first piece to be entered into his personal catalog.[21] Mozart and Ployer must have had contact with one another before this date. Presumably, they knew each other long enough for Mozart to determine that Ployer was worthy of the dedication, which reads "per la Sig^{ra} de Ployer Viena li 9 di Feb 1784." By Mozart's description of the work, Senn hypothesizes that Mozart composed the work for a house academy.[22]

In the second letter, Mozart wrote to his father on April 10, 1784 telling him that he had dedicated a Piano Concerto in G major, KV 453, to Ployer.[23] Mozart entered the work in his catalog on April 12; the dedication reads "per la Sig^{ra} Barbara Ployer."

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[19]Senn, 1978, 19.

[20]Lach, 15-17.

[21]William A. Bauer, Otto Erich Deutsch, and Joseph Heinz Eibl, eds., *Mozart: Briefe und Aufzeichnungen* (Kassel: 1962-75), Vol. III, No. 776, 302, lines 22-25.

[22]Senn, 1978, 20.

[23]Bauer-Deutsch, III, No. 783, 309, lines 19-20.

In the third letter, from June 12 of the same year, Mozart tells of his visit to Gottfried Ignaz von Ployer, the uncle with whom Ployer stayed while she lived in Vienna.[24] The letter states that Ployer performed the Concerto in G, KV 453, and that Mozart performed the Piano Quintet in E♭, KV 452. Together, they played the Sonata for Two Pianos in D, KV 448.

These three letters are the ones traditionally cited to indicate that Mozart and Ployer moved within some of the same musical circles in the spring of 1784. The lessons in composition, if indeed Ployer studied composition with Mozart, are generally accepted to have occurred during this period.

Other references, however, indicate that contact between Mozart and the Ployers continued for some years after the spring of 1784, though no correspondence mentions Barbara by name. Leopold Mozart, for example, during his visit to Vienna from February 12-April 25, 1785, mentions three contacts with Gottfried Ignaz von Ployer, but does not mention Barbara, though another contemporary source indicates that she was in Vienna at the time.[25]

Albums and Other Sources Regarding Mozart's Relation to Ployer

The remaining evidence that documents the connection between Mozart and Ployer stems from various entries in albums and from the written-out improvisation for the second movement to the Piano Concerto in A major, KV 488, which, according to Wolfgang Plath, comes from the same hand as that found in the Ployer Studies. Federhofer writes that Plath examined the two manuscripts and determined that the handwriting is identical.[26] However, Federhofer provides no citation. Furthermore, the handwriting, though certainly

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[24]Bauer-Deutsch, III, No. 797, 318, lines 22-28.

[25]Senn, 1978, 21.

[26]Federhofer, *Vorwort*, x.

stemming from the same person, provides no evidence regarding the identity of the writer, since both sources are, essentially, anonymous.

If, indeed, it was Ployer who wrote out the improvisatory passages to the second movement of the piano concerto and if the improvisations stem from Mozart himself, then Ployer was in contact with Mozart as late as March 2, 1786—the day on which Mozart entered the concerto into his catalog.[27] Even later, Barbara's father, Franz Cajetan, made an entry into Mozart's album on June 28, 1787 thanking him for sharing some of his immense talent with his daughter.[28]

Entries in Barbara Ployer's own album, which has been lost since 1945, indicate several important facts: 1) Ployer was a well-respected member of the Vienna musical community and had contact with Haydn and Albrectsberger; 2) Ployer was, indeed, a cousin of Abbé Maximilian Stadler; 3) Ployer had a personal association with Constanze Mozart; and 4) Ployer's musical contact with Mozart likely extended beyond piano lessons to include theoretical and compositional studies.[29]

Several notable people showed their respect for Ployer by making entries into her album, among them Joseph Haydn and Johann Georg Albrechtsberger. Haydn entered a double crab canon "Du sollst an einen Gott glauben" with the dedication, "from your adorer and admirer Joseph Hayden."[30] Albrechtsberger entered a four-voice fugue and signed beneath it, "unworthy master" (unwürdiger Meister).[31] According to Stadler,

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[27]W. A. Mozart, *Verzeichnüss aller meiner Werke* (1784-91).

[28]Otto Erich Deutsch, *Mozart—Die Dokumente seines Lebens* (Kassel: 1961), 259. "Tibi, qui coelesti Apollinis arte / cunctos superasti, eaque natam / suam insignem reddidisti, in / perpetuam grati animi ac / amicitiae significationem."

[29]Roland Tenschert, "Das Stammbuch der Babette Ployer" *39th Annual report of the international Mozarteum conference in Salzburg 1929* (1927). The quotations from the album that appear below are from Tenschert's transcription of the entries.

[30]"Von Ihrem Verehrer und Bewunderer Joseph Hayden." Senn states that the dedication was obviously written later and with a different pen than the notes and text of the canon. Senn, 1978, note 30.

[31]Ibid., 22.

"Albrechtsberger taught her composition, so that she was able to improvise for long periods of time at the piano and extemporize over a given theme or play different types of variations upon it."[32] Senn, however, points out that Stadler, despite his familiarity with both Ployer and Mozart, makes no mention of any composition studies that Ployer had with Mozart.[33] Instead, Stadler indicates only that she had Mozart as a piano teacher.[34]

In Ployer's album, Stadler signs his ode to her, "Fedelissimo Cugino Massimiliano Stadler Abbate Commendatatio." The word *Cugino* indicates that Stadler and Ployer were, in fact, cousins—second cousins to be precise; Senn states that they are related through a great aunt of Ployer's (see the partial family tree in Figure 1-1).[35]

A dedication signed by Constanze Mozart also appears in Ployer's album. The message appears beneath a miniature portrait of Mozart.[36]

> In the belief, that you, kind friend!
> always deservedly knew to value
> my deceased husband's unmistakable talent,
> I affirm here with this eternal keepsake of his silhouette
> his and my friendship,
> and am sure that he, from beyond, nods his approval to me.[37]

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[32]"Albrechtsberger unterrichtete sie in der Composition, und sie brachte es dahin, daß sie ganze Stunden auf dem Klavier zu fantasiren und ein gegebenes Thema regelmäßig aus dem Stegreif auszuführen oder auf verschiedene Art zu variren wußte." Abbè Maximilian Stadler, "Seine Materialien zur Geschichte der Musik unter den österreichischen Regenten," in *Schriftenreihe der Internationalen Stiftung Mozarteum in Salzburg*, ed. Karl Wagner, vol. 6, 126.

[33]Senn, 1978, 22.

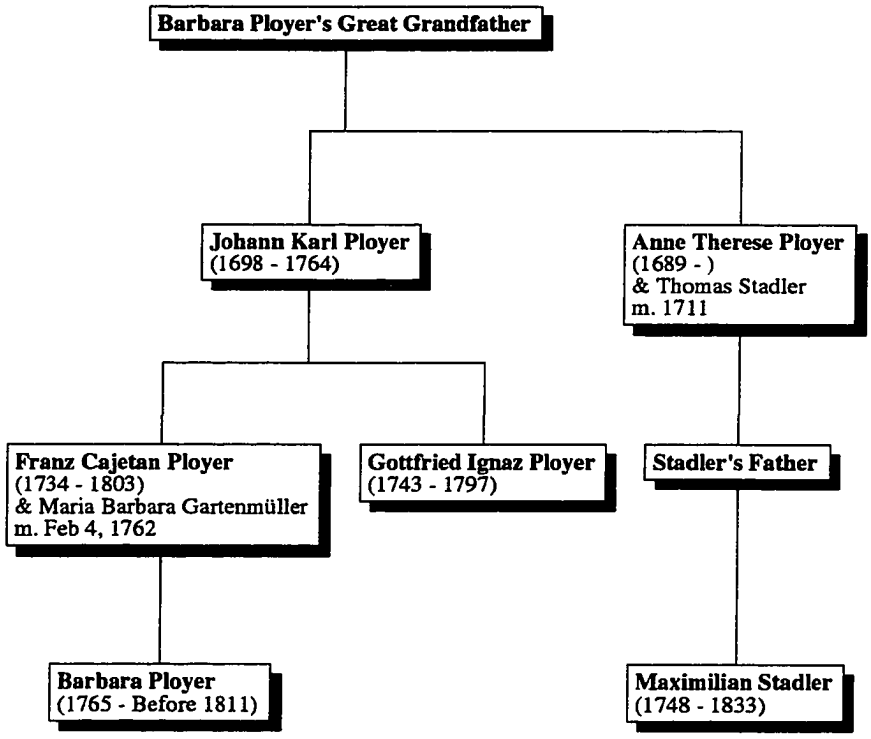
[34]Ibid., 19.

[35]Ibid., 23.

[36]Ibid., 23-24. Facsimile of portrait in Otto Erich Deutsch, *Mozart und seine Welt in zeitgenössischen Bildern* (*Neue Mozart Ausgabe, Serie X, Workgruppe 32*). Senn writes that the dedication is probably authentic. "Die Widmung wurde offenbar von Constanze bestellt" Senn, 1978, 24.

[37]In der Überzeugnung, daß Sie, Liebe Freundin! / meines verstorbenen Gemahls unverkennbaren / Talente jederzeit nach Verdienst zu schätzen / wusten, füge ich hier zum immerwährenden / Andenken seiner und meiner Freundschaft / sein Schattenbild bey, und bin sicher, daß er / mir deshalb dort—seinen Beyfall zunücht.—

Figure 1-1. Partial family tree indicating the relationship between Abbé Maximilian Stadler and Barbara Ployer.[38]



Ployer's album contains a sixteen-measure funeral march written in Mozart's hand.[39] Perhaps the funeral march was intended as a joke, initiated, possibly, by Ployer's departure from Vienna. The funeral march may also be intended as a parody of the D major Piano Concerto KV 451, which begins with the same rhythm.[40] Curiously enough, Mozart signs "Marche funebre del Sig[r]. Maestro Contrapunto." This is the one bit of evidence linking Ployer to theoretical studies with Mozart.

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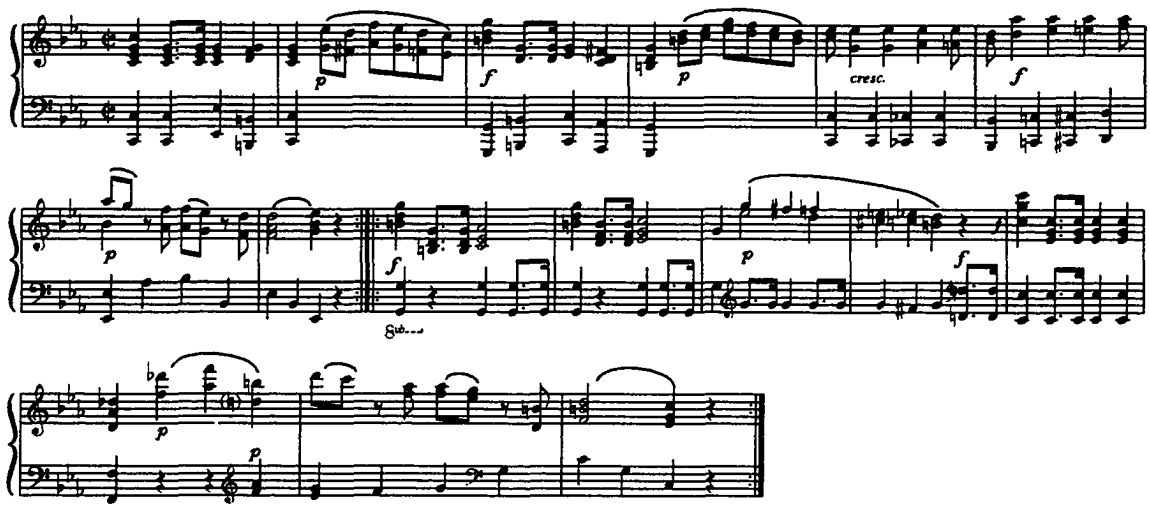
[38]This information comes from Senn, 1978, 18-19. See his footnote 5 for sources. The family tree shows those individuals necessary to establish the familial relationship between Barbara Ployer and Maximilian Stadler. The tree also includes Gottfried Ignaz von Ployer because of his close association with his niece, Barbara.

[39]Roland Tenschert, "Eine unbekannte Komposition Mozarts?" *Die Musik* 1 (1929/30), 22. The composition was originally attributed to Beethoven.

[40]See Einstein's comment on page 1013 of the third edition of Mozart's thematic catalog.

Example 1-1. Mozart's *Marche Funebre* from Barbara Ployer's album.



Ployer's Life after Mozart's Death

Apparently, Ployer continued to be involved with musical endeavors after Mozart's death and her marriage. Haydn might have dedicated a piano piece to her and she might have played a role in the publication of the E♭ major Piano Concerto, KV 449, which Mozart dedicated to her. The following section summarizes information presented by Senn in his 1978 article "Barbara Ployer, Mozarts Klavierschülerin." Senn states:

> When and where Barbara Ployer married is not known. Her husband, who was five years younger than she, was Kornelius Bujanovics von Agg-Telek, a landowner in Kreutzer county in Croatia. She lived, as Constanze Mozart wrote[41] on May 31, 1800, "around Kreuz," that is Kreutz (Krizevci) northeast of Agram (Zagreb). Kornelius (b. ca. 1770, d. October 24, 1844 in Vienna) was a son of Karl Bujanovics (ca. 1734-1811), a Transylvanian court agent in Vienna, and Josepha, *neé* von Frendl. It appears that only one son, Ladislaus, who stayed in Croatia till 1844, survived Barbara.[42]

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[41]Bauer-Deutsch, IV, N. 1299, 357, line 179.

[42]"Wann und wo sich Barbara Ployer vermählte, ist bisher nicht bekannt. Ihr Gemahl wurde der um etwa fünf Jahre jüngere Kornelius Bujanovics von Agg-Telek, ein Gutzbesitzer im einstigen Kreutzer Komitat in Kroatien. Sie lebten, wie Constanze Mozart im 31. Mai 1800 schreibt, 'unweit Kreuz,' d. i. Kreutz (Krizevci), nordöstlich von Agram. Kornelius (geb. um 1770, gest. 24. Oktober 1844 in Wien) war ein Sohn des

Senn cites Haydn's dedication of an Andante in F minor with two variations and coda for piano from 1793, HXVII: 6, as evidence suggesting that Ployer was married at that time. Haydn wrote on the title page: "Un picolo divertimento scritto e composto per le Stimatissima Signora de Ployer di me Giuseppe Haydn 1793." The word *Signora* suggests that the Ployer to whom Haydn dedicated the work was married.[43]

Senn also suspects that Stadler kept in touch with Barbara by letter.[44] Constanze and Johann Anton André (1774-1842) may have sought Ployer's help in preparing KV 449 for publication; the autograph copy in their possession was missing pages 35 and 38. Two of Constanze's letters suggest that she tried to contact Ployer in the hope that she would still have a copy of the concerto that Mozart dedicated to her in February of 1784. If her copy was intact, then it could serve to supply the missing passages from the rondo finale. Senn hypothesizes that Stadler may have acted as a intermediary in the procurement of the necessary material.

Barbara's uncle, Gottfried Ignaz von Ployer, died in 1797. Ployer and her sister went home to Sarmingstein for her father's funeral in 1803. She traveled back to Croatia through Vienna. Barbara Ployer herself must have died by 1811, for according to Senn, "her widower married again in the spring on April 16, 1811 in Vienna to Karoline, widowed Schott, *neé* von Auernhammer (c. 1775-1835). She was possibly a relation of Mozart's piano student Josepha Barbara von Auernhammer."[45]

Siebenbürgischen Hofagenten in Wien Karl Bujanovics (um 1734 bis 1811) und der Josepha, geb. von Frendl.—Nur ein Sohn scheint Barbara überlebt zu haben, Ladislaus, der sich 1844 auf den väterlichen Gütern in Kroatien aufhielt." Senn, 1978, 24.

[43]Hoboken took the dedication to refer to Barbara Ployer. Senn, 1978, 25, states that the dedication could refer to Gottfried Ignaz's wife, Antonia.

[44]Ibid., 25.

[45]"Der Witwer vermählte sich in zweiter Ehe am 16. April 1811 in Wien mit Karoline, verwitweten Schott, geb. Auernhammer (um 1775 bis 1835), wohl einer Verwandten von Mozarts Klavierschülerin Josepha Barbara von Auernhammer." Ibid., 26.

Summary

The accumulation of evidence gleaned from Mozart's own correspondence, the albums of both Mozart and Ployer, and the written-out improvisation for the second movement of the Piano Concerto in A, KV 488, suggests that Mozart and Ployer had a musical association that extended from some undetermined time before February of 1784 (the date of the letter telling of the dedication of the Piano Concerto in E♭, KV 449) to sometime after March of 1786 (the time of the composition of the Piano Concerto KV 488). The evidence also suggests that Ployer associated with important musicians other than Mozart. Stadler states directly that Ployer studied counterpoint with Albrechtsberger, whose dedication in Ployer's album supports Stadler's claim. Furthermore, it is possible that Haydn composed an Andante with two variations and coda for Ployer. Finally, Mozart's signature beneath the Funeral March contained in Ployer's album suggests that Mozart may have taught Ployer counterpoint as well as piano.

Assuming that Ployer is the student for whom the lesson book was created, the period of time in which the lessons might have occurred might be significantly greater than the four months, February to June of 1784, asserted by Engl and other scholars. Theoretically, the lessons in composition could have occurred over the duration of their relationship. The exercises remaining in the lesson book may be as diverse as they are because they may represent only a small portion of material that was spread out over several years.

In the end, however, it hardly matters for whom Mozart prepared the exercises. Though assigning a name to the student to whom the notebook belonged personalizes the connection between the student and Mozart and between scholars and the lessons themselves, it is, essentially, irrelevant to the present study. However, precisely to enhance the personal connection between us and Mozart's student, I here forth assume that she was, indeed, Barbara Ployer, for the sake of this dissertation. What is important is that Mozart was certainly the teacher and that by examining the contents of the exercises we can

determine how he thought about many compositional issues and how he communicated them.

Chapter 2

Order of Exercises

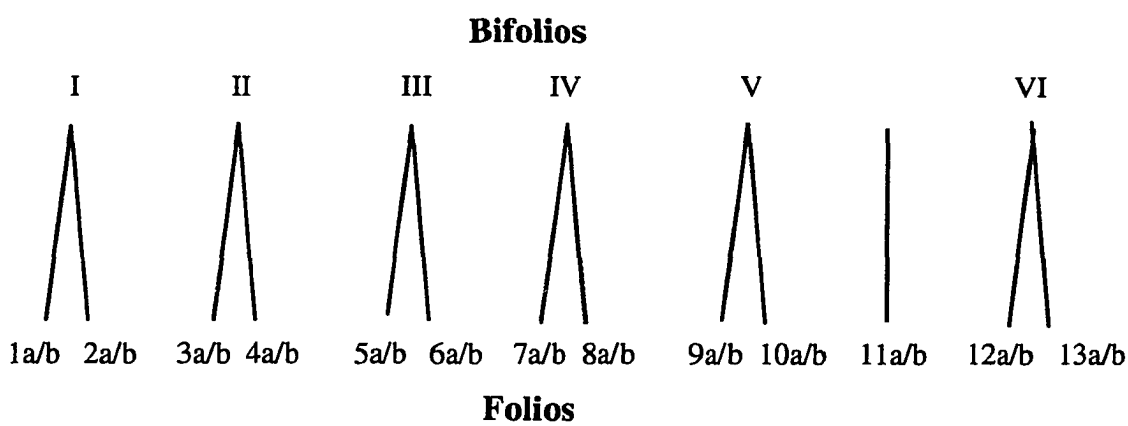
This chapter has two sections. The first summarizes the contents of the manuscript; the second offers a hypothetical order in which the exercises were assigned and completed.

The *Neue Mozart Ausgabe* provides a highly detailed description of each folio and its contents. For the present study, a brief summary of the manuscript's contents introduces the reader to its layout and to the location of its various exercises. The summary emphasizes the harmonization exercises by providing the reader with incipits; other exercises—those that fall outside the scope of this study, are mentioned to complete the overview of the manuscript. Though I provide numerous transcriptions and reproductions from the manuscript, the reader may wish to have the complete facsimile from the *Neue Mozart Ausgabe* at hand to facilitate study.

Summary of Contents

The manuscript consists of five bifolios plus a single folio that probably was itself torn from a bifolio. Each bifolio consists of four folios. Figure 2-1 indicates the disposition of the bifolios as they were organized before the manuscript was unbound in 1991.

Figure 2-1. Numbering of bifolios and folios.



Some of the bifolios contain exercises of a similar ilk. For example, the single folio contains only exercises in two-part species counterpoint. One page from this folio is particularly important since it contains Mozart's fairly detailed instructions on how Ployer could improve her settings.[1] Bifolios III and IV contain only string quartet settings. The latter contains the G-minor exercise mentioned by Novello in his recollection of his visit with Stadler. Most of the bifolios, however, contain exercises of various types, whether they be for keyboard, string quartet, or four-part chorus. The following summarizes their content and introduces some nicknames by which some of the exercises can conveniently be referred.

Bifolio I. This bifolio contains two different exercises. The first, which appears under Stadler's title of the manuscript on folio 1a, resembles the theme from the *Benedictus* from Mozart's *Requiem* and, henceforth, will be known as the "Benedictus."[2] Its first four measures appear in Example 2-1.

Example 2-1. First four measures of the "Benedictus" from folio 1a.[3]

Three two-part settings of the "Benedictus" appear on folio 1a; the first two, in Ployer's hand, include a fundamental bass; the third, in Mozart's hand, does not. The exercise appears a final time in a four-part setting on folio 2b. There the outer voices are in Mozart's hand, the inner voices in Ployer's.

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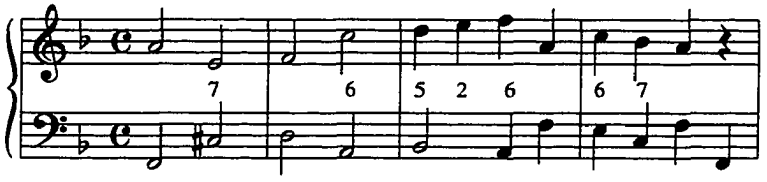
[1]For information regarding the significance of Mozart's corrections (in particular how he understood two-voice counterpoint to imply underlying triads), see Joel Lester, *Compositional Theory in the Eighteenth Century* (Cambridge: Harvard University Press, 1992), 186.

[2]Lach notes the exercise's similarity to the *Requiem* on page 7 of his study.

[3]Mozart wrote nearly all the melodies of the harmonization exercises in soprano clef; in this study, I have transcribed them using treble clef.

Example 2-2 shows a second exercise from bifolio I that resembles the Priest's March from *Die Zauberflöte* and, consequently, will be referred to as the "Priest's March."[4]

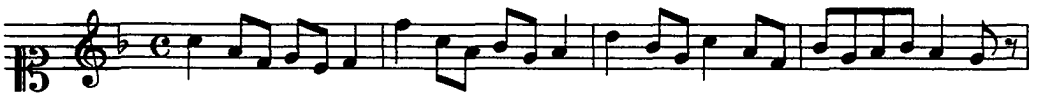
Example 2-2. Exercise from folio 1b, the "Priest's March."



This exercise appears twice on folio 1b; first in a keyboard setting in Mozart's hand, second in a four-part setting with the outer voices and figures by Mozart and the inner voices by Ployer.[5] The "Priest's March" also appears on folio 2a, again in a four-part setting. There the outer voices and figures are in Ployer's hand and the inner parts to the first four measures and the last three measures are in Mozart's hand.

Bifolio II. This bifolio contains four different exercises. The first, in F major, appears in three versions, the first two of which appear on folio 3a, the third, on the top half of folio 3b. In her three settings, Ployer gradually increases the degree of the rhythmic elaboration in her bass, hence I call the exercise the "Diminution."

Example 2-3. The first phrase of the "Diminution" that appears on folios 3a and b.

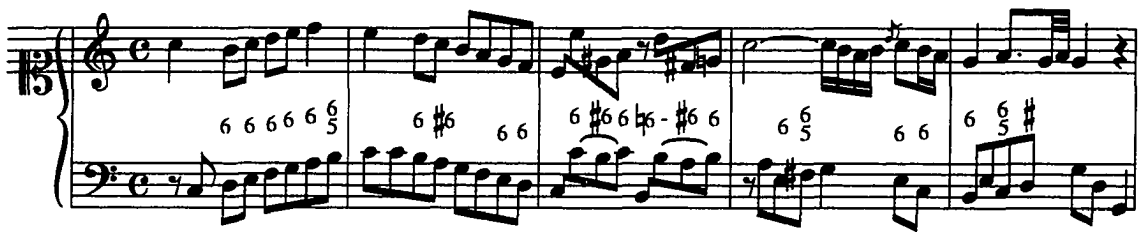


[4]See Lach, 26.

[5]I discuss Ployer's four-part setting in detail in Chapter 4.

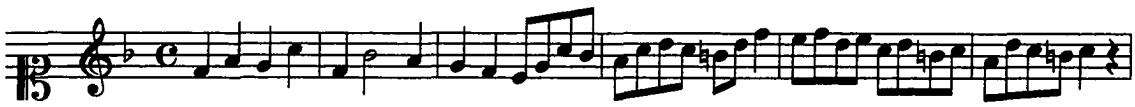
The second exercise—a model actually, as we will see—appears on the bottom half of folio 3b. It is a keyboard setting in C-major, entirely in Mozart hand. It appears nowhere else in the extant manuscript.

Example 2-4. First period of C-major exercise from bottom half of folio 3b.



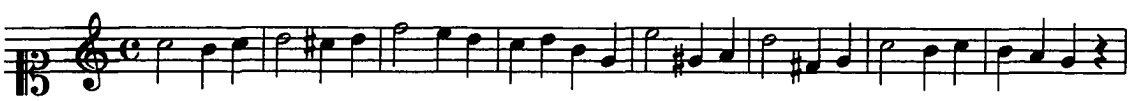
The third exercise of the bifolio, in F major, appears on folio 4a. In this exercise, Mozart provides Ployer with only a partial fundamental bass.

Example 2-5. First period of F-major exercise from folio 4a.



The fourth exercise from bifolio II contains two settings of a C-major exercise. Mozart provided only the melody and the space to write the continuo and fundamental basses. Since the opening three measures elaborate the opening motive from the Finale of Mozart's Symphony No. 41, I call this exercise the "Jupiter." Note the similarity between the opening gestures of Example 2-4 and 2-6.

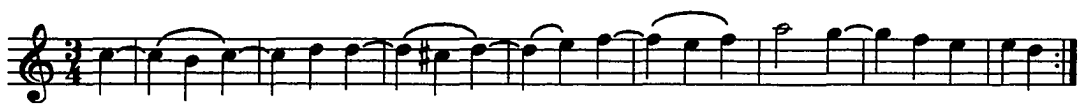
Example 2-6. First period of the "Jupiter" exercise from folio 4b.



Bifolio III. This bifolio contains string quartet settings that fall outside of the study of the harmonization exercises. Each exercise consists of an outer-voice framework and figures written by Mozart. Ployer provided the inner parts.

Example 2-7 presents the melody of the exercise from folio 5a. The similarity with measures 1-2 from Example 2-4 and measures 1-4 from Example 2-6 is significant and will be mentioned in connection with melodic patterns in Chapter 7.

Example 2-7. First period of string quartet setting from folio 5a. NB similarity with Examples 2-4 and 2-6.

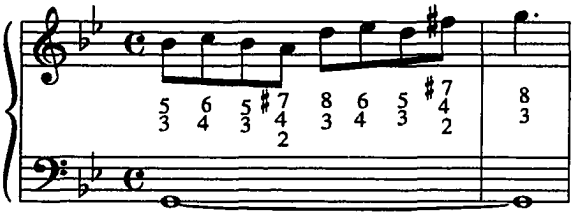


Folio 5b contains a D-minor setting for string quartet marked *Presto furioso* and a G-minor fragment at the bottom of the page, written entirely in Ployer's hand. Folio 6a contains three settings of a period in F major that, like the majority of initial periods of many of the exercises, modulates to the dominant. This phrase is nearly identical in structure to the F-major exercise with a partial fundamental bass. Folio 6b, the final page of bifolio III, contains two exercises both in F minor. The first is heavily crossed out. The second contains two versions of the initial four measures.

Bifolio IV. This bifolio also contains various four-part settings that lie outside the scope of the present investigation. Folio 7a contains a D-minor exercise; all the parts and the figures are in Ployer's hand. At the bottom of the folio, Mozart rewrote the final measure, providing two alternatives that improve the approach to the cadence in the upper voices.

The G-minor exercise mentioned by Novello spans both folios 7b and 8a. Following the exercise on folio 8a are Mozart's comments regarding various aspects of Ployer's chord construction and voice leading. Example 2-8 presents the opening gesture of the "Novello" exercise.

Example 2-8. Measures 1-2 of the "Novello" exercise.

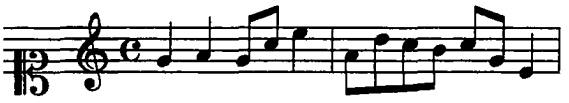


An E♭-major exercise occupies the bottom portion of folio 8a. Mozart wrote the stems of the outer voices as long as he could, given the available space on the page; those of the final chord are 5 to 6 inches long. The final page of the bifolio contains two exercises in C minor—one in common time, the other in alla breve. Some space remaining at the bottom of the folio contains alternative versions of the first cadence of the second exercise.

Bifolio V. This bifolio contains a variety of exercises that suggest it was used primarily as a scrap piece of paper on which various material could be written. It includes Mozart's examples of how a melody could yield multiple fundamental and continuo basses, and his own corrections of some of Ployer's later work.

Folio 9a contains two exercises. The first, in Ployer's hand, appears to be the second or third setting of an exercise now separated from the manuscript.

Example 2-9. First two measures of the C-major exercise from folio 9a.

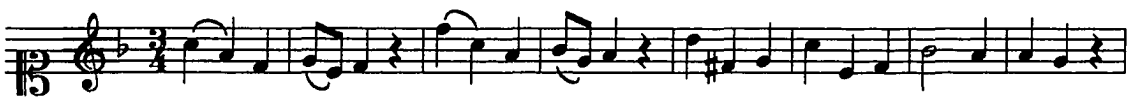


The second, at the bottom of the folio, is Mozart's corrected version of the "Jupiter" exercise that Ployer had set on folio 4b. Mozart wrote out the outer voices and figures separately from the fundamental bass, which appears on the last two staves of the folio.

Folio 9b contains two items. The first is in F major, with melody, continuo and fundamental basses written in Mozart's hand. It is the only setting in 𝄵 and appears

nowhere else in the lesson book, though a comparison of Example 2-10 with Example 2-3 shows the thematic correspondence between the first period of each. Later in the chapter, I cite this correspondence and others as an example of Mozart's use of models. I call it the "𝄞" exercise.

Example 2-10. First phrase of the "𝄞" exercise at the top of folio 9b.

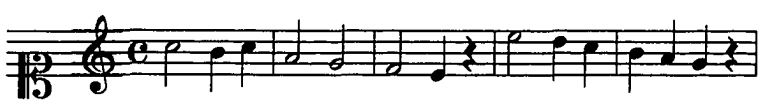


The second exercise on folio 9b is another four-part setting of the "Priest's March." All of the voices and figures are in Ployer's hand. It appears that Mozart indicated some mistakes and possible corrections.

Folio 10a contains two four-part settings that use different c-clefs for the upper voices. All of the material is in Ployer's hand. It appears that her task was to realize a figured bass and indicate the intervallic relationships between the bass and the upper voices, thus fleshing out the original figures, which are necessarily only abbreviations of the intervals formed in the chords above the bass. This material is one of the remedial tasks to which Mozart set Ployer in order that she could improve some of her basic skills.

Folio 10b contains a 13-measure exercise, the first phrase of which appears to have been used by Mozart to demonstrate the various possible ways of setting a bass to a melody. The first phrase of the exercise appears in Example 2-11.

Example 2-11. Folio 10b, C-major exercise, measures 1-5.



The single folio. As mentioned above, this sheet contains only exercises in two-part second-species counterpoint. Mozart provided Ployer with four different cantus firmi. In most cases she set a counterpoint above and below the given line.

Folio 11a contains a series of written-out corrections in Mozart's hand referring to several of Ployer's more problematic measures. Mozart also rewrites the lower counterpoint to Ployer's first setting of the cantus that appears at the top of the page.

I suspect that this folio was torn from its other half because of the marginalia that appear on folio 11b. The marginalia might have belonged to a larger group of drawings on the adjacent folio that someone might have considered superfluous to the musical nature of the manuscript.

Bifolio VI. This bifolio contains two-part first species exercises on folios 12a and 13b and more four-part exercises on folios 12b and 13a of the type first encountered on folio 10a. In the counterpoint exercises, Mozart provided the cantus firmus and Ployer, the counterpoint and numerals indicating the intervals formed with the cantus. Folio 12b contains Ployer's setting of a four-part exercise and Mozart's rewritten version of the same. Folio 13a also contains a four-part setting in which Mozart provided the outer parts and figures and Ployer had to write the inner voices and indicate the intervals formed between the upper parts and the bass.

Ordering of the Exercises

Now that the contents of each bifolio have been summarized, I discuss the order in which the exercises were assigned and completed. The broad sequence of events is difficult to determine. Mozart and Ployer certainly did not work from the beginning of folio 1a to the back of folio 13b page by page; recall that the lesson book was, originally, not a book at all but a collection of loose leaves that were bound together some time after Ployer's death and before they came into the collection of the Austrian court library.[6] Furthermore, Federhofer states that the lesson book is incomplete and does not represent all the work that Mozart and Ployer did together.[7]

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[6]See Chapter 1, 15.

[7]Federhofer, *Ployer Studies*, xi.

This section: 1) describes the importance of ordering the exercises and places the harmonization exercises within the context of the entire lesson book; 2) explains why the order in which the exercises were assigned and completed is so difficult to determine; and 3) presents a hypothetical sequence of events based on criteria established below.

Advantages to Determining the Order in Which Exercises Were Assigned and Completed

Why is it important to determine the order in which the exercises were written? Though a great deal can be learned about Mozart's teaching method merely by noting the types of exercises that he assigned to Ployer, a complete evaluation of his approach, its success, and Ployer's accomplishments within the curriculum is impossible without determining the order of the curriculum. Furthermore, a syllabus reconstructed from the lesson book would allow Mozart's pedagogy to be compared to those recommended by theorists of the eighteenth century. Knowing the order in which Mozart assigned the lessons would provide the clearest and most revealing picture of how Mozart taught Barbara Ployer in particular, allowing comparison with his pedagogy of another student, Thomas Attwood, whom he taught the following year. A reconstruction of both sets of lessons would indicate how well Mozart attended to Ployer's specific needs.

Since this study focuses primarily on the harmonization exercises, it is most important that the order of these particular exercises be determined. For only if an order for the exercises has been established can the role played by voice-leading paradigms be fully determined. Did Mozart manipulate the voice-leading paradigms to aid Ployer and, if so, how? How did Ployer react to the recurring paradigms? Did her later settings of passages organized by familiar voice-leading paradigms improve? Or do they show that Ployer failed to use them to her advantage? The order in which the exercises were assigned and completed is essential to an understanding of the lesson book's significance as a historical document and as a personal document of one of the greatest composers. The following section details the major difficulties in establishing such an order.

The Difficulties Involved in Reconstructing the Sequence of Events

Diverse types of exercises. The diversity of the exercises makes it difficult to determine the order in which they were assigned and completed. If the lesson book were to contain only a single type—species counterpoint, for example—the chronology could be based, to a large extent, on the relative complexity of the exercises and the degree of success with which Ployer completed them. Mozart probably, in this hypothetical case, would have begun with first species and worked toward fifth; Ployer's skills, over the course of the study, would gradually improve. The problem with the lesson book, however, is that there is no model curriculum—eighteenth-century or otherwise—to suggest how the various compositional tasks may have been applied.

Arranging the exercises according to their relative complexity offers a solution to this problem. I assume that Mozart assigned easier tasks first and more difficult ones later. This assumption makes sense pedagogically, though it does not take into account the possibility that Mozart, during the process of assessing Ployer's skills, assigned exercises that were too difficult for her at first. Only after determining what Ployer knew would Mozart have proceeded to give her exercises increasing in complexity, and even then only when Ployer was ready for more challenging tasks.

In order of ascending complexity, I list the exercises as follows: two-part species counterpoint; four-part chorale settings; the four-part "Priest's March" setting; melodic harmonizations with diminution basses; and string quartet settings. I list the string quartet settings last mainly because of the complexity of the figures used in those exercises (see the facsimile of the "Novello" presented on page 14 and its partial transcription on page 32 for an example of the figures). The figures are far more intricate than those, for example, in the "Priest's March" or in the C-major keyboard setting from folio 3b. However, one could argue quite rightly that the melodic harmonization exercises require skills of a greater conceptual nature than do the string quartet settings, which, despite some complexity, simply require Ployer to realize a figured bass. In the harmonization exercises, Ployer must

decide which chord might be appropriate for any given note. Though some of her choices were obvious ones, others were less so, forcing her to choose between several possible harmonizations. The addition of a fundamental bass further increases the sophistication of these exercises. Certainly, both the melodic harmonization exercises and the string quartet settings are more complicated than the others listed above.

In terms of the sequence of events, the relationship between the melodic harmonization exercises and the string quartet settings is difficult to determine. One interpretation of the evidence suggests that, since Ployer never really caught on to melodic harmonization, Mozart simply moved on to the string quartet settings, which, as just mentioned, are less abstract than the harmonization exercises. On one hand, this rather pessimistic view makes sense if Mozart felt he wanted to cover a certain amount of material in a limited time. On the other hand, perhaps, this was not the case; Ployer herself might have requested that she try her hand at the quartet settings and Mozart may have obliged her.

It should also be noted that some theorists who follow the teaching of J. S. Bach, notably Kirnberger, reserved two-part exercises until *after* those in four and three parts had been mastered by the student. Kirnberger's reasons—it is easier to express complete harmonies with a greater number of voices, and two-part writing expresses the essentials of a four-part texture—do not apply directly to exercises in species counterpoint.[8] Even though Fux and Mozart both considered the writing of even two-part species exercises to reflect an underlying triadic organization, the Fuxian approach, which Mozart follows here, is one that always proceeds from a two-voiced texture.[9]

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[8]Johann Philipp Kirnberger, *Die Kunst des reinen Satzes in der Musik, aus sicheren Grundsätzen hergeleitet und mit deutlichen Beyspielen erläutert* (Berlin: Christian Friedrich Voß, 1771-1779).

[9]Johann Joseph Fux, *Gradus ad Parnassum, sive manuductio ad compositionem musicae regularem, methodo nova, ac certa, nondum ante tam exacto ordine in lucem edita* (Vienna: Johann Peter van Ghelen, 1725). Also see Lester, 1992. There are some slight differences in Mozart's and Fux's approach to species counterpoint, one being that Mozart allowed the double neighbor in third species (as shown in the Attwood Studies), and Fux did not.

There are two basic scenarios regarding the manner in which Mozart introduced Ployer to the various exercises. In the first, Mozart might have introduced Ployer to each type of exercise individually, working through all settings before moving on to the next type. Perhaps Ployer completed the species counterpoint exercises first, then the four-part chorale settings, then the melodic harmonization exercises, and lastly the string quartet settings. In the second scenario, Mozart might have given more than one type of exercise to Ployer at the same time. She might have worked on species counterpoint while also trying her hand at setting the four-part chorale exercises. Perhaps she studied the string quartet settings while learning how to harmonize melodies and write diminution basses. Of course, other pairings and orderings different from these are also possible.

Though both these scenarios offer a relatively tidy picture of the sequence of events, the reality of the lessons was, most probably, more convoluted. Other aspects apart from those in the lesson book itself enter into the equation. For example, how did Mozart know where to begin with Ployer? How much contact with her did Mozart have before the lessons began? To what extent was Mozart able to evaluate her skills in this undetermined amount of time? These questions speak to the nature of the diagnostic period with which any series of lessons begins. Simply put, how much of the lesson book as it now exists is devoted to Mozart's exploration of Ployer's ability? Furthermore, did Mozart and Ployer believe that the lessons were to continue indefinitely or did they operate under the assumption that the lessons would terminate at a mutually-agreed-upon time? If Mozart knew that the lessons were to last for a limited time, he might have chosen to expose Ployer to more aspects of theory and composition than he would have if he knew that the lessons could extend into the future at a pace determined by Ployer's abilities.

Missing material. Of course, the problem of ordering the exercises is greatly compounded by the unknown—how much of the lesson book is missing? Certainly, the sequence is obscured by gaps that appear in the lesson book. In this respect, the Ployer Studies are like a transcript of an interview that has an unknown number of missing

questions and answers. As if the conversation of the interview were not difficult enough to follow, some unknown hand has rearranged the remaining questions so that they appear out of order, unrelated to each other. Indeed, in some places, only the questions remain, in others only the answers.

The manner in which Mozart and Ployer filled the bifolios. The manner in which Mozart and Ployer filled the bifolios makes it difficult to determine the order in which the exercises were assigned and completed. Often, multiple settings of the same exercise are spread out among two folios. Bifolio V, in particular, appears to be a scrap upon which sundry flotsam from the lessons could be written. This bifolio contains a wide variety of material in which each item is unrelated to what appears around it. Since the items that appear there were completed out of sequence, it is very difficult to determine how the material relates to the rest of the lesson book.

Despite the difficulties of determining the order of the diverse exercises, the manner in which the bifolios were filled, as well as the amount of missing material, the manuscript itself offers several clues regarding the order in which Mozart assigned the exercises to Ployer. The following section offers a hypothetical sequence of events and provides supporting evidence based on established criteria. The resulting order provides a foundation upon which an assessment of Mozart's pedagogical approach and Ployer's progress as a student can be built.

Hypothetical Order of the Exercises

According to this hypothesis, after an initial diagnostic period in which he acquainted himself with Ployer's abilities and effected necessary remediation, Mozart assigned exercises that increased in difficulty. The level of difficulty can be gauged by genre, as detailed above, or by design, meaning that a single type of exercise (e.g., those concerning melodic harmonization) can also have within itself graduated levels of difficulty. In the harmonization exercises, the role played by the fundamental bass is the principal barometer of difficulty. An exercise in which Mozart provides the entire

fundamental bass, for example, is easier to complete than one in which no fundamental bass is given. The evidence further suggests that Mozart presented Ployer with models, completed settings that sometimes contain a fundamental bass, that she could refer to while completing her homework.

I determine the order in which Mozart assigned the exercises in the following way. First, I establish the order in which multiple settings of the same exercise were written and completed. This course follows a predictable pattern: the exercise first appears written in Mozart's hand, followed by Ployer's settings that gradually improve and often increase in figuration, culminating, perhaps, in a corrected version by Mozart. Often, other exercises are interspersed between settings of a single assignment. Their place in the sequence of events is determined by their proximity to the multiple settings within which they appear. Second, I determine the order in which Mozart assigned specific exercises by examining their relative complexity and the quality of Ployer's completion.

Exercises that Appear on Multiple Folios

The exercises that appear in multiple settings are as follows: the "Benedictus"—folios 1a and 2b; the "Priest's March"—folios 1b, 2a, and 9b; the "Diminution"—folios 3a and 3b; the "Jupiter"—folios 4a and 9a; and the "Novello" exercise—folios 7b and 8a. With these exercises, it is possible to determine with a great deal of certainty the order in which the members of these settings were completed because it is relatively simple to see how the later settings improve upon the earlier ones. In other cases, the laws of cause and effect provide clues. For example, the "Benedictus" exercise appears twice in the lesson book: in the versions on folio 1a and in a four-part setting for string quartet on folio 2b. Since the latter, four-part version contains Mozart's own bass from his setting at the bottom of folio 1a, it seems logical to assume that the four-part version came after Ployer's and Mozart's settings on folio 1a.

The "Priest's March" exercise appears on three different folios: 1b, 2a, and 9b. First, Mozart wrote out the exercise on folio 1b—initially for keyboard, then for string

quartet. The next setting, entirely in Ployer's hand but with Mozart's corrections, was completed on folio 9b. The final, incomplete setting with Ployer's outer voices and Mozart's inner parts appears on folio 2a.

The following evidence supports this odd sequence. There can be no doubt that Mozart's keyboard setting on folio 1b is the first appearance of the exercise. Though it is unclear why Mozart initially used a keyboard setting, it certainly precedes Ployer's disastrous four-part setting, which occupies the rest of the folio. Her setting on folio 9b is a definite improvement, though it contains parallel octaves between the 'cello and second violin in measures 2 and 3. It appears that Mozart marked the parallels and may have had Ployer correct the mistake. Even with the correction, the inner parts are awkward, as if they were merely transferred from a keyboard realization into open score. Mozart had Ployer write out the exercise again on folio 2a. Here, he supplied the inner parts to the first four measures, showing how they could be rendered accurately and gracefully. If Ployer's setting from folio 9b were *last*, she either would have had to ignore or completely miscopy Mozart's example from 2a. A more logical interpretation (and one kinder to Ployer) suggests that the "Priest's March" from 9b was completed *before* that of 2a.

The order in which the "Priest's March" settings were completed yields another bit of information pertaining to the sequence of events. The "$\frac{3}{4}$" exercise at the top of folio 9b, obviously written before Ployer's second setting of the "Priest's March" at the bottom of the folio, was written, in all likelihood, even before the first version of the "Priest's March" on folio 1b. It is certainly possible, however, that it was written between the first and second settings of the "Priest's March."

Mozart and Ployer completed the three settings of the "Diminution" exercise of folio 3a and 3b in direct order. The exercise appears first in Mozart's hand on the top of folio 3a. Two settings by Ployer follow and occupy the remainder of the folio. Mozart copied the melody and bass onto the top of folio 3b, creating a composite of Ployer's two settings while making some improvements of his own. This setting provides the basis for Ployer's

diminution bass that follows immediately below. The C-major keyboard setting in Mozart's hand that appears beneath Ployer's diminution bass must have been written after all the preceding material from the F-major exercise.

There are three settings of the "Jupiter" exercise, which appears first at the top of folio 4b. Mozart wrote out the melody and clefs, providing space for Ployer to write both a fundamental and a continuo bass. She did so and also copied out the melody a second time and wrote a diminution bass below it. This material nearly fills the page; it certainly leaves no room for a third complete version of the exercise. Several poor choices in the harmony mar Ployer's settings. The third version of the exercise, written by Mozart on folio 9a, serves as a correction to Ployer's ill-conceived attempts.[10]

This ordering, too, yields another significant bit of information. Mozart's corrected version of the exercise from folio 9a appears beneath a ten-measure double period written entirely in Ployer's hand (see incipit from Example 2-9, p. 32). Certainly, this exercise was written before Mozart's correction to the "Jupiter" exercise that appears on the bottom half of the folio.

Only one other exercise, the "Novello," spans multiple folios. The piece covers folios 7b and 8a, unequivocally indicating that folio 7b was completed before folio 8a. A string quartet setting in E♭ major (the one with the long stems) appears at the bottom of folio 8a; presumably this eight-measure exercise was written after Ployer had added the inner voices to the "Novello" exercise and Mozart made written comments regarding her setting.

Figure 2-2 summarizes the information gained by examining those exercises that appear on multiple folios.

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[10]It should be noted that Mozart placed the fundamental bass of the corrected version on a different system apart from the melody and continuo part, contrary to his custom of uniting the three in a single system. The placement of the fundamental bass relative to the melody and continuo part was not motivated by space constraints; Mozart had ample room to arrange the three parts as he had elsewhere. The disposition of the parts suggests, as one would expect in the presentation of a corrected version, that the fundamental bass here serves an analytical function rather than a determinative one.

Figure 2-2. Exercises that appear on multiple folios and the order in which those folios were filled. Any additional material that is interspersed between settings is shown in brackets.

The "Benedictus"	1a→2b
The "Priest's March"	1b→["[illegible]" model]→9b→2a
The "Diminution"	3a→3b→C-major model
The "Jupiter"	4b→[miscellaneous C-major exercise]→9a
The "Novello"	7b→8a→the "Long Stem" exercise

Order of Exercises Appearing on Multiple Folios

The following section discusses how these five exercises can be ordered using the second criterion listed above: the graduation of complexity. Those pairs that appear on the same bifolio are discussed first.

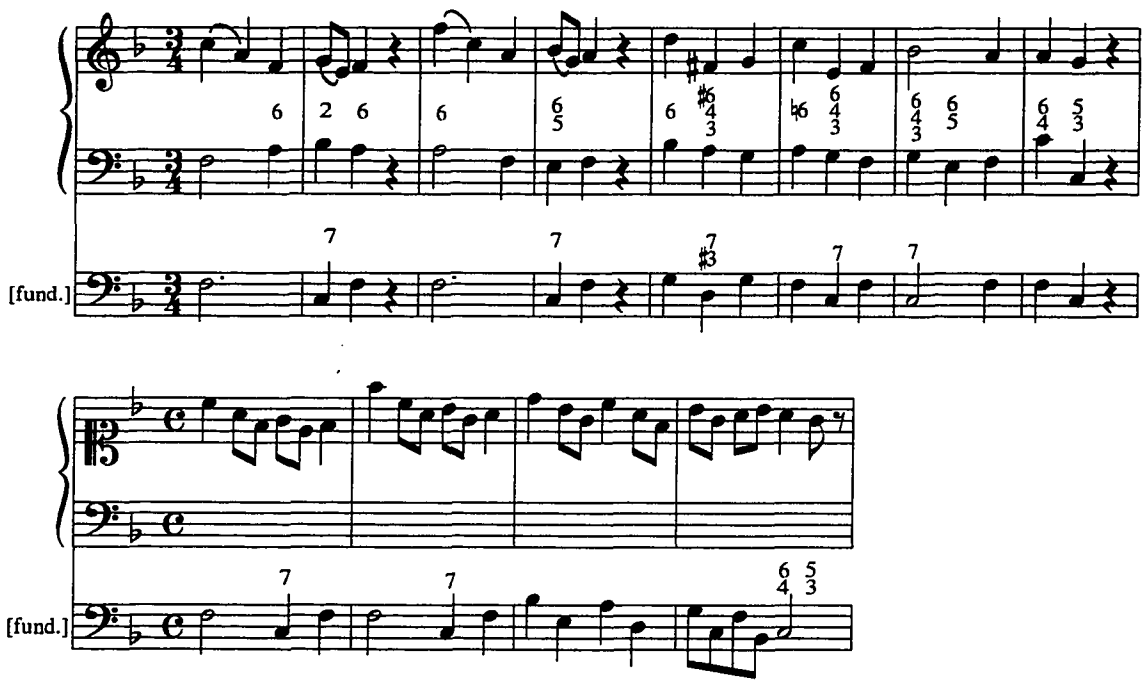
The order in which the exercises were assigned and completed on bifolio II, which contains folios 3a/b and 4a/b, can be determined with a great deal of certainty based on the degree to which fundamental bass is a factor. This bifolio appears to have been filled in order beginning with folio 3a and ending with folio 4b. This order corresponds to the increasing level of difficulty of the three harmonization exercises. The "Diminution" exercise from folio 3a contains a complete fundamental bass, another F-major exercise from folio 4a only a partial one, the "Jupiter" exercise from folio 4b none at all. Perhaps Mozart intended to wean Ployer from the fundamental bass over the course of these exercises. Furthermore, had space remained on the bifolio after Ployer had completed both settings of the "Jupiter" exercise, Mozart would have been able to use it to add his corrected version, which, instead, appears on bifolio V, folio 9a. It appears that Ployer finished bifolio II with her two settings, forcing Mozart to find available staves elsewhere.

Model/Exercise Pairs

Mozart provided Ployer with models that serve as examples of how later exercises should be set. Models may consist of exercises completed satisfactorily by Ployer or complete settings by Mozart himself in which he presents the melody and figured bass together; at least one such model by Mozart also includes a fundamental bass. The models have phrase structures and melodic materials similar to the corresponding exercises that Ployer had to complete on her own.

The clearest example of a model setting appears at the top of folio 9b. Mozart most likely used this setting as a model for Ployer to refer to when she set the "Diminution" exercise from folio 3a.

Example 2-12. Model/exercise pair; "$\frac{3}{4}$" model, folio 9b, and the "Diminution" exercise, folio 3a.



Measures 1-4 in the model are equivalent to the first two of the harmonization exercise. They are, in fact, identical excepting for the difference in meter. Measures 5-8 in

the model feature a descending melodic line from $\hat{6}$ to $\hat{2}$ that is counterpointed in the bass primarily by parallel tenths. Measures 3-4 in the exercise contain a similar progression, though generated from a different fundamental bass.

Mozart's C-major keyboard setting from folio 3b serves as model for the "Jupiter" exercise that Ployer was to complete on folio 4b. The model, like the exercise, contains no fundamental bass. As in the example cited above, the first periods of these two settings are quite similar. Each begins with a motion from $\hat{1}$ to $\hat{3}$ with $\hat{4}$ as an incomplete neighbor. Both passages continue with a phrase that begins with a sequence and modulates to the dominant. Even the figuration within the sequence is identical.

The setting from folio 10b may be a model for Ployer's setting of the exercise that appears on the top of folio 9a. The similarities between these two exercises are subtler than those in the examples listed above, though both exercises clearly feature a stepwise descent from $\hat{6}$ to $\hat{1}$ in the dominant at the end of the first period. Other similarities occur in the first phrase of the second period, where the dominant seventh chord alternates with the tonic. I suspect that Ployer was able to examine her setting from folio 10b while she determined the chords and continuo to the exercise on folio 9a, though Mozart may simply have provided her with a fundamental bass in both cases.

The relative position of these three pairs of models and exercises is difficult to determine. Certainly, however, the keyboard model and "Jupiter" exercise likely appeared last since neither contains a figured bass. The difficulty in positioning the remaining two pairs lies in the fact that the role of the fundamental bass is conjectural in the model/exercise pair from 10b/9a. On 10b Mozart clearly shows how the first phrase can be set in three different ways, each yielding a different fundamental bass. The process shown in Mozart's work would seem to be the perfect introduction to setting melodies for which he provides no fundamental bass, hence it might have followed the "[illegible]" model and "Diminution" exercise. The bass of the second period, however, is set only by Ployer and, though no fundamental bass is present, her harmonies are excellent. Maybe she worked out the bass

with Mozart or maybe there once existed a working page on which the fundamental bass was written that is now separated from the manuscript. The exercise on 9a is similarly puzzling in that Ployer's harmonies are flawless, strongly indicating that her setting, perhaps her second or third attempt at the exercise, was also based on a fundamental now lost. The material on 10b and 9a stands in contrast to all the other harmonization exercises in that the role played by the fundamental bass is not clear.

The "$\frac{3}{4}$" model and "Diminution" exercise pair each use fundamental bass throughout. The clarity of its function should suggest perhaps that this pair occurred first, followed by the 10b/9a pair and lastly by the C-major keyboard model and "Jupiter" exercise.

Figure 2-3 culls some of the information from the above discussion and presents the order of the exercises from folio 1b through all of bifolio II to folio 9a.

Figure 2-3. Order of exercises appearing on multiple folios, those directly adjacent to them, and model/exercise pairs.

First setting of the "Priest's March" from 1b
"$\frac{3}{4}$" model from 9b
Second setting of the "Priest's March" 9b
"Diminution" exercise from 3a/b
C-major model from 10b
C-major exercise from 9a
F-major exercise from 4a
C-major keyboard model from 3b
"Jupiter" exercise from 4b
Mozart's corrected version of "Jupiter" exercise from 9a

"Benedictus" Precedes All Exercises that Contain a Diminution Bass

Mozart and Ployer completed the "Benedictus" exercise before all those that contain diminution basses. It is the only exercise that Ployer set twice, using note-against-note settings both times. This suggests that Mozart used the exercise as a diagnostic examination that illustrates how a continuo and fundamental bass could be set to a given melody. If he, at first, thought that such a setting would lead to a diminution bass, he changed his mind

after seeing Ployer's shortcomings and decided, instead, to focus on more fundamental matters.

The "Benedictus" returns on folio 2b with Mozart's outer voices from 1a serving as the basis of a string quartet setting. Here, the quality of the part writing for the viola and second violin, so superior to any of Ployer's "Priest's March" settings, indicates that Mozart must have helped her. One has only to notice the imitation between the inner parts in the first four measures to suspect that Ployer had special assistance.

The settings of the "Priest's March" exercise certainly precede the "Novello" exercise from folios 7b and 8a simply because of the simplicity of the former and complexity of the latter. Both contain a melody and a figured bass by Mozart. The "Novello" exercise contains a great deal of figuration while the melody of the "Priest's March" moves predominantly in quarter and half notes. This difference alone suggests that Ployer completed the "Novello" exercise later. Furthermore, the sequence in which these exercises were written becomes clearer after a simple comparison of the quality of Ployer's inner voices. The next chapter indicates Ployer's numerous problems with the inner voices to the "Priest's March" exercise. In the "Novello" exercise, though Mozart made several written comments about Ployer's setting, the general level of her work is much higher and indicates that over the course of the lessons that Ployer did indeed make a great deal of improvement in realizing a figured bass. Ployer's settings of the melodies and figured basses from the center of the lesson book are, in fact, all of a higher quality than the "Priest's March" exercise. The string quartet exercises, if not assigned and completed after all of the harmonization exercises, came after the "Priest's March" exercise. The possibility, however, that Mozart interspersed them between harmonization exercises cannot be ruled out.

Since the second version of the "Priest's March" appears on folio 9b along with the "$\frac{3}{4}$" model that prepares Ployer for the "Diminution" exercise on folio 3a, it seems logical to place the "Priest's March" exercise in line after the "Benedictus," which requires nothing in

regard to a diminution bass. Figure 2-4 presents the hypothetical order of all the harmonization exercises. The "Benedictus" occupies the first position and Mozart's correction to the "Jupiter" exercise from folio 9a the last.

Figure 2-4. Hypothetical order of all the harmonization exercises.

"Benedictus" from 1a
First setting of the "Priest's March" from 1b
"$\frac{3}{4}$" model from 9b
Second setting of the "Priest's March" 9b
"Diminution" exercise from 3a/b
C-major model from 10b
C-major exercise from 9a
F-major exercise from 4a
C-major keyboard model from 3b
"Jupiter" exercise from 4b
Mozart's corrected version of "Jupiter" exercise from 9a

Summary. This chapter has determined three important organizational factors of the lessons. First, it seems that Mozart presented Ployer with models that share some salient features with the melodies that she was to harmonize. I postulate three such pairs: the "$\frac{3}{4}$" model and "Diminution" exercise; the C-major keyboard model and the "Jupiter" exercise; and the 10b model and 9a exercise. Second, in setting the exercises themselves, she was to construct settings that increased the rhythmic activity in the bass so that the final products move almost entirely in eighth notes. Third, Mozart gradually weaned Ployer from the fundamental bass, so that for the final pair he provides no fundamental bass at all.

Excluded from the model/exercise pairs are the two items that appear on the first bifolio: the "Benedictus" and the "Priest's March." Each seems to stand at the head of a series of exercises—melodic harmonization and string quartet setting respectively. Several factors indicate that these exercises were part of a diagnostic period with which the lessons began. The "Benedictus" seems to be the first harmonization exercise because it is not preceded with a model as, apparently, all the others are. It is entirely likely that Mozart did not immediately know that Ployer needed the help of his models. Second, the difference between Ployer's first and second setting of the "Benedictus" does not resemble similar

steps taken between subsequent settings of later exercises, in which, as just mentioned above, Ployer increases the figuration in the bass while perhaps at the same time also improving her harmonic choices. Indeed in the second setting of the "Benedictus," Ployer makes some rhythmic changes but nothing like the type of changes that occur in the "Diminution" or "Jupiter" exercises, for example. It is as if Mozart told her that the second setting should somehow be a variation of the first but she did not know quite how to go about doing it. Later, after she completed the assignment for homework, Mozart may have clarified his request; consequently the later exercises actually do move toward diminution basses.

The "Priest's March" is not only tied to the "Benedictus" by physical proximity, appearing as it does on the same piece of paper, but also by the fact that it appears to be the first attempt at a string quartet setting. Certainly, as compared with the other quartet settings, the figures are much simpler, as one might expect from the first exercise of its kind. Second, as will be shown in detail in Chapter 4, Ployer's setting of the inner parts is abominable. Her work in later exercises is much better despite their increased complexity. The following two chapters discuss the nature of the diagnostic period and the "Benedictus" and "Priest's March" in particular.

This chapter first discussed why it is important that the exercises be placed in their original order. Ascertaining the original order makes possible a comprehensive view of Mozart's pedagogy and its relationship to others from the eighteenth century. It also indicates how Mozart reacted to Ployer's specific needs as a theory and composition student. This chapter also discusses the three major problems concerning the ordering of the lessons: 1) the diverse types of exercises for which no conventional ordering exists; 2) the irregular manner in which Mozart and Ployer filled the bifolios; and 3) the fact that the lesson book is incomplete. Nevertheless, the manuscript offers some clues that lead to the hypothetical order of the exercises presented above. First among these clues are those exercises that appear on more than one folio. A direct cause-and-effect relationship between

the stages of the various exercises can be established based on the same principles used to determine the sequence of events on a single folio. These exercises, as well as those that appear on only a single folio, were ordered by determining the relative complexity of the exercises. Those exercises that focus on simple melodic harmonization and fundamental bass probably preceded other exercises that contain diminution basses. Chapter 3 discusses the initial diagnostic exercises with which the lessons began and organizes the harmonization exercises according to the role played by the fundamental bass.

Chapter 3

The Diagnostic Review: The "Benedictus" Exercise

The previous chapter determined that the lessons began with a diagnostic period in which Mozart determined the level of skill that Ployer brought to the first lessons. Based on their relationship to the exercises in the manuscript, it appears that the "Benedictus" and "Priest's March" exercises were part of this diagnostic phase. This chapter focuses only on the "Benedictus" exercise; Ployer's four-part setting of the "Priest's March" exercise is considered in Chapter 4. The present chapter establishes a precedent for the beginning stages of the lessons, reconstructs Ployer's settings of the first period from the "Benedictus" exercise, evaluates her work, and suggests the extent to which Mozart himself participated in the lesson. The contents of a letter that Mozart sent to his father from Paris six years before the lessons with Barbara Ployer began frames the discussion.

Mozart's letter, dated May 14th, 1778, tells of his contact with the daughter of the Duke of Guines, a young woman of significant musical skills. Mozart writes that "she plays the harp *magnifique*,...has much talent and genius and, in particular, an incomparable memory so that she can play all her pieces, actually some two hundred, by heart."[1] It was the duke's intention that Mozart teach his daughter composition so that she could write sonatas for his instrument, the flute, and for her own, the harp. Mozart goes on to write: "today I gave her her fourth lesson, and, as regards the rules of composition and harmony, I am fairly satisfied with her. She set quite a good bass to the first minuet when I put it before her. She managed it, but soon found it tedious." Apparently, at this point in the lessons, possibly to maintain the interest of his student and also to fulfill the wishes of her father, Mozart advanced her to writing melodies. At this she fared less well, evidently

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[1]Emily Anderson, *The Letters of Mozart and His Family*, 2nd ed. (New York: St. Martin's Press, 1966).

suffering from a lack of ideas. Mozart's letter to his father proceeds to describe his frustrating attempts to provide exercises that were appropriate for her level of ability.

> I cannot help her, however, I cannot get any farther. It would be too soon to say so if there really were genius there but, unhappily there is none—everything has to be done artificially. She has no ideas at all—nothing comes. I have tested her in every possible way. Among other things it occurred to me to write a quite simple minuet and see if she could not make variations on it. It was all in vain. "Well," thought I, "she does not know how to begin," so I set to work upon the first bar and told her she must go on keeping to that idea. Eventually she did not do so badly with it. When that was over I said she should make something of her own, only the first part, the melody. She thought for a quarter of an hour and produced nothing. Then I wrote four bars of a minuet and said, "See what an ass I am! I have begun a minuet and cannot even finish the first part. Pray be so kind as to do it for me." She did not think she could, but at last, with a prodigious effort, she produced something. I was glad indeed to see something for once! I told her then to finish the minuet—that is to say only the top part. As homework, all I asked her to do, however, was to alter my four bars and make something of her own—to find a new opening—the harmony being the same and only the melody different. Well, tomorrow I shall see.[2]

Mozart "tested her in every way"; in other words, he administered a diagnostic examination. The test began with the student setting a bass to a minuet. Next, Mozart had the young duchess write a variation on a melody; to help her, he provided an example, i.e. a model, of how she might begin. Next, Mozart asked her to compose something on her own. Again in order to help her, Mozart wrote the first four measures, leaving the remainder of the "first part" of the minuet for her to complete. His mention of the numbers of measures that he had written for her, four, and the reference to the first part of the minuet both speak to the issue of form, which evidently was germane even at this early stage of instruction. The homework assignment is most interesting in that he expected her to rewrite the melody of his first four measures based on their harmony. Whether or not the harmony is implied by only his melody or by *both* the melody and bass is not entirely clear. In either case, Mozart once again makes use of modeling. It should be noted that

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[2]Anderson, 102.

Kirnberger wrote about the practice of recomposing the outer voices to a minuet so that a new piece based entirely on the structure of the original results.[3]

However, Leopold reproves Mozart for pushing the girl too fast, reminding him that not everyone has his genius.

> You write that you have that very day been giving Monsieur le Duc's daughter her fourth lesson, and that you want her to do original work already!—Do you imagine everyone has your genius?—It will come soon enough! She has a good memory. *Eh bien!* Let her steal, or, more politely, appropriate—there is nothing to be done till courage comes.[4]

Leopold did, however, encourage Mozart by approving of his use of variation. He writes: "Your variation method is a good one and you should persevere with it!—"[5]

Though none of the exercises from the Paris lessons survives, we can assume that the first task, in which Mozart had the student set a bass to a minuet, was very similar to the first exercise in the Ployer studies. A reconstruction of the "Benedictus" exercise provides a script of the lesson and illuminates Ployer's abilities and limitations, from which he fashioned further tasks appropriate to her ability.

The manner in which Mozart notated the exercise plays a significant role in the reconstruction. The reconstruction suggests that Mozart was concerned with the broad application of basic concepts rather than strict attention to detail. It appears that it was most important to Mozart that Ployer be able to invent a bass and understand the harmonic origins from which her choices came rather than for her to write a beautiful line (though, certainly, Mozart would not have objected if she was able to accomplish all this at once).

Layout of the "Benedictus." Example 3-1 shows the beginning of the first six staves from folio 1a. First, Mozart wrote out a grand staff (#1 in Example 3-1). The upper

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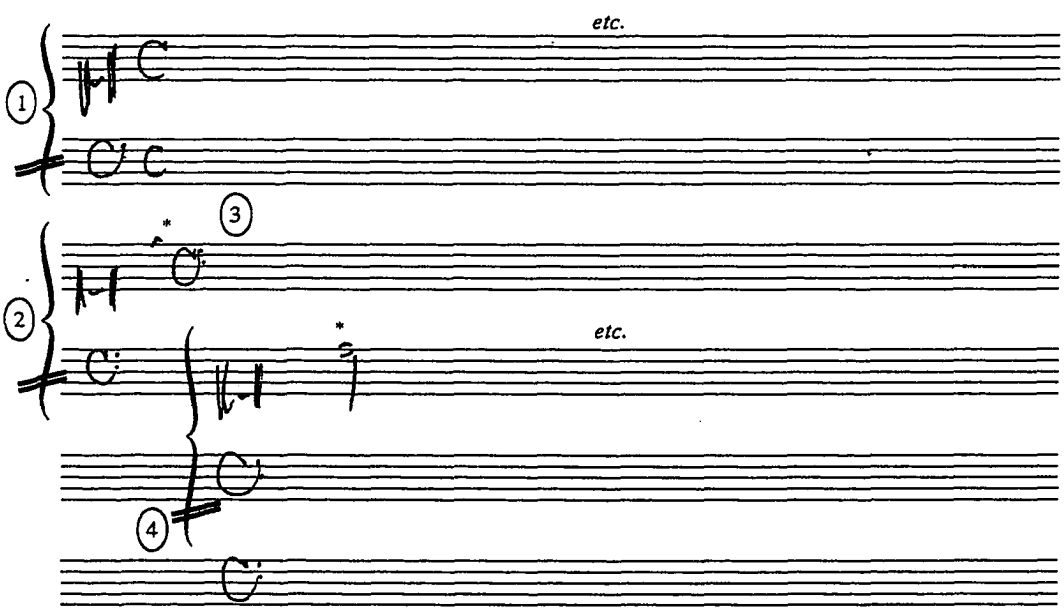
[3]See Kirnberger, *Der allerzeit fertige Polonoisen- und Menuettencomponist* (Berlin: Georg Ludewig Winter, 1757).

[4]Anderson, 103.

[5]Ibid.

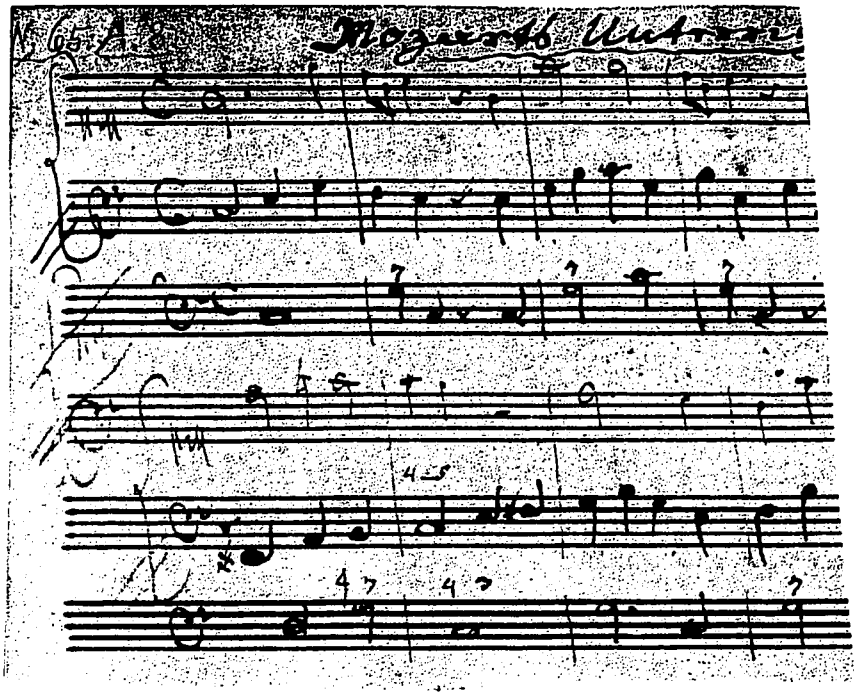
part, written in soprano clef, contains his melody; the bottom part contains space for Ployer to add her bass. The first ten measures occupy the first system. Second, needing more room to complete the melody, Mozart wrote out the clefs and brace for the next grand staff on the third and fourth staves of the folio and even began to write the next note of the melody, as indicated in the example by the asterisk. Here, however, he stopped. He crossed out the clefs he had just written and added another bass clef and common time signature to the third staff of the folio—the one directly below where Ployer was to write her bass line. Mozart, it appears, had forgotten to provide room for the third line that was to contain the fundamental bass. After realizing his mistake, Mozart wrote another grand staff for the second system, this time including a line for the fundamental bass, and proceeded to write the rest of his melody (#4 in Example 3-1).

Example 3-1. How Mozart wrote out the "Benedictus" exercise.



Mozart's notational error suggests that he forgot that Ployer was going to need the fundamental bass as she worked out or analyzed the melody. Illustration 3-1 shows how the grouping appears in the manuscript.

Illustration 3-1. Facsimile of upper left hand corner of folio 1a, showing Mozart's grouping of staves.



Fundamental bass. Fundamental bass is a multi-meaning concept first set out by Jean-Philippe Rameau in his *Traité* from 1722.[6] One of its meanings denotes what we now refer to as *chordal roots.* 18th-century musicians wrote these roots as pitches on a separate staff. The manner in which Mozart designed this and the other harmonization exercises suggests that the fundamental bass, once established, served as a harmonic foundation to guide later bass settings that included diminutions (see Chapter 5 in particular).

Hypothetical guidelines that Mozart may have given Ployer. After Mozart had written out the melody and provided enough room for the continuo and fundamental basses, it was time for Ployer to begin to set the melody. But what instructions did Mozart

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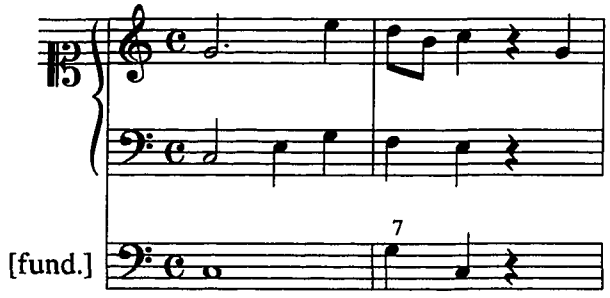
[6]Jean-Philippe Rameau, *Traité de l'harmonie réduite à ses principes naturels; divisé en quatre livres: Livre I, Du rapport des Raisons & Proportions Harmonique; Livre II, De la nature & de la proprieté des Accords; Et de tout ce qui peut servir à rendre une musique parfait; Livre III, Principes de Composition; Livre IV Principes d'accompagnement* (Paris: Jean-Baptiste-Christophe Ballard, 1722).

give her? Surely, he must have said something. Perhaps his instructions were similar to those he gave to the daughter of the duke: "Set a bass to this melody." Perhaps he recommended, for purposes of establishing the key, that she use only the tonic and dominant seventh chords in the first phrase and stick mostly to those chords, in either the tonic or another key, throughout the whole exercise. Mozart may have told her to indicate the roots of the chords to which her choices belong in the extra bass line. Perhaps Ployer herself, having had previous experience with fundamental bass, requested that Mozart incorporate it into the lessons. Ployer's setting suggests that she went about her task using instructions similar to these and her own ear as her guide.

Ployer's setting of the first phrase. Rather than consider measures 1-4 as a combination of two phrases, I prefer to interpret them as a single phrase in which the first two measures have been extended through repetition.[7] Perhaps Ployer or Mozart played the first phrase in order for her to have it in her ear. After that, Ployer began to invent her bass, the first two measures of which are shown in Example 3-2.

Example 3-2. Ployer's setting of the first two measures of "Benedictus." The melody is Mozart's, continuo and fundamental basses are by Ployer.



[7]This in the manner of an *Ausdänung*, Joseph Riepel's term that describes a varied repetition of a phrase segment. See Joseph Riepel, *Gründliche Erklärung der Tonordnung insbesondere zugleich aber für die mehresten Organisten insgemein* (Frankfurt, Leipzig, etc.: n.p.; Regensburg: Johann Leopold Montag, 1757) and Nola Jane Reed, "The Theories of Joseph Riepel as Expressed in His *Anfangsgründe zur Musicalischen Setzkunst.*" (Ph.D. diss., University of Rochester, 1983), 83f. I make a more direct connection between Riepel's concepts of phrase structure and the harmonization exercises in Chapter 10.

She chose *c* as the first note—after all, the piece is in the key of C major—but felt that the bass should contain some movement while the melody sustains *g'*.[8] Consequently, she moved the bass to *e*. The melody leaps; Ployer moved her bass to accompany it. On the fourth beat on measure 1, she had a choice. She might have moved back to *c*, which would have formed a tenth with the melody, or moved upward to *g*, forming a no-less-pleasant sixth and completing an arpeggiation of the tonic chord in the first measure. Choosing *g*, Ployer moved on to the second measure. After having heard the melody before she began the setting, Ployer might have felt a return to the tonic on the second beat of the second measure. While logically, she might place *c* in the bass at this point, the given melody and her own choice of *g* in the preceding measure make this difficult. Ployer could not approach the tonic by step, for she would create octaves with the melody. She could repeat *g* in the bass but, perhaps, this repetition did not appeal to her. Her actual choice, *f-e*, is the best given the circumstances and accords with Mozart's own choice in his setting of the exercises (discussed below).

As shown in Example 3-3, Ployer makes an interesting choice in measure 3. Why did she choose to set *f''* with a dominant seventh chord instead of what might be the more obvious choice of the subdominant? There are, perhaps, two reasons. First, given the fact that she placed *e* in the bass on the fourth beat of measure 2, Ployer might have been aware that moving to *f* on the following downbeat would create bad octaves. (Though, of course, moving to the third of the subdominant, *a*, would have eliminated that problem.) Second, Ployer may simply have been following Mozart's instructions to use only the tonic and dominant seventh chords wherever possible. After choosing *g* and *b* of the dominant chord, she logically supports *e''* with the tonic and continues the quarter-note motion through the measure with *g* on beat four.

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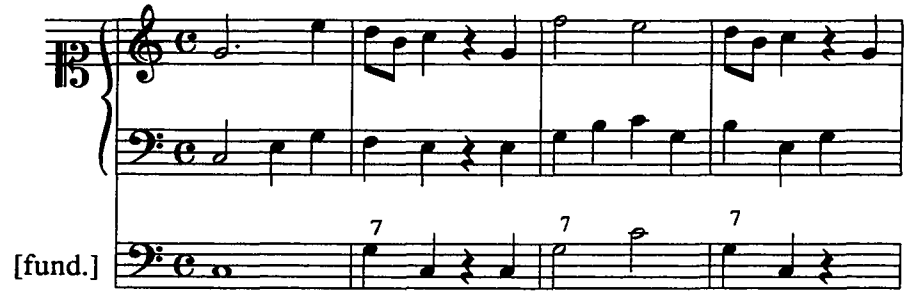
[8]In places where the register is relevant, I use common notation for octave designation, e.g. *C*, *c*, *c'*, *c''*, etc.

Ployer evidently thought she had to do something different in measure 4 even though the melody is identical to measure 2. Unfortunately, this led her to make a bad decision; she placed the leading tone on the downbeat. The problems with this option are listed above. Ployer, by leaping away from the leading tone, makes the only choice she could if she were to maintain quarter note motion in the bass and avoid octaves with the soprano. Thus, the first phrase ends not quite as auspiciously as it started.

Ployer's problematic choice on the downbeat of measure 4 is the first indication that she completed this exercise as homework, away from Mozart's watchful eyes. Had Mozart been at her side, he would either have not allowed Ployer to make the mistake in the first place, would have corrected it himself, or directed Ployer to correct it. Her setting of the second phrase of the first period confirms with its many mistakes that Mozart was not present during the completion of this setting.

Example 3-3. Ployer's setting of measures 1-4 of the "Benedictus."



Two-part versus four-part setting. At this point, it would be appropriate to digress for a moment and discuss the number of parts that Mozart and Ployer actually intended for this exercise. The question is this: did they intend Ployer's setting to be in more than two parts? I present three bits of evidence that argue for a two-part texture. First, recall Mozart's letter describing the Paris lessons of 1778: he mentions that the student set a bass to a melody, provide variations to a simple minuet, and write her own minuet melody; Mozart writes nothing about creating a figured bass or any inner parts. Surely, Mozart intends to

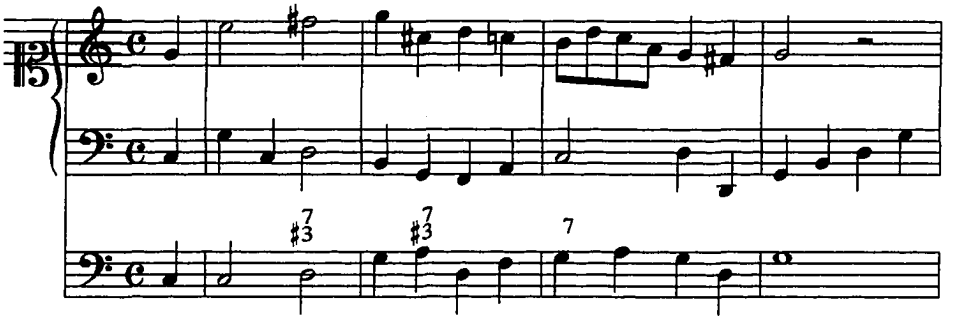
differentiate pedagogically between these two levels of skill. The student should be able to compose a good bass to a melody, then add the inner parts. In Chapter 12, I present an example of the type of piece that Koch used to describe a simple binary form that, like the overwhelming majority of his examples, contains only outer voices. Mozart's own childhood works for piano are written in predominantly the same two-voice texture. These factors strongly suggest that Mozart expected the same from his students. Second, while it could be argued that Ployer left her bass unfigured because a comparison with the fundamental bass implies the inversion, it seems that the purpose of this lesson was that she counterpoint the melody using notes that belong to a select group of chords and indicate those harmonies in the fundamental bass. Thus, the exercise focuses on the application of harmonic counterpoint. Mozart takes as his starting point a two-voice texture that fleshes out an underlying succession of harmonies rather than proceeding as Kirnberger did, arriving at the two-part texture only after the mastering of four- and three-voice textures. Third, an examination of Mozart's comments regarding Ployer's execution of a two-part second species counterpoint exercise reveals that Mozart considered even a simple texture such as that to express underlying triads.[9] Despite the fact that two parts imply complete triads, the counterpoint exercises are, unequivocally, in only two parts. The same may hold true for this setting of the "Benedictus"; the two written parts imply triads. During the setting of the first phrase, Ployer probably filled in the fundamental bass as she went along, deciding, as per Mozart's hypothetical instructions, whether the notes of the melody belong either to the tonic, dominant, or dominant seventh chords. Once this was done, Ployer chose from among the various chord tones.

Ployer's setting of the second phrase. At the beginning of the second phrase, as shown in Example 3-4, Ployer made some reasonable and attractive choices. Though she still prefers to counterpoint *e''* with *g*, her following choices beneath *f♯''-g''-c♯''* are

[9]Again, see Lester, 1992, 186.

particularly successful. She probably understood the *f♯* as a new leading tone that resolves into a G-major chord. She probably had a similar understanding of the *c♯*. However, Ployer resolves this leading tone to a D-minor chord, then places *c* on the following downbeat, which contradicts her own fundamental bass for the first beat and has a questionable relationship to the melody.

Example 3-4. Ployer's setting of measures 5-8.



Mozart must have hoped that Ployer would see that the first three notes of the phrase move in the key of the dominant. The logical resolution of the *c♯* (if it is understood as a leading tone like the *f♯*) leads to a D chord in measure 6. The integrity of the remainder of the phrase depends upon whether this D chord is heard as the supertonic in the main key or the dominant in the new key. Mozart's setting shows that he heard the phrase moving in the dominant from measure 5 to the cadence, thus requiring that the D chord be major, functioning as the local dominant. Once D is recognized as the dominant in the new key, it stands to reason that the following *c″* is a melodically active passing tone inclining toward *b′* as in a V^{8-7} motion.

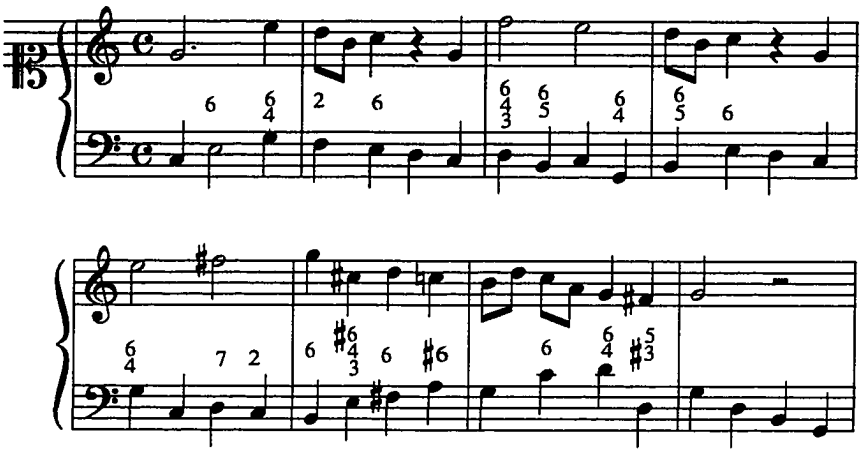
Apparently, Ployer heard the chromatic alterations in the melody as incidental tonicizations within the main key, failing to realize their significance in the larger modulation. Three clues underscore her interpretation. First, the continuo and fundamental basses below *d″* in measure 6 show that Ployer heard this chord as the minor supertonic of C major; the absence of a sharp in the figures for both basses, indicating *f♯*, prove this

point. Second, Ployer sets *c''* as the fifth of the subdominant chord of C major, not as the seventh of the applied chord to V in that key. Again, the lack of any indication to raise *f* to *f♯*, as would be appropriate in a dominant six-five chord, makes this clear.[10] Third, the following G chord and the figure *7* that accompanies it—indicating a dominant seventh chord *still* in C major—reveal that she continued to see the phrase moving in the tonic even at this late point in the phrase. This chord, she thought, was to lead to an A-minor chord as a deceptive resolution of a dominant. For Ployer, recognizing where the modulation to the dominant occurs was to be a recurring problem throughout the harmonization exercises despite some very creative efforts by Mozart to help her. How Mozart constructs phrases that modulate to the dominant will be particularly important later in the dissertation, when I discuss some of the voice-leading paradigms.

Ployer's second setting. After she completed the second period of the "Benedictus," Ployer set the whole exercise again—this time with a figured bass. (Again, the presence of figures does not necessarily indicate a four-part setting. The figures indicate the bass's relation to the harmony that generates it.)

[10]Most confusing is why the editors of the *NMA* included just such an f♯ in the fundamental bass; clearly, despite being closer to Mozart's conception of the phrase, this is not what Ployer intended.

Example 3-5. Ployer's second setting of measures 1-8.[11]

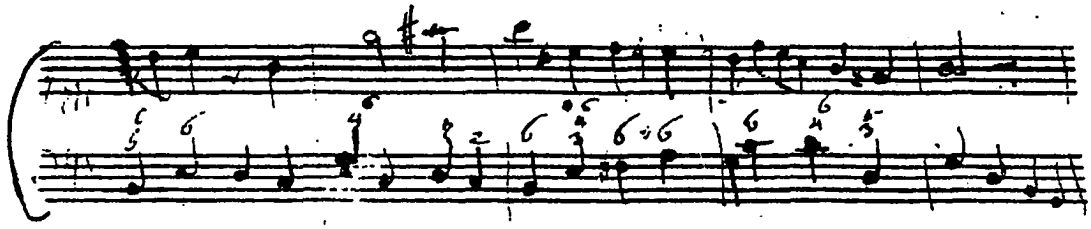


Her second setting is better. The most significant improvements come in the phrase that modulates to the dominant. Her bass in measure 6 is much the same, though this time she includes all the necessary accidentals—in the bass and figures. Measure 7 is much better, mainly owing to the fact that she realized that the chord on the downbeat should be a G-major chord.

Careful inspection of the manuscript, however, suggests that Ployer originally placed *c* on the downbeat of measure 7, just as she had done in the first setting. Perhaps, this was the one mistake that Mozart could not tolerate, and he suggested to her that she squeeze *g* in between the bar line and the *c* that she had written in error. She would also have to change the *c* from a half to a quarter note.

[11]Note the spacing and the figures in the cadential six-four chord in measure 7. The bass and soprano are separated only by a fourth, making it impossible to have a sixth above the bass as an inner voice. Here the details of Ployer's notation hint at a two-part setting.

Illustration 3-2. Measures 4-8 of Ployer's second setting, showing inserted *g* in measure 7.



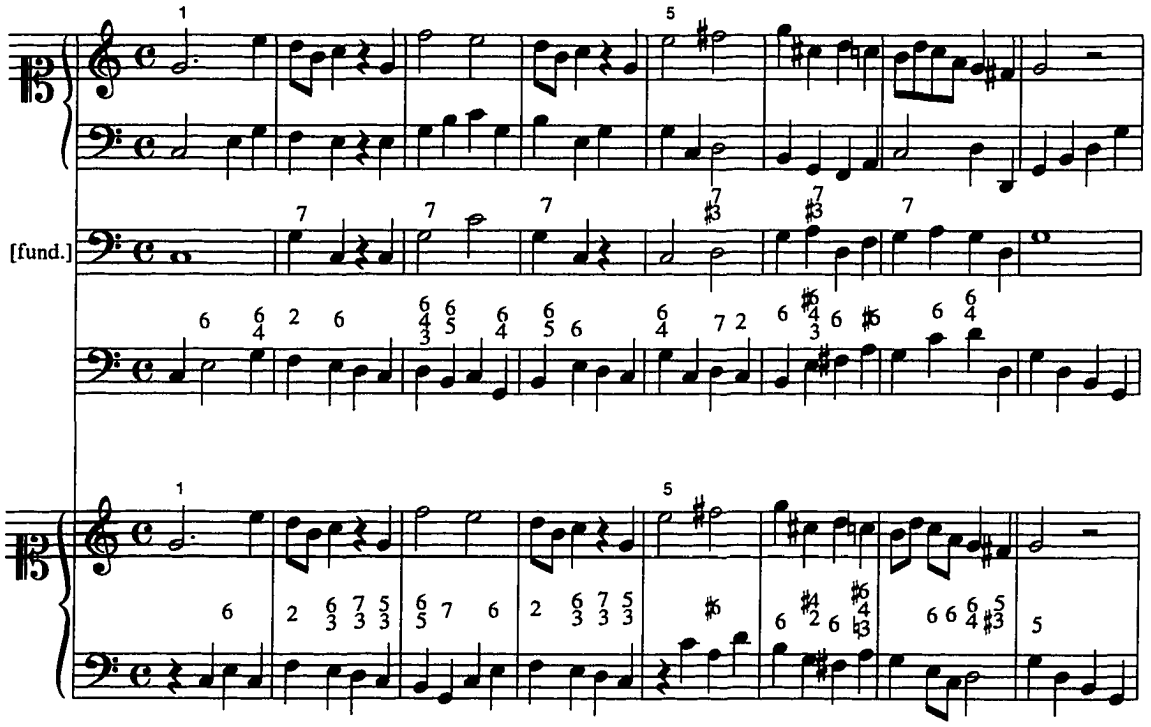
Several clues, including her correction in measure 7, suggest that Ployer's second setting was completed without the benefit of Mozart's critique of the first: 1) In two out of the remaining three harmonization exercises that appear in multiple settings, Ployer finishes two versions, a note-against-note setting followed by a diminution bass, *before* Mozart makes comments or corrections. Ployer followed this procedure in the exercises from folios 4a, where the exercise with the partial fundamental bass appears, and in the "Jupiter" exercise.

2) Both of Ployer's settings of the "Benedictus" contain harmonic choices at variance with Mozart's own setting that appears at the bottom of the folio. Example 3-6 juxtaposes Mozart's and Ployer's setting of the exercise. Ployer's setting of measure 11 contains a D major triad and a G dominant seventh chord while Mozart's contains the dominant seventh for the entire measure. Ployer's setting of measure 13 contains G major for three beats and C major for beat four while Mozart, essentially, prolongs D throughout the whole measure. The D chord first appears as a minor triad then changes to an applied chord after the passing seventh chord on the third beat. These discrepancies, as well as more serious harmonic errors in her setting in the "Jupiter," go unchallenged until Mozart's corrected version appears.

3) When Mozart had the opportunity to correct Ployer's mistakes between settings, he took them. On folio 3a, he makes important marks in Ployer's bass that cause her to set

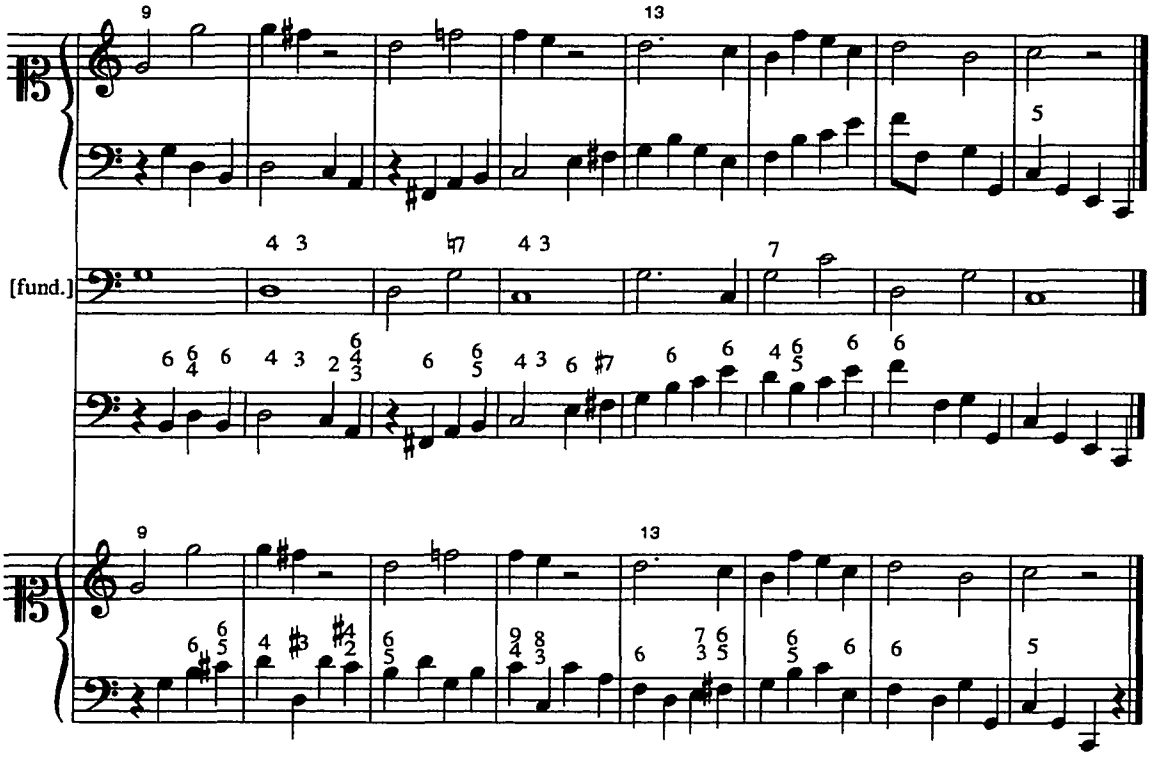
the same passage differently in the her next attempt.[12] 4) The most serious mistake, which could not be construed merely as a difference in harmonic interpretation, occurs in measure 7 where Ployer, in both settings, originally wrote *c* as a half note in the continuo bass. It seems that Ployer made this mistake in both settings and that the subsequent corrections occurred only *after* the second setting. Clearly, the fundamental bass in the first setting is altered at this point—though the continuo is not; and, upon close scrutiny of the manuscript, it appears that the *g* that appears on the downbeat of measure 7 in the second setting was added after Ployer originally wrote a half note *c* there, as she had done in the first setting. Had Mozart seen the mistake after the initial setting he probably would have corrected it in *both* the fundamental and continuo basses. What appears to have happened is that he saw the mistake only after Ployer had completed both basses and directed her to make the correction in the second setting and then *only* to the fundamental bass in the first.

Example 3-6. Ployer's and Mozart's settings of the "Benedictus" exercise.



[12]See Chapter 5, 91f.

Example 3-6, cont.



A glance at Mozart's setting of the first period shows that his harmonies do not differ significantly from Ployer's, except, of course, in the cadential measure. Certainly, his bass is much more fluid than Ployer's, which seems to have been constructed rather mechanically, possibly because of the guidelines set by Mozart or simply from lack of skill.

Diagnosis. Given those hypothetical parameters, Ployer had some success. Though Mozart tolerated some mistakes, her harmonies are mostly correct. It appears that he may have corrected only the most glaring error in measure 7. However, her line, especially in the first setting, lacks smoothness. If, indeed, her primary focus was to invent a single line beneath a given melody, then she needed some remedial work in counterpoint to improve her skills.

Mozart's minimal participation in this exercise is characteristic of one who is administering a diagnostic test. He designed the exercise and probably gave Ployer some

directions to follow as she completed her work. However, for the most part, he left her to her own devices. If he had taken a more active role, he almost certainly would have made numerous corrections as she went along. It appears that he was satisfied enough with her work that he did not feel compelled to intercede, though clearly he would have preferred that she had done some things differently, as his version of the setting indicates.

His diagnostic test proved one thing for certain: Ployer was not ready to go on to more complicated issues of composition. In fact, Mozart apparently had to investigate further in order to determine Ployer's level of competence. It seems clear that the contents of the lesson book that follow the first harmonization exercise represent Mozart's attempt to determine Ployer's level of skill in figured bass realization and part writing.

Chapter 4

The Diagnostic Review: The Four-Part Setting of the "Priest's March" Exercise

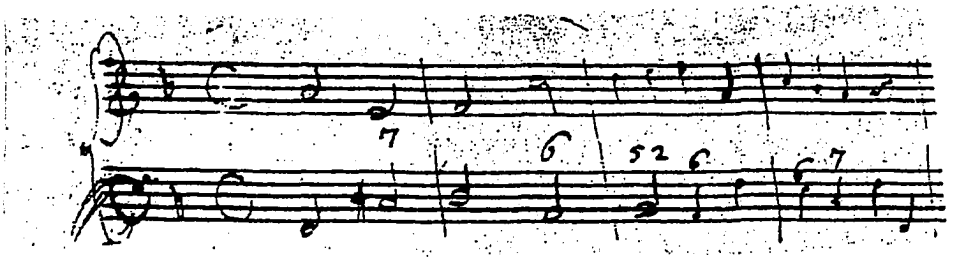
Mozart realized from Ployer's execution of the "Benedictus" that she lacked the skills necessary to complete a good bass line. Ployer was particularly deficient in counterpoint, as witnessed by her poor melodic construction. Mozart simplified subsequent tasks for Ployer in accordance with her skills. In the "Priest's March" exercise on the back of the first folio, Mozart required only that Ployer realize the inner parts to a melody and figured bass. Through this vehicle, Mozart could determine what Ployer knew about voice leading and figured bass. The part-writing mistakes that Ployer made in this exercise—parallel octaves and fifths, awkward lines, poor chord construction—are so deplorable that Mozart must have been frustrated with his student. Some of the inner voices simply fail to realize the figures that Mozart provided, indicating that Ployer needed further instruction in figured bass as well. Mozart must have expected that she would do better. It is after her completion of the "Priest's March" exercise that Mozart probably directed Ployer to the remedial exercises in species counterpoint and figured-bass chorales.

This chapter discusses Ployer's completion of the inner voices of the four-part version of the "Priest's March" exercise from folio 1b. The detailed examination of Ployer's choices of notes for the inner voices reveals the following: 1) the process that Ployer followed as she realized the figures and penned the inner parts at the chord-to-chord level; 2) what Ployer knew of figured bass, voice leading, and chord construction at a point somewhere near the beginning of the theoretical studies; and 3) what role Mozart played in the completion of the exercise. The evidence suggests that Mozart took a more visible role than he did in the setting of the "Benedictus" exercises. Most importantly, the exercise's reconstruction suggests how Mozart may have guided Ployer through an overview of its form.

The evidence below suggests that Mozart worked together with Ployer at the beginning of each of the exercise's two periods. Mozart probably wanted Ployer to start off in the right direction and, to that end, worked out with her solutions for the beginning of each period. The general quality of these measures is significantly higher, most likely due to Mozart's participation, than that of the rest of the exercise. If Ployer alone completed the entire exercise, unaided by Mozart, then she applied different principles to the setting of the initial part of each of the periods than she did to the rest the exercise, which contains numerous mistakes. Rather than assume that Ployer's approach was drastically inconsistent, the evidence suggests that the portions of the exercise that are completed satisfactorily, even skillfully, were written under Mozart's watchful eyes. The poor quality of the remainder of the exercise suggests that Ployer completed it as a homework assignment.

Layout of exercise. The exercise that appears first at the top of folio 1b is similar in formal terms to the melodic harmonization and string quartet settings elsewhere in the lesson book. Like the other exercises, it is written in a double-period form in which the first period modulates to the dominant. The "Priest's March" consists of a melody and figured bass, written first on two staves in keyboard format.

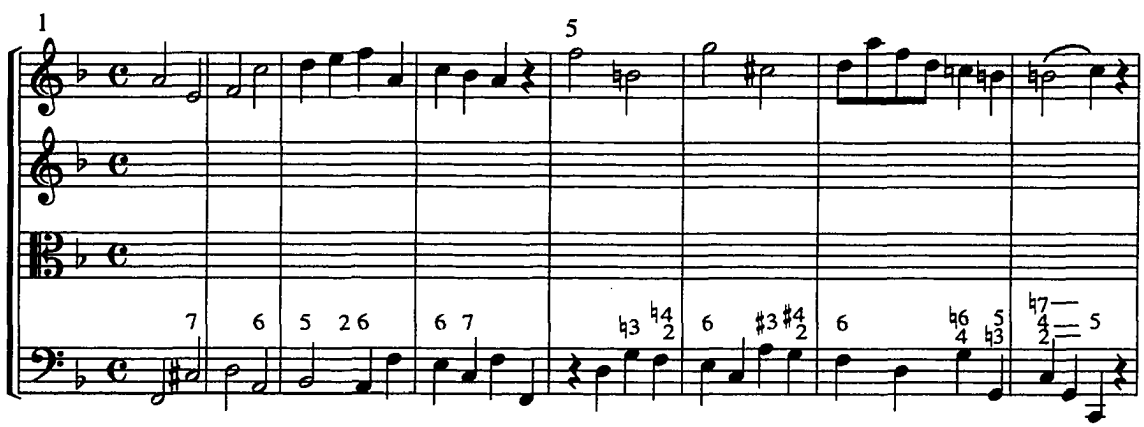
Illustration 4-1. Folio 1b. "Priest's March" exercise, measures 1-4, in keyboard format.



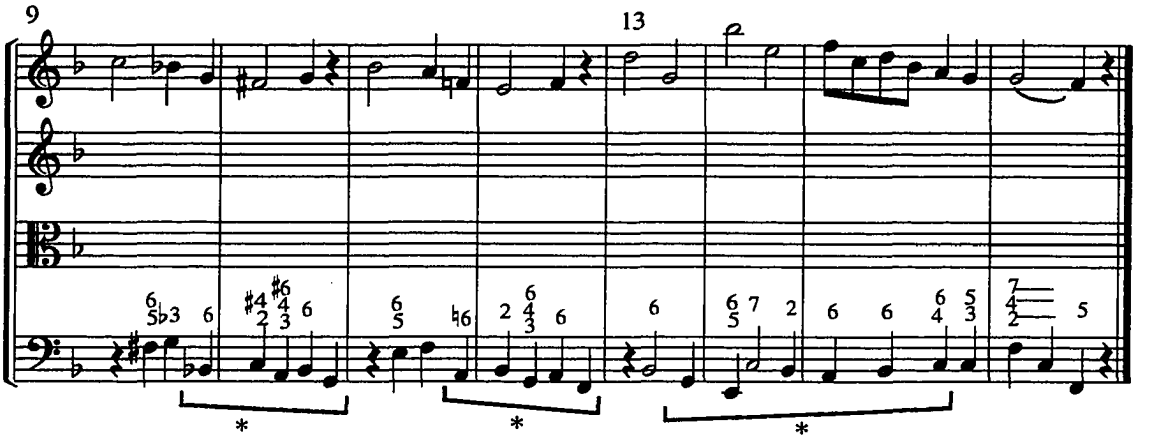
Why Mozart wrote the exercise in keyboard format first is not immediately clear. Written as it is, Ployer had nowhere to write the inner voices, if this was indeed to be her task. Perhaps Mozart wanted Ployer to realize the inner parts at the keyboard, as she might

have done in the second setting of the "Benedictus"; Mozart himself might have demonstrated such a setting for Ployer. Maybe Mozart wrote out portions of the melody first and then, with her at his side, went over them to show Ployer how to set the bass. An examination of the bar lines in Illustration 4-1 shows that on many occasions Mozart drew individual bar lines for both voices; on fewer occasions he drew a single bar line through both parts. This suggests that he might sometimes have written an entire phrase of the melody before setting the bass, while at other times he worked more or less measure by measure, completing both parts approximately simultaneously. Regardless, Mozart rewrote the melody and figured bass beneath the keyboard setting, altering the register of the bass in the second period in order to provide room for inner voices, as shown in Example 4-1.

Example 4-1. Folio 1b. Four-part layout of "Priest's March" exercise.



Example 4-1, cont.

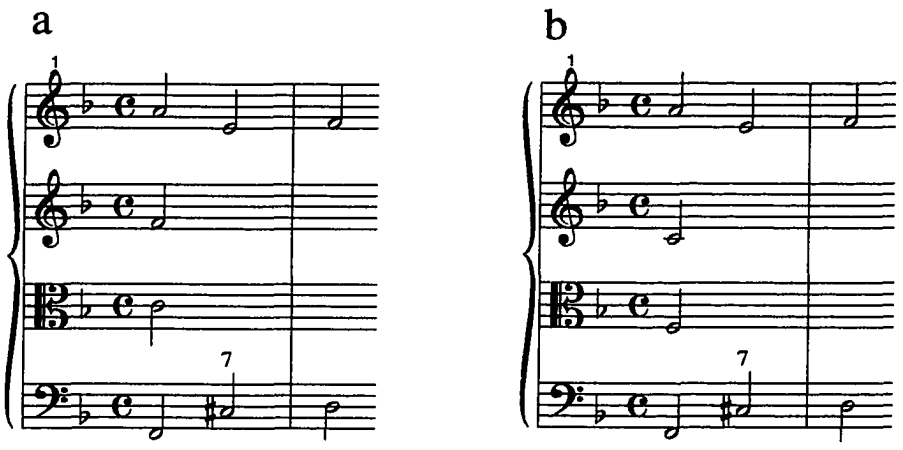


* These notes are transposed down an octave from the keyboard setting.

In the keyboard setting, the high register of the bass in measures 9-12 makes it impossible to sustain a true four-part realization throughout. Though the register of the bass in the following measures does not entirely preclude a four-part setting, Mozart saw fit to adjust the register downward as he did at the period's beginning, perhaps for no other reason than consistency. The last four notes of the bass remain as they were in the keyboard setting. When Ployer began the exercise, she saw only the melody and figured bass of the four-part setting; the staves for the inner parts were entirely blank.

Ployer's setting of the inner voices. Ployer's first task was to decide which notes the second violin and viola should receive in the first chord. She knew, presumably, that the absence of figures in the bass indicates that the first chord is in root position. This means that she needed to add the fifth of the chord, *c*, to the outer voices, *F* and *a'*, which Mozart had already provided. After this, one of the chord tones would have to be doubled—probably the root. Example 4-2 shows the two possibilities that complete the chord and double the root. Ployer chose the voicing shown at **a**.

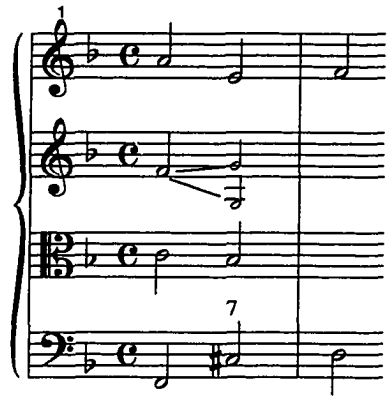
Example 4-2. Folio 1a, "Priest's March," mm. 1-2.[1]



Ployer saw that on the second half of the measure she must include a seventh, *b♭*, above the bass, as indicated by Mozart's figure *7*. Perhaps, she thought quite correctly, the viola would move smoothly from *c'-b♭*; and so she penned *b♭* into that part. This choice, however, forces the second violin to move to *g*, the fifth of the chord, if it is to be complete. Mozart may have drawn Ployer's attention to the two unappealing choices shown in Example 4-3, which result from placing *b♭* in the viola. In the first, the second violin moves up by step to *g'*, thereby crossing the first violin. In the second, the second violin leaps down to *g*; creating an dissonant skip, *f'-g*, and crossing below the viola part.

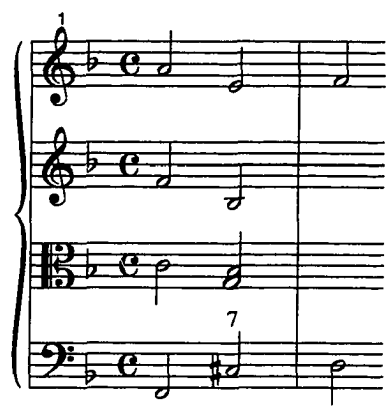
[1]In the following transcribed examples, Mozart wrote all but the notes in the inner voices, which were written by Ployer.

Example 4-3. Folio 1b, "Priest's March," mm. 1-2. How will the second violin move to *g* if the viola takes *b♭*?



Since neither *g* appears in the second violin, Ployer apparently recognized the problem immediately after writing *b♭* in the viola. After realizing the consequences of placing the seventh of the chord in the viola part, Ployer probably wrote *g* underneath her first choice *b♭* in the viola and led the second violin to the *b♭*, as shown in Example 4-4. This solution avoids the problem of having to place *g* in the second violin.

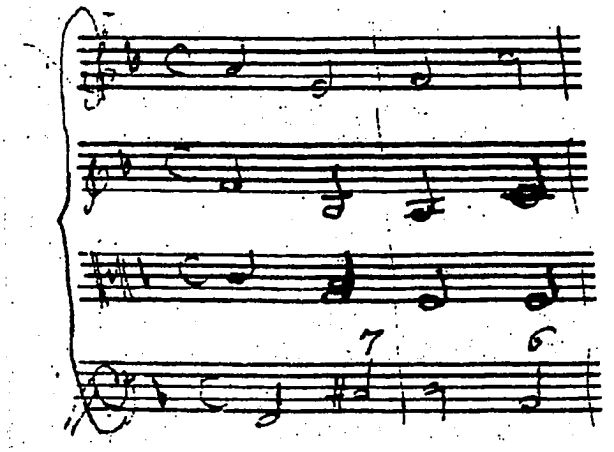
Example 4-4. Folio 1b, "Priest's March," mm. 1-2. Ployer rewrites the viola part, placing *g* beneath her original choice and giving the second violin the seventh of the chord, *b♭*.



The absence of figures above the third note in the bass indicates, again, that the chord is in root position. Here, however, Ployer has an added voice-leading responsibility; she must resolve the dissonant *b♭* downward by step to *a*, the note which completes the D minor chord. Whether Ployer moved the second violin to *a* in order to resolve the dissonant

7th or to simply supply the fifth above the bass cannot be determined. Perhaps she was aware that one necessity would complement the other. However, Ployer almost certainly wrote the *a* of the second violin before the *f* of the viola. Had she first led the viola to *f*, resolving the diminished fifth c♯-g, she would have doubled the third of the D-minor chord before completing it—an unlikely scenario given the construction of the first two chords. Had she led the viola to *a*, Ployer would have written parallel fifths (one diminished, one perfect) between that part and the cello.

Illustration 4-2. Folio 1b, "Priest's March," mm. 1-2. Facsimile.



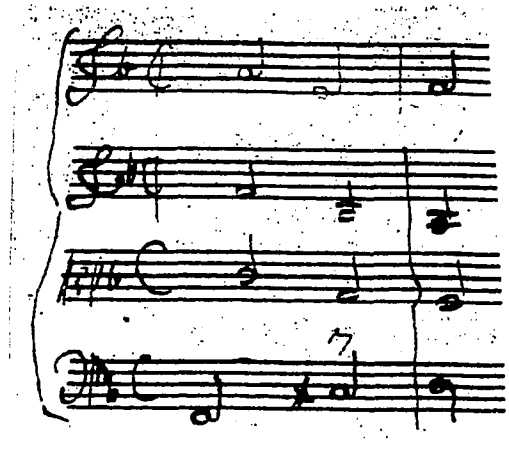
Ployer's procedures. Ployer's setting of the first three half notes tells us several things about her working method and abilities. Presumably, Ployer worked one chord at a time, rather than completing the entire viola part first then the second violin, or vice versa. She must have realized that such an additive approach would have created great difficulties for the completion of the fourth part. Her setting suggests that she followed the following course of action: 1) in the first root-position triad, Ployer first added the note that completes the chord, then chose the best doubling for the remaining voice; 2) in the single chord containing the figure *7* above *c♯*, Ployer first wrote that note in the inner voice since it is not already present in the given melody; 3) in the second root position triad, Ployer resolved the dissonant 7th downward by step, which, coincidentally, also completes the chord.

Thus, in the first two chords, Ployer probably wrote the viola part first, then the second violin. In the first chord, her choice of *c'* in the viola part completes the chord though it leaves a space of twelfth between the cello and the viola. Had she written the second violin part first and placed the *c'* there, she may have arrived at the more even spacing shown in Example 4-2b, above. In the second chord, Ployer's initial choice of *b♭* for the viola makes sense melodically but, as shown, causes problems for the second violin. Evidently, she saw the problem and adjusted the inner voices accordingly, moving the *b♭* to the second violin and taking *g* in the viola. In the third chord, the more immediate need for the resolution of the 7th takes priority; thus, here, she probably wrote the second violin part first, where *b♭* falls to *a*, then the viola part.

These choices seem to indicate that Ployer did not, or could not, conceive of both inner parts simultaneously. Had she been able to do so, she could have avoided at least the chord construction problem above *c♯*. Nevertheless, Ployer completed these chords accurately and led the voices smoothly and carefully.

Ployer's realization of the first three chords matches Mozart's setting of the exercise that appears on folio 2a. There, Ployer wrote out the clefs, key signature, meter, melody, and figured bass; Mozart realized the inner voices in measures 1-4 and 13-16. Illustration 4-3 shows that Mozart's second violin and viola part for the first three chords are identical to Ployer's.

Illustration 4-3. Folio 2a. Mozart's setting of the first three chords of the "Priest's March" exercise.



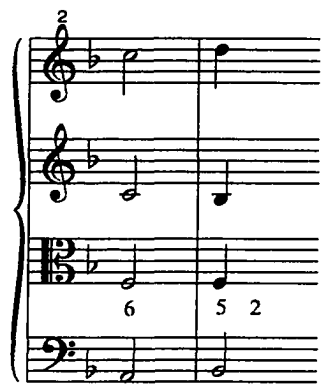
Ployer's setting begins to unravel after her realization of the first three chords. A glance at the facsimile shown in Illustration 4-2 suggests that Ployer made a mistake in the second violin part on the second half of measure 2. It appears that Ployer originally wrote *e'*, then wrote *c'* over it. How did the mistake come about? Perhaps Ployer failed to see the figure *6* above the *A* in the cello part. She may have assumed, after seeing the *A* and the *c''* of the first violin, that the chord was actually an A-minor chord in root position; hence, she penned what she thought would be the fifth of that chord, *e*, in the second violin. After realizing her error, Ployer maintained the *f* in the viola part, which represents the 6 of the figured bass, and changed the second violin from *e'* to *c'*. As with the *c♯* diminished seventh chord, Ployer caught the mistake. However, the error in the six-chord above *A* is more serious because it disregards Mozart's figured bass.

Through the second measure, the choices that Ployer made in her setting of the inner voices can be reconstructed according to a logical set of procedures. The examination shows that though Ployer occasionally set the inner voices imperfectly, she realized mistakes when she made them and corrected them almost immediately. It is difficult, however, to see any logic behind the choices that Ployer made for many of the chords remaining in the first period.

Ployer's setting of measures 3-8. Example 4-5 shows that on the downbeat of measure 3, Mozart writes the figures *5 2* above the bass *B♭*, indicating a root position chord moving to a seventh chord in third inversion, six-four-two. Had Ployer completed the inner voices according to the procedure used in the first three chords, she would have added the fifth above the bass as indicated by the figures. The fifth of the chord, *f*, might have appeared in either of the inner parts. The viola, coming from an *f* in the preceding chord, could remain there; Ployer then might decide to double the root, as shown in Example 4-5.

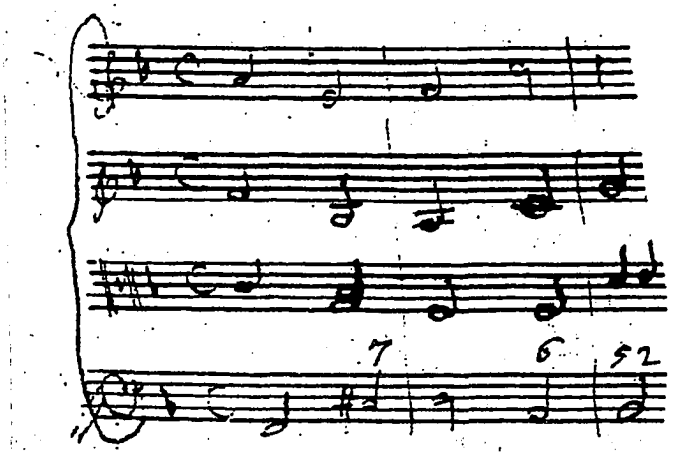
Example 4-5. Folio 1b, "Priest's March," mm. 2-3. The downbeat of measure 3.

a



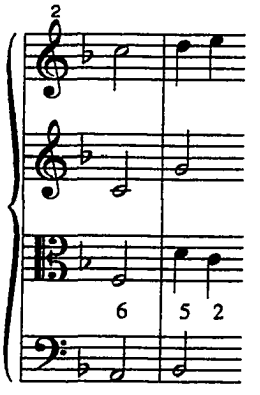
The actual choices made by Ployer do not follow the pattern that she established in the first two measures, in which she completed the chord according to the figures and chose best among the possible doublings. If Ployer, as I suspect, worked one voice at a time, the first voice which she added would most likely be the one to complete the chord. For the downbeat of the third measure, this means that *f* must appear in one of the inner voices. No such *f*, however, appears. Instead, the manuscript suggests that Ployer originally wrote a quarter note *a'* in the second violin and some time later changed it to a half note *g'*, as seen in Illustration 4-4. Neither *a'* nor *g'*, of course, agrees with Mozart's figured bass. Furthermore, the viola leaps a sixth to *d'*, bypassing *b♭*, which would have provided a better doubling and a better line for the viola.

Illustration 4-4. Folio 1b, "Priest's March," mm. 1-3. Ployer's choices for the downbeat of measure 3.



There is one arrangement for the second beat of measure 3 that is satisfactory, given Ployer's construction of the downbeat—including the possibility that the second violin originally stood as a quarter note on *a'*. Ployer, following Mozart's figure *2*, should move one of the inner voices to *c*. Ideally, Ployer would lead the viola by step to *c'* and move the second violin from *a'* to *g'*, though, as discussed above, it should have been on *f'* previously. This solution is shown in Example 4-6. (Ployer may have altered the second violin part at this point, after realizing she needed a *g* in the six-four-two chord above *B♭*. Why she failed to correct the pitch on the downbeat of the measure is unclear.)

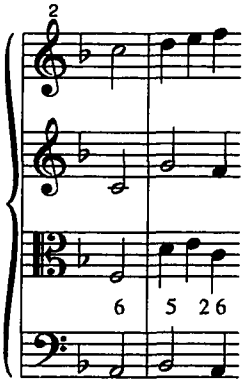
Example 4-6. Folio 1b, mm. 2-3. Best solution for second beat of measure 3.



However, rather than moving the viola to *c'*, Ployer wrote *e'* in the viola part. Three problems result: the leading tone is doubled, there are parallel octaves between viola and first violin, and the progression ignores the figure *2* in the bass, as Illustration 4-4 shows.

On beat 3 Mozart wrote *A* in the bass with the figure *6* above it and *f''* in the melody. Ployer should have realized that the melody covers the sixth above the bass as indicated by the figure. If she were thoroughly familiar with figured bass, Ployer would have realized that the chord requires a third above the bass. Perhaps she might have led the viola down a third from *e'* to *c'* in order to complete the chord. After this, Ployer might have doubled the root in the second violin. Example 4-7 shows this possibility.

Example 4-7. Folio 1a, mm. 2-3. Best solution, considering mistakes already written.



Instead of choosing this voice leading, Ployer, by resolving the leading tone to the tonic, once again writes parallel octaves with the first violin. The sixth above the bass is tripled. The manuscript suggests that Ployer originally wrote a quarter note *a'* in the second violin and changed it to *f'*.

The fourth beat of measure 3 is the only part of the measures that is written correctly. The *f* in the bass is unfigured, indicating a root position chord. The melody stands on *a'*; Ployer need only to complete the chord by adding the fifth, c. Ployer moved

the viola to *c'* to complete the chord and retained the *f'* in the second violin. On the fourth beat, she wrote it as a quarter note, then, probably in an afterthought, tied it to the previous *f'* as if she knew that a single half note for the two f's would have sufficed.

Measure 3 contains a litany of errors. First of all, she wrote the wrong chord on the downbeat; she wrote, in both middle parts, unseemly leaps to get there, and then did not catch her errors, as she had done in the first two measures. Secondly, Ployer wrote not one, but two sets of parallel octaves between the viola and first violin, doubling the leading tone on the second beat. She failed to recognize these mistakes as well.

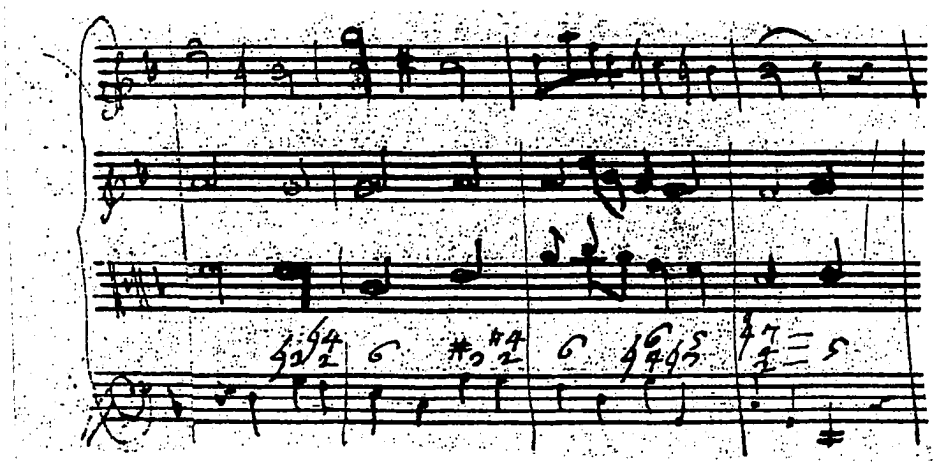
What went wrong here? Perhaps a reevaluation of Ployer's abilities is in order, given the errors she made. Her poor execution suggests the following: 1) Ployer did not check her work consistently. Her correction in the viola part in measure 1 indicates that careful contemplation was not beyond her (as shown in Examples 4-2 to 4-4); 2) If Ployer intended to write everything that she did (that is, she meant to write *a'* or *g'*, not *f'*, in the second violin on the downbeat of the third measure) she knew less about figured bass and basic voice-leading principles than assumed above.

What can account for the dichotomy between the setting of the first two measures, with their thoughtful execution, and the third, with its careless mistakes? As suggested above, perhaps Ployer worked on the first two measures in Mozart's presence and took the rest of the exercise home and completed it herself. During the lesson, Mozart would have pointed out the pitfalls of voice leading and chord construction at the very beginning of the exercise. He might also have provided the hypothetical procedure for setting the inner voices as gleaned from Ployer's choices in the first two measures. Ployer would, of course, have followed his advice. However, when Ployer was left to her own devices, she could not successfully complete the inner voices as she had in Mozart's presence.

Ployer's setting of measures 5-8. Illustration 4-5 shows the remainder of the first period, which modulates to the dominant in measures 5-8, and the serious errors in voice leading and chord construction in Ployer's setting. Many of Mozart's figures are

contradicted by Ployer's choices: the seventh above the bass in measure 5; the *c'* and *f'* of the viola and the *bb'* and *a* of the second violin in measure 7. These mistakes are so glaring that we must assume that Ployer did not check her work at the keyboard. Certainly, if she had, she would have heard the conglomeration of dissonances she had written and, hopefully, made the appropriate adjustments.

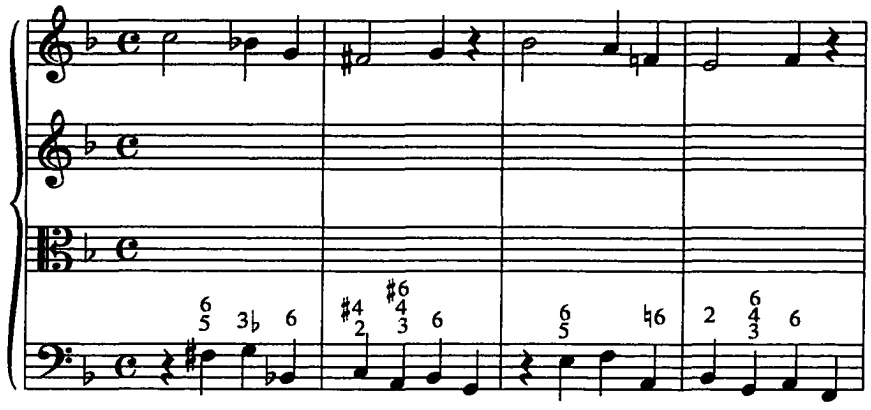
Illustration 4-5. Folio 1b. Measures 5-8.



The Second Period

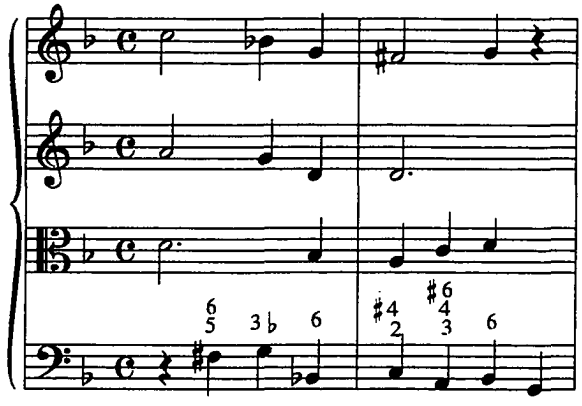
After Ployer's error-ridden setting of the final measures of the first period, a remarkable clarity returns in the setting of the beginning of the second period. Measures 9-12 contain a sequence that forms a transition between the tonicization of the dominant at the end of the first period and the tonic return in the second period.

Example 4-8. Folio 1b, "Priest's March," mm. 9-12.



The first two of these measures are set nearly perfectly and appear to be written with great confidence. However, the second two-measure pair is fraught with error and hesitation. Example 4-9 shows that Ployer's setting of the first two measures is nearly flawless: all the notes she wrote for the second violin and viola agree with Mozart's figures; all the chords are complete; and the voice leading is irreproachable—save for the upward resolution of the *c'*, measure 10, in the viola part.

Example 4-9. Folio 1b, mm. 9-10. Ployer's inner voices.



The upward resolution of *c'*, the dissonant note of the chord, indicates that perhaps Ployer did not recognize that note as such. It is, after all, a third above the bass not, for example, a seventh or fourth.[2]

Compared to her setting of measures 2-8, the manner in which Ployer set these measures indicates a remarkable sophistication on her part. Apparently, she no longer thought one chord at a time but conceived the inner parts for several chords before she committed pen to paper. Her use of dotted half notes, in particular, underscores this point. Though *d'* appears in two different chords in the viola part in measure 9—the six-five chord above *f#* and the five-three chord above *g*—Ployer had the presence of mind to notate the rhythm with a dotted half note instead of using a half tied to a quarter, as she had done in measure 3 in Illustration 4-4, above. Her choice of dot over tied quarter note reflects a certain sophistication even if Ployer added the dot only as an afterthought. Similarly, Ployer's use of the dotted half note in the second violin part in the following measure is even more promising because the *d'* is present in three different chords.

The difference between the setting of measures 3-8 and that of measures 9-10 could hardly be more striking. In the former, the chords are constructed poorly, making it impossible even to consider the quality of the voice leading. In the latter, the chords contain all the correct notes (no notes are foreign to the chords or contradict Mozart's figures) and the voice leading (save for the upward resolution of the *c* in measure 10) is exemplary. The quality with which these measures are set resembles not that of the measures that Ployer completed immediately before but, rather, that of the very first measures of the exercise. This suggests that Mozart worked out the beginning of this period with Ployer as well. By

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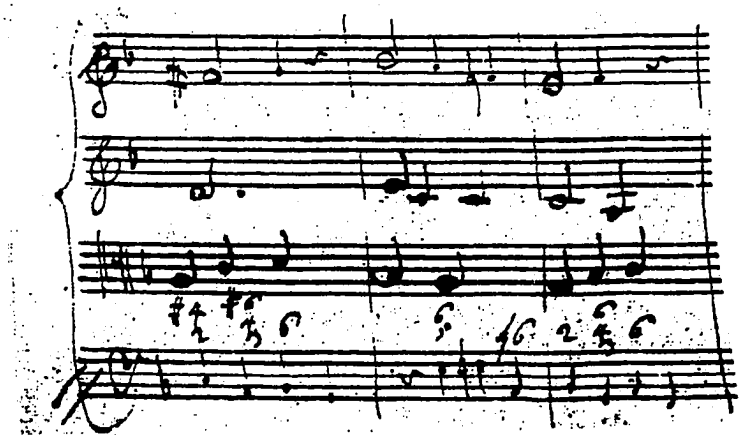
[2]C.P.E Bach states in his *Versuch*: "The exceptional features of [the six-four-three] are that the third is treated as a dissonance and the fourth enjoys more freedom than usual. The [third] is usually (i.e. except when the fourth is omitted) restricted by the [fourth], and always resolves by stepwise descent." *Essay on the True Art of Playing Keyboard Instruments* by Carl Philipp Emanuel Bach, trans. and ed. by William J. Mitchell (New York: W. W. Norton, 1949), 233, §4. There are, however, instances in which this third above the bass does "resolve" up, particularly when the motion moves in parallel tenths with the bass, as in V4/3 to I6.

helping Ployer with the first statement of the sequence, Mozart provides her with a model for its second statement, as we will see later at the beginning of the second period to the F-major exercise with a partial fundamental bass.

Evidently, Ployer did not recognize that measures 11 and 12 repeat the previous two measures a step lower. Had she realized this, Ployer could have adjusted the inner voices from the preceding measures to fit the second statement of the sequence. However, she did not and, consequently, made several errors. See Illustration 4-6

Illustration 4-6. Folio 1b, "Priest's March," mm. 10-12. Ployer's inner parts.



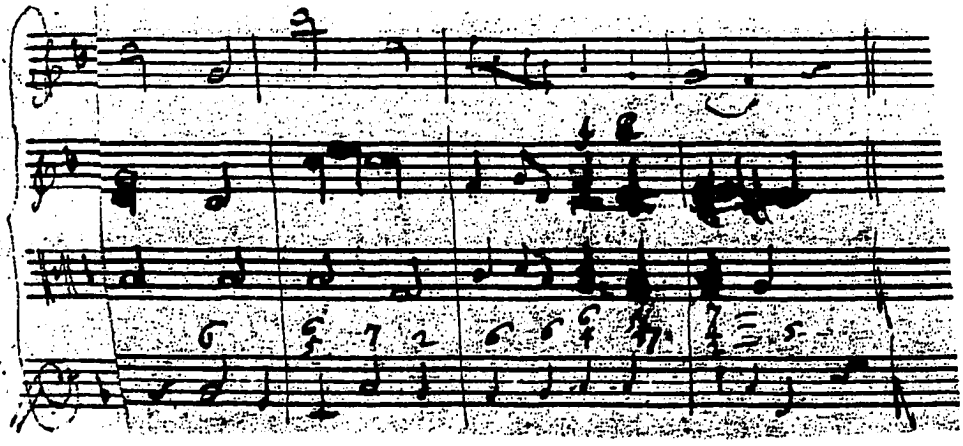
Ployer seems to have labored over these measures, especially with regard to the rhythm of the second violin and viola; she did so despite the fact that these measures contain the same chord progressions and nearly the identical figures as the preceding two measures that she had set so well. There appear to be several places in which Ployer wrote over a note she had written earlier. In the second violin, the appearance of *e'* suggests that Ployer probably wrote it as a half note and later realized that if the *e'* sustained through the second beat it would double the leading tone already present in the bass. To correct the error, Ployer simply filled in the half note to make it appear as a quarter. The viola part contains three such rhythmic corrections. Ployer wrote the *b♭* on the downbeat of measure 11 first as a quarter note and later changed it to a half note. The same is true for the

following note, *a*—a quarter note changed to a half note. The *g* of the viola in measure 12 seems to have suffered the opposite fate; its appearance suggests that Ployer originally wrote it as a half note, then changed it to a quarter note. Ployer might have followed the same sequence of durational alteration when, also in the viola, she wrote *g* on the downbeat of measure 12. These emendations are precisely the type that are absent from the preceding two measures, where Ployer handled the rhythm of the inner voices with confident aplomb. The emendations in measures 11 and 12 appear to be a by-product of the myopic, chord-to-chord approach to which she, apparently, returned.[3]

The Final Phrase and Mozart's Participation in the Setting of the Cadence

The last phrase of the exercise contains nearly as many errors as did the last phrase of the first period. That Ployer struggled to set the inner voices is apparent from the facsimile of these measures presented in Illustration 4-7.

Illustration 4-7. Folio 1b, "Priest's March," measures 13-16.



[3]Measure 11 also contains two errors in voice leading and chord construction. The problems are caused by the doubling of the *b♭* in the viola part. Apparently, Ployer had the presence of mind to change the duration of this note, as mentioned above, but not to omit it entirely since it doubles the dissonant fifth above the bass of the six-five chord. The resolution of the doubled dissonance in the alto, of course, causes parallel octaves with the first violin. In measure 12, Ployer retains one element of the preceding two measures that she might have expunged: the upward "resolution" of the third above the bass in the six-four-three chord. On the third beat of this measure the second violin and the viola cross; though this poses no problems, as Mozart's setting of a portion of the inner parts of this exercise shows.

The second violin in particular gave Ployer significant problems. Ployer obviously changed the first note of the second violin from *d'* to *g'*, thus providing the sixth above the bass, as indicated in the figures. In measure 14, awkward leaps, possibly motivated by the large leap in the first violin, disturb the melodic flow of the inner parts. The facsimile suggests that in the same measure Ployer originally wrote the rhythm ♪♪♪, then changed it to ♪♪♪. The final cadence in the second violin is nearly illegible and is discussed in more detail below. The viola part contains fewer corrections but nearly as many mistakes: Ployer doubles the dissonant fifth of the six-five chord on the downbeat of measure 14 and, in the next measure, it appears that Ployer originally wrote parallel octaves with the first violin from the first to the fourth beat. Ployer corrected the last set of parallels, though the octaves on the second beat remain. In the last measure, Ployer changed the downbeat from *g* to *b♭*.

Hellmut Federhofer implies that Mozart was present when Ployer completed the inner voices to the final cadence. He states that Ployer smudged the figure 7 that Mozart had originally written above the final dominant. Mozart replaced the obliterated 7 with the large numeral that appears to the right of the original figures.[4] If it was indeed Ployer who caused the disappearance of the original 7, then she would have had to begun work on this portion of the exercise soon after Mozart had completed copying the exercise—before the ink had time to dry.

If Mozart was present to rewrite the figured bass after Ployer had smudged the figure 7, then he might also have been able to see what Ployer had written. Presumably, Mozart would have pointed out any errors that Ployer made in his presence. The final cadence contains numerous errors that may have been detected by Mozart and corrected as per his request.

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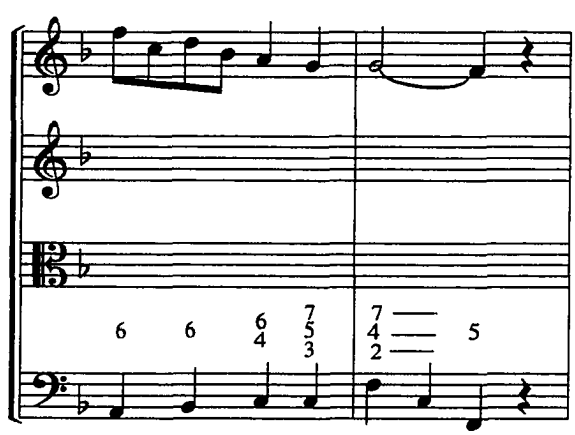
[4]"Alle Verbesserungen und Änderungen in den beiden Mittelstimmen nahm die Schülerin selbst vor. Die einzige Hinzufügung Mozarts betrifft die vierte Akkolade, und zwar dort in Takt 15 bei der Bezifferung des von ihm selbst geschriebenen Basses; infolge der von der Schülerin verursachen Kleckse war die an oberster Stelle geschriebene Ziffer '7' fast unleserlich geworden, so daß sie der Meister nochmals, nunmehr unübersehbar, hinzufügte." Hellmut Federhofer, 1989, 6.

The following examples provide a hypothetical chronicle of the various stages of completion of the last two measures. Example 4-10a shows measures 15 and 16 as they originally appeared, before Ployer began her setting. The inner voices are, of course, lacking; the original figure 7 above the final dominant, as posited by Federhofer, is present. Example 4-10b shows Ployer's first setting as she might have written it. The reconstruction of the second violin part poses many problems because of the difficulty in deciphering the pitches. The notes presented here are those that Federhofer suggests in his commentary to the *Neue Mozart Ausgabe* transcription.[5] Ployer's choice for beat 3 lacks a fourth above the bass and, as mentioned above, contains parallel octaves between the first violin and viola on beats three and four. It was perhaps while writing these notes that Ployer smudged the original numeral 7, hence it is omitted from the example. Example 4-10c shows Ployer's corrections, which may have been suggested by Mozart, and presents her original choices in small notes. Ployer eliminated the parallel octaves in the viola part and wrote the letters *f* and *e* above the second violin so as to make clear her intentions for that part. At some point after Ployer's first setting, Mozart must have rewritten the figure 7 that had previously been erased.

Example 4-10. Reconstruction of Ployer's setting of measures 15-16.

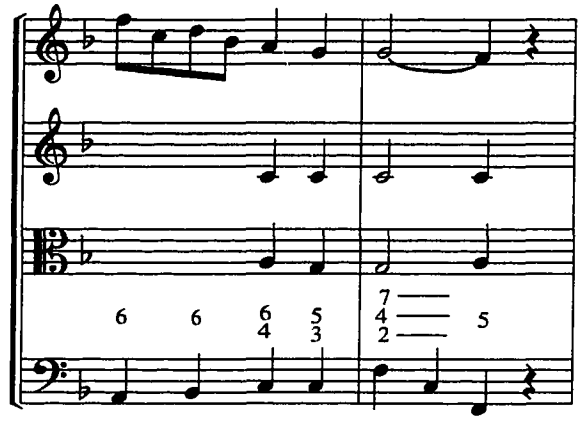
a



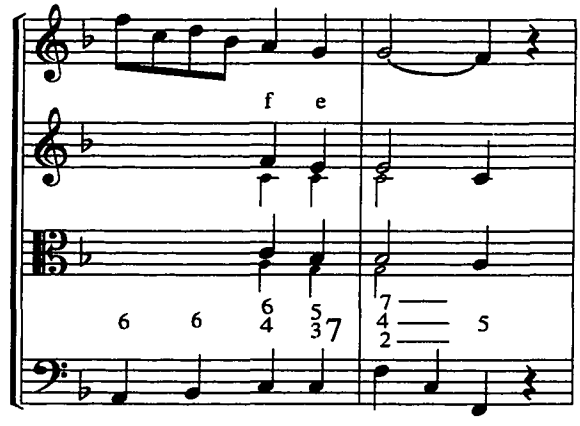
[5]Lach differs with this interpretation in a few places.

Example 4-10, cont.

b



c



Ployer must have set the first two beats of measure 15 away from Mozart's presence. As Illustration 4-2 shows, they, too, contain parallel octaves between the viola and first violin. Had he seen these mistakes, Mozart almost certainly would have drawn Ployer's attention to them, as he may have done in the final six measures of the exercise.

Summary. The examination of Ployer's setting of the "Priest's March" exercise from folio 1b reveals significant inconsistencies in Ployer's setting of the inner voices. Her setting of the initial measures of each period and the final cadence indicate a careful, competent approach to realizing Mozart's figures. However, Ployer's setting of most of the remainder of the exercise entirely lacks such care and competence. The final cadence is a

significant exception. There Ployer, possibly under Mozart's supervision, heavily emended her first setting, which contains numerous errors, so that problems of voice leading and chord construction were eliminated.

The evidence suggests that Mozart and Ployer worked on the exercise together for a time before Ployer left to complete her homework alone. The high quality of the setting of the beginning of each of the periods suggests that Mozart guided Ployer through the settings of these measures, probably with the hope that Ployer would remember the process to which Mozart had introduced her. Federhofer's assertion that Mozart added the plump figure 7 in measures 15 after Ployer had smeared it suggests that Mozart and Ployer worked out the final cadence together as well. The poor voice leading and chord construction of the portion of the exercise that Ployer completed on her own indicates that she retained little of the approach exemplified under Mozart's tutelage.

These diagnostic lessons occurred six years after Mozart gave the lessons in Paris, which he describes in the letter quoted in Chapter 3. In the interim, Mozart had acquired the pedagogical tools necessary to concentrate on his student's weaknesses and improve her skills. Mozart's ability to diagnose and treat Ployer's shortcomings represents a significant improvement in his teaching skills. The frustration he felt in the Paris lessons arose because he could find few techniques to help the duke's daughter. With Ployer, however, Mozart was able to suggest several courses of action to improve her work.

Ployer's execution of the "Benedictus" and "Priest's March" exercises indicated to Mozart that if she were to successfully harmonize a melody in two, let alone four parts, she needed remedial work. To this end, Mozart probably turned Ployer's attention to two-part species counterpoint. Here the cantus and counterpoint become analogous to the melody and bass of a melodic harmonization exercise. The controlled environment of the species provides a setting in which the relationship between the outer voices can be scrutinized.

Ployer's study of the first two species focused her attention on several issues common to both counterpoint and melodic harmonization. Among them are the priority of

consonance and subordination of dissonance; balance in melodic contour; and triadic implications in two-part structures. All of these issues are directly relevant to melodic harmonization.

As seen in her execution of the "Priest's March," Ployer also needed to improve her figured-bass skills. To this end, Mozart provided four-part chorale harmonizations which contain only a melody and figured bass. Ployer's task was to realize the inner voices and label the intervals between the upper parts and the bass. These intervals, in effect, would provide a long-hand version of the figures that Mozart placed above the bass part. Ployer could then see how Mozart's figures manifested themselves in a four-part setting where the figure *6* might come to represent the combination of three intervals above the bass: octave, sixth, and third. The simple, note-against-note setting of the chorales also raised issues concerning voice leading in four parts, issues of which Ployer must be made aware if she were to successfully add inner voices to her bass settings of Mozart's melodies.

The exercises in counterpoint and chorale setting appear in the back of the manuscript. Their position at the end of the volume belies the role they must have played in the early stages of Ployer's study with Mozart. It is logical to assume that Mozart assigned them either before further exercises in melodic harmonization were resumed or in conjunction with them.

Despite their fundamentally different character, Mozart used the exercises in species counterpoint and chorale setting to focus Ployer's attention on the skills she would need in order to properly set a bass to a melody. Once Ployer reviewed (or, perhaps, learned for the first time) the basic rules of voice leading and figured bass, she would have been able to reapply herself to the task with which her study with Mozart began, melodic harmonization. I turn now to the main body of harmonization exercises that follow the diagnostic period.

Chapter 5

The Main Body of Harmonization Exercises: A Graduated Design Organized by Disposition of the Fundamental Bass

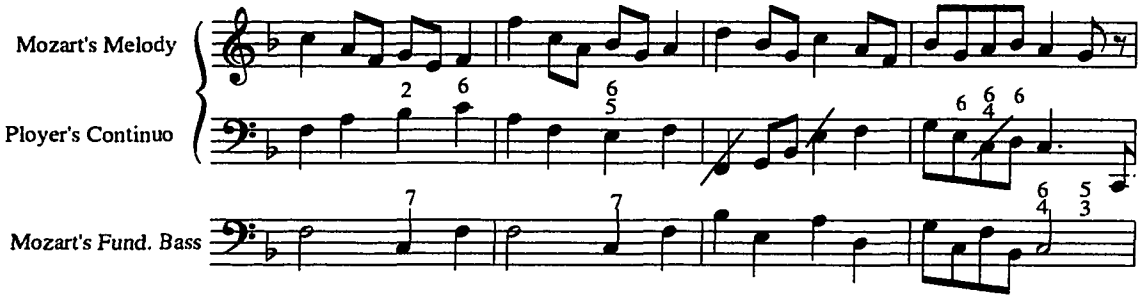
This chapter shows how Mozart presented a graduated series of harmonization exercises that required Ployer to compose basses founded on specific harmonic progressions, either predetermined by Mozart or left for Ployer herself to determine on her own. The primary factor determining the relative difficulty of the exercise is the disposition of the fundamental bass. According to the sequence of events established in Chapter 2, I show that Mozart organized the body of work done in melodic harmonization by gradually weaning Ployer away from the fundamental bass. Mozart designed a series of at least three model/exercise pairs for this purpose. All are contained on bifolio II. The series begins with folio 3a, which contains a complete fundamental bass, follows with folio 4a, which contains a partial one, and leads to folio 4b, which contains no fundamental bass at all.

Folio 3a/b. The exercises on bifolio II have a different focus than the "Benedictus" from folio 1a. Each contains a variation, or diminution bass or basses. It appears that in two of these exercises Ployer was to determine a simple, note-against-note bass, possibly suggested by a fundamental bass provided by Mozart, and lead this to a bass containing primarily eighth note motion. In an intermediate exercise, Ployer set the diminution bass immediately.

The "Diminution." Example 5-1 shows the first four measures of a double period from folio 3a. In this exercise, Mozart used the fundamental bass to guide Ployer in her choice of notes for the continuo part. As in the "Benedictus," Mozart laid out his melody and, two staves below, his fundamental bass. The staff in the middle was originally left blank for Ployer to complete her continuo part. Mozart's fundamental bass contains an

alternation of tonic and dominant seventh chords in the first two measures (as in the "Benedictus") followed by a series of descending fifths that lead to a half cadence. [1]

Example 5-1. Folio 3a, mm. 1-4. Mozart's melody and fundamental bass; and Ployer's first setting.



Ployer's continuo bass, in the broadest terms, agrees with Mozart's fundamental bass. All of her notes belong to the chords indicated in Mozart's harmonic guide, though most inverted chords lack the necessary figures. Ployer's ability to correctly follow a predetermined fundamental bass becomes significant later, when she is faced with the task of following a flawed fundamental bass of her own devising.

Several problems, however, appear in Ployer's continuo part. In the first measure, the bass of the four-two chord resolves incorrectly, upward instead of downward. Also in this measure and, indeed, throughout the entire exercise, Ployer has a tendency to treat second inversion triads on an equal footing with those in root position and first inversion.[2]

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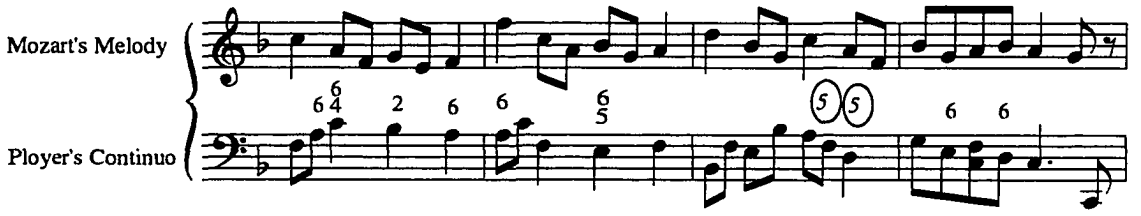
[1]The choice of *e* in the fundamental bass in measure 3 is interesting because the diminished triad on $\hat{7}$ was seen, usually, as having the dominant as its fundamental bass. Apparently, Mozart saw the series of descending fifths as the primary organizing factor in this progression and chose to label the fundamental bass accordingly.

[2]Lester writes: "Ployer was in good company concerning the problematic 6/4 chords. Two rather well-known German harmonic theorists, Georg Andreas Sorge and Johann Kirnberger, were soundly criticized around 1760 by Marpurg for using 6/4 chords as freely as 6/3 chords. Marpurg, like Rameau, believed that all positions of a chord represented the same fundamental bass. But both were quite circumspect in using 6/4 chords." From Lester's "Mozart as Composition Teacher and Later Eighteenth-Century Theory." For Marpurg, see Friedrich Wilhelm Marpurg, "Herrn Georg Andreas Sorgens Anleitung zum Generalbass und zur Composition," *Historisch-kritische Beyträge zur Aufnahme der Musik*

The six-four chords create the most problems in Ployer's bass line. Mozart apparently crossed out two bass notes in the third measure, and one in the fourth, probably because he objected to the six-four chords they produced.[3] Ployer's continuo part throughout the exercise is, in general, awkward and ungainly. Some elements of her first setting, however, appear in a later draft in Mozart's hand.

The subsequent variations of this continuo part improve on some of the technical deficiencies of the original and include diminutions. Example 5-2 shows measures 1-4 from Ployer's second setting of the continuo bass. Ployer, after inserting a new six-four chord on the second beat, corrects the unresolved seventh in the first measure. In the third measure, the six-four chords on beats 1 and 3 are gone but other problems have replaced them; first, the fifth leaps in the first two beats are rather awkward; second, and of greater significance, are the parallel fifths between the third and fourth beats.[4]

Example 5-2. Ployer's second setting of measures 1-4. I have added the circled numeral 5s to indicate the parallel fifths.



Example 5-3 also shows other corrections that Mozart made to the first measures of Ployer's second setting. The bass in the first two measures moves entirely in quarter notes

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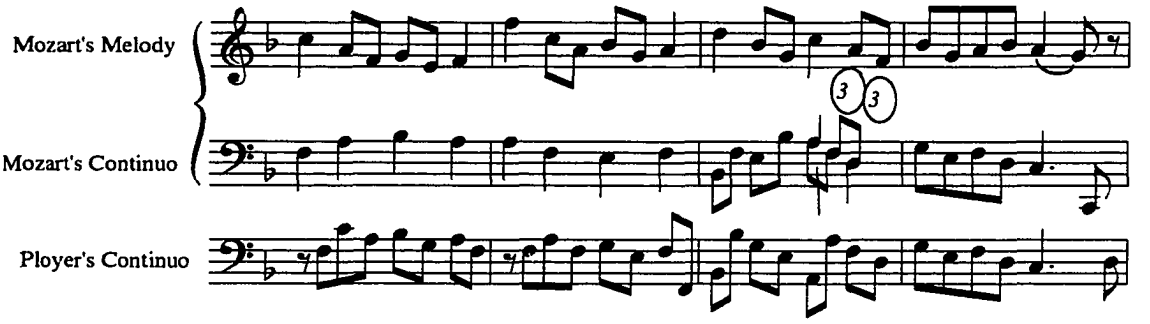
(1760), 41-47 and *Kritische Briefe über die Tonkunst, mit kleinen Clavierstücken und Singoden, begleitet von einer musikalischen Gesellschaft in Berlin* (1759-63), 175-220.

[3]Chapter 11 discusses Mozart's corrections in detail.

[4]The fifths may result from a notational error in the rhythm of the bass. Ployer may have intended to write four eighths followed by a quarter and then two eighths, which would produce a series of parallel thirds with the melody on beats three and four rather than a set of fifths. Mozart himself made this error when he copied out his own version of the bass line. As shown in Example 5-3, Mozart, however, corrected the rhythm in the bass so that the outer voices would, indeed, move in parallel thirds.

without a trace of six-four chords. The third and fourth measures are, except for the changed rhythm, exactly the same as what Ployer had written—awkward leaps and all. Evidently, these measures were enough of an improvement over Ployer's first version that Mozart allowed them to stand.

Example 5-3. Melody and continuo copied in Mozart's hand and Ployer's third setting. I have added the circled numerals to indicate the parallel thirds that replace the parallel fifths of Example 5-2.



The absence of figures in Mozart's copy of the exercise raises the following questions. Did Mozart omit the figures simply because Ployer would be able to imagine the inner parts without them? Did Mozart decide that the figures, and hence the inner voices, distracted Ployer from writing good counterpoint between the outer parts? Or was this actually a two-voice setting with no inner parts at all? Perhaps, along this line, Mozart omitted the figures so that Ployer could concentrate on the intervals between the bass and the soprano rather than on the chords above the bass as indicated in the figures. Mozart also chose to omit the figures in other instances in which he copied out a preexisting bass line, either one of his own or one of Ployer's. The actual reason for their omission here might be a combination of convenience for Mozart and clarity for Ployer. Perhaps, Mozart simply did not take the time to write them out.

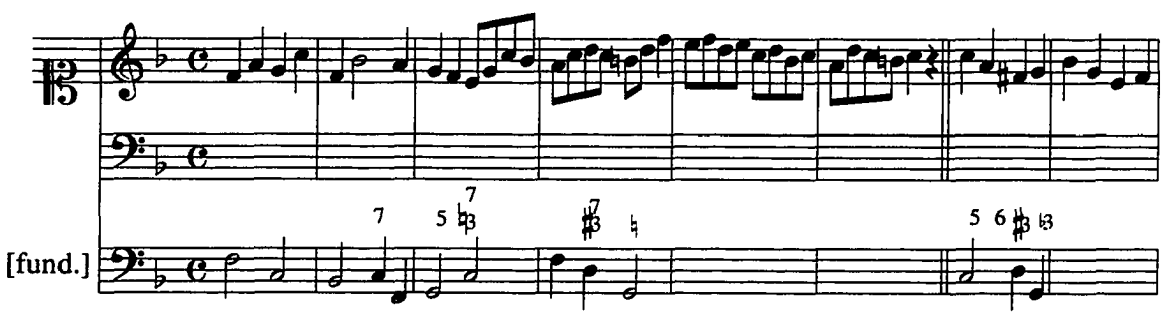
Ployer's third and final bass appears directly below the version of the exercise copied out in Mozart's hand. It consists almost entirely of eighth notes and, like Mozart's copy, contains no figures. A close look at the intervals formed with the soprano indicates a

strong preference for thirds and sixths, even if it means temporarily displacing a note from Mozart's bass. Finally, Ployer's last setting greatly improves the counterpoint and the shape of her bass line in measure 3 (though another six-four chord pops up in measure 1, beat 2).

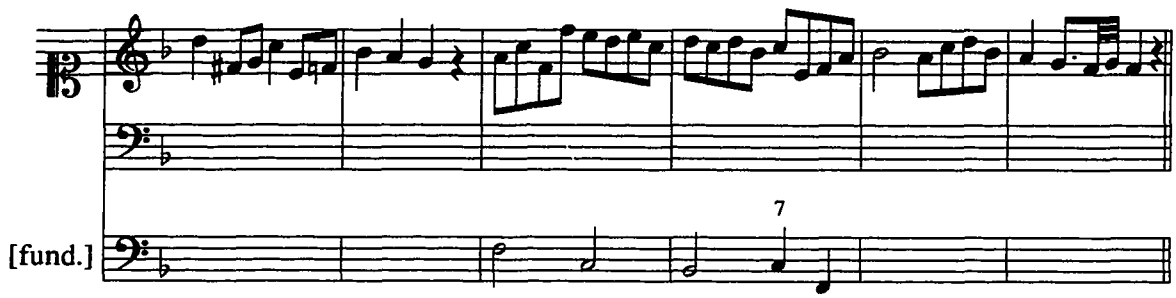
The three bass variations benefit from Mozart's fundamental bass in that the harmonic structure of the melody is articulated consistently throughout each setting. Here, Mozart uses the fundamental bass as a guide right from the beginning. The predetermined fundamental bass relieves her of the problem of having to choose the chords for herself, which she faced with some difficulty in the "Benedictus." The design of the exercise, therefore, is pedagogically motivated with the abilities of his student in mind. Ployer relies on it to provide the proper harmony to her first continuo part and subsequent variations.

Folio 4a—the F-major exercise with a partial fundamental bass. The design of folio 4a represents an intermediate step in the level of difficulty. Two factors support this conclusion. First, it appears that Mozart instructed Ployer to invent a bass that contains a steady stream of eighth notes, thus bypassing the note-against-note setting with which the exercise from folio 3a began. Second, Mozart provides Ployer with only a *partially* completed fundamental bass.

Example 5-4. Folio 4b. Mozart's melody and partial fundamental bass.



Example 5-4, cont.



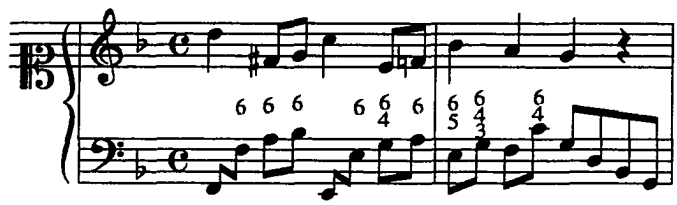
Mozart requires Ployer to determine the continuo and fundamental bass for the final two measures of the first period, the second statement of the sequence with which the second period begins, the material in measures 9 and 10 (with which Ployer might have been familiar, having seen a similar passage on folio 3b), and the final cadence. It seems logical to assume that Mozart provided the fundamental bass in places where he thought Ployer would need it. The places in which no fundamental bass occurs contain various clues that should have suggested familiar solutions to Ployer. Chapter 10 discusses in detail the pedagogical reasons surrounding the partial fundamental bass.

Ployer set the exercise from folio 4a twice; the second setting contains an additional version of the last five measures. Ployer's settings are successful to the extent that they do not stray far from the harmonies indicated in Mozart's fundamental bass. Ployer dares to include some passing and neighboring tones within the delineated chords. In general, once again, the shape of the line is quite unattractive.

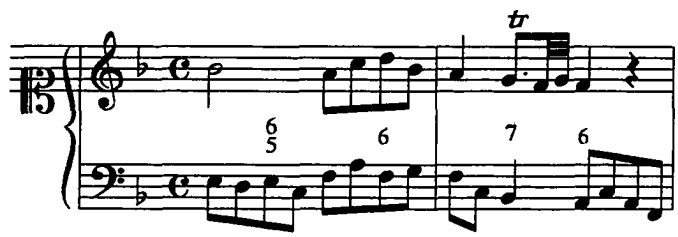
In those measures without fundamental bass, Ployer made some grievous errors; the most serious of these occur at important cadential points. The first phrase of the second period should end with a half cadence in measure 10. Example 5-5 shows that, instead, Ployer supports $\hat{2}$ with a supertonic chord. Example 5-6 shows that it appears to end with a dominant four-two chord resolving to a tonic six-three chord. Note, in addition, that Ployer

incorrectly figures the *B♭* with *7* rather than *2*. Though her later settings offer some redemption, Ployer never articulates these cadential points coherently.

Example 5-5. Folio 4b, mm. 9-10.



Example 5-6. Folio 4b, mm. 13-14.

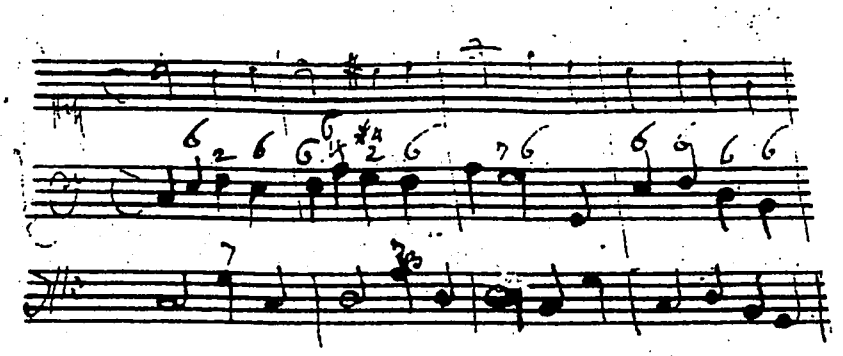


Though he might well have marked something in every measure of Ployer's setting, Mozart chose only to indicate corrections to four places in the exercise. He offers two slightly different versions of the approach to the cadence at the end of the first period, rewrites the two cadences that Ployer botched in the second period, and makes some interesting adjustments in measure 9 that I discuss in detail in Chapter 11.

Folio 4b—the "Jupiter." Example 5-7 shows the first four measures of a sixteen-measure double period from folio 4b. The layout of this exercise is similar to those above—melody on top, fundamental bass on the bottom, and continuo bass in the middle. Here, however, Mozart has provided only the melody; Ployer's task was to determine *both* the continuo part and the fundamental bass.[5]

[5]Evidence suggesting the order in which Ployer wrote the basses is sketchy. However, I tend to favor the continuo as taking precedence over the fundamental bass for three reasons. First, the manner in which Ployer wrote the fundamental bass in measure 3 indicates that she had a great deal of difficulty assigning a harmony to the *f* of the melody. Here, the note appearing on the downbeat of the fundamental bass is difficult to read. The

Example 5-7. Folio 4b. Mozart's melody and Ployer's first setting of the continuo and fundamental basses.



In regard to dissonance treatment and the use of six-four chords, Ployer's execution is better than in the exercise shown in Example 5-1. Only a single six-four chord appears and the basses of both four-two chords resolve correctly, downward by step. The correlation between Ployer's fundamental bass and continuo part is also sound, with the exception of measure 3. Assuming that Lach and the *Neue Mozart Ausgabe* are accurate, the *d* of the fundamental bass indicates that Ployer interpreted the *f* of the melody as the third of a *d* minor chord and, the *e* and *d* as the third of the tonic and fifth of the dominant

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folio itself has a hole in it around the fourth line and space, possibly caused by an erasure. The symbol that remains resembles those notes that Ployer initially wrote as a quarter note then enlarged to form a half note. Ployer may even have changed the pitch as well. Despite this, both Robert Lach and the *Neue Mozart Ausgabe* transcribe without comment a half note *d*. The difficulty Ployer had most likely stems from the fact that the continuo bass indicates a change of harmony beneath the sustained melody. (Mozart may have designed this melody with the hope that Ployer would recognize the change of harmony beneath $\hat{4}$ as it occurs in measure 2 from folio 4a.) Ployer's chances of writing a continuo part that agrees with a predetermined fundamental bass were good, as indicated in her execution of the exercise from Example 5-1. Clearly, the basses do not agree here. The contradiction, the first of two in the measure, suggests that Ployer wrote the continuo part first and later struggled to conform the fundamental bass to the accompaniment she chose (much as she may have done in the "Benedictus" measure 7). Second, if Ployer had completed the basses in the opposite order, fundamental then continuo bass, she would have made the unseemly choice of setting the fundamental bass of measure 4 so that it moves in parallel octaves with the melody. Though the fundamental bass is not an actual sounding voice, a fact that Ployer must have been aware of, it seems unlikely that she would predetermine such a parallel progression. What is more likely is that she chose to set the melody with parallel six-three chords that consequently produce a fundamental bass that moves in parallel octaves with the melody. Third, Mozart's own setting and fundamental bass indicate that he considered the relationship between the continuo part and the melody to be of primary importance. I discuss Mozart's version of the exercise later.

chord respectively. The continuo bass contradicts this interpretation. Ployer's *a* on the downbeat of the third measure could be figured as a six-three chord; however, it is also possible that she intended the chord to be in second inversion, thus, six-four. The latter intention agrees with her fundamental bass. The strongest contradiction between the two basses occurs in beats two and three. In the continuo part, Ployer writes *g* and above it the figures 7-6, indicating a suspension in the soprano. The fundamental bass in this case should be *e* for both beats two and three. Interpreting the fundamental bass beneath the 7-6 suspension might also have proven difficult for Ployer, causing the second discrepancy between the two basses.

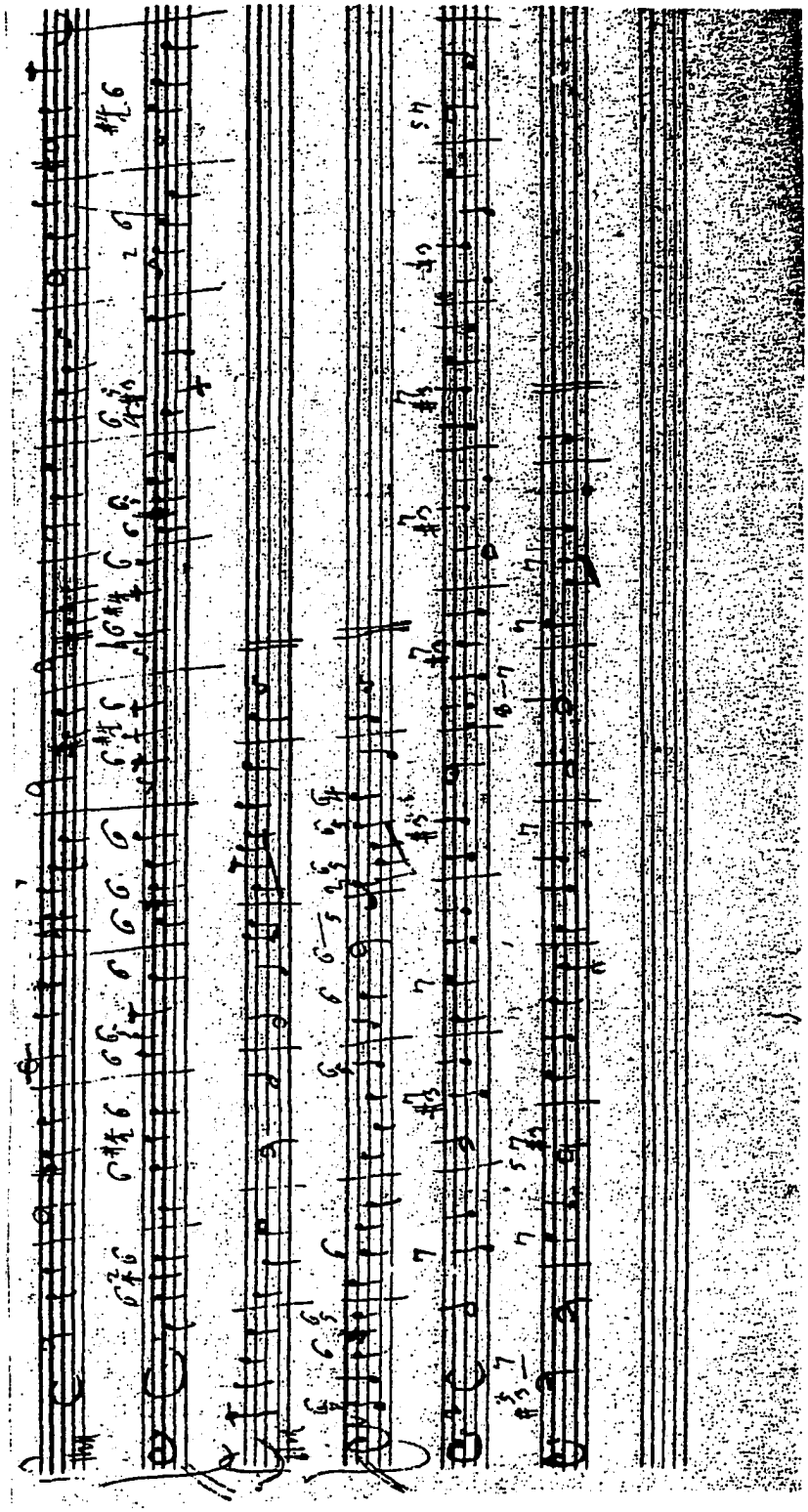
Ployer's diminution bass. The subsequent bass variation both confirms Ployer's fundamental bass and contradicts it. The first two measures repeat the chords of the continuo part and the root progressions of the fundamental bass. The third measure, in which the two basses were irreconcilable in the first setting, contains a continuo part that matches perfectly with the fundamental bass written above. Here, the bass arpeggiates a D-minor chord for beats one and two, and a C-major and G-major chord, both in six-three position on the last two beats. Note that Ployer apparently wrote the figure 6 on the downbeat of measure 3 and later wrote over it, turning it into a *5*, as it appears in both transcriptions.

The harmonies that Ployer chose in the fourth measure contradict her own figures for the passage and the original fundamental bass. As she did in the first setting, Ployer wrote four six-three chords on each of the measure's four beats. However, the *g* retained in the accompaniment suggests that the figures for the chords on the second and third beats should be four-two and six-four or, perhaps, six-four-three, respectively. Ployer's harmonization, in effect, prolongs a dominant seventh chord throughout the last three beats of the measure. The difference between the figures and the harmonies implied by the actual pitches in the bass indicate that Ployer's eye saw one progression, that which was indicated by her fundamental bass, and that her ear heard another.

The quality of the bass variation suffers from Ployer's poor choice of harmonies in her original setting. A comparison between Ployer's basses for this exercise and Mozart's shows points of congruence and divergence in the two settings.

Mozart's solution. Mozart's setting of the exercise and accompanying fundamental bass appear on a different folio altogether. Example 5-8 shows how Mozart wrote out the setting separately from the fundamental bass. The separation of the two parts suggests that Mozart used the fundamental bass not to determine the harmonies suggested by the melody but to analyze the harmonies that resulted from the combination of the melody and his continuo part. Had he intended to show Ployer how a particular progression of chords moves beneath his melody, he might have scored the exercise as he did in the other examples, with all the parts written on top of each other.

Example 5-8. Mozart's solution with fundamental bass.



The relative position of Mozart's continuo and fundamental basses suggests that Mozart intended Ployer to take a similar approach in her setting of the melody. She first chose a bass that counterpointed the melody well and then determined the fundamental bass from the resulting intervals and implied chords. This exercise reverses the process followed above in Example 5-1, where Mozart provided Ployer with the fundamental bass in order to help her fashion the continuo part.

Mozart's fundamental bass for the first two measures agrees with Ployer's, though his continuo bass emphasizes the sequential nature of these measures while Ployer's does not. From there, Mozart's interpretation of the passage is quite different.

In measure 3, Mozart's setting interprets the *f''* of the melody as being first the root of the subdominant, then the seventh of the dominant (as discussed in note 5, above), before resolving to *e''* above tonic harmony. Mozart harmonizes the following *d''* as a passing tone supported not with a dominant chord but, rather, with a six-three chord above $\hat{4}$. (A six-four-two chord above *f* would certainly be possible, too.) The passing tone reaches *c''*, supported by the tonic, on the downbeat of measure 4. Mozart's continuo bass drives to the dominant through the applied chord on the second beat. Both Mozart and Ployer heard dominant harmony on the last two beats of the measure, though Mozart's harmonization articulates the structure of the melody better. In particular, Mozart's setting emphasizes the melodic connection between *c* and *b* in measure 4. In this context the *d* functions as an incomplete neighbor. Ployer must have heard the *d*, *b*, and *g* as belonging to the same chord. Mozart's version of the exercise served as a reference for Ployer to which she could refer when similar melodies appeared in later exercises.

Summary. In the three exercises from bifolio II, Mozart presents Ployer with three exercises that increase in complexity. The levels of difficulty are determined by how much guidance Mozart provides in the form of the fundamental bass. In the "Diminution" exercise from folio 3a, Mozart provides the entire fundamental bass. Ployer's continuo part agrees with Mozart's harmonic guide, though Mozart objected to some of her specific

choices in her first two settings. The F-major exercise with a partial fundamental bass from folio 4a represents an intermediate level of difficulty. Here Mozart provides a partial fundamental bass for those areas of the exercise that, for one reason or another, might cause Ployer difficulty. Those portions of the exercise without a fundamental bass correspond with material with which Ployer was familiar, thus obviating the need for a harmonic guide. Mozart left Ployer to determine the proper harmonies on her own. I discuss this exercise in detail in Chapter 11. The "Jupiter" exercise from folio 4b contains no fundamental bass at all. Here, Mozart hoped that he had prepared Ployer well enough that she could complete the entire setting on her own. Though Mozart agreed with some aspects of her setting, significant room for improvement remained so that he felt compelled to include his solution, which is found on folio 9a.

Taken individually, each type of bass highlights specific aspects of melodic harmonization that Mozart considered primary. The continuo part emphasizes the linear aspects of the bass line and the resulting counterpoint between the outer voices. The fundamental bass has two functions, depending on whether it was written before or after the continuo part. If written first, as in folio 3a and portions of 4a, it serves—in conjunction with the melody—as a basis for the initial and subsequent continuo parts by showing Ployer the roots and, consequently, the members of all the chords to be used in the harmonization. If written later (as, perhaps, on folio 4b) the fundamental bass serves as an analytical device by which Ployer attempts to determine the roots of the chords used in her completed continuo part and confirms the harmonic basis of an exercise on which later variations can be based. Evidence suggests that Mozart fashioned a reciprocal relationship between the basses in which either may be constructed first, providing a basis for the other. The resulting amalgam of the two parts acts as a foundation upon which Ployer wrote her variations.

The evidence suggests that Mozart chose one or the other approach in any given exercise based on the pedagogical needs of his student. In the "Benedictus," the exercise

given as a diagnostic examination, Mozart expected Ployer to determine both the continuo and fundamental basses to his melody. He quickly found that this twofold task was beyond her ability. In order to compensate for Ployer's shortcomings and develop her skills, Mozart simplified the task by supplying her with a melody and fundamental bass of his own. In this approach, Mozart's fundamental bass eases the burden of having to determine the proper harmony for each note of the melody by identifying the chord that Ployer was to use.

Mozart's fundamental basses also serve as examples of how chordal roots tend to progress at particular points in the structure of the exercise. For example, Mozart's fundamental basses usually start with an alternation between the tonic triad and the dominant seventh chord, serving to establish the tonality of the exercise. Ployer, in those exercises in which Mozart expected her to complete both basses, could refer to the fundamental bass progressions provided by Mozart and use them as models that could be adapted to her own use.

PART 2

Chapter 6

Folio 10b

Folio 10b contains a single exercise whose first period is set three times by Mozart, each with its corresponding fundamental bass, and whose second period is set by Ployer, without a fundamental bass. The evidence suggests that Mozart, in his settings of the first period, described to Ployer how a given melody may be set with several different basses, each resulting in a slightly different harmonic progression. Though each of the settings differs with regard to particular details, all the settings elaborate essentially the same basic harmonic structure. It appears that Mozart wanted to show Ployer how a given melody, in this case the first period of the exercise, interacts with a harmonic structure that has both fixed and variable elements. Those that are fixed articulate the foundation of the structure; those that are variable elaborate that structure. This chapter serves as an introduction to Chapters 7-10, which explore systematically Mozart's pedagogical use of recurring thematic material in the harmonization exercises.

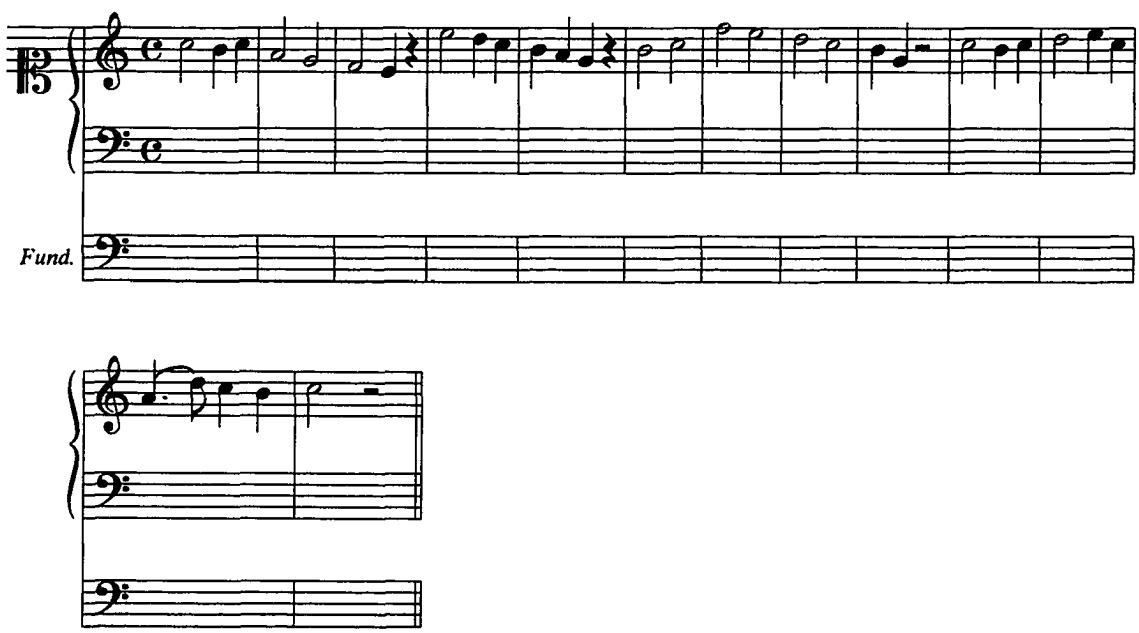
The following discussion first determines the order in which the material of folio 10b was written. Here, the evidence strongly suggests that the first period and its subsequent harmonizations were written first and that Mozart intended Ployer to set the second period, which was written after Mozart exposed her to the process of how continuo and fundamental basses can be derived from a melody, for homework. This indicates that it was Mozart's intention to focus primarily on the setting of the first two phrases, and to flesh out the specific structures on which they are based. After this, I discuss Ployer's setting of the second period and how it relates to the approach that Mozart espoused in the first period. Here, the evidence suggests that what appears in Ployer's bass was

accompanied by a fundamental bass copied from a working page now separated from the manuscript.

Explanation of Page Layout

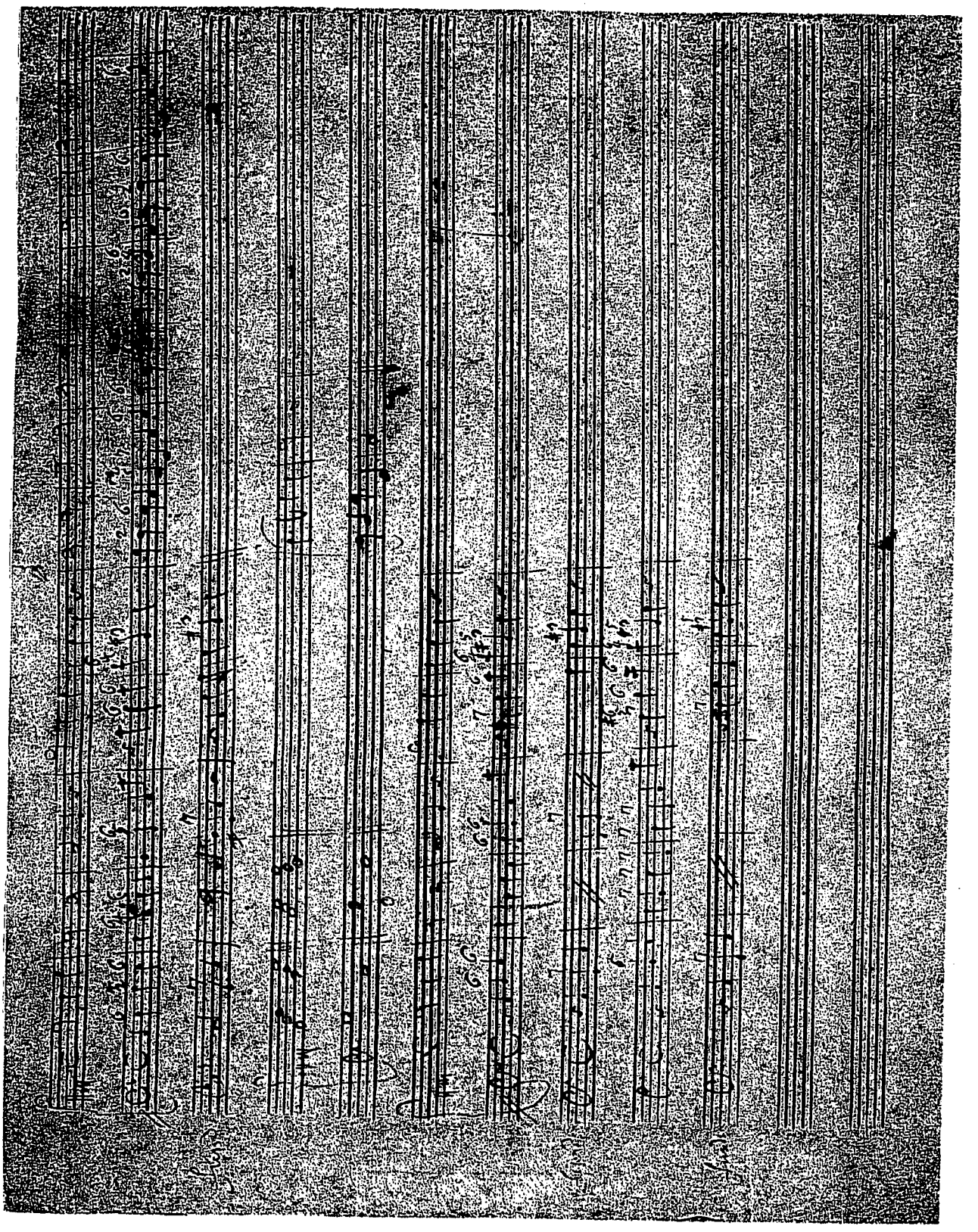
The first period: Mozart's lecture. Apparently, Mozart presented a detailed discussion, which fills the entire left-hand side of the folio, of how to set the first period. Ployer then had to complete the second period, which fills the right-hand side of the folio, for homework. The manner in which the folio appears indicates this. For example, had Mozart written out the entire melody of both periods before setting to work on the bass, he would have written across the top of the first staff, as he did, then proceeded to write the remainder of the melody, that which did not fit in the first staff, at the left margin of one of the lower staves, as Example 6-1 shows.

Example 6-1. Hypothetical layout if Mozart first wrote out entire melody. Folio 10b, measures 1-13.



However, the final two measures of the second period (those that appear in the second system of the hypothetical layout) appear, not flush with the left margin, but in the *middle* of the fourth and fifth staves. This indicates that Mozart wrote the material found at the beginning of those staves, a pair of chord progressions, before he wrote the last two measures of the second period. Consequently, the entirety of the second period must have been written following the chord progressions at the beginning of the fourth and fifth staves; it is highly unlikely that Mozart wrote the first six measures of the second period, interrupted the phrase with the two chord progressions at the beginning of the next staves, and, finally, penned the last two measures of the phrase in the middle of the page. Illustration 6-1 shows the facsimile of the entire folio.

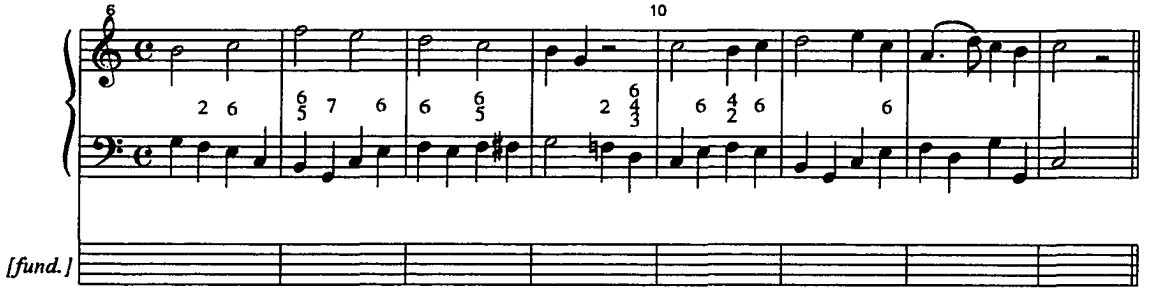
Illustration 6-1. Folio 10b.



Further examination of the folio indicates that Mozart most likely wrote the second period of the exercise only after copying the melody to the first period and setting two additional continuo and fundamental basses to it in staves 6-10. Therefore, the second period of the exercise was the last to be written and completed by Mozart and Ployer. Note in Illustration 6-1 how the final two measures of the exercise were carefully placed toward the center of the page so as not to disturb the alignment of the three settings of the first period, which appear on the left side of the folio.

The second period: Ployer's homework. Now it was Ployer's turn to set a continuo bass to the melody. But what about the fundamental bass? Had not Mozart just gone to great lengths to incorporate fundamental bass into the harmonization of the first period? Indeed, he had. Did it play no role in the setting of the second period?

Example 6-2. Folio 10b, measures 6-13. Ployer's setting of the second period. Note the absence of a fundamental bass.



Perhaps, before going any further, another question should be asked: Did Ployer work on these eight measures alone or did she have help from Mozart? The bass line itself tells us little about its conception, whether it comes from a fundamental bass or sprang fully-formed from Ployer's ear. It has, though, a peculiar quality to it, different than almost all the other material that appears in her hand. As a second glance at Illustration 6-1 shows, the notes are particularly well-written; there are no crossed out notes or notes that have been

written over by others.[1] For another, even the direction of the stems follows strictly the rules regarding their placement, either up or down, something neither Mozart or Ployer were careful about elsewhere. Lastly, there remains no evidence suggesting that Ployer used a process anything like the one that Mozart used in his setting of the first period, in which he clearly shows how each note of the continuo relates directly to the fundamental bass. These attributes of Ployer's bass line suggest that what appears on the page represents only the final product of her labors, much like folio 9a.

Several aspects of the bass line suggest that Ployer worked alone. First, since Mozart had gone to such lengths to incorporate fundamental bass into setting the first period, it seems highly improbable that he would not have had Ployer write the fundamental bass if they worked out the exercise together. The fundamental basses to the first period, with the possible exception of the first, appear to have sprung from Mozart's brain simultaneously with the melody and continuo bass; their neat, matter-of-fact appearance makes it unlikely that Ployer had much input in their creation. When it came time for Ployer to set the melody, Mozart would have wanted to see how she would handle the fundamental bass. But, of course, none appears.

Secondly, the bass, though it contains many figures correctly written, is not completely figured. The *e* in measure 8 should have above it either the figure *7* (cf. Example 3-6, measure 13, p. 60, where a similar "I^7" chord appears) or a dashed line indicating that the intervals above the *f* of the preceding downbeat should be sustained through the second beat, in effect making the *e* a neighbor note. The redundant figures on the last beat of the same measure are, quite correctly, crossed out. Would Mozart, had he been at her side, allowed them to be written in the first place?[2] The downbeat of measure 11 has *B* in the bass with no figures. This means either that Ployer, in fact, intended the

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[1]With the possible exception of the *g* in the bass of measure 9. This appears to have been written first as a quarter note, then changed to a half note.

[2]Lach writes, in his terse comments about this page, that is impossible to discern with any certainty whether the figures for beat three are 6/3 or 6/5, p. 96.

diminished triad to be in root position or that she omitted the figure 6, indicating a chord in first inversion. The penultimate measure should have figures on the final two beats at least, 6/4-5/3.

These omissions from the figures seem to be nothing more than that—as if Ployer, in copying from her working notes to the final version, omitted some of the figures. Though the bass and figures Ployer wrote are quite correct in most respects, it does not stand that they were written under Mozart's watchful eyes. If Ployer did write out the exercise on another piece of paper, a version which may even have included a fundamental bass, it has long since been separated from the lesson book.

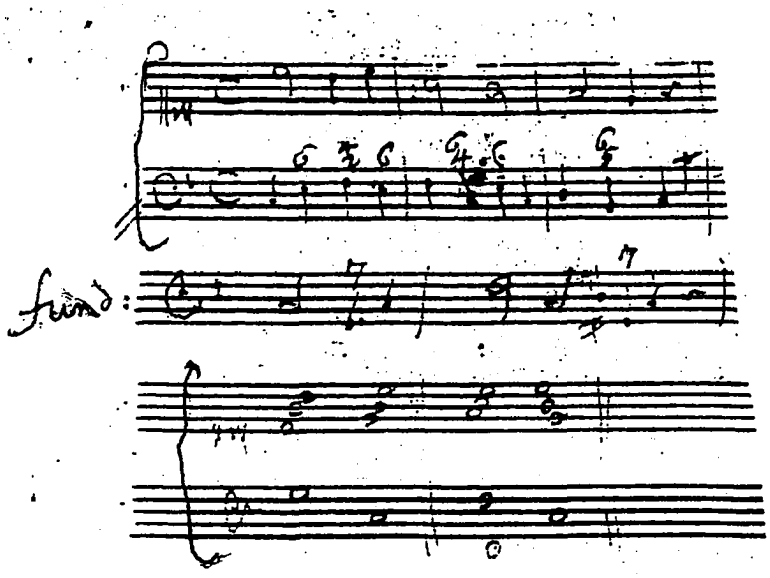
Mozart's Three Settings of the First Period

The first period consists of two phrases: the first begins and ends on the tonic; the second begins on the tonic and modulates to the dominant. (The five-measure length is not unique to the harmonization exercise; the C-major exercise from folio 3b consists of two periods, each five measures long, each dividing 2+3.) Each phrase moves as modestly and economically as possible to its close. There is little in the way of rhythmic activity to give the melody or bass any distinction whatsoever.

First setting. Mozart, after having written the melody of the first period, next wrote the fundamental and continuo basses. The question of which bass Mozart completed first, though significant, is not relevant here. Suffice it to say, Mozart wrote the melody and the two basses of the first period at more or less the same time.

Beneath this Mozart wrote two chord progressions on staves four and five, the first from dominant to tonic, the second from subdominant to tonic. What purpose did these two progressions serve? The fact that Mozart wrote these progressions directly under two measures that contain these very root progressions suggests that they relate directly to the setting of the melody. Maybe he used them to explain how he arrived at his first setting; if so, this approach to setting a melody would have much in common with that espoused by Rameau.

Illustration 6-2. Detail of folio 10b. Mozart's first setting of the first period and the cadences (aligned?) beneath Mozart's first setting.



Perhaps Mozart constructed the first three measures of the melody to exemplify three of the most important types of root progressions: dominant-tonic, as in Rameau's perfect cadence; subdominant-tonic, resembling his irregular cadence; and supertonic-dominant-tonic. Mozart, underneath the melody and basses, then demonstrated the perfect and irregular cadences (the equivalent of the modern V-I and IV-I), similar to how they appear in the actual exercise. Though these progressions do not coincide with cadences in the modern conception of that term, they do form the basis of cadence-like progressions as understood by Rameau, whether they appear at the ends of phrases or, as they do here, within the body of a phrase. Furthermore, although Mozart aligns the irregular cadence more or less with the similar root progression above, the top voice, *c''-c''*, differs from that of the actual melody. Similarly, the dominant chord in the first progression is a triad, not a seventh chord. The connection, if any, between the exercise and the two progressions thus remains uncertain.[3]

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[3]The final chapter discuses at length how Ployer might have gone about setting melodies according to Rameauian cadential formulas in the melody.

Despite their bare simplicity, both the continuo and fundamental basses contain notes written over and crossed out. Such a note appears in the fourth measure of the continuo part, where it seems that Mozart may have begun to write *g* on the third beat, then wrote *b* over it.[4] In the fundamental bass, Mozart crossed out the very small *G*, written on the downbeat of measure 3.[5] Another note in the fundamental bass, *c* in measure 4, is also crossed out with *a* written over it. The discrepancies suggest that Mozart was explaining to Ployer how the melody could be set in different ways and that each variation in the setting affected the coordination between the continuo and fundamental basses.

Two of Mozart's changes, in the same measure no less—the *g* of the continuo part and the *c* of the fundamental bass, measure 4—might stem from a confusion between the continuo and fundamental basses. The *g* written in the continuo part turns out to be the correct fundamental bass for that chord; the *c* written in the fundamental bass is actually the note used in the continuo bass, not the root of the chord.

The tiny *G* in the fundamental bass, measure 3, is very curious. The downward stem of the note, short as it is, suggests that Mozart penned it after the *d* that lies above it. He stemmed the *G* downward so that it would not conflict with the *d* that was already there. Perhaps Mozart wrote the tiny *G* and said that, though it would be possible for the *f* of the melody to be supported with a dominant seventh chord for two beats, and hence the G in the fundamental bass, the setting would be better if the *f* was first supported by a root position triad on *d* and then the dominant seventh chord.

These notes squeezed in and crossed out might be how Mozart first tried to show Ployer alternative versions to the first two phrases. Perhaps he then realized that it would be a good idea simply to rewrite the phrase a second and even a third time, so that he could demonstrate other ways in which the first period might be set.

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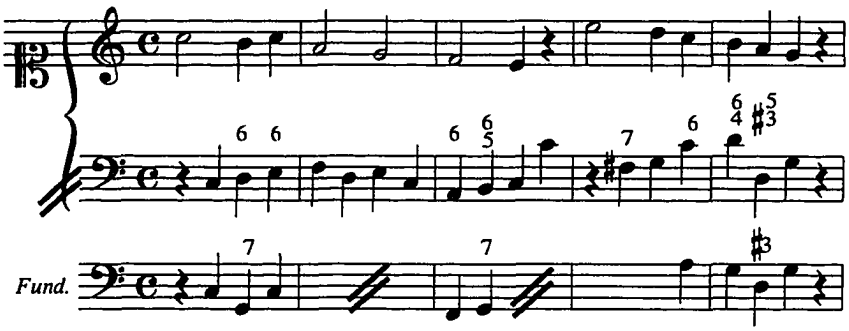
[4]Neither Lach nor Federhofer mention this.

[5]This *G* is probably the smallest note in the entire manuscript, Lach, in an otherwise thorough critical report on the Ployer studies, doesn't mention it.

Second setting. As Illustration 6-1 shows, Mozart wrote out the first five measures of the exercise a second time on staves six and seven. The melody is unchanged. However, the continuo and fundamental basses show some variation from the originals above.

Example 6-3. Folio 10b. Mozart's second setting of first period.



The differences in the first measure are not significant; the continuo bass begins with a rest, as does the fundamental bass; the motion *c-d-e* in the continuo part creates the same fundamental bass, *c-G7-c*, as in the first version of the exercise.[6]

The second and third measures, however, do contain some interesting elements different from Mozart's first setting. All the chords are in root position. Instead of *c* on the second quarter, which in the initial setting yielded a six-four chord, Mozart placed *d*, indicating five-three.[7] Both beats three and four also contain root-position chords. In the fundamental bass he wrote two slanting lines indicating, perhaps, that the fundamental bass is merely the same as the continuo bass. The downbeat of the third measure contains a six-three chord above *A*. This produces an *F* in the fundamental bass.

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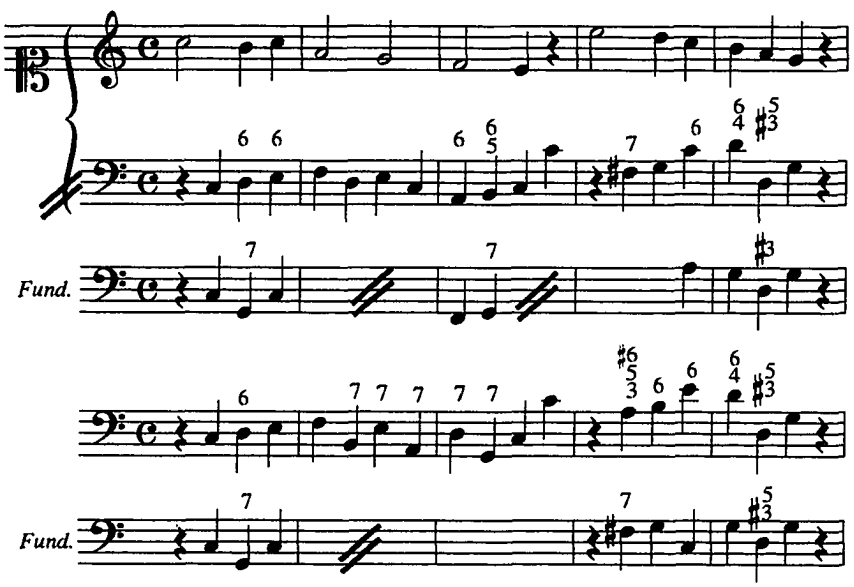
[6]The fundamental bass to a six-three chord above $\hat{2}$ was often interpreted as being the dominant, rather than the leading tone, though this is contrary to Mozart's own analysis of the "Diminution" exercise. See Example 5-1, measure 3, where it seems that the sequence of descending fifths to which the VII chord belongs takes precedence.

[7]Federhofer writes that *c* has been wiped away and replaced by *d*: "*c ausgewischt und mit d gesetzt.*" He continues, writing that Mozart's correction, *d* for *c*, indicates that Mozart was not bothered by the offbeat fifths between the melody and bass as Lach assumed (p. 27). Federhofer cites a similar instance in which Mozart again wrote a succession of offbeat fifths on folio 9a, mm. 12-13 (*Kommentar*, p. 13).

In the fourth measure, Mozart places a rest on the downbeat followed by a seventh chord on *f♯* on the second quarter. This seventh chord leads to a G chord in root position. The fourth beat is set in the same way as it was above. Mozart did not write a pair of slanting lines in the fundamental bass to indicate that for the first three beats of the measure the fundamental bass and continuo bass contain the same notes, though, certainly, they would. The cadential measure is identical to the first setting except for the addition of the figure *5*, which appears in conjunction with *♯3* on the second beat.

Third setting. The third and final version of continuo and fundamental bass appears on staves nine and ten. The first measure in both bass parts is identical to the second setting written directly above. Measures 2 and 3 contain a sequence of descending fifths from the *f* on the downbeat of measure 2 to the tonic in the next measure. All chords in the progression, except for the first and last, are seventh chords. Once again, slanting lines indicate that the fundamental bass contains the same notes as the continuo bass.

Example 6-3. Folio 10b. Mozart's second and third settings of the first period.



The final two measures of the phrase also contain new elements. Again, Mozart places a rest on the downbeat. On the second quarter he wrote a six-five chord above *a*,

producing *f♯* in the fundamental bass. A six-three chord above *b* follows. The six-three chord above *e'* on the fourth beat produces *c* in the fundamental bass. The cadence is the same. The fundamental bass, however, has *5/♯3* rather than simply *♯3* on the second chord.

Elements common to all settings. Though Mozart made many different choices in these three settings of the bass, several elements remain unchanged. In the first measure, each continuo bass supports the two *c''*s of the melody with *c-e*. Only the manner in which these two notes are joined differs. In the first setting a neighboring four-two appears between the two tonics, and in the second and third settings a passing six-three fills the same space. Consequently, the fundamental bass for the first measure is the same in each of the settings.

The second measure has two elements that remain unchanged throughout each setting. In each case, the *a'* and *g'* of the melody are counterpointed in tenths with *f* and *e*. The chord above the *f* is, in each case, a root position triad; consequently, the fundamental bass is the same for each setting. The *e* that supports the *g'* of the melody is first the bass of a six-three chord, second the bass of a root position triad, and, finally, the root of a seventh chord. In the first setting, the fundamental bass reads *c* and in the later settings, *e*. In measure three, Mozart invariably sets the *f'* of the melody so that on the second quarter of the measure it functions as the seventh of the dominant chord. The first quarter may contain either the supertonic or the subdominant chord. In each setting the *e'* of the melody is set with a tonic chord in root position.

The settings of measures four and five also have important points of congruence. First, the cadence in each setting is, except for inconsequential differences in the figures, identical. The other immutable point is the third quarter in the fourth measure: Mozart in each setting harmonizes the chord as a local tonic, either in root position or first inversion.

The presence of these elements common to each setting suggests that Mozart saw in the counterpoint between the melody and bass manifestations of certain structures, one in each phrase, that govern the three settings on folio 10b. Some elements of the structures

necessarily remain immutable—particularly the cadences; others possess a flexibility that manifests itself in a single bass note that may support a variety of chords—for example, the *e* in the second measure of the continuo part. This paradigmatic approach to melodic harmonization is a central tenet of Mozart's pedagogical process throughout the lesson book. Close examination of the other bifolios that contain harmonization exercises suggests that folio 10b may have been the spawning ground, so to speak, of several of the structures that appear elsewhere.

Summary. The evidence gleaned from folio 10b suggests that Mozart organized a lesson or a portion thereof around how a bass can be set to a melody in several different ways, each of which affects the correspondence between the continuo part and the fundamental bass. To exemplify his point, Mozart worked through three settings of the first period in detail, showing a variety of possible settings and the harmonic progressions that result. He may even have designed the first phrase in order to accommodate the variety of settings that followed, sacrificing the symmetry of two-bar phrases for a single five-measure phrase that despite its "irregular" length served his pedagogical purposes. The elements common to all three settings of the melody are manifestations of the same structure. Subsequent chapters will show that some of the structures that appear on folio 10b recur throughout the harmonization exercises. Consequently, folio 10b appears to be the spawning ground for some of these different settings. During this discussion, Mozart might have said something about cadences, as witnessed in the placement of the authentic and plagal progressions underneath his first setting. These progressions might have a direct relationship to the actual content of the melodic settings. Finally, it appears that Ployer completed the bass to the second period as a homework assignment. Away from Mozart's presence on a scratch sheet of paper, Ployer probably determined both a continuo part and a fundamental bass. She later transcribed only the continuo part back to the exercise on folio 10b.

Chapter 7

Recurring Thematic Material and the Voice-Leading Paradigm

The four, distinct phrases of the exercise from folio 10b are curiously disjunct and separated from one another. It is, in fact, the only exercise that features four phrases disposed in this manner. The other exercises discussed so far, for example the "Diminution" and the "Jupiter," contain elided phrases that effect a smoother continuity. It seems that on folio 10b Mozart's purpose may have been to throw these phrases into relief so that he could discuss each separately. As perhaps the reader has noticed, each of these phrases, or particular parts thereof, appears elsewhere in the manuscript in similar places in the form. This chapter investigates the nature of the recurring thematic material throughout the lessons and the harmonic contexts in which it appears.

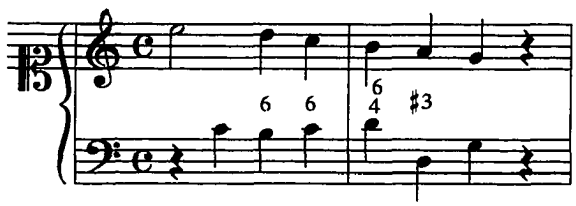
As mentioned in the Introduction, Lach was the first to notice thematic similarities between some of the melodies of the exercises. He lists three different exercises that use a common theme (do, re, fa, mi: fols. 3b, 4b, 5a, and 9a) and a pair of exercises that use the identical theme (F major: folios 3a and 9b), altered only to suit the different meters of the exercises in which it appears. Lach cites these similarities as proof that Mozart followed the same method as he had in Paris: giving melodic harmonization right away, and using variation, as Leopold recommended to him.

Variation is, indeed, an important element in the harmonization exercises, though it appears in a different guise than it did in the Paris lessons. Mozart's letter from Paris, quoted in Chapter 2, states that he asked the student to compose variations on a given melody. The student found it difficult to begin, so Mozart showed her how the first several measures might be set. The student then continued in the same vein. No such overt *melodic* variations appear in the harmonization exercises; however, Mozart does apply a variation technique in the construction of his melodies so that many exercises contain essentially the

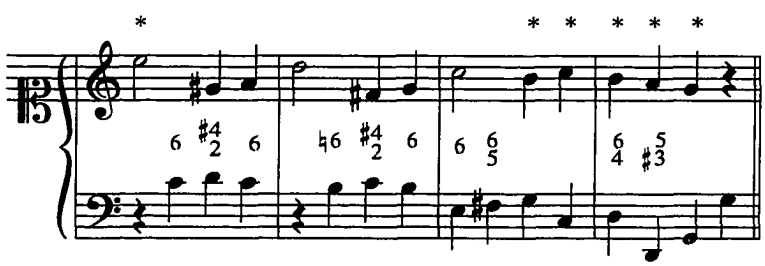
same material. This technique provided Ployer with practice in setting melodies without requiring her to grapple with completely new sets of issues in every exercise. The degree to which Mozart used thematic similarities, however, extends far beyond the examples that Lach cited.

In the melodies he composed and gave to Ployer, Mozart repeatedly includes different versions of certain melodic structures. Compare, for example, the second phrase from folio 10b with the analogous phrase from the "Jupiter" exercise.

Example 7-1a. Folio 10b, measures 4-5.

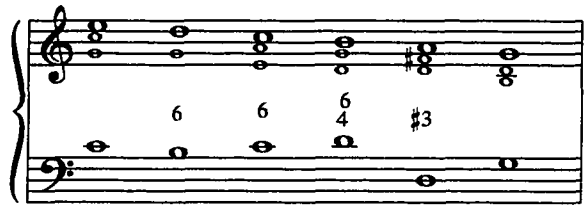


Example 7-1b. Folio 4b, the "Jupiter" exercise, measures 5-8.



These two phrases are built on the same underlying structure, shown in Example 7-2. The first phrase is a completely undecorated version of the structure, the second contains added material, as well as some figuration. The asterisks in the phrase from the "Jupiter" coincide with the essential elements of the structure, or *voice-leading paradigm*, that generates the passage.

Example 7-2. The voice-leading paradigm that generates the material from the passages shown in Example 7-1a and b.



There are slight differences between the generative voice-leading paradigm and the chords marked with asterisks. For example, I render the second chord of the paradigm as a six-three chord with *d''* in the melody; the realization of the paradigm in the "Jupiter" exercise has a G-major chord in root position with *b'* in the melody (see Example 7-1b, the second asterisk, measure 7). The third chord shown in the paradigm is an A-minor six-three chord; the "Jupiter" exercise has in the analogous place a C-major chord. I see these differences as variations of the framework. It is very difficult, if not impossible, to show all possible variations of a voice-leading paradigm in a single example. For this reason I discuss each manifestation of the paradigms in Chapters 8-10.

The essential melodic notes of voice-leading paradigms bear a great deal of similarity to cantus firmi in that they are, essentially, rhythmically amorphous. (The relationship between the two types of given melodies is intriguing and may play an important role in Mozart's pedagogy.) As Example 7.1b shows, Mozart breathes life into the upper voice of the paradigm by imbuing it with figuration. Most commonly, the figuration enlarges the scope of the paradigm by prolonging the progression of one note to another, perhaps through motions into an inner voice or embellishing motions. In this sense, the figuration is interpolative. The interpolations not only fulfill structural functions but serve to vary familiar material so that Ployer receives additional practice in melodic settings without growing restless from constant repetition. The paradigms are extremely elastic in that the figuration can bend and stretch them in many different ways while they retain their identity. Sometimes the paradigms stand in bold relief against the surrounding

material, as, for example, in the exercise from folio 10b. Other times they are subtly imbedded in the texture. Whatever their appearance, Mozart infused them throughout the exercises. Any phrase in the double period format in which Mozart wrote the harmonization exercises may contain a manifestation of one paradigm or another.

Consistency of Function. The nature of the paradigms insures that each incarnation will have slightly different melodic and rhythmic characteristics. However, regardless of the shape they take, the paradigms frequently evince similar structural functions in each instance in which they occur. For example, the paradigm shown above modulates to the dominant; another might serve to establish the key of an exercise by moving between the notes of the tonic and dominant seventh chords, as in the first phrase of the "Benedictus" and the "Diminution" exercises. The latter paradigm maintains this harmonic function whether it appears at the beginning of the exercise or at the beginning of the second period following a tonicization of the dominant. The consistency of function is crucial to the role played by the paradigms in the harmonization exercises. However, as the examples from Chapters 8 and 9 show, some manifestations of a particular paradigm are at variance with the harmonic structure most commonly associated with it.

Systematic presentation. Evidence suggests that Mozart presented the paradigms in a systematic way, creating a pedagogical device that aided Ployer in her settings of the given melodies. The following account of one of Ployer's travails shows Mozart's method in action. Ployer had a particularly difficult time setting the modulatory second phrase of the first period. Recall, in particular, Ployer's setting of measures 5-8 of the "Benedictus."[1] In Ployer's first setting, she realized too late that the phrase was moving in the key of the dominant towards a cadence in that key at the end of the period. Mozart, in order to help Ployer set this portion of the double period correctly, provided her with several other exercises in which the problematic modulatory passage is organized by the voice-leading paradigm shown in Example 7-2. Repeating the same paradigm provided Ployer with the

[1]See in particular Example 3-4, p. 60.

necessary practice in setting the phrase. So inventive was Mozart in this pursuit of the proper setting of the modulation to the dominant that he wrote several exercises in a key a fifth lower so that the phrase that modulated to the dominant would resemble previous phrases set by Ployer that cadenced in the tonic. Chapter 2, which presents a hypothetical order in which the exercises were completed, argues that the F-major "Diminution" exercise was, perhaps, the first harmonization exercise that Ployer attempted after her problematic setting of the C-major "Benedictus," which was given as a diagnostic.

Mozart's conception and method of presenting voice-leading paradigms conforms to notions of good pedagogy as well as to important tenets of the classical style. By repeating certain paradigms, Mozart bases his approach on sound pedagogy by having Ployer repeat the same task until she learned it. By maintaining some melodic elements in common between the various exercises, Mozart was able to drill Ployer on the appropriate way of setting certain phrases while, at the same time, introducing new material in order to keep the exercises fresh. By using a method that uses the recurring material in a consistent way throughout the harmonization exercises, Mozart conforms to an important tenet of the classical style, namely, that of convention. As part of their efforts to identify and classify compositional elements, eighteenth-century theorists emphasize the role played by convention in the classical style. Riepel classifies various phrases by length, by the type of cadence with which they end, and by where they might fit into a piece of music.[2] His *Monte*, *Fonte*, and *Ponte*—melodic-harmonic stereotypes as Lester calls them—serve as the basis for melodic elaborations and play particular roles within pieces, much the same way as Mozart's paradigms do.[3] Robert Gjerdingen, in comparing composers to "tailors—men who stitched and sewed together swatches," has made the same point.[4] Gjerdingen

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[2]See Riepel's *Tonordnung*.

[3]Lester 1992, 269.

[4]Robert O. Gjerdingen, *A Classic Turn of Phrase: Music and the Psychology of Convention* (Philadelphia: University of Pennsylvania Press, 1988).

emphasizes that musical continuity could be created by connecting the appropriate phrases following the conventions of the time, much as a tailor might make a suit out of the appropriate pieces of fabric. Riepel and Gjerdingen both refer to material that performs specific tasks appropriate to particular parts of pieces, much as Mozart's melodic patterns fulfill the same harmonic functions in Ployer's exercises.

Furthermore, the setting of the melodic manifestations of the paradigms themselves indicates that Mozart believed that the interaction of contrapuntal and harmonic forces creates musical continuity. As Lester points out in his review of Gjerdingen's book, the melodies are not only the "swatches" of musical fabric, but part of the voice-leading as well.[5] The play between the counterpoint of the outer voices under the watchful eye of harmony creates the paradigms. In this respect the patterns are designed to perform such simple tasks as prolonging chords and prolonging motion between chords.

The melodies are but the most readily recognizable element of the voice-leading paradigms from which they are derived. Mozart might have hoped that Ployer would recognize a particular paradigm by the melody that he prepared for her. Ployer's task was to join the melody to the appropriate harmonic and contrapuntal support, completing or reassembling the puzzle.

Without a verbal text, of course, we can never know if Mozart and Ployer discussed the paradigms. However, they occupy such an important place in the harmonization exercises that it is hard to imagine that Mozart failed to call Ployer's attention to them. Chapter 11 suggests that Mozart directed Ployer to conform her settings to the appropriate voice-leading paradigms. The evidence suggests that, despite the lack of a verbal transcript, the paradigms do play a role in the written text of the lessons. The following chapters explore the nature of the most important voice-leading paradigms in the harmonization exercises.

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[5]Joel Lester, Review of *A Classic Turn of Phrase: Music and the Psychology of Convention. Journal of Music Theory* 34 (1990), 369-378.

Chapter 8

Voice-Leading Paradigm A

In this chapter and the two that follow it, I begin by presenting the voice-leading paradigms themselves, similar to the manner of Example 7-2. Then I show all the passages that are manifestations of these paradigms. Accompanying each of these is a voice-leading graph. I use the graphs to show how the elements of the paradigms appear in different guises, while in many instances, but not all, retaining a common structural function. It is important that the reader understand that the structures shown in the various graphs are not the voice-leading paradigms themselves but simply analyses of passages that are generated by the paradigms. The graphs show only the structure of the passage at hand, not its relationship to the larger context. The paradigms are not organized in a hierarchical manner and are represented in a rhythmically neutral fashion so that they are clearly connected to the broadest range of applications.

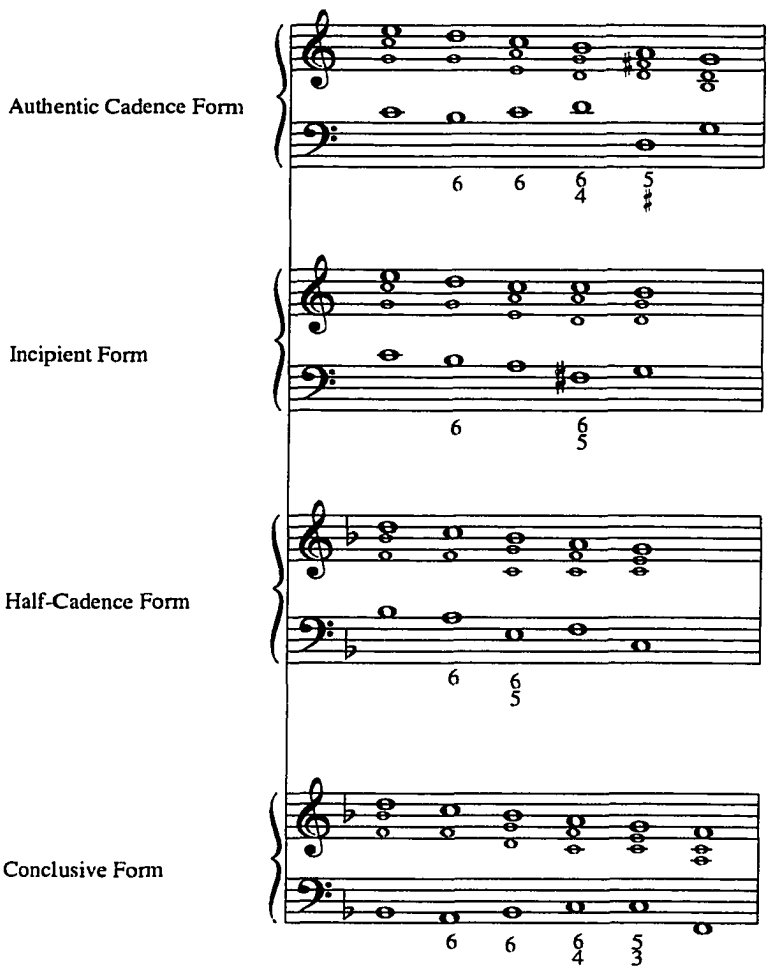
Voice-leading paradigm A. The ubiquitous voice-leading paradigm A accounts for more than a third of the material in the harmonization exercises. Characterized by a stepwise descent in the melody, most frequently from $\hat{6}$, the paradigm appears everywhere in the double-period format. The *authentic cadence form* concludes the first period of many exercises and effects the modulation to the dominant. The *incipient form* begins two exercises and establishes the main key with a close on $\hat{3}$. It is often used as an interpolation. The *half cadence form* appears in either the first or the second period, usually in an interior phrase, though in one instance it concludes the first period. The *conclusive form*, as the name implies, appears at the end of several exercises; it closely resembles the authentic cadence form and is often merely a modification of it.

In their essential forms, the different versions of the paradigm consist of a simple melodic and harmonic progression. In almost all cases, this simple structure is expanded

through interpolations. Though the surface details of these interpolations are often similar—indeed, nearly identical—each form plays a decidedly different role in the structure of the exercises.

Figure 8-1 shows each form, without the many interpolations that alter their surface appearance. The keys chosen, C major and F major, reflect the tonalities in which the patterns most frequently appear.

Figure 8-1. The four forms of voice-leading paradigm A.

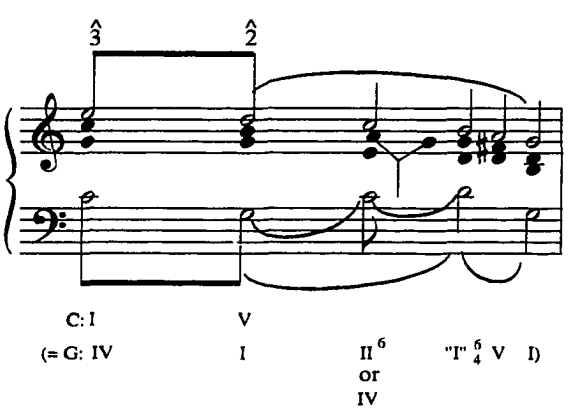


Authentic-Cadence Form

General characteristics. The authentic cadence form most frequently occurs at the end of the first period, where it effects a modulation to the dominant. The "Benedictus" exercise and the C-major exercise from folio 10b both contain this paradigm at the end of the first period.

Example 8-1 shows that the authentic-cadence form is in most cases based on the interruption figure $\hat{3}$-$\hat{2}$. The paradigm consists of two interdependent elements: a harmonic progression, indicated in the graph and the Roman numerals below it; and the three upper parts, which I call a *voice-leading complex.* The progression contains a C-major chord that functions as a pivot between the keys of the tonic and dominant and a cadence that confirms the modulation. The progression has one variable: the third chord can be either an A chord or a C chord. The voice-leading complex accommodates this variability; that is, the "alto" will either read *a'* or *g'* when the bass indicates either an A chord or a C chord respectively. The form enjoys a great deal of rhythmic flexibility, occupying two, three, or four measures. I have labeled the beginning of the cadential dominant as an apparent tonic six-four for reasons to be discussed presently.

Example 8-1. Graph showing common structural function of voice-leading paradigm A; authentic-cadence form.



Voice-leading complex. The voice-leading complex in the upper parts is a network within which the melody of the paradigm can weave. The examples of Mozart's settings of voice-leading paradigm A indicate that the melodic path to the cadence may lead through any of the voice-leading strands shown in the complex. For example, while one melody moves along the "soprano" line, another melody might follow the strand of the "alto" line; still another might alternate between the two. The voice-leading complex endorses no single melodic strand as being most representative of the upper part. In the examples below, the course actually taken by the melody is indicated with small lines that connect the notes of the melody.[1]

The simplest realization of the authentic cadence form appears in Mozart's first setting of the melody from folio 10b, reproduced again in Example 8-2. Mozart's fundamental bass shows that he understands the cadential six-four to be a second inversion of the tonic chord. Therefore he places *g* in the fundamental bass rather than *d*. A later example shows that a first-inversion tonic may also appear in this place in the paradigm.

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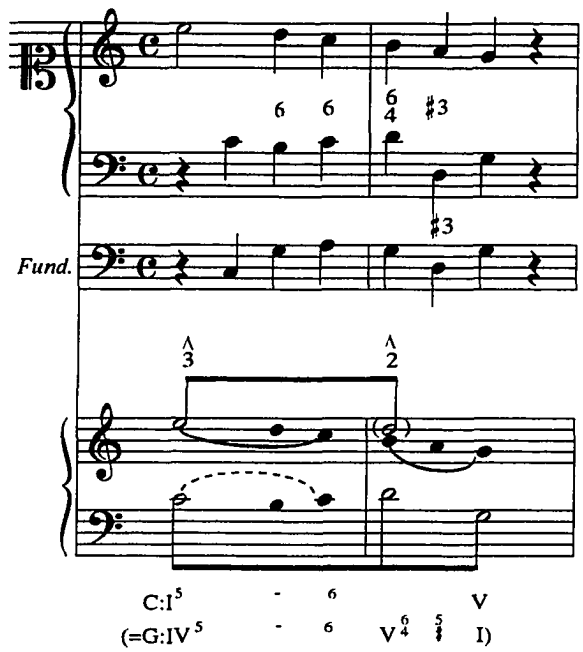
[1]William Renwick is perhaps the first to use the term *voice-leading complex*. His use of the term is slightly different. Renwick uses it in regard to invertible counterpoint in which any of the voices may appear in any position, soprano, middle, bass, etc., while retaining their integrity. See his *Analyzing Fugue: A Schenkerian Approach*. Harmonologia Series No. 8 (Stuyvesant, New York: Pendragon Press, 1995), 83-86.

Example 8-2. Realization of voice-leading paradigm A; authentic-cadence form. Folio 10b, Mozart's first setting of mm. 4-5.



If this slight passage is graphable at all, the reader will notice that its structure is immediately distinguishable from that presented in Example 8-1. This difference points to one of the significant aspects of the voice-leading paradigms—that passages organized by similar if not identical contrapuntal and harmonic elements often have different structural profiles.

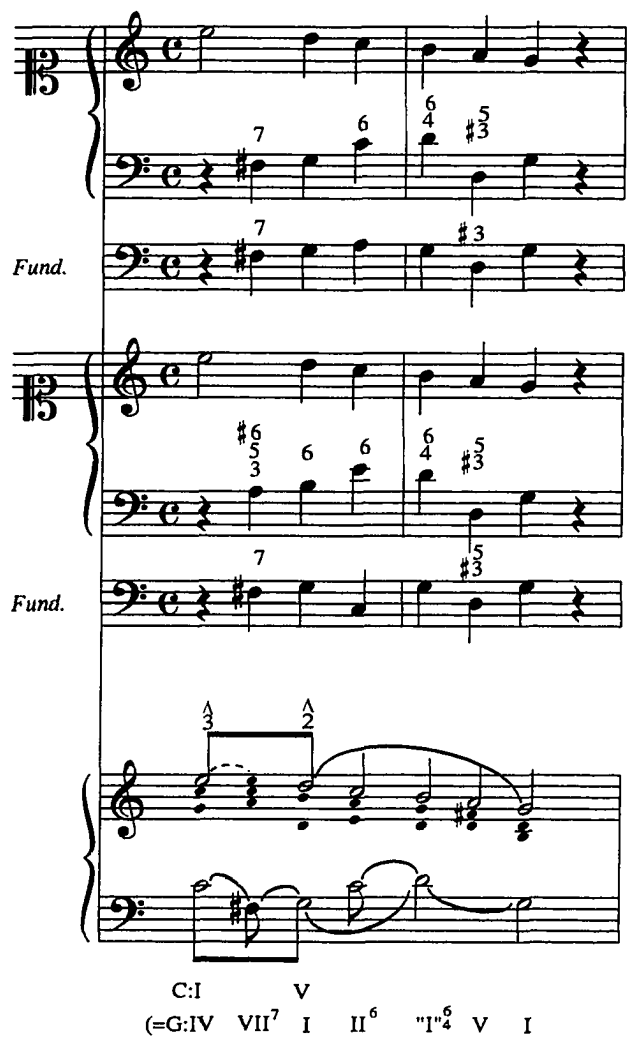
Interpolations. The authentic-cadence form often hosts interpolations that augment its size. There are two common interpolative elements: an applied chord that follows the pivot and emphasizes the new key; and a prolongation of the motion from the pivot chord to the new tonic, often based on a succession of parallel tenths between the outer parts.[2] I show that the latter interpolation is actually the same as the incipient form of the paradigm.

[2]Kirnberger also recognized one-chord interpolations. In his third type of harmonic accompaniment, he introduces applied chords into what had been purely diatonic settings previously. In this context, the applied chords function as tiny interpolations within the larger framework of the chorale harmonizations that he presents. See Johann Philipp Kirnberger, *The Art of Strict Musical Composition*, translated by David Beach and Jürgen Thym. Music Theory Translation Series (New Haven: Yale University Press, 1982), 295.

While instances of individual interpolations occurring within the paradigm exist, most often the interpolations appear in combination with each other.

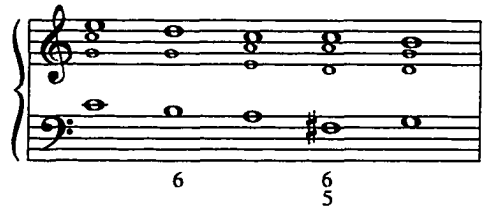
Applied chord interpolation. An applied chord, which appears in Mozart's second and third settings from folio 10b, shown in Example 8-3, is the simplest interpolation within the paradigm. The graph shows the interpolation in relation to the structure of the basic paradigm.

Example 8-3. Realization of voice-leading paradigm A; authentic-cadence form with applied chord interpolation. Folio 10b, mm. 4-5, Mozart's second and third settings.



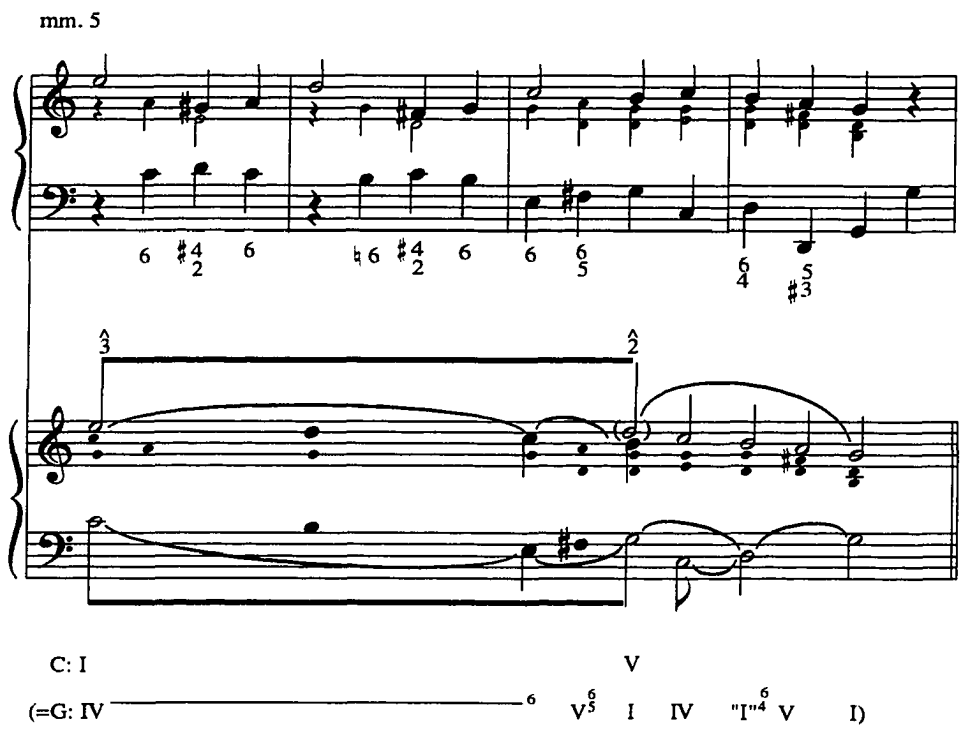
Initial form interpolation. In four instances, the initial form of the paradigm prolongs the motion from the first C-major chord to the G-major chord that functions as the new tonic, as shown in Example 8-4.

Example 8-4. Initial form interpolation.



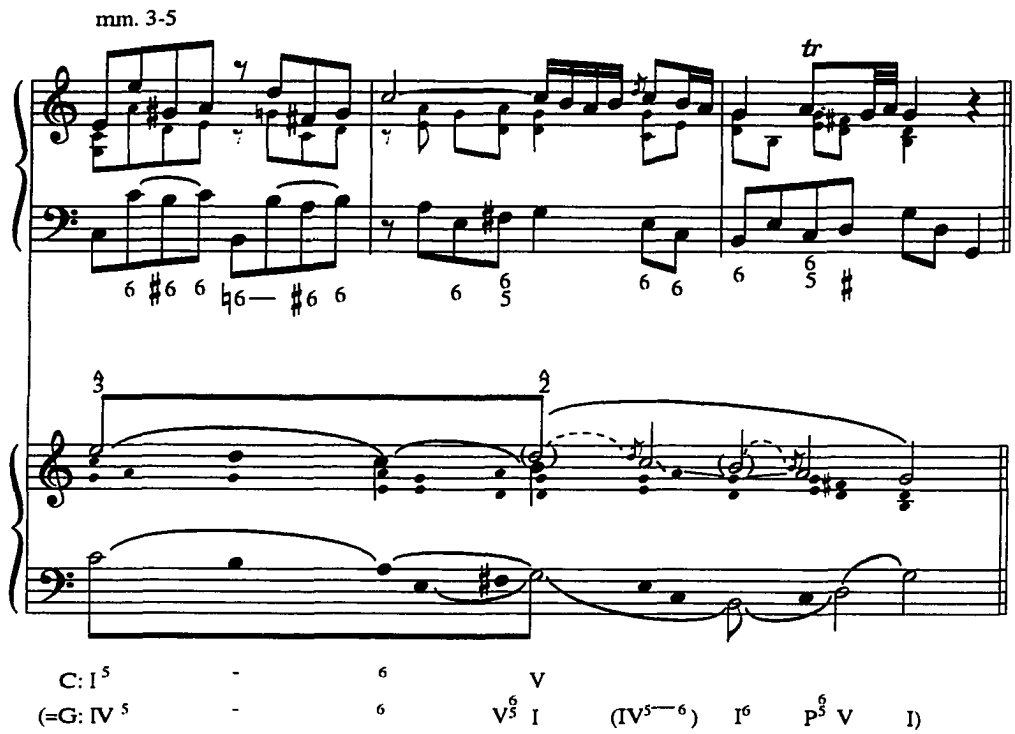
Example 8-5 shows measures 5-8 from Mozart's corrected version of the "Jupiter" exercise. Mozart inserts a descending fourth, *e''-b'*, from the first to the second chord of the paradigm; after an initial 5-6 motion and the prolongation of the resulting A-minor sonority, leaps into the inner voice prolong the progressions *e''-d''* and *d''-c''*. The interpolation leads to *b'*, the "alto" note of the voice-leading complex. Rather than supporting *c''* with a five-three chord above *a*, Mozart chooses instead a six-three chord above *e*. Aside from the interpolation, the pattern remains unadorned and, in fact, nearly identical to the passages from folio 10b shown in Examples 8-2 and 8-3.

Example 8-5. Realization of voice-leading paradigm A; authentic cadence form with initial form interpolation. The "Jupiter" exercise folio 9a, mm. 5-8.



This same interpolated fourth appears in Example 8-6, which shows measures 3-5 from the C-major model from folio 3b. Like the interpolation shown in the preceding example, this passage begins with a 5-6 motion above *c*, which is followed by a neighboring chord within A minor. In both exercises, Mozart repeats this motive sequentially a step lower.

Example 8-6. Realization of voice-leading paradigm A; authentic-cadence form with initial form interpolation. Folio 3b, C-major keyboard model, mm. 3-5.

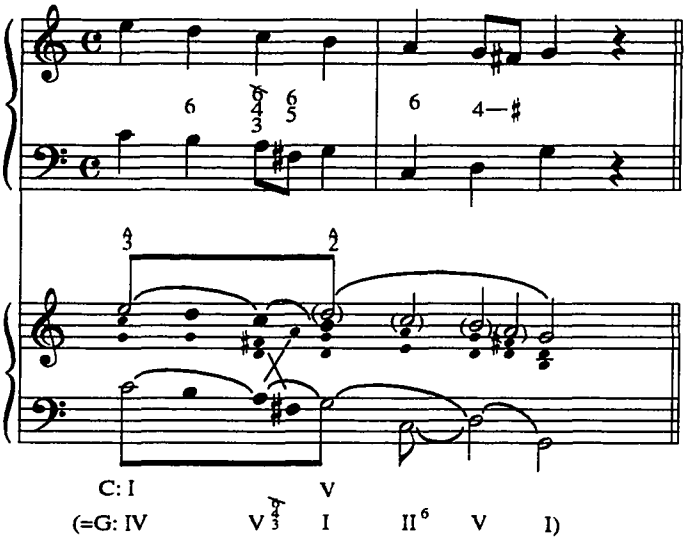


A brief examination of the cadence above in Example 8-6 reveals how the melody moves within the voice-leading complex in the upper parts. The top staff of the graph in Example 8-6 charts the course of the melody from the end of the interpolation to the final cadence. The small lines show the melody weaving between the "soprano" and "alto" voices of the voice-leading complex.

Mozart counterpoints the cadential portion of the voice-leading complex differently in this setting, though in a way consistent with the voice-leading paradigm. Here, Mozart supports the *g'* on the downbeat of measure 5 with a six-three chord, rather than a six-four chord as he does in the other exercises. This further suggests that he heard the small portion of the melody, *g'-a'-g'*, moving within the G-major chord, as the fundamental bass for the passage would attest.

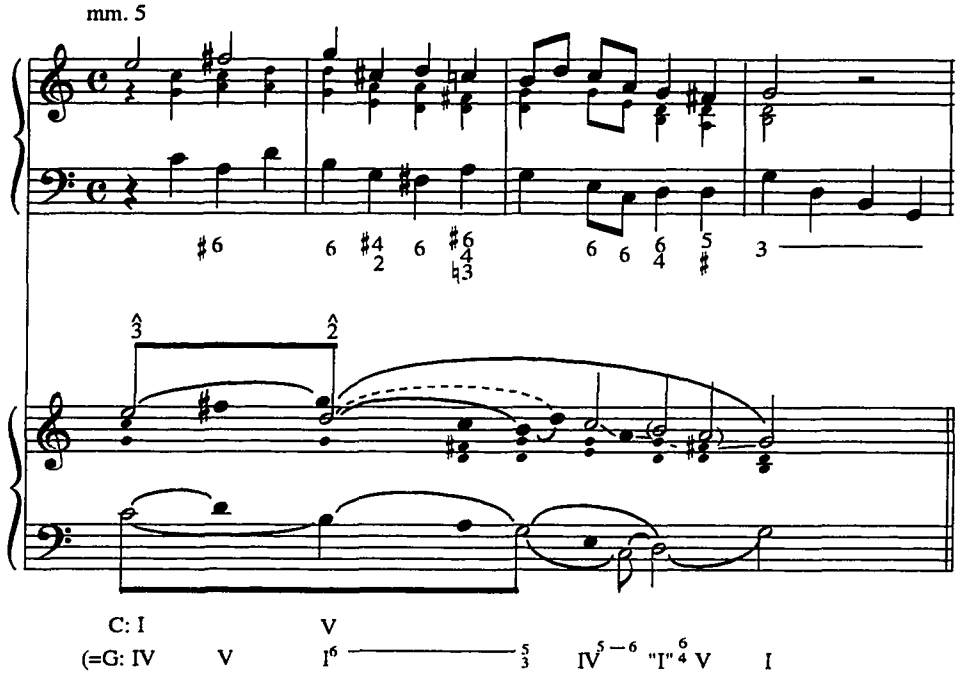
Example 8-7 shows the analogous modulatory passage from folio 9a. Here I have replaced Ployer's awkward continuo with my own. Despite the fact that her own line lacks smoothness, it does appear that it was derived from a fundamental bass that Mozart provided. All her harmonic choices are good. My continuo is based on the harmonies implied by the fundamental bass that may have generated Ployer's harmonies.

Example 8-7. Realization of voice-leading paradigm A; authentic-cadence form with initial form interpolation. Folio 9a, mm. 3-4.



Example 8-8 shows measures 5-8 from the "Benedictus," which contains slightly different interpolative material. Here the fourth *e''-b'* is divided *e''-d''-b'* (step plus third) rather than *e''-c''-b'* (third plus step) as it is in most of the passages above. The melody begins with a melodic motion from $\hat{6}$ to $\hat{8}$; the passing tone *f♯''* of the applied chord intensifies the drive to *g''* and helps to establish the dominant as the new key. Next, the line that descends from $\hat{2}$, itself prolonged with a lower neighbor, begins in an inner voice beneath *g''*. It reaches *b'*, where it elides with the cadential portion of the main form.

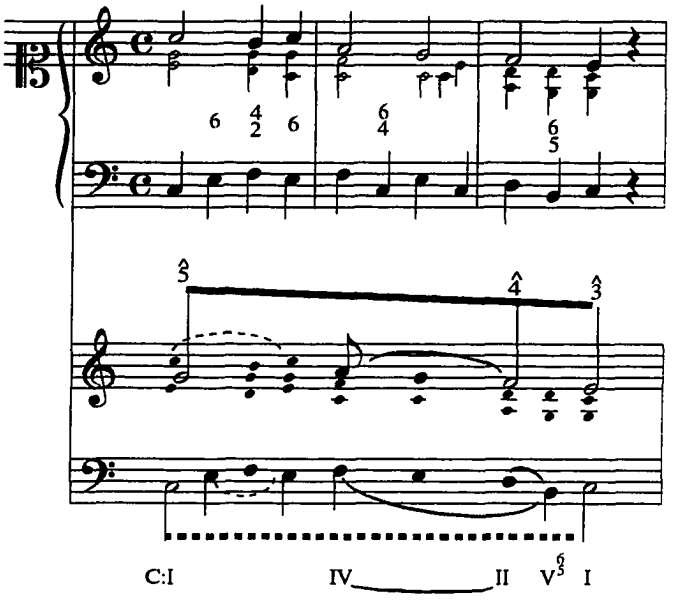
Example 8-8. Realization of voice-leading paradigm A; authentic cadence form. Folio 1a, the "Benedictus," mm. 5-8.



Incipient Form

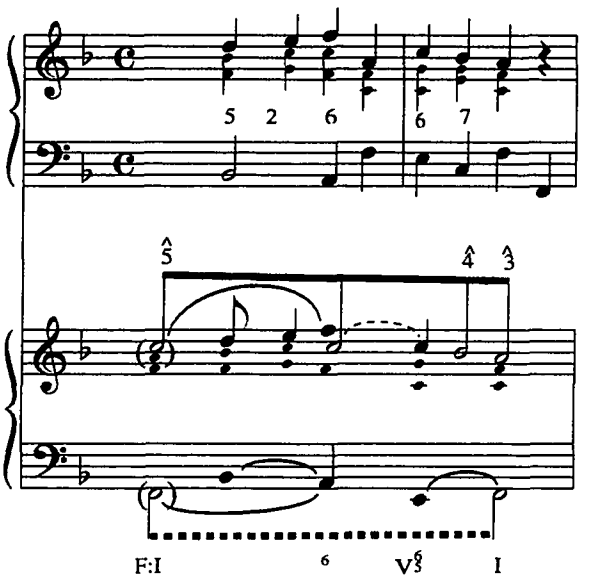
The exercise form folio 10b begins with the incipient form of the paradigm, as shown in Example 8-9. As in the previous examples, a descending line from ó is prominent. Here the descent follows a simple tonic-dominant alternation that establishes the main key. This form is well-suited to the beginning of an exercise where a full close on the tonic is inappropriate.

Example 8-9. Realization of voice-leading paradigm A; incipient form. Folio 10b, mm. 1-3.



Even this brief structure admits an interpolation. Example 8-10 shows measures 3-4 from the "Priest's March" that feature the descent to $\hat{3}$ characteristic of the incipient form. Here, however, a fourth-progression that ascends through the neighbor $\hat{6}$ elaborates the motion in a way similar to that found in Example 8-8 above.

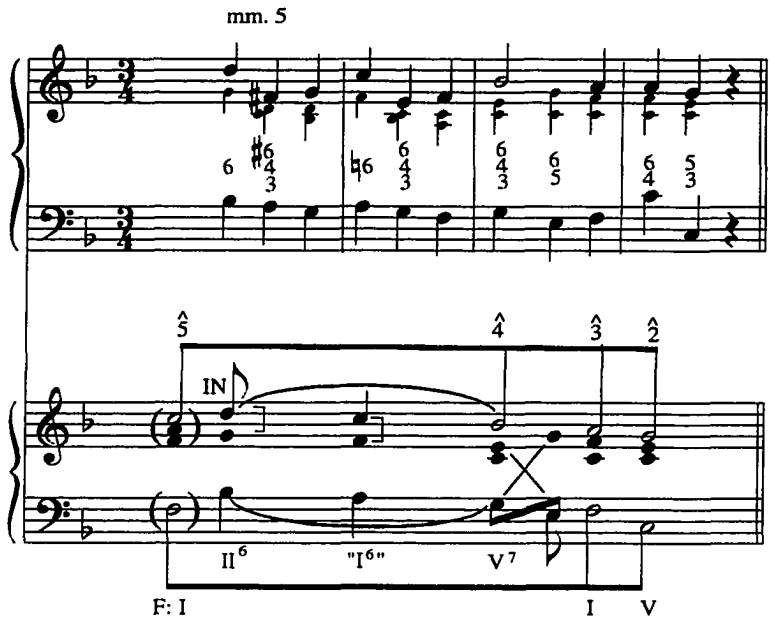
Example 8-10. Realization of voice-leading paradigm A; incipient form. Folio 1b, the "Priest's March," mm. 3-4.



Half-Cadence Form

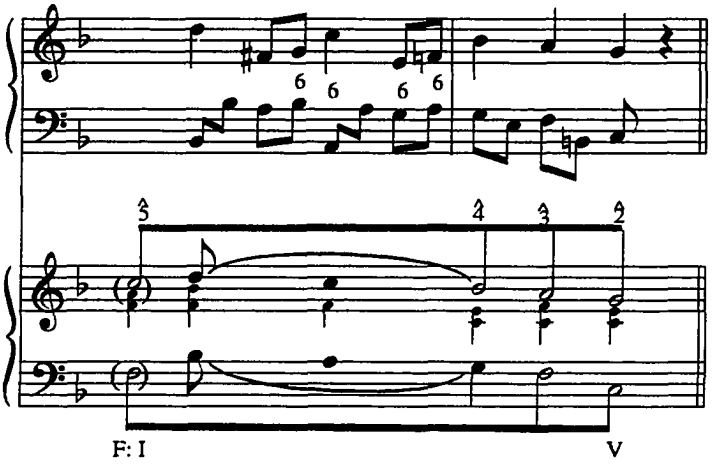
General characteristics. The half-cadence form of the paradigm looks very similar to its cousin the authentic cadence form; Mozart even uses many of the same figures to elaborate it. It tends to appear in F-major exercises whose head tone is $\hat{5}$. Despite the similarities, its structural function differs significantly. Within the form itself are two different parsings of structure. Examples 8-11 and 8-12 align two passages with the graphs that indicate their structural function. In the graphs, the F-major chord with which the passages begin represents the material that precedes the phrase in question.

Example 8-11. Realization of voice-leading paradigm A; half-cadence form. ♮ model from folio 9b, mm. 5-8.



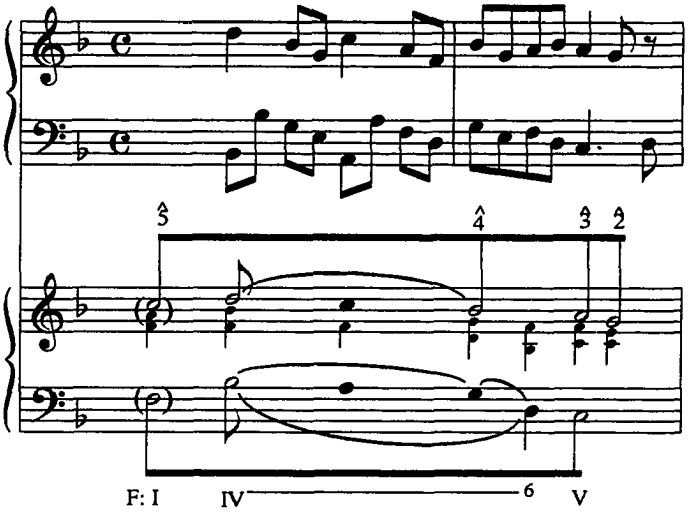
It is often difficult to determine the function of the tonic chord immediately before the half cadence. Sometimes it seems like a momentary return to the tonic before the cadence; at other times it resembles a passing chord between V4/3 and the root position dominant at the end of the phrase.

Example 8-12. Realization of voice-leading paradigm A; half-cadence form. F-major exercise with partial fundamental bass, folio 4a, mm. 9-10.



Example 8-13 shows a passages from the "Diminution" exercise that contains a slightly different parsing of the structure.

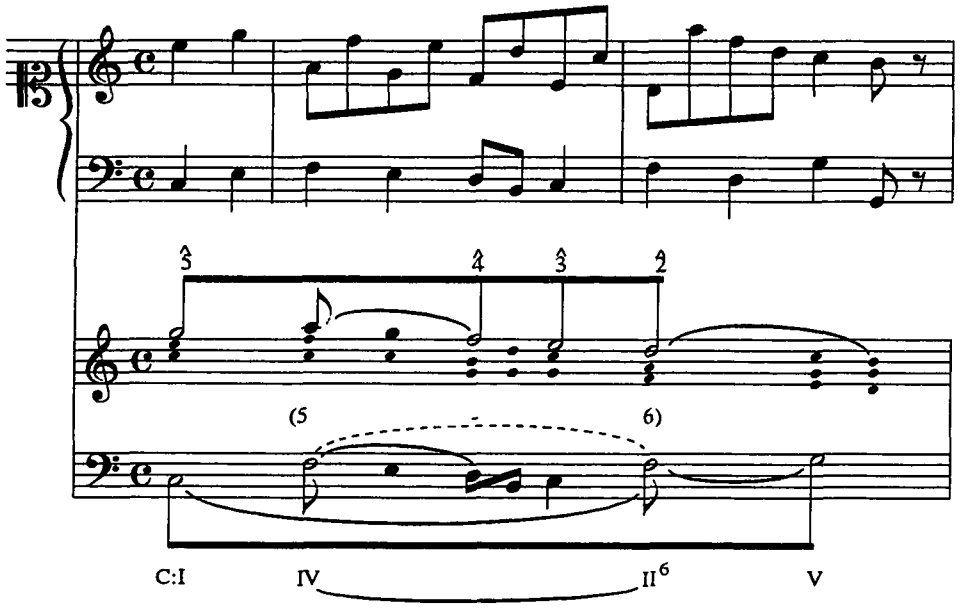
Example 8-13. Realization of voice-leading paradigm A; half-cadence form. The "Diminution" exercise, folio 3b, mm. 3-4.



The passage shown in Example 8-14 contains a variant of the half-cadence form in which a II^6 chord, supporting $\hat{2}$, appears before the cadential dominant. This addition, which might be considered a type of interpolation, necessitates a motion into the inner

voice, *d''-b'*, above the dominant. Perhaps Mozart altered the form so that the eighth-note motion established in the preceding bar could continue up to the cadence.

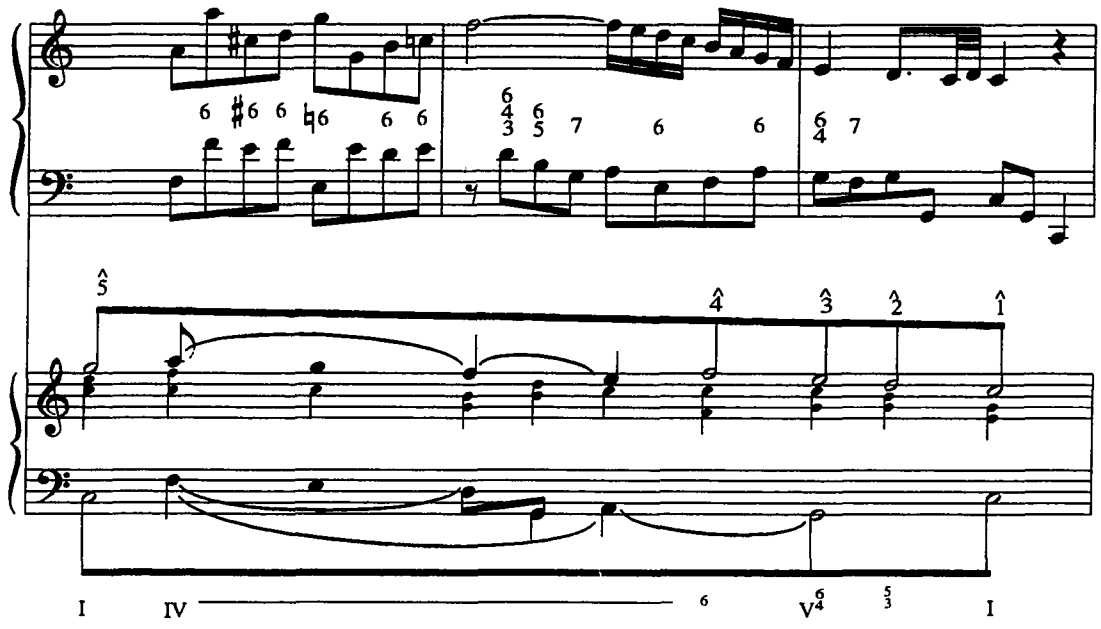
Example 8-14. Realization of voice-leading paradigm A; half-cadence form. Folio 9a, mm. 6-8.



Conclusive Form

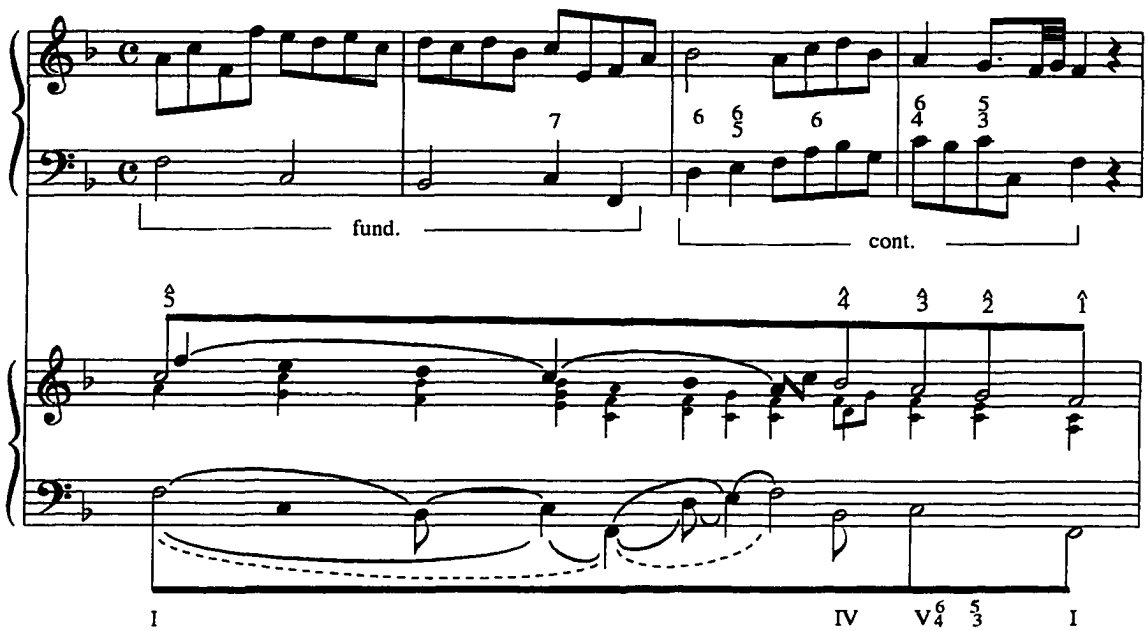
When the authentic cadence form is altered so that the passage appears in the tonic rather than the dominant I call it the conclusive form. In the passage shown in Example 8-15, $\hat{4}$ is transferred down an octave, completing the descent from $\hat{6}$ in the lower register.

Example 8-15. Realization of voice-leading paradigm A; conclusive form. Folio 3b, mm. 8-10.



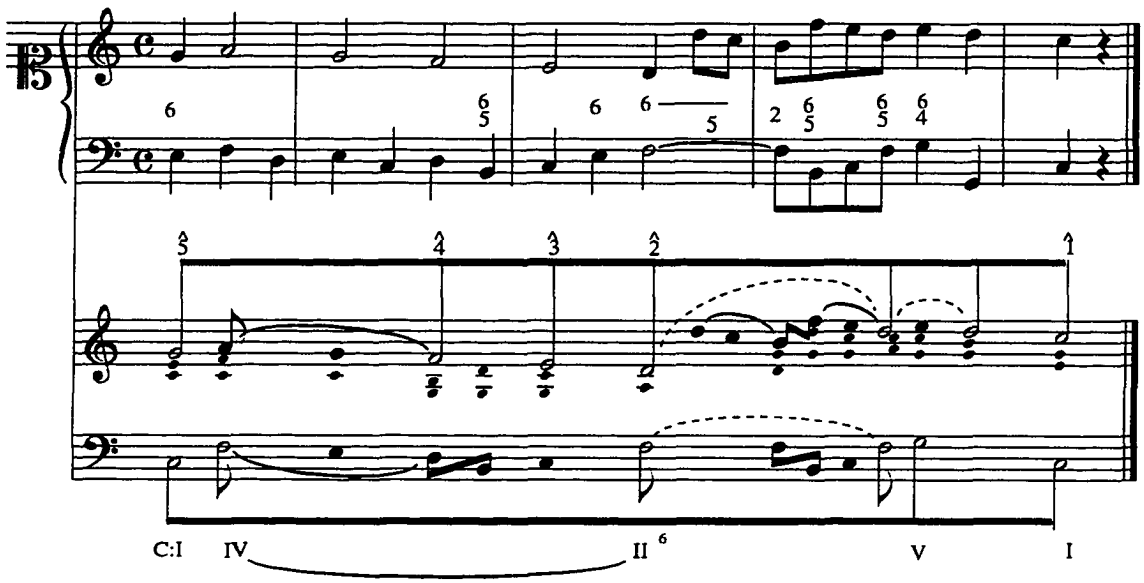
A similar version of the form occurs in Example 8-16, where an octave descent leads to the final cadence. Rather than prolonging $\hat{5}$-$\hat{4}$ with an incomplete neighbor $\hat{6}$ as in many of the examples above, here a motion into an inner voice prolongs $\hat{5}$ in a manner similar to that found above in Example 8-8.

Example 8-16. Realization of voice-leading paradigm A; conclusive form. Folio 4a, mm. 11-14.



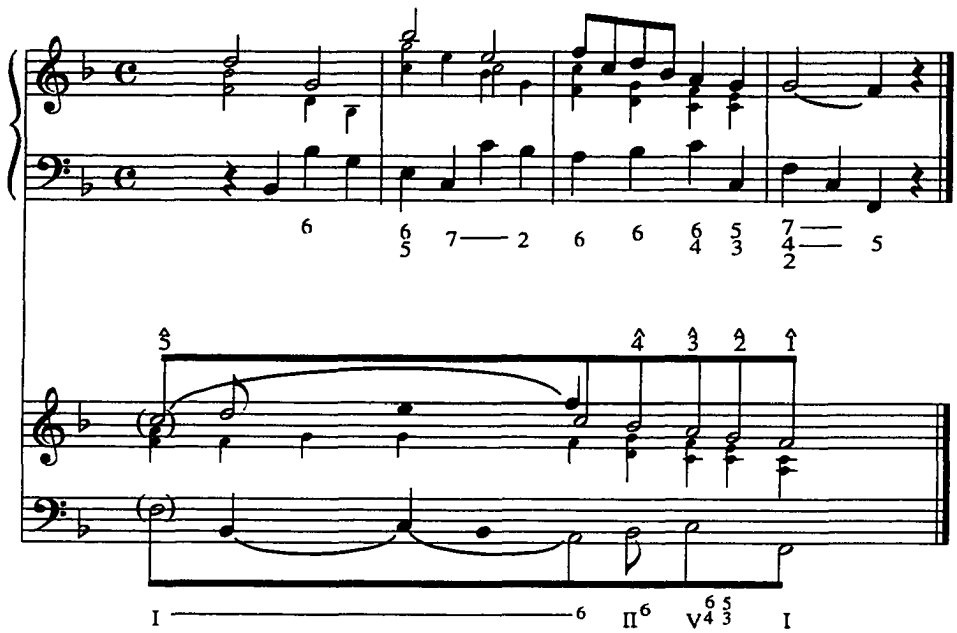
In the passage shown in Example 8-17, Mozart prolongs $\hat{2}$ above the II^6 chord in order to forestall the arrival of the cadence and to return the melody to a higher register. Nested within the prolongation of $\hat{2}$ is a form of voice-leading paradigm B, which I discuss in the next chapter.

Example 8-17. Realization of voice-leading paradigm A; conclusive form. The "Jupiter," folio 9a, mm. 12-16.



One final example shows that the "Priest's March" also concludes with the conclusive form of voice-leading paradigm B. In the passage shown in Example 8-18, 6̂ is part of a fourth-progression that ascends to a superimposed *f''*.

Example 8-18. Realization of voice-leading paradigm A; conclusive form. Folio 1b, the "Priest's March" exercise, mm. 13-16.

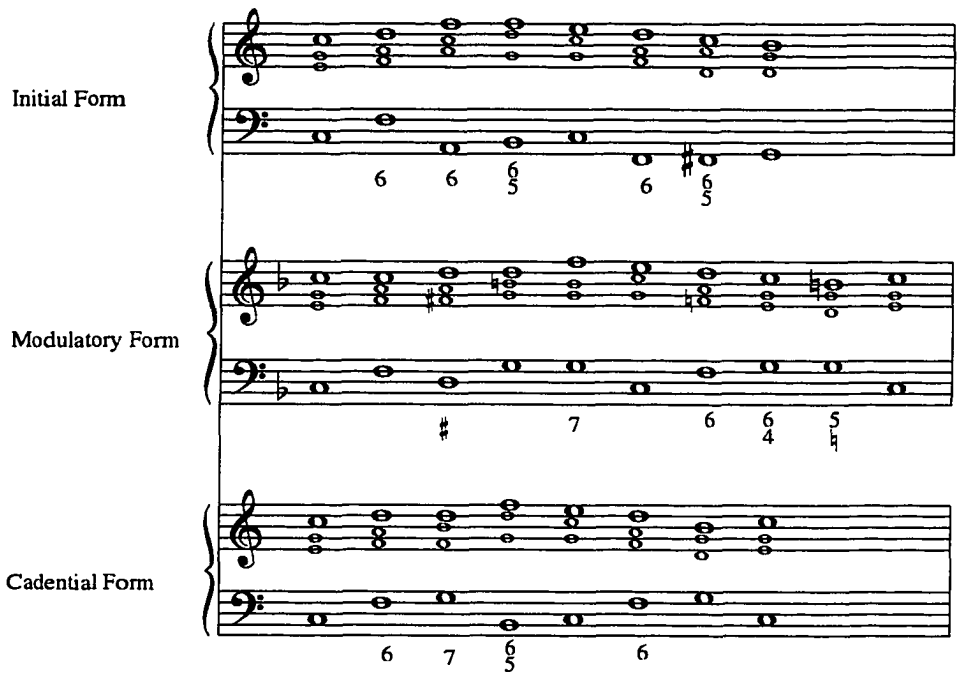


Chapter 9

Voice-Leading Paradigm B

Voice-leading paradigm B admits more variations than does voice-leading paradigm A. This is probably the case because in many occurrences it begins phrases rather than ends them. Often what follows the paradigm affects its conclusion. Despite this greater variety, most instances of voice-leading paradigm B consists of a rising motion to $\hat{3}$, often followed by a descent to $\hat{2}$ or all the way to $\hat{1}$. It has three forms: *initial*, *modulatory*, and *cadential*. Each tends to appear in particular places within the double period format. As its name implies, the initial type often appears at the beginning of either the first or second period. It is this material to which Lach refers when he mentions thematic similarities between some of the exercises. The modulatory type appears at the end of the first period and ends in the key of the dominant. The cadential type concludes many of the exercises. Figure 9-1 shows the basic structure of each type.

Figure 9-1. The three types of voice-leading paradigm B.



The following passages shown in the examples will deviate from these forms in small ways. For instance, the second chord of the initial form sometimes supports $\hat{2}$ with dominant harmony rather than supertonic harmony. In some instances of the cadential form, not all of the chords before the final I-II^6-V-I appear. It is perhaps most important to notice that voice-leading paradigm B is pitch specific, meaning that all of its forms occur only in the key of C major. Therefore, it not only provides an excellent way to establish the tonic in that key, but it also works perfectly well as a vehicle for modulating to the dominant in F major.

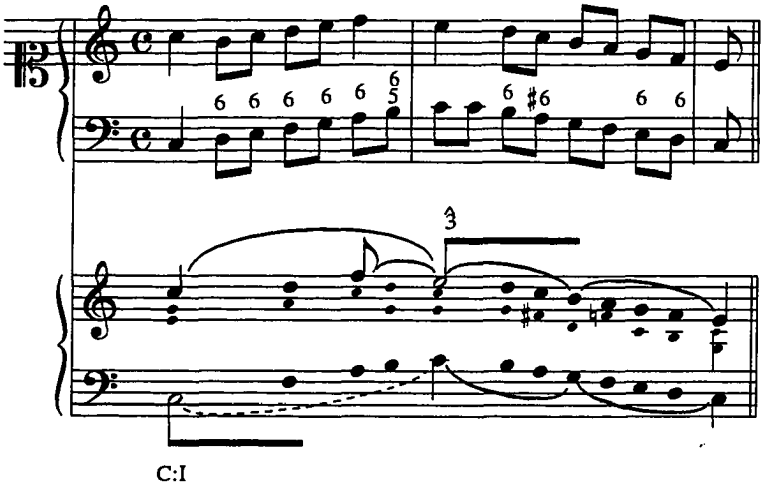
Initial form

General characteristics. The initial form of voice-leading paradigm B can appear at the beginning of either the first or second period. It serves to establish or reestablish the tonic and always elides with other paradigms. Every appearance contains a melodic motion

from $\hat{1}$ to $\hat{3}$. Many statements also include a suffix that leads to the dominant, as in a tonicized half cadence.

First-period type. The first period type prolongs the tonic and is characterized by a melodic motion $\hat{1}$-$\hat{2}$-$\hat{4}$-$\hat{3}$. Scale degree 4 is consistently set with both the subdominant and the dominant seventh chord, typically manifested in the progression IV^{6}-$V^{6/5}$. The second scale degree can be supported with either supertonic or dominant harmony.

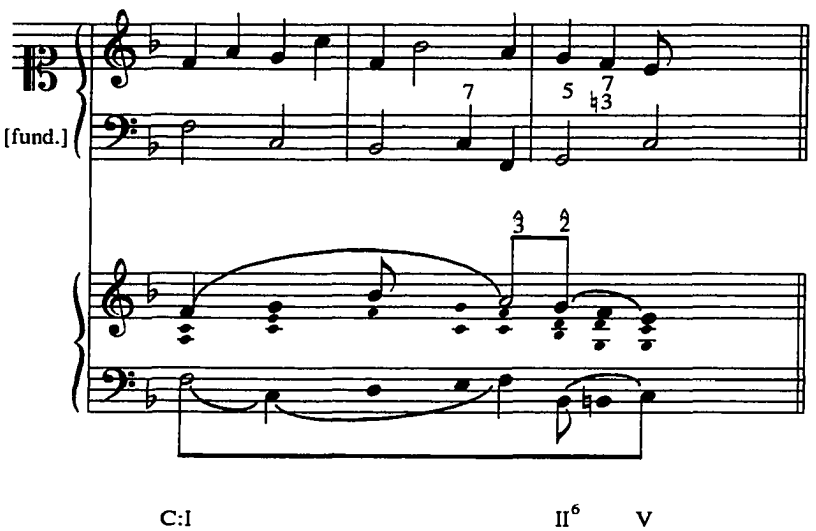
Example 9-1. Realization of voice-leading paradigm B; initial form. C-major keyboard model, folio 3b, mm. 1-3.



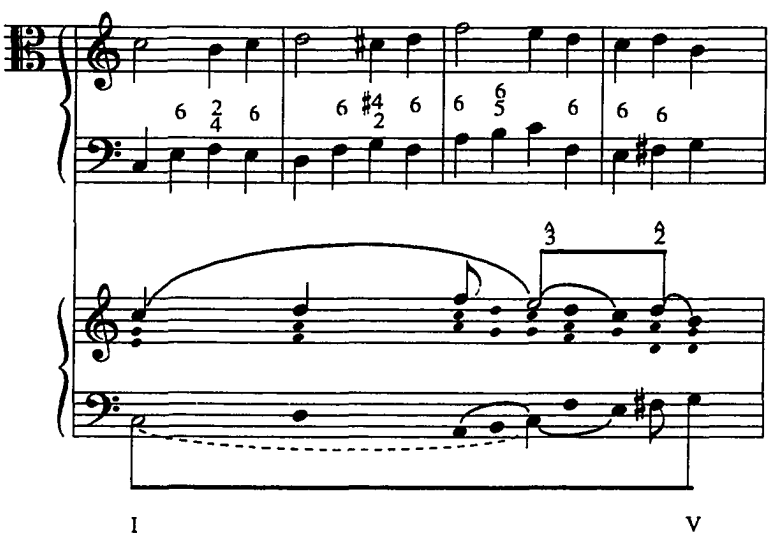
Suffixes. In many cases, a suffix extends the paradigm, moving it toward a tonicized root position dominant that leads to the following phrase. In these instances $\hat{3}$, reached through the ascent, descends to $\hat{2}$, which moves into the inner-voice tone *b'* above the dominant. This motion to the dominant is hinted at even in the previous example.

The passage shown in Example 9-2 is the only one in which voice-leading paradigm B appears in the key of F major; in all other passages the paradigm appears in C major or modulates to that key.

Example 9-2. Realization of voice-leading paradigm B; initial form with tonicized half cadence. F-major exercise with partial fundamental bass, folio 4a, mm. 1-3.[1]



Example 9-3. Realization of voice-leading paradigm B; initial form with tonicized half cadence. The "Jupiter" exercise, folio 9a, mm. 1-4.

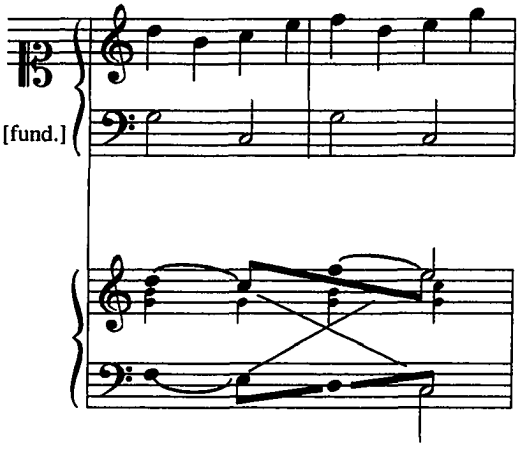


Second period type. The three instances in which the second-period type appears follow the tonicization of the dominant at the end of the first period. As in the first period

[1]Some of the exercises have continuo parts only in Ployer's hand; many of these contain mistakes. Therefore, in this and a few of the following examples, I provide my own realization to Mozart's fundamental bass.

type, the motion from $\hat{1}$ via $\hat{4}$ to $\hat{3}$ plays a significant role. This form of the paradigm always begins with the dominant. In Examples 9-4 and 9-5 the melody unfolds between the dominant and tonic chords.

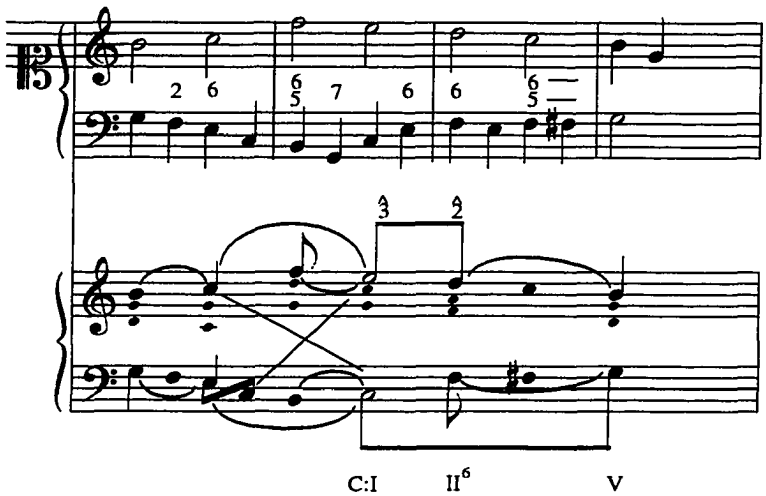
Example 9-4. Realization of voice-leading paradigm B; initial form, second period type. Folio 9a, mm. 5-6.[2]



Suffixes. In two instances, the second period type contains the suffix that leads to a tonicized half cadence.

[2]Here I derive the given fundamental bass from Ployer's setting. The bass in the graph is mine.

Example 9-5. Realization of voice-leading paradigm B; initial form, second period type with tonicized half cadence. Folio 10b, mm. 6-9.

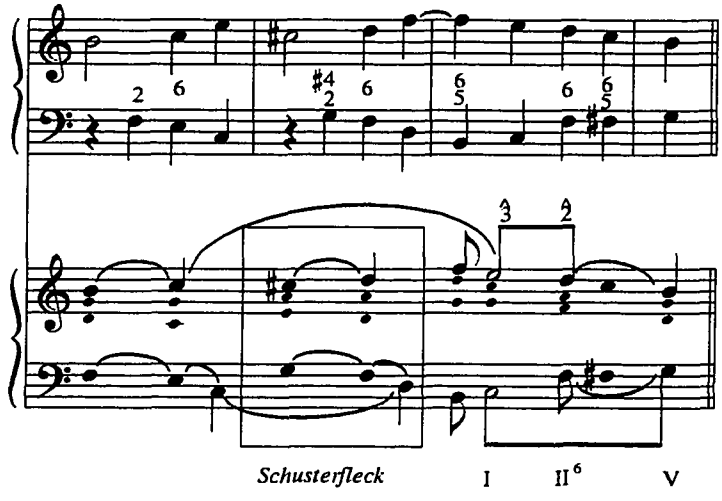


In Example 9-6, Mozart repeats the initial chord progression a step higher. The repetition functions like an interpolation between the two dominant-tonic progressions. Riepel calls this progression a *Schusterfleck*, or cobbler's patch.[3] Reed writes: "this...label may refer to the use of this [harmonic] cliché to 'patch together' the two parts of a small binary piece."[4] This succession of harmonies becomes the basis for Riepel's *Monte*.

[3]Riepel, *Anfangsgründe*, I:19.

[4]Reed, 76.

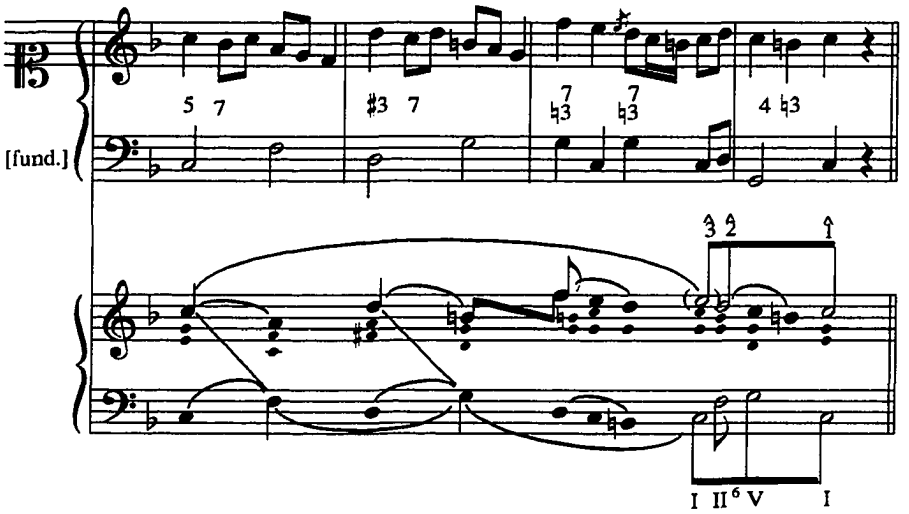
Example 9-6. Realization of voice-leading paradigm B; initial form, second period type with tonicized half cadence and *Schusterfleck*. The "Jupiter" exercise, folio 4b, mm. 9-12.



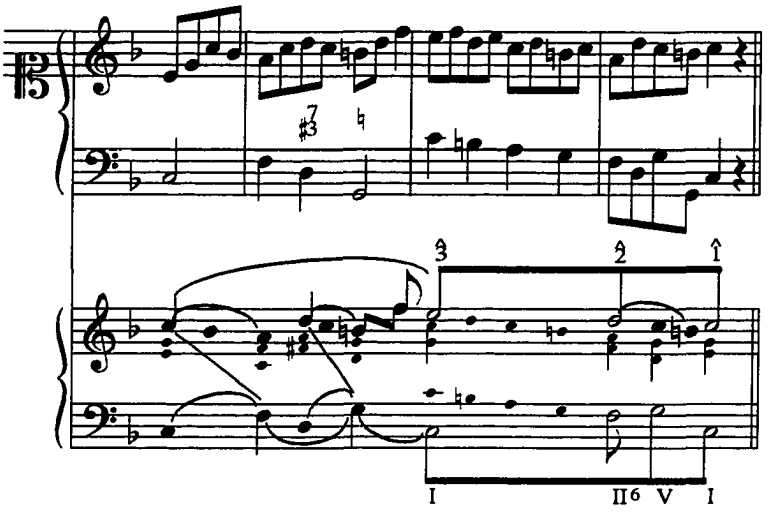
Modulatory Form

General characteristics. The modulatory form of voice-leading paradigm B appears twice, each time effecting a modulation at the end of the first period. In keeping with the pitch-specific nature of the paradigm, the modulatory form appears in exercises in F major, in which material that had previously functioned in the main key in C major exercises now functions in the dominant. Both passages begin with a rising sequence, a *Schusterfleck.* Material that appears as a suffix in the initial form of the paradigm now leads to a cadence.

Example 9-7. Realization of voice-leading paradigm B; modulatory form. The "Diminution" exercise, folio 3a, mm. 5-8.



Example 9-8. Realization of voice-leading paradigm B; modulatory form. F-major exercise with partial fundamental bass, folio 4a, mm. 3-6.[5]



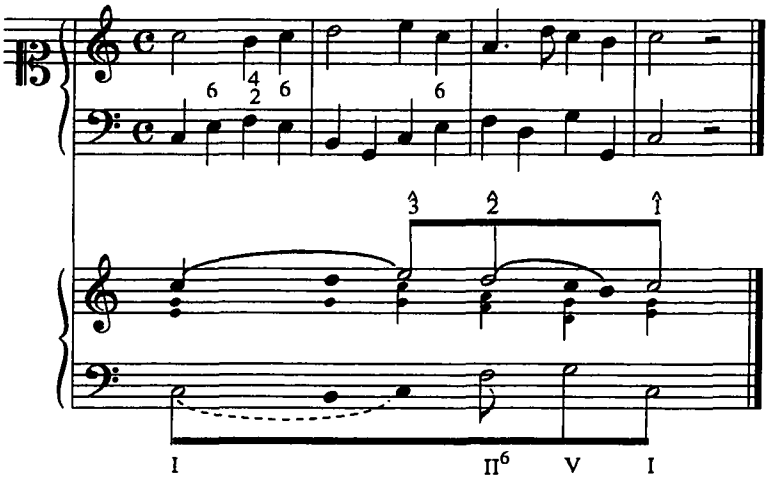
Cadential Form

General characteristics. Like the other forms of voice-leading paradigm B, the cadential form begins with a distinct rising motion to $\hat{3}$. It shares much with the modulatory

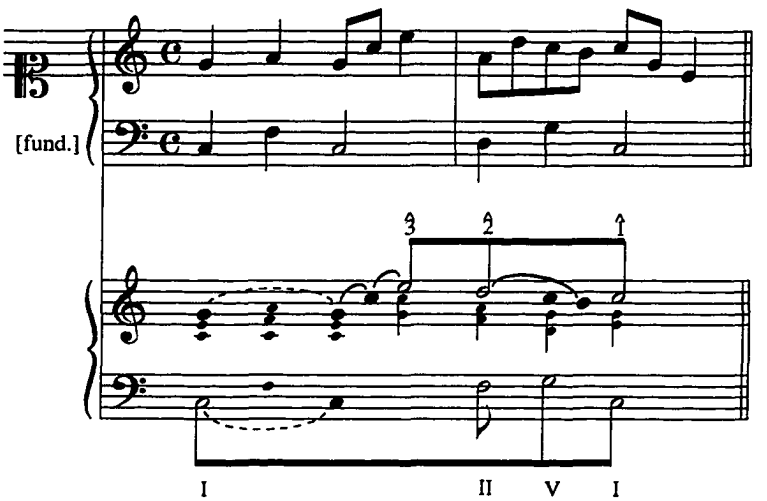
[5]In this example, I provide Mozart's fundamental bass and a simplified version of his suggestion for measures 5-6.

form. Both typically occur in the key of C major and feature a stepwise descent from $\hat{3}$. In several of the melodies a motion into the inner-voice tone *a'* prolongs the progression from $\hat{3}$ to $\hat{2}$ (like that just shown in Example 8-8). The material that precedes the actual cadence varies quite a bit in the cadential form. A tonic prolongation may lead to the cadence when the phrase follows the half cadence, as in Example 9-9, or (in a unique instance) when the cadential form begins an exercise, as in Example 9-10.

Example 9-9. Realization of voice-leading paradigm B; cadential form. Folio 10b, mm. 10-13.

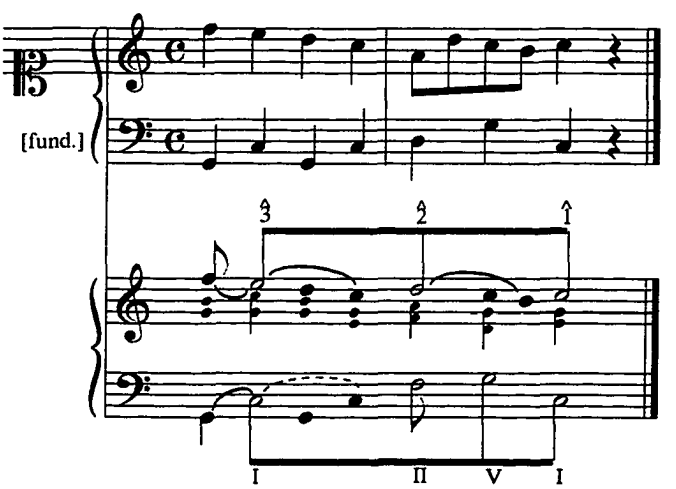


Example 9-10. Realization of voice-leading paradigm B; cadential form. Folio 9a, mm. 1-2.



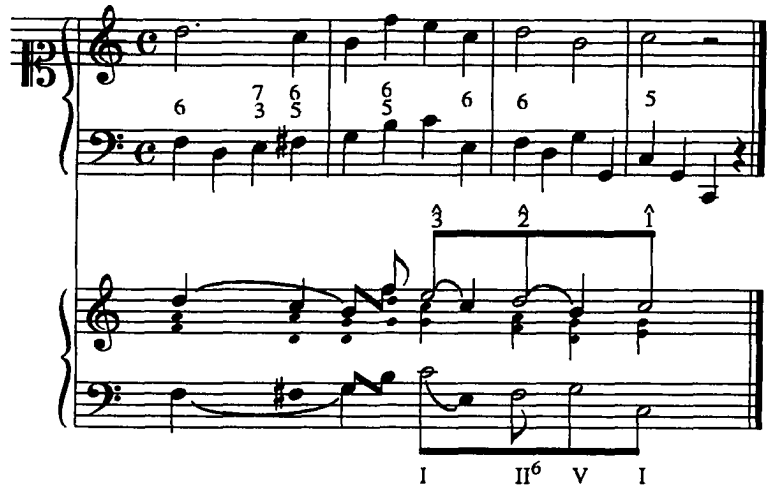
The passage shown in Example 9-11 follows a half cadence and begins with a prominent statement of $\hat{4}$ in the melody. Examples 9-11 to 9-13 each feature this placement of $\hat{4}$.

Example 9-11. Realization of voice-leading paradigm B; cadential form. Folio 9a, mm. 9-10.

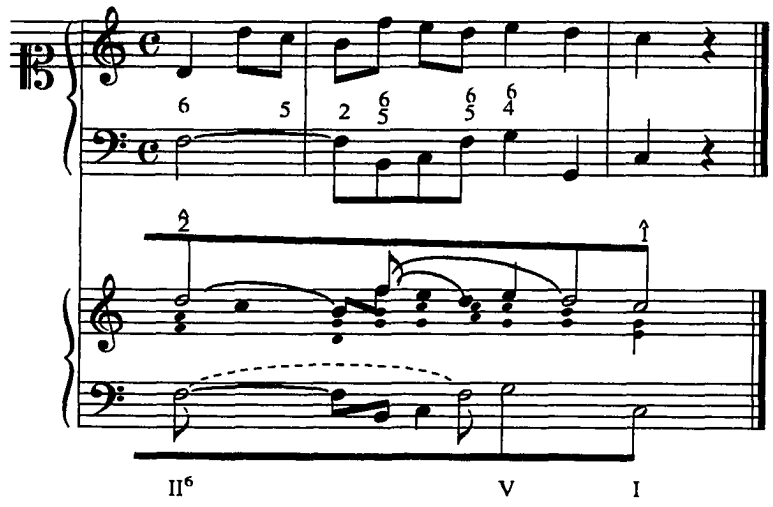


Examples 9-12 and 9-13 show two instances in which the cadential form begins with a melodic motion $\hat{2}$-$\hat{7}$ followed by a leap to up $\hat{4}$, which is followed by the cadence itself.

Example 9-12. Realization of voice-leading paradigm B; cadential form. The "Benedictus," folio 1a, mm. 13-16.



Example 9-13. Realization of voice-leading paradigm B; cadential form. The "Jupiter," folio 9a, mm. 14-16.



Summary. Chapters 8 and 9 have discussed voice-leading paradigms A and B, which account for the overwhelming majority of the material in the harmonization exercises, as the numerous examples attest. As stated in the current chapter, Mozart made use of stock eighteenth-century paradigms, such as Riepel's *Schusterfleck*, too. Though Riepel's patterns represent a significantly smaller portion of the exercises they, nonetheless, play an important role and provide an opportunity to compare Riepel's and Mozart's application of paradigms. The following chapter concludes the survey of paradigms with an examination of Mozart's and Riepel's use of a common mid-century paradigm, the *Fonte*.

Chapter 10

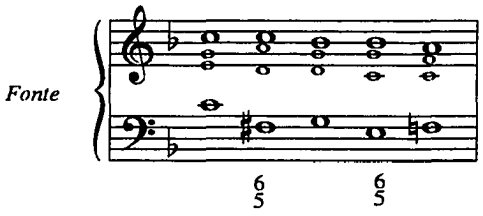
Riepel's *Fonte*

Joseph Riepel contributed greatly to the early study of phrase structure and laid the foundation on which Koch would later build his own theories. Riepel classified phrases by their length and cadential orientation and recognized inner divisions of phrases, calling them incises. He was the first to articulate the idea that large structures like sonata-form movements were expansions of simpler, smaller structures. Leopold thought enough of Riepel's work to recommend it to Mozart.[1]

The *Fonte*

Five passages from the exercises contain a paradigm that conforms in melodic content and structural function to a stereotype first discussed by Riepel. Figure 10-1 shows the *Fonte* as a voice-leading paradigm.

Figure 10-1. Riepel's *Fonte*.



A melodic progression from $\hat{5}$ to $\hat{3}$ characterizes this pattern, which reestablishes the main key after the tonicization of the dominant. A description of the *Fonte* in Riepel's work precedes the detailed account of the *Fonte*'s presence in Mozart's harmonization exercises.

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[1]See Bauer-Deutsch, vol. III, no. 715, 246.

Joseph Riepel was the first and, probably, the only theorist to refer to a particular phrase as the *Fonte*, or fountain. Riepel does not deny that he uses the term and others (the *Monte*, mountain and *Ponte*, bridge) as a way of poking fun at similar descriptive terms created by other theorists.[2] Regardless of what Riepel calls it, the *Fonte* and other passages play an important role in his discussion of melody, particularly in regard to the ways in which a melody can be extended.

The term appears in the chapter entitled *Tonordnung* from his *Anfangsgründe*, where it describes a phrase that follows immediately after an authentic cadence in the dominant. Nola Reed describes the *Fonte* as consisting "of the descending sequence V/II-II-V-I."[3] For Riepel, the passage, indeed, corresponds to this progression. That Figure 10-1 begins with a V chord does not change the basic function of the paradigm or its characteristic melody, $\hat{5}$-$\hat{4}$-$\hat{4}$-$\hat{3}$. Both the melodic and harmonic features are readily apparent in Example 10-1, which shows a sixteen-measure double period in which the *Fonte* appears at the beginning of the second period and brings about a return to the tonic.

Perhaps it is significant that the pair of harmonic progressions in the *Fonte* are the reverse of that found in the *Schusterfleck* discussed in the last chapter—as if the *Schusterfleck* could effect the modulation to the dominant and the *Fonte* could reverse it. In the harmonization exercises, only the "Diminution" exercise on folio 4a contains both. Mozart and Riepel, however, might have thought of these clichés in reciprocal terms.

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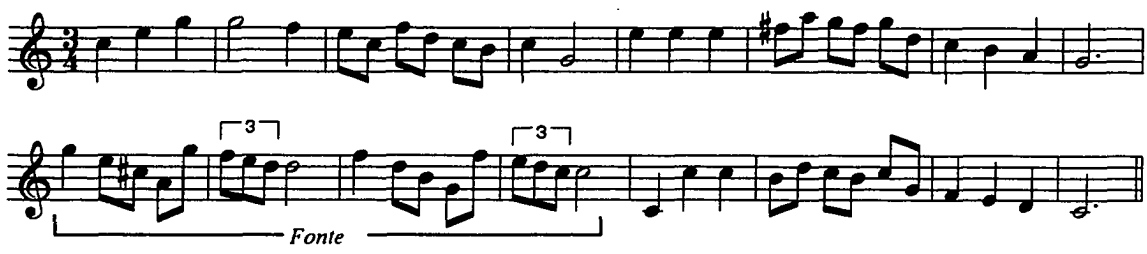
[2]Writing in the voice of his student, the Discantista, Riepel accuses himself of "making fun, with your *Monte*, *Fonte*, and *Ponte*, of those foreign terms which most music writers throw in, the more to cover their ignorance." Riepel, *Anfangsgründe*, III:1.

[3]Reed, 78.

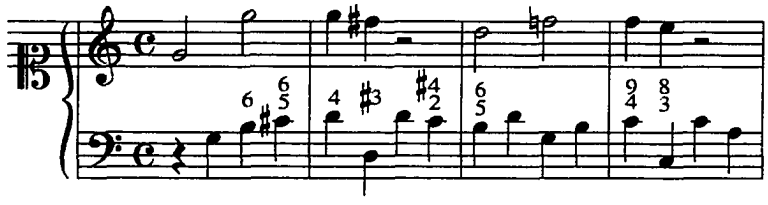
Example 10-1. The *Fonte* from Joseph Riepel's *Anfangsgründe*, II: 43-44. Note the similarity with the "Benedictus" melody.



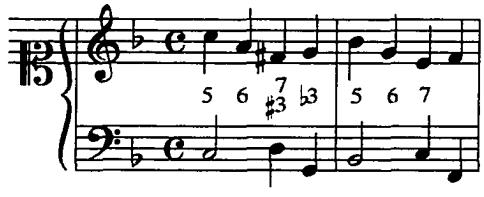
The descending-third motion of the melody and similar accompanying harmony are present in the analogous place in several of the exercises that Mozart wrote for Ployer. In this location, the passage fulfills the same structural function as does Riepel's *Fonte*. All of the passages shown in Example 10-2 below contain the descending third from $\hat{5}$ to $\hat{3}$, though in Examples 10-2.2 and 10-2.4 motions into an inner voice obscure it.

Example 10-2. The *Fonte* in the harmonization exercises.

10-2.1. The "Benedictus," folio 1a, mm. 9-12

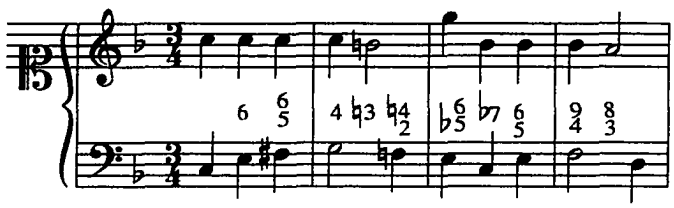


10-2.2. F-major exercise with partial fundamental bass, folio 4a, mm. 7-8

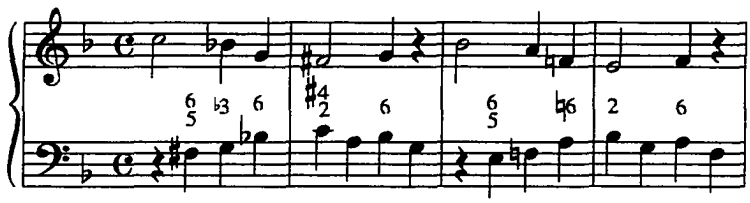


Example 10-2 cont.

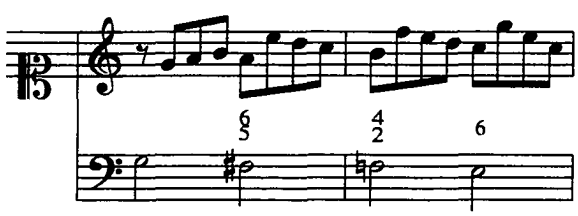
10-2.3. 𝄞 model, folio 9b, mm. 9-12.



10-2.4. The "Priest's March," folio 1b, mm. 9-12.



10-2.5. C-major keyboard model, folio 3b, mm. 6-7



The *Fonte*, as a harmonic structure, organizes even this last passage, which contains the characteristic third motion in the bass rather than the soprano. Here, however, the V 4/2 of V 6/5 of V and the sequential design common to the *Fonte* are lacking.

Comparison of Mozart's *Fonte* with Riepel's

Harmonic differences. Each of Mozart's *Fontes* differs in some respects from the simplest form of the cliché as defined by Riepel. Three out of four, Examples 10-2.1, 10-2.3, and 10-2.4, begin with the dominant rather than V/II, which follows immediately. In

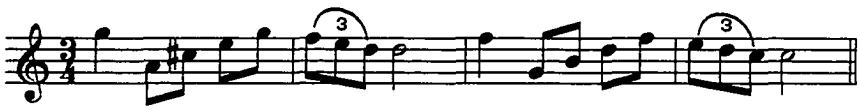
Examples 10-2.1, 10-2.3, and 10-2.5 the II chord is major and functions as an applied chord to the dominant or dominant seventh.

Melodic extension. In Example 10-2.4, Mozart repeats each half of the *Fonte* with the voices exchanged, extending a two-measure phrase to a four-measure phrase. He does this to balance the length of the third phrase of the double period with the other three phrases of the exercise, each of which is four measures long.

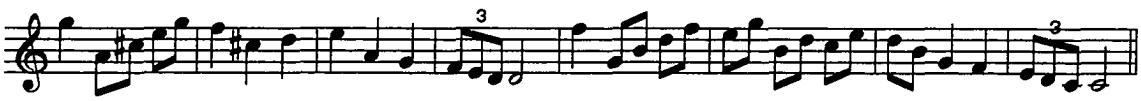
Riepel himself uses the repetition of a progression as the third of four ways in which a melody can be lengthened through extension (*Ausdähnung*). "This lengthening occurs by means of the addition of measures related harmonically to the pre-existing fragment."[4] In Riepel's example, the added measures repeat the progression found in the original passage.

Example 10-3. *Fonte* and extended *Fonte*, Riepel, II: 60.

10-3.1. *Fonte.*



10-3.2. Extended *Fonte.*



In the "Priest's March" exercise, the repetition of each progression creates a pair of double voice exchanges between the outer voices, as shown in Example 10-4. This degree of contrapuntal cohesion is absent from Riepel's examples simply because they include only the melody; though the harmony is always clearly implied, the counterpoint is never explicitly stated.

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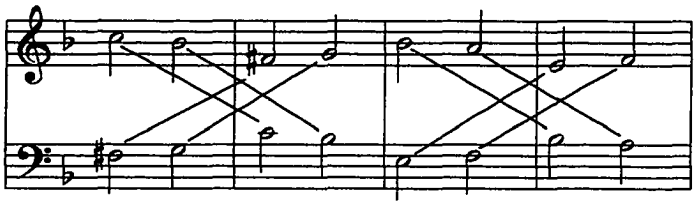
[4]Reed, ibid.

Example 10-4. Double voice exchange in extended *Fonte* from the "Priest's March" exercise, mm. 9-12.



Mozart incorporates the passage shown in Example 10-2.2 in a different balancing technique. He follows the *Fonte* with a two-measure statement of the half-cadence form of paradigm A, shown above in Example 8-12. Here Mozart combines two different phrases in order to achieve balance with the surrounding material.

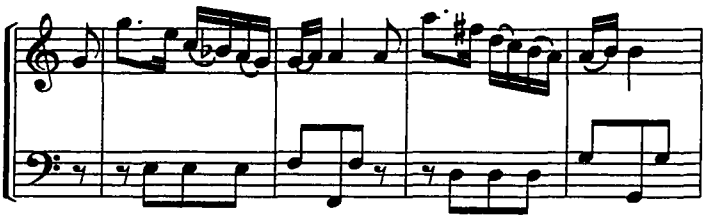
Summary. The presence of the *Fonte* in the harmonization exercises indicates that Mozart used material that had long since been considered out of date. Riepel himself, writing in 1755, states that the *Fonte*, *Monte*, and *Ponte* "in many places—indeed in important musical centers—...were discarded a long time ago, like bad coins, whether or not they are elaborated."[5]

Interestingly enough, Koch makes a similar comment about phrases that resemble the *Fonte*, *Monte*, and *Ponte* in his work dating from 1782-93. Koch actually refers to the *Schusterfleck*, though he calls it *Rosalien*, from the Italian *rosalia*. Describing the passage shown in Example 10-5, Koch writes..."nothing else is objectionable in this phrase except that the taste of our time does not approve of it. Such phrases transposed upwards step by step are called *rosalien*. They were used so frequently in older compositions that they have

[5]*...in viel Orten und zwar in musicalischen Hauptprovinzen schon lang so verrufen wären, wie eine falsche Müntze; sie mögen ausgedehnt oder kurz machen.* Riepel, *Anfangsgründe* IV: 12.

become disagreeable to some extent."[6] It appears that though these phrases were undeniably out of fashion, they were suited well to pedagogical discussions of melody.

Example 10-5. Koch's *Rosalien*, or *Schusterfleck.*[7]



[6]*Introductory Essay on Composition: The Mechanical Rules of Melody, Sections 3 and 4* by Heinrich Christoph Koch. Translated by Nancy K. Baker. Music Theory in Translation Series (New Haven and London: Yale University, 1983), 101.

[7]Koch, Example 258 in Baker, 104.

Chapter 11

The Influence of Voice-Leading Paradigms in Mozart's Corrections of Ployer's Work

Part I of this dissertation presents evidence that suggests that Mozart structured the lessons themselves in a highly organized fashion. After a brief diagnostic period and some necessary remedial work, he presented exercises that gradually increased in complexity. Fundamental bass acts as a barometer of difficulty; those exercises in which Mozart provides it for the entire exercise are easier than those in which Mozart left Ployer more or less to her own devices. Part II identifies several recurring melodic patterns and systematically organizes the voice-leading paradigms to which they belong. The evidence suggests that the paradigms are manifested in the structure of the exercises.

The current chapter asks if the paradigms are manifested in the pedagogical process. Did Mozart consciously manipulate these recurring elements as a teaching strategy? Two aspects of the exercises are particularly instructive in this regard. The first concerns Mozart's written corrections to Ployer's work; the second, Mozart's design of the exercises themselves. This chapter begins with some general remarks about Mozart's corrections, then proceeds to an examination of the exercises from folios 3a/b and 4a in which Mozart's suggestions lead Ployer's settings progressively closer to the contrapuntal and harmonic structures he had in mind. The chapter ends by showing that Mozart's design of the exercise from folio 4a tacitly states that Ployer was to recognize some recurring elements.

General Comments Regarding Mozart's Corrections and Focus of Exercises

Verbal corrections. It must be remembered that there was probably a great deal of verbal interchange between Mozart and Ployer during the lessons. Consequently, Mozart would certainly have corrected much of Ployer's work by *telling* her what she did wrong or by playing improved versions rather than showing her on paper, just as any teacher would do in the normal course of a lesson. A comment reminding Ployer that the bass of a four-

two chord should resolve downward by step might achieve better results more quickly than would indicating the proper resolution for each infraction (something Mozart does nowhere in the lesson book). Furthermore, many of Ployer's executions were so poor that Mozart probably asked her to write out these exercises again, following his instructions on how to improve the settings. Recall the numerous problems with the "Priest's March" exercise, which Mozart must have recognized as error-ridden even though few of his corrections made it onto the paper.

Focus on process. The focus of the harmonization exercises was such that the problems germane to the tasks at hand were more easily talked about than discussed in writing. Mozart was teaching Ployer a *process* of melodic harmonization. In this respect, Ployer's task was to learn how to approach the setting of a melody. Mozart's instruction probably focused, therefore, on fundamental orders of operation: what to do first, then second, etc., in order to set a bass to a melody. The minutiae of melodic construction, voice-leading, and the lot were not the primary concerns in these exercises. Mozart gave Ployer other work that concentrated on the "nuts and bolts," such as the four-part figured bass chorales and the two-part species counterpoint exercises, which are designed specifically for the purpose of strengthening these rudiments.[1]

Of course we can never be sure of what Mozart said during the lessons. We can, however, gain a lot by examining his written comments. Those corrections occurring in passages governed by the voice-leading paradigms are particularly valuable in this regard.

Paradigms Manifested in Mozart's Written Corrections in the "Diminution" Exercise and the F-Major Exercise with Partial Fundamental Bass.

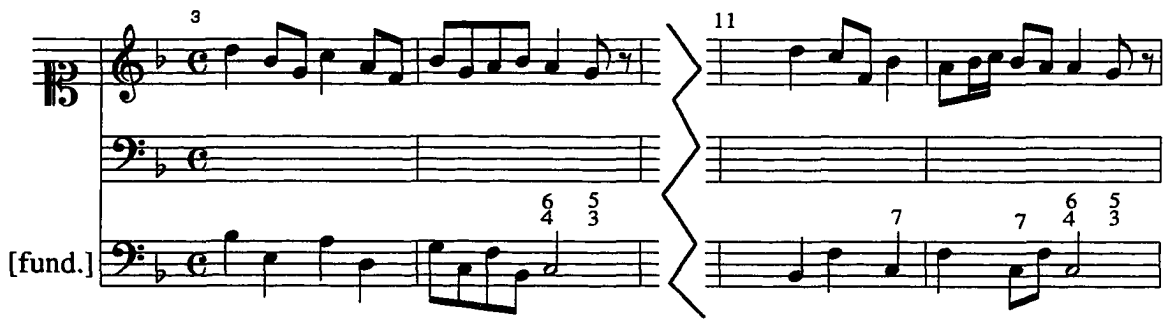
In the "Diminution" exercise and the F-major exercise with a partial fundamental bass, Ployer, with Mozart's help, set each melody several times. Each setting shows some evidence of Mozart's influence. In some places, Mozart simply crosses out notes in

[1]The larger number of written corrections and suggestions in some of the exercises suggests that on occasion Mozart marked a few of the papers away from Ployer's presence.

Ployer's bass. In others, his markings are more thorough; for example, some indicate the change in root progression brought about by a corresponding change in a bass note. Do Mozart's corrections seem intended to induce Ployer to move her settings progressively closer to the paradigms at hand?

The "Diminution" exercise, Folio 3a/b. An examination of Mozart's corrections to two of the passages set by Ployer on folio 3a suggests that he gradually molded her settings to conform to the half-cadence form of voice-leading paradigm A. Example 11-1 shows the passages as they appeared to Ployer before she set the bass. In each, the top staff contains the melody, the middle staff space for Ployer to write her continuo, and the bottom staff the fundamental bass.

Example 11-1. Folio 3a, measures 3-5 and 11-12. Mozart's melody and fundamental bass to the half-cadence form of voice-leading paradigm a.

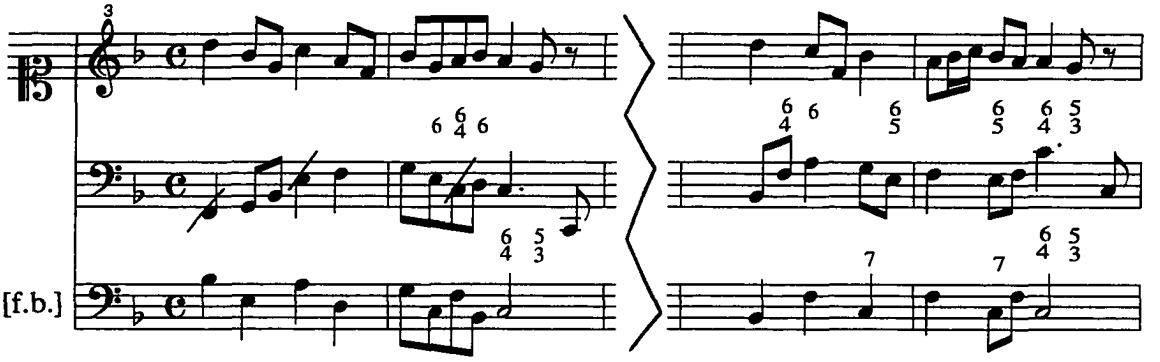


The passage on the left contains a series of descending fifths, the first portion of which is sequential. The passage on the right, though based on the same melodic pattern, consists of an entirely different root progression that relies primarily on the alternation of the tonic triad and dominant seventh chord.

Ployer's first setting. As stated in Chapter 5, Ployer had to determine a continuo part based on Mozart's given melody and fundamental bass and later use the resulting amalgam as the foundation for a variation or diminution bass that moves predominantly in eighth notes. Example 11-2, which contains the two passages from the "Diminution" governed by the paradigm, shows that Ployer's first setting counterpoints the melody note

for note in measures 3-4 and adds a pair of decorative chordal skips in measures 11-12. Ployer did not figure the bass completely, so the position of some of the unfigured chords is not entirely certain. However, since Ployer demonstrated in other exercises that she could coordinate a continuo and fundamental bass properly, the notes of her continuo part probably belong to the roots indicated below. Thus, for example, the figures above *F* in the first chord of measure 3 would be six-four.

Example 11-2. Ployer's first setting of measures 3-4 and 11-12 from folio 3a.



In the first passage, Mozart crossed out three of the notes in Ployer's bass.[2] Why? They form sixths with the melody—a perfectly suitable contrapuntal interval—and cause no voice-leading problems. Perhaps Mozart objected to them because, when taken in conjunction with the fundamental bass, they form six-four chords. However, one has only to recall Ployer's setting of the "Benedictus" exercise to remember that Mozart tolerated many six-four chords there. Even if he mentioned their inappropriateness, he did not cross out the offending bass notes or, for that matter, make any other mark of disapproval. Mozart's disapproval cannot simply stem from the fact that Ployer's bass creates six-four chords. Another possible reason for Mozart's displeasure is that these notes simply do not conform to the counterpoint that he had in mind for the passage. Were they to be set paradigmatically (see Example 8-13) they would form tenths with the melody, not sixths.

[2] That the notes were crossed out by Mozart and not Ployer stands to reason if Ployer's habit of simply writing over her mistakes is taken into consideration, as Illustration 11-1 shows.

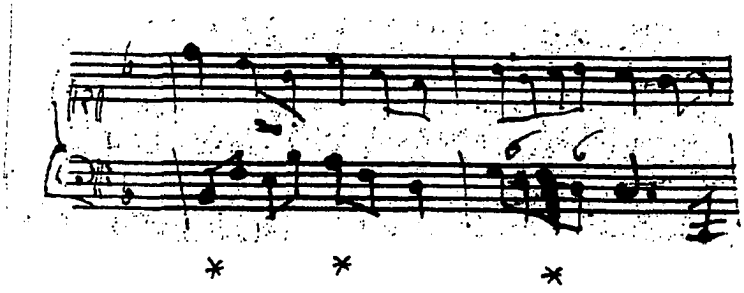
Evidence suggests that Mozart accepted the other notes from Ployer's bass because they agree contrapuntally, if not melodically *vis-à-vis* the sequence, with the voice-leading paradigm.

In the second passage shown in Example 11-2, measures 11-12, Mozart makes no corrections. It appears, though, that he was not entirely happy with all of Ployer's choices, since small adjustments creep into Ployer's second setting. So the corrections that Mozart made to Ployer's first setting concern the manner in which she chose to counterpoint the main notes of the melody. In those instances where her choices disagree with his notion of how the passage should be set, Mozart crosses out the offending notes. He leaves details of shape and register to be dealt with later.

Ployer's second setting. In her second setting of measures 3-4, Ployer replaced those notes crossed out by Mozart with those that form tenths with the melody. Illustration 11-1 shows the new counterpoint provided by *B♭*, *a*, and *f*, which are marked with asterisks.

These improvements are a significant, though obvious, step closer to the voice-leading paradigm. Ployer, after all, had only one other choice in these places if she was not to write sixths with the melody and still agree with Mozart's fundamental bass. Between the two remaining possibilities, she chose those notes that form tenths with the melody rather than the alternative that would have formed octaves.

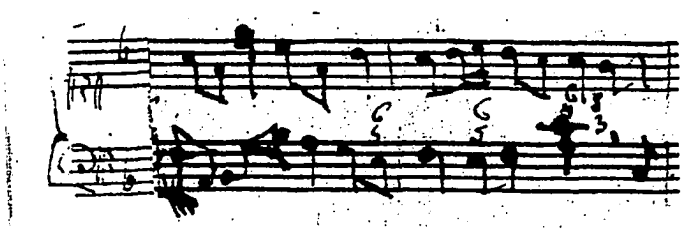
Illustration 11-1. Facsimile of Ployer's second setting of measures 3-4 from folio 3a.



Elsewhere in her first setting, however, Ployer made some bad choices. The illustration shows that in the first measure, she changed the second beat to *e*, which lies a diminished fifth below the melody, abandoning her previous choice of *g* that Mozart, apparently, sanctioned. On beats three and four, she writes parallel fifths $\overset{c''\text{-}a''}{f\text{ - }d}$. Furthermore, the manuscript indicates that Ployer removed the six-four chord that appeared on the second beat of the second measure. She apparently did this only as an afterthought, because Ployer first wrote *c* there and (as she was wont to do after she realized her errors) penned the correct note, *f*, over it.

Ployer's second setting of measures 11-12, shown in Illustration 11-2, is nearly identical to her first.

Illustration 11-2. Facsimile of Ployer's second setting of measures 11-12 from folio 3a.

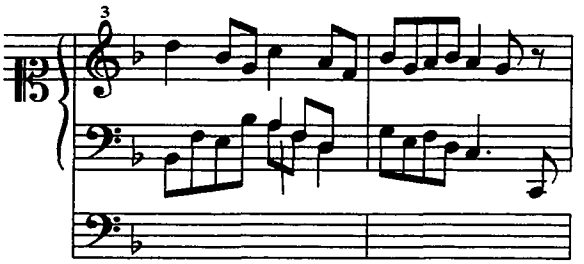


Mozart or Ployer apparently crossed out the *f* that joined the *B♭* to the *a* between beats two and three. Either he or she wrote the octave leap *B♭-b♭* in its place, thus improving the melodic contour of the first setting. The only other difference between the first and second setting appears in the second measure where it seems as if Ployer first wrote *a* on beat three, then wrote *c'* over it. This is a curious but quickly-corrected mistake.

Mozart's amended copy of Ployer's second setting. Mozart himself copied Ployer's second bass line onto the top of folio 3b. He must have thought that Ployer's bass line for measures 3-4 was good enough to stand as the basis for her diminution bass because, as

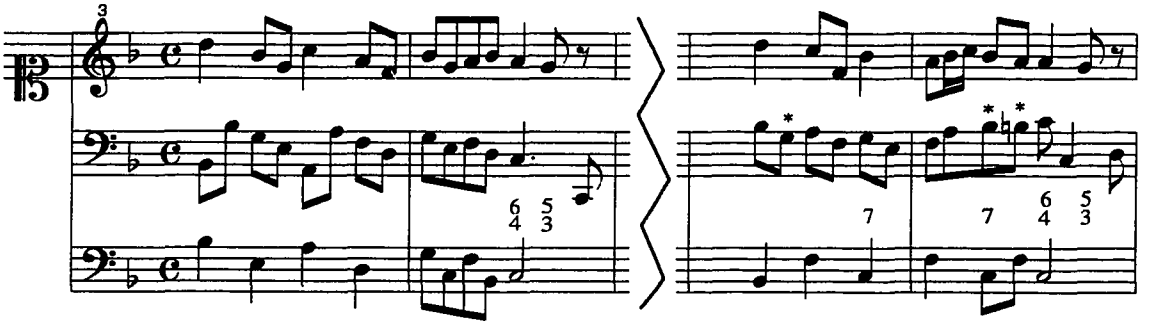
Example 11-3 indicates, Mozart altered nothing from Ployer's second setting. He left the staff below the bass blank so that Ployer could write her final bass directly beneath his. Apparently, he even inadvertently copied Ployer's parallel fifths before he altered the rhythm (crossing out ♩♫♩ to get ♩ ♩♫) so that the voices move in parallel tenths instead.

Example 11-3. Mozart's copy of measures 3-4 from top of folio 3b.



Ployer's third setting:the diminution bass. Ployer's third and final setting of measures 3 and 4 is the only one that properly reflects the sequence and approaches the contrapuntal/harmonic relationships that Mozart desired. Example 11-4 indicates that Ployer made both registral and contrapuntal adjustments to her previous setting, placing *b♭* in the higher register so that it connects with the rest of the line and replacing *g* on the second beat, returning to her sound contrapuntal choice from the first setting.

Example 11-4. Ployer's final setting of measures 3-4 and 11-12.

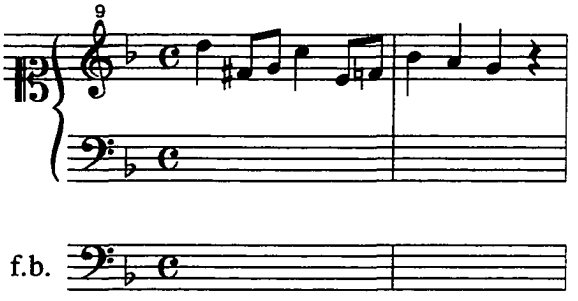


Ployer's final setting of measures 11 and 12, shown in the same example, deviates from the fundamental bass that Mozart had originally placed beneath the melody. Asterisks

mark those notes that contradict Mozart's fundamental bass, which I place in the example only for the sake of comparison. The first asterisk implies a 5-6 motion, *f-g*, over *b♭*, the second a B♭ major chord in root position, instead of a dominant seventh chord above *c*, the third a half-diminished seventh chord above *b♮*, instead of a tonic chord above *f*. All the changes are plausible. The last two, however, alter the important contrapuntal relationships of the paradigm. Mozart probably saw Ployer's diminution bass and approved of it because he went on to write another exercise on the remaining staves of the folio.

The exercise with a partial fundamental bass, Folio 4a. On folio 4a, Mozart's corrections to Ployer's work led her towards the appropriate setting of two instances of the half cadence form of voice-leading paradigm A. Example 11-5 shows the first appearance of the passage from measures 9-10. These measures appear in the second period and prepare the tonic return in the following phrase. Though Mozart provided a fundamental bass for some portions of the exercise, he did not provide it here.

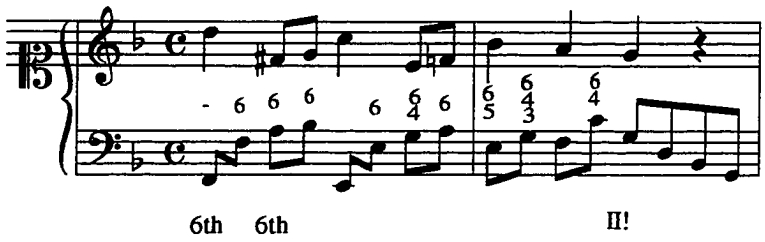
Example 11-5. Half-cadence form of voice-leading paradigm A, folio 4a, measures 9-10.



Ployer's first setting. Though Ployer was probably exposed to this characteristic figure or ones resembling it several times before its appearance on folio 4a, she still had some difficulty determining the proper accompaniment.[3] While some elements of Ployer's first setting of these measures conform with the governing voice-leading paradigm, Example 11-6 shows that others do not.

[3]The figure appears in the "3/4" model on folio 9a.

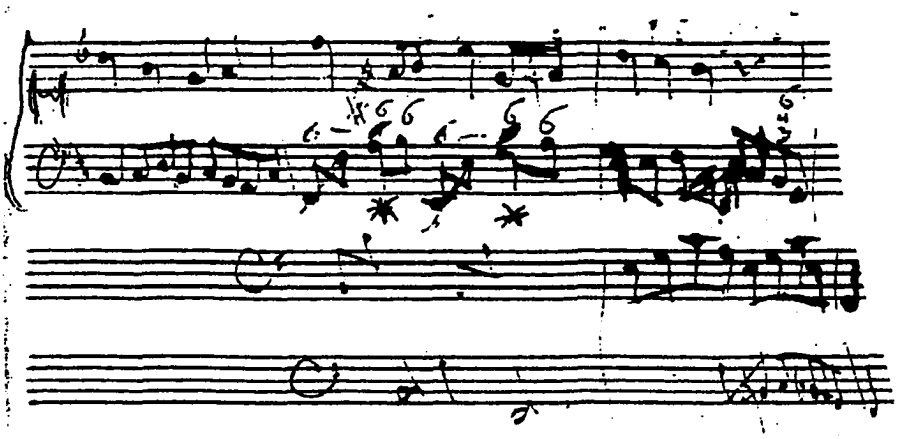
Example 11-6. Ployer's first setting of measures 9-10 from folio 4a.



The *d''* and *c''* of the melody ought to be counterpointed with tenths, producing *b♭* and *a* in the continuo part, rather than with sixths, *F* and *E*. The melody's final *g'* should certainly belong to the dominant harmony, not supertonic harmony as Ployer uses here. Most of the rest of this setting is good. The six-four chord on beat four of the first measure is the most significant exception. Here *g* should, of course, be set with a six-three chord, as is the corresponding sonority on the second beat. Perhaps Ployer was confused about deriving a triad from the leading tone, *e*, which would result from a six-three chord above *g*. Apparently Ployer did not think to review the "3" model from folio 9a. Had she done this, she would have discovered that it contains material very similar to this set by Mozart himself.

Ployer's second setting. Ployer, in her second setting, changes the final chord to the dominant in the second measure but retains *F* and *E* in the first measure. Close examination of the passage shown in Illustration 11-3 suggests that she originally intended that both chords on beats two and four be in six-four position.

Illustration 11-3. Ployer's second setting of measures 9-10, folio 4a, with Mozart's corrections. The figure 4s, mentioned in the text are highlighted by asterisks.



It appears that either she or Mozart crossed out both figure *4*s. Ployer wrote another version of the cadential measure beneath her second setting in which the *a'* of the melody is supported with *c*, again implying six-four. The dominant chord that follows appears first in six-three position.

Mozart's corrections. Mozart's corrections, shown in the above illustration, address both the contrapuntal support for *d''* and *c''* in measure 9 and the position of the last two chords in measure 10. On the staff below Ployer's second setting, Mozart writes *b♭* and *a* as substitute bass notes, counterpointing the melody in parallel tenths, as his paradigm dictates, rather than sixths. Beneath the next measure, Mozart rewrites the cadence so that root position triads on the tonic and dominant support *a'* and the final *g'* of the melody.[4] Mozart's corrections here imply that he sanctioned either of Ployer's basses for the first chord of the cadential measure, that is either *g-e* or *e-g* (both possibilities occur in Mozart's own settings of the paradigm elsewhere). Thus, Mozart's corrections build on the good elements of Ployer's bass and replace those that are contrary to the harmony and counterpoint that he has in mind.

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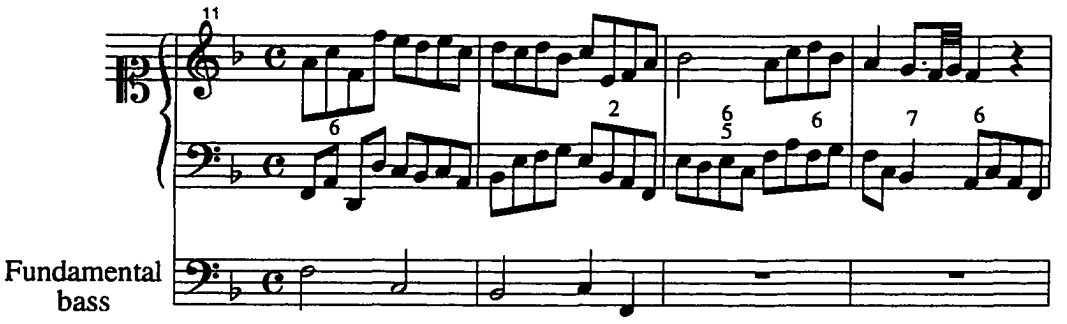
[4]The *b♮* between *f* and *c* is analogous to that which appeared in Ployer's diminution bass from 3b, see Example 11-4 above.

Ployer's first setting of 11-14. Example 11-7 shows the second appearance of the paradigm from measures 11-14. Here Mozart provided the fundamental bass only for the first half of the passage.

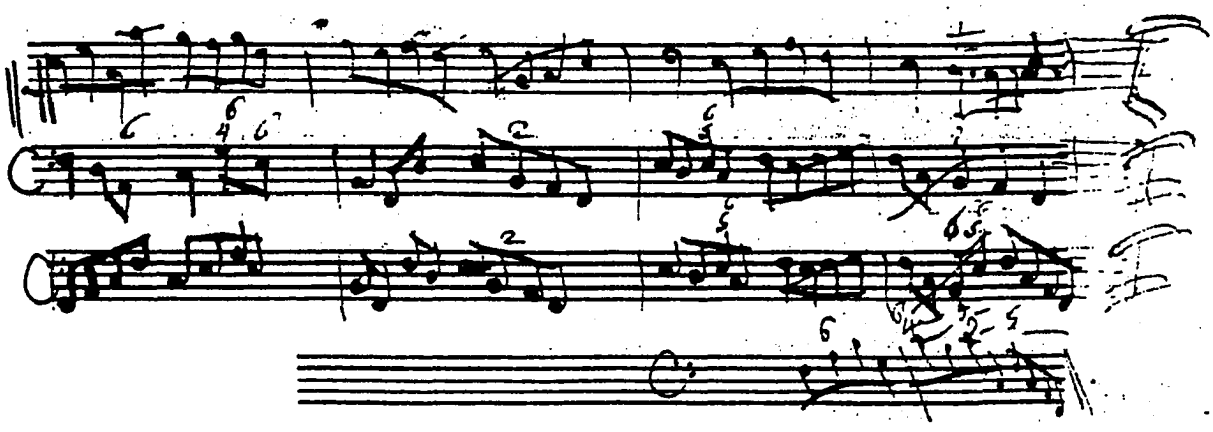
Example 11-7. Ployer's first setting of measures 11-14 from folio 4a, with Mozart's fundamental bass.



Ployer did not have an easy time setting these measures. Though her harmonies in measures 11 and 12 that align with the fundamental bass are correct (as they should be since they follow Mozart's harmonic guide), her bass line is very awkward and ungainly. Her harmonies in the final measure where no fundamental bass appears, however, are severely flawed.

Mozart's corrections. Mozart, as his corrections following Ployer's second and third settings in Illustration 11-4 indicate, was not principally concerned with the shortcomings of the shape of Ployer's bass line. Instead, he focused on the last measure and a half of the exercise, crossing out most of what Ployer had written in her second and third settings where she failed to see the root progression of chords common to the cadence.

Illustration 11-4. Folio 4a, measures 11-14. Mozart's corrections.



Evidently, Mozart sanctioned her choice of a single dominant harmony beneath *bb'* in measure 13 and the root-position tonic that follows. Frequently, though, this portion of the paradigm supports $\hat{4}$ with two chords, so that supertonic or subdominant harmony leads to the dominant before the arrival of the tonic. Mozart alters the final motion to the cadence almost entirely. On the fourth beat, he counterpoints the melody in tenths and leads to the cadential six-four on the downbeat of the final measure.

The examples and illustrations appearing thus far show that Mozart, like any good teacher, through his corrections gradually directed Ployer to settings that conform with his conception of the passages and paradigms under discussion. The corrections focused first on the contrapuntal support beneath the melody and second on finer aspects like melodic shape.

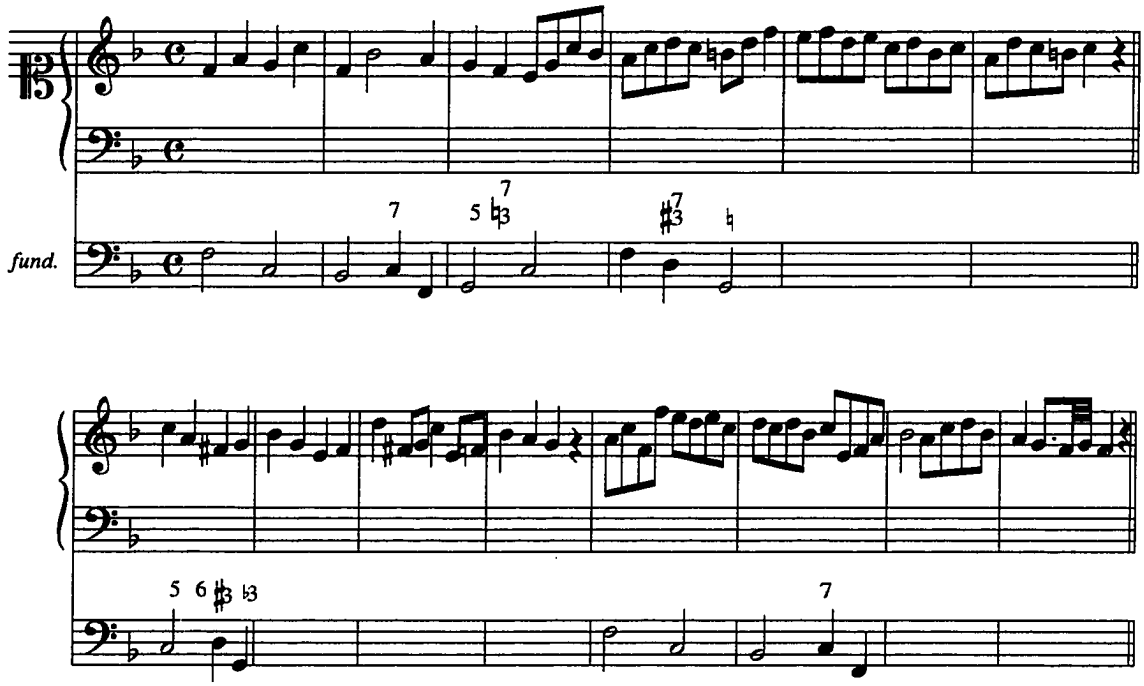
Paradigms as Manifested in Design

Not only do Mozart's corrections make manifest the paradigms, but the design and construction of the exercises themselves do, too. In the exercise with a partial fundamental bass, Mozart must have expected that Ployer would recognize some of the material in the melody and that she would set it appropriately based on her past experiences with it. Mozart, consequently, omits the fundamental bass for these passages, which, not

coincidentally, contain high-profile occurrences of some of the melodic patterns and cadences common to other exercises.

Example 11-10 shows that the fundamental bass is omitted in the three most clearly punctuated cadences, measures 5-6, 9-10, and 13-14. Measure 8, the second measure of a sequence, also lacks a fundamental bass. Here Mozart must have assumed that after providing the fundamental bass for the first measure of the sequence he would not have to repeat it in the second (not unlike what he did in the "Priest's March," see page 78).

Example 11-10. F-major exercise with partial fundamental bass.



In this chapter I have demonstrated how the voice-leading paradigms are manifested through Mozart's corrections to Ployer's work and in the design of the exercises themselves. I have determined that Mozart expected Ployer to set portions of the exercises from folio 4a based on her familiarity with the content of these passages. He assumed, rightly or wrongly, that Ployer knew enough about the context in which the material appeared that she could set it on her own. This raises the question that the next chapter

seeks to answer: What are the contextual elements that Ployer was supposed to recognize, and how was she supposed to use them?

PART 3

Chapter 12

Description of the Phrase Structure of Small Forms and the Process of Setting Fundamental and Continuo Basses to the Melody: Eighteenth-Century Precedents and Mozart's Approach

Examination of the written evidence in the extant manuscript reveals much about the types of exercises that Mozart gave to Ployer, the order in which they were assigned, and the basic elements of which they consist. Judging by the layout of any given exercise, for example, it is relatively easy to determine the task that Ployer had to complete, whether it be melodic harmonization, figured bass realization, or species counterpoint. But nowhere in the manuscript does Mozart write *how* she is to do these things. How is she to go about determining a fundamental bass and continuo from his given melodies? How is she to turn a set of figures into a four-part contrapuntal structure? How is she to learn the rules of species counterpoint? Mozart must have conveyed much of this information orally.

The examination of what Mozart said to Ployer need not be an exercise in historical fiction. The script can be considered in light of the tasks that Mozart assigned and the language used by eighteenth-century theorists. In order to determine the contextual elements that Mozart expected Ployer to wield in her settings of melodies without fundamental basses, I briefly discuss small aspects of the work of two of the century's most important theorists, Koch and Rameau. What elements of their theories regarding phrase structure and the setting of a melody could Mozart have imparted to Ployer? To a basic vocabulary derived from their work, I add elements of Mozart's own approach based on the written evidence from folio 10b and determine how he may have told Ployer to go about setting those portions of a melody for which he did not provide a fundamental bass. The principles derived from this process are shown to apply directly to the last harmonization exercise without fundamental bass, the "Jupiter."

This survey will reveal what Mozart knew about small forms and their structure and how he communicated it to Ployer. The evidence strongly suggests, not surprisingly perhaps, that Mozart knew more about structure than he was able to communicate using contemporary parlance. It is interesting to see how Mozart, who created the exercises from a keen understanding of higher-level structure, attempted to raise Ployer's comprehension from the lowest levels, in order that she might see something of the larger picture in which the exercises were created. Part of this consciousness-raising process involves phrase structure, which Mozart might have described in terms similar to those used by Koch.

Koch and Phrase Structure

Koch contributed most significantly to the understanding of phrase structure and form. Built on the work of Riepel, Koch's approach details how the various elements of form relate to one another: segments to phrases; phrases to periods; and periods to entire movements. Many of these elements are categorized by the cadences with which they typically end, usually on I or V. Consequently, we look to Koch to learn something about how someone in the last part of the eighteenth century might have spoken about pieces with phrase structures similar, at times even identical, to those in the harmonization exercises. Koch wrote about concepts that were "in the air" at the time, and familiar to educated musicians. Mozart may well have been familiar with many of these ideas, too.

Volume 3, section 4 of the *Versuch* is entitled "The Connection of Melodic Sections, or the Structure of Periods."[1] By connecting periods, Koch is able to talk about the structure of simple dance forms and other "short pieces arbitrarily arranged with respect to the meter, the rhythm, the length, the punctuation, and the tempo." One of the exercises that serves as an example of the latter type mirrors the structure found in Mozart's exercises. Koch describes this structure, "in which four melodic sections are connected, of which one contains a cadence in a secondary key," in the following way:

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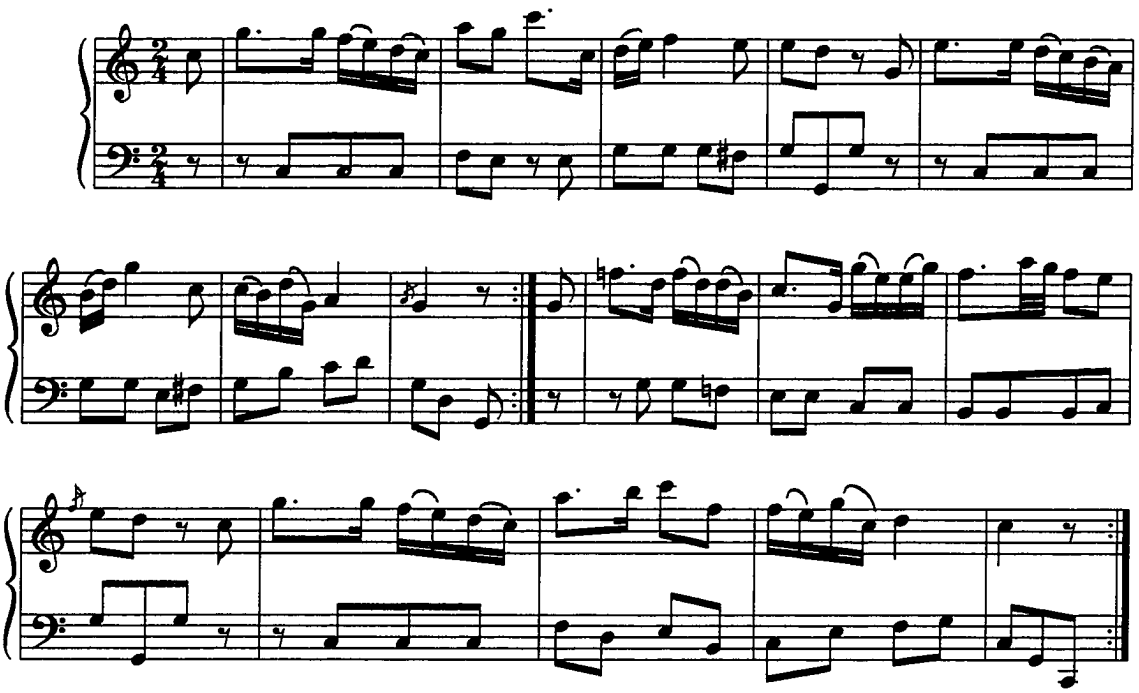
[1]Koch, translated by Baker, 63.

> ...The first cadence which closes in a subsidiary key is usually made by means of the second phrase, and the whole is divided into two periods of equal size. When using the major mode, this secondary key in which the second phrase closes is the major key of the fifth.
>
> In the major mode, when the second phrase closes with a cadence in the fifth...four different punctuation forms arise with regard to the first and third phrases. 1) The first melodic section can be a I-phrase, the third a V-phrase. This is the most usual form for four melodic sections of which the second closes with a cadence in the fifth. 2) Not only the first, but also the third melodic section can be a V-phrase.[2]

Example 12-1 shows Koch's second punctuation from.

Example 12-1. Koch's example of a double period in which the first period modulates to the dominant. The first and third phrases end on V.[3]



[2]Koch's third and fourth forms include the other ways in which the first and third phrases might end on either the tonic or dominant.

[3]Koch, translated by Baker, 96. This example is actually a combination of Koch's Examples 243 and 244. Measures 1-4 are from Example 244, the remainder are from Example 243. Koch clearly intends that the phrase shown in Example 244 can be substituted for the first phrase of Example 243, as I have done.

Like the example from Riepel that shows the *Fonte* (see Chapter 10, page 151), the resemblance to Mozart's exercises is striking, particularly with regard to the second phrase, which modulates to the dominant. Nearly chord-for-chord, this phrase follows the harmonic and contrapuntal structure of voice-leading paradigm A (shown in Example 8-1, page 124), the only exception being the absence of a cadential six-four chord.

Koch's vocabulary provides a way of describing the entire phrase structure of Mozart's exercises. Like his own examples, Koch would say that the harmonization exercises, too, consist of four phrases, each being a particular length (in Koch's examples the four-bar phrase is the norm, though he readily admits exceptions). The phrases group into two periods, the first of which closes typically in the dominant, the second in the main key. The first and third phrases will end either on the tonic or the dominant. Mozart would probably have been able to describe the form of his exercises in much the same way, this despite the fact that Koch's volume was published nine years after the lessons are supposed to have taken place.

Rameau and the Process of Setting a Fundamental Bass and Continuo Beneath a Melody

Presumably, Mozart would also have had some way to describe how to go about setting a bass to a melody. For this information, he could have relied on a much better known theorist and composer, Rameau, whose ideas about fundamental bass had been disseminated throughout most of the century. The obvious fact that all the harmonization exercises contain some use of the fundamental bass is testimony to Rameau's influence. It also suggests that the fundamental bass played a significant role in the *process* by which Ployer set Mozart's melodies.

Rameau himself describes the process of setting a bass to a melody in two chapters from his *Traité:* "On how to compose a fundamental bass below a treble" and "How to

compose a basso continuo below a treble." The process depends to a large degree on one's ability to locate cadences.[4]

Rameau's concept of cadence, however, is different from both Koch's and ours. For not only does Rameau state that a cadence is located at the end of a phrase (Fr. *conclusion de chant*), he also uses the concept of cadence to show how all chords progress one to another. His basic types—perfect, deceptive, and irregular—can be imitated by inversion or by techniques such as alteration, supposition, or borrowing. These alteration techniques postpone the arrival of the basic cadence forms themselves while imitating them. That is, up until the end of a phrase where one of the basic types appears, the preceding succession of chords imitates and elaborates the basic voice-leading of the cadences.

Rameau recommends that the student begin by setting dance melodies—"Gavottes, Sarabandes, etc., for there the cadences almost always occur every two measures and they are easily handled."[5] Thus Rameau, like Koch, directs the reader to locate cadences at the ends of phrases of simple dance forms. To aid in the identification of cadences in the melody, Rameau provides a table, reproduced in Example 12-2, of the typical melodic progressions that occur in the treble. The table focuses on stepwise melodic motions and how they imply harmonic progressions at the chord-to-chord level. Rameau leaves the reader to supply the bass parts beneath the melody, depending on the type of cadence to which each progression belongs.

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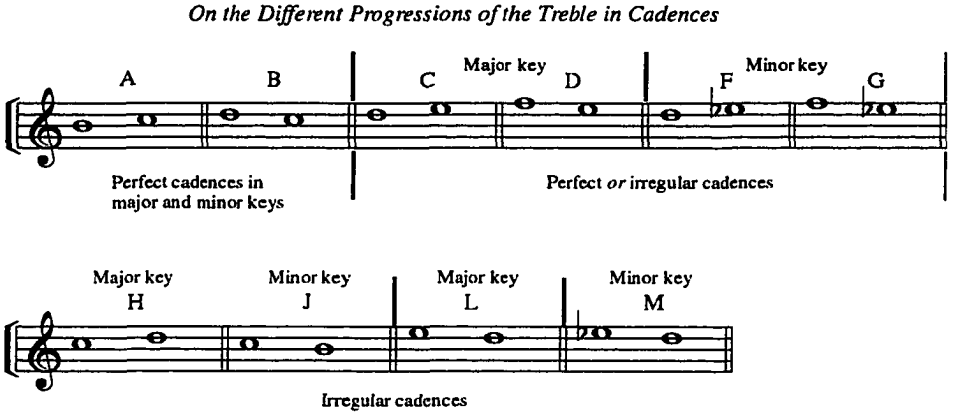
[4]Jean-Phillipe Rameau, *Traité de l'harmonie reduite à ses Principes naturels; divisé en quatre livres: Livre I, Du rapport des Raisons & Proportions Harmoniques; Livre II, De la nature & de la proprieté des Accords; Et de tout ce qui peut servir à rendre une Musique parfaite; Livre III, Principes de Composition; Livre IV, Principes d'Accompagnement* (Paris: Jean-Baptiste-Christophe Ballard, 1722). The following citations refer to the original edition and to Philip Gossett's translation: Jean-Phillipe Rameau, *Treatise on Harmony*, trans. Philip Gossett (New York: Dover, 1971).

[5]Rameau, 316; Gossett, 334.

Example 12-2. Rameau's Example III.118, "On the Different Progressions of the Treble in Cadences."[6]



Rameau's example shows ten melodic progressions, each leading by step either to or from the tonic or mediant. The progressions are grouped according to cadence type: perfect cadences, in which the bass descends a fifth, support the melodic progressions shown in A and B; perfect *or* irregular cadences—in the latter the bass ascends a fifth—support those shown in C, D, F, G (here the irregular cadences use what Rameau calls the chord of the large sixth, what we might call a IV chord with an added sixth); and irregular cadences, in which the bass rises a fifth from tonic to dominant, support the remaining cadences in H, J, L, M. This table of cadences is significant because Mozart provides a similar chart on folio 10b, which I discuss at length below.[7]

Furthermore, Rameau realizes that the melodies to be set will likely contain cadences in "foreign" keys. These cadences will resemble those in the table, only they will be transposed. To aid in the recognition of foreign cadences, Rameau presents another example, showing leading-tone progressions in the keys closely related to C major.

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[6]Rameau, 314; Gossett, 332.

[7]While Rameau's typical cadences contain stepwise melodies, he shows two exceptions in which the melody moves from $\hat{2}$ above the dominant to $\hat{5}$ above the tonic, in order that the tonic chord be complete. See his Examples III.25 and III.26. Rameau, 193 and 196; Gossett, 214 and 216.

Example 12-3. Rameau's Example III.119, showing leading-tone progressions in keys closely related to C major.[8]

The student now knows that the cadences will appear every two measures or so, according to the nature of the dance, and that their melodies typically consist of stepwise motions like those presented in Rameau's charts.

I next reproduce a portion of one of Rameau's examples that shows the basic phrase and cadential structure of the Sarabande. I then show how these characteristics are present in a complete two-part Sarabande for which Rameau provides a fundamental bass. Given what Rameau writes about the structure of the Sarabande in general and the completed fundamental bass for the two-part Sarabande in particular, I attempt to recreate the process by which Rameau determined this fundamental bass and drew from it the continuo part, much as Ployer might have done in the harmonization exercises.

Rameau explains the cadential structure of Sarabandes in an early chapter called "On the number of Measures each Air should contain, and on their characteristic Movements."[9] Here Rameau relates the typical number of beats within a bar to the typical number of measures for each dance: "The number indicating how many beats there are in a measure also indicates how many measures an air appropriate to the dance should contain. The numbers two and four are the principal ones, *for the cadence usually occurs in the fourth measure, sometimes in the second,* but only seldom in the third."[10] Obviously, Sarabands,

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[8]Rameau, 316; Gossett, 334. Rameau's discussion of foreign cadences is interesting because he distinguishes between transient tonicizations and modulations. He writes, "if these cadences end a strain (Fr. *terminent le Chant*), the key then changes...If the strain is not quite finished, however, the bass should be left to follow its natural course, preferring the more perfect progression wherever possible."

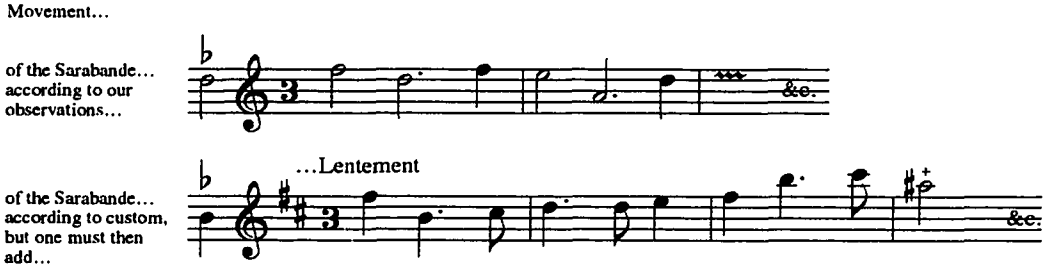
[9]Rameau, 159; Gossett, 174.

[10]Ibid. (emphasis mine).

written as they are in **3**, are an exception to this rule, as will be seen in Rameau's own examples.

Rameau presents the first phrases of two Sarabandes, one in 𝅗𝅥 and one in 𝅝, reproduced in Example 12-3a. The length of the incipits suggests that the one in 𝅗𝅥 has a cadence every two measures and the one in 𝅗𝅥 every four measures.

Example 12-3a. The first phrases of two Sarabands from Rameau's Example II.59; the first has a cadence every two measures, the second has a cadence every four measures.[11]

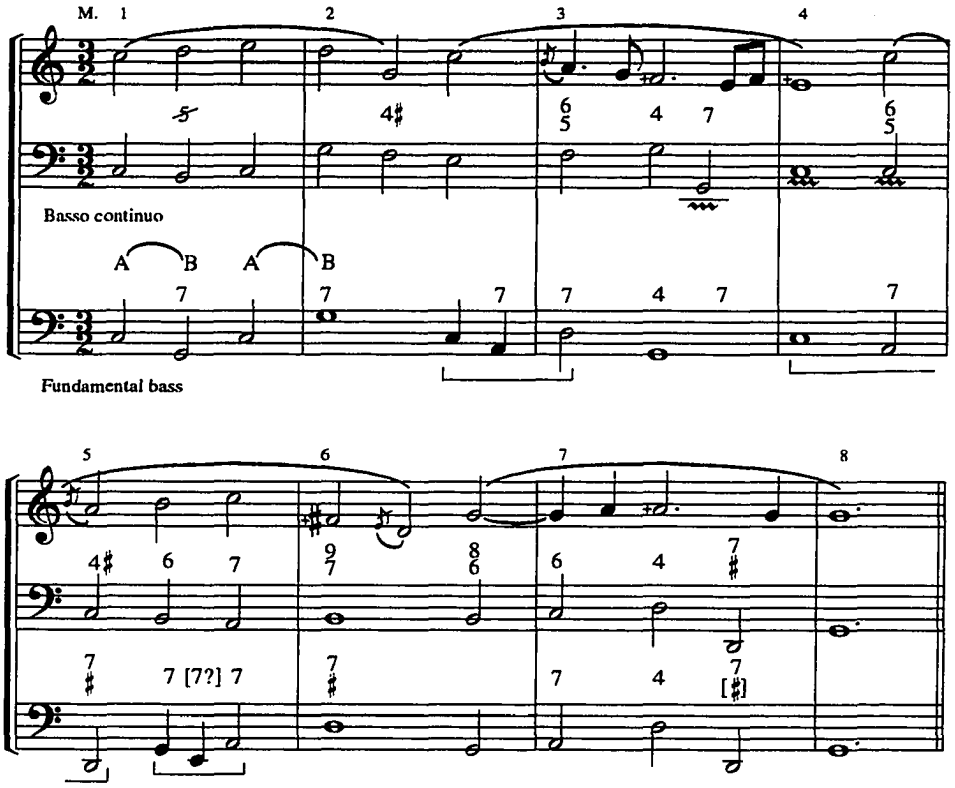


Both phrases end with what Rameau would call an irregular cadence, in which the fundamental bass rises a fifth from tonic to dominant (what we would call a half cadence). Presumably each melody would continue with another phrase of equal length, probably ending in a perfect cadence, perhaps in the tonic or the relative major.

The complete two-part Sarabande with fundamental bass, shown in Example 12-4, is of the first type, which moves in groups of two measures. Rameau presents it in order to show how a continuo can be derived from a fundamental bass. I use it to show how Rameau might have determined the fundamental bass itself, based on some of his own directions.

[11]Rameau, 159; Gossett, 176.

Example 12-4. Rameau's Example III.128, a Sarabande with fundamental bass and basso continuo. The slurs added above the melody are mine.[12]



The resemblance between the phrasing of this Sarabande and that of the one in $\frac{3}{2}$, presented in Example 12-3a, is immediately apparent. In both the cadences mostly occur every two measures. As we will see, however, Rameau finds only three cadences in these eight measures.

[12]Rameau, 325; Gossett 343. Rameau's example likely contains at least one error not mentioned in the Gossett translation. The fundamental bass in measure 5 shows the figure *7* above *G* as it descends a third and ascends a fourth in order to avoid a dissonant, stepwise progression. In most if not all examples that show such a motion in the fundamental bass, it is the *second* bass note, *E* in this case, that supports a seventh, not the first. Compare the fundamental bass in measure 2 in the present example and also Rameau's Examples III.26 and III.123. (Rameau, 212 and 318; Gossett, 232 and 336). One small omission, which Gossett does mention, is in the figures above the penultimate note in the fundamental bass, where a ♯ should appear above *D*.

In the first phrase Rameau recognizes two cadences: an irregular cadence from the first to the second measure and a perfect cadence from the third to the fourth measure. Rameau writes regarding this first phrase: "In the first and second measures of the fundamental bass, there are two equal progressions, A and B. I reserve the progression [in the continuo] most closely related to the cadence [i.e. matching the leap of a fifth in the fundamental bass] for the second measure, because this is where [on the downbeat of the second measure] the cadence occurs normally; notice that the cadence is irregular here and perfect in the fourth measure."[13]

I suspect that the figure *7*, appearing on the downbeat of measure 2, should rightly coincide with the second beat of the measure. For if we take Rameau at his word, that an irregular cadence occurs between the first and second measures, a triad, not a seventh chord, must be found on the downbeat. Though a seventh or a sixth may indeed be added to this triad as a common way to imitate and avoid the cadence, he does not describe this as happening here.[14]

The guides (〰) in measures 3 and 4 indicate an alternative to the perfect cadence in C. Rameau writes that "diversity demands" an irregular cadence ending on A.[15] Apparently, Rameau remains firm in the face of diversity, since his notation clearly indicates his preference for a perfect cadence in C major. He writes nothing regarding the second guide at the end of measure 4; I wonder if it, too, is a misprint.

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[13]Rameau, 325-326; Gossett, 342.

[14]See his Example II.10, in which he provides a myriad of ways in which cadences can be avoided (Rameau, 71; Gossett, 86). Rameau did, on at least one occasion in the *Traité*, analyze what in modern terms would be called a half-cadence leading through a dominant six-five chord to the tonic as having a fundamental bass supporting first a triad then a seventh chord, similar to what actually happens in the Sarabande (see his Example III.134, measure 29 [Rameau, 341-355; Gossett, 358-366]).

[15]Rameau, 325; Gossett, 342.

In the second phrase Rameau recognizes only a single perfect cadence, a "foreign" one at that, between measures 7 and 8. This brings the total number of cadences to three—the first irregular, the next two perfect.

Apparently Rameau did not hear a cadence in measure 6, perhaps because the melody does not contain one of the stepwise progressions shown in Example 12-2.[16] To emphasize the fact that no cadence occurs here, the continuo does not follow the fundamental bass, as it does in the three other cadences of the Sarabande. Maybe Rameau understood this to be a "non-strain-ending" foreign cadence, or, perhaps, an avoided irregular cadence. Regardless, the note *d*, if placed in the continuo in measure six to suggest a cadence, would not be such a good choice anyway, since the same pitch occurs prominently in the perfect cadence of the next measure. I suspect Rameau chooses the unlikely *b*, producing a chord by supposition, (figured with 9 and 7!) in order to achieve variety.

Once the cadences have been located, the remainder of the fundamental bass may be determined. Rameau states that in the root progressions of the remaining chords "the descending fifth should be preferred to the descending fourth, this latter to the third, and this latter to the seventh; remember that ascending a second is the same as descending a seventh."[17] Thus, in effect, the fundamental bass can progress by almost any interval.

There are only a handful of places in which the fundamental bass does not progress by fifth. In three of them, Rameau avoids root movement by ascending second by leading the fundamental bass down a third then up a fourth (see the bracketed portions in the example). He does not invoke the same technique between measures 6 and 7, however. Here the fundamental bass simply moves from *G* to *A*, ascending a second, as he permits but clearly does not prefer.

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[16]The leap in the melody at this point, *c''-f#'*, does not correspond to those exceptions mentioned above in note 7.

[17]Rameau, 315-316; Gossett, 333.

It would have been most useful had Rameau presented a discussion of the derivation of the fundamental bass. He, of course, does not, though, to his credit, it does seem that his recommendations could indeed yield the fundamental bass of the Sarabande.[18]

Rameau, in this example, focuses primarily on the derivation of the continuo from the fundamental bass. In this regard his choices can be summarized simply. The continuo is to proceed whenever possible by step, according to the notes available in the fundamental bass and the resulting counterpoint with the treble, as taste allows. At the cadences the continuo part should follow the fundamental bass.[19]

In the Sarabande, Rameau presents a completed example of a continuo derived from a fundamental bass. However, the derivation of both basses would have resulted from a multi-step process in which the parts take on their form only gradually. In this way, note by note, the fundamental bass would take shape. The process by which the continuo was completed would have focused attention on the individual notes of the fundamental bass and how they might generate pitches capable of supporting the melody, drawing attention to the chord-to-chord level.

Summary. The preceding discussion shows that by the end of the century Mozart would have been able to describe both the phrase structure of the exercises and the process of determining a fundamental bass and continuo to a melody, using a vocabulary provided by Koch and Rameau. In addition, it shows that Mozart's pedagogy belongs to the same

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[18]For more on how Rameau might have applied his notions of phrase-ending cadence analytically, see Thomas Christensen, *Rameau and Musical Thought in the Enlightenment*, Cambridge Studies in Theory and Analysis, no. 4 (Cambridge: Cambridge University Press, 1993), 113-123 and Lester, *Compositional Theory in the Eighteenth Century*, 115-122.

[19]Among the many interesting things about this Sarabande is that it appears in the *Traité* at the end of a group of chapters on two-part composition. It contains, like all of the harmonization exercises for Ployer, a melody above a figured continuo and a fundamental bass. This further suggests that the harmonization exercises were themselves intended to be only in two parts. Elsewhere, in fact, Rameau, in an aside critical of Zarlino, writes: "A skillful man should always figure his bass, especially when his examples are in only two parts..." Rameau, 60; Gossett, 69.

line as Rameau's and Koch's in that he chooses the same type of pieces—simple binary forms—and the same type of tasks—determination of a fundamental bass from a melody and the derivation of a continuo from the fundamental bass.

We now know that a vocabulary existed that could describe this process. The next question is, where and when did Mozart impart it to Ployer? The folio on which this took place would have to look a little different from others on which Mozart only wrote out an exercise for Ployer to complete. The folio would have to show evidence of careful focus on the small details of the chord-to-chord level. It would look a little like Rameau's Sarabande, except that Mozart could afford to write out his examples chord-by-chord and explain the issues to Ployer along the way, rather than presenting a completed example as Rameau did.

Folio 10b and Mozart's Explanation of Harmonization Process

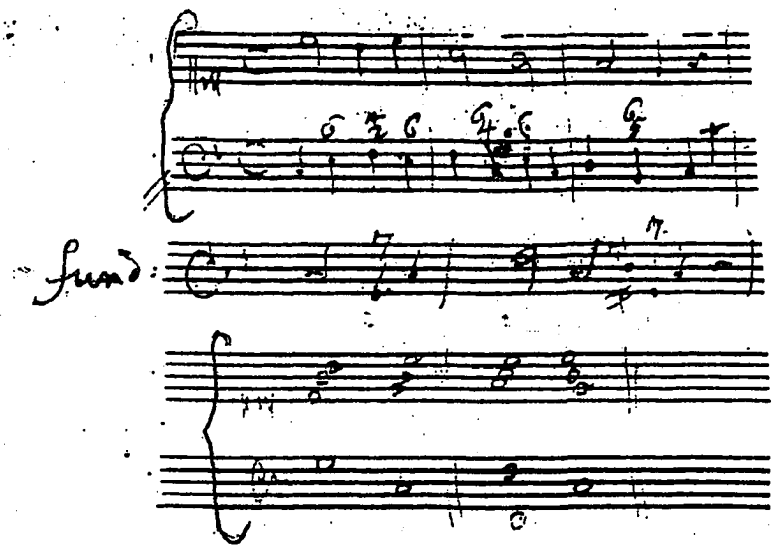
By its appearance, folio 10b (see Illustration 6-1 on page 102) seems to be the place where Mozart provided a detailed explanation of how a fundamental bass could be determined from a melody. The folio contains three settings of one phrase, all in Mozart's hand. In each, Mozart derives from the melody slightly different fundamental basses yielding a variety of continuo settings. Most importantly, the *way* in which Mozart wrote out the fundamental and continuo basses of his first setting, as I have described in Chapter 6, suggests that he did so one note at a time. Consequently, Mozart was probably discussing issues related to the progression of the music at the chord-to-chord level—that is, how a fundamental bass can be derived from a melody, and how a continuo can be derived from this fundamental bass. The majority of the material on this folio, including the two progressions written directly beneath the first two measures of the exercise, is pertinent to this discussion.

It appears that Mozart's process is similar to Rameau's, especially with regard to harmonic succession within the phrase at the chord-to-chord level. The manuscript seems to suggest that in this context, Mozart wanted Ployer to use progressions that lead either by descending or ascending fifth to the tonic, that is from the dominant or subdominant. The

similarity to Rameau's theory is clear; the harmony is organized by the "imitation" of the perfect and irregular cadences. It appears, though, that Mozart may have explained harmonic succession at the ends of phrases a little differently. For this reason, I refer to the chord-to-chord successions within a phrase as *progressions*, rather than imitated cadences in the Rameauian sense. At the ends of phrases, Mozart probably wanted Ployer to set the melody according to a small group of formulae, each containing from 2-4 chords. These formulae often contain what we would call pre-dominant, dominant, and tonic chords. I refer to these formulae as *cadences*, using the term in the modern sense rather than a Rameauian one.

Dominant-tonic and subdominant-tonic progressions. The two progressions, shown in Illustration 12-1, are related directly to the setting of a fundamental bass to a melody because they contain the root progressions and characteristic melodic features in the first two measures of the exercise itself. In the first progression, the bass leads *g* to *c*, supporting three upper voices written in keyboard style in close position; the melody leads from the leading tone to the tonic. In the second progression, two *fs* in different registers lead to *c* (it seems unlikely that the higher *f* in the bass clef is an inner voice); above this in the upper voices, the melody sustains *c''*. Though the relationship between these progressions and the basses of the first two measures is clear, their relationship to the melody is less so.

Illustration 12-1. Detail of folio 10b showing melody and continuo of exercise and fundamental bass above dominant/tonic and subdominant/tonic progressions.



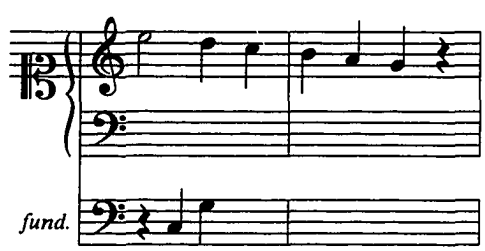
The melody of the first progression does, indeed, replicate that in the first measure of the exercise, $\hat{7}$-$\hat{8}$. The melody of the second progression, *c''-c''*, however, does not replicate that of the exercise, *a'-g'*. Perhaps, Mozart wanted to show that the tonic is a common tone between the subdominant and tonic chords. The way in which the whole notes of the upper voices are angled from left upward to right in the first chord and from left downward to right in the second chord suggests that the two *c''s* were written one after each other, emphasizing their "commonality." Despite the difference, though, a relation between the melody of the exercise and the progression exists in that *a'-g'* is present in the "alto" part of the chord progression. Both progressions, dominant-tonic and subdominant-tonic, relate directly to the exercise and highlight the context in which the tonic appears in each. Mozart follows an approach similar to Rameau's by using the melody and root progressions of the perfect and irregular cadences to serve as models for harmonic succession within phrases.

The cadence formula. No model progression, however, appears beneath measure 3, which contains the first cadence.[20] Here, the melody, $\hat{4}$-$\hat{3}$, is set with three chords. Mozart wants the half note on $\hat{4}$ to be supported with both a pre-dominant chord, II, and V^7.[21] This is the first of several cadential formulae that Mozart demonstrates on this folio.

Thus, in the first three measures of the exercise, Mozart distinguishes between the setting of notes in the midst of a phrase, which he explains by leading either the dominant or subdominant to the tonic, and the setting of the cadence, which uses a slightly larger complex of chords. The following discussion shows how these general principles can be followed throughout the entire exercise on folio 10b, and contributes to an understanding of the elements Ployer had to have at her command.

The second phrase. The second phrase will also be set by matching particular melodic motions to either dominant/tonic or subdominant/tonic progressions; however, these will occur in the key of the dominant. Measure 4 begins with $\hat{6}$-$\hat{5}$ in the new key, not $\hat{3}$-$\hat{2}$ in the tonic; thus it belongs to the subdominant-tonic progression. Either interpretation, of course, yields C-G in the fundamental bass, as Example 12-5 shows.

Example 12-5. Folio 10b, second phrase containing modulation to the dominant.



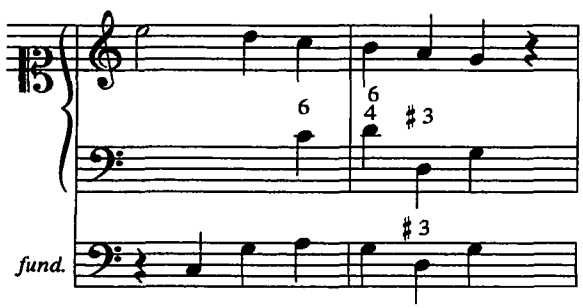
The second cadence follows. Like that at the end of the first phrase, this too consists of a pre-dominant chord followed by the dominant itself and then the tonic. For

[20]Note that this cadence uses an inverted V^7—the continuo does not follow the fundamental bass.

[21]The crossed out *G* in the manuscript (refer to Illustration 12-1 above) appears to suggest that Mozart discussed the possibility of its use, but preferred the additional chord.

Mozart, however, the cadence actually contains four chords, since he considers the cadential six-four to be an inversion of the new tonic rather than an elaboration of the dominant.

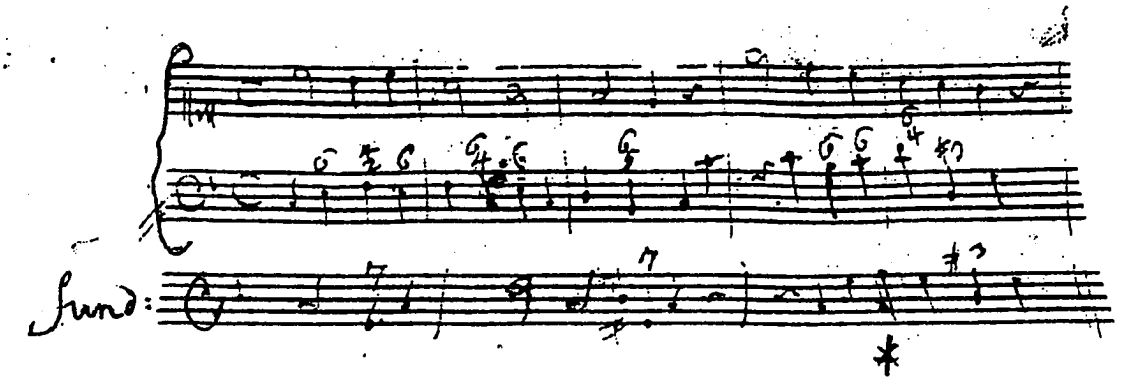
Example 12-6. Folio 10b, setting of cadence at end of second phrase.



At the end of measure four, the decision to set *c''* as the third of an A-minor chord, rather than the root of a C-major chord, seems to have been made in order to avoid any ambiguity between the tonic and dominant keys. A detail in the manuscript suggests that Mozart discussed this ambiguity. Illustration 12-2 shows that Mozart crossed out a second *c* in the fundamental bass in this measure. He may well have said that since this phrase moves in the key of the dominant, *e''-d''-c''* must not be confused for $\hat{3}$-$\hat{2}$-$\hat{1}$ in the tonic, which indeed would have been set with the roots C-G-C. (Recall Ployer's setting of the "Benedictus" where she realizes too late that the second phrase moves in V; also see the discussion of the second phrase on folio 4b below. Perhaps Mozart was trying to avoid this problem.)[22]

[22]Mozart's second and third settings of the measure do indeed have C as the root at this point. In these cases, however, the ambiguity is significantly diffused because the second phrase begins with an applied chord to the dominant, heralding the new key.

Illustration 12-2. Facsimile of folio 10b. NB fundamental bass, measure 4, beat 4, where *c* is crossed out and *a* written above it.

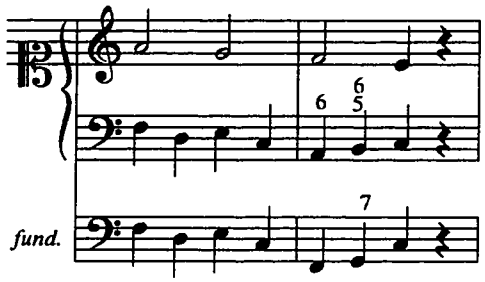


Having eliminated the C-major chord as a possibility, the only choice left, given the context, is the A-minor chord. The continuation of the cadence with *d'-d-g* in the continuo precludes that *c''* will be set as the seventh of V^7 because of the awkward syncopation with the following cadential six-four that would result. This leaves *c''* to be set as the third of the II chord. Measure 5 contains the simple segment $\hat{3}$-$\hat{2}$-$\hat{1}$. This, of course, belongs to the tonic/dominant progression.

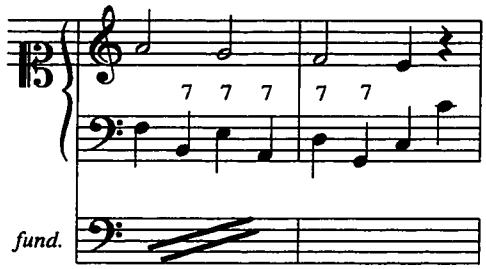
Alternative settings of the first period. Mozart's other settings of the first period, shown in Examples 12-7 and 12-8, contain alternatives to both phrases. Two concern how the descending line *a'-g'-f'-e'* in measures 2-3 might be set. Mozart's second setting supports *a'-g'* with two chords each; *f'-e'* are set much as they had been above, as shown in Example 12-7.[23] Here Mozart chooses IV-V-I instead of II-V-I because he writes *A*, rather than *d*, to support *f'*. More importantly, his third setting supports the descent *a'-g'-f'-e'* with a sequence of descending fifths. This is the longest succession of chordal roots that must necessarily be considered as a single entity.

[23]This melodic segment and its accompanying continuo and fundamental basses recur elsewhere and are discussed below.

Example 12-7. Folio 10b, Mozart's second setting of measures 2-3.

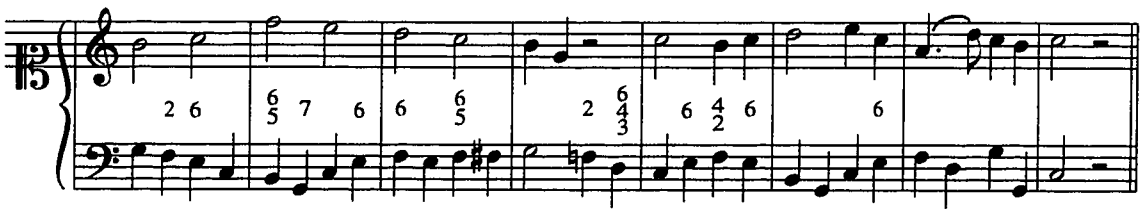


Example 12-8. Folio 10b, Mozart's third setting of measures 2-3.



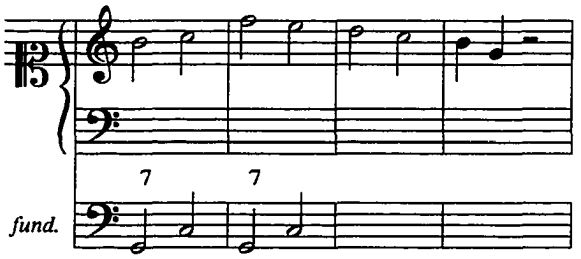
Second Period. In the second period, Mozart did not continue his discussion of the various ways in which the melody might be set. Instead, he wrote out the melody for Ployer and had her set the bass. (I argue in Chapter 6 that Ployer must have worked directly with Mozart or from a working copy with fundamental bass that is no longer part of the manuscript. Her setting, when seen in context with her others, is too good to have been done by her alone.)

Example 12-9. Folio 10b, second period, measures 6-13, with Mozart's melody and Ployer's bass and figures.



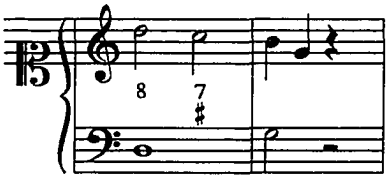
Like the first period, the second can be set successfully by locating the proper tonic-dominant and tonic-subdominant progressions and cadences suggested by the melody. The first cadence appears in measures 8 and 9, the second at the end. The first two measures each contain half-step motions to members of the tonic chord, $\hat{7}$-$\hat{8}$ and $\hat{4}$-$\hat{3}$. This suggests that the fundamental bass in both measures should be G-C, V^7-I. (Though, as mentioned above, $\hat{4}$, appearing as a half note moving to $\hat{3}$ could be set with II or IV, then V7, the context here suggests that the harmony of the preceding measure should be repeated.)

Example 12-10. Folio 10b, measures 6 and 9.



Measures 8 and 9 contain a tonicized half cadence (see pages 140-143). Here, *d''-c''-b'* must not be seen so much as $\hat{2}$-$\hat{8}$-$\hat{7}$ in the tonic but rather as $\hat{5}$-$\hat{4}$-$\hat{3}$ in the dominant. Thus, the fundamental bass should be D^{8-7}-G, as shown in Example 12-11. Ployer's setting reflects this harmonic interpretation.

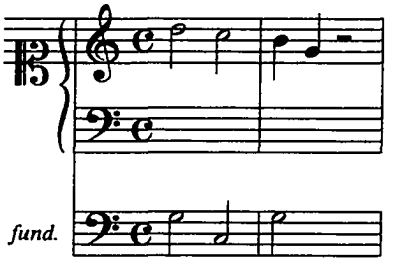
Example 12-11. Folio 10b, measures 8 and 9 and the fundamental bass implied by Ployer's continuo.



Without an awareness of the specific type of cadential figure at work here, it is unlikely that Ployer would have set these measures properly. This has significant implications for how Mozart might have instructed her to go about setting the bass. It

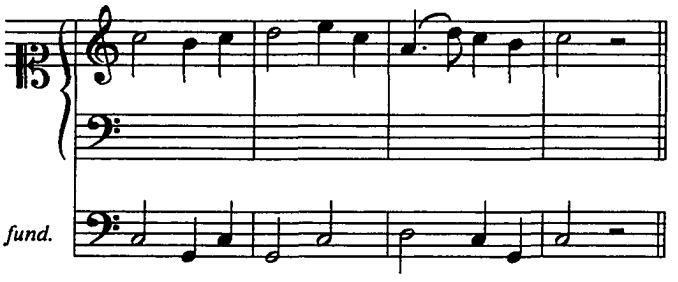
strongly suggests that Mozart, as Rameau and Koch would probably have done, discussed the cadences apart from the body of the phrases. Without Mozart's help, either with him at her side or via his fundamental bass, would not Ployer have set *d''* as the fifth of the dominant and the following *c''* as the root of the tonic?

Example 12-12. Folio 10b, hypothetical fundamental bass.



The rest of the second period adds nothing new to Mozart's vocabulary; the melody can be set simply by recognizing the tonic-dominant and tonic-subdominant progressions and the proper cadential figure, which is a variation of the one that concluded the first period. Only the penultimate measure might have raised some question regarding how *a'-d''* should be set. But here the slur strongly suggests that the two notes should be considered as part of the same harmony, II.

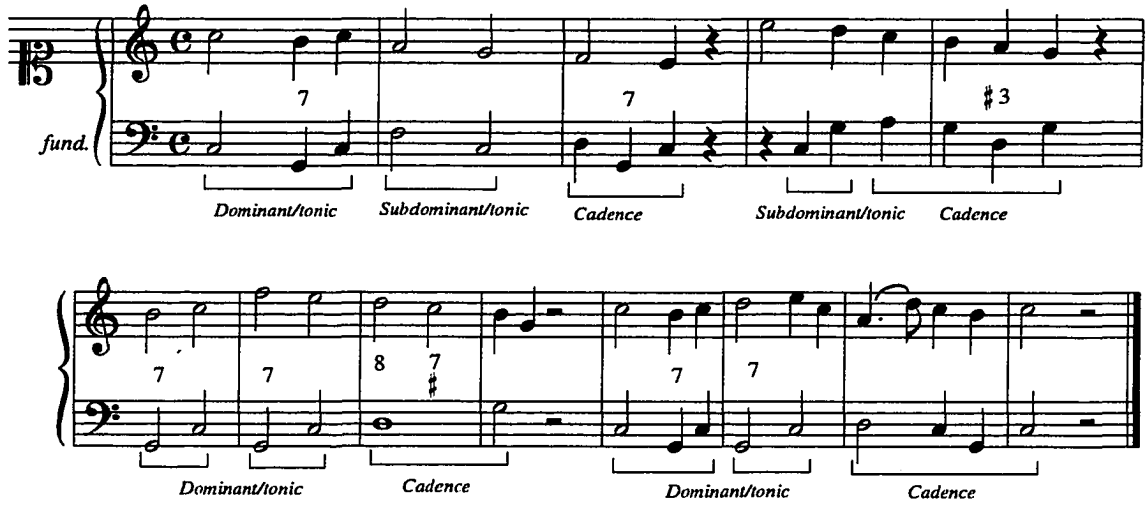
Example 12-13. Folio 10b, measures 10-13.



This completes the harmonic palette that Ployer was to choose from in her settings of Mozart's melodies. In other exercises in which Mozart wants something that deviates from this basis, he provides her with some type of clue, usually in the form of a given

fundamental bass. Example 12-14 presents the entire setting of the exercise from folio 10b and indicates the derivation of the choices in the fundamental bass as being either from the tonic-dominant, tonic-subdominant, or cadential progressions. The next section shows how Ployer might have gone about setting the "Jupiter" exercise armed with the above knowledge.

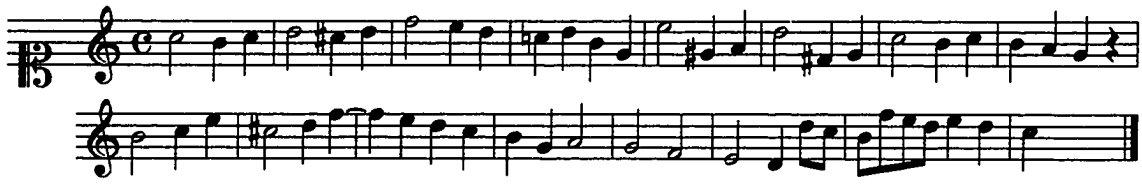
Example 12-14. Folio 10b, melody with entire fundamental bass derived from Mozart's first setting and Ployer's.



Application of Dominant/Tonic, Subdominant/Tonic, and Cadential Progressions to the "Jupiter" Exercise on Folio 4b.

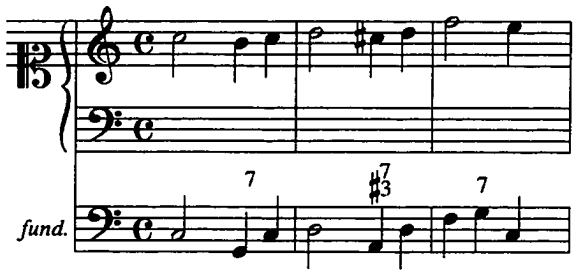
According to the approach detailed above, Ployer would have begun the setting of the "Jupiter" exercise, shown in Example 12-15, by examining the exercise's phrase structure, the broad outline of which should already be familiar to her because it resembles that of the other exercises: the first period divides into two four-measure phrases—the first of these ends with a tonicized half cadence, the second contains a sequence and cadences in the dominant; the second period also consists of two phrases, though not exactly equal in length—the first, again, ends with a tonicized half cadence, the second ends with a perfect authentic cadence in the tonic.

Example 12-15. Folio 4b, melody.



The first phrase. Upon setting down to the work of harmonization, Ployer would immediately see that the first two measures each contain $\hat{8}$-$\hat{7}$-$\hat{8}$, first in the tonic, then in the supertonic. Therefore they will each contain I-V^7-I, in C major and D minor respectively. Measure three begins with a half note $\hat{4}$ moving to $\hat{3}$, suggesting first II or IV, then V^7 to I.

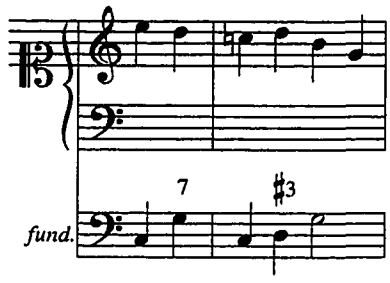
Example 12-16. Folio 4b, melody and fundamental bass in measures 1-3.



What follows is determined by the tonicized half cadence and the arrival of the dominant on the third beat of measure four. The stretch *e''-d''-c''* should be seen as $\hat{3}$-$\hat{2}$-$\hat{1}$ and set I-V^7-I.[24] The following *d''* should be supported with the applied chord to the dominant.

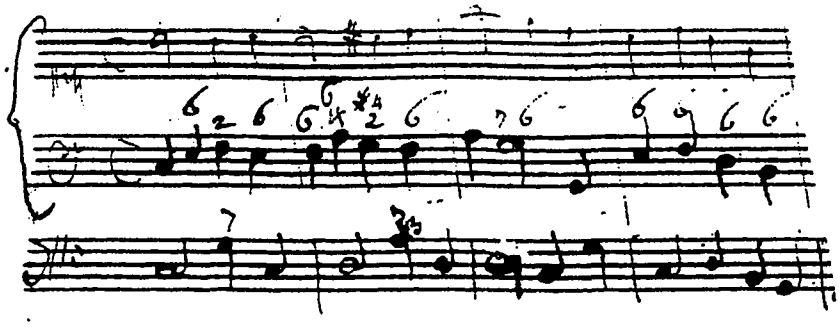
[24]Though Ployer chooses V beneath *d''*, Mozart chooses II^6. Both solutions allow for the continuo to lead *f-e*, thus relying on the same counterpoint between the outer voices.

Example 12-17. Folio 4b, tonicized half cadence in measures 3-4.



Ployer's analysis of some of the first phrase is good. However, she botches the setting of $\hat{4}$ in measure 3. Illustration 12-3 shows the disagreement between her continuo and the fundamental bass, which she seems to have had difficulty determining.[25] In measure four, Ployer makes a crucial mistake by not recognizing that *b'-g'* should both belong to a G major chord. Having failed to identify the point at which the dominant arrives, it would be unlikely that Ployer would have correctly set the preceding *d''* with the appropriate applied chord; she, of course, does not, though at least she chose the correct root.

Illustration 12-3. Detail of facsimile of folio 4b.



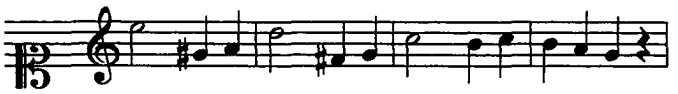
At least Ployer saw that this *d''*, $\hat{2}$ in C major, was not to be set with V, as it would be in most other circumstances. And her choices in the fundamental bass following this, *B*

[25]She obviously wrote a large half note over something she had written earlier. The page even has a hole in it, suggesting that her exertions were such that she tore the paper.

and *G*, suggest that she heard these two beats as "dominant like," as befits the half cadence. Perhaps remembering Mozart's discussion from folio 10b, she was half aware of the special conditions of the tonicized half cadence but simply not aware enough to set it properly. This measure comes tantalizingly close to proving that Mozart successfully communicated this cadential structure to Ployer. However, the inconsistencies in her setting are too significant to support this conclusion.

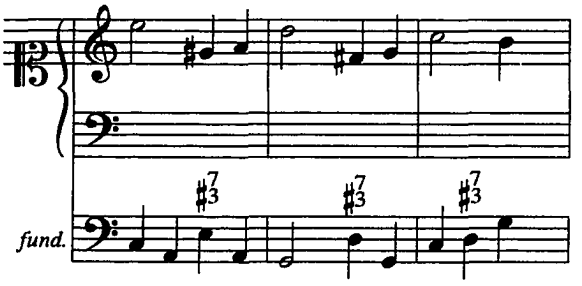
The second phrase. The sequence in measures 5-8 contains many clues suggesting tonic-dominant progressions in one key or another, as Example 12-18 shows.

Example 12-18. Folio 4b, measures 5-8, sequence and cadence in the dominant.



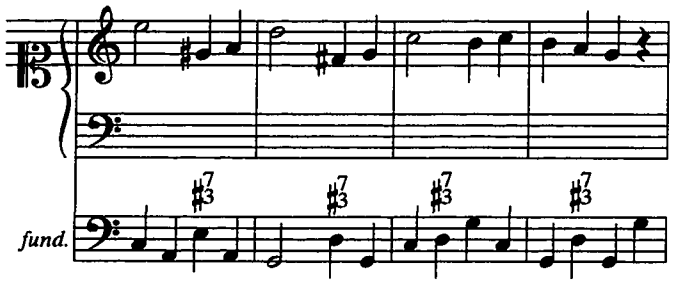
Immediately in measure five, *g♯'-a'* appears suggesting V^7-I in A minor, destabilizing the tonic key as the phrase moves toward the cadence in the dominant. Seen in this context, the downbeat *e''* could either be part of the A-minor harmony or a vestige of the original key. The melodic pattern continues in the next measure: *f♯'-g'* suggests V^7-I in G major; the downbeat *d''* could be seen as part of the same chord, suggesting a tonic-dominant-tonic progression.

Example 12-19. Folio 4b, measures 5-7 with correct fundamental bass.



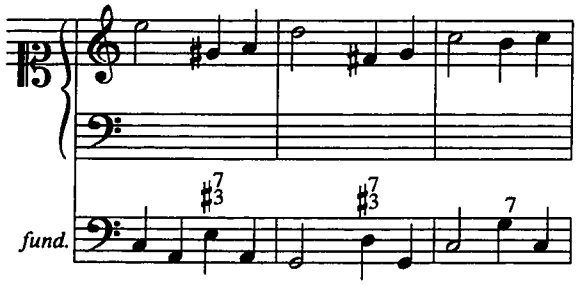
The pattern changes in measure 7. Ployer should have interpreted the half note *c''* moving to *b'* as $\hat{4}$-$\hat{3}$ in G major and hence set it with II or IV then V^7 moving to I, as in Example 12-20.

Example 12-20. Folio 4b, measures 5-8 with cadential figure.



Mozart must have hoped that the sequential material with which the phrase begins would lead Ployer's ear away from the original key toward the dominant; certainly following *f♯''-g''* she should have realized that the melody suggests this key. However, Ployer instead saw a continuation of the tonic-dominant-tonic patterns, as established in the previous two measures. Her fundamental bass yields I-V^7-I in C major, shown in Example 12-21

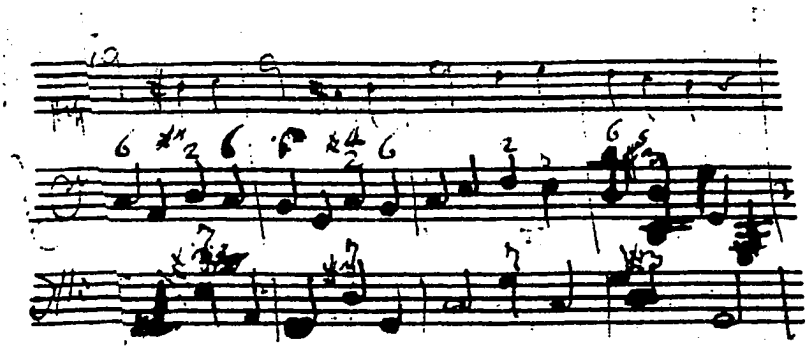
Example 12-21. Folio 4b, measures 5-7 with Ployer's fundamental bass.



The second *c''* in measure 7 should, indeed, belong to a C-major chord (A minor would also be appropriate), but this note is part of the motion to the cadence in the dominant—the same motion that Mozart showed in detail on folio 10b (see pages 180ff.).

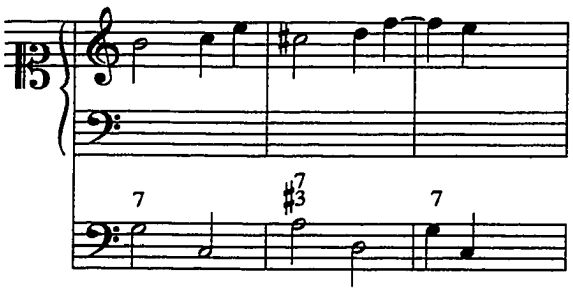
Mozart would probably have said the same thing about these analogous passages. On folio 10b, *e''-d''-c''* was not to be set with C-G-C as is the case here with *c''-b'-c''*. Ployer set the final measure, *b'-a'-g'*, as she should have, with I-V^7-I in G major. However, as Illustration 12-4 shows, it appears she originally wrote two half notes *d* and *G* in the fundamental bass, then squeezed in *g* on the downbeat.

Illustration 12-4. Detail of facsimile from folio 4b.



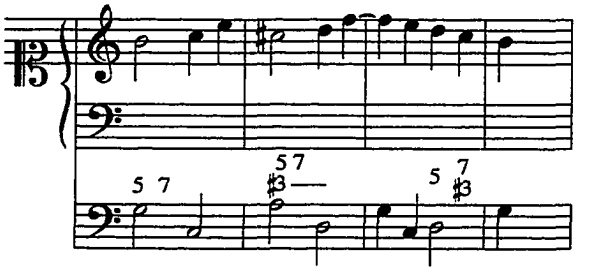
The Third Phrase. Ployer's setting of the first phrase of the second period contains many good elements. Example 12-22 indicates that she correctly identified dominant-tonic progressions in measures 9 and 10 and even recognized that *f''* in measures 10-11 changes from the third of the tonicized II chord to the seventh above the dominant, which resolves down to *e''*.

Example 12-22. Folio 4b, measures 9-11.



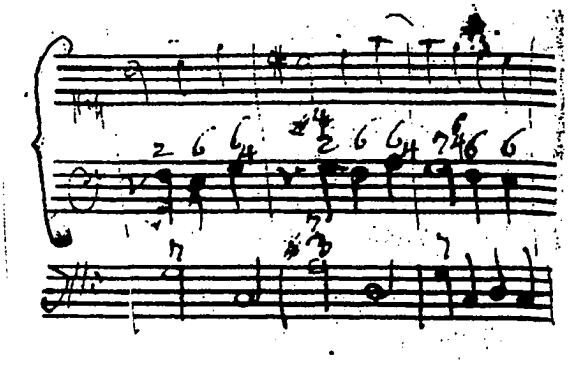
However, she once again fails to correctly set the tonicized half cadence that follows. In measure 11, *d''* and *c''* each belong to the applied chord to the dominant, which arrives on the following downbeat.

Example 12-23. Folio 4b, measures 9-12, with Mozart's fundamental bass.



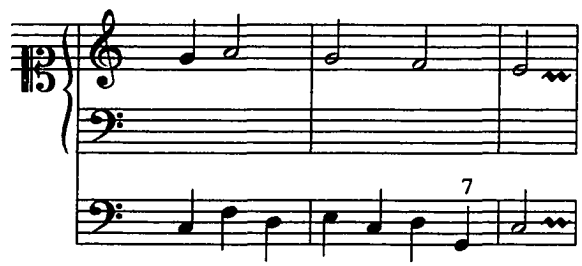
Her choices for the fundamental bass in measure 11 are inconsistent with the approach she may have followed to this point. One might assume that, were she to harmonize this passage incorrectly, her mistake would be to interpret *e''-d''-c''* as I-V^7-I in the tonic, yielding C-G-C in the fundamental bass. However, as Illustration 12-5 shows, Ployer chose C-D-C.

Illustration 12-5. Detail of facsimile from folio 4b.



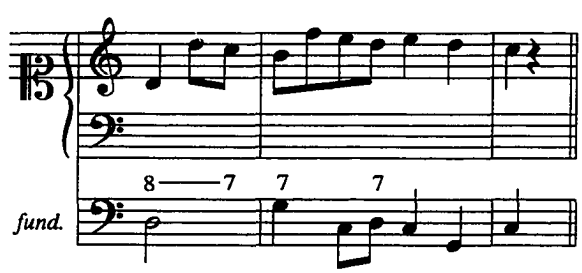
The Fourth Phrase. The phrase following the tonicized half cadence is interesting in that it contains the melodic fragment *a'-g'-f'-e'*, first encountered above on folio 10b. Mozart chooses a fundamental bass that closely resembles his first alternative setting from 10b; see Example 12-7 above.

Example 12-24. Folio 4b, measures 12-14.



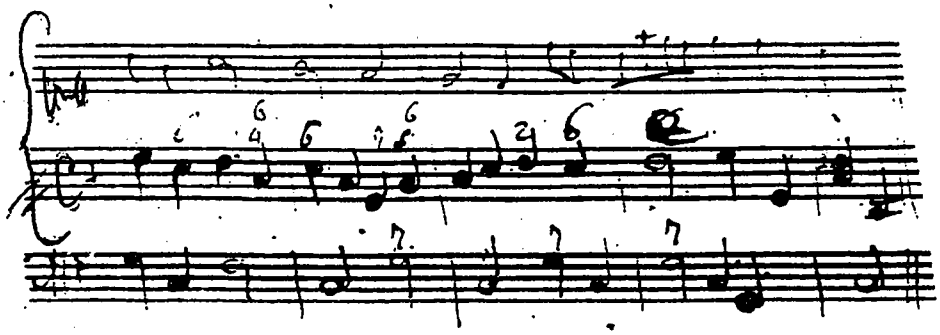
Despite the flurry of eighth notes, the final cadence, too, can be set using the same principles; see Example 12-25. As in the tonicized half cadence, *d''-c''-b'* requires $D^{8\text{-}7}$-G in the fundamental bass, though here without the leading tone, f♯. After that, a chordal skip and the remaining stepwise progressions suggest a simple root movement using I, II, and V. In the last measure, *b'-f'* suggests the dominant seventh chord; *e''* is the resolution supported by the tonic. A look ahead to the final three notes implies that the preceding *d''* should be set with II, not with V, so that the cadence can lead I-V-I, with the first tonic in six-four position.

Example 12-25. Folio 4b, final cadence.



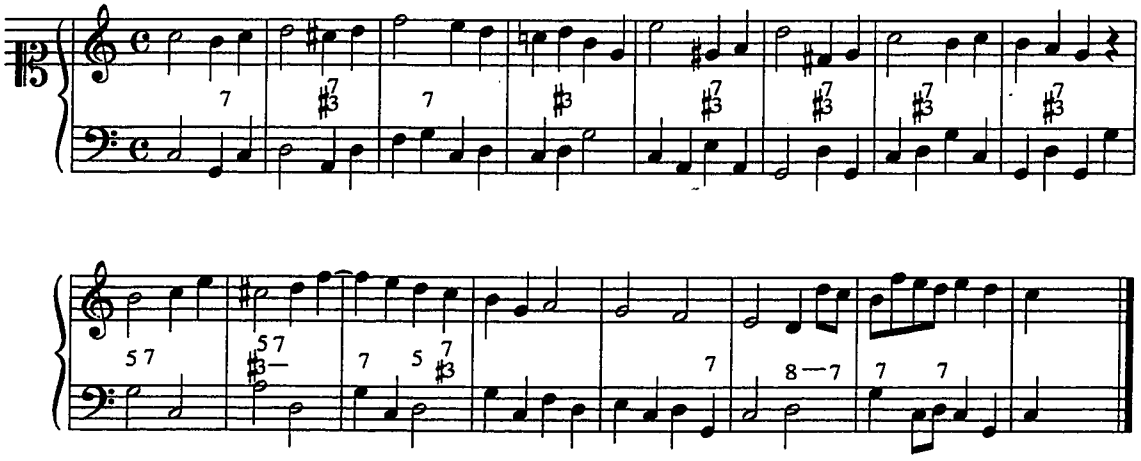
Ployer's choices, shown in Illustration 12-6, reflect a less detailed analysis of the melody. Though her bass does contain elements in common with Mozart's, she again fails to recognize *d''-c''* as an 8-7 motion above *d*. It also appears that in the penultimate measure, she inserted *c* between the two *gs* in the fundamental bass.

Illustration 12-6. Detail of facsimile from folio 4b.



Example 12-26 presents Mozart's entire melody and fundamental bass.

Example 12-26. Folio 4b with Mozart's fundamental bass. This transcription is based on the facsimile shown on page 96.



This section shows that Ployer, had she applied the principles that Mozart introduced on folio 10b, should have been able to set the melody on folio 4b perfectly. The

many examples cited above argue that the chord-to-chord level of structure was a vital element in the harmonization exercises, one that Mozart communicated to Ployer and that she, on many but not nearly all occasions, recognized too.

The evidence suggests that Mozart could have used a vocabulary similar to Koch's to discuss the phrase structure of the exercise and one similar to Rameau's to discuss the process of setting a fundamental bass to a melody. The layout of the exercise from folio 10b reflects that it was there that Mozart imparted this knowledge to Ployer. Here Mozart probably told her that most of the melodic motions within a phrase can be harmonized using either a tonic-dominant or tonic-subdominant progression. The ends of the phrases should be set according to a few cadential figures, depending on whether the phrase ends on I or V. The correct application of this approach would have led her to an accurate setting of the "Jupiter" exercise from folio 4b, which contains no fundamental bass. Had the same principles been applied to the exercise with a partial fundamental bass on folio 4a, the point of departure on the search for the elements that Ployer had to recognize on her own, she could have set that melody successfully as well.

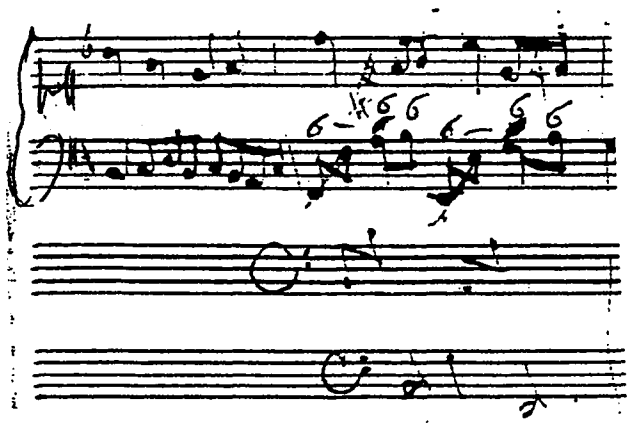
Mozart and Structure

Ployer's success has mainly to do with the design of the exercises and the existence of a cogent analytical tool, the fundamental bass. This final section of the chapter establishes the degree to which the fundamental bass can adequately describe the structure. I show that the fundamental bass is well-suited to identifying three- or four-chord structures such as appear in the exercises discussed above. It is even likely that Mozart designed the exercises with these "blocks" of chords in mind. However, fundamental bass fails as a reliable tool to describe the type of phrase-level structures present in Mozart's design. Consequently, there is a gap between the level of structure that Mozart can impart to Ployer via the fundamental bass and that by which he conceived the exercises.

Mozart's reductive fundamental bass from folio 4a. A review of some important details from folio 4a reveals significant aspects of Mozart's concept of local-level structure

and how he might have been able to impart this to Ployer. Recall Mozart's corrections to the first phrase of the second period, shown in Illustration 12-7. Here Mozart crossed out a pair of notes in Ployer's bass and wrote his preferences in the staff beneath.

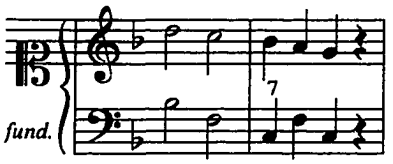
Illustration 12-7. Detail of facsimile from folio 4a.



Mozart's fundamental bass, which corresponds to his corrections, indicates that he recognizes three levels of structure within the passage. Mozart used reductive techniques and different durational values to indicate the relative importance of the harmonies that result from his corrections. The *B♭* and *F* half notes that appear on the bottom staff of Illustration 12-7 represent the roots of the chords that belong to the first level of structure within the voice-leading paradigm. The *g* quarter note signifies the root of the six-three chord on the second half of the second beat, a chord that results from the 5-6 motion with which this type of phrase often begins.[26] Mozart does not provide a fundamental bass for the six-three chord above *a* on beat 2. Apparently, he thought that this chord lacked enough structural significance to warrant a fundamental bass of its own. Mozart's reduction suggests that the essence of the phrase might be distilled to that shown in Example 12-27.

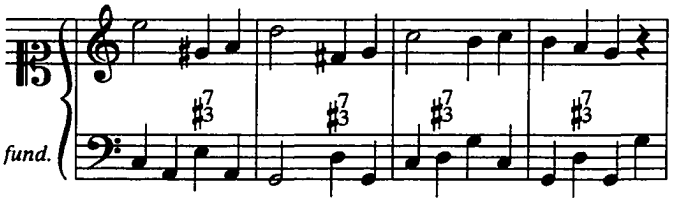
[26]See, for example, folio 4b, measure 5 and the C major model from folio 3b, measure 3.

Example 12-27. Hypothetical reduction of measures 9-10 from folio 4a.



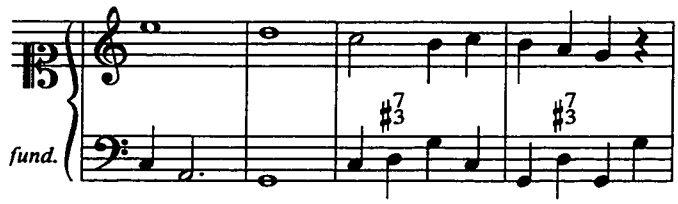
This reductive approach could be hypothetically applied to the "Jupiter" exercise from folio 4b. Example 12-28 shows Mozart's melody of measure 5-8 and its accompanying fundamental bass. Though the fundamental bass contains fourteen notes (not counting the repeated *g* at the end), Mozart must have understood that some of these could be factored out of the analysis, as some in his reductive fundamental bass on folio 4a had been.

Example 12-28. Folio 4b, measures 5-8.



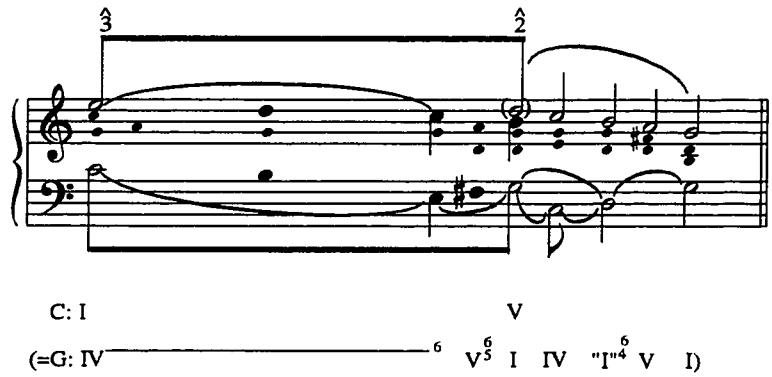
Two groups based on tonic-dominant alternations can be reduced to simpler progressions. Example 12-29 presents the distilled version of the fundamental bass as Mozart might have written it based on the reductive approach he applied in the exercise from folio 4a. In the example, I have omitted the fundamental bass of the dominant seventh chords in measures 5 and 6.

Example 12-29. Hypothetical reduction of measures 5-8 from folio 4b.



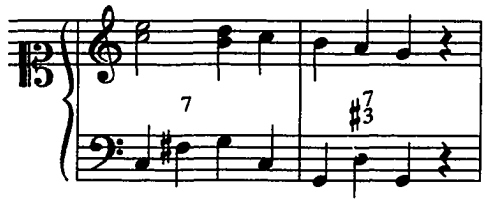
That Mozart would have understood the resulting C-major prolongation from measure 5 to the downbeat of measure 7 would be speculative. However, this interpretation, arrived at through the hypothetical extension of Mozart's own reductive techniques, agrees with the description of the passage presented in Chapter 8; compare Example 12-29 with Example 12-30.

Example 12-30. Voice-leading paradigm A; authentic cadence form with C-major interpolation.



One step further in the process returns the phrase to what is perhaps its simplest six-note form, which Mozart presented first on folio 10b. In particular, recall Mozart's second and third settings of the modulatory phrase that support *e''* with an applied VII^7.

Example 12-31. Ultimate distillation of measures 5-8 from folio 4b.



Mozart was certainly aware of structure at this level; witness the voice-leading paradigms whose existence is established merely by the way in which he replicates them time and again. Whether or not Mozart drew Ployer's attention to these, which represent the highest level of structure, is a moot point, for she could, potentially, achieve results that accorded with the paradigms by following a chord-to-chord approach that strings together lower levels of structure. Besides this, there is no evidence more specific than the approximate repetition of paradigms in various exercises to indicate that Mozart drew Ployer's attention to them. In regard to the description of higher-level structure, he lacked an adequate analytical tool. At the highest level, fundamental bass fails to adequately describe the context. I call the analytical space between what can be successfully indicated in the fundamental bass and the contrapuntal/harmonic structures of the paradigms the *hierarchical gap.*

Chapter 13

Conclusion

This dissertation attempts to answer many questions regarding the nature of Ployer's harmonization lessons and Mozart's pedagogic process. It shows what Mozart's goals for Ployer were and how he set about to achieve them. In the process, many interesting things about Mozart's understanding of eighteenth-century compositional theory and musical structure have come to light. This conclusion presents the most significant findings gleaned from the examination of the Ployer Studies.

Ployer, at some point in her piano studies with Mozart, apparently became interested in compositional issues that may have been raised during their lessons together. She must have had questions about why things are the way they are in the music she was playing—that of Mozart and, presumably, that of other composers as well. She may have turned to Mozart and sought from him his understanding of the musical issues that he considered important for her to know or, perhaps, Mozart wanted to communicate to her the value of learning more about the compositional principles that govern the music she was performing. The manuscript to which this study is dedicated is the result of what Mozart chose to communicate to Ployer—a window into his teaching methods as applied to one student in particular.

Ployer came to these studies with Mozart with a cursory knowledge of all the elements that she would need in the course of the lessons. Foremost among these elements are thoroughbass, fundamental bass, and voice-leading. However, her knowledge of each was insufficient and had to be strengthened if she was to reap any benefit from what Mozart had to teach her. Though she made significant strides in her course of study, she did not attain a thorough understanding of melodic harmonization.

Course Description

Mozart was a skilled, organized pedagogue. At the outset of the lessons, he knew what and how he wanted Ployer to learn. He had a set of fundamental prerequisites and advanced applications of those fundamentals.

Fundamental prerequisites. He wanted her to be able to assign chords belonging to a simple harmonic palette to the notes of his melodies and to be able to extract from those chords notes that would be suitable for a bass. This required that she know something about fundamental bass. In order to successfully set a bass to a melody after the appropriate harmonies had been determined and the available notes summoned, Ployer needed to know something about voice-leading. This required that she know something about counterpoint. Mozart also wanted her to be able to indicate the position of the chord implied by her choice of bass note; hence a familiarity with figured bass was necessary. Only after she had obtained these raw materials could Ployer even begin the task of setting the melody. Mozart needed for Ployer to have all these skills at her disposal because the degree of success with which she set the melodies depended upon how well she could integrate those skills.

Advanced applications of fundamentals. Mozart wanted her to have some idea of normative harmonic progressions and where such progressions might occur. For example, a piece might begin by alternating between the tonic and the dominant chords, thus establishing the key; Ployer should be aware of this convention and be able to set such passages accordingly. Mozart also wanted Ployer to recognize typical ways in which certain melodic patterns could be set. Such a pattern might be set by providing the proper contrapuntal support in the bass. Several different chords might provide adequate contrapuntal support in a particular instance; Ployer would have to be aware of these possibilities and choose wisely among them.

Mozart's concept of structure

Mozart used the advanced application of thoroughbass, fundamental bass, and counterpoint to communicate his hierarchical concept of structure. The phrase lies toward the top of the hierarchy (as we would expect from contemporaneous theoretical writings like those of Koch, whose *Versuch*, Vol. I, appeared two years (1782) before Ployer took her lessons with Mozart). Mozart created the exercises by combining different types of phrases, each having characteristics suitable for particular places in the exercises. That Mozart, indeed, differentiated between types of phrases indicates that he recognized a level of structure beyond the phrase level. It is likely and consistent with compositional theory of the time that Mozart considered the period—identifiable by its cadential orientation—to be the largest unit of structure smaller than the whole. Mozart created a two-period structure, which consists of a modulation to the dominant in the first period and a return to the tonic in the second, in nearly all of the exercises.

Setting a Bass to a Melody

Mozart wanted Ployer to set a bass to a melody that he had composed. The bass would agree with the implied harmony and complement the rhythm of the melody. When the lessons began, Ployer was not able to accomplish this satisfactorily. Consequently, Mozart had Ployer write simpler bass lines, gradually leading her to the type of rhythmically free lines that he originally intended. In this process, essentially a variation technique, Ployer began by writing note-against-note settings; subsequent settings of the same exercise contain more rhythmically active basses; the process culminates in a bass part that moves exclusively in eighth notes. The variation process is one that Leopold Mozart himself sanctioned in a letter Mozart received when he was in Paris in 1778. Ployer reached the point where she would begin writing a variation bass immediately. However, she never became comfortable enough to write basses that had a pleasant mix of rhythms.

Significance of figures. Ployer's basses are figured in idiosyncratic ways. All are incompletely figured. Some unnecessarily contain figures for a steady stream of eighth

notes in one measure, then lack them entirely in the next measure. Evidence presented throughout the dissertation suggests that the figures indicate primarily the continuo bass's relation to the fundamental bass, rather than to notes that would have been supplied in inner voices.

Order of Exercises

This study determines a hypothetical order in which the exercises were assigned and completed, enabling a comprehensive examination of Mozart's pedagogical approach. The order of the exercises was determined using several factors. First, I determined the order in which various settings of the same exercise were completed. In these, some of which appear on several different folios, Mozart's layout of the exercise appears first, followed by ever-improving settings by Ployer. Second, I determined the order in which the exercises themselves were assigned by examining their degree of difficulty and the quality of Ployer's settings.

The results suggest that the lessons probably began with a brief diagnostic period in which Mozart discovered what Ployer knew about melodic harmonization, fundamental bass, thoroughbass, chord construction, and voice-leading. The "Benedictus" and "Priest's March" exercises appear to belong to this period. After a brief period of remediation in which Mozart assigned exercises in four-part figured-bass chorale realization and two-part first- and second-species counterpoint, Mozart presented Ployer with series of graduated exercises that are accompanied by completed settings by Mozart that serve as models to which Ployer could refer while doing her homework exercises. This central portion of the lessons most likely began with the exercise on folio 10b, in which Mozart indicated how its first phrase might be set in different ways, each resulting in a different fundamental bass. This exercise probably served as the model for another exercise in C major whose second or third setting appears on the top of folio 9a. An examination of Ployer's bass indicates that it agrees perfectly with Mozart's melody, suggesting that Mozart had provided Ployer with a complete fundamental bass in the original layout of the exercise. Mozart's setting

and fundamental bass of a double period in F major from folio 9a appears to serve as the model for the F-major exercise on folio 3a, in which Mozart again provided Ployer with a complete fundamental bass. After these exercises, Mozart gradually weaned Ployer from the fundamental bass. I order the remaining two exercises according to the amount of fundamental bass present in each. The F-major exercise at the top of folio 4a contains a partial fundamental bass. This exercise most likely preceded the C-major exercise on folio 4b that contains no fundamental bass at all. Mozart's completed C-major setting without fundamental bass from folio 3b most likely served as the model for that from folio 4b.

The complex nature of the figures in the string quartet settings from the central bifolios of the manuscript suggest that they were probably assigned and completed either concurrently with or after the main body of harmonization exercises. These exercises, in general, lie outside the focus of this study.

Diagnostic and Remedial Periods

Diagnostic exercises. Despite the fact that Ployer may have been studying piano with him for some time before the lessons in theory began, Mozart did not have a clear picture of her abilities. In fact, as was the case with the daughter of the Duke of Guines in Paris, he overestimated Ployer's abilities. It may not have been Mozart's original intention to administer such a diagnostic examination, but the "Benedictus" and other exercises testify to the fact that Mozart set Ployer to a number of tasks in order to find out how familiar she was with the basic tools that formed the foundation of his pedagogy.

In the diagnostic period, Mozart discovered what Ployer was capable of doing. From her completion of the "Benedictus" exercise, Mozart learned that Ployer had difficulty in determining a fundamental bass and deriving from it a satisfactory continuo line. From her completion of the "Priest's March" exercise, in which he presented her with a melody and figured bass, Mozart learned that Ployer lacked basic skills in thoroughbass realization and voice leading.

In order to compensate for these deficiencies, Mozart assigned a brief series of remedial exercises that focused on those areas in which Ployer needed improvement. The exercises included two-part counterpoint in first and second species and four-part chorale harmonizations in which Mozart supplied the outer parts and figures. In the species counterpoint exercises, Ployer had to indicate the intervals formed between the two parts. Similarly, in the four-part settings, Ployer had to indicate the intervallic relationships between the bass and each of the upper parts, thus fleshing out the figures given by Mozart. After the series of remedial exercises, Mozart and Ployer returned to work on melodic harmonization.

Graduated Exercises

Mozart presented Ployer with a series of graduated lessons commensurate with her ability and the recently-gained information to which Mozart had exposed her in the four-part settings and species exercises. Mozart adjusted the level of difficulty in these harmonization exercises by manipulating three factors: fundamental bass, diminution bass, and, to a lesser extent, key.

Fundamental bass. After he realized the difficulty that Ployer encountered when she determined a fundamental bass on her own, Mozart assigned her exercises in which he provided the entire fundamental bass himself. This relieved Ployer of having to determine from the melody the proper harmonies by herself. By providing the harmonic guide, Mozart freed her to concentrate on the selection of notes that belong to his given harmonies and that counterpoint well with the melody—Ployer would also be able to focus on the horizontal aspects of the line and its contrapuntal relation to the melody. In subsequent exercises, Mozart provided less and less of a fundamental bass so that the harmonies were, once again, hers to decide, placing the entire burden of harmonization on Ployer.

Diminution bass. Throughout the course of the exercises, Mozart reduced the series of steps that led to the creation of a diminution bass. It may have been his intention from the very beginning of the lessons that Ployer set a rhythmically active accompanying bass

to the melodies that he provided. He discovered, though, in the course of the "Benedictus" exercise that Ployer was challenged enough simply by having to determine the proper harmonies and selecting from them an appropriate counterpoint. In later, intermediate exercises, Mozart first asked Ployer to compose a note-against-note setting, derived from his given fundamental bass; after that she could proceed to create a more figurated bass that moves predominately in eighth notes. They followed this series of steps in the F-major exercise from folio 3a. Soon enough, though, Mozart freed Ployer so that she began the diminution bass immediately, as is the case in the F-major exercise from folio 4a and the C-major exercise from folio 4b

Key. To speak of a graduation of keys—that one key is more challenging than another—fails to impart the reasoning behind Mozart's choice of keys for the harmonization exercises. If this were the case, C major would be the easiest key, of course, and F major would be more complicated. I suspect, however, that for Ployer the opposite was true. Recall Ployer's difficulty recognizing that the second phrase of the "Benedictus" exercise moves in the dominant immediately; even in the measures before the cadence she was thinking in the key of the tonic, C, rather than the dominant, G. What easier way of helping her to identify and harmonize a modulatory phrase such as this than to begin in the key of F and have the phrase in question move in the key of C, with which she was most familiar? In this sense, then, F major is actually the "easier" key.

After setting two exercises in F major, Mozart reintroduced the key of C major in the model from folio 3b and the exercise from folio 4b. Unfortunately, Ployer had the same difficulty determining the location of the modulation there that she did in the "Benedictus."

Mozart's Pedagogical Use of Models

Mozart made significant use of models in his pedagogy. Modeling manifests itself on two levels.

Model settings. Mozart, on as many as three occasions, presented Ployer with a complete setting to which she could refer while doing her homework. Three pairs of

settings appear to be organized in this way: the C-major exercise from folio 10b and the C-major exercise from folio 9a; the "𝄞" model from folio 9b and the "Diminution" exercise from folio 3a; and the C-major exercise from folio 3b and the "Jupiter" exercise from folio 4b. The model settings contain melodic/harmonic and cadential similarities to those exercises Ployer had to complete on her own.

Voice-leading paradigms. Many of the similarities between the model exercises and those that Ployer had to complete are found in recurring melodic patterns and the contrapuntal and harmonic structures of which they are a part. I call these structures *voice-leading paradigms.* The paradigms are complex models that depend on the interaction of counterpoint, thoroughbass, and harmony for their existence. (This is why it was so important that Ployer have sufficient knowledge of each of these elements before the in-depth study of harmonization began.) The paradigms lift the student's eyes from the note-to-note, chord-by-chord approach that fundamental bass encourages. The voice-leading paradigms operate on the phrase level, so the student, instead of identifying the appropriate chord to use for a given note of the melody, has the opportunity to recognize the appropriate contrapuntal and harmonic structure of an entire phrase. Each paradigm consists of a melodic pattern and thoroughbass accompaniment possessing both fixed harmonic elements and variable contrapuntal elements. Nearly every phrase of the harmonization exercises comes from one or another group of paradigms.

The voice-leading paradigms go through a process of creation, dismantling, and reconstruction. First, Mozart conceives of the exercise, which consists of a set of phrases each based on one paradigm or another. Second, he separates the thoroughbass from the melody, dismantling the paradigms, and presents the melody and, perhaps, a fundamental bass to Ployer. Third, Ployer must reconstruct the voice-leading paradigms as Mozart conceived them originally from the clues of the melody and her familiarity with Mozart's models. The degree of success by which Ployer's settings can be measured depends on how close her settings come to the paradigms.

Often, various interpolations augment the paradigms without distorting their contrapuntal/harmonic framework. These interpolations indicate that Mozart recognized several different levels of structure. In one instance in particular—his modification of Ployer's setting of the F-major exercise from folio 4a—Mozart uses a nascent form of reductive notation that indicates three distinct levels of structure.

In several of the exercises, Mozart uses paradigms identical to those discussed by Joseph Riepel in his *Anfangsgründe zur musicalischen Setzkunst.* Riepel's writings focus on phrase structure, the constituent parts thereof, and the role played by phrases in larger entities. He defined phrases by their length and cadential orientation. In both the *Anfangsgründe* and the harmonization exercises, the *Fonte* appears in the first phrase of the second period. This indicates that Mozart had a concept of phrase structure and form quite similar to Riepel's. Mozart's extensive use of paradigms throughout the double-period format suggests that he recognized their significance as structural arbiters in a broader range of applications.

Mozart's modifications of Ployer's settings clearly indicate that he altered her settings until they conformed with the voice-leading paradigms that organize the exercise. This suggests that Mozart used the paradigms consciously as a pedagogical tool.

Fundamental Bass and Voice-Leading Paradigms as Expression of Structure

The fundamental bass satisfactorily identifies and accounts for as many as three levels of structure: the isolated chord and its prolongation via simple melodic arpeggiation, the intervallic progression between the roots of two chords, and the simple prolonging progression tonic-dominant-tonic. Thus, fundamental bass is a useful tool for showing how a single root might generate one or more notes of a given melody. It also clearly indicates the repeated root progressions found in sequences and the boundary points of those sequences. At another level, it highlights the key-defining progression tonic-dominant-tonic as an individual entity unto itself.

Mozart uses the fundamental bass to generate a pool of pitches from which Ployer could select the notes of her continuo part. Once she determined the notes available from a given note of the fundamental bass, Ployer then decided which note in particular would be best suited for the accompaniment based on the rules of counterpoint. This simple system worked relatively successfully for Mozart and Ployer when the types of structures described above were involved, particularly those in which a two- or three-chord progression was repeated at the same pitch level or another, as at the beginning of an exercise or in a sequence.

In passages that contain a longer series of chordal roots—not merely the same root progression repeated many times—fundamental bass fails to satisfactorily describe structure and ceases to be a reliable tool for harmonization. In instances such as these, fundamental bass illuminates the structure of a phrase to the limited degree that a Roman numeral analysis might; it can accurately label individual entities but fails to articulate the larger forces that organize their interaction. The possible combinations of pitches derived from given roots multiply exponentially with each additional root; the practical combinations, however, do not.

It is here that the voice-leading paradigm becomes the best method for organizing structure. Mozart's paradigms limit the number of contrapuntal possibilities between the outer voices. Consequently, specific intervallic combinations, as opposed to specific root progressions, become the most prominent elements of passages organized in this way.

Fundamental bass plays a passive, implicit role in this organizational method. On most occasions, Mozart augments the voice-leading paradigms by inserting interpolations, which add to the accumulation of roots within the progression. The immutable elements of the paradigms, those that define the paradigm itself and remain regardless of the type or location of the interpolation, can easily be located by examining the notes of the fundamental bass.

Though the paradigms are excellent tools for organizing structure at the phrase level, they are, conceptually, much harder to grasp and communicate than simple fundamental bass progressions. Mozart communicated the paradigms through his models and his careful modification of Ployer's settings. Ployer did not become well versed in recognizing the melodies to the patterns and setting them accordingly.

The Hierarchical Gap

From fundamental bass, Mozart made the pedagogical leap to melodic patterns and voice-leading paradigms, for it is these that allow him to communicate a sense of structure on the largest level. There is, however, a significant gap in the hierarchical structure. Clearly, Mozart recognized, as is evident in his fundamental basses, that an arpeggiated melody expressed a single chord. It is likely that he recognized that a progression like I VII^6 I^6 with the fundamental bass I V I was also an expression of a single chord, namely the tonic. Most surprisingly, Mozart, as evinced in his fundamental bass reduction of the half-cadence form of voice-leading paradigm A as it appears on folio 4a, was able to distinguish the hierarchy within an individual interpolation.

However, there is no evidence in the harmonization exercises that Mozart was capable of differentiating the intermediate ground between this level and the phrase level. In fact, as the summary following the discussions of the various forms of voice-leading paradigm A shows, the five- or six-note unit that comprises the melodic portion of the paradigm can be parsed in many different ways. It seems highly unlikely that, even if Mozart was capable of distinguishing between the various subtleties of the prolongations, he had any way of expressing these subtleties in notation. The hierarchical distinctions were probably not important to him since they served no practical purpose.

Critique of Mozart's Approach

Mozart's is a brilliant approach, yet, perhaps, too sophisticated for Ployer, who could barely form notes properly with a pen. His pedagogy incorporates the most important

theoretical tenets of the century and integrates them in an original way. His extensive application of voice-leading paradigms in particular places Mozart in a type of pedagogical avant-garde. That Ployer was unable to successfully internalize this approach in a short time, coming, as she did, from a background weak in the fundamentals, is not surprising. Mozart was the genius prodigy; Ployer was the talented pianist but routine sophomore theory student. Mozart would have had greater luck with a student like Thomas Attwood, though he was, perhaps, too capable as a composer to have found himself wrapped up in the completion of harmonization exercises.

The Attwood Studies, which contain an extensive and detailed study of counterpoint, thoroughbass, and free composition, are of a fundamentally different nature and scope than those of Ployer. Placed side-by-side with the Ployer Studies, they contain a comparatively exhaustive record of what Mozart could accomplish as a theory teacher, given an appropriate amount of time and a capable student.

The basic difference between the two sets of studies lies, no doubt, in the fact that Thomas Attwood (1765-1838) possessed greater interest and ability than Ployer. According to his own autobiographical account, he was sent by the Prince of Wales (later George the IV) to Italy, where he studied composition with Filippo Cinque and Gaetano Latilla. By August 1785 he was in Vienna, beginning his year-and-a-half study with Mozart. He returned to London in the spring of 1787 to a significant career that culminated in a position as organist at St. Paul's Cathedral—a post he held nearly until his death.[1]

It appears that Attwood brought out the most in what Mozart could offer as a composition teacher. There is, for example, greater attention paid to the initial discussion of issues like counterpoint and thoroughbass. Indeed, the fact that the first pages of these subjects can be clearly located at all sets the lessons and their presentation of the material

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[1]See Daniel Heartz and Alfred Mann, eds.,*Thomas Attwoods Theorie- und Kompositionsstudien bei Mozart* (Kassel: Bärenreiter, 1965). For a brief overview of the progress made by Attwood over the course of his study, see Daniel Heartz, "Thomas Attwood's Lessons in Composition with Mozart," *Proceedings of the Royal Musical Association*, vol. 100 (1973-74).

apart from those of Ployer. Attwood may have coaxed from Mozart more of the information that Leopold himself had imparted to his son, for it seems that in these lessons Mozart called upon a great wealth of pedagogical knowledge, the likes of which may have come from his own experience as a former student of his father.

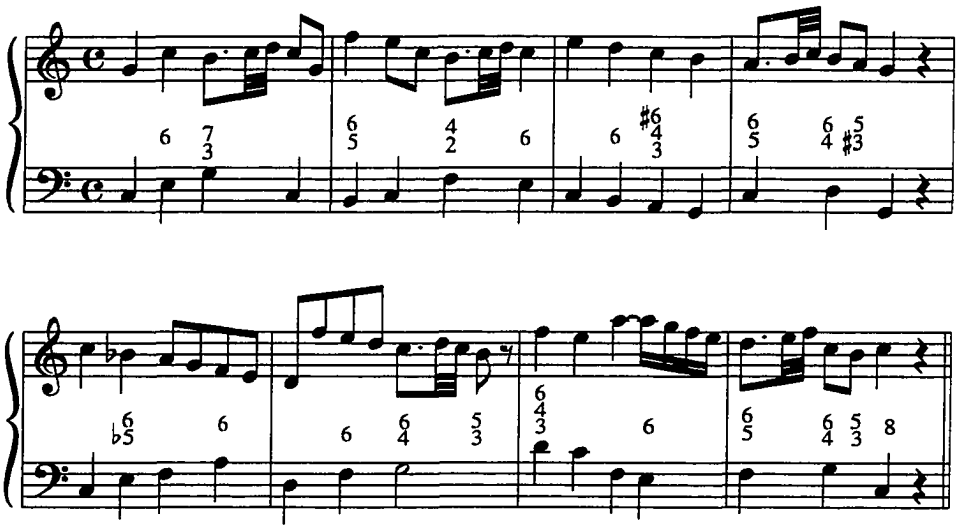
In general, there is in the Attwood Studies a greater sense of security, both in the way in which the information is presented by Mozart and in the manner in which it is completed by Attwood. Gone entirely is the diagnostic phase of the lessons, with which, I suspect, the work with Ployer began. It seems as if Mozart knew exactly what Attwood needed to know and proceeded to give it to him from the ground up. With thoroughbass and counterpoint in particular, Mozart began with a careful explanation of the basics before going on to more complicated issues. For example, he and Attwood worked together through all five species in two parts, then proceeded to three-part counterpoint and, eventually, to canon and fugue. It is clear that Mozart's intention was to communicate the full depth of the species approach, in all its complexity, rather than the tangential role it plays in the Ployer Studies.

The slightly later date of the Attwood Studies—1785 compared to 1784—cannot, alone, account for the difference in tone of the lessons, as if Mozart carefully read Fux's *Gradus* after the Ployer lessons and reproduced its pedagogy shortly thereafter for Attwood. Rather, it seems that the difference between Attwood and Ployer themselves accounts for the vast difference between the two sets of lessons. Ployer certainly would have benefited from the kind of detailed approach present in the Attwood Studies, but her relationship with Mozart seems primarily founded on her abilities as a pianist rather than as a composer.

The two sets of studies are not without similarity, perhaps the greatest of which appears in the early, four-part exercises in free composition that contain a fundamental bass. However, the fundamental bass in the Attwood studies is clearly analytical in function, rather than generative, as it most often is for Ployer. Attwood was clearly beyond

the level of merely setting basses to melodies (though one such exercise does appear, whose second phrase even contains a manifestation of voice-leading paradigm A).

Example 13-1. Mozart's melody harmonized by Attwood. Note the resemblance to the "Benedictus" in the first phrase and the manifestation of voice-leading paradigm A in the second phrase.



Attwood soon began to write works for string quartet—not just the inner voices above a figured bass, as Ployer had done. In these Mozart's suggestions are, at times, extensive, though his contributions are mostly concerned with improving Attwood's original work, not in designing exercises themselves. Surely there is a pedagogical bent, but its focus is nothing like that which he directed toward Ployer in order to wring from her all she and her ability could provide.

The degree to which Mozart made use of paradigms in his own music is difficult to determine. One has to remember that, in the Ployer Studies, they are a pedagogical device rather than an expressive one. Mozart simply would not have had the need to employ them in his own compositions; though the very fact that I can call this or that exercise the "Benedictus," "Priest's March," or "Jupiter" says something about their relation to Mozart's own work, as even Lach suspected.

I believe that the closest the paradigms come to appearing in Mozart's works is not at the surface level, as in the harmonization exercises, but at the middleground level. Recall that one of the basic attributes of paradigm A is the interruption figure $\hat{3}$ to $\hat{2}$. To say the least, this structure has a broad application, not only in Mozart's music. It would, of course, be far beyond the bounds of this study to detail the connection, if any, between this paradigm and interruption in Mozart's music, but I can point to other instances in which paradigms are applied in eighteenth century music and suggest possible courses for further study.

One need only look at the various mid-century writings designed to aid dilettantes in the composition of simple pieces, primarily dance movements, to see another practical application of paradigms.[2] All these treatises describe a composition method by which one can pick and choose between various elaborations of an underlying chord progression. The progression acts exactly like the voice-leading complex mentioned in Chapter 8, page 125. Like the different guises of the melodic patterns, the variations move between the different strands of voice leading. The basic difference between what are essentially parlor games and Mozart's paradigms is that the chord progressions in the former are more regulated, perhaps one chord per measure, in order to facilitate their mindless creation. The number of possible outcomes is determined by the length of the piece, the number of variations fashioned by the designer, and by the interest and time commitment of the "composer." Often such accessories as dice or spinning tops could be used to make the selection of variations more exciting.

These types of games did not appear much before the middle of the eighteenth century, the point at which practice and theory had evolved to the point where such structures could be objectified, classified, and manipulated. An excellent avenue for further study would be to investigate the various factors that led to the creation of musical

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[2]Stephen A Hedges, "Dice Music in the Eighteenth Century," *Music & Letters* 59 (no. 2 1978), 180-187.

structures such as these. Their nascent form could certainly be traced back to the recognition of the triad as a structure unto itself. More central to such a study would perhaps be the development of thoroughbass as a means for classifying vertical sonorities. In their most banal form, the structures are the basis for the dice games mentioned above. In their most influential form, however, they are the very basis for the voice-leading structures first uncovered or, perhaps, rediscovered by Schenker. How did these paradigms filter up from the foreground of, say, dice games or harmonization exercises to the middleground structure of sonata-form movements?

The harmonization exercises have, of course, been the focus of this study. The voice-leading paradigms contained therein are easily recognizable and their function within Mozart's pedagogy readily comprehensible. The harmonization exercises, though, stand in contrast to the other significant type of piece in the lesson book, the string quartet settings, in profound ways. Though some of the quartet settings are, indeed, based on some of the same paradigms, they have for the most part completely different structures, some even incomplete. Their primary purpose appears to have less to do with structure in particular and more with composition in general.

This basic difference points to another gap, conceptual rather than hierarchical, one between theory and practice. Yes, music can be "assembled" through the patching together of various phrases or progressions, testifying to achievements of compositional theory that at least recognize and categorize these elements. But what Mozart divulges in the string quartet settings is not merely this or that element of suspension or modulation but pedagogical topics such as these achieved with compositional freedom and, in some cases, beauty. The "Novello" setting is a glimpse outside the confines of what can easily be described and communicated from master to student into the world of composition as art, a world understood perhaps only instinctively by genius and only theoretically by others.

APPENDIX 1

Mozart and the Cadential Six-Four Chord

Nearly every cadence in the harmonization exercises includes what modern theory calls the cadential six-four chord. In the middle and later parts of the eighteenth century, there were two schools of thought regarding its harmonic derivation. One understood the chord to be an elaboration above the dominant, the other considered it to be a second inversion tonic. Rameau had a foot in each school. A handful of examples from other composers cited in the *Traité* of 1722 tangentially suggest that he considered the cadential six-four to be an inverted tonic.[1] But none of Rameau's own examples, throughout the entire *Traité*, contain a cadential six-four chord. In instances in which one might appear, he prefers instead a five-four chord. Later, in his *Code de musique pratique* of 1760, Rameau was of the opinion that the cadential six-four chord was formed by suspending the tonic over the dominant, when it preceded the dominant directly.[2] However, when chords other than the tonic preceded the dominant, he understood the six-four chord to be a second inversion tonic.

There were others who considered the cadential six-four to be a consonant, second inversion of the tonic. Georg Andreas Sorge (1703-1778), though he was aware of the

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[1]See Example II.7 in the Gossett translation, p. 76. Here Rameau excerpts a passage from Charles Masson's *Nouveau traité des règles de le composition...*(1697) to show an example of an irregular cadence in inversion; we might analyze the cadential portion of the passage as II4/3 to V6/4-5/♯ in G minor. Rameau, however, omits the resolution of the six-four chord. As is typical of an irregular cadence, the fundamental bass falls a fourth from *c* to *G*, which he evidently understands as the root of the six-four chord. His Example II.18 (Gossett, 99), again taken from Masson, shows a cadential six-four as an inverted tonic much more clearly.

[2]Rameau, *Code de musique pratique, ou méthodes pour apprendre la musique...avec de nouvelles réflexions sur le principe sonore* (Paris: Imprimerie royale, 1760). He perhaps held this view even as early as 1740, as seen in his "L'art de la basse fondamentale" (Ms., ca. 1739-44). See Thomas Christensen, "Rameau's 'L'art de la basse fondamentale'," *Music Theory Spectrum* 9 (1987), 18-41.

cadential six-four chord's dependence on the following five-three, considers it to be generated by the tonic.[3] Friedrich Wilhelm Marpurg (1718-1795), a friend of Leopold Mozart's, also understands the chord to be in second inversion.[4]

Johann Philipp Kirnberger (1721-1783) differs from both schools. He is often credited as being the first theorist to write about the dual nature of the six-four chord in which it is sometimes consonant and sometimes dissonant. To him the cadential six-four chord, in particular, was dissonant.[5]

Mozart's interpretation. Mozart, apparently, adhered to neither of these schools. Surprisingly, he distinguishes even among cadential six-four chords, those that are consonant and those that are dissonant. Daniel Heartz, in the *Critical Report* to the Attwood Studies, notes that the type of cadence—half or authentic—plays the deciding role.[6] Gernot Gruber sees that it is primarily the metric placement of the six-four chord and the way in which the fourth is quit that determines the chord's consonance or dissonance.[7]

According to Heartz, Mozart's concept of the chord can be summarized as follows: when the chord appears at an authentic cadence, it is a second inversion tonic—therefore, consonant; when it appears at a half cadence, it is an elaboration above the dominant—

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[3]Georg Andrea Sorge, *Vorgemach der musicalischen Composition; oder, Ausführliche, ordentliche und vor heutige Praxin hinlängliche Anweisung zum General-Bass...* , 3 vols. (Lobenstein: the author, 1745[-47]). See in particular Vol. 2, Part 2, Chapter 1, Table 14, Figure 4.

[4]Friedrich Wilhelm Marpurg, *Versuch über die musikalische Temperatur, nebst einem Anhang über den Rameau- und Kirnbergerschen Grundbaß* (Breslau: Johann Friedrich Korn, 1776), 218ff.

[5]Kirnberger, *Die Kunst des reinen Satzes in der Musik, aus sicheren Grundsätzen hergeleitet und mit deutlichen Beyspielen erläutert.* See 71ff in the Beach translation. For a historical account of the six-four chord see David Beach, "The Functions of the Six-Four Chord," *Journal of Music Theory* 11 (no. 1, Spring 1967), 2-11.

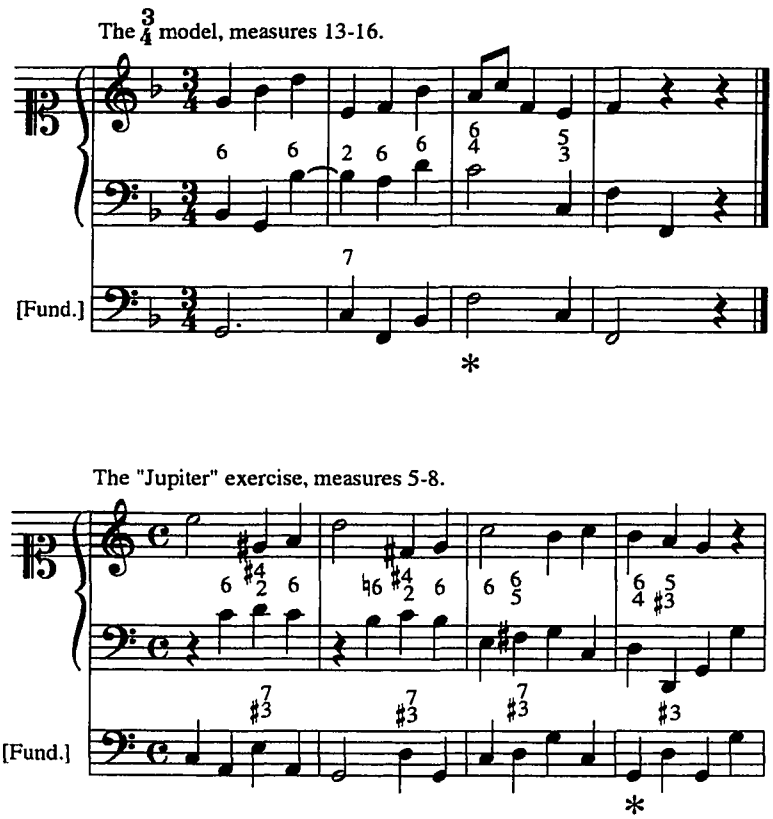
[6]Daniel Heartz and Alfred Mann, *Kritische Bericht* to *Serie X, Werkgruppe 30, Band 1: Thomas Attwoods Theorie- und Kompositionsstudien bei Mozart* in *Neue Mozart Ausgabe* (Bärenreiter: Kassel, 1969). See 55ff.

[7]Gernot Gruber, "Zu Mozart's Lehre in 'basso fondamentale'," in *Gedenkschrift Hermann Beck*, eds. Hermann Dechant and Wolfgang Sieber (Laabe, 1982), 128-131.

therefore, dissonant. All of Mozart's fundamental basses in the Ployer and Attwood studies, with only a single exception, reflect this interpretation.[8]

Example A-1 shows all the authentic cadences in the Ployer Studies containing a cadential six-four in which Mozart provides a fundamental bass; in each instance Mozart's analysis indicates that these chords are consonant, second inversion tonics.

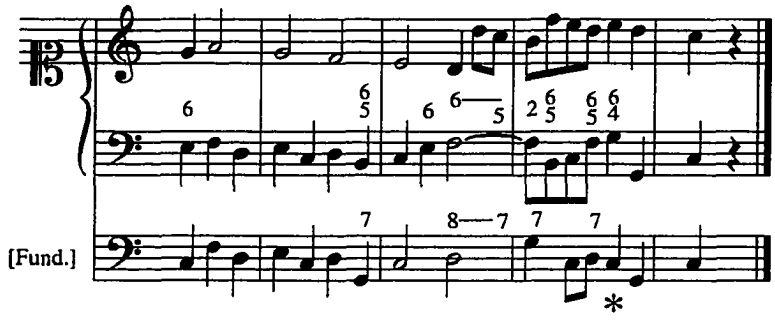
Example A-1. Authentic cadences containing consonant cadential six-four chords. The cadential six-four chords are marked with an asterisk.



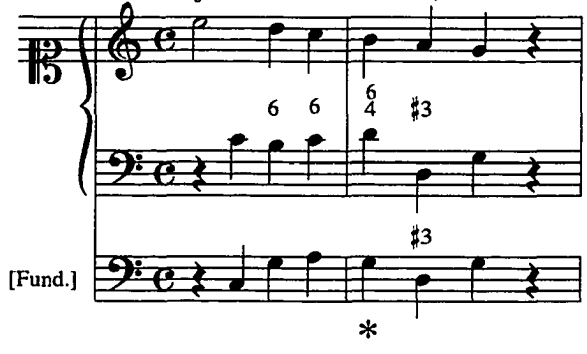
[8]Heartz writes that Mozart's fundamental basses in the Ployer studies are not intended as analyses of harmonic function. Rather they serve much like a Roman numeral "analysis," in which the student could easily see the relationship between the inverted chords and their roots. However, the fact that Mozart, even in the Ployer Studies, discerns both a consonant and a dissonant six-four chord weakens this position.

Example A-1, continued

The "Jupiter" exercise, measures 13-16.



The C-major model from folio 10b, measures 4-5.

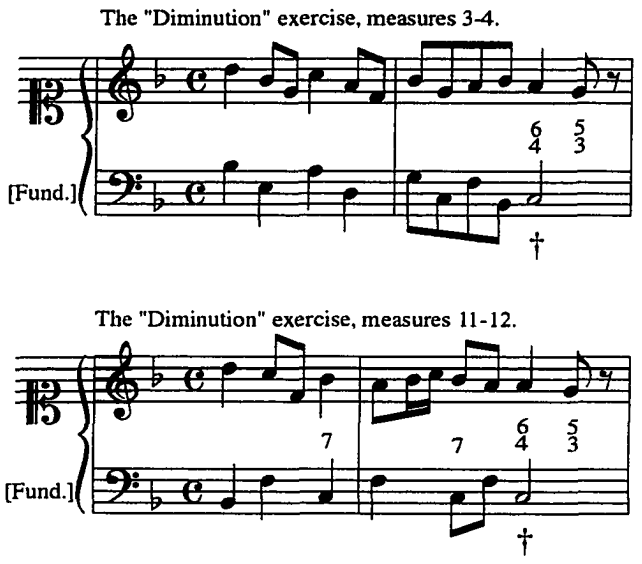


In this example, all of Mozart's fundamental basses indicate that the authentic cadences occurs from weak beat to strong beat, as per Rameau's idea regarding the metric placement of cadences.[9]

Example A-2 shows two of the three phrases in the harmonization exercises that end with half cadences and have cadential six-four chords. Mozart's analysis shows that these two are dissonant. Again, notice that Mozart's interpretation allows the cadence to be reached on a strong beat.

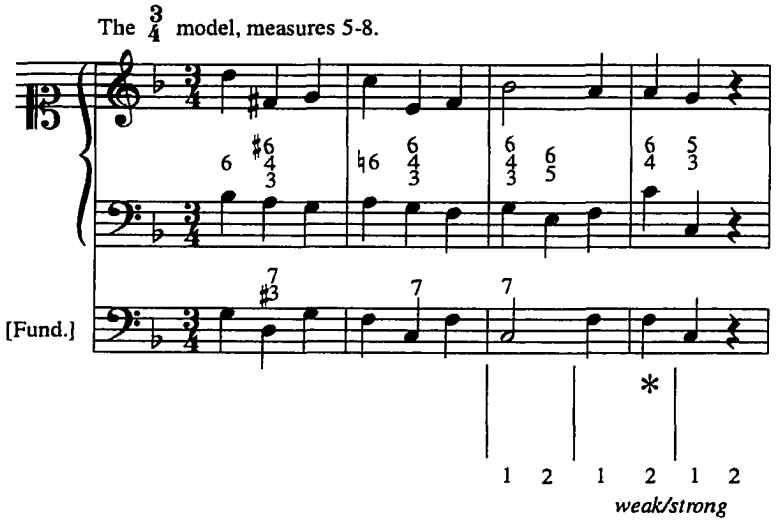
[9]See Chapter 8 from the *Code de musique pratique.*

Example A-2. Dissonant six-four chords at half cadences.[10]



Example A-3 shows a consonant six-four chord at a half cadence—the only anomaly in all of the exercises in both the Ployer and Attwood Studies in which Mozart himself supplied the fundamental bass.

Example A-3. The $\frac{3}{4}$ model, which shows a consonant six-four chord at a half-cadence—and apparent anomaly in Mozart's analyses of cadential six-four chords.

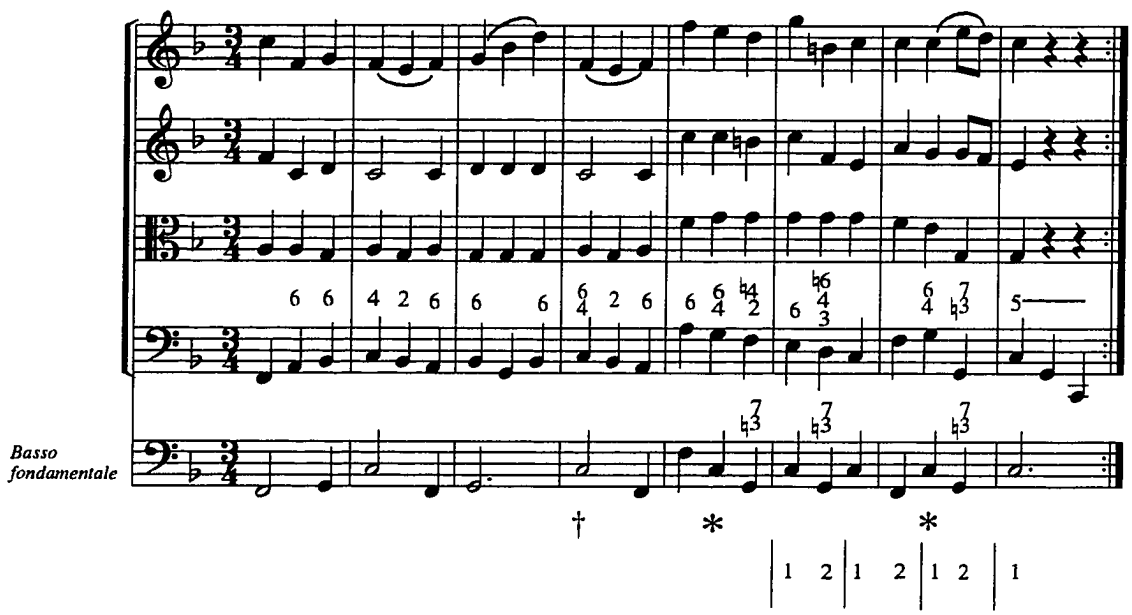


[10]I omit the continuo parts to these passages because none appears to be composed by Mozart.

Mozart's analysis is particularly interesting because the phrase is so similar to those just shown in Example A-2 where a similar six-four is dissonant; indeed both phrases are manifestations of the half-cadence form of voice-leading paradigm A. Perhaps Mozart understood a hemiola rhythm in the last two measures that joins the two tonic chords together, thus allowing the half cadence to fall on a strong beat.

The Attwood Studies contain many more examples of both types of cadential six-four chords. However, most of these fundamental basses are in Attwood's hand, not Mozart's. Example A-4 shows the only exercise—the first period of a *Menuetto*—in which Mozart supplied the fundamental bass. Here Mozart recognizes three different types of six-four chords. It appears that Mozart was sensitive to the context in which each appeared, particularly the metric placement, and adjusted his analysis accordingly.

Example A-4. *Menuetto* from the Attwood Studies, vol. IV, 3. The outer voices and fundamental bass are by Mozart. Consonant six-four chords are marked with an asterisk while dissonant ones are marked with †.



The cadential six-four in the authentic cadence in measure 8 is consonant, as in the examples shown above. The similarly accented six-four chord in measure 4, however, is dissonant—this despite that fact that the melody suggests a perfect authentic cadence. Once again it seems that Mozart chooses the dominant in the fundamental bass because of its metric emphasis. To call the six-four consonant, with *F* in the fundamental bass, would go against the weak to strong progression which coincides with the rising fourth, *G-c*, between measures 3 and 4. Mozart's interpretation is sensitive to the fact that it is the dominant chord, not the tonic on the third beat, that receives the greater metric accent. In measure 5, Mozart analyzes the passing six-four as consonant, as perhaps all eighteenth-century theorists might have done.[11]

Summary. After examining the relevant passages from both sets of studies, it seems that a comprehensive understanding, which encompasses the main features from Heartz's and Gruber's study, best describes Mozart's interpretation of the cadential six-four.[12] The type of cadence involved does, indeed, play a primary role, but the metric context in which the cadence appears also influences the chord's disposition.[13]

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[11]In measure 2, Attwood writes, contrary to Mozart's figures, a six-four chord on the downbeat. Presumeably, Mozart wants five-four rather than six-four.

[12]The chart in which Gruber categorizes the cadential six-four chords in the Attwood Studies contains one significant error. It appears in the section listing cadences in which the fundamental bass of the cadential six-four chord is $\hat{5}$. His first example, from page 169 measure 7 of the Attwood studies, is said to be a half cadence, "Halbschluß"; it clearly is, rather, an authentic cadence, "Ganzschluß," in the dominant.

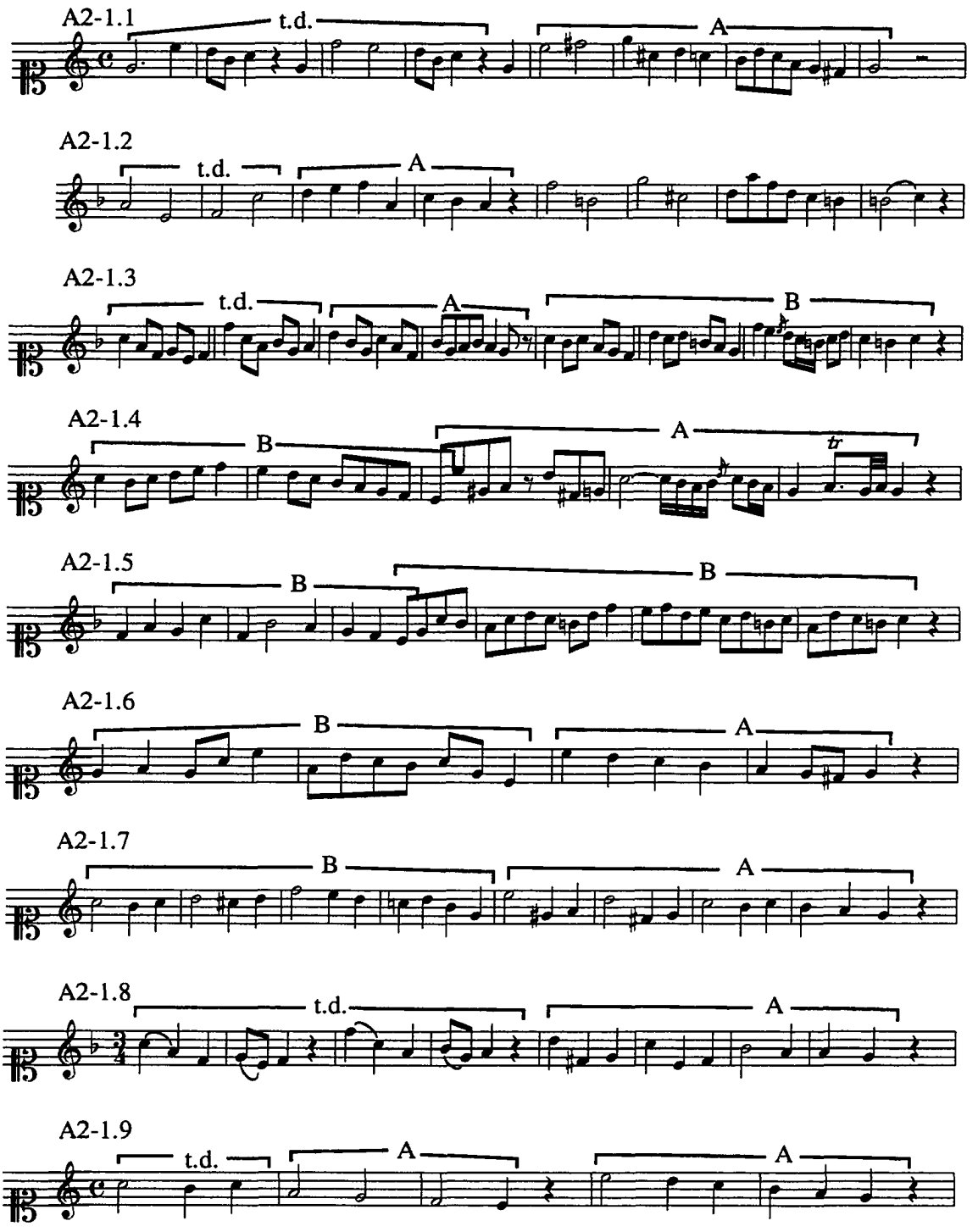
[13]John Hind Chesnut interprets the evidence somewhat more equivically, and finds less consistency in Mozart's interpretation of the cadential six-four chord. See Chesnut, 1976, 307ff. Also see Lester's discussions of the cadential six-four, Lester, 1992.

APPENDIX 2

Location of Voice-Leading Paradigms in the Harmonization Exercises

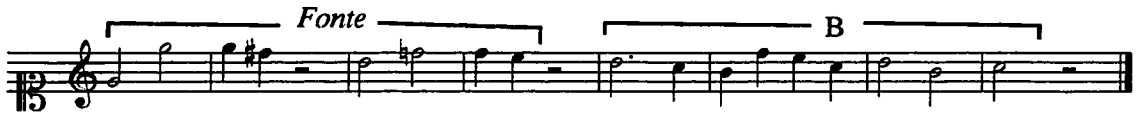
Examples A2-1 and A2-2 present the melodies of the eight harmonization exercises (plus the "Priest's March") that Mozart gave to Ployer. Example A2-1 shows the first periods of the exercises, Example A2-2 the second; absent from the examples are all of Mozart's and Ployer's harmonizations of the melodies (which are discussed in Chapters 8-10) and all fundamental basses, Ployer's as well as Mozart's.

Example A2-1. First-period melodies (t.d. stands for tonic/dominant).

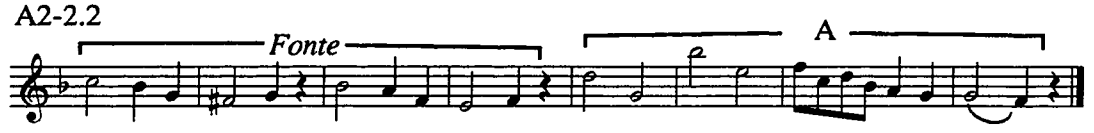


Example A2-2. Second-period melodies.

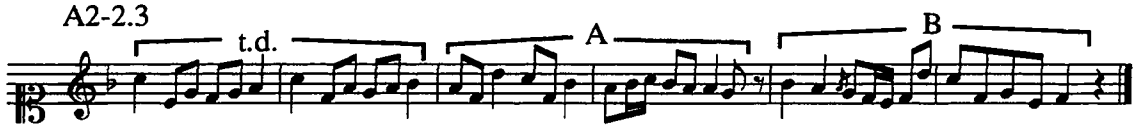
A2-2.1



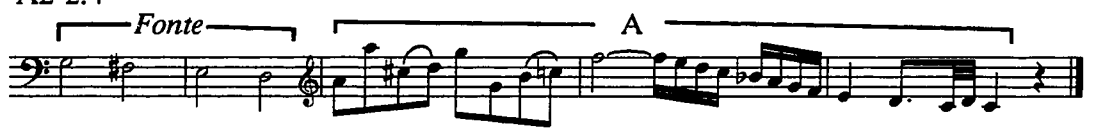
A2-2.2



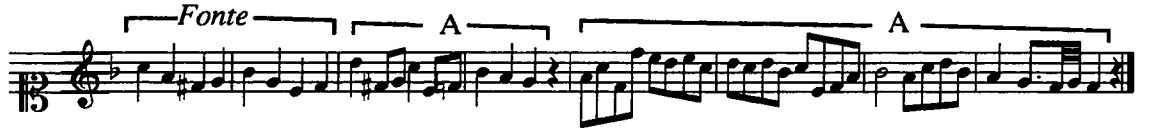
A2-2.3



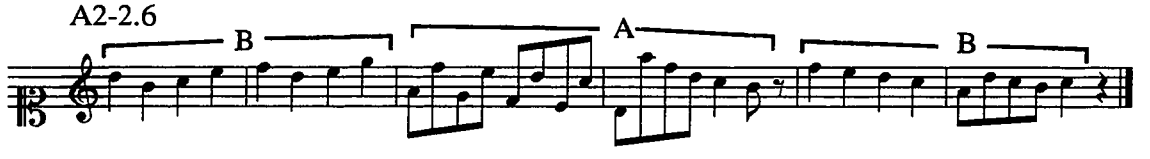
A2-2.4



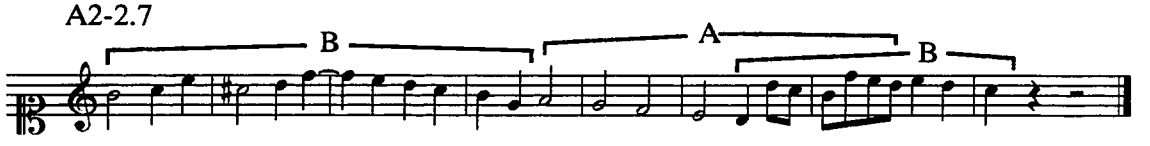
A2-2.5



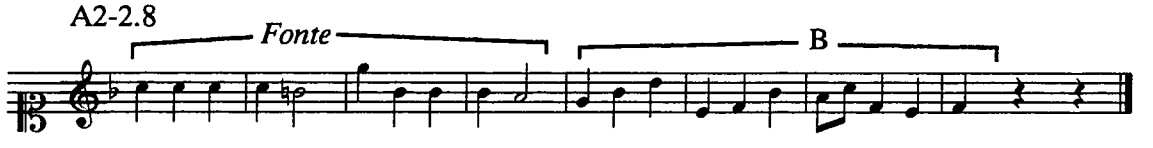
A2-2.6



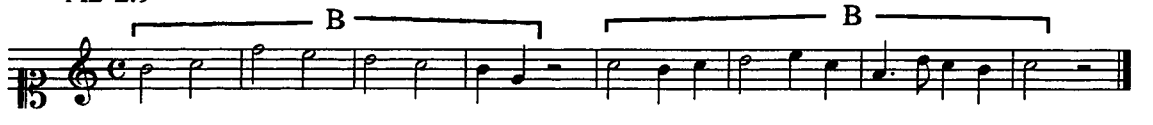
A2-2.7



A2-2.8



A2-2.9



The following tables locate each occurrence of voice-leading paradigms A and B, Riepel's *Fonte*, and tonic-dominant alternations.

Table A2-1. Voice-Leading Paradigm A

Authentic-cadence form	A2-1.1, The "Benedictus" exercise, Folio 1a, mm. 5-8. A2-1.4, C-major keyboard model, Folio 3b, mm. 3-5. A2-1.6, C-major exercise, Folio 9a, mm. 3-4. A2-1.7, The "Jupiter" exercise, Folio 4b, mm. 5-8. A2-1.9, C-major model, Folio 10b, mm. 2-3. A2-1.9, C-Major model, Folio 10b, mm. 4-5.	
Half-cadence form	A2-1.3, The "Diminution" exercise, Folio 3a, mm. 3-4. A2-1.8, "♮"-major exercise, Folio 9b, mm. 5-8.	A2-2.3 The "Diminution" exercise, Folio 3a, mm. 11-12. A2-2.5, F-major exercise with partial fundamental bass, Folio 4a, mm. 9-10. A2-2.6 C-major exercise, Folio 9a, mm. 7-8.
Conclusive form		A2-2.2 The "Priest's March" exercise, Folio 1b, mm. 13-16. A2-2.4, C-major keyboard model, Folio 3b, mm. 8-10. A2-2.5, F-major exercise with partial fundamental bass, Folio 4a, mm. 11-14. A2-2.7 The "Jupiter" exercise, Folio 4b, mm. 12-16.
Incipient form	A2-1.2, The "Priest's March" exercise, Folio 1b, mm. 3-4. A2-1.9, C-major model, Folio 10b, mm. 2-3.	

Table A2-2. Voice-Leading paradigm B

Initial form	A2-1.4, C-major keyboard model, Folio 3b, mm. 1-3. A2-1.5, F-major exercise with partial fundamental bass, Folio 4a, mm. 1-3. A2-1.7, The "Jupiter" exercise, Folio 4b, mm. 1-4.	A2-2.6, C-major exercise, Folio 9a, mm. 5-6. A2-2.7, The "Jupiter" exercise, Folio 4b, mm. 9-12. A2-2.9, C-major model, Folio 10b, mm. 6-9.
Modulatory form	A2-1.3, The "Diminution" exercise, Folio 3a, mm. 5-8. A2-1.5, F-major exercise with partial fundamental bass, Folio 4a, mm. 3-6.	
Cadential form	A2-1.6, C-major exercise, Folio 9a, mm. 1-2.	A2-2.1, The "Benedictus" exercise, Folio 1a, mm. 13-16. A2-2.3, The "Diminution" exercise, Folio 3a, mm. 15-16. A2-2.6, C-major exercise, Folio 9a, mm. 9-10. A2-2.7, The "Jupiter" exercise, Folio 4b, mm. 14-16. A2-2.8, 𝄞-model, Folio 9b, mm. 13-16. A2-2.9, C-major model, Folio 10b, mm. 10-13.

Table A2-3. Riepel's *Fonte*

Fonte	A2-2.1, The "Benedictus" exercise, Folio 1a, mm. 9-12. A2-2.2, The "Priest's March" exercise, Folio 1b, mm. 9-12. A2-2.4, C-major keyboard model, Folio 3b, mm. 6-7. A2-2.5, F-major exercise with partial fundamental bass, Folio 4a, mm. 7-8. A2-2.8, 𝄞-model, Folio 9b, mm. 9-112.

Table A2-4. Tonic-Dominant Alternations

Tonic-dominant alternations	A2-1.1, The "Benedictus" exercise, Folio 1a, mm. 1-4. A2-1.2, The "Priest's March" exercise, Folio 1b, mm. 1-2. A2-1.3, The "Diminution" exercise, Folio 3a, mm. 1-2. A2-1.8, $\frac{3}{4}$-model, Folio 9b, mm. 1-4. A2-1.9, C-major model, Folio 10b, m. 1. A2-2.4, C-major keyboard model, Folio 3b, mm. 1-3.

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