Johann Philipp Kirnberger, Grundsätze des Generalbasses als erste Linien zur Composition (1781)

Robert Michael Fling

University of Iowa

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JOHANN PHILIPP KIRNBERGER,

GRUNDSÄTZE DES GENERALBASSES ALS ERSTE LINIEN

ZUR COMPOSITION (1781)

Translated and Edited by

Robert Michael Fling

Volume I

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts, in the Department of Music in the Graduate College of the State University of Iowa

August, 1964

Chairman: Professor Albert T. Luper
Treatises on thoroughbass are far from being rare items, but such essays available in English are somewhat less numerous. The present translation was undertaken with the hope that it would be a useful addition to the growing number of sources for keyboard practice of the eighteenth century. Kirnberger was a pupil of Johann Sebastian Bach, and he devoted a great part of his energies to perpetuating the teaching and methods of that master. Consequently, the Grundsätze des Generalbasses is often regarded as an attempt to formulate the keyboard method of Bach, a supposition seemingly supported by Kirnberger's several references to his teacher throughout the treatise. Our writer, however, does not provide detailed information on matters of interpretation, and for this reason his essay is somewhat less valuable as a source on the performance of Bach's works than the Versuch of Philipp Emanuel Bach. 1 Nevertheless, his comments on part writing are well worth the attention of the student of thoroughbass.

Perhaps more important than Kirnberger's opinions

on matters of performance are the theoretical concepts from which he derives them. He had definite ideas on the structure and function of chords, ideas that were often at variance with those of Rameau and other writers of his century. He has been described by a number of writers both of our time and of his own as one of the most important music theorists of the second half of the eighteenth century, yet none of his major treatises is available in English (though excellent surveys of his theories are given by Matthew Shirlaw and Joyce Mekeel, and translations of selected passages of the *Grundsätze* with a summary of it are contained in Frank T. Arnold's superb book).² Kirnberger's essay on thoroughbass is not the most important of his theoretical writings, but it does expose the major points of his harmonic concepts. Hopefully, students of the history of theory will also find this translation of value.

I wish to acknowledge my indebtedness to Professor Gerhard Krapf for making clear some of the more obscure passages of the German, and to Professor Albert T. Luper for his careful check of the translation and his helpful suggestions.

² See the Bibliography for the titles of works by the writers just cited.
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### FUNDAMENTALS OF THOROUGHBASS

**AS THE RUDIMENTS OF COMPOSITION**

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**PART TWO**

**Dissonant Chords, Particularly Chords of the Seventh**

**Origin of the Leading Tone**

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TRANSLATOR'S INTRODUCTION

Johann Philipp Kirnberger

The author of the Grundsätze des Generalbasses was born in simple circumstances on April 24, 1721, at Saalfeld in Thuringia. His father, Matthias Kernberg, was lackey to a prince. After attending the Latin School in Coburg, where he soon distinguished himself among his fellow pupils by his extraordinary memory, Kirnberger devoted his abilities entirely to music. He had learned the fundamentals of violin and keyboard playing in his home town, and he must have shown a lively interest and talent in the art, for his parents were persuaded in spite of their modest means to allow him to continue study with the celebrated organist Peter Kellner in Gräfenroda. Later, in 1738, he journeyed to Sondershausen where he received violin training from Johann Meil, and continued organ study with the court organist.

3. The best readily available biographies are those by Georg von Dadelsen in Die Musik in Geschichte und Gegenwart, ed. F. Blume (Kassel: Bärenreiter, 1949-), VII, 950-56; by Philipp Spitta in the Allgemeine Deutsche Biographie, 55 vols. (Leipzig: Duncker & Humbolt, 1875-1912), XVI, 24-26; and by Carl F. Ledebur in the Tonkünstler-Lexikon Berlin's (Berlin: Ludwig Rauh, 1861), 283-86. A more detailed discussion is found in Siegfried Borris's dissertation, Kirnberger's Leben und Werke und seine Bedeutung im Berliner Musikkreis um 1750 (Kassel: Bärenreiter, 1933). The present account is based largely on these.
Plate I

Engraved by Bollinger for the title page of the Allgemeine Musikalische Zeitung, Volume IX (1806-07)
Heinrich Nikolas Gerber, father of the lexicographer.

Both Gerber and Kellner, as pupils of J. S. Bach, acquainted Kirnberger with the music of that master, and eventually persuaded him to go to Leipzig for further study. He is said to have matriculated at Leipzig University in 1738, and to have enjoyed Bach's teaching in Clavier playing and composition for two years between 1739 and 1741, but no certain testimony of his presence in Leipzig during that time has been preserved. On the contrary, the fragments of his diary which survive tend to indicate that he remained in Sondershausen through 1740, and did not take up residence in Leipzig until January of 1741.\(^4\) It is therefore possible that his training with Bach lasted only a few months, because in June of the same year he left for Dresden. After a brief stay in that city Kirnberger journeyed to Poland where he spent ten years in the service of various magnates: in Tschenstochau as cembalist to Count Poninsky, in Lemberg as music director of a nunnery, in Ruowo (Wolhynia) to Prince Stanislaw Lubomirsky, and in Pedolina to Count Casimir Rzewusky.

In 1751 Kirnberger returned to Germany. After a brief residence in Coburg and Gotha he moved on to Dresden, and following a year of violin study with the chamber musician

---

Fickler he was engaged as violinist in the royal chapel of Frederick II in Berlin. In 1754, after obtaining royal permission, he exchanged this position for a similar one in the chapel of the Margrave Heinrich in Rheinsberg. Finally, in 1758, Kirnberger advanced to the post of court musician in the service of Princess Anna Amalia, the sister of Frederick II; he remained her teacher and musical advisor until his death in July of 1783.

As a composer Kirnberger is relatively unimportant. He wrote a number of simple naïve songs and odes, but his best works are for the keyboard; though a few of the latter approach the galant style of C. P. E. Bach, the greater number are imitative of the fugues of Johann Sebastian Bach. His position as an emulator of Bach and champion of the Baroque aesthetic, coupled with his cleverness and ability in dealing with contrapuntal forms, gained him an early reputation as an authority on learned music. His first compositions to be published, in fact, were a number of canons and exercises included by Marpurg in Part One of his Abhandlung von der Fuge (1753) as models to be followed.\(^5\)

Kirnberger's preference for fugues brought him both attention and veneration on the one side, and derision and misunderstanding on the other, as his contemporaries were unable to understand the seriousness with which he approached his art. His ability to write fugues free from external influence set him apart from his contemporaries, even if it did not enable him to achieve the same level of mastery as those who sought to emulate the styles of the great masters of the Baroque era.

\(^5\) Borris, 21.
standing on the other. His more "progressive" contemporaries, of course, considered him merely a skilled though reactionary craftsman, lacking in invention and originality. Burney did not hesitate to publish that fact:

Kernberger (1721-83), of Berlin, lately deceased, was a scholar of Seb. Bach, and possessed of great musical learning. His knowledge of counterpoint, and of all the laws and subtleties of canon and fugue, were indispensable. But in his compositions he is often dry and crude, and perpetually striving at new passages and effects, with which his invention did not very liberally supply him.6

Schubart said of him that "the fugues are certainly dull and wearisome, though worked out with great skill. What he has written for singing, however, is unbearable, set with a deathly cold heart, and thus without any effect."7 In spite of these assaults, Kirnberger continued to defend the honor and greatness of J. S. Bach with such fanaticism that he seemed somewhat ridiculous to his contemporaries.

That Kirnberger was a pedagogue in the first degree is evidenced by the number of his musical publications with


primarily a didactic purpose. Among these are his four-part collection, *Clavierübungen mit der Bachischen Applikatur in einer Folge von den leichtesten bis zu den schwersten Stücken* (Berlin: Bimstiel, 1762-66), for teaching the application of the fingering method of Philipp Emanuel Bach, and the *Recueil d'airs de danse caractéristiques pour servir de modèle aux jeunes compositeurs et d'exercice à ceux qui touchent du clavecin* (Berlin and Amsterdam: Hummel, 1777), which contains 26 pieces by different composers in various dance types for teaching young composers their characteristic beats.®

Kirnberger's accomplishments as a performer were no more immune to attack than his abilities as a composer, judging from Carl Friedrich Nicolai's comments in the *Anekdoten von König Friedrich II. von Preussen:*

Kirnberger has many good musical ideas, not only concerning analysis but also on the subject of composition; he deserves full credit as a theorist. But he is unable personally to bring any of his ideas to good musical fruition, perhaps because of insufficient talent. His aim is not to see good music performed but merely to find music containing "errors" so that he may make learned -- and often violent -- statements about the mistakes of others.

8. For a list of Kirnberger's musical publications, both of his own works and those of other composers, as well as of his music in manuscript sources and in modern publications, see Georg von Dadelsen, 953, 955.

As a performer he has practically no skill at all, except when playing his own compositions; his sense of rhythm is particularly uncertain.

Kirnberger's activities culminated in the last decade of his life in a series of bitter exchanges with Marpurg, who envied him his growing reputation as a theorist. These polemics, begun on the relatively lofty plane of theoretical discussion, ultimately descended to the realm of name-calling; Marpurg is said to have constructed a canon to the words:

Kirn- Kirn- Kirn- Kirnberger hat kein Gehirn!

...to which Kirnberger replied:

Mar- Mar- Mar- Marpurg ist ein Narr!

Embittered by opposition and disappointment, Kirnberger withdrew with his faithful pupils and friends -- Princess Amalia, Schulz, Sulzer, Forkel, Cramer, later Reichardt, Fasch, and Zelter -- and devoted his remaining years to theorizing and advancing the cause of masters of earlier generations, particularly J. S. Bach. To this end he was responsible for the


first publication in score of Hassler’s Psalmen und christlichen Gesänge (Leipzig: Breitkopf, 1777), a four-volume edition of Carl Heinrich Graun’s Duetti, Terzetti, Quintetti, Sestetti ed alcuni chori (Berlin und Königsberg: Decker und Hartung, 1773-74), and an improved reprint of J. S. Bach’s chorale settings (Leipzig: Breitkopf, 1784-87). Just as imposing testimony to Kirnberger’s belief in enduring musical values is the library which he assembled for the Princess Amalia. Numerous works of Bach and his contemporaries survive today only because they were preserved in the Amalien-Bibliothek.

Kirnberger’s Writings on Music

The impulse to disseminate his theoretical knowledge came to Kirnberger from his pedagogical activity, above all through his position with Princess Amalia. She was well


13. After Amalia’s death this collection was incorporated into the library of the Joachimstalsches Gymnasium, cataloged by Robert Eitner, Katalog der Musikalensammlung des Joachimstalschen Gymnasium zu Berlin (Berlin: T. Trautwein, 1884), reprinted in Monatshefte für Musikgeschichte XVI (1884), 1-97.
acquainted with the particulars of his theoretical concepts and teaching methods, and she encouraged him to put his thoughts into order and make them available to others. Unfortunately, Kirnberger's insight into complicated theoretical problems was foiled by a surprising lack of knowledge of even some of the simplest extra-musical matters. His previously mentioned ability in memorization was apparently characterized more by swiftness of conception than by duration of retention; in later years virtually his entire course of education failed him.

After I dedicated myself wholly to music, the musical notes replaced everything that I had learned in school; thus I very easily incurred suspicion in scholarly people, for in my whole life I had scarcely seen a grammar book, or even a catechism, hymn book, or Bible, because by my twelfth year I could recite the Psalms, a number of passages from both the Old and New Testaments, and even all of the Gospels as if reading from a book.14

Consequently, Kirnberger had frequent recourse to the aid of his friends and pupils — particularly Schulz, Agricola, and Sulzer — in setting his theories down in a comprehensible manner. In a letter to Princess Amalia he elaborated on his difficulties:

I must confess that it lacks order, style, and God knows what all. . . . I have to write my thoughts

on only one side of half a sheet of paper, after which he \text{/Sulzer/} cuts each idea up and pastes the pieces together in a systematic order. The first part of my \textit{Kunst des reinen Satzes} and the collected \textit{musical} articles in the first part of his \textit{Theorie der schönen Künste} came into being in this manner.\textsuperscript{15}

\textbf{Der Polonaisen- und Menuetttencomponist}

Kirnberger's first theoretical-pedagogical work is \textbf{Der allezeit fertige Polonaisen- und Menuetttencomponist} (Berlin: G. L. Winter, 1757). In the same year a French translation appeared in Berlin under the title \textit{L'art de composer menuets et des Polonoises sur le champ}. The essay is a short pamphlet of nineteen pages which discusses the manner in which even an amateur can derive permutations of musical formulae for these dance patterns by throws of dice.\textsuperscript{16}

\textbf{Construction der gleichschwebenden Temperatur}

The \textbf{Construction der gleichschwebenden Temperatur} (Berlin: Birnstiel, 1760), consisting of only one leaf with an engraved plate, was also brought out in Paris by Beaucé as \textit{Nouvelle méthode d'accorder le pianoforte}. Kirnberger here

\textsuperscript{15} Ibid. Sulzer was not a musician, but an aesthetcian for whose \textit{Theorie} Kirnberger wrote a number of articles.

\textsuperscript{16} The essay was reviewed and the method elucidated by Marpurg in his \textit{Historisch-kritische Beiträge} III, 135-54. See also Hermann Gätler, "Musik und Würfelspiel," \textit{Zeitschrift für Musik} CIII (1936), 190-93.
advocates an irregular system of tuning involving an arithmetic division of the syntonic comma between the fifths D-A and A-E into two equal parts. 17

Kunst des reinen Satzes

Kirnberger's definitive theoretical work is Die Kunst des reinen Satzes in der Musik. Part One was first published in Berlin by Voss in 1771, and a second edition of it was brought out in 1774 by G. J. Decker and G. L. Hartung of Berlin and Königsberg, who also published the three sections of Part Two in 1776, 1777, and 1779. The work was intended as a summary of all Kirnberger's theoretical and practical musical knowledge, arranged in a functional order for systematic teaching; thus it incorporates the material of his earlier publications, as well as some material which appeared also in later monographs.

The contents 18 are as follows: "Part I. The scale and its tempering; intervals; chords; the character and use of chords and the intervals belonging to them (triad; chord

17. The system was attacked by Georg Tempelhof, Gedanken über die Temperatur des Herrn Kirnberger (Berlin und Leipzig: G. J. Decker, 1775). For further discussion of the system, see J. Murray Barbour, Tuning and Temperament (East Lansing: Michigan State College Press), 157-59.

18. As listed by Johann N. Forkel, Allgemeine Litteratur der Musik (Leipzig: Schwickertschen Verlag, 1792), 431.
of the sixth; consonant six-four chord; first, second, and third inversion of the chord of the seventh; the nature, use, preparation, and resolution of non-essential dissonances or suspensions); treatment of dissonant chords in the free style; harmonic periods and cadences; modulation; modulation to remote keys and abrupt transitions; harmonious and inharmonious melodic progressions; simple counterpoint in two and more parts; ornamented or variegated counterpoint. Part II. Section I. Various kinds of harmonic accompaniment to a given melody (in view of its correctness, and in view of its expression); the scale and the pitches and notes which occur therein (in old music church modes and in new music); melodic progression and flowing melody; motion, meter, and rhythm. Section II. Double counterpoint at the octave, tenth, and twelfth. Section III. Conclusion, on double counterpoint and canons."

Spitta states that an additional section on instruction in vocal composition and the character of the dance forms was intended, with a concluding section giving instruction in fugue.¹⁹

Though the Kunst was widely used as an instruction

book in composition for many years, it was probably intended as much to cultivate the composer's taste as to advance his technical knowledge; special prominence is given to the works of Johann Sebastian Bach (Volume II, pp. 45ff., includes solutions to the first six canons of the Musical Offering). Schweitzer, in fact, classifies the Kunst along with Philipp Emanuel Bach's Versuch as the most important productions which have come down to us from the school of J. S. Bach.  

Allgemeine Theorie der schönen Künste

For Johann Georg Sulzer's two-volume Allgemeine Theorie der schönen Künste (Leipzig: M. G. Weidmanns Erben und Reich, 1771-74) Kirnberger wrote the articles on music, "A" through "Modulation"; the remainder were completed by his pupil, J. A. P. Schulz. The work as a whole pronounces the formulas of the rationalistic Affektenlehre of galant art. Concerning the musical examples, it should be noted that for composition, melody, expression, and even counterpoint, fugue, chorale, etc., Kirnberger quotes exclusively from the works of Handel, Hasse, and Graun; on the other hand, the Kunst des reinen Satzes, Part One of which also appeared in 1771, is


based entirely on examples and the teaching of J. S. Bach. 22

Die wahren Grundsätze der Harmonie

As the title indicates, Die wahren Grundsätze zum Gebrauch der Harmonie... als ein Zusatz zu der Kunst des reinen Satzes (Berlin and Königsberg: G. J. Decker and G. L. Hartung, 1773) was intended as a complement to the Kunst des reinen Satzes, even though it appeared two years before Section I of Part II of the Kunst was first published. Fétis23 lists a second edition by Haslinger in Vienna, 1793. The work was claimed by Kirnberger's pupil and disciple, J. A. P. Schulz, though Kirnberger's name appears on the title page. In all probability, however, it is the production of the two men working in close collaboration.24 Since it contains perhaps the clearest explanation of Kirnberger's harmonic principles, it is usually listed among his works. It is somewhat shorter than the Kunst, concentrating on chord structure, fundamental bass, and the problems of musical analysis. The musical examples include a harmonic analysis

22. Ibid.


24. Siegfried Borris, 97-98, explores the relation of Schulz to the treatise.

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of the B minor fugue from Part One of Bach’s Wohltemperiertes Clavier.

Grundsätze des Generalbasses

Not Kirnberger’s most important theoretical work, but certainly his most popular one, is the Grundsätze des Generalbasses als erste Linien zur Composition (Berlin: J. J. Hummel, 1781). Undated reprints were made in Rotterdam, in Vienna by the Chemische Druckerei, and in Hamburg by Böhme, as well as in Munich, Mannheim, and Düsseldorf by Johann Michael Götz, and also in Offenbach by André and in Berlin by Lischke. The book was to have been dedicated to Kirnberger’s former patron, Frederick the Great, but in a letter of February 25, 1781, Frederick refused the "honor" because he thought the material being dealt with was old fashioned:

His Royal Majesty of Prussia, etc. Our most gracious lord cannot be persuaded that the announced work of the chamber musician Kirnberger in Berlin could contain anything new and of superior value to music and

25. According to Eitner, Quellen-Lexikon, V, 374.
26. Ibid.
musical composition, for thoroughbass was brought to a sure perfection many years ago. . . .29

The wide circulation of the Grundsätze indicates that Frederick's opinion was not universally shared. Also, even a cursory glance at the list of subscribers reveals the names of several members of royal houses, as well as a number of eminent musicians: Johann Friedrich Gottlieb Beckmann of Celle, and Johann Becker of Cassel, both regarded as among the finest organists of the time;30 J. J. Kannengiesser, a member of Frederick's chapel in Berlin; Johann August Just of Amsterdam, the organist Harson of the Marienkirche of Berlin, and Schulz of Reinsberg, all former pupils of Kirnberger; Johann Gottfried Schwanenberg, Kapellmeister of the court in Braunschweig; Johann Nikolaus Forkel in Göttingen; Johann Gottlob Naumann, Kapellmeister at Dresden; and Daniel Gottlob Türk, music director at the university in Halle and author of a later thoroughbass text, Kurze Anweisung zum Generalbassspielen (1791).31

In spite of the allusion to composition in the


31. The list of subscribers in the original is located on four unnumbered pages directly after the title page of Volume I. It is reproduced here in Appendix A, pp. 188ff.
title of the essay, Kirnberger's object is not only to pro-
claim the laws of harmony, but to teach pupils — specifi-
cally children — to play from a figured bass. The Grundsätze,
according to the author's preface, are concerned with the first
rules of harmony and thoroughbass, a subject slighted in his
Kunst des reinen Satzes.

As a keyboard instruction manual purporting to
give the fundamentals of music, the Grundsätze leave much to
be desired. The names of the notes and their position on
the keyboard are given at the outset along with the finger-
ings of all the major and minor scales, after which
Kirnberger begins immediately with thoroughbass; he does not
seem to share the opinion of Mattheson and Philipp Emanuel
Bach that a study of pieces for finger technique is necessary
before beginning with thoroughbass. There is no explanation
of rhythmic values, time signatures and meter, extra-note

32. For a general discussion of the contents and methods of
several eighteenth-century keyboard treatises (not includ-
ing the Grundsätzte) see Marvin John Bostrom, Keyboard In-
struction Books of the Eighteenth Century (Ph.D. Dis-
sertation, University of Michigan, 1961).

33. In the earliest phases of instruction Kirnberger advocates
the use of the old German nomenclature of the notes in
which all black keys except B-flat are regarded as sharps,
but only in the oral specification of the names; in
writing the notes he considers the use of either # or b
to be correct.

34. Arnold, 313.
groupings (triplets, etc.), or signs such as the fermata.
Neither is there any discussion of technique (position at the keyboard, use of the arms, etc.) or interpretation (tempo, ornamentation, the use of various characters of accompaniment for different types or moods of composition, etc.). The fingering of chords is dismissed with the statement that children may play them any way that they are able. Furthermore, Kirnberger does not always present his materials in the most convenient order; clef signs, for example, are not introduced until near the end of Part One and after more than 60 musical examples have already been presented. There are frequent digressions and redundant statements which he sometimes justifies as for the purpose of review. Perhaps he was relying on the resourceful teacher to seek whatever he needed wherever it might be, and to provide what was lacking. The musical examples, if judged against the text, are conspicuous for their excellence. They are copious, neatly engraved, and contain surprisingly few errors.

Kirnberger's presentation of thoroughbass is based upon his theory of harmony, of which the *Grundsätze* expose the essential points. He was above all a practical theorist,

35. Spitta, *Johann Sebastian Bach*, II, 299, citing the second edition of the *Allgemeine Theorie*, I, 194, states that Kirnberger held that the accompanist had only to add harmonies, and therefore ought to aim at simplicity and refrain from unnecessary ornaments.
strongly opposing concepts which he regarded as removed from the practical aspects of music, e.g., those of Rameau and his principal German disciple, Marpurg. In the Preface to Die wahren Grundsätze zum Gebrauch der Harmonie (see above, p.xxii) Kirnberger wrote:

Rameau has filled this theory of harmony with so many absurdities as to cause one fairly to wonder how such extravagances could ever have found acceptance among us Germans. . . . Those who are acquainted with Rameau's theory will, in the course of this work, soon perceive in what respects his theory and my own differ from each other, and which it is that explains most simply and most naturally the origin and treatment of chords.36

According to Matthew Shirlaw,37 the basic difference between Kirnberger and Rameau lies less in their resulting theories than in their approach to them; Rameau's was scientific, Kirnberger's was practical. Kirnberger seldom attempts to justify his theories by speculation or by acoustical phenomena; he is more concerned with the function of chords within a key than with their structure or origins. His observations are for the most part based on a common-sense aural approach.

Kirnberger bases his harmonic theory on the premise that there are only two fundamental chords from which all

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37. Ibid., 317-18.
other chords arise: the consonant triad, which may be major, minor, or diminished, and the dissonant "essential" seventh chord which may be the minor seventh with perfect fifth and major or minor third, the minor seventh with diminished fifth and minor third, or the major seventh with perfect fifth and major third. Like Rameau, Kirnberger rejects chords of the ninth, eleventh, etc.

Part One of the Grundsätze deals with the consonant triads. We are told that any note in the major, minor or diminished triad or any of its inversions may be doubled, except the major third of the dominant chord. Kirnberger regards the diminished triad on the leading tone to be an incomplete form of the dominant seventh chord, and therefore its bass, as third of the dominant chord, cannot be doubled. Any note of the diminished triad on the supertonic of a minor key, on the other hand, may be duplicated freely.

Kirnberger distinguishes two forms of the six-four chord. Heinichen and Mattheson had considered the six-four to be dissonant in all cases; Rameau recognized it to be consonant. Kirnberger splits the difference and recognizes a consonant form (the second inversion of the triad) and a dissonant form (discussed in Part Three) in which the four and

38. Ibid., 323.
six retard the three and five of the triad, or in which the
four alone retards the three of the chord of the sixth. In
the consonant six-four chord, any note may be doubled; in the
dissonant form, only the stationary notes may be duplicated.

Discords, according to Kirnberger, may be divided
into two classes: essential (wesentlich) and non-essential
(zufällig). The former occur only in chords which resolve
on a root that ascends a fourth or descends a fifth, in
other words, the chord of the seventh and its inversions;
it may occur on either weak or strong beats of the measure.
These are discussed in Part Two of the Grundsätze. The
second class of dissonances, discussed in Part Three, originates
in the modification by suspension or retardation of one or
more notes of a consonant or "essentially" dissonant harmony,
and may occur only on strong beats. The nature of these non-
essential dissonances may be disguised or complicated by being
taken without preparation (only in the free style), or by
ellision of the resolution. In the so-called strict style
all dissonances must be prepared and must resolve in the
same part; in the free style either type of dissonance may be
taken unprepared, and its resolution may occur in a different
voice. Neither dissonant notes nor the leading tone of a
key may be doubled.

Kirnberger's concept of essential and non-essential
dissonance is unique, and the most important part of his harmonic theory; it shows that in practical theoretical observation he had greater insight than either Rameau or Marpurg. Though his temperament and some aspects of his writing belong to an earlier generation, his doctrine of dissonance is of his own time, and indeed, is even reflected in the writings of a later generation. Riemann's remark that Fux's four rules and Rameau's building of chords in thirds represent the whole of Kirnberger's harmonic theory would seem to be a gross oversimplification.

**Verschiedenen Lehrarten in der Komposition**

In *Gedanken über verschiedenen Lehrarten in der Komposition, als Vorbereitung zur Fugenkentniss* (Berlin: Decker, 1782) Kirnberger examines the fugal style and rules of Angelo Berardi (*Documenti armonici*, 1687), Giovanni Maria Bononcini (*Musico pratico*, 1688), and J. J. Fux (*Gradus ad Parnassum*, 1725) and finds each inferior to the method of J. S. Bach. Berardi's method displays unity and character, he says, but it is not to be recommended because it, like


40. Ibid. For example, in the writings of Türk, Gottfried Weber, Kollmann, and others.

Fux's, is too strict; Bononcini's is less limiting, but this writer does not take care that the character of the initial theme dominate the entire composition.

**Anleitung zur Singekomposition**


**Methode Sonaten zu schüddeln**

Kirnberger's last theoretical publication, a short pamphlet titled *Methode Sonaten aus'm Ermel zu schüddeln* (Berlin: F. W. Birnstiel, 1783), is often regarded as having been written in jest.\(^2\) It consists of a method whereby a composer devoid of inspiration can borrow a figured bass from an existing source, write a new melody to go over it, and then contrive a new bass to go under that melody, thus producing

a "new" composition. Kirnberger demonstrates the method using the Gigue from J. S. Bach's Sixth French Suite in E as the source piece.

Notes on the Translation

The copy of the *Grundsätze des Generalbasses* in the State University of Iowa Library bears the imprint of J. J. Hummel of Berlin, the first publisher, but certain external characteristics indicate that it may be one of the numerous later reprints of the original 1781 edition. It is bound in two volumes, the first consisting entirely of text, and the second of engraved musical examples. Volume One measures 24 x 20 centimeters and is bound in a light brown paperboard cover which shows signs of heavy use. Except for the title page, which is printed from a single engraved plate, the entire volume is reproduced by letterpress. There are 88 pages of text numbered with Arabic numerals, preceded by six pages containing the preliminary preface, introduction, and table of contents numbered with Roman numerals; directly after the title page there are four unnumbered pages which contain the list of subscribers. This list was apparently added after the earliest printing of the volume; the only other copy of
the **Grundsätze** which has been available for examination\(^3\) does not include such a list. After the title page and preliminary ten pages (five leaves), there are eleven gatherings of four leaves each marked A, A₂, A₃, \(A₄\) through \(A₇\).

Volume Two measures 22 1/4 x 16 3/4 centimeters, and is bound in a cover similar to that of Volume One, but of lighter weight. The title page is printed from the same plate used for the first volume, but it bears the added inscription, "Nebst XXXXV Kupfretafeln" (sic) (see Plate II, next page). Both volumes of the Sibley Library copy carry these words. There are 45 pages of engraved musical examples. Though Volume One of the State University of Iowa copy corresponds in every detail (except for the added list of subscribers) with the first edition, some changes have been made in the examples of Volume Two. Most of these alterations occur in the last two pages of the volume and are concerned with figurings, such as \(4\)\(^1\) changed to \(4\)\(^\frac{1}{2}\). Variants such as these have not been noted in the translation. Major corrections, however, have been indicated at the proper places in the text.

The title pages of both volumes bear the inscription

\(^3\) A copy of the first edition held by the Sibley Music Library of the University of Rochester, reproduced in microcard form by the University of Rochester Press.
GRUNDSÄTZE DES GENERALBASSES
als erste Linien zur COMPOSITION
VON
JOHAN PHILIP KIRNBERGER,
Käf. xxxv. 2 Kappensfaden.

BERLIN bey J. J. HUMMEL,
In der Königlich Privilegierten Musikalien Icherey und Handlung.

Plate II
GRUNDSÄTZE DES GENERALBASSES
Title Page of Volume II

xxxiv
of a former owner: "Ad biblioth. music. J. N. Neubig." In Volume Two the name of another owner, F. Georg Kazel (Bazel?), and the year 1807 have been scratched out, presumably by Herr Neubig.

The treatise is divided into three main parts, which are further sub-divided into paragraphs or sections (§§), numbered continuously and without regard to the subject divisions of the parts. Some paragraphs have the same number, but are distinguished by sub-letters (§20a, §20b). Such paragraphs deal, in general, with the same material, presenting it in various ways so that the instructor may adapt his teaching method to the capabilities of the pupils. By some careless oversight, the division into numbered paragraphs ceases abruptly before the middle of Part Three, and it has proved impossible to determine just where §172 is supposed to end. To add to the confusion, the discussion entitled "Accompaniment in Many Voices," which closes the third main section, is divided into §§1-12. The first two parts are also divided into "lectures" (Vorlesungen) with such inequity that some lectures consist of only one sentence with reference to one short example, while others are a number of pages in length and refer to several long and difficult musical examples. Furthermore, the text contains subject headings scattered throughout which correspond to the subject
entries in the table of contents. Several of the headings in the table do not appear in the original text; these have been added in the translation. The hierarchy of lecture and subject heading, if any was intended, is not clear. In the table of contents, lectures have been placed in vertical alignment with each other, as have subject headings. If this translation were intended as a teaching manual for modern students of thoroughbass, revision of Kirnberger's lecture and paragraph divisions would be desirable; but as a source for students of eighteenth-century theory and performance practice, no logical purpose would be served in doing this. Also, since Frank T. Arnold, the principal English commentator on the Grundsätzte, refers to paragraph and lecture numbers, it has been thought best to leave the divisions in the same order and proportion as in the original.

The German is not easy. Kirnberger was a practical man, but he often allowed his pedantry to diminish the value of his writings. His theories and instructions are couched in exceedingly dry and humorless language, but in this respect he compares perhaps not too unfavorably with his contemporaries. More distressing are the frequently tortuous sentence structures and errors in grammar and punctuation. Some of these may conceivably be blamed on the printer, though Kirnberger himself admitted his difficulties in expressing his thoughts.
in writing, and, as has been mentioned above, was often aided by his pupils and friends when preparing essays for publication. He occasionally uses an archaic term, such as Verwechslung instead of the Umkehrung favored by his contemporaries for harmonic inversion, demonstrating his anachronistic turn of mind.

The nature of Kirnberger's German has governed the mode of translation. It seemed more desirable to attempt to present his thought in readable English than to reproduce his obscurities literally. Obvious errors have been corrected without note, punctuation has been altered radically to conform with modern English usage, and short paragraphs have been combined, or long paragraphs broken up, where subject matter warrants it. It has frequently been necessary to juggle Kirnberger's syntax and to use paraphrase to elucidate his meaning, but all additions to or interpretations of the original have been placed in brackets (\[\]) or removed to footnotes.

Rather than separating his notes from the main body of text, Kirnberger placed each one immediately after the point to which reference was being made; they are set in smaller type and introduced by the word Anmerkung. The same procedure has been followed here. Kirnberger's notes are
within the main text, single spaced and indented; all footnotes are by the translator.

The musical examples in the original are bound in a separate volume, divided into three parts corresponding to the three main parts of the text, the numbering beginning anew in each part. In the present translation the numbering has been continued after Part One instead of beginning anew after each part. A conversion table for the numbering of the examples is given in Appendix B, pp. 193ff. It was originally planned to interpolate the examples into the text in order to save the reader the necessity of handling two volumes. Some of the examples, however, are quite long, running to several pages, and some are referred to out of sequence; consequently it was thought better to provide the music in a separate volume, as in the original, to avoid constant page turning to search for the proper figure.
FUNDAMENTALS OF THOROUGHBASS
AS THE RUDIMENTS OF COMPOSITION
In my work on the art of correct composition I presumed the reader to have a knowledge of the fundamentals of music and thoroughbass; but many lovers of beauty have wished for these principles as well. This wish and my sincere desire to trace those precepts back to their original source, to form composers, to lay the foundation of a pure accompaniment, and thereby to be able to make the former work more generally useful, were influential enough to resolve me to promulgate these fundamentals of correct composition about which such fervent inquiry has been made.

To the amateur who wants to advance far in a brief time, these facts about music, which have been confirmed by experience, will seem tedious and will try his patience; but they are written for those who want to learn music in its entirety, to make a real study of it, and to relish the great pleasure which is attached to all study, but especially to sound and melody; they will not be tedious to these lovers of

beauty, and he who has not tasted the bitter has not deserved the sweet.
Introduction

For the young, the learning of thoroughbass is usually connected with many difficulties. Various teachers, therefore, do not begin to convey such thoroughbass to the children until they have spent several years merely in the acquisition of Clavier playing and have trained their fingers.

A great number of rules and applications, the comprehension of which requires more thought than can be expected from the young during their early years, when they are still unaccustomed to deliberation and are rather flighty in their thoughts, makes instruction a torment for them. Time is wasted, and everything that they have eventually learned is, nevertheless, no more than such machine-like elements as are only one part of the requirements for accompanying.

Even if they come so far as to learn the rules and fundamentals by heart, they still do not have a lucid notion of them, and the final imprint on their minds of a concept is lost in a short time. On the other hand it would be too long a delay if acquisition of thoroughbass were postponed until their power of comprehension had fully matured.

Therefore, without entering into advanced applications, I want to set down the rules here in all possible
brevity in a mechanical way to music-loving amateurs, ac-
cording to which one can lay the foundation and reserve the
advanced application itself for the mature years; the fol-
lowing essay may serve in lieu of the proof that the learning
of thoroughbass, in so far as I will discuss it here, is
possible for any age group, even past that of childhood.

It is, indeed, a mere prejudice if one believes
that children ought to first have control of their fingers
before they accustom their ears to full and pure harmony.
Since the ear is far more sensitive than the touch, and can
be easily spoiled, and is primarily the first means of per-
ception of the art of music, thus it is necessary to combine
the development of the former /i.e., the ear/ with the prac-
tice of the fingers so that the pupil may acquire the same
perfection, strength, and correctness in both simultaneously,
even though at first it comes about mechanically and by imi-
tation.

It is self-evident that this will depend on a good
method, a method which is appropriate to the budding mind of
a child, and according to which he gradually learns and so
completely absorbs the thoroughbass and its rules as to be
quite unaware of the difficulties involved, thanks to the ease
of the manner of teaching.

To be sure, at this stage one cannot hope for a
high degree of detailed comprehension of these rules, but
such a degree is not yet necessary, just as little as it is necessary that a child should know the reason why he must use the first, second, third, etc., fingers. But if the mind has developed properly, then it is not difficult to compensate for this deficiency, and a somewhat persistent scrutinization teaches the pupils to find the fundamentals very easily.

The capabilities of children, and a long experience which has taught me how to deal with them, should serve me, therefore, as a guide in dealing with thoroughbass, which I shall discuss here. I shall begin with the quite easy things, and gradually pass to the more difficult subjects.

The entire work is divided into certain lectures, and organized in such order as seems best to relate my principles.

Originally, I did not want to concern myself with fingering because Herr Capellmeister Carl Philipp Emanuel Bach of Hamburg has attended to that in a peerless manner in Part One of his Versuch über die wahre Art das Clavier zu spielen,\(^2\) applying the method of his father J. S. Bach.\(^7\) Nevertheless, it seemed to me to be advisable, and to the advantage of beginners who wish to learn thoroughbass per se, to begin with the major and minor (or hard and soft) scales,

\(^2\) See footnote 1, p. ii.
both ascending and descending, together with the accompanying fingering.

Regarding the fingering of chords, it is understood without my mentioning it that one must require the children, whose fingers frequently are not yet long enough, to play chords such as they are able to span with comfort; for this same reason one must also be very indulgent toward them regarding use of the thumb in place of the second finger.
First Lecture

§1. In the first hours of instruction one can be occupied with nothing other than that children be taught to know and find every key \[\text{on the keyboard}\]. Experience gained through much teaching has shown me how this may be done in the easiest and most efficient manner, and I intend to demonstrate this presently, without, however, hindering anyone in his \[\text{teaching}\] method.

Knowledge of the Keyboard

§2. It is obvious to every child that there are two kinds of keys on the Clavier. Some, which are called the white keys, lie next to one another in an uninterrupted row; the remaining, which are called black keys, proceed in degrees by twos and threes and are interrupted, as it were, by the white keys.

I have always noticed that children become acquainted with the black keys before the white; perhaps the arrangement of them contributes somewhat to this.

3. \textit{Untersten} (sic). In Kirnberger's day the keys were not universally white and black as on the modern instruments, hence he referred to them as \textit{unter}n and \textit{obern} (lower and upper) rather than "white" and "black."
One can accordingly use this to advantage and show them that the first (on the left) of the pair of adjacent black keys is called C-sharp, and the key lying next to it on the right is called D-sharp; then they may look for both C-sharp and D-sharp through all the octaves.

As soon as they have learned to find all of these notes without difficulty, one should proceed to the three adjacent black keys and tell them that the first (on the left) is called F-sharp, and the middle or second one to the right is called G-sharp, and the third is called B-flat; then they may also look for these notes through all the octaves.

§3. After these notes have been made clear to them and they know how to find them in all octaves, then they may also be taught the remaining notes and keys. They should be directed in the same way to the two adjacent black keys (C-sharp and D-sharp) and told that the white key directly to the left of C-sharp is called C, and the white key to the left of D-sharp is called D, and that E is on the right, adjacent to D-sharp. One should proceed thus through all the octaves.

The three adjacent black keys should be dealt with next. Tell the pupils that the white key directly to the left
of F-sharp is called F; the key to the left of G-sharp is G, and A is directly to the left of B-flat; the key lying directly to the right of B-flat is called B. Again, the pupils should search for and learn these keys in all the octaves.

In this manner children become acquainted with all the keys and notes without great difficulty. When they are prepared in this, they may be told, even with redundancy, that the white keys proceed from left to right in a natural order with the letter names C, D, E, F, G, to A and B.

§4. With this exercise children become naturally aware that different keys or notes [in different octaves] on the Clavier have identical names, and thus they must be taught the difference between notes of the same name. To this end, show them that the bottom C-sharp on the left is called "great," the first C-sharp after it is called "small" or "without-line;" following to the right is "one-line" middle C-sharp, next "two-line," and finally the highest is called "three-line" -- in order to distinguish each C [sharp] from the others. This also occurs in the case of all the remaining notes.5

5. Thus Middle C and the notes in the octave above it are distinguished by the use of a lower case letter with one line (c'), the octave above that by two lines (c''), and the octave above that by three lines (c'''). The octave below c' by a lower case letter without line, and the lowest octave by a capital letter. Kirnberger apparently had in mind an instrument with a range of between 4½ and 5½ octaves -- somewhat more limited than the modern pianoforte
5. For the purpose of a thorough comprehension of fingering, the children should become familiar with the following rules:

1. One ascends by steps on the Clavier.

2. In C major, half steps occur between E and F, and between B and C.

3. If any note at all is substituted for C as beginning note or tonic, then the half and whole steps occur anew in a like manner to their position in C major.

4. A whole step is present as soon as a mediant note lies between thirds.

5. The penultimate note before the octave of the tonic is called the leading tone, and this leading tone must always resolve to the tonic note, because the failure to do so would produce a complete disordering of the ear.

6. When one ascends from C to c without touching one of the black keys, one has the C major scale; therefore, have the pupils play and hear the scale: C, D, E, F, G, A, B, c.

7. Make them acquainted with the black and white keys, and then they can be taught the notes on the staff with

with its range of more than seven octaves. In order to facilitate typing, the designations c', c'', etc., have been used here instead of Kirnberger's c', c'', etc.
little effort. Show them how C-sharp is indicated on the staff, and that it is played once whenever a # appears before C, which raises it a half step, or else by virtue of transposition when a b appears before D, lowering it a half step.

8. Show them that this precept is followed in the case of all the other notes.

9. The combination of tones in C major occurs in such a way that one half step always lies after two or three whole steps.

\[ \text{C - D - E - F - G - A - B - c} \]

whole half whole half steps

10. This same combination of notes also occurs among the remaining notes in the other octaves.

11. The intervals (spaces) in C major are enumerated in the following manner:

\[
\begin{align*}
\text{From the keytone} & : \\
& \text{to the major second}, \\
& \text{to the major third}, \\
& \text{to the perfect fourth}, \\
& \text{to the perfect fifth}, \\
& \text{to the major sixth}, \\
& \text{to the major seventh}, \\
& \text{to the octave}.
\end{align*}
\]

The same tones are retained in descent.

12. In the scale which follows next in close relation to C, namely G, all of the notes of C are retained, and only

6. The original text reads "zwei halbe Tönen."
a new leading tone, F-sharp, is added. C-sharp is taken as the new leading tone in D major, G-sharp is taken as the new leading tone in A major, and continuing thus with the remaining scales.

13. The rule conceived by J. S. Bach should be made known to them, that in most cases before and after the leading tone (semitono modi), the thumb should be placed regardless of its occurrence on black or white key.

14. In ascent the indicated finger steps over the thumb, and in descent the thumb is put under the finger (in the case of the left hand).

The entire concept of fingering depends upon the accurate understanding of these precepts. One should not hasten, therefore, with any of them; rather, one should make sure that the pupil will have completely understood before moving on.

7. Halben oder ganzen Ton. Literally, "half or whole note" — a method for distinguishing the black and white keys, described by Philipp Emanuel Bach, p. 45, as "more usual than correct." This is a remarkable statement by Kirnberger, but in none of the subsequent fingering charts does he show a black key being taken by the thumb. C. P. E. Bach, ibid., whose fingering method Kirnberger praises in the Introduction, states that black keys are taken by the thumb only out of necessity. Concerning the fingering of J. S. Bach, see The Bach Reader, ed. Hans T. David and Arthur Mendel (New York: W. W. Norton, 1945), 223, 306-10, and Arnold Dolmetsch, The Interpretation of the Music of the XVII and XVIII Centuries (London: Novello, 1946), 412-18.
§7. The fingering of the minor scales has been separated from that of the major scales in the following examples. The character of a piece, whether it is major or minor, is determined by the quality of the third lying in the pre-existing scale.

§8. All major scales always have the major third.

§9. All minor scales have the minor third as their distinguishing characteristic from the major scales.

§10. The fingering of the left hand is separated from that of the right hand.

**Fingering**

§11. Here occurs the fingering of all the notes themselves, and first of all the fingering of the ascending and descending scales in the left hand.

\[
\begin{array}{cccccccc}
\text{C} & \text{D} & \text{E} & \text{F} & \text{G} & \text{A} & \text{B} & \text{c} \\
5 & 1 & 3 & 1 & 4 & 1 & 3 & 1 \\
\text{d} & \text{e} & \text{f} & \text{g} & \text{a} & \text{b} & \text{c'} \\
5 & 1 & 3 & 1 & 4 & 1 & 3 & 1
\end{array}
\]

Note 1: The numbers attached over the notes signify the fingers to be used in ascent, and the figures under them indicate the fingers to be used in descent. 8

Note 2: Two kinds of fingerings often are provided for one scale. In this case one must use either one fingering or the other according to the disposition of the piece. Thus, for example, in A major

---

8. Kirnberger follows the usual designations by indicating the thumb with the number 1, the finger next to the thumb with 2, etc.
the upper figures can be used in both ascending and descending motion, as the lower figures can also, in both of which, however, the rule of J. S. Bach is in the most strict application, that the thumb must be put either before or after a semitono:

G major with the leading tone F-sharp:

<table>
<thead>
<tr>
<th>G</th>
<th>A</th>
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<th>#f</th>
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</table>

D major with the leading tone C-sharp:

<table>
<thead>
<tr>
<th>D</th>
<th>E</th>
<th>#F</th>
<th>G</th>
<th>A</th>
<th>B</th>
<th>#c</th>
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</table>

A major with the leading tone G-sharp:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>#c</th>
<th>d</th>
<th>e</th>
<th>#f</th>
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<th>b</th>
<th>#c'</th>
<th>d'</th>
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<th>#f'</th>
<th>#g'</th>
<th>a'</th>
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</table>

E major with the leading tone D-sharp:

<table>
<thead>
<tr>
<th>E</th>
<th>#F</th>
<th>#G</th>
<th>A</th>
<th>B</th>
<th>#c</th>
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<th>e'</th>
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</table>

B major with the leading tone A-sharp:

<table>
<thead>
<tr>
<th>B</th>
<th>#c</th>
<th>#d</th>
<th>e</th>
<th>#f</th>
<th>#g</th>
<th>a</th>
<th>b</th>
<th>#c'</th>
<th>#d'</th>
<th>e'</th>
<th>#f'</th>
<th>#g'</th>
<th>a'</th>
<th>b'</th>
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<tbody>
<tr>
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</table>

F-sharp major with the leading tone E-sharp:

<table>
<thead>
<tr>
<th>#F</th>
<th>#G</th>
<th>#A</th>
<th>B</th>
<th>#c</th>
<th>#d</th>
<th>#e</th>
<th>#f</th>
<th>#g</th>
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<th>#c'</th>
<th>#d'</th>
<th>#e'</th>
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</tbody>
</table>

C-sharp major with the leading tone B-sharp:

<table>
<thead>
<tr>
<th>#C</th>
<th>#D</th>
<th>#E</th>
<th>#F</th>
<th>#G</th>
<th>#A</th>
<th>#B</th>
<th>#c</th>
<th>#d</th>
<th>#e</th>
<th>#f</th>
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</tbody>
</table>
A-flat major with the leading tone G:

\[
\begin{array}{ccccccc}
3 & 1 & 4 & 1 & 3 & 1 & 4 \\
 bA & bB & c & d & be & f & g \ ba \ bb & c' & d' & be' & f' & g' & be' \\
3 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2
\end{array}
\]

E-flat major with the leading tone D:

\[
\begin{array}{ccccccc}
3 & 1 & 4 & 1 & 3^9 & 1 & 4 & 3 & 1 & 2 \\
 bE & F & G & bA & bB & c & d & be & f & g \ ba \ bb & c' & d' & be' \\
3 & 1 & 4 & 1 & 3 & 1 & 4 & 3 & 1 & 2
\end{array}
\]

B-flat major with the leading tone A:

\[
\begin{array}{ccccccc}
3 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2 \\
 bB & c & d & be & f & g \ a \ bb & c' & d' & be' & f' & g' & a' & bb' \\
3 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2
\end{array}
\]

F major with the leading tone E:

\[
\begin{array}{ccccccc}
5 & 1 & 3 & 1 & 4 & 1 & 3 & 1 & 1 \\
 F & G & A & bB & c & d & e & f & g \ a \ bb & c' & d' & e' & f' \\
5 & 1 & 3 & 1 & 4 & 1 & 3 & 1
\end{array}
\]

§12. After the fingering of the major scale comes the finger placement for the minor scale. In ascending motion its half steps are located between the second and third degrees, and between the major seventh and the octave. In descent it has the same notes, but with the difference that the half step between the major seventh and the octave then appears, rather, between the fifth and sixth tones (from the first note on the left, reading to the right).

9. The original indicates 4, both above and below be.

10. This is what we now call the "melodic" form of the minor scale, with the sixth and seventh steps raised in ascending motion, and lowered in descending motion.
The steps of the minor scale are calculated in the following manner, ascending:

\[
\{ \begin{align*}
to \text{ the major second,} \\
to \text{ the minor third,} \\
to \text{ the perfect fourth,} \\
to \text{ the perfect fifth,} \\
to \text{ the major sixth,} \\
to \text{ the major seventh,} \\
to \text{ the octave.}
\end{align*} \}
\]

§13. In descent the same procedure occurs, but with the qualification that the minor sixth and minor seventh are used instead of the major sixth and major seventh.

§14. Following, therefore, are the fingerings of the minor scales with the left hand, ascending and descending:

**C minor:**

\[
\begin{array}{c}
5 \\
C \ D \ \#E \ F \ G \ A \ B \ c \ d \ b e \ f \ g \ a \ b \ c' \\
\ bA \ bB \\
1 \ 1
\end{array}
\]

**G minor:**

\[
\begin{array}{c}
5 \\
G \ A \ bB \ c \ d \ e \ #f \ g \ a \ b \ b c' \ d' \ e' \ #f' \ g' \\
b e \ f \\
1 \ 1
\end{array}
\]

**D minor:**

\[
\begin{array}{c}
5 \\
D \ E \ F \ G \ A \ B \ #c \ d \ e \ f \ g \ a \ b \ #c' \ d' \\
\ bB \ c \\
\ bb \ c'
\end{array}
\]

11. Kirnberger's fingering indications in the minor scales have a different meaning. The figures above indicate the fingering in ascent and descent; below are indicated the chromatic alterations which must be made in descending motion. If fingerings are shown below, these also must be used in descent.
A minor:

\[
\begin{array}{cccccccc}
5 & 1 & 3 & 1 & 4 & 1 & 3 & 1 \\
A & B & c & d & e & f & g & a \\
B & c & d & e & f & g & a & b \\
A & B & c & d & e & f & g & a \\
\end{array}
\]

E minor:

\[
\begin{array}{cccccccc}
5 & 1 & 3 & 1 & 4 & 1 & 3 & 1 \\
E & F & G & A & B & C & D & E \\
E & F & G & A & B & C & D & E \\
E & F & G & A & B & C & D & E \\
\end{array}
\]

B minor:

\[
\begin{array}{cccccccc}
4 & 1 & 4 & 1 & 3 & 1 & 4 & 1 \\
B & C & D & E & F & G & A & B \\
B & C & D & E & F & G & A & B \\
B & C & D & E & F & G & A & B \\
\end{array}
\]

F-sharp minor:

\[
\begin{array}{cccccccc}
4 & 1 & 3 & 1 & 4 & 1 & 3 & 1 & 2 \\
F & G & A & B & C & D & E & F \\
F & G & A & B & C & D & E & F \\
F & G & A & B & C & D & E & F \\
\end{array}
\]

C-sharp minor:

\[
\begin{array}{cccccccc}
3 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2 \\
C & D & E & F & G & A & B & C \\
C & D & E & F & G & A & B & C \\
C & D & E & F & G & A & B & C \\
\end{array}
\]

G-sharp minor:

\[
\begin{array}{cccccccc}
3 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2 \\
G & A & B & C & D & E & F & G \\
G & A & B & C & D & E & F & G \\
G & A & B & C & D & E & F & G \\
\end{array}
\]

A-flat minor:

\[
\begin{array}{cccccccc}
3 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2 \\
b & A & b & B & c & d & e & f \\
b & A & b & B & c & d & e & f \\
b & A & b & B & c & d & e & f \\
\end{array}
\]

12. In the original, oder was misplaced before G-sharp minor.
E-flat minor:
\[
\begin{array}{cccccccccccc}
2 & 1 & 4 & 1 & 3 & 2 & 1 & 4 & 1 & 3 & 2 \\
_bE & F & bG & bA & bB & c & d & be & f & g & ba & b & c' & d' & be' \\
\end{array}
\]

B-flat minor:
\[
\begin{array}{cccccccccccc}
2 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 3 & 2 \\
_bB & c & bd & be & f & g & a & b & b & c' & d' & be' & f' & g' & a' & bb' \\
\end{array}
\]

F minor:
\[
\begin{array}{cccccccccccc}
5 & & & & & & & & & & & & \\
F & G & bA & bB & c & d & e & f & g & ba & b & c' & d' & e' & f' \\
bd & be & & & & & & & & & & & & & & & & & bg & ba' \\
1 & 3 & 1 & 4 & & & & & & & & & & & & & & & 1 & 3 & 1 & 4 \\
\end{array}
\]

Fingering for the Right Hand, Ascending and Descending

C major:
\[
\begin{array}{cccccccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 5 \\
c' & d & e & f & g & a & b & c' & d & e & f & g & a & b & c'' \\
\end{array}
\]

G major:
\[
\begin{array}{cccccccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 \\
g & a & b & c' & d & e & #f & g & a & b & c'' & d & e & #f & g \\
\end{array}
\]

D major:
\[
\begin{array}{cccccccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 5 \\
d' & e & #f & g & a & b & #c'' & d & e & #f & g & a & b & #c''' & d \\
\end{array}
\]

A major:
\[
\begin{array}{cccccccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 4 & 5 \\
a & b & #c' & d & e & #f & #g & a & b & #c'' & d & e & #f & #g & a \\
\end{array}
\]

E major:
\[
\begin{array}{cccccccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 4 & 5 \\
e' & #f & #g & a & b & #c'' & #d & e & #f & #g & a & b & #c''' & #d & e \\
\end{array}
\]
B major:

1
2  b #c' #d  e #f g a
3  b c' #d e #f g a
4  b c' #d e #f g a
5  b c' #d e #f g a

F-sharp major:

2  4 1  b #c' #d e #f g a
3  2  1  3  1  2  b #c' #d e #f g a
4  3  1  2  4  1  3  1  2  b #c' #d e #f g a

C-sharp major:

2  3  1  #c' #d e #f g a
3  2  3  1  4  1  3  1  2  #c' #d e #f g a
4  3  1  2  4  1  3  1  2  #c' #d e #f g a

Or D-flat major:

bd be f bg ba bb c' bd be f bg ba bb c' bd

F-major:

1  f' g a bb c'' d e f g a bb c'' d e f

B-flat major:

2  1  b c' d be f g a bb c'' d be f g a bb

E-flat major:

2  1  be' f g ba bb c'' d be f g ba bb c'' d be

A-flat major:

2  3  1  ba bb c' bd be f g ba bb c' bd be f g ba

Minor Scales in the Right Hand

C minor:

1  3  c' d be f g a b c'' d be f g a b c''
2  3  1  c' d be f g a b c'' d be f g a b c''
3  b a bb c' bd be f g ba bb c' bd be f g ba bb
G minor:
\[
\begin{array}{cccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 5 \\
\text{g a b c' d e #f g a b c' d e #f g}
\end{array}
\]

D minor:
\[
\begin{array}{cccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 4 & 5 \\
\text{d' e f g a b #c'' d e f g a b #c'' d}
\end{array}
\]

A minor:
\[
\begin{array}{cccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 5 \\
\text{a b c' d e #f g a b c' d e #f g a}
\end{array}
\]

E minor:
\[
\begin{array}{cccccccc}
1 & 2 & 3 & 1 & 4 & 1 & 3 & 1 & 4 & 5 \\
\text{e' #f g a b #c'' #d e #f g a b #c'' #d e}
\end{array}
\]

B minor:
\[
\begin{array}{cccccccc}
1 & 3 & 1 & 4 & 1 & 3 & 1 & 5 \\
\text{b #c' d e #f g a b #c' d e #f g a}
\end{array}
\]

F-sharp minor:
\[
\begin{array}{cccccccc}
2 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2 \\
\text{#f #g a b #c' #d e #f #g a b #c' #d e #f}
\end{array}
\]

C-sharp minor:
\[
\begin{array}{cccccccc}
\sqrt{27} & 3 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 2 \\
\text{#c' #d e #f g a #b #c' #d e #f g a #b #c''}
\end{array}
\]

G-sharp minor:
\[
\begin{array}{cccccccc}
2 & 3 & 1 & 3 & 1 & 2 & 3 & 4 & 1 & 3 & 1 & 3 \\
\text{#g #a b #c' #d #e xf #g #a b #c' #d #e xf g}
\end{array}
\]
F minor:

\[
\begin{array}{cccccccc}
1 & 4 & 1 & 3 & 1 & 4 & 1 & 4 \\
F & g & b & b & c & d & e & f \\
\end{array}
\]

B-flat minor:

\[
\begin{array}{cccccccc}
2 & 1 & 3 & 1 & 4 & 1 & 3 & 1 & 4 \\
bb & c & d & e & f & g & a & bb \\
bg & ba & \\
\end{array}
\]

E-flat minor:

\[
\begin{array}{cccccccc}
2 & 1 & 4 & 1 & 3 & 1 & 4 & 1 & 3 \\
be & f & g & a & bb & c & d & be & f \\
bg & ba & bb & c & d & be & bb \\
\end{array}
\]

§15. When the pupil has understood fingering, have him repeat verbally all the hard and soft, or major and minor, scales; but only with the twelve different names C, C-sharp, D, D-sharp, E, F, F-sharp, G, G-sharp, A, B-flat, B; the true alternate names of some of them -- D-flat, A-flat, F-flat, G-flat instead of C-sharp, D-sharp, etc. -- should be postponed until the pupil is able to write all the intervals orthographically, in which matter the teacher can give the necessary instruction.

Note: A more detailed view of the scale and of its tempering is found in my Kunst des reimen Satzes, Part One, Section One, page 2.

§16. Up to this point I have written of the steps in both major and minor keys, and have given the considerations

13. I.e., spelled correctly according to its use in the scale or chord. See below, §20c, p. 26f.

and means whereby one should be able to succeed to proper fingering; now I want to pass on to the theory of the intervals themselves, and since so much depends on this in the following, an accurate exposition of the same becomes all the more interesting for teacher and pupil.

Intervals

§17. In making the children acquainted with the intervals, one can have them observe that the notes are reckoned from the left to the right on the keyboard; one may begin wherever it is desirable, having them point out the natural intervals in each scale, without at first paying attention to the difference between major and minor seconds, thirds, etc.

§18. Since the perfect fifth is the consonance which belongs to the major as well as the minor triad, one can have it played and announced simultaneously in order that in time the ear may learn to perceive perfect fifths.

With little difficulty a child will point out the fifths of C, D, E, F, G, and A, and know them from memory; now tell them that just as G is the fifth of C, or c is the fifth of F, thus also is G-sharp the fifth of C-sharp, and c-sharp the fifth of F-sharp.

It is somewhat difficult for them to learn that f-sharp is the perfect fifth of B, and likewise that f is the pure or perfect fifth of B-flat.
§19. When a child has understood what a diatonic scale is, then show him how the half steps go in succession; seek to reach the point where the pupil, beginning wherever it is desirable, can name in order all twelve half steps up to the octave, such as C, C-sharp, D, D-sharp, E, F, F-sharp, G, G-sharp, A, B-flat, B, c.

**Intervals**

§20. When the child knows that from C to D is a second, then show him that a note lies between C and D which is called a half step. Hence it follows that there are two kinds of seconds, small and large; the same is true of thirds, fourths, fifths, sixths, and sevenths.

§20a. When the children are able to name the half steps in succession by rote, then in one lecture they can be taught the minor second of each half step with the characteristic that it stands one half step higher, such as C, D-flat; D, E-flat; or E, F; B, C; etc.

Still another half step may be added to that minor second so that a whole step results, which is the major second, such as C, D; E, F-sharp; B, c-sharp; etc.

Next, another half tone is added to the whole tone, and thus the minor third results from the addition of one whole and one half step, such as C, E-flat; D, F; D-sharp, F-sharp; E, G; etc.
If one more half tone is added to the minor third, then two whole steps result which together are called the major third. Consequently C, E; D, F-sharp; E, G-sharp; etc., are two whole steps.

The same is true of the perfect fourth -- e.g., C, F; D, G; E, A, etc. -- which is one half tone larger than the major third, and is made of two and one-half tones.

The augmented fourth is also one half tone larger than this perfect fourth. Consequently it consists of three whole tones, such as C, F-sharp; D, G-sharp; F, B; etc. This fourth is named in different ways, at one time as the tritone, and another time, whenever it occurs between the diminished fifth and the octave \( \frac{5}{8} \), as the large, augmented fourth in the diminished triad. It also consists of three whole tones, but it is of an entirely different nature from the tritone.

Note: Although the tritone, or augmented fourth, is, according to its nature, entirely different from the large fourth which results from the diminished triad, there is, however, no difference in degree between the two. Whereas an augmented prime, a minor second, a minor third, a major third, a diminished fourth, etc., differ completely according to their positions on the staff with one below the other, on the keyboard one key represents two different kinds of intervals.

After this fourth comes the perfect fifth, e.g., C, G; C-sharp, G-sharp; D, A; etc.

The minor sixth -- e.g., C, A-flat; C-sharp, A; D, B-flat; etc. -- is one half tone higher than the fifth, and
after this the major sixth -- e.g., C, A; D, B; F, d; etc.

After that follows the minor seventh -- C, B-flat; D, c; E, d; etc. -- and after this the major seventh -- C, B; D, c-sharp; E, d-sharp; F, e; etc. --- and finally the octave above the keynote -- C, c; C-sharp, c-sharp; D, d; etc.

§20b. After children have been shown that there are two different kinds of seconds, first a small and then a large, and that this is true also of thirds and fourths, but that there is only one perfect fifth, but on the other hand that there are two kinds of sixths, and also two kinds of sevenths, and then the perfect octave, then have them recite the intervals within one octave in the proper order in the following manner:

C, the keynote or prime;
D-flat, the minor second; D, the major second;
E-flat, the minor third; E, the major third;
F, the perfect fourth; F-sharp, the augmented fourth;
G, the perfect fifth;
A-flat, the minor sixth; A, the major sixth;
B-flat, the minor seventh; B, the major seventh;
c, the perfect octave.

In addition, they can be told that ninths are an

15. Cf., however, §20, p. 23, and §20a, p. 24, and elsewhere, where the diminished fifth is mentioned.
octave above the seconds, and are identical with them; further, that in distinguishing the small fourth, C-F, in the C major or minor mode, it is called the "perfect" fourth quite as aptly as the fifth is called "perfect." This will be explained further below with the consonances.

§20c. It would be very improper and would waste time in an irresponsible manner if one tormented young children with the different names for the same key, e.g., that F-sharp in another instance is called G-flat, or that D is called C double-sharp in a different case. It is initially satisfactory if they call the minor second above C a C-sharp, or the minor third above C a D-sharp, etc.

When they are older, they will learn in one lesson period that in writing and in the most exact meaning there must be a distinction between C-sharp and D-flat, and that the distance of a note from the fundamental is less important than the number of degrees encompassed on the staff; thus, for example, two degrees form a second, etc.

I do not begrudge whatever amusement they find in insisting on multiple names of the keys. It is completely adequate when a child only shows in writing each note in its correct position, or where it should stand. For example:

The augmented prime from C to C-sharp;
the minor second from C to D-flat;
the major second from C to D♯;
the augmented second from C to D-sharp;
the minor third from C to E-flat;
the major third from C to E;
the diminished fourth from C to F-flat, differing from the perfect fourth in that it is not the ordinary F, which forms a perfect rather than a diminished fourth;
the perfect fourth from C to F;
the augmented fourth from C to F-sharp;
the diminished (imperfect) fifth from C to G-flat;
the perfect fifth from C to G;
the augmented fifth from C to G-sharp;
the minor sixth from C to A-flat;
the major sixth from C to A;
the augmented sixth from C to A-sharp, differing from the minor seventh in that it is not the ordinary B-flat, which forms a minor seventh rather than an augmented sixth;
the diminished seventh from B to A-flat;
the minor seventh from C to B-flat;
the major seventh from C to B;
the diminished octave from C to c-flat;
in addition, the major third from D-sharp to F-sharp with a simple x standing before it F double-sharp, differing from the diminished fourth in that it is not the common G, which forms a diminished fourth rather than a major third.
The difference in the naming of an interval can be seen in the degrees with which one ascends from one interval to another. For example, the major third above D-sharp ascends in this way:

\[
\begin{array}{l}
#D, \ #E, \ xF, \text{ or } bD, \ bE, \ F. \\
1 \ 2 \ 3 \ 1 \ 2 \ 3
\end{array}
\]

On the other hand, the diminished fourth ascends thus:

\[
\begin{array}{l}
#D, \ E, \ #F, \ G, \ #C, \ D, \ E, \ F, \\
1 \ 2 \ 3 \ 4 \ 1 \ 2 \ 3 \ 4
\end{array}
\]

and so it goes with all the remaining intervals.

§20d. After one has explained to the children that each note has two seconds above it, the first above it called the minor, and the second one above it called the major, and that there are also two thirds, two fourths, one perfect fifth, two sixths, and two sevenths, and that each tone has its octave, and after they are able to name all of these tones both in order and individually, then they should be shown the remaining intervals which are accepted and used by thorough composers.

Note: The appended table shows, (1) all possible intervals from each note, (2) which notes are used for the various chords of each bass note, namely major and minor and diminished triads, and (3) how one and the same key on the keyboard may have two names according to whether one considers the left or right side of the cited table.16

16. The table (page 30), read from bottom to top, shows the name of each key on the keyboard up to an octave above each note of a chromatic scale, and on the left and right sides of the table are given the two names and two ways of figuring each interval. In the original the names are
This difference is best recognized through orthography, and this table, therefore, can be of use to the more experienced pupil. The difference in the names of the keys depends upon the difference in their distance from tonic, and this table, consequently, can serve those who ask about the reason for this nomenclature. The varied use of these intervals will be found below.

Perfect and Imperfect Consonances

Second Lecture

§21. When the children have progressed to the point that they know all the major and minor scales and are able to recite them and play them on the Clavier, then one can go one step further and show them that whenever a few or several notes are taken simultaneously, they either harmonize or they do not. Those which harmonize are called consonances or euphonious tones; they are the third, the fifth, and the octave.

They are divided into perfect and imperfect. Perfect consonances are the octave and the fifth; also the perfect fourth, but the latter only when it occurs in the triad, reckoned from the fifth to the octave in this way:

\[
\begin{align*}
1 & 3 & 5 & 8 \\
C & E & G & c \\
1 & 4 & & \\
\end{align*}
\]

fourth.

given in both German and Latin. The use in the table of only raised semitones above white keys (except for B-flat) results in enharmonic spellings for some minor chords. For example, the C minor triad is C-D#-G, rather than C-Eb-G.
<table>
<thead>
<tr>
<th>Perfect Octave, in major, minor, and diminished triads</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>c</td>
<td>c</td>
<td>d</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>#f</td>
<td>g</td>
<td>#g</td>
</tr>
<tr>
<td>Major Seventh #7</td>
<td>B</td>
<td>c</td>
<td>c</td>
<td>d</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>#f</td>
<td>g</td>
</tr>
<tr>
<td>Minor Seventh b7</td>
<td>bB</td>
<td>B</td>
<td>c</td>
<td>c</td>
<td>d</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>#f</td>
</tr>
<tr>
<td>Major Sixth #6</td>
<td>A</td>
<td>bB</td>
<td>B</td>
<td>c</td>
<td>c</td>
<td>d</td>
<td>d</td>
<td>e</td>
<td>f</td>
</tr>
<tr>
<td>Minor Sixth b6</td>
<td>G</td>
<td>A</td>
<td>bB</td>
<td>B</td>
<td>c</td>
<td>c</td>
<td>d</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>Perfect Fifth, for major and minor triads</td>
<td>G</td>
<td>#G</td>
<td>A</td>
<td>bB</td>
<td>B</td>
<td>c</td>
<td>c</td>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>Augmented Fourth #4</td>
<td>F</td>
<td>#F</td>
<td>G</td>
<td>#G</td>
<td>A</td>
<td>bB</td>
<td>B</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Major Third for major triads #3</td>
<td>E</td>
<td>F</td>
<td>#F</td>
<td>G</td>
<td>#G</td>
<td>A</td>
<td>bB</td>
<td>B</td>
<td>c</td>
</tr>
<tr>
<td>Minor Third for minor &amp; diminished triads #3</td>
<td>#D</td>
<td>E</td>
<td>F</td>
<td>#F</td>
<td>G</td>
<td>#G</td>
<td>A</td>
<td>bB</td>
<td>B</td>
</tr>
<tr>
<td>Major Second, Whole Tone #2</td>
<td>D</td>
<td>#D</td>
<td>E</td>
<td>F</td>
<td>#F</td>
<td>G</td>
<td>#G</td>
<td>A</td>
<td>bB</td>
</tr>
<tr>
<td>Minor Second, Half Tone b2</td>
<td>#C</td>
<td>D</td>
<td>#D</td>
<td>E</td>
<td>F</td>
<td>#F</td>
<td>G</td>
<td>#G</td>
<td>A</td>
</tr>
<tr>
<td>Unison, root of all 1 intervals and triads</td>
<td>C</td>
<td>#C</td>
<td>D</td>
<td>#D</td>
<td>E</td>
<td>F</td>
<td>#F</td>
<td>G</td>
<td>#G</td>
</tr>
</tbody>
</table>

False, minor Fifth belongs to diminished triads
They are called perfect consonances because they can be made neither larger nor smaller without altering their nature. This is now the place for the rule that two or more perfect consecutive octaves and fifths are forbidden, not only in parallel motion, but also in contrary motion.\textsuperscript{17}

The imperfect consonances are the thirds because they can be major and minor, and through inversion of thirds also arise two kinds of sixths, for example, the minor sixth E–c from the major third C–E, and the major sixth G–e from the minor third E–G.

Both a number of thirds and a number of sixths can succeed one another by leap and by step in either parallel or contrary motion.

§22. If the difference between the major and minor third has been well noted, then one must also show them [the pupils] which tones harmonize together, that is, which tones blend in such a way that the ear is agreeably aroused when they are

\textsuperscript{17} Friedrich Wilhelm Marpurg, \textit{Handbuch bey dem Generalbasse und der Composition}, 3 parts (Berlin, 1755-62), 98, was less strict in the matter of consecutives in contrary motion. In four-part harmony he allows contrary consecutive fifths even in a slow tempo. In two-part harmony, he writes, the tempo should be quick, and it is better if the first of the two fifths is a passing note than if both are main notes, though the latter is tolerated. Concerning octaves he writes that in harmony of more than four parts, this may occur in slow tempo and between main notes, but preferably not between outer parts. When the harmony is thin, the tempo must be brisk, and the first octave must be a passing note.
played simultaneously. For this purpose, select any note whatsoever, and have them play the third and fifth simultaneously with it, making them mindful of the blended sound, and having them judge for themselves whether these notes sound well and pleasant together.

Then tell them that these and no others are precisely the notes which harmonize together, and that whenever one wishes to hear even one or several notes consonating simultaneously with these three, the same notes are merely doubled, either higher or lower.

In four-part harmony the root is taken doubled one or two octaves higher, depending on the position of the third or fifth. The third and fifth may also be doubled instead of playing the octave of the root, but the triad must never be without a third.

The Chords, Particularly Major and Minor Triads

§23: Assuming the knowledge of this, one can begin with thoroughbass, in which the teaching of chords takes the first and most important place.

Note: My Die wahren Grundsätze zum Gebrauch der Harmonie (Berlin and Königsberg: G. J. Decker and G. L. Hartung, 1773), printed in quarto, will be of good service to the curious in this matter.

In the case of Figure 12a, the third, fifth, and octave belong to the harmonious triad. If the third is major, as in Figure 12a, then the triad is called major or hard. If,
however, the third is minor, as in Figure 12b, then it is called the minor chord or soft triad. The minor third is indicated by a b above the bass note. One must have the child note these terms well. In the case of either kind of triad, the octave and fifth are always unchangeable, for example,

\[
\begin{align*}
\text{in C major:} & & C & E & G & c \\
& & 1 & 3 & 5 & 8 \\
\text{in C minor:} & & C & bE & G & c \\
& & 1 & 3 & 5 & 8
\end{align*}
\]

Note: Concerning chords, see also Die Kunst des reinen Satzes, Part One, Chapter III, p. 26.

§24. In order, now, that the children become acquainted with these triads in all keys and learn to find them in all octaves and positions on the keyboard, have them play the major third, fifth, and octave simultaneously and in all positions on the Clavier, and in each position have them say with the chord where the third, fifth, and octave lie, whether they are found above, in the middle, or below.\(^\text{18}\)

<table>
<thead>
<tr>
<th>Major Chords</th>
<th>Minor Chords</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 3 5 8</td>
<td>1 3 5 8</td>
</tr>
<tr>
<td>1. c e' g' c''</td>
<td>1. c be' g' c''</td>
</tr>
</tbody>
</table>

18. In the following examples, all chords are in octave position, though with varying octave spreads above the bass. Of the minor chords Nos. 8 and 11 have been corrected from g bb d' g' and bb bd' f b, respectively, in order to avoid the second inversion, which has not been discussed, and No. 6 of the major chords has been changed from f a c f' for the same reason. These are likely typographical errors.
When they have understood these major chords, have them change the major third to minor, and thus they hear simultaneously the difference between the major and minor chord. Have them practice these chords in all keys until they have mastered them completely.

§25. The first and most important rule of thoroughbass playing is that one should not play or have two or more octaves or fifths succeed one another, neither ascending nor descending, e.g., Figure 1. In Figure 1 the successive forbidden octaves in parallel motion are in the top voice against the bass, and the forbidden fifths are in the middle [alto] voice [against the bass].
In Figure 2 the \textit{consecutive} octaves are in the middle \textit{alto} voice, and the fifths are in the part below it \textit{both against the bass}.

In Figure 3 the octaves are in the bottom part \textit{of the right hand}, and the simultaneous forbidden fifths are in the top voice against the bottom part of the right hand. Therefore the rule of forbidden \textit{consecutive} octaves and fifths not only applies to one of the three upper voices against the bass, but also neither octaves nor fifths may follow one another in the three upper parts. In general, no voice may make this fault against any other, but every voice must be pure against every other.\footnote{A more liberal viewpoint is expressed by Francesco Gasparini in \textit{The Practical Harmonist at the Harpsichord} (1708), trans. by Frank S. Stillings, ed. by David L. Burrows (New Haven: Journal of Music Theory, 1963), 76. He allows consecutive fifths and octaves in inner parts, including those which occur between inner parts and the bass (cf. Frank T. Arnold, \textit{The Art of Accompaniment from a Thorough-Bass} \textit{London: Oxford University Press, 1931}, 253), because "they are considered to be evaded by the crossing of the parts."}

In Figures 4, 5, and 6 the same fault occurs in descending motion.

For pure harmony in composition as well as in playing thoroughbass, which must be just as pure as a good composition, even the playing of hidden octaves and fifths is forbidden; that is, the octaves and fifths do not follow one another directly, but they appear only when the intervening empty space
of a third or fourth is filled with notes. 20

In general, one only has to take care not to move in parallel motion from any interval to the perfect consonance of fifth or octave, because hidden fifths or octaves invariably originate in that way. In Figure 7 the passing hidden fifth is between the three bass notes; 21 in Figure 8 they become obvious through the addition of passing notes. Thus it follows that in order to avoid this mistake, the hands are moved as often as possible either toward or away from one another, which is called contrary motion. 22

Concerning imperfect consonances, which are the thirds and sixths, one can move in parallel motion just as well as in contrary motion.

There are occasions, as in Figure 10, in which the hidden fifths, as the lesser of two evils, are not to be avoided. In Figure 9 forbidden parallel octaves clearly occur in the top voice against the bass, and forbidden fifths occur in the middle alto voice against the bass. If one moves in contrary motion in order to avoid these errors, then,

20. Kirnberger explains this phrase in the following paragraph with Figures 7 and 8.

21. I.e., the two bass notes which are a third apart.

22. Kirnberger does not here distinguish between hidden progressions in extreme parts, and those found in inner parts, but his following examples indicate a prohibition in both cases. See, however, § 49, p. 48, below.
as in Figure 10, clear hidden fifths result between the top voice and the second one above the bass, and these must be endured in order to avoid the greater flaw of consecutives.

In Figure 11 the hidden fifths are made obvious by the filling in of passing notes.

§26. One must not be in too great a hurry to give children more than they can grasp in one lesson. It is best, consequently, to treat the C chord until it is played without mistakes by the student in all positions, both high and low; on the next day the previously taught lesson should first be repeated, and then a new chord added to it. Even so, one will cover the triad within a month without much trouble. This is well-nigh the most troublesome and, consequently, one of the greatest faults if one hurries too much and progresses too soon with children.

§27. The diminished triad can be put off until they have mastered the major and minor triads. In this way one can make use of a small advantage, namely, one has the minor chord taken with its complete or perfect fifth lowered a half tone.

§28. The major triad with the major third and perfect fifth is played whenever the two intervals, third and fifth, occur in the scale. The same is true of the diminished triad.\(^{23}\)

\(^{23}\) I.e., it is played whenever the minor third and diminished fifth occur in the scale.
Besides this case, the major chord is indicated by a # above the bass note, and the false diminished fifth is never permitted to be used with it, even though it may actually be found in the scale at that place.

The minor triad is indicated by a b above the bass note. The perfect fifth is also commonly used with it, but not when it occurs on the semitone below tonic of the major or hard scale, or on the supertonic of the minor scale, e.g., on B in the key of C major, or on B in A minor. But aside from that, whenever b stands above a bass note, it is understood to indicate the minor triad with the minor third and perfect fifth.

§ 29. The indicates a consideration of both the major and minor triads according to which one the key or pattern of notes requires, e.g., in A major a b above the A or E indicates the minor triad.

In keys where a b is indicated at the beginning in the key signature, indicates the major third, just as in the preceding case the minor third was taken instead of the major third.

Note: The b also has this property of making a note a half step higher or lower in the case of

---

24. I.e., when it is found naturally in the scale.

25. This b and the one in the following paragraph were omitted from the original by an obvious printing error.
all the remaining intervals, so that at one time the major sixth is indicated by $\frac{7}{4}$ instead of $b$ for the minor sixth, and another time the minor sixth is indicated by $\frac{7}{4}$ instead of $#$ for the major sixth.

Whenever the diminished fifth occurs, the diminished third is never permitted to be taken with it; even if it could have been indicated previously in the scale, the minor third is used instead.

**Third Lecture**

§30. These chords learned up to this point stand in no relation to one another at all, but, as in a language of individual words, are only separate expressions without relation and without significance.

In order to produce significance, comprehension, and relation by virtue of chords, it is necessary to know which chords can follow one another, and which are the most preferable for generating flowing melodies and harmonies which progress properly.

As soon as manual control of the major and minor chords has been achieved, one must seek to give the pupil an understanding of this expression: harmonic progressions.

---

26. William S. Newman, "Kirnberger's Method for Tossing off Sonatas," *Musical Quarterly* XLVII/4 (1961), 518, states that one of the main tenets to reappear throughout Kirnberger's writings is that melody originates in the realization of thoroughbass, which is not quite the same as Rameau's idea that melody originates from harmony.
within the logical context of a given tonality.

§31. Every piece has its particular determined tone (or its own key) from which it proceeds or in which it is set. This tone is called the keytone or tonic. Every piece begins with the triad on the tonic, and the whole piece is finally ended with this same triad.

Every note which lies in the scale also has its own chord, but not all of these chords can directly follow one another. I must show, therefore, which ones can follow one another most suitably.

§32. After the tonic chord in either major or minor mode, as in the case of Figure 12, no chord other than the one on the upper fifth, or the so-called dominant of the keytone, can follow in all conciseness. As soon as this chord has been reached, then one can return immediately to the tonic chord, as in Figure 13.

Fourth Lecture

§33. Have your pupils learn these three chords in all major and minor keys with first the octave, then the third, and then the fifth on top [In the tonic chord]. With the exercise recommend to them that they never move both hands upward and downward simultaneously, but that whenever the bass ascends, the right hand is brought closer to it; and
that when the bass descends, the right hand should move away from the left, but that one should not jump over any position of a chord; instead, the one lying nearest should be played.

§34. Because of the dominant chord's adhering quality, it is used to produce a feeling of repose which fully satisfies the ear since upon its resolution to tonic it does not suggest expectation of other chords, because once a tonality has been firmly established, other chords confuse the ear; and just at that place the dominant chord restores the feeling of repose through its relation to the accepted tonic chord.

The dominant chord is always major in both the major and minor modes, whether it is naturally so in the scale or not, because its third is the leading tone which resolves to the octave of the tonic tone (Figure 13).

The way in which this occurs, namely the progression from the dominant chord to the chord of the tonic, is a full cadence. This is found at the end of every piece.

\textit{Fifth Lecture}

§35. After this progression comes the progression from the tonic chord to the subdominant chord, the chord a fifth below tonic, and from this back again to the tonic chord. This upward progression from the subdominant chord to the tonic is called a half cadence, because experience has shown
that the repose which is produced by it is not so complete as that which the full cadence brings (Figure 14).

Whenever the bass ascends a fifth \textit{from tonic to dominant}, the octave \textit{of the first chord} moves to the third of the dominant; but if the bass descends a fifth \textit{from dominant to tonic or from tonic to subdominant}, then the major third \textit{in the first chord} moves to the octave of the following \textit{bass} note. The same thing also happens whenever the bass ascends a fourth \textit{from dominant to tonic or from tonic to subdominant} instead of descending a fifth.

\S 36. Have your pupils again practice these three successive chords in all keys, and each time have them properly execute the rules given concerning the manner in which the chords must be taken in ascent and descent.

\S 37. In the minor keys this manner of ending a piece, the half cadence, is not at all customary. Nevertheless, if it does occur in minor keys, it happens in one of two ways: first, ascending from tonic to the dominant, which has the major third, as in Figure 15; second, moving from subdominant to tonic, as is shown in major in Figure 14. In this \textit{latter} case also, the major third is taken on the last chord even though the entire piece should be in minor, as in Figure 16.\footnote{In the original, the \textit{b} before \textit{e} was omitted.} \footnote{In \textit{Kunst des reinen Satzes}, I, 95, Kirnberger adds that}
music, both in chorales and figural compositions.

Occasionally it can happen in minor keys that the subdominant ascends a fifth, and a minor triad is played on this fifth tonic triad. But this occurs only in connecting several chords and occasionally in the case of simple modulations, but never at the end of a piece.

§38. In order to prepare and extend a cadence, one can precede the penultimate dominant chord by various chords. The most natural can be the subdominant triad. If the third of the key is major, then the third of the subdominant chord is also major (Figure 17). The major third of the tonic moves upward to the octave of subdominant just as previously the major third of the dominant moved to the octave of tonic. If the key is minor, then the subdominant triad is also minor (Figure 18).

Sixth Lecture

§39. On the other hand, whenever the triad of the dominant is used as the penultimate triad at a close, it always has a major third whether the key is major or minor.

Seventh Lecture

§40. The triad of the submediant, or the third below tonic, can also precede the dominant triad which is used at the major third must replace the minor shortly before the close as well as in the cadential chord itself, though Figure 16 does not show this.
a close, either in a major or minor key.

Eighth Lecture

§41. Take an example in the best position, as in Figure 19, and instead of striking the octave, double the third \( \text{In the submediant chord} \). Further, in the example of Figure 20, the harmony is spread so that each hand strikes two voices.

§42. In the example of Figure 21, care has been taken to cross the alto and tenor parts in four-part harmony in order to avoid obvious \( \text{parallel} \) fifths and octaves. The second voice \( \text{alto} \) moves from \( a' \) to \( d' \) in the third voice \( \text{tenor} \), and the third voice \( \text{tenor} \) ascends a third from \( e' \) to \( g' \) \( \text{In the alto} \). On the organ, however, \( \text{the sound} \) is not improved by this. Consequently it is best to guard against this dilemma before coming to the ensnaring chord at * \( \text{Figure 21} \). If necessary, the third is doubled as in Figure 23 at * *, by which means the fifths or octaves become somewhat less noticeable. Figure 22 \( \text{shows the same}

29. Except for the purpose of excusing what on a keyboard instrument would strike the ear as a faulty progression, Kirnberger, as we shall see, had no objection to the crossing of parts in four-part harmony in order to escape an occasional difficulty. The use of the device to avoid consecutives seems to have been countenanced by Mattheson, to a certain extent by Heinichen and Marpurg, but not by Philipp Emanuel Bach. See Arnold, 392-94.

30. In the third example of Figure 23, however, hidden fifths or octaves do not occur, nor would they occur if the root of the second chord were doubled in the usual manner instead of the third.
progression as Figure 21, but with an added voice in the subdominant chord, and subsequent crossing of parts.

§43. In Figure 23 the first two examples hidden fifths occur between the second and third chords in the top voice against the voice nearest the bass, c\'' d\''', but this is allowed in thoroughbass playing. In Figure 24, including that which follows, the same example is given in minor mode.

§44. If one were forced to take the octave above the bass in the top voice, as in the case of the second beat of Figure 25, then the chord shown on the third beat is the only one which can be taken with all possible safety in order to avert not only forbidden parallel fifths and octaves, but also a forbidden progression of an augmented second.

§45. In a close, the minor triad on the second step above the tonic can be taken after the tonic and before the dominant chord, as is shown in Figure 26 through Figure 30 in C major and with all possible modifications.

§46. In Figure 28 the third above the bass note is

31. The original text indicates Figure 25.

32. Cf. the prohibition of hidden fifths and octaves in §25. In the earlier statement hidden fifths and octaves are expressly forbidden unless consecutives can be avoided in no other way. The third example of Figure 23 shows clearly that both faults can be avoided in this case. Hidden octaves are found in the last example of Figure 23 in the extreme parts of the last two chords.
doubled in the second chord, because in this way both forbidden consecutive fifths and octaves are avoided whenever the top voice is obliged to move in thirds with the bass.

In Figure 27a the minor third f' in the middle alto voice above the bass note d moves up a second and thereby becomes the octave of the following bass note. In Figure 28 this progression occurs in the lower tenor voice. Everyone will easily feel that this progression of two consecutive thirds, in which the tritone f-b produces a dissonant cross-relation, is an unpleasant sound.

The consecutive major thirds are found in the top two voices in Figure 27a, but in the two middle voices in Figure 28.

§47. It appears that whenever this third such as the f' in the second chord of Figure 29 does not descend so that it becomes the fifth of the following bass note g, as in Figure 27b, it preferably remains stationary as the seventh of g; and when the g'' is taken in the soprano instead of f'', this could be considered rather as an extension of the seventh, as in Figure 30, as is the case with several forms of similar dissonances in which, nevertheless, the true dissonance is sensed even though it is not played. On this principle the following note g'' can be played immediately, as in Figure 30, instead of having f'' occur; on the other hand it is best to take the note g'' down a third to e'', the third above the
following bass note c, in order to simulate the proper resolution of a seventh that was not actually present.

§48. The major third of the dominant chord, which is the leading tone (ton sensible) to the octave, preferably ascends a semitone to the octave above the bass of the tonic as in Figures 26, 27a, 27b, 28, and 29. Thus it would not be good to descend a third from the leading tone to the fifth of the bass note on the last chord, as in Figure 30, rather than resolving the leading tone to tonic as in Figures 27a, 27b, 28, and 29. Consequently the third instead of the octave of the tonic can be doubled, as in Figure 31, or the octave can be doubled instead of the third, as in Figure 32; but one must not guard against this downward resolution of the leading tone to such an extent that it never resolves in this way, because there are cases in which it is inevitable that the leading tone resolve down a third. This occurs even in composition, such as in Figure 33, though hidden fifths are found between the top voice and the voice directly above the bass, $d'$, and the same voices in the following chord, $g'\ g'$.  

33. Hidden fifths also occur between the soprano and tenor voices in the first two chords of Figure 33. The strongest leading tone in this progression is the accidental F-sharp, and it resolves upward to G in the proper manner.
§49. In thoroughbass playing one does not need to observe this rule prohibiting hidden fifths and octaves scrupulously in the middle parts, and therefore progressions such as occur in Figure 33 can be taken without hesitation.

**The Diminished Triad**

**Ninth Lecture**

§50. The diminished triad, shown in Figure 34 on the second note and followed by its possible changes of position, is discussed in this lecture. One should explain this chord in the following way: As far as the third is concerned, it is identical with the minor chord or minor triad; on the other hand the fifth is not perfect, as in the major and minor triads, but is a half step smaller, the diminished fifth. Thus it consists of two minor thirds, b-d' and d'-f'.

Note: This diminished fifth must not be confused with the false fifth which occurs in the chord of the seventh, e.g., G-B-d-f, which should be dealt with in its proper place.

§51. Since the minor third is usually doubled in the triad on the second step above the tonic, as in Figure 28, it is well to take the trouble to practice it in all keys according to this example. In a minor key it is much less

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34. Cf. §25, above, where Kirnberger indicates that hidden fifths and octaves involving an inner voice are undesirable unless there is no other way to avoid consecutives.
useful, because one has to be too careful of false progressions afterwards. Thus the progression in Figure 35 is completely false between the second and third chords because of the augmented second which is found there, and on that account it is better as in Figure 36.

§52. The diminished triad is usually preceded by one of three triads: the triad a fifth above it, a third above it, or a second below it. The diminished triad is most often followed by a triad other than that a fourth above it, either major or minor as the key demands it.35

Tenth Lecture

§53. The bass may progress directly to a new triad [with its root] a third lower quite as naturally as it moves in ascending or descending fifths or fourths. This progression may occur from major to minor triads as well as from minor to major triads, also from a minor triad to the diminished triad on the minor third below; not, however, from a minor to a minor triad on the major third below, neither from a diminished triad to a minor triad a major third below.36

35: Kirnberger evidently means the opposite. The progression is a perfectly logical one, and, indeed, it is precisely the one he gives in all the pertinent examples of Part One.

36. The progression of the bass to a third below is illustrated in Figures 37–43.
Eleventh Lecture

§54. In Figure 37 the first two chords may be taken in parallel motion, but from that point the remaining ones [the moving parts] must be in contrary motion. Even though contrary motion is not necessary [in the first two chords] in either major or minor keys, this has been demonstrated in Figure 38.

In the examples of Figures 37 and 38 one can also move in parallel motion from the third to the fourth chord, as is shown in Figure 39, rather than in contrary motion; but in the case of the following examples [in minor mode in Figure 40] the motion must be contrary from the third to the fourth chord because in parallel motion a progression of an augmented second would occur. The remainder of what was said of Figure 38 applies here also; in Figure 40 the examples are in minor mode.

Twelfth Lecture

§55. In the tenth lecture has been shown how one triad may progress to another a third lower. In this lecture it is seen that one is not limited to only one progression of a third, but that such a progression in the bass may also be made two and three times [in succession], as in Figure 41.

37. See, however, the next paragraph.

38. The original reads "twelfth."
One has to take care in this lecture to move only in contrary motion.

**Thirteenth Lecture**

§56. With this lecture the same progression of the preceding lecture is used in the minor mode and in contrary motion, as in Figure 42.

**Fourteenth Lecture**

§57. In this lecture one has only to observe that contrary motion should be used, for which guidance has been given in Figure 43.39

**Fifteenth Lecture**

§58. In this lecture the major third of the dominant chord above the second bass note in Figure 44 is moved up one degree to the third of the following bass note of the third chord, in the same manner as when the bass descends a fifth or ascends a fourth after the dominant chord, as discussed in §34.

In Figure 45 the octave is doubled instead of the third, and even though doubling of the third is better, the octave doubling is tolerated in thoroughbass playing.40

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39. Parallel motion occurs, however, in the antepenultimate to penultimate chords of each example of this figure.

40. A misprint in the edition used for this translation shows
In Figure 46 first example7 hidden fifths occur from the third to the fourth chords between the top voice and the voice directly above the bass.41 This also is tolerated in thoroughbass playing.

It is of unusual difficulty to accompany the example in Figure 48 with four true voices. In order that it should now be truly maintained in various positions, no other means remains than that a spread position of harmony be used, namely, that whenever the upper three voices cannot be played simultaneously by the right hand, the voice directly above the bass should be played by the left hand.42

Sixteenth Lecture

§59. In the minor mode, whenever the bass ascends a semitone /from dominant to submediant/, the major third of the dominant chord can do nothing else but ascend a semitone /also/, as in Figure 47. The ton sensible (leading tone), g'-sharp in the second chord, cannot descend to the octave

Figure 45 to be identical with the first example of Figure 44. Collation with a microprint copy of the first edition shows the correct progression with the top voice descending to a' in the submediant chord.

41. In the second example hidden fifths occur in the same voices between the second and third chords.

42. It had been customary from the latter half of the seventeenth century to play only the bass with the left hand and add the harmony with the right. See Arnold, 330-48, for an examination of the uses of spread positions of chords by various composers.
above the bass in the third chord \( \sqrt[5]{to f^\sharp} \), since thereby
the forbidden progression of an augmented second would result.

All augmented progressions, both ascending and de-
scending, are forbidden in all voices in thoroughbass playing
as well as in pure composition.\(^{43}\)

Seventeenth Lecture

\( \delta 60. \) In the first measure of Figure 49 there are two
dominant chords with major thirds, the first on \( E \) with the
major third \( g^\# \)-sharp as leading tone to the following chord
on \( A \), and the second on \( D \) with the major third \( f^\# \)-sharp as
leading tone to the chord on \( G \) which follows it.

It has been stressed, however, in \( \delta 34 \) and in the
sixteenth\(^{44}\) lecture that the ton sensible should always re-
solve upward; yet this prohibition allows an exception when-
ever dominants occur frequently. If one always were to ob-

\(^{43}\) By "pure composition" Kirnberger apparently means the so-
called strict style. In Kunst des reinen Satzes, Part I, 2nd ed., 80ff., he enumerates the liberties permitted in
the "Tree" style, and among these is the use of augmented
melodic progressions. The strict style, he writes, is
used chiefly in church music, which is always of a ser-
ious nature; the free style is used primarily for the
stage and for concerted music, the principal aim of which
is to delight the ear. That Kirnberger himself used aug-
mented melodic intervals is evidenced by the ninth measure
of an example from a keyboard prelude of his composition
which is printed by Ernest Eugene Helm, Music at the
Court of Frederick the Great (Norman: University of
Oklahoma Press, 1960), 240. In that measure an augmented
fourth appears in the bass part.

\(^{44}\) The original reads "seventeenth."
serve the rule in such cases and resolve the leading tone upward, the upper extension of the keyboard would not be sufficient, and besides, the hands would become separated too far from one another. In this case it must be a primary rule not to separate the hands more than two, at most three, half octaves apart without necessity. Accordingly, the ton sensible can also descend to the fifth of the following bass note, and ascend only as often as it can be done [with safety].

But it is still understood that this ton sensible should be permitted to descend only when it occurs in inner parts, as in Figure 49 [measures 1 and 4 at *, and elsewhere]. If, on the contrary, the ton sensible is in the outermost top part, then it is very intolerable if it does not resolve up one half step.

An incorrect progression would occur if the top part [Figure 42] were to descend a third from the second to the third measure [from $b$ to $g$] in the right hand.

Take note of the B major triad with the major third and perfect fifth on the note b, on the fourth beat of the second measure; here the f♯-sharp must be used on this root even though it is not shown at the beginning of the piece [in the key signature].

In the fourth measure a major third comes after the
minor third; in this case the change of thirds \( \text{minor to major}\) must occur in the same voice in which the minor third appeared, and must by no means move either up or down \( \text{to another voice}\), because as a rule, a discordant cross-relation would occur. Both \( g' e'\) and \( e' g'-\text{sharp}\) are incorrect.

In the seventh measure \( b5\) is figured above the second bass note, by which is indicated that the diminished fifth should be played instead of the perfect fifth. This diminished fifth \( \text{tria d}\) has already been met in a preceding \( \text{ninth}\) lecture, where it was shown that it is built of two conjunct minor thirds and the octave.

Both the diminished fifth and the augmented fourth which results from its inversion are consonances, but compared with all the other \( \text{consonances}\) they are the most imperfect, because one will find no example in which one could conclude a period with the diminished triad; it will be found, however, that it may begin \( \text{a period}\) in the middle of a piece just as the major and minor triads do.

Those theorists who maintain that the diminished fifth is a dissonance in all cases are entirely wrong, for that \( \text{dissonant}\) diminished fifth which is otherwise also called false and which arises from the inversion of the aug-

45. See, however, the following paragraph.
mented fourth, which also always admits the sixth with it and whose origin and use are found below, is a special case.\(^46\)

It would be very useful if the two kinds of diminished fifths could be marked with the \(b\), namely, (1) if it should be the diminished triad to which the minor third and the octave belong, as \(b_5\); (2) if it is to show the six-five chord which is the first inversion of the chord of the essential seventh, either \(\text{with}\) or without the third, as \(b_6\).

In the seventh measure the third above the bass note \(b\)-flat \(\text{on the last beat}\) is doubled in order to avoid forbidden fifths and octaves, and to prevent the false progression of an augmented second \(\text{which would occur}\) by virtue of contrary motion.

In the ninth measure the major third above the first bass note ascends to the \(\text{minor third above the}\) second bass note in accordance with the preceding \(\text{paragraphs of the}\) seventeenth lecture.\(^47\)

\(^{46}\) Thus the diminished fifth in the dominant seventh chord is considered a dissonance. In Part Two Kirnberger classifies the triad on the leading tone as an incomplete form of the dominant seventh, and therefore it is also classed as a dissonance. Consequently, the only diminished fifth which he actually categorizes with the consonances is the one which occurs on the minor supertonic

\(^{47}\) In this case the C major chord has assumed the function of dominant preparing for the cadence in F major in measure 10. Though the presence of a number of dominant chords has obviated the necessity of resolving all leading tones upward, the rule must apply here because the leading tone occurs in the top voice.
In the seventeenth measure \[ \text{fourth beat} \] the \[ \text{major} \] third \( g' \) of the bass note e-flat is doubled; this also occurs in a like manner in the fifth measure \[ \text{in the chord on} \ f \]. Here there is a difference \[ \text{from the case discussed above} \] in that there are two parts which move to the third on the same note \[ \text{at the unison} \]. This is considered to be the same as two separate thirds at the distance of an octave \[ \text{as in the previous cases} \]. The first ten measures depart briefly (as though in passing) from the tonic key \[ \text{C major} \] to the nearly related keys, eventually coming to F major.

I presume that a child should now thoroughly understand how to ascend the scale of C major, and should know whether an interval must be major or minor above this or that note, which is very easily seen from the arrangement of the steps in C major.

\[
C \ D \ E \ F \ G \ A \ B \ c
\]

If an alteration should occur so that an interval which is not in the scale should be used, it is indicated by \# or b. For example, it is proper to use the diminished fifth \( f \) with B, but if it should be f-sharp, then \# must certainly stand before the fifth \[ \text{in the figures above the bass} \], as \#5; and when the diminished fifth is supposed to be taken instead of the perfect fifth, it is indicated by the sign b set before the fifth, as \( b5 \); for example, in the
seventh measure of Figure 49 the sign $b$ is given to show that b-flat rather than b should be played as the fifth of e. The same rule applies with all the other intervals.

From the tenth to the twentieth measures in the example of Figure 49, a b-flat stands on the staff to show that the key of C major should be put aside and the key of F major taken in its place. Observe that it is the progression is the same as that in the C major section. The same is true throughout the remainder of the example; after each ten measures, new key signatures and tonalities occur.

I consider it necessary to mention as yet that in much old music, both printed and in manuscript, the major third or some other interval is indicated by # instead of $\sharp$, and also the minor third or another interval is indicated by a $b$ instead of a $\flat$; e.g., the major thirds of C, F, and G in C minor are indicated by a # sign.

In those times one could be understood with only the signs # and $b$, since a diminished third never was met then, and in order that the diminished third should not be

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48. There is one minor change. In the fifth measure the last chord is a secondary tonic on the subdominant of the home key. The comparable chord in the repetitions of the example is a secondary tonic on the submediant.

49. Figure 49 repeats the one ten-measure progression through the complete circle of fifth. Though the bass progression is the same, the chord positions vary for the three upper voices.

50. The $\sharp$ is omitted or faintly printed in the original.
played, the minor third, such as \( \text{the second one in the progression} \) \( d' #f' \), was indicated by a \# in the figuring. In this case the \# merely shows the minor third \( f' \)-sharp above \( d' \)-sharp. Even though the \# before 3 is usually understood to designate the major third, it is also used at times to indicate only the minor third. For example, if nothing key signature is given at the beginning of a piece, and if a \# stands before \( d \) in the bass so that it becomes \( d' \)-sharp, and moreover if \( \text{the figuring} \) \#5 \#3 stands above this \( d' \)-sharp, then instead of taking the major triad on \( d' \)-sharp with the major third, only the minor third \( f' \)-sharp must be played. If the third is supposed to be major, then \( x \) is used instead of \#. It is customary to call this \( x \) a double-sharp even though it raises no more than the ordinary \# does, which is to say one half step, for in the scale of C-sharp major, or some other one with many sharps, the single \( x \) does the same thing as the \# does in C major.\footnote{Why Kirnberger calls the double sharp sign a "single \( x \)" is understood when it is compared with the way in which the sharp sign was actually written as a double \( x (\#\#) \).}
of the \( \text{x} \), but it is distinguished from D in that it is called C double-sharp by some. On the other hand, if \( x \) stands before the simple C, it is raised two half steps. Nevertheless, when it is no longer required, it should be lowered in both cases by the \( \text{b} \).

The great J. S. Bach used various methods. One time, ## was used to raise C by two half steps; also, if a # already stood before the C in the key signature, the same # was repeated directly before the note to raise it to C double-sharp, and with the application of \( \text{b} \) it became C-sharp again. Another time, if C-sharp was designated in the key signature, and it was to be raised a half step higher, namely to D on the keyboard, the single x was placed before the C-sharp, and with the use of either # or \( \text{b} \) for cancellation it would be lowered again to C-sharp according to the key signature.

Since now the # and x are lowered by the \( \text{b} \) at one time to the extent of a half step, and at another time to the extent of two half steps, it would be clearer, I believe, if a triple-sharp # were used to raise a note by two half steps, and if a single x double-sharp sign were always used instead of # to raise a note by one half step when a # is

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52. For further discussion of notations for accidentals and double accidentals, see Arnold, 884-88.
already shown in the key signature.

Note: The suggestion concerning the newly introduced triple-sharp must be taken here simply as a proposal to use with new music, in connection with which, however, one can not dispense with the old scheme, since otherwise all the old pieces would be unintelligible.

In canceling the accidentals, one could also make a change in the ♯ in order to cancel this #53 as follows, by ♯.

The example of Figure 49 has been given in all keys with the hands shown in one position. For more practice the entire piece may be played from the beginning in the other two chord positions so that, just as it is begun here with the third in the top part, one could continue with the remaining examples by beginning with the top voice in the fifth and octave positions. These three different positions are given in C major at the end of the example at (a), (b), and (c).

This rather unusually detailed discussion of the triad may seem somewhat strange, but I must confess that it seemed necessary to me to provide this opportunity in order that the various mistakes, parallel fifths and octaves as well as other forbidden progressions that crop up might be avoided.

53. x in the original.
§61. Besides the major, minor, and also diminished triads, there is no chord which is not indicated by one or more figures above the bass note. In every key the major, minor, and diminished chords are taken according to the quality of the thirds and fifths which lie in the scale. Thus C major, for example, has the following sequence of notes in the scale:

C D E F G A B

From this it is seen that C, F, and G have the major triad, that is, with the major third and perfect fifth, and that D, E, and A have the minor triad with the minor third and perfect fifth. The ton sensible B has the diminished triad with the minor third and diminished fifth:

The key of A minor has the same chords as the key of C major.

Only with the occurrence of thirds or fifths which in and by themselves are not in the scale do signs or numbers stand with the triad above the bass notes. For example, in C major or A minor, if A is in the bass, then C is its natural third; but if the major third of A, C-sharp, ought to be played, then it is indicated by \#3, or more simply by the \# alone.

The same is true of the fifth of B, the natural

54. In the original the scale is entirely in lower case letters,
diminished fifth $F$. If the pure or perfect fifth ought to be taken in the case of the minor triad on $B$, the sign $\#5$ is written above the bass note $B$.

Whenever the major third stands above the bass note, then it is not necessary to indicate the perfect fifth in a special way, because it must always be taken with the major third even though it may not be in the scale. In a like manner, whenever the third is naturally major -- e.g., in C major in which the natural third of $G$, namely $B$, is major, but when $G$ occurs in the bass and a minor third should be taken with it -- then $b_3$, or just $b$, is written above the bass note.

The triad $\text{natural to the scale}$ is taken in all the following cases: when nothing stands above a note; when 3 or 5 alone, or when the 8 alone occurs above a note; when 5 8 3 together, or 3 together, or all three $\text{numbers}$ together, 5, 8 3 occur above a note. But it is unnecessary to place figures above the bass note for triads unless they are needed to determine an interval which is not in the scale.

§62. The same is true of chords which cannot occur without figures, as applies to the triad with which the third, fifth, and octave are played when nothing $\text{no figure}$ stands above the bass note, or when 3, or 5, or 8, or 3, or 3, or 5 8 3
occur; namely, that it is not necessary to indicate all the tones which belong to it. For example, the chord of the sixth has either the third and the octave, or the third doubled, or the sixth doubled, and in all three cases the chord is expressed by only the 6, unless it should be necessary to show by a # or b a third which is not found in the scale, e.g., 6 or 6.

§63. The chord of the sixth has its origin in the triad; the same notes are found in both chords, but they occur in a different arrangement. Thus the harmony of the chord of the sixth is shown in the following diagram:

At α occurs a twofold transposition: a transposition from the chord-7 third [e'] above the bass note to an octave lower, and a transposition of the bass note from c to c' an octave higher.

At β occurs an exchange to the fifth above the octave; the bass note c [of the first chord] is exchanged
for \( g' \) in the top voice of the second chord.

\[ \text{The example} \] at \( \gamma \) can be viewed first of all as an exchange of the c for e in the lower octave, and an exchange of the bass note c for the \( g' \)\(^{55} \) a duodecime, or twelfth, higher; or, if one wishes, it can be viewed as both parts, the highest and lowest, being placed a third higher.

\( \S 64. \) From the preceding observation one will easily understand that whenever only the triad or some other chord is taken in another position, it could not happen without double counterpoint; hence the inversions themselves originate in double counterpoint, with which I will deal on another occasion, and consequently every thoroughbassist often unknowingly plays whole pieces in the same double counterpoint as often as he begins a composition in a different position, as, for instance, the first nine measures of the seventeenth lecture.\(^{56} \)

\( \S 65. \) Concerning chords of the sixth, it is to be remembered that whenever the third or sixth is doubled in a series of adjacent sixth chords, forbidden octaves can result very easily. Thus, instead of doubling two thirds or two sixths \( \text{in succession} \), the octave above the bass must be taken

\(^{55}\) The line indicating the position of this \( g' \) is omitted in the original diagram.

\(^{56}\) The original reads "eighteenth lecture," but the reference is apparently to Figure 49, which is discussed in the first half of the seventeenth lecture, and which is to be played in different positions.
Alternately with the sixth and third.

The sixth with the third and octave are well taken on e in the key of C major; for example, when the bass moves, not a semitone higher to the triad on f, but rather a third higher to the chord on g, as here in the first example, Figure 50; also, the chord of the sixth is well taken on A, the third below the preceding bass note C, as in Figure 51 when the bass continues down another third.

Never should the sixth, third, and octave be played, however, on the semitone below the tonic, as B is to c in Figures 52 and 53, for after this chord on the leading tone, the bass usually ascends a semitone to the triad on tonic. This semitone is called the ton sensible (leading tone to the octave); if this tone is doubled, a clumsy progression results if it does not also move upward to the octave of the bass, as in Figure 52. If this does occur, i.e., the doubled leading tone also moves up a half step, obvious forbidden octaves result with the bass, as in Figure 53. In this case, therefore, either the third or sixth must be doubled, as in Figure 54, instead of the octave.

These observations, which are not too easily comprehended by children, concern the teacher more than the beginner, at least until the matter is made understandable to the children. Therefore, pass over the reasons at first, and proceed only to the examples which occur in the following
Eighteenth Lecture

Whenever a six stands above a bass note, then one takes either the sixth tone enumerated from the bass, or the same tone which is identical with the sixth an octave higher, and with it the third and octave, or whatever is identical. Have the children take the triad on the third below the bass note, e.g.:

The sixth chord on is the triad on

§66. Whenever, as here, the triad is taken on a note, and after it the bass ascends a third, and this second note has the chord of the sixth above it, then it should be shown to the children that the preceding chord is the same chord which one had to seek with the latter note, as in Figure 50.

Nineteenth Lecture

§67. Above the third note in Figure 52 stands the leading tone with 6 above the bass. Previously it has been stated that the octave above the bass may not be played in the chord of the sixth on the leading tone, but rather that either the third is doubled instead, as in the first example

57. The original text has e above the A.
58. The original text reads zweiten.
or the sixth doubled as in the second or third example. In the fourth and fifth examples of Figure 54 the third is doubled at the unison, and in the sixth example the sixth is doubled at the unison.

Twentieth Lecture

§68. In Figure 55 the third of the second [bass] note is doubled as in the first example of Figure 54. On the fourth note of Figure 55 the triad on f occurs first, proceeding to the chord of the sixth on the same bass note.

Since the bass does not ascend a half step after this sixth chord on f as in the preceding measure, but rather ascends a whole step to a triad, it is thus not necessary to double the third or the sixth; one plays the triad of the third below the bass note, only noticing that the progression must be in contrary motion, else consecutive octaves would be made in parallel motion.

In the case of the second and fourth [bass] notes of the second measure and the second [bass] note of the third measure, doubling of a tone other than the bass is necessary, because each of these tones in the bass with 6 above it must be regarded as a leading tone to the following chord.

59. The words here omitted are: "or the sixth doubled as in the first example." They appear to have been included through a typesetter's error.
Above the bass note a in the third measure stands first the triad of a, and then the chord of the sixth. Initially it is not necessary to double the third or sixth instead of the bass because the bass does not ascend a semitone to the triad; rather, the octave must be played, because on the following beat occurs b with the chord of the sixth in which the third or sixth must be doubled. 60

One must be very careful, therefore, with doublings in the chord of the sixth in the case of a preceding bass note which lies a second higher or lower, because forbidden fifths and octaves as in Figure 56 cannot well be avoided without difficulty.

From the third to the fourth notes in the fourth measure of Figure 55 the bass descends in thirds from the preceding beat. Here also no particular doubling is necessary, but one simply takes the triad of the third below the bass note.

In the following measure, on the other hand, the third or sixth of e is doubled even though a progression of a third also occurs in the bass, because the bass ascends a half step to the triad on the following beat.

It is moreover to be observed here that whenever

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60. Consecutives would occur with the following chord if the octave were doubled. Another possibility would be to double the third in one chord and the sixth in the other.
two different harmonies occur above a single bass note, as
on f in the first measure of Figure 55, and when one or two
notes of the first harmony belong also to the second, the same
repeated notes can be struck again if one wishes. But it is
better to leave them stationary and play alone only the new
note which belongs to the following harmony. In the second
and third settings of Figure 55, therefore, the improvement
has been undertaken at *.

§69. The teacher can continue with the other keys in the
same manner as the three versions of the progression in
Figure 55 that are given here in C major. It is most benefi-
cial if the beginners themselves are allowed to produce the
variations. Moreover, one must write out only the bass just
as it occurs here in the twentieth lecture and thus also
with all the preceding lectures, and either have the children
themselves seek out the chords thereto on the keyboard in
C major or minor after a preliminary examination, or, even
better, as soon as they are able to write even a few notes,
have the children set them all in four voices. By this
means they can grasp more clearly and quickly how the harmonies
must be produced without errors. Furthermore, this has the
additional advantage of teaching the children the concept of
strict four-part writing in a congenial manner.

61. The original text reads 21sten.
Twenty-First Lecture

§70. In Figure 57 the sixth is doubled above the fourth note in the first measure [In going] to the following first note in the second measure, even though the bass does not ascend a half step to the triad on the half note (as does the first note [going] to the second in the first measure).

Such doubling is often necessary in order that the top voice not come too near the bass. Also, this c in the bass is considered almost a leading tone to the d on the following beat because the actual leading tone to d, c-sharp, could occur with the same chord of the sixth. Five and six stand adjacent above the first bass note of the second measure. This chord of the sixth has the minor third and the major sixth; it originates from the triad a third below the bass note, and is the diminished triad whose most usual progression [is], as here, to the triad a fourth above or a fifth below [the root, i.e., to the dominant], or to the chord of the sixth of G or G-sharp which originates from there.

§71. Since this diminished triad is counted as a consonant chord, the diminished fifth and its inversion, the augmented fourth, are consonant, but only in the very least degree compared with the major and minor triads. Thus both the major sixth and the minor third can be doubled in the chord of the sixth for the reason of avoiding forbidden octaves, as in the case of Figure 58 on the first d above which the sixth
occurs. Also, in the second example the minor third is doubled with the same bass note. In this sixth chord which arises from the diminished triad a third lower, this third can be doubled because it is consonant.

Further below will be shown the difference of this chord of the sixth from another chord of the sixth which also has the minor third and the major sixth, but which does not originate from the triad a third below, but rather from the chord of the seventh a fifth below or a fourth above the bass note, i.e., \( \frac{6}{4} \). This chord of the sixth does not permit doubling of the third as is shown in Figure 58 because this third is the essential seventh of the root from which the chord of the sixth originates. Moreover, it will be shown below that no dissonance may be doubled.

**Twenty-Second Lecture**

§72. If a number of sixths occur in succession on a

62. Only the sixth is doubled in the first example of Figure 58, and the third is doubled in the second example. C. P. E. Bach, p. 210, unequivocally forbids doubling of the major sixth when it is associated with the minor third. Other theorists (discussed by Arnold, p. 519) permitted its doubling on occasion, but only under certain circumstances, as for example, in the repetition of a sequence.

63. See Arnold, pp. 525-33, for discussion of chords of the sixth in succession with special reference to the rules of Philipp Emanuel Bach.
bass that ascends by seconds, as in Figure 59, and if one takes the sixth with the third and octave on each bass note, clear forbidden octaves with the bass would result if one moved in parallel motion. And if one were to move in contrary motion to the ascending bass, then the upper voices would get too low, or in the case of a descending bass the right hand would get too high. Moreover, the melody in the top voice would be very unsingable.

In the first example of Figure 59 both in the first measure above the g in the bass and in the third measure in the third chord, on g, doubling of the third at the unison would be completely false because leaps of augmented fourths (tritones), which are forbidden in both ascent and descent, would occur. These augmented fourths are seen in the examples of Figure 60; in the first example the forbidden progression is found in ascent from the first to the second chord, and in descent in the second example from the second to the third chord.

§73. It would be very easy to take note of still other ways of progressing with the sixths, but doubtless the melodic line in the top part would be even less singable. Since the first two among these four examples (Figure 59)

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64. The original text reads "ten."  
65. There are six examples in Figure 59.
are preferable to the second two, it is always best to have the sixth above the bass note in the top voice in all chords whenever possible.

One has to be particularly careful not to take the third in the top voice in a succession of chords of the sixth because clear forbidden fifths occur very easily. But if one gets into the predicament of being obliged to have the third in the top voice, then proceed as in the fifth example of Figure 59.

§74. The chord of the sixth can also be used in descent. In the case of the second bass note [Figure 59, example 6], the octave is taken, contrary to the rule that either the sixth or third should be doubled. But it will frequently be found below [in the following discussion] that many rules allow an exception in certain instances. Such is the case here, because the succession of harmonies is interrupted.66

§75. The method of playing the sixth with only the third in a number of successive chords of the sixth is completely wrong,67 particularly if the bass is a tenth below the

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66. In other words, the following chord is taken partly in contrary motion. Also, it is permissible to double the leading tone in this instance because the bass is obliged to resolve downward.

67. This is a remarkable statement considering the fact that such progressions present fewer difficulties than those in four-part setting. Kirnberger modifies his stand, however, in the following paragraphs.
third, because in that case clear perfect fourths occur.\textsuperscript{68} These sound very unpleasant \textit{at that distance} even though they are perfect consonances. The reason for this is probably that the fourths are inverted perfect fifths, and are thus reflections (\textit{repercussio}) of the fifths.

In three-part harmony in which the bass is only the interval of a third below the chord third, the sixth and third can be played alone without hesitation. This usually occurs whenever the bass goes very high, or when it is necessary in the case of a low bass to have also a low accompaniment, e.g., in a bass or tenor aria, or a violoncello or bassoon solo.

In the first measure of Figure 59, example six, on the \textit{bass note} b, the sixth can be doubled at the unison in place of the octave \textit{of the bass}, and then the continuation remains as it is there \textit{in Figure 59}. See Figure 61 where it occurs in that manner.\textsuperscript{69}

Successions of a number of chords of the sixth in both ascent and descent are undoubtedly the greatest anathema in four-voice \textit{setting} in so far as they \textit{must} have good melodies in the top voice and proper progressions in the

\textsuperscript{68} Perfect fourths would occur in any instance unless the third were in the top voice. In the latter case, perfect fifths would occur.

\textsuperscript{69} Figure 61 gives only the first two chords from the progression of Figure 59, example six.
middle parts. These difficulties are much alleviated if the harmony is played in only three parts so that the highest part is the sixth above the bass, and the middle voice is the third above the bass; this is also the easiest and most singable manner of playing successive chords of the sixth. Thus one does not need to take strictly the prohibition of this method which was given above. It also occurs especially at times in composition, and if the setting is supposed to be harmonic, the viola moves parallel with the bass in octaves (all' octava). But in large works such as choruses, overtures, fugues in many voices and the like, this method must be avoided because otherwise it exhibits the faults of a poor accompanist.

Consonant Six-Four Chords

§76. The six-four chord is formed by the inversion of the triad a fifth below its bass note, e.g., C E G c as the triad, G c e c' as the six-four chord.

It differs from the preceding chord of the sixth, which is called the first inversion of the triad a third below its bass note (in which the third of the fundamental chord becomes the bass of the chord of the sixth). In the six-four chord, on the other hand, the fifth above the root is put in the bass as the foundation.

§77. Just as the chord of the sixth in which two sixths
and a third result from the literal rearrangement of the notes of the triad, so the same also occurs in this case in the six-four chord with two fourths and a sixth, as is seen in Figure 62.

§78. In Part One of my Die Kunst des reinen Satzes and the subsequent essay on pure harmony\(^70\) I have clearly explained that these three chords\(^71\) are consonant, but that the chord of the sixth is imperfect in relation to the triad, and that the six-four chord is even less perfect than the chord of the sixth. Therefore I am omitting this and proceeding directly to the examples.

§79. In the six-four chord which is the second inversion of the triad and with which there are two fourths, these two fourths are consonant\(^72\). Consequently these fourths require neither preparation nor resolution. In the case of dissonant fourths, on the other hand, other rules are met with which will be shown and discussed below.

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71. I.e., the triad, chord of the sixth, and six-four chord.

72. Philipp Emanuel Bach, p. 226, considered the fourth in the six-four chord to be a dissonance and did not allow its doubling. In four-part harmony the bass was usually doubled (most of Kirnberger's examples show this doubling) and sometimes the sixth. Most theorists permitted duplication of the fourth only in certain circumstances. See Arnold, pp. 536-40.
Note: The dissonant fourths are prepared by the preceding harmony, and they must resolve. Therefore the fourth cannot be doubled because forbidden octaves would result in the resolution of the doubled fourth.

§80. Because the use of the six-four chord with one sixth and two fourths gives rise to some deep thought on the part of beginners, and because it is easier if they are told that whenever 4 stands above a bass note, only the ordinary triad of the note a fifth below or a fourth above the bass note could be taken, I want to begin thus in the following lecture. In this case, consequently, instead of having two fourths and one sixth, the six-four chord has the octave above the bass replacing one of the perfect fourths.

This six-four chord with the octave doubled above the bass occurs most often on the tonic and its dominant. It will be shown further below in the discussion of the use of chords of the essential seventh that whenever 6 stands above the second step above tonic, sometimes the third is played with it instead of the octave of the bass. 73

Twenty-Third Lecture

§81. In this lecture the triad of the fifth below or the fourth above the bass note should be played throughout in the right hand whenever 6 stands above a note, so that

73. Thus producing the second inversion of the chord of the dominant seventh.
one has the six-four chord with the octave of the bass doubled.

On the second quarter-note of the first measure of Figure 63 the triad of C is the fundamental chord of $g_6^6$; in the third measure the triad of F is the fundamental chord of the first bass note $c_4^6$. In the fourth measure on $d_4^6$ the triad of G is the fundamental chord, and in the fifth measure on the first note g, it is the triad of C, but in the sixth measure on the first note g, it is the triad of C, but in the sixth measure on the first note g, it is the triad of F. In all passages the six-four chord is consonant.

Twenty-Fourth Lecture

§82. In this lecture are found nothing but chords and successions of tones which are already known, except from the penultimate to the last measure of Figure 64 where after the six-four chord on e the bass descends one step to the triad on the following bass note d in the last measure. But there is no doubt at all that this progression is entirely correct, because the greatest and strictest harmonists have used it repeatedly.

Note: The right-hand part of the third example of Figure 64 must be played an entire octave lower, because one of the most important rules of thorough-

74. That is, a $I_6^6$ to IV progression in A minor. All of the preceding six-four chords have resolved in the manner of dissonances to the triad in root position on the same bass note.
bass playing\textdagger is that one should not strike a chord with the right hand above f''. Since the violin clef does not effect this transposition with enough ease, I will use other clefs in the following examples. One will do well, therefore, to become acquainted with the tenor, alto, and soprano clefs, because these are the best for that purpose since by virtue of their help it is not necessary to add \textit{leger lines} above or below the five usual musical lines. These alto, tenor, and soprano clefs have been given individually in Figure 65 in a preparatory manner so that at Letter A the notes are shown in the violin clef, at Letter B in the soprano clef, at Letter C in the alto clef, at Letter D in the tenor clef, and at Letter E in the bass clef.\textsuperscript{75}

\textbf{Twenty-Fifth Lecture}

\$83.\textsuperscript{76} On the fourth \textit{bass} note in the first measure of Figure 66 the six-four chord occurs two times in succession at * *, both times it is struck independently. Therefore one merely seeks the triad of the fifth below the bass note above which \textbf{\textsuperscript{5}} stands.

\$84.\textsuperscript{76} The melody of Figure 67 makes it absolutely necessary to take the c in the bass with 14 instead of f with the triad as in the first example, because otherwise obvious \textit{parallel} octaves could not be avoided in any way.

\textsuperscript{75} In order to facilitate matters for the modern reader, all examples in the present translation except Figure 65 have been changed from the C clef to the G clef.

\textsuperscript{76} This is true only on the assumption that the middle voice is also fixed, otherwise the chord of the sixth on a could be used rather than the six-four on c.
In the first measure of the first example of Figure 67 obvious parallel octaves occur in the top voice against the bass from the first to the second chord; they are corrected in that place in the second example by the use of the six-four chord on c.77

Twenty-Sixth Lecture

§85. In the third chord of the first measure of Figure 68 the six-four is produced without the octave of the bass note, and instead of the latter the fourth is doubled. In the second measure the six-four with the octave appears on the fourth note. In the second and third variants the fourth is doubled at the unison. It is consonant for just that reason, because it can be doubled.

§86. The sixth can also be doubled in the consonant six-four chord, as occurs in the first example (b) of Figure 69.

§87a. At Figure 69(a) the doubling of the fourth in the six-four chord is the root triad with two octaves and a third reckoned from the root. The doubling of the sixth in the aforesaid chord, however, is the root triad with two thirds and one octave, as at (b). Occasionally the consonant six-four chord occurs with two octaves and a sixth but without

77. The sequential pattern in the upper voices results in non-chord tones which Kirnberger fails to mention: d" on the second beat of the measure, and f' on the fourth beat.
a fourth, as at (c). This doubling of the octave with the sixth alone is the triad of its root with two fifths and a third.

Note: Of these three kinds, the six-four at (c) is the least harmonious because it lacks the fourth as root.

In the first three examples of Figure 69 the various six-four chords are shown, and the fundamental chords from which they were formed are noted in the last three.

§87b. Up to this point the theory of consonant chords, namely the triad as the source of all other chords, its first inversion the chord of the sixth, and its second inversion the consonant six-four chord, has been dealt with. One should not hurry his pupils, but should go through everything with them as often and as long as necessary for them to acquire such a facility that they know how to play the intervals immediately without any searching or calculating. It will be found below that, if the consonant chords are played without hesitation, the dissonances which occur fall into the grasp of all beginners very easily. This is understood, however, of orderly thoroughbass, for no one can play bad or abnormal thoroughbass78 correctly even if it is by the greatest composer.

78. I.e., conceived in such a way as to prohibit correct and melodious voice leading.
§88. In all the foregoing examples, with the exception of Figures 24 and 48, I have arranged the upper voices of the chords only so that they can be played by the right hand alone. Further below I will also give them spread in such a way that both hands must be used. Finally, I will also show how the intervals may be doubled in an accompaniment of many parts.

Moreover, at various places in Figures 68 and 70 which have been marked with *, the fourth has been doubled just like other consonances on other occasions, and this can serve as evidence that the fourth has the property here of consonance. A second unfailing characteristic of the consonant six-four chord, further, is whether or not the third above the bass note should be added to it; the choice is the province of the composer. Finally a third characteristic is that the fifth cannot be taken in place of the sixth in a consonant six-four chord. The following will develop the subject still further, showing in which cases the fourth is dissonant.

END OF PART ONE

79. Producing the second inversion of a chord of the seventh.

80. Kirnberger refers here to the five-four chord in which the four is a retardation to three.
PART TWO

Dissonant Chords. Particularly Chords of the Seventh

§89. In Part One, only successions of consonant chords have been taught, and particularly how they are treated in producing a clear four-part accompaniment, to wit: that (1) neither forbidden fifths nor octaves may occur in parallel motion in two voices; (2) no forbidden melodic progressions -- i.e., all augmented intervals -- may occur; (3) there should be no unnecessary leaps, but rather one should move to the nearest chord; (4) the semitonium modi (the so-called leading tone) usually ascends one half-step to the octave above the bass note whenever the bass descends a fifth or ascends a fourth, unless other circumstances require that the semitonium modi should make another progression. This will frequently be the case in the following lectures, e.g., in order to prepare dissonant notes in this manner.

Accompaniment is undoubtedly always most difficult even for skilled thoroughbass players in the case of either a number of successive triads or successive chords of the

81. Cf. §21 (above, p. 31) where consecutives in contrary motion are also forbidden.
sixth, because (1) completely new notes must be taken in almost every chord, and (2) in a few cases the danger of producing forbidden fifths and octaves is constant. That being the case, the positions in which almost all dissonant chords ought to be taken are, on the other hand, specified, because the dissonant notes are always prepared, and their resolutions are always downward one degree unless the dissonant note is in the bass.

The melodies of each voice are unrestricted in the case of consonant chords; one can move to any note that he wishes as long as he only avoids augmented progressions. Only one instance makes a departure from this general rule necessary, and that is in the case of a tonic which has moved to the seventh, for after that, it, the leading tone, can go nowhere else but to the octave of the tonic where it is taken by its own nature.

Further, the harmony in which this leading tone (ton sensible) occurs has been adequately shown in Part One, namely, that it is the major third of the dominant chord of the tonic, or of a dominant chord which leads to another note related to the tonic, either by the usual progression a fifth downward in the bass (g-C or G-c), or else by a whole or half step upward. Both kinds of progression are called cadences, the first complete perfect, the other interrupted
A piece is ended by a cadence, and the ear is put at rest by it. The predetermined desire to be put at rest binds the leading tone to resolve upward, and makes it seem to be a dissonance.

Just as the leading tone which has been demonstrated must ascend one degree, the same is true also in a second case when one descends five notes in a scale from the octave above the tonic to the fourth above, as:

\[
c' b a g^* f e d c
\]

87654321,

after which no progression can occur other than down one degree to the third above the tonic. This occurs in the case of a complete cadence, \( f e \).

\[
G C
\]

In the case of the interrupted \( \text{deceptive} \) cadence from \( G \) in the bass to \( A \), the tone \( e \) becomes the fifth of \( A \) after the preceding \( f \) (downward leading tone), \( 7 5 \).

\[
G A
\]

Here are given the two leading tones, the first of which ascends, and the second of which must descend.

\[
e f g a^* b c' \quad c' b a g^* f e
\]

Here are the three conditions as regards the leading tones:

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82. Unvollkommene. This is actually the first mention Kirnberger has made of the V-VI progression as a cadence.
a) The ascending leading tone can occur alone.
b) The descending leading tone can occur alone.
c) The ascending and descending leading tones can occur simultaneously.

§90. The leading tone which is the major third of the dominant chord, and must resolve upward, produces the greatest unrest in the listener if the following $\text{tonic}$ chord is omitted, even if no dissonant interval is found in the triad, but instead, perhaps, only the notion of an apparent dissonance.

The second kind of leading tone has quite a different character; when it also is included in the harmony of the dominant chord in either a major or minor key, it is an essential dissonance.

Note: The following principle may be stated concerning the term "leading tone" (ton sensible): Whenever the key of C major is assumed, and the triad of the dominant chord is considered in general, then the major third b would certainly not be dissonant. But when this major third disappoints the expectations of the listeners in its progression because their confused ears long for the state of repose, then this state of mind makes it necessary for the b to move to c'. Furthermore, every interval which is smaller than a minor third is dissonant, and since c' is a minor second from b, then this b must be dissonant against the c'.

The second kind of leading tone, from f to e, is even more dissonant than the one from b to c', because, first, it is dissonant with the note which should follow it, namely the third above the tonic; in addition, it is dissonant as the fourth above the tonic; thirdly, it is dissonant as the seventh of its own fundamental chord.83

83. At least one objection can be raised to this definition of
Origin of the Leading Tone

Since the ancients made do with only consonant chords and melodic-harmonic progressions, it can be accepted as likely that a singer or instrumentalist sometimes passed through the middle step f instead of going straight from g to e, and by this means discovered by chance the treatment of chords of the seventh. This conjecture seems to me to have been contrived earlier than that which the Dresden Kapellmeister Bernhard has adopted under the name Superjectiones, when he says: Whenever the melody descends in conjunct thirds with the bass, as:

\[ \text{c'} \text{b} \text{a} \text{g} \text{f} \text{e} \]

then one should interpolate a second above and after each the leading-tone dissonance. According to Kirnberger, the leading tone on the seventh scale-step derives its dissonance entirely from its proximity to the octave of the tonic. By the same definition, the fourth degree of the scale ought to have as strong a downward leading quality in the supertonic triad, for example, but this is not the case. The downward tendency of the fourth degree depends also upon added considerations.

84. Christoph Bernhard (1627-1692), a German musician who enjoyed great respect as a composer; he was a pupil of Heinrich Schütz, and his successor as Kapellmeister in Dresden. Bernhard discusses dissonances and the Superjectio in his Tractatus Compositionis augmentatus, which survives only in undated manuscript copies from the late seventeenth century. His theoretical writings are published by Joseph M. Müller-Blattau in Die Kompositionslehre Heinrich Schützens in der Fassung seines Schülers Christoph Bernhard (Leipzig, 1926).
main note of the melody, as:

\[ \begin{align*}
A & \quad G \\
F & \quad E \\
D & \quad C \\
\end{align*} \]

§91. It happens that the leading tone, \([\text{the one}]\) which is the third of the dominant chord, does not always have its expected progression, because the composer can use this same leading tone as a preparation for a dissonance rather than having it make its expected progression. Thus instead of ascending, as in \(8 \quad 3 \quad 8\), it must descend in the resolution, as in \(8 \quad 3 \quad 9 \quad 8\),

\(C \quad G \quad C\),

\(C \quad G \quad A\).

**Chords of the Seventh**

§92. The harmony in the case of the second leading tone, that which is the seventh of the dominant chord, is the only principal dissonance chord from which all possible dissonances originate through inversion of voices. All of these dissonant chords are called essential dissonances.

The first \([\text{chord illustrated below}]\) is the original, \([\text{and the other three are derived from it by inversion}]\).

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85. In the original, G appears midway between and below b and c', and F, E, and D are below the second letter of their respective pairs above. They were perhaps misplaced by the typesetter, for Kirnberger's description seems to indicate that the lower notes should occur with the first of each pair of upper notes.
§93. Such a dissonant chord is called "essential," and has various arrangements of positions, just as the triads in the scale do.

On the tonic and subdominant in major mode the chord of the seventh has the major seventh, major third, and perfect fifth; on the dominant it has the minor seventh, major third, and perfect fifth; on the mediant, submediant, and supertonic it has the minor seventh, minor third, and perfect fifth; finally, on the semitone below the tonic it has the minor seventh, minor third, and diminished fifth.

§94. Thus a seventh can be added to the diminished triad as well as to the major and minor triads.

§95. Every triad can be struck freely with only the distinction that the subsequent chords must be related as chords that occur in the scale, or, if one wishes to move to another key, in that scale into which the modulation occurs.

86. On the left side of the table are given the names of the chords, then the notes and their arrangement in C major, and finally the figurings of each of the chords.
The chord of the essential seventh has quite a different nature, because the seventh can be taken only when the note from which it is reckoned as the seventh \(\text{i.e.},\) the root\(\) lies already in the preceding chord; this is called a prepared note. Or in another case the note which becomes the seventh itself is prepared by the preceding chord.\(^\text{87}\)

§96. It makes no difference whether the seventh is prepared by the octave, third, fifth, or sixth \(\text{of the preceding chord}\). In the case of the prepared bass, it also makes no difference whether the octave, third, or fifth \(\text{of the preceding chord}\) moves to the \(\text{unprepared}\) seventh.

§97. After the seventh occurs, it resolves down one degree, and the note of resolution must be consonant with

\(^{87}\) Kirnberger would seem to be speaking of two different styles, strict and free, without carefully distinguishing between the two. According to Friedrich W. Marpurg (Handbuch bey dem Generalbasse, 2nd ed., 1762; quoted by Frank T. Arnold, p. 602), chords of the seventh and their derivatives may be taken unprepared in the free style, but in such cases it is advisable that the bass be prepared by the previous chord; in the strict style all dissonances must be prepared and resolved. Kirnberger does not give an entirely clear definition. Above (§89, p. 85) he states that all dissonances are prepared; below (§137 and §138), however, he indicates that the root alone may be prepared in the strict style. In the Kunst des reinen Satzes, pp. 80ff.) he gives a detailed list of the liberties characteristic of the free style, but his discussion there indicates only that dissonant chords may be taken unprepared in the free style. Arnold, 359-62, gives a condensation of Kirnberger's list with a general discussion of the strict and free styles.
the notes occurring with it. Thus the resolution must be either to a third in the case of the bass progression up a fourth or down a fifth, or to a fifth in the case of a bass ascending one degree. But it can never resolve to the octave of the bass, for then the bass progression would be a third downward, e.g., from G to E, and hidden octaves would result.

First Lecture

§98. Whenever the seven stands above a note, then the triad is played on the bass note above which it stands, either with the third, fifth, and octave in five parts, or with the third and fifth, or third and octave in four-part harmony. Two thirds are occasionally played with the seventh, but only on notes in the scale on which the third can be doubled in the triad. Therefore the third cannot be doubled in the case of a chord of the seventh occurring on the dominant.

§99. In this first lecture are found eight different dispositions of the chord of the seventh, some with different positions of the notes in the right hand; some of these

88. These two resolutions are illustrated above in §89, p. 86.
89. In Die Kunst des reinen Satzes, I, 66, Kirnberger states that this progression is allowed by good harmonists, but only if the bass rises a sixth instead of falling a third.
have, besides the root, the seventh, third, and fifth, and others have the seventh, third, and octave of the root, as in Figure 71. 90

§100. In Figure 71 the chords of the seventh occur with the bass prepared, and therefore the sevenths are added freely. In example (1) the octave moves down one degree to the seventh, and thereby maintains the third and fifth with it. The seventh resolves to the third of the following bass note, and the third, as the leading tone in C major, moves up a half step to the octave above the following bass note, just as it also does in example (2). For this reason the part directly above the bass in example (1) can move only to the octave above the bass. 91

At (2) and (3) is given a literal inversion in double counterpoint. 92

Note: Double counterpoint is understood here as two voices with either the top part put an octave lower, or the bottom put an octave higher; in either case one voice remains unaltered.

At (4) and (5) the third of the chord of the seventh descends a third to the fifth of the following bass note, rather than ascending to the octave as it did in

90. Figure 71 is, in the original, Figure 1 of Part Two.

91. It could conceivably be moved upward to double the third in the final chord.

92. I.e., (3) presents an inversion of the upper parts of (2).
the preceding examples, and as it should there. The melody in this voice is certainly very disagreeable, particularly if it occurs in this manner in a piece that is sung. But in playing thoroughbass one has the freedom to do this.93

At (6), (7), and (8) the fifth of the dominant chord jumps to the seventh instead of moving to the octave of the tonic chord as previously, and the chord of the seventh has the third and octave rather than the fifth and third.

In minor mode the chords are taken in the same way as in major mode, and are given in Figure 72.

Second Lecture

§101. When, as in Figure 73, the bass ascends after the dominant to the triad one step higher, then the top three voices of examples (1), (2), and (3) of Figure 71 are identical with these first three examples; that is, the third of the submediant is doubled instead of the octave after the chord of the seventh. In the first two examples the octave above the bass can and must be taken, as in Figure 74, only in the event that this note is necessary as a preparation for the following dissonance.94

In the third example of Figure 73, it is not good

93. But not in the top voice.
94. The latter is not shown in the example.
to take the octave of the triad which follows the first chord of the seventh, because consecutive forbidden fifths would result; rather, two thirds are played instead of the octave.

§102. In the minor keys, shown in Figure 75, the octave above the third bass note f cannot be taken in either the first, second, or third examples, because the progression from the major third, g'-sharp of the dominant chord, to the octave f' above the bass, is a forbidden augmented second, particularly since this third is the leading tone of the minor key. In the uppermost voice of the first example, this would occur if it g'-sharp did not ascend a half step to the third above the third bass note. Above the last note of the second measure of the first example in Figure 75 this same leading tone must ascend to the octave above the bass on the last note, which is in the following measure. In the second and third examples of Figure 75, on the other hand, the accompanist is permitted after this leading tone to play the fifth of the following bass note in the last measure.

Third Lecture

§103. From both of the preceding lectures it can be seen that the seventh may be struck after the octave of the bass that is already present.

§104. This seventh which occurs after the octave should
undoubtedly cause young people no difficulty at all, for initially they have to take the simple triad, and the seventh following it must be very easy to find since it is one step lower than the octave of the bass note. It is only necessary to remark of this seventh which is taken as a passing note that it should never be taken without the third, but rather that it must be played either with the third and fifth, or with the third and octave.

§105. It is easy to conclude from the present third lecture that the third and fifth or third and octave must by necessity be taken with the seventh. If here in Figure 76 one were to take the seventh with the third and fifth every time, then not only would the melodies in some voices turn out very bad, but since the seventh must always resolve downward, the upper parts would also get so low that one finally could go no further.

Fourth Lecture

§106. In the previous examples of the chord of the seventh the bass has consistently remained stationary as the fundamental voice, and the seventh which belonged with it was added thereto. In the following examples, Figure 77, the seventh continues from \( \text{i.e., is prepared by} \) the preceding chord, and the bass is added to it as the fundamental voice with its third and fifth or third and octave. In the first
example the seventh lies in the lowest of the upper voices and is prepared by the octave of the preceding bass note.

§107. The seventh must remain lying in the voice in which it is prepared, and afterwards resolve down one degree.

-note: "Resolution" means a dissonance changing to a consonance, which can be either a third, fifth, or sixth above the bass note.

§108. No other voice may be moved either above or below a dissonant note, as in Figure 78. In the first example the seventh, which is prepared in the lower part, moves to the middle part; in the second example consecutive fifths occur in the top voice against the bass when, as here, the fifth and third are taken with the seventh. Therefore the octave and third must be taken in this case instead of the octave and fifth.

§109. If the octave instead of the fifth must be taken in the triad on the bass note as in the fourth example of Figure 77, and thus two notes occur with which the seventh can be prepared -- which is made particularly necessary by a preexistent chord of the seventh -- then the lowest note

95. The original is "Resolviren oder Auflösen."

96. I.e., in the so-called strict style (see footnote 87, p. 91) a dissonance must be played in the same voice in which it is prepared.

97. The precise meaning of this phrase is not clear. Perhaps Kirnberger is merely emphasizing that in the strict style it is necessary to prepare the seventh rather than the root of a chord of the seventh which is definitely figured so.
of the right hand] can be held over to the seventh with the third and fifth above. The cadence, however, can be taken with two thirds and an octave above the bass [example (4)], or, if one wishes, with one third and two octaves [example (5)], or with the third and fifth [examples (6) to (9)]; but in the case of the last beat of the fifth example in Figure 77, not the third, octave, and fifth, because the leading tone must ascend when it is in the top voice.98

In the sixth example of Figure 77 it is permissible to descend a third from the leading tone to the fifth above the last bass note. In Figure 79 one cannot leap from f' to b', because the low part [the tenor] ascends a forbidden augmented fourth, and the middle voice [alto] moves to a perfect consonance in parallel motion with the bass, causing hidden fifths to occur.

§110. These six different ways [Figure 77, examples (1) through (6)] can be sought and played in all keys. One can also proceed as in the seventh, eighth, and ninth examples of Figure 77. It is therefore customary to take the chord in this manner [i.e., in these various manners], particularly in composition, for otherwise would occur two successive major thirds, which, because of the tritone f-b, is called the in-

98. This chord arrangement is possible in examples (1) and (7), however, because the octave is doubled in the chord of the seventh.
harmonious diatonic cross-relation, such as $a'\ b'$, and which is deplored by strict composers.99

§111. The first, second, third, seventh, eighth, and ninth examples which were given in major in Figure 77 are given in minor in Figure 80. The fourth, fifth, and sixth examples, on the other hand, cannot be produced in minor keys as it is possible to do in major keys, for in (4) the forbidden progression of an augmented second would occur in the middle voice [alto] from $f'$ in the second chord to $g'$-sharp in the third [in the key of A minor]; the same fault would occur in the lower voice [tenor] in (6), and in the top voice in (5).

§112. The forbidden [augmented fourth] progression in the major key in Figure 79 becomes even worse if it is put in a minor key, as in Figure 81, since not one but two prohibited progressions of an augmented fourth occur, from $f'$ to $b'$, and from $d'$ to $g'$-sharp.

Fifth Lecture

§113. As in the preceding lecture, here the seventh is taken sometimes with the third and fifth, and at other times with the third and octave, as is shown in the first and second examples of Figure 82.100 The third, fourth, fifth, and

99. Kirnberger does not avoid this progression in all the examples of Figure 77; in (5) it appears even in extreme voices.

100. The progression here differs from the preceding one in that the supertonic instead of the subdominant triad comes before the dominant seventh.
sixth examples are merely rearrangements of the chord positions of the first and second examples. The seventh and eighth examples are also constituted like those in the preceding lecture.

§114. As in the previous lecture, one should guard against forbidden progressions of the augmented second, as in Figure 83. For this reason the first, third, fifth, and seventh examples of Figure 82 should not be put in the minor mode, because in (1) the augmented second would occur from $f'$ to $g'$-sharp in the top voice in A minor, in the middle voice in (3), in the lower voice in (5), and in the middle voice in (7).

Sixth Lecture

§115. In the first three examples of Figure 84 the third and fifth cannot be taken with the seventh in the second chord, but only the third and octave. If, however, one still wants to take the third and fifth with this seventh, then the fifth must be omitted from the first chord, and the octave above the bass doubled instead, as is seen in the fourth and fifth examples. The minor mode is shown in Figure 85.

101. Use of the fifth would produce parallel fifths in the first two chords.

102. Figure 85 gives only the first three examples of Figure 84 (the second and third in reverse order), though the remainder may also be taken in minor.
Seventh Lecture

§116. The third and octave cannot be taken with the seventh in the second chord of Figures 86 and 87, because forbidden octaves would occur with the bass. Nothing further needs to be said of these examples other than that each seventh is prepared, resolves downward, and that the third and fifth or third and octave are taken in the succession according to necessity.

§117. If the triad has been taken on a bass note, and the bass proceeds to the chord of the seventh a third below, as in Figure 86, then one is permitted simply to retain the triad which is already in the right hand; thus one has the complete chord of the seventh with the third and fifth.

§118. Just as the chord of the sixth with the third and octave is the same as the triad a third below the bass note, so also here, in the case of the chord of the seventh, the appropriate chord for the right hand is the triad a third above the bass note. 103

Eighth Lecture

§119. In the second chord of Figure 88 one has the choice of taking either the fifth and third or the octave and third with the seventh. The succession of chords itself shows

103. Kirnberger does not mean to suggest that the third of the chord of the seventh is the fundamental note; he is only showing how to find the chord on the keyboard.
whether the third and fifth or third and octave must be taken. The corresponding examples in the minor mode are noted in Figure 89.

**Ninth Lecture**

§120. Above the third \( \text{bass} \) note of Figure 90 stands the minor seventh of A, even though the major seventh \( g'' \)-sharp is prepared by the preceding chord. This minor seventh \( g'' \) may not be taken arbitrarily, but one should regard it as prepared in the top voice, even though the preceding note is \( g'' \)-sharp instead of \( g'' \). All of the following examples of Figure 90 occur in this manner. Such alterations are allowed, but they occur only when the chromatic scale is mixed with the diatonic, and such alterations occur to the extent of a half step in this chromatic scale.

**The Six-Five Chord**

**Tenth Lecture**

§121. Just as either the root or seventh in the chord of the seventh must be prepared by the preceding chord, so also must the fifth or sixth in the six-five chord be prepared.

§122. The six-five chord is produced whenever the third of the chord of the seventh is put in the lowest voice.

§123. This chord arises from the inversion of the chord of the essential seventh, and thus the sixth in the six-five

104. Original text reads *Septime*. 
chord is the same note and has the same function as the root of the chord of the seventh, and the fifth in the six-five chord is the same as the seventh in the root-position chord.

§124. The resolution of the fifth in the six-five chord is the same as that of the seventh in the chord of the seventh, i.e., down one degree to the following chord.

§125. In Figure 91 in this tenth lecture the sixth is prepared, and the dissonant diminished fifth is added to it. If the chord of the sixth with the sixth doubled precedes the six-five chord, one sixth can move to the fifth; or if the third is doubled in the chord of the sixth, one of the thirds can move up to the fifth as in the second example and the fifth and seventh examples. 105

§126. The third must always be included in the six-five chord in four-part harmony.

§127. Whenever the fifth does not initially occur in the six-five chord but is struck after a sixth, then the sixth must be doubled initially in the chord of the sixth; otherwise the sixth would be missing in the six-five chord when the sixth is moved to the fifth, as will be evident in the following lecture.

105. The fourth example, perhaps through an engraver's error, shows the bass being doubled in parallel octaves by the tenor voice, as well as an upward resolution of the downward leading tone.
Eleventh Lecture

§128. In Figure 92 [first example] the sixth is doubled in every chord of the sixth in order that the six-five chord may appear and be heard complete with the sixth, fifth, and third.

§129. In the second manner [of treatment shown in] Figure 92 the sixth is doubled at the unison [see examples (2) and (4)], but it makes no difference whether the doubling occurs at the unison or an octave apart.

§130. In the third manner, in which the sixth is not doubled, the third above the bass note must move to the dissonant [diminished] fifth [see Figure 92, example (3), also first measure of example (2)]; this is just as correct as moving from the sixth to the fifth.

§131. In the [first] example in minor in Figure 93, the chord of the sixth with the major sixth doubled occurs on the fifth below the tonic at *. In this case it is permissible to double it, because these major sixths are not leading tones, but have quite a different character, like that of the major sixth which occurs on the supertonic of a major or minor key, and of which more will be said below.

§132. This chord of the sixth in Figure 93 [at *] is the first inversion of the diminished triad which lies a third below the bass, and whose diminished fifth [F] is also con-
sonant. The fifth of this six-five chord, on the other hand, is dissonant even though it is a perfect fifth above the bass note, for it is the dissonant seventh of the true root B.

Twelfth Lecture

§133. The six-five chord in the examples of Figure 94 is variously prepared by the sixth: in the first measure by the fifth above the bass in the preceding chord on C, and in the second measure by the third above the bass note e of the preceding chord. In the same measure the sixth in the second six-five chord is prepared by the octave of the preceding bass note.

§134. In the second example of Figure 94 at * * two fifths occur in succession, but they are permitted in both composition and playing, because the progression occurs with the bass and top voice in contrary motion, and because the first fifth is perfect, and the second one diminished.

Thirteenth and Fourteenth Lecture

§135. In Figure 95 the six-five is always on a strong

106. See above, §60, pp. 55f., and footnote 46.

107. Cf. above, Part I, §21, p. 31, where consecutives in contrary motion are forbidden.

108. See below, Part III, §155. The consecutives occur in all three examples, though in the second one they are in outer parts.
beat with the fifth prepared and the sixth and third added to it. In Figure 96 the six-five appears on weak beats and is prepared by the fifth. Since it may occur on either a strong or weak beat, it is understood to be a chord of essential dissonance.

Fifteenth Lecture

§136. In all the six-five chords which occur in the first two measures of the three examples of Figure 97 the diminished fifth is added freely to the sixth, but it is calculated as if prepared by the major third of the preceding bass note. The circumstances are the same here as in the ninth lecture where the minor seventh is also taken freely.¹⁰⁹

Sixteenth Lecture

§137. Six-five chords occasionally follow directly in succession just as plain sevenths can occur in succession. But one must never lose sight of the rule that either the fifth or the sixth is prepared, and the fifth resolves afterwards.

§138. If it is not possible for a good thoroughbass player to effect this rule satisfactorily, then the composer and his composition, if it be written in strict style, can be accused

¹⁰⁹. Figure 97 presents the same progression as Figure 90 of the ninth lecture, but with six-five chords substituted for chords of the seventh.
of incorrectness against pure composition. In the free style of composition, in which dissonances occur quite unprepared, the circumstances are entirely different; their justification is known only to masters of the art.110

§139. Whenever $\frac{6}{5}$ occurs above a note and the preceding note is a half or whole step lower with the chord of the sixth above it, the sixth must not be doubled $\text{in the first chord}$, otherwise forbidden consecutive fifths would arise in $\text{going to}$ the following chord from the preceding one, as in Figure 99.

§140. If, however, the chord of the sixth must be taken necessarily with two sixths, then one cannot help having the lower sixth remain stationary so that it becomes the fifth in the six-five chord, as in Figure 100.

§141. Owing to this doubling of the sixth, the complaint very easily arises that, first, the tune in the top voice becomes unmelodious, and second, the upper voices get too low. The latter cannot be avoided when a number of dissonant chords occur in succession. Therefore, avoid the doubled sixth before the six-five chord as often as possible, and take the octave instead of two sixths. The third, however, can $\text{also}$ be doubled, as in Figure 101.

110. See footnote 87, p. 91.
Seventeenth Lecture

§142. On the third chord of Figure 102 an accidental # is found before the bass note d. Even though according to the degrees of the staff the third should be just f', which in modern times is called the diminished third, nevertheless it must not be used with d-sharp -- rather, the true minor third, f'-sharp, instead. In all compositions by Händel the minor third always occurs instead of the diminished third in cases such as this. Although in modern compositions the diminished third is occasionally used with the minor sixth in the six-five chord, it is nevertheless to be avoided unless one sees explicitly that it is the composer's intention that it should be taken instead of the minor third.

Further below I will deal in detail with the diminished third and the inverted augmented sixth (which has always been condemned by the older generation of strict theorists). 111

Young people, who should hear pure harmonies, must be completely spared this diminished third; since its use involves such great difficulties, put off teaching it until a later time.

111. Johann David Heinichen in his Der General-Bass in der Composition (1728), for example, forbade use of the diminished third as being too harsh an interval to be tolerated, even between two upper voices. For his remarks on this subject, see Arnold, 262.
Whenever by inversion the augmented sixth occurred above the bass, the older writers raised the bass note a half step so that it became the common major sixth instead of the augmented, as can be seen in Figure 103.\(^{112}\) The same situation occurs here, where the true minor third must be taken instead of the diminished third in the six-five chord, as was the case in the triad with which the perfect rather than the diminished fifth must be taken with the major third even though it is not so indicated \[\text{in the signature}\] at the beginning of the piece (see Figure 104 at a).\(^{113}\) In the second example of Figure 104, the perfect fifth is taken at b\(^{114}\) and c even though it is foreign to the key signature. If it happens that the diminished fifth should be taken with the major third, then the chord is dissonant, even though the combination of the intervals -- third, fifth, and octave -- occurs just as in the consonant triad.

The reason for the dissonance of the chord with the major third and diminished fifth is that B-d\(^\#\) and B-f are from different scales, and therefore from different keys, and

\(^{112}\) Kirnberger has neglected to mention that the raised sixth may be figured 6, as it appears in Figure 103. In later examples, 4+ is sometimes used to indicate a raised fourth.

\(^{113}\) See above, §28, p. 38.

\(^{114}\) The \(\flat\) before the bass note and the octave above it at b are omitted in the original.
also because the major third in this case is a leading tone after which can occur no other progression than a half step upward, and the diminished fifth is simultaneously a downward leading tone which can only descend a half step.

It is very necessary to beware of the completely false precepts of such teachers as allege that every triad is consonant if it only has the correct steps on the staff. This chord with all its inversions, and all other chords except the major, minor, and diminished, are dissonant in the highest degree.115

Six-Four-Three Chords

Eighth Lecture

§143. Whenever $\text{\textit{6}}$ stands above a bass note, as in Figure 3

105, all the notes which must be taken are already indicated in the figuring; but care must be taken that, once either the third or the fourth is firmly prepared by the preceding chord, it remains stationary in the voice in which it is prepared, and that afterwards the third resolves down one degree to the following chord.

Usually in the case of the six-four-three chord

115. Though he is speaking primarily of triads, Kirnberger does not mean to exclude seventh chords which have some of the same intervals.
one attends simply to the sixth, and the fourth and third are taken with it according to their nature, but only in the instance that the bass descends one degree to the triad, or ascends one degree (either a major or minor second) to the chord of the sixth.

It makes no difference whether the fourth or third is prepared by the third, fifth, or octave of the preceding chord. In all the examples of Figure 105 the fourth is prepared, and the third above the bass note is added freely, either as a passing note to the stationary bass, or struck simultaneously with the bass.

There is no need for further note of how different kinds of fourths may be prepared, for everyone can see it in the given examples without further instruction.

In all the variants of Figure 105 the third occurs as a passing note, just as the seventh with the stationary bass in the first example of Figure 107, or the passing fifth with two sixths and a third in the case of the six-five chord, as in the second example of Figure 107.116

When there is another chord before the six-four-three chord by which the fourth is prepared, then the third

116. The original indicates Figure 97. Judging from his examples in Figure 105, Kirnberger does not refer simply to "passing" notes, but to other figures as well, e.g., upper and lower auxiliaries. See, however, the following paragraph, and footnote 117.
does not occur as a passing note, but is struck freely together with the bass note, as in Figure 108. 117

In Figures 105(a), 106(a), and 109(a) the fourth is doubled in the six-four chord. This serves notice that the fourth is consonant, may be played freely, and may be doubled, whereas the dissonant fourth must be prepared and permits no doubling.

Nineteenth Lecture

§144. On the third \textit{bass} note of the first measure, in the fourth example of Figure 110, the six-four-three chord is the second inversion of the diminished triad, with the fourth prepared as the octave above the root, and the third played freely as the essential minor seventh. On the fourth quarter of the second measure the third above the bass is struck freely as the essential seventh above the root. 118

§145. As often as one passes into a nearly related key in either major or minor mode, and a major sixth which is foreign to the scale in use occurs \textit{on the supertonic}, then the fourth can always be taken along with the third, as in Figures 111 and 112, instead of following the prescription \textit{of bass}

117. Notice that Figure 108 with its third played "freely" would be identical with Figure 105(n) with its third taken as a "passing" note were it not for the held note in the latter.

118. Actually, the third is prepared by the preceding chord, and the fourth is added "freely."
figurings in Figure 113. In Figure 112 the sixth is major according to the fundamental key; but the accidental minor third shows that this sixth should be treated just as the other sixth, because it leads down one step to the neighboring key of F.

§146. If after the chord of the sixth the bass ascends one degree to the chord of the sixth rather than descending one degree to the triad, then is taken with the sixth in the same manner, since the following chord of the sixth stands for the triad a third lower, as in Figure 114.

§147. It is not always necessary to take the fourth with the sixth doubled in the following chord, as in Figure 115.

119. I.e., the fourth may be added to the six-three chord whether it is indicated or not; it is becoming evident that Kirnberger considers the simple on the supertonic to be an incomplete form of 4. In the original Figures 111 and 112, as well as in a number of the preceding examples, the chord on the supertonic is figured only with 3, indicating that the accompanist is free to add the dissonant fourth above the bass at will. In the present translation, the figuring has been "completed" in brackets as an aid to the modern reader, though the reader should bear in mind that such additions are considered unnecessary by Kirnberger. Thus, except for differences in the original figuring, Figure 113 is identical with 112(3).
On the last note e of Figure 115 the chord of the sixth with the sixth doubled is more pleasing than if the octave were taken. In Figure 116, on the other hand, the octave of this note e must be played, for the seventh of the first Bass note in the following measure is prepared by it. In the case of the sixth on d in Figure 117, however, it makes no difference whether I take $\frac{4}{3}$ or 3 and 8 with it.

Note: In many writers one finds, both in composition and thoroughbass playing, instead of the chord of the sixth on the supertonic being taken as $\frac{4}{3}$ or $\frac{3}{6}$, a doubling of the minor third, which some strict theorists condemn, for the seventh of the root of the dominant seventh is thereby doubled. In our times it is doubled without hesitation, but never with the major sixth, because it is the ton sensible which admits no doubling.\textsuperscript{120}

From this it by no means follows as a fundamental rule that the major sixth may not be doubled if it has the minor third with it, for whenever the major sixth is not the ton sensible of the root, it can be doubled without hesitation, as in Figure 118.\textsuperscript{121} This will be perceived immediately from the succession of chords, for here it steps up one degree to the triad instead of down one degree.

**Six-Four-Two Chords**

**Twentieth Lecture**

\textsection 148. The chord of the second, which is indicated by

\textsuperscript{120} Kirnberger intends to class himself as one of the strict theorists who condemn this doubling. See \textsection 12 of the section titled "Accompaniment in Many Voices," below.

\textsuperscript{121} Cf. above, p.72 and footnote 62.
either 2 alone, or $\frac{4}{2}$, or $\frac{6}{2}$, is the third inversion of the chord of the essential seventh; the essential seventh is the bass note, and the second above the bass is the root. Just as in the chord of the seventh, in which either the root or the seventh is prepared and afterwards the seventh resolves down one degree; and further in the six-five chord, in which either the sixth or the fifth is prepared and the fifth resolves downward; and in the six-four-three chord, in which either the fourth or third is prepared and afterwards the third must resolve down; so in the same way in this chord of the second either the second above the bass note is prepared as the root, or the bass note itself is prepared as the seventh and then resolves down one degree.

§149. The chord of the second is actually the consonant triad [added] a second above the bass note. It can be major, minor, or diminished. For example, in C major and A minor, the triad is major when the chord of the second stands above the bass notes E, F, and B; the triad is minor when the second stands above the bass notes C, D, and G; it is diminished when the second stands above the bass note A. One sees from this that the chord of the second is capable of various figurings. In all such cases it is best to figure only the second above the bass note to which the fourth and sixth must be taken, and to be sure that the second, fourth,
and sixth as they are found in the scale. Either 4 or 6 must be put above the bass note in addition to only in the case that either the fourth or the sixth should differ from that which is found in the scale. In C major, for example, f-sharp is taken instead of f above the figuring with the bass on C7; b-flat is taken instead of b in the case of D; d-sharp and f-sharp are taken instead of d and f in the case of #4. This last chord of C #4 is not a true chord of the second, and it will be dealt with further below.

In four-part harmony the chord of the second can never be taken without the fourth, for the fourth is the third of the root, which, as is well known, must always be taken along with the plain triad as well as with the chord of the seventh and the chord of the sixth. On the other hand it is permissible to double the sixth instead of taking the second in order to avoid forbidden fifths, as in Figure 119 at a and b.122

§150. At a in Figure 120(1) occurs the chord of the second with the second prepared and the bass struck independently. In this case, when the triad a second above the

122. Figure 119a does show the sixth doubled and the second omitted; b, however, has the second doubled and the sixth omitted.
bass7 precedes the chord of the second, the same chord remains stationary as taken. At b, on the other hand, the triad a second above the stationary bass note is taken; since here the bass note f remains stationary, the triad of g is taken to it.

It makes no difference whether the right hand ascends or descends to the fixed bass in adding the chord of the second to it; only in the case that the fifth is in the top voice of the preceding triad is one required to descend in order to avoid forbidden consecutive fifths, as in Figure 121 where the false method is shown at *, and the proper method occurs at **.

Although the discourse in this lecture was to have been only about chords of the second, I nevertheless consider it necessary that the previous chords, both consonant and dissonant, be reiterated. Therefore at Figure 120c there are two chords of the seventh in succession in which the seventh is prepared; at d the seventh is added freely to the prepared bass note. At e the six-five chord is prepared by the sixth, and the fifth is added freely to it; at f the fifth is prepared, and the sixth is added freely. At g the six-four-three chord is prepared by the fourth, and the third is added to it freely; at h the third is prepared, and the fourth is added freely.
§151. In the case of the chord of the second (which is the easiest to find of the dissonant chords, because one only has to take the triad a second above the bass note), only this is still to be noted: when the minor second $b_2$ is indicated, the triad with the major third and perfect fifth a half step higher must be taken, as in Figure 122; also, whenever the second is minor in the scale, the major triad must be taken, as in Figure 123.

§152. Whenever the augmented fourth is indicated by $4^+$, $4$, or $\#4$ alone, or by $\frac{4}{2}^+$, then the triad with the major third is taken by the right hand on the second step above the bass note.\[123\]

The two examples at Figures 124 and 125 serve to teach beginners the chord of the second in a comprehensible manner; in the first example (Figure 124), the second, together with the fourth and sixth, are already prepared, and the bass is taken in passing; in the second (Figure 125), on the other hand, the dissonances are prepared in the bass, and the triad on the second step above the bass note is taken as it occurs in the scale, either major, minor, or diminished.

In the first example (Figure 124) it is to be noticed in addition that the passing bass note is played alone, and the chord of the second which lies in the right hand

123. The same may also be true, of course, of chords of the second figured by 2 alone, e.g., Figure 120(1)a and b.
should remain stationary, above all on the organ (particularly in fugues), in well-worked choruses, and in all strict compositions in both single and double counterpoint.

§153. When the chord of the second taken in passing occurs prepared by the top part, then it requires no separate figuring. One is then permitted simply to use the sign — instead of the otherwise customary figuring with numbers set above it. This sign indicates always, as also in the present instance, that the harmony of the preceding bass note remains stationary, and thus it facilitates the playing itself, as is shown in Figure 126.

**Conclusion of Parts One and Two**

In conclusion I append two examples, in major and minor Figure 127, in order to survey at a glance, as it were, all consonant chords with their inversions, and also all possible chords of essential dissonance, namely, the chord of the seventh and its possible inversions. The proper preparation and resolution in the dissonant chords occurs in accordance with the rules established in this my rudimentary treatise, and whoever realizes these two examples beginning in all three right-hand positions and in four true

124. I.e., by the parts in the top, or right, hand.
125. Examples (3) and (4) are realizations of (1) and (2), respectively.
voices, and plays fluently in the practice recital, and in addition to this correctly realizes both examples in all other keys, will have overcome the greatest difficulties of thorough-bass both in theory and practice.
§154. In Part One the use of the three various triads has been demonstrated: (1) the major triad with the major third and perfect fifth; (2) the minor triad with the minor third and perfect fifth; (3) the diminished triad with the minor third and diminished fifth. I will mention only briefly that, as was taught there, the full harmony which makes up the triad -- the third, fifth, and octave -- should in most cases be taken on each bass note that calls for a triad, but that two perfect fifths or octaves in succession are not permitted in parallel motion between two parts either in ascent or descent; in order to avoid this fault, contrary motion should be used. In case parallel motion becomes necessary, one can double either the third (as in Figure 128 at a and b), or the octave (as at c), instead of playing the full triad. It is a primary rule that the third is always taken with the bass note above which the triad is indicated, and thus the third can be doubled in both major and minor triads. In Figure 128a, for example, the doubling occurs on the minor third; the doubling of the minor third is to be avoided only when the latter is accidental by virtue of a,.


127. Or by a when the third has a sharp. No reason is given for this prohibition.
Furthermore, the major third is doubled in Figure 128 at b. Theorists unanimously forbid the doubling of the major third, but this rule applies only in the case of a dominant chord in which this third is the leading tone to the following note semitone above; therefore it also may not be doubled when it occurs by virtue of an accidental which is foreign to the key in which one is, for it then becomes the leading tone of the following note. In the triad on the principal note or tonique, and the triad on the subdominant, it can be doubled without hesitation unless special circumstances should indicate the contrary.128

The major or minor sixth which has the major or minor third with it can always be doubled if the resultant chord of the sixth is the first inversion of the major, minor, or diminished triad, because the major or minor sixth is the octave above the root. Only in the case that the fourth can be added to it can the major sixth not be doubled, for this chord usually occurs on the second above the note from which the entire piece proceeds i.e., on the supertonic, or in a passing key, after which the bass either descends one step to the tonic triad, or ascends a major or minor second to

128. Even earlier, Johann David Heinichen in Der General-Bass in der Composition (1728) had disassociated himself from the rule forbidding doubling of the major third in all circumstances. For his remarks on the subject, see Arnold, 499.
the chord of the sixth. Since this major sixth is the third of the fifth below the bass note rather than the octave of the root, and since this major sixth is the leading tone or near-tone\textsuperscript{129} or the major seventh of the tonic, it does not allow doubling.

By \textit{alternately} doubling the third and the sixth \textit{in chords of the sixth}, one can avoid in many instances both forbidden fifths and octaves, as in the examples of Figure 128 at d, e, and f.

The fifth \textit{in a root-position triad}, furthermore, is doubled only in particularly rare cases, but the octave or fifth can never be doubled unless accompanied by a third; Figure 128g must certainly have the third of the bass note with it.

\textbf{§155.} One can see from the scale of the major or minor key which third and fifth should be taken along with each additional note above the tonic up to its octave. Only observe here that when a sharp sign foreign to the key shown at the beginning indicates a major third, the perfect fifth also must be taken with it even though only the diminished fifth be \textit{shown} at the beginning \textit{in the signature}. For example in the scale of C major or A minor, if the bass B occurs with the major third d-sharp, then f-sharp rather than f must be taken to it, as at Figure 129. In case, however, \textbf{129. Nebenton}.
the diminished fifth should and must be taken with the major third, it must also be expressly indicated, as \( \frac{5}{3}b \).

It is yet to be noted of this diminished fifth that, because of its imperfection when judged against the perfect fifth, the ear does not take hold of it perceptible as well. Consequently, a diminished (or imperfect) fifth can follow a perfect fifth in descending motion, as in Figure 130a, but a perfect fifth after a diminished fifth in ascending motion, as at b, is not good. It is more tolerable in ascending motion if an imperfect fifth follows a perfect one, as at c.

§156. For a long time great composers have placed a perfect fifth after a diminished fifth without scruple in inner voices in ascending motion; but it is always an unpardonable fault in extreme voices, namely between the bass and the highest voice, because it is known from experience that the two outer voices are the most clearly perceptible.\(^{130}\) Therefore, one does not willingly put the bass note in the top voice without necessity, for it is not sufficiently harmonious. Rather, the third or sixth above the bass note is used instead of it, or the fourth may be suspended before the third.

---

\(^{130}\) The example at c shows the ascending perfect to diminished fifth in outer voices. C. P. E. Bach, 200-201, forbids both ascending progressions in outer parts, permits the descending diminished to perfect fifth in outer voices only by necessity, but allows the descending perfect to diminished fifth in any pair of voices.
or the seventh before the sixth.\textsuperscript{131}

The ninth, to be sure, can also be retarded before the octave, but rather than resolving to the octave on the same bass note, it is better if the bass ascends a third in the resolution, by which means the resolution of the ninth becomes the sixth of the following bass note, as at Figure 131a; or if the bass descends a third in order that the resolution of the ninth becomes the third of the following bass note, as at b. The rarest case is if the bass ascends a fourth or descends a fifth so that the ninth becomes the fifth in the resolution, as at c.

\textit{§157.} In all of these three instances the resolution of the ninth, which must be to the octave of the same bass note above which it occurs, has been delayed, and it resolves with the commencement of the following bass note. This is called retardation, which will be discussed in more detail below with the use of the non-essential dissonances.

\textit{§158.} In addition to the use of pure harmony without forbidden fifths and octaves, it has also been taught in Part One which melodic progressions are good in themselves in each voice, and which are bad and are to be avoided; among

\textsuperscript{131} Daniel Gottlob Türk makes a similar statement in the \textit{Kurze Anweisung zum Generalbassspielen} (Halle und Leipzig: Schwickert, 1791), 109, but he adds that the octave may be taken in cadences. C. P. E. Bach (p. 211), however, gives this rule only in connection with chords of the sixth.
the latter are all augmented intervals, such as the augmented second, augmented fourth, augmented fifth, augmented sixth, and also the major seventh. These progressions are permitted only when the composer uses them deliberately and with reason.

The first harmonists or composers in the earliest times did not use these augmented intervals, but they likely used the various modes, such as Ionian, Dorian, Phrygian, Lydian, Mixolydian, and Aeolian; they further divided each type into two kinds, such as upper and lower i.e., authentic and plagal Ionian, Dorian, etc.

**Note:** Concerning this, see *Kunst des reinen Satzes*, Volume Two, Part Two, pp. 41ff.

§159. From such pieces of quite old church music as have been preserved to this day (and of which I myself possess some) may be deduced that the ancients composed exclusively with sequences of perfect triads, but without forbidden fifths and octaves; and finally after the introduction of chords of the sixth they composed again for a long time with the effect of greater harmonic variety, but without the slightest dissonance, neither essential nor non-essential. On great occasions of church music performances both types produce a

132. The discussion in the *Kunst* includes a brief description of the Greek tetrachords of Ptolemy, followed by the authentic and plagal ecclesiastical modes (including Ionian and Aeolian) with a number of musical examples from plainchant and from chorale settings of J. S. Bach. The description includes a list of the expressive qualities which Kirnberger attributes to each mode.
very pleasing harmony as well as a magnificence which is appropriate to the divine service, and cause holy awe for the devout worshipers through the unexpected succession of harmonies.

After the essential seventh was recognized in an accidental manner and introduced into use,\textsuperscript{133} the composers of those times enriched their compositions with it, but they used neither the six-five chord, the six-four-three chord, nor the chord of the second until ultimately all of the harmonies derived from the chord of the seventh were added; Part Two of this treatise deals with their use.

The various triads and the inversions derived from them -- the chords of the sixth and the six-four chords -- and the chord of the essential seventh with the six-five, six-four-three, and four-two chords which are derived from it are, altogether, those harmonies out of which a composer discerns all possible harmonies. The orderly combination of these harmonies and their use itself marks each composer with strength or weakness.

From time immemorial church music performances, although they may have been without instruments, have been sung in four, eight, or more parts, with the organ accompanying as the foundation and support of the music -- or at least a

\textsuperscript{133} See above, pp. 88f.
positive [organ] was used if the music was performed at the Grabe Christi\textsuperscript{134} or for some other occasion down in the nave,\textsuperscript{135} to which contra violons\textsuperscript{136} were added in proportion to the number of singers. In another manner of performance each voice part was accompanied by trombones and Zinken,\textsuperscript{137} but never excluding the use of at least a positive. In the present enlightened times, in which church music must be modeled entirely after a comic operetta, it is considered quite improper for the organ to accompany the singers; as a result, a church choir is degraded from its true dignity and put on a level with such musical miscarriages as are found in taverns.

\$160. Under the article "Dissonance" in Sulzer's Allgemeine Theorie der schönen Künste, p. 262ff.\textsuperscript{138} one can clearly learn what dissonances are, how they differ from consonances, and how many kinds of them there are. There three kinds of dissonance are noted: The first is that which occurs in passing between two consonant notes.\textsuperscript{139} This kind of dissonance does not occur.

\textsuperscript{134} At the altar, which was symbolic of Christ's tomb.

\textsuperscript{135} Unten in der Kirche. Literally, "below in the church," as opposed to high in a balcony or gallery, where choirs, organs, and instruments were often located.

\textsuperscript{136} String bass instruments.

\textsuperscript{137} The Zink was the wooden cornett with cup-shaped mouthpiece.

\textsuperscript{138} The original indicates p. 349. Concerning the Theorie, see above, p.xxi.

\textsuperscript{139} The other kinds of dissonance described are the essential dissonance (discussed above in Part Two) and the non-essential dissonance (discussed below in Part Three).
not belong to any particular harmony, but comes about only in passing from one beat to a following harmony, which is either the same or different from the preceding. Also, such passing dissonances can occupy a half or a quarter of a beat, but never two or more beats.

This kind of dissonance happens in two manners. The first passes to a consonance on a beat after it, hence from one consonance to another between two beats, and this kind is called the common passing tone (transitum regularem). The second kind occurs when the dissonant note is taken simultaneously with the bass note of a beat, and it is succeeded by the consonant note which belongs to it; this is called the uncommon accented passing tone (transitum irregularem). Both kinds occur very commonly, but the former is given preference to the latter; the latter is used by strict composers who know how to employ it suitably and without being unpleasant.

The alternate use of both kinds of dissonance in one composition is what provides the greatest variety in composition; particularly distinguished by this use of both types are the compositions of J. S. Bach, by virtue of which they are noted above all others and sound extraordinary.

Just as both kinds of passing dissonances are dissimilar in the usage of strict composition, they also differ in the same degree in performance; thus no one can
play the compositions of J. S. Bach without an accurate knowledge of harmony.

In addition it is to be noted of this kind of dissonance that (since it is certain that only such a manner of writing could be called good and pure in which all the chords are composed of consonant notes, but in which passing dissonances, nevertheless, occur between consonances) one ought to see that the consonances are always considered as primary notes; the passing dissonances, however, are considered merely as incidental and not as necessary notes. Therefore these dissonances which occur on the beat together with the true and proper consonant note should consume no more time than the consonances; but the consonance, on the other hand, can consume more time, because it is the principal note of the harmony. It is an error in any case, regardless of the dissonant note's occupying the larger part of the first or last half of the beat, because in either case the consonant note would be perceived less than the dissonant one. Therefore it is quite surprising how some composers choose improperly to handle regular and irregular passing notes, thinking thereby to effect something quite special.

The improper use of the passing dissonances which has been mentioned, in which dissonances in a composition are heard more than consonances, is the greatest agony for a good
ear, and also the most obnoxious in playing. The above use of these dissonances will never be found in the well-grounded composers, but only in the ignorant so-called geniuses of the present age who have not the slightest knowledge of pure and orderly composition; what is more, they also have no wish for it, because they imagine themselves to be geniuses.

PART THREE

Non-Essential Dissonances /In the Triad/

§161. This kind of dissonance occurs both with the consonant triads and their inversions -- chords of the sixth and six-four chords -- and also with the chord of the essential dissonant seventh and its inversions -- the six-five chord, six-four-three chord, and the chord of the second.

A non-essential dissonance can occur with the triad in three ways. First, instead of simultaneously playing the three tones which belong to the triad -- the third, fifth, and octave -- the third can be retarded by the fourth. The fourth, however, must be situated in the preceding chord and must remain stationary, and afterwards move down to the third of the same bass note above which the fourth stands, as in the first example of Figure 128, and Figure 132 (1).

§162. Second, the sixth can stand before the fifth, as in
Figure 132(2), and 7third, 140 the ninth before the octave, as in Figure 132(3), in the same manner in which the fourth was retarded before the third.

§163. In the first case, in which the fourth is retarded before the third, those notes which the triad lacks in addition to the third, namely the fifth and octave, must be taken with the stationary fourth which resolves to the third, and with the resolution of the fourth to the third, the triad is restored to completion.

§164. In the case of the sixth before the fifth, the situation is the same; it must be prepared and remain stationary, and that which is lacking with the fifth to which it later resolves, namely the third and octave, is added to it. The sixth is to be regarded as a dissonance in this case, because it is a retardation of the fifth, just as the fourth is of the third, or the ninth of the octave.

§165. If the ninth appears before the octave, then it is dealt with in every respect as has been taught. The third and fifth are struck simultaneously as complement to the ninth.

7Non-Essential Dissonances in the Chord of the Sixth

§166. It is easy to know what must be taken with such
occurring dissonances if one only takes note of the interval to which the non-essential dissonance resolves. It is necessary only to add what is lacking as complement for the triad, e.g.:

\[
\begin{array}{ccc}
4 & 3 & 6 \\
5 & 8 & 3 \\
6 & 8 & 3
\end{array}
\]

The chord of the sixth, to which the third and octave belong, has the same condition as the ordinary triad. In the selfsame way, the seventh comes before the sixth, the ninth before the octave, and the fourth can be suspended before the third, remaining stationary in the same voice which prepares it, and resolving in the same part in which it was suspended to the consonance above the same bass note.

§167. Just as easily will it be noted what should be taken with each dissonance which occurs in the case of the chord of the sixth (to which the third and octave belong) if just those intervals which are lacking at the resolution are added directly to the non-essential dissonance, as:

\[
\begin{array}{ccc}
7 & 6 & 9 \\
3 & 6 & 4 \\
8 & 3 & 3
\end{array}
\]

§168. In both the triad \([\text{represented}]\) as the chord of the sixth, and in the consonant six-four chord which is the second inversion of the triad, the consonant notes which are struck simultaneously with the tied non-essential dissonance must remain stationary with the following note of resolution,
because only in this way does the harmony attain its perfection. In the opposite case \( \text{i.e.,} \) if the added consonant notes do not remain stationary\( \), the completeness of the harmony would become interrupted; for example, if a \( \text{dissonant} \) fourth and \( \text{a following consonant} \) third are quarter-notes above a bass note which is a half-note in value, then the fifth and octave which belong with it are half-notes. If, on the other hand, the two notes of non-essential dissonance, including the resolution, are eighth-notes, then the \( \text{consonant notes} \) which belong with them are quarter-notes, etc.

§169. One must be indeed careful not to mistake the dissonant \( \frac{6}{4} \frac{1}{3} \) chord (in which the sixth is consonant and the fourth is a non-essential dissonance to the third to which it resolves, and by its resolution becomes the chord of the sixth, as in Figure 133 at \( b \)) for the consonant six-four chord, as in Figure 133 at \( a \). The two are of quite a different nature, for in the consonant six-four chord neither the fourth nor the sixth is a dissonance, and thus they do not have the obligation of dissonances, namely to be prepared and resolved; in the case of the \( \frac{6}{4} \frac{1}{3} \) chord (as in Figure 133 at \( b \)) the sixth is consonant and the fourth is a non-essential dissonance.

In addition, it is to be observed of the \( \frac{6}{4} \frac{1}{3} \) chord that the sixth can be doubled, and with the resolution of the
fourth to the third it becomes the chord of the sixth with the sixth doubled. This doubling of the sixth is proof that it is consonant; the fourth, on the other hand, is dissonant, for it cannot be doubled. See Figure 134 first three measures.\textsuperscript{141}

It is another case if both the sixth is suspended to the fifth, and the fourth is suspended to the third, for then the two -- both sixth and fourth -- are dissonant and therefore cannot be doubled. See Figure 133 at c.\textsuperscript{142}

We have pointed out three different kinds of six-four chords: (a) the consonant six-four chord (Figure 133a); (b) the dissonant six-four chord in which only the sixth is consonant, but the fourth which resolves to the third is dissonant (Figure 133b); and (c) the six-four chord in which both the sixth, which resolves to the fifth, and the fourth, which resolves to the third, are dissonant (Figure 133c). In the case of the six-four chord at (a) the root is a fifth below the bass note, at (b) the root is a third below the bass note, and at (c) the bass note is also the root.

\textsuperscript{141} The original text indicates Figure 133 at c, which is discussed only in the following paragraph. None of the six-four chords in Figure 133 show the doubled sixth.

\textsuperscript{142} Notice that the dissonant sixth and fourth at c are prepared by the consonant sixth and fourth at a in the preceding measure. The root and the function of the chord are considered to change as it passes over the bar line, even though all the notes remain stationary.
Each of these three chords has a different root, and therefore a different progression also. From the different roots which each of these three observed chords has, one can see which notes have to be doubled in a setting of more than four parts. All of these chords are clearly distinguished by their use, namely (a) in the doubling of the harmony, (b) in how the tying occurs between two chords, and (c) in the progression -- what chord may succeed another.

The consonant six-four chord is distinguished from the other two dissonant six-four chords in that the two notes, the fourth and the sixth, can be freely added unprepared to either a prepared or unprepared bass note, and various progressions to other chords are allowed. In addition, the consonant six-four chord can occur on either a weak or a strong beat. Finally, in settings of a number of voices, both in composition and thoroughbass playing, any of the notes which belong to the triad above the root can be doubled in the consonant six-four chord of which the root is a fifth below the bass. Furthermore, after the consonant six-four chord the bass can either descend one degree to the root-position triad, or can ascend one degree (or a second) to the chord of the sixth; in this case the minor third above the bass note, which is the minor seventh of the root, can also be added to the six-four chord. This cannot occur in the
case of either of the other two chords, namely the $6_{4\frac{3}{3}}$ chord in which only the sixth is consonant, and in the $6_{4\frac{5}{3}}$ chord in which both the sixth and fourth are dissonant.

When the minor third above the bass note is added to the consonant six-four chord, then this chord is none other than the second inversion of the chord of the seventh a fifth below the bass note, that is to say, the $6_{3\frac{7}{3}}$ chord. If, on the other hand, no minor third is added to the consonant six-four chord, then it is, as is well known, merely the second inversion of the triad of the root without the essential seventh. But in both of the other dissonant $6_{4\frac{5}{3}}$ chords -- $6_{4\frac{5}{3}}$ and $6_{4\frac{5}{3}}$ -- neither this addition of the minor third nor the doubling of $6_{4\frac{5}{3}}$ notes is permissible in a setting of many voices.

In the case of the consonant six-four chord, both the sixth and the fourth are essential notes. In the case of the dissonant $6_{4\frac{5}{3}}$ chord, both the sixth and the fourth are non-essential notes; that is to say, the sixth is a suspension to the fifth, and the fourth is a suspension to the third, and in this instance either the fifth instead of the sixth in the $6_{4\frac{5}{3}}$ chord can be taken directly with the fourth $6_{4\frac{5}{3}}$, or the third instead of the fourth can be taken directly with the sixth $6_{3\frac{7}{3}}$. It is thus that the consonant six-four
chord is most clearly distinguished from the former the
dissonant six-four chords for in it neither the fifth can
stand in place of the sixth, nor can the third stand in place
of the fourth.

In the case of the $\begin{pmatrix} 6 \\ 4_3 \end{pmatrix}$ chord in which only the sixth
is consonant and the fourth is dissonant, and of which the
third below the bass note is the root, only those notes which
belong to the triad of the root can be doubled.

The bass can never move down one step to the $\begin{pmatrix} \text{root}\text{-position} \end{pmatrix}$ triad after the $\begin{pmatrix} 6 & 5 \\ 4_3 \end{pmatrix}$ chord, as it can after the con­
sonant six-four chord; rather, if the progression one step
downward does occur, then the bass note after the dissonant
six-four chord has the chord of the second with it, and only
then does the resolution of the preceding six-four chord
occur, as in Figure 137 at a.\textsuperscript{143}

\textsuperscript{170}. Just as one or two non-essential dissonances can
be suspended in place of the consonances which should occur
simultaneously with a bass note to which a triad or chord of
the sixth belongs, so also can all three consonant notes be
retarded by non-essential dissonances. In this case it is
only necessary to take what is there, because the harmony is
already in four parts.\textsuperscript{144} But all three dissonant notes must

\textsuperscript{143}. I.e., it is not necessary for the non-essential dissonances
to resolve before the following dissonant chord is struck.

\textsuperscript{144}. I.e., all three dissonances will have been prepared by
the preceding chord, so it is not necessary to seek them,
but only to locate the bass note.
be prepared, remain stationary, and resolve to the nearest consonances in whose places they stand, as in Figure 135. In this diagram\textsuperscript{145} the three non-essential dissonances at

\begin{align*}
(a) & \quad (b) & \quad (c) \\
9 & \quad 8 & \quad 9>8 \\
6 & \quad 5 & \quad 6>5 \\
4 & \quad 3 & \quad 4>3 \\
\end{align*}

(a) resolve downward as usual to their consonant notes, from the fourth to the third, the sixth to the fifth, and the ninth to the octave. At (b) and (c), on the other hand, the non-essential dissonant seventh moves up one degree to the octave, before which it was retarded. It must move upward in this manner, for by resolving to the octave it produces the ordinary triad.\textsuperscript{146} If, on the contrary, the seventh at (c) were allowed to descend one degree to the sixth of the bass note, the chord of the sixth would result rather than the triad which is supposed to be here.\textsuperscript{147} In this instance the seventh is a non-essential dissonance, for it may resolve both upward and downward. The true essential dissonance, on the other hand, is permitted to resolve only downward.

\textsuperscript{145} Parts (a), (b), and (c) of the diagram correspond to the chords at a, b, and c of Figure 135.

\textsuperscript{146} Also, it must resolve upward because it is the leading tone.

\textsuperscript{147} At b in Figure 135 it would become a first inversion of a seventh chord if the other voices remained the same, and forbidden fifths would result between the alto and tenor parts.
Furthermore the two sevenths may be distinguished by a second characteristic: in the case of the essential seventh the resolution does not occur until the following different harmony or bass note, whereas the resolution of the non-essential seventh, either upward or downward, occurs with the same bass note.

Non-Essential Dissonances in the Consonant Six-Four Chord

§171. One, two, and three non-essential dissonances can be retarded in the case of the consonant six-four chord just as in the triad and the chord of the sixth. The consonant notes which occur after them and into which the dissonances resolve also show what notes must move to those consonances which are still lacking and which have to be added immediately with the non-essential dissonant intervals, as:

With one non-essential dissonance

\[
\begin{array}{cccc}
6 & 7 & 6 & 9 \\
5 & 4 & 3 & 4 \\
8 & 8 & 8 & 4
\end{array}
\]

Two dissonances

\[
\begin{array}{ccc}
7 & 6 & 9 \\
5 & 4 & 3 \\
8 & 8 & 4
\end{array}
\]

Three dissonances

\[
\begin{array}{cc}
9 & 8 \\
7 & 6 \\
5 & 4
\end{array}
\]
The 0 signifies here in the preceding diagram that one seeks nothing more, but should only have to take the indicated intervals.\(^{148}\)

**Non-Essential Dissonances in the Chord of the Seventh and Its Inversions**

\(^{149}\) In the places marked b and d\(^{150}\) in Figure 136, it could very easily be presumed that the first figures are essential rather than non-essential dissonances, and that two different roots belong to them, namely that the first harmony is the chord of the essential seventh, and that succeeding it at the resolution is the consonant six-four chord which is the second inversion of the triad a fifth lower. While it is curious and plausible, nevertheless two explanations are possible: first, that the first figures, of the chord of the essential seventh, belong to the one i.e.,

\(^{148}\) I.e., all the intervals are dissonant, and therefore they will have been prepared by the preceding chord. The diagrams show the notes taken by the right hand; the asterisks indicate chords in which all notes, save for the bass and its octave, are dissonant. In the original, the last chord among the two-dissonance group was shown among those with three dissonances; the 0 which appears with the first chord with three dissonances has been changed from the 8 shown in the original.

\(^{149}\) §172 is the last of the numbered sections. It is not clear where this section is supposed to end. See the Introduction, p.xxxv.

\(^{150}\) The discussion immediately following deals only with b going to c. Concerning d, see the next paragraph.
the first half of the stationary bass note, and that at its resolution (on the stationary bass) occurs the consonant six-four chord, and consequently that there are two different fundamental harmonies; in the second case, on the other hand, the first figures are non-essential dissonances and have only one root in common with the following six-four chord. Thus when the chord of the essential seventh occurs on the preceding note, and then the same notes are repeated with the same bass, then they are non-essential. Thus at a in Figure 136 the chord of the essential seventh on the root G, and at b the third and seventh are non-essential dissonances before the fourth and sixth on the same bass note G and with the root C.151

The circumstances are the same in the case of the chord of the essential seventh on a bass note, followed by a non-essential dissonant seventh (which resolves to the sixth rather than being the essential seventh on the same bass note), as in the case at c, where the consonant six-four chord of which the root is a fifth below has the same bass note and the same notes in the upper parts as the dissonant six-four chord at d.

In both cases, at b and d, the preceding fundamental

151. Concerning preparation of a non-essential dissonance by an essential dissonant seventh, see below, p. 146.
harmony cannot be repeated; a moderate sensation is experienced, and another root is expected immediately with the second chord of each of the two pairs, particularly when the first occurs before the bar line, and the second follows it, e.g., either as from the second to the third bass note in Figure 137, or, as in the example of Figure 137, where in the second measure the root is C even on 7; in the case of a setting in a number of voices, only the consonant notes of the triad of C can be doubled. It is absolutely false that the root G which occurred in the preceding measure of Figures 136 and 137 is also the root on the first beat of the last measure; and it is also wrong to want to call this fourth, e.g., in Figure 137, first beat of second measure an eleventh (which is an absurdity in any instance), for all intervals occurring above the octave in this manner are just repetitions at a higher octave of the intervals enclosed between an accepted root and the octave above it, from which all possible harmonies are derived by the inversion of voices.

If, however, one wanted to cite the ninth as being outside the limits of the octave, and that it should necessarily be called so in order to distinguish it from the

152. Figure 137 presents the same basic progression as Figure 136, but with the bass and tenor voices altered to clarify the root progression.
second since it has a nature quite different from that of the second, this objection is still insufficient; for all intervals can be figured as within the octave as soon as one accepts and, as must necessarily occur, establishes that the complete triad consists of the root with its third and fifth, but that the octave is only a repetition of the prime or root. In such a way, as the older generation has done, one can rightly term the second which resolves to prime of which it is a non-essential dissonance, instead of the ninth which resolves to the octave — but with the distinction that when the ninth, considered as second, is supposed to move to the prime, the third must be taken with it; on the other hand, if it is supposed to be the essential dissonant chord of the second, the fourth has to be taken instead of the third.

Thus the proposition that the second which resolves to the prime is of the same nature as the ninth which moves to the octave is correct; in my opinion, therefore, it is even better to retain the ninth as a term and figuring, for it is almost universally accepted in modern times, and because the figuring may not be taken in contradistinction to. For this reason it is even better to write the nine in the case that it resolves to the octave of the stationary bass, because in the case of the second with which the third and fifth of the bass note are taken,
three adjacent seconds occur, and this is very difficult for the ear to comprehend. The ninth which is the second above the octave of the bass note, on the other hand, can be heard easily and agreeably.

Even though one finds in the compositions of the greatest harmonists that the so-called ninth is set next to the bass note as the second with the third of the bass occurring with it, it is better to refrain from this arrangement as often as possible and, more suitably, to put the second, which must be accompanied by the third and fifth, at a distance of one or two octaves from the bass.$^{153}$

Non-essential dissonances can be produced in the triad, the chord of the sixth, and in the consonant six-four chord as is evident by the following examples. In Figure 138 they are produced in the triad at (a), in the chord of the sixth at (b), and in the consonant six-four chord at (c). Any non-essential dissonance can be prepared by any note pertinent to it in the preceding triad, chord

153. Kirnberger's approach and reasoning are rather round-about, but his conclusions are essentially those of C. P. E. Bach. The latter writes (p. 183) that intervals larger than the octave are often figured, particularly in the galant or free style and three-part accompaniment, in order to specify the exact progression of voices; further (p. 300), that "the ninth has the same position on the staff as the second, but is clearly distinguishable from it in its accompaniment, preparation and resolution. In the case of the figured second, the dissonance lies in the bass, which must be prepared and resolved; but in the figured ninth, the dissonance lies in the upper tone, which must be prepared and resolved."
of the sixth, or six-four chord, as in Figure 139. At a
the fourth is prepared by the octave of the preceding triad
on f, at b by the sixth of the preceding chord of the sixth
on e, and at c by the fourth of the preceding six-four
chord on g.\textsuperscript{154}

What is shown here of the non-essential dissonant
fourth is true also in the case of the remaining non-essen-
tial dissonances. Consequently, the non-essential dis-
sonant notes can be prepared by any note which belongs to
the chord of the essential seventh, and even by the seventh
itself, which in the first inversion is the fifth of the
six-five chord, is the third in the six-four-three chord,
and is in the bass in the chord of the second. In Figure
140 the fourth is prepared at a by the seventh of the pre-
ceding chord on g, at b by the fifth of the preceding six-
five chord on b, at c by the third of the preceding six-
four-three chord on d, and at d by the bass of the preceding
chord of the second on f.

The ninth is prepared by the preceding chord
which may be the triad, the chord of the sixth, or an es-
sential dissonant chord, but not by the octave of the bass
note a second higher in the triad or chord of the sixth, as
at a in Figure 141, nor by the seventh of the preceding chord

\textsuperscript{154} It is worth noting, also, that in each of these in-
stances the dissonance is prepared by the root of the
preceding chord.
if the bass descends a third, as at b, on account of the therewith contained hidden octaves. This finely drawn prohibition against the ninth being prepared by the seventh in the chord of the seventh is observed by expert strict composers. If, however, the bass ascends a sixth after this chord of the seventh rather than descending a third, it is very often set as in Figure 142 at *.

It happens on occasion that non-essential dissonances are indicated without being prepared as the strict style demands. In Figure 143, for example, the fourth before the third at a and the seventh before the sixth at b are not prepared; furthermore, at c, d, e, and f the non-essential dissonances in the bass are not prepared; also at g the seventh in the six-four chord is unprepared. This manner of composing and of accompanying in the case of thoroughbass, however, occurs only in the free style, never in the strict style in which, as is known, both the essential and the non-essential dissonance must be prepared by

155. Consecutive octaves saved only by a retardation of one of the voices were tolerated through the early years of the eighteenth century, but were forbidden by most theorists by the middle years of the century (see Arnold, 397-99). Should the dilemma arise, however, Kirnberger suggests above in §156 that the chord of resolution be taken in first inversion. I have found no other instance of prohibition of hidden octaves which are saved by a retardation of one of the voices. Marpurg, however, allows the direct resolution of a seventh on the octave of a bass which falls a third if the harmony is in more than two parts. See Arnold, 489.
the preceding chord, must remain stationary in the voice in which it appeared, and must resolve in the same voice.

Although much in the free style of writing derives from the strict rules of the so-called severe style, it too has its established rules just as does the strict style. These include the following: Such dissonances as are struck freely unprepared must, with the resolution, amount to no more time than one strong or weak beat of a measure, of which the simple $\frac{4}{4}$ measure has four, and the allabreve measure has two. But the dissonance together with the note of resolution is never permitted to occupy two beats of a measure, for these two notes, the dissonance and the consonance which follows it, are simply the transitus irregularis\(^{156}\) which, as is known, always occurs on one beat; whereas in the strict style, on the other hand, in which the non-essential dissonances are duly prepared, they \(\text{the dissonance plus the resolution}\)\(^{7}\) can occupy two beats of a measure, but only on the condition that the non-essential dissonances always occur on strong beats, and the resolutions on weak beats.\(^{157}\)

From this one will easily realize how restricted

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156. I.e., accented passing notes. See p. 129.

157. In Kunst des reinen Satzes, I, 80ff., Kirnberger gives a more detailed list of the characteristics of the free style. These are summarized in Arnold, 360-62.
and attentive one has to be in dealing with non-essential dissonances in both the free and the strict or severe style. In the case of the essential dissonances, on the other hand, one is freed from much restraint, because in the strict style the essential dissonances occur in all manners on both strong and weak beats, and in the free style they can also be taken unprepared. Moreover, in the strict style the essential dissonance must resolve in the same voice in which it occurs, but in the galant or free style the resolution may be transferred to a different voice.

Progressions which otherwise would be obviously erroneous can be made quite correct through the alternation of accented with unaccented passing notes, as in the setting at A [In Figure 143] which would have progressions of forbidden consecutive fifths, as at B, if the two kinds of passing notes were not added to it. In the subsequent harmonization at C the obvious [parallel] fifths would be heard clearly, therefore it is to be rejected.158

In the following example, Figure 144, the non-essential dissonances in the bass are struck with the three different notes of the upper parts even if they dissonate

158. Georg Michael Telemann (according to Arnold, 492-93) would allow such a progression as at C in ascending motion, but in descent it is forbidden even if the top voice is in even eighth-note rhythm.
against each of them. In this example\textsuperscript{159} one easily understands on what basis it may happen, for the three upper parts all harmonize with one another, but in the bass is the non-essential dissonance which dissonates against each note in the upper parts. Therefore in Figure 144 at (a) the seventh, indicated in accordance with its otherwise proper quality, is not, as is usually the case, an essential or non-essential seventh at all, and even less so essential or non-essential dissonances\textsuperscript{7} are the second and fifth against which the bass note makes a dissonance.

It is not to be denied, therefore, that the different kinds of seventh which occur above the bass note are bewildering and difficult for beginners if one wants to categorize them according to their use. Thus the figuring of which the late Graun\textsuperscript{160} has made use is always to be preferred to that clumsy figuring, because it indicates in each instance the actual harmony \textit{to be derived} from the second of two bass notes, and shows through the use of a small diagonal stroke that the \textit{same} chord must be struck simultaneously with the first note, as in Figure 146(a).

\textsuperscript{159} The original text indicates Figure 145.

\textsuperscript{160} Carl Heinrich Graun (1704-1759) whom Kirnberger knew during his early years in Berlin, and whose Duetti, Terzetti, Quintetti, Sestetti ed alcuni chori he published in 1773-74. See Translator's Introduction, p. xvi.
It is seen in Figure 145 which consonant chords would be produced if the non-essential dissonances in Figure 143 [first setting] were omitted.

In order to remedy the difficulty of figuring thoroughbass, some composers in the case of accented passing notes have indicated the principal notes in the bass, and have shown the non-essential dissonances by grace notes, as in Figure 147. The transitus irregularis [accented passing note] is also found in a like manner in the melodies, where the principal notes are set directly, and the transitus irregularis is indicated by a grace note [Figure 148].

The figuring such as is shown in the example of Figure 143 [first example] at c, in which all non-essential dissonances should be played on the Clavier, is not advised when accompanying in a moderate tempo, and even less so in a quite fast tempo; and neither a solo singer nor a solo instrumentalist will be thankful to a composer who thus figures a passage, because a performer is very restricted by it in the adding of various beautiful features such as retarding or anticipating in accordance with the Affekt. Therefore the figuring of a thoroughbass in which the pure harmony or the actual chord without the non-essential dissonance is indicated, such as it occurs in the example of Figure 145, is preferable to the other.

Repetitions, particularly in cases where the pupil
lacks sufficient skill to deduce the following harmony from the preceding one, have their proper intrinsic value here also, and it cannot be sufficiently recommended by oral instruction. Therefore with regard to Figure 149\textsuperscript{161} I want to review once more the six-four chord in its consonant and dissonant forms.\textsuperscript{162}

In Figure 149 at (a) the six-four chord is consonant because it occurs on a weak beat, whereas the dissonant six-four chord can occur only on a strong beat; and because the fourth, which occurs here as a consonance, is doubled, whereas it cannot be doubled when it occurs as a non-essential dissonance. It is not necessary to take the consonant fifth with the fourth, as at (e), instead of the non-essential dissonant sixth shown at (d)\textsuperscript{7}. In the example at (b) the minor third instead of the octave can be added to the consonant six-four, but in the case of the dissonant six-four chord at (d) this cannot be done at all. After the consonant six-four chord the following bass note can move down one step to the triad, or up one step to the chord of the sixth; this cannot be at all tolerated in the case of the non-essential dissonant six-four chord, because after the resolution to the sixth must follow.

\textsuperscript{161} Original indicates Figure 150.

\textsuperscript{162} Cf. above, pp. 132ff.
It has been taught that every non-essential dissonance is prepared by the preceding chord, remains stationary in the same voice, and must resolve in the very same voice. If one were to proceed strictly according to this rule in four-part harmony, the upper parts would eventually move too closely above the bass notes if a number of non-essential fourths were to occur in succession. Therefore, in order to return them to the required height, one must either enter with a fifth voice above the three parts in the right hand, as in the first example of Figure 150 at *, or else release the fifth of the chord with the resolution of the fourth to the third, as in the second example at *.

Whenever a four-three suspension occurs after a half-measure, a whole-measure, or more measures of rest, it may be prepared by the chord preceding the rest, as at (a) in Figure 150, or it may not be prepared, as at (b). Therefore, before the end of the pause the same note the fourth is played quite alone, without bass, and the dissonance is thereby prepared at the entry of the bass note above which the four-three occurs. Also, it makes no difference whether this fourth is played in the lower tenor, middle alto, or top voice, as at (c) and (d).

163. See above, pp. 131ff.
A number of successive ninths, as in Figure 151, are treated in the same manner as a number of successive fourths. In this example there appear to be forbidden progressions of perfect fifths from the second half of the first measure to the first half of the second measure, and also from the first to the second half of the second measure. These are, however, only apparent progressions of forbidden fifths, for as soon as the fifth voice enters in the uppermost part, the lowest part /tenor/ ceases to belong to the four-part harmony, and, accordingly, the progression between the first and second measures is not from a' to b', but d'' descends a minor third to b', and a', as the lowest of the three upper voices, descends one step to g'. The same occurs in the second measure between the first and second halves.\textsuperscript{164}

In compositions for diverse instruments the ear does not notice forbidden octave or fifth progressions when the parts cross one another. On the organ or Clavier, on the other hand, one becomes aware of them despite the two kinds of indication /of voice crossing/ to clarify the maintenance of pure harmony, as shown in Figure 152 at (a) and

\textsuperscript{164}. This example serves to demonstrate the general rule that consecutives were not considered to result from the addition of a new part. Kirnberger was apparently aware, however, that his solution in this particular instance was somewhat dubious, for he presents a different solution below in Figure 153. See Arnold, 349-59, for a general discussion of the practice of temporarily adopting a fifth part.
(b); one voice rises above the other, but the ear is by no means well-disposed by this even though it is a pure progression to the eye. At (a) in Figure 152, between the penultimate measure and the last, d'' in the middle upper voice \[\text{alto}\] moves to g', and b' in the lowest voice \[\text{tenor}\] moves to c'', and by this means the previous middle voice \[\text{alto}\] becomes the lowest \[\text{tenor}\], and the previous lowest voice \[\text{tenor}\] becomes the middle of the three upper voices. Here, of course, the organ would not let the ear perceive the correctness of the pure part writing; to the ear it seems simply a progression of forbidden perfect octaves between the middle voice \[\text{alto}\], d''-c'', and the bass, d-c.\(^{165}\) There is, however, a means of evading this bad-sounding fault on the organ and similar instruments; after this position has been reached, the octave of the bass may be completely omitted from the upper parts on the last beat \[\text{the second of the two chords}\] and the third or fifth doubled, as at (c) and (d) \[\text{of Figure 152}\].

In the case of a number of ninths in succession, instead of entering with a fifth part, one can also allow the voices to cross without doing damage to the purity of progression. How the voices cross, however, is seen from the \[\text{direction}\] of the note stems, by which each voice is

\(^{165}\) Cf. footnote 29, p. 44, above.
distinguishable from the others; see Figure 153. In this way the four-part harmony is maintained, and since, moreover, two equal voice parts in duets, and two violin or flute parts in trios\textsuperscript{166} cross each other in many of these sequences of ninths, the accompaniment sounds best of all when the parts are allowed to cross over one another just as in the example in Figure 153,\textsuperscript{167} whereas, on the other hand, if the ninth were permitted to remain where it was prepared, and were resolved in the same voice, not only would the right hand get too low down, but also would produce octaves with the principal parts (though by crossing, the latter maintain themselves at the same level); in addition, a very bad melodic progression would result in the upper part.\textsuperscript{168}

\textsuperscript{166} Trios, of course, refers to trio sonatas, which would have exactly the same texture as the duets for two voices and continuo just mentioned.

\textsuperscript{167} There can be little doubt that Figure 153 is superior to Figure 151. The latter, involving the addition of a fifth part, would still produce the effect of consecutive fifths on the keyboard regardless of Kirnberger's explanation that the tenor no longer belongs to the four-part harmony as soon as the fifth voice enters.

\textsuperscript{168} Frank T. Arnold, 369-71, shows that the resolution of a dissonance in the accompaniment an octave below the principal part is not particularly desirable, but neither is it always to be avoided. He continues (p. 396) that in this case, however, it would be undesirable, for the effect of one ninth resolving in unison with the solo, and the next ninth resolving an octave lower, would be especially bad.
Just as non-essential dissonances can be used in the triad, the chord of the sixth, and the six-four chord, they also can be used in the chord of the essential seventh, the six-five chord, the six-four-three chord, and chord of the second. In Figure 154 the fourth is suspended before the third in the chord of the seventh. In the first example it has the octave of the bass with it, and thus at the resolution of the fourth arises the chord of the seventh with the octave and third. In the second example the seventh has the fifth with it, instead of the octave, as was the case in the preceding example, where the chord of the seventh occurs with a duplication of the octave at the resolution of the non-essential dissonant fourth to the third.

In the example of Figure 154 the chord of the essential seventh is played with the bass prepared; in the following Figure 155, the seventh is prepared, and the bass is added freely to it. At (a) only the octave can be played with 7, because both the seventh and the fourth must remain stationary in their positions, and thus the octave of the bass note enclosed between the two notes is the only possibility.

In the subsequent example at (b) it is possible to play only the fifth with 4 for the same reason as in the

169. The original text indicates Figure 144.
preceding, that both the seventh and fourth \[\text{must}\] remain stationary in their positions. In this example at (b) one must be very careful not to use \[\text{the figuring}\ 8\] with the chord of the sixth preceding the \[7/3\] chord, because one would have to play forbidden octaves in the middle part \[\text{alto}\] against the bass.\^170 If by chance, however, one has got into the dilemma of having to take the \[8\] with this chord of the sixth, then the only remedy is to have the middle part \[\text{alto}\] cross above the top part and take the fifth of the bass, as in the example at (c).\^171 If crossing becomes necessary, then it is better to move the middle part \[\text{alto}\] a' down to d' below the prepared seventh; the position of the top part is thereby maintained, as at (d).

In Figure 156 the sixth is suspended before the fifth in the chord of the essential seventh.

In most textbooks it is said that the third, fifth,

\^170. Though the figuring \[8\] is to be avoided, the example shows that it is permissible to play the third.

\^171. Arnold, 318, points out that the necessity for crossing parts would be avoided by doubling the third at the unison above the 7-6 suspension. Arnold omits the bass in his example (shown below):

\begin{center}
\includegraphics[width=0.5\textwidth]{example.png}
\end{center}
sixth, and octave are consonances. This cannot be accepted in all cases, for they are consonant only when they occur, first, between only two parts; second, together with only consonant notes which harmonize one against the other — either a third, fifth, sixth, octave, or consonant fourth of every note.

All of these notes which I have indicated can be dissonant if they occur in such a relation with other notes that they become non-essential dissonances of them, as in the examples of Figure 156. At * the sixth is dissonant, first of all as the non-essential seventh \[\text{suspended}\] before the sixth of the lowest of the three upper parts, \(e''d''\); second, because one feels \[\text{present}\] the fifth \(d''\) in the case of the chord on G, against which this \(e''\) also dissonates as the second; the same situation occurs at *, the only difference being that the chord is in another position and therefore the \(e'\) is discordant as the non-essential dissonance before the fifth of the bass note; the resolution also indicates this, since \(e'\) resolves downward to \(d'\), the third below \(f'\).

In Figure 157(a), instead of the octave being played simultaneously with the chord of the essential seventh, the ninth is suspended to it; in the following example \[\text{Figure 157(b)}\] the same occurs in the minor mode.

In Figure 158 the resolution of the non-essential
ninth to the octave of the bass is delayed from the pen-ultimate bass note to the following note in the last measure. This $9$ chord is not a chord of essential dissonance as is, for instance, the chord of the essential seventh, even though its resolution deviates from the usual manner and does not occur until the following bass note, just as that of an essential dissonance does. This resolution is called continued or delayed (retarded). It is seen very clearly that the resolution of the ninth to the octave of the pen-ultimate note is elided, though it may occur as in the example in Figure 157(a). An essential dissonance, on the other hand, can resolve only on the following bass note, either simultaneously with it, or even later if the dissonance which was previously essential is held out as a non-essential dissonance of the note to which it was supposed to resolve, as in Figure 159.

In the examples in Figure 160 the six-five chord occurs on the penultimate bass note $B$, and the preceding note $c$, figured $5\ 4\ 2$, is the non-essential dissonance of $B$. The $5\ 4\ 2$ which stands above the tied $c$ in the bass is simply the six-five chord of the subsequent $B$ which one may merely play with the $c^7$ without having to search a long while for the second, fourth, and fifth. Therefore, instead of writing
it would be desirable rather to indicate the actual harmony of the following bass note \( \sqrt[5]{\frac{6}{5}} \), and show with a diagonal stroke that the same six-five chord must be played with the c, as at (c). In the example at (a) where the seventh of the root is added to the g' which occurs in the discant, the root is G. At (b) the seventh f' of the root G is prepared in the discant, and the octave of the root \( \sqrt[5]{\frac{g'}{7}} \) is added to it.

Since either the fifth or the sixth in the six-five chord must be prepared, in the example at (a) the sixth, and at (b) the fifth of the six-five chord isprepared. Consequently in the \( \frac{5}{4} \) chord the fifth is of the same nature as the sixth in the six-five chord, and the fourth in the \( \frac{5}{4} \) chord is of the same nature as the fifth in the six-five chord; therefore, either the fourth or fifth in the \( \frac{5}{4} \) must be prepared. The bass note above which \( \frac{5}{4} \) occurs is the non-essential dissonance of the following bass note, or in other words, it is the non-essential fourth which resolves to the third of the root G.

When, as in the example at Figure 156, one has the

172. Discant refers to a note occurring in any voice in the right hand, or its staff.
sixth suspended before the fifth of the chord of the seventh on the root G, then, by inversion, the fourth arises as the non-essential dissonance before the third in the six-five chord, as in Figure 161. The figuring, therefore, could be \( \text{III} \).

This third e'' in the discant, as well as the bass note c above which \( \text{IV} \) stands, are both non-essential dissonances of the six-five chord on B. This situation will either never, or at least seldom, be met, even though it is permissible (and not to be disallowed) if one sets it thus.

The \( \text{IV} \) may begin with the harmony spread as in the example of Figure 163, or Figure 162(a), but not as in the following example /Figure 162(b)\ in which three adjacent notes a second apart occur in the upper parts. This is never allowed, even though in the case of ninths placed in a position /next to the root\, three adjacent notes a second apart also occur, such as c', d', and e' at * * * /in Figure 162(c)\. Unless it is absolutely necessary, it is best to avoid such settings in which there are three adjacent notes a second apart.

\[\text{The Non-Essential Chord of the Seventh}\]

In the six-five chord of Figure 163 the seventh can
be suspended before the sixth. This non-essential chord of the seventh must not be confused with the essential chord of the seventh; this seventh at (a) is the non-essential ninth before the octave g' of the root G, even if it should resolve only with the following bass note, as at (b). In this position one must only be careful not to take the octave of the bass note in the resolution, because obvious parallel fifths would arise; therefore the fifth of the last note must be doubled rather than the octave. In the other two positions of the upper parts one gets a progression of consonant fourths in the top parts on account of the inversion of the fifths, as at (c) and (d), and no error can arise through that.

It is fundamentally wrong to call this chord of the seventh on B in Figure 163(a) an essential seventh chord. for it is nothing but the first inversion, on B, of the chord on G; and since the ninth is a non-essential dissonance with its root G, so also the seventh is a suspension of the sixth of a six-five chord. It is a non-essential dissonance whether it resolves to the sixth over the same bass note, or whether its resolution is delayed until the following bass note, where it becomes the fifth of the bass note c, as at (b), (c), and (d).

In the example in the minor key the fifth is also,
doubled at *, which may be consolation for those who make it a matter of conscience to let a perfect fifth follow an imperfect one; but the progression at ** is best, because the minor third can be doubled without offending the ear, whereas it is unpleasant to double the major third, especially if it is accidental by virtue of a # or foreign to the key.\textsuperscript{173}

It can very easily be recognized whether the chord of the seventh above a note is an essential or non-essential discord by examining the progression of the bass; if it rises a fourth or falls a fifth, then it is the chord of the essential seventh. But if the bass rises a semitone, as here in Figure 163 from B to c, or from G-sharp to A, then it is the non-essential seventh.\textsuperscript{174}

\textsuperscript{173} C. F. E. Bach, 220, differs with Kirnberger on this latter point in that he allows the doubling of the accidentally "sharped" major third at the unison in such an instance.

\textsuperscript{174} Thus, by Kirnberger's description, the seventh in the progression \[ \begin{array}{c} \text{\textsuperscript{7}} \\ \text{5} \end{array} \] or \[ \begin{array}{c} \text{\textsuperscript{7}} \\ \text{5} \end{array} \] would not be an essential dissonance. In \textit{Die Kunst des reinen Satzes}, I, 62, he states that in the former case he regards the seventh on g to be the ninth of an incomplete chord on the mediant. He offers no explanation for the latter progression. Friedrich W. Marpurg gives a somewhat different definition of essential and non-essential dissonance in his \textit{Versuch über die musikalische Temperatur} (Breslau: J. F. Korn, 1776), 240. "Every dissonance which is plainly used for the sake of melody, and which in view of the harmony can just as well be present
In Figure 164 the seventh at (a) is a non-essential dissonance before the sixth of the \( \frac{6}{3} \) chord. The consonant fourth as the octave of the root is prepared, and therefore the third above the bass note is added freely as the seventh of the root. At (b) the third of the bass note is prepared as the essential seventh of the root G, to which the fourth \( g' \) of the bass note d is added freely as the octave of the root G. In both examples the third, as seventh of the root, resolves down one step with the appearance of the following bass note. Since in the essential \( \frac{6}{3} \) chord the third of the bass note d represents the seventh of the root G, and the fourth above the bass note represents the octave of the root, the two notes, both third and fourth, have the same characteristics in the chord that the seventh and root have in the chord of the essential seventh, namely that one of the two must be prepared, the other note is added freely, and then

as not, is called a non-essential dissonance in the teaching of harmony. Such are the dissonant passing notes and changing notes. . . . Every dissonance which is present for the sake of both the melody and the harmony is called an essential dissonance. Such are the dissonances (1) which arise from suspension . . . (2) which arise from the anticipation of the unaccented passing note. . . . "

175. The original text indicates the \( \frac{6}{5} \) chord.
In Figure 165 the non-essential fifth, which is the ninth of the root G and must resolve to the octave, is suspended before the fourth in the $\frac{6}{3}$ chord. In this position the fifth cannot be held until the following bass note, as in Figure 165 at *, because in the case of the retarded resolution forbidden fifths would arise between the top part and the bass. This applies also in the other positions of the upper parts where forbidden fifths would occur in a like manner see third and fourth examples of Figure 165.

Whenever after the six-five chord the bass ascends one degree to the chord of the sixth instead of descending one degree to the triad, the resolution of the fifth can be delayed until the following bass note, and the part writing remains pure and without progressions of fifths. See Figure 166.

This non-essential six-five chord must not be confused with the essential six-five chord, because the non-essential $6_5$ is actually an essential $6_4$ with the fifth suspended in the place of the fourth; it may resolve either immediately, or else not until the following bass note. In
the case of the essential six-five chord the resolution does not occur until the following bass note. The root of the non-essential six-five chord is a fifth below the bass note; the root of the essential six-five chord, on the other hand, is a third below the bass note.

In Figure 167 the non-essential seventh is suspended before the essential consonant sixth of the non-

\[ \text{essential} \begin{array}{c} \text{fourth} \\ \text{of the bass note. The fifth, therefore, is dissonant, because it is the ninth of the root G and resolves afterwards to the octave. At (b) the resolution of the same fifth is postponed to the following bass note. At (c) the root of } e^9 \text{ is C, not E with the chord of the ninth. At (d) this same chord occurs above the actual root C, in which case the fourth and seventh are non-essential dissonances.} \\
\end{array} \]

In Figure 168 the non-essential six-five chord occurs at (a); the fifth does not resolve to the fourth above the bass note d, but rather the resolution is delayed until the following bass note e with which the chord of the sixth should occur directly, but in the case of which the same fifth that occurred above the preceding note d may re-

176. The original indicates the _\text{6}_{\text{5}}_ chord.
tard the third by becoming the fourth, as at (b). The $4 \times 5$ which occurs with it, and which resolves upward to the sixth of the bass note $e^b$, is also a non-essential dissonance, namely the major seventh of the root $C$ which afterwards resolves to the octave, as is shown in the fourth example of Figure 168 at *.

In the fifth example at * the root of the penultimate note $g$ in the bass is $G$, and above it the harmony must be doubled in more than four parts. On the last bass note at * with $9 \begin{array}{c} 10 \\ 7 \end{array} \begin{array}{c} 8 \\ 6 \end{array} \begin{array}{c} 5 \\ 4 \end{array} \begin{array}{c} 3 \\ \end{array}$, on the other hand, the root is $C$.

Therefore only the notes of the triad can be doubled in more than four parts, because the tonic harmony of $C$ is felt in the last measure immediately after the preceding dominant chord of the key of $C$, and the dissonant notes above it are all non-essential. The best position of this chord in the major key is shown in Figure 168 at ***. In the last measure, observe that the ninth does not resolve to the octave of the bass note, but upward to the tenth, $a'g'$, because obvious parallel perfect fifths are avoided in this way.

The ninth in the case of the ordinary triad, the fourth in the case of the third, and the sixth in the case of the fifth expressly require their resolutions on the same
bass note, and the only manner in which the ninth is permitted to resolve with the following bass note, namely when the bass either descends a fifth\(^{177}\) or ascends a fourth, has been pointed out above. The ninth in the essential dissonant chord of the seventh, on the other hand, can either delay its resolution until the following bass note, or else become a new non-essential dissonance of the following bass note: the sixth which resolves to the fifth of the subsequent bass note.

The same is also true of the first inversion of the chord of the ninth with the non-essential seventh \(^7\)above the bass, which is actually a six-five chord and not a chord of the seventh in the proper sense of the term.\(^{178}\) In this case also the resolution \(^7\)of the ninth can be delayed, and the non-essential dissonance which is yet to be resolved becomes a new non-essential dissonance which resolves over the following bass note. Finally, this same principle occurs in the case of the other three inversions of this non-literal chord of the seventh -- the \(\frac{6}{5}, \frac{6}{3},\) and \(\frac{4}{2}\) chords.

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**The Non-Essential Six-Four-Three Chord**

In Figure 169 occurs the non-essential chord.

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177. The original text reads *drei Töne fällt.*

178. I.e., the root is lacking, causing the chord to appear to be a chord of the seventh.
The third above the bass note f is the non-essential ninth of the chord of the seventh with G as the root. The resolution of the ninth follows directly to the octave of the root G.

The following examples in Figures 170, 171, and 172 demonstrate what kind of non-essential notes can be suspended. In Figure 171 the non-essential third which stands in place of the second is retarded until the following chord, and only then does it resolve. In truth, this non-essential chord is none other than the essential chord of the second without the root, and the resolution may occur on the same bass note, or not until the following bass note.

In Figure 173 this same third which must resolve to the second is retained until the following harmony. In the first example the non-essential seventh occurs before the sixth, and in the following example the same occurs along with the fifth as the non-essential dissonance before the fourth.

The last inversion of the chord of the essential seventh with the non-essential ninth occurs whenever the ninth is found in the bass, and when in accordance with its
arrangement it resolves one degree to the root and thereby becomes a true chord of the seventh, as in Figure 174 at *. Here it is not the essential chord of the second which is above the a in the bass, but rather the essential notes of the chord of the seventh on the root G — the second, fourth, and sixth in the upper parts; the bass note a is the non-essential dissonance of the subsequent g which is the root, or octave of the root. Just as in the case of the other inversions of the chord of the essential seventh accompanied by the non-essential ninth, and the ninth may delay its resolution until the subsequent bass note, the same can also occur here; but with the resolution — when a moves to g — the consonant six-four chord results, as at * *. The first inversion of the triad of C, namely the chord of the sixth on E, can be taken in the resolution instead of the consonant chord on G, as at ** **. In the second measure of this last example the true seventh f' of the root G ascends to g' even though it should have resolved down to e', but since the bass assumes this note e, an interchange occurs between the two voices so that f' in the discant takes over the octave of the missing bass note \( \text{i.e., root} \ G \) of the preceding chord, and the bass takes over the resolution from f' in the discant to e'. This can be seen
also by the added cross strokes. 179

In this non-essential chord of the second, the third in the upper parts can be suspended before the second, as in Figure 175 at *. In a minor key the sound of the non-essential chord of the second is preferable as at * *. In the second half of the penultimate measure in the examples at *** and ****, the root is G with the chord of the essential seventh accompanied by the non-essential ninth. 180 In this chord the harmony of the root G is doubled in a setting of several voices. What is more, in the last measure the same notes occur in the upper parts, but the root is C, and the notes which belong to its triad must be doubled. As in these two examples, these dissonant harmonies are sounded only in a spread position, 181 for the distance from one note to another is for the most part a minor third. If in the

179. Such transference of resolution is characteristic of free, as opposed to strict, style. This particular case, in which the seventh ascends and the bass takes the note on which it (the seventh) would naturally resolve, seems not to have been generally accepted until the late eighteenth century. Arnold, 840-49, gives a general review of the references made to the subject by some of the principal authorities of that century.

180. Kirnberger does not identify the non-chord c in the bass of the second measure of each of these two examples; it is apparently to be regarded as a pedal point. Concerning this device, see Arnold, 798-801.

181. I.e., with an interval of at least a third between most notes. See p. 162, above.
last measure of the last two examples of Figure 175 one
wanted to play the notes of the triad above the bass note
in the bass clef an octave higher, then in both examples
all the seconds of an entire octave would stand adjacent.
For example at ***, with c in the bass, c', d', e', f',
g', a'b, and b would stand in the discant, and this would
be most unpleasant for the ear, even if the resolution were
to occur ever so regularly. In the major key, as at ***,
the notes would occur in the following way: b, c', d', e',
f', g', a'.

Accompaniment in Many Voices

§1. An accompaniment in a number of voices results
from the doubling of notes which belong to the chord; in the
preceding I have shown the manner in which this doubling may
occur.

When the rules of strict part writing do not per-
mit the doubling of the octave or fifth, the harmony is
completed with such permitted notes as remain after discount-
ing the impeded notes; thus the fifth can be doubled if the
octave is not to be had, and, on the other hand, both the
major and minor third are doubled if both the fifth and
octave are in the way. This doubling of the third does
not take place, however, in the dominant chord, for its major
third is the leading tone to the octave of the tonic, and it must always move upward; in this case, then, one must deviate from this obligation of leading both voices to the tonic by means of a tie.

Note 1: In the whole of J. S. Bach's compositions I have found only one incident of the major third of a dominant chord being doubled in four-part harmony: in the Clavier-Übung, Part III, page 18, fifth measure.

Note 2: One also finds the prohibition against doubling the major third in the triad in very old textbooks, even though reference to notes foreign to the scale, where doubling is inadmissible, is lacking. Thus the major third in the dominant chord, or wherever it is indicated by a ♯ or ♭, is not to be doubled; it is always a leading tone to the adjacent note above it.

52. The chords with the major sixth and minor third can be easily confused with each other; one must be well on guard against this confusion, for notwithstanding the fact that in the first kind (which is the first inversion of the

triad a third below the bass note and which may be intro-
duced with the fifth if it is pleasing), the third and
sixth may be doubled; and the non-literal third instead of
the octave can be doubled in the second kind (which is the
second inversion of the chord of the seventh of the fifth
below the bass note), they are as different as heaven and
earth as far as the progression of their bass notes is con-
cerned.

§3. The chord with the major sixth and minor third, to which the fifth can be added if one wishes, always ascends
a half or whole step to the triad, and the fourth can never
be taken along with it. On the other hand, the chord of
the sixth which originates from the fifth below the bass note
either descends a whole step to the triad, or ascends a half
or whole step to the chord of the sixth.

183. I.e., the first inversion of the diminished triad on the
leading tone.

184. I.e., the second inversion of the dominant-seventh chord.

185. Kirnberger's discussion in this paragraph is somewhat
confusing. Concerning the first inversion of the leading-
tone triad, he states that the sixth (i.e., the leading
tone) can be doubled, but in §4, below, he forbids the
doubling of the sixth in the second inversion of the
dominant seventh because it is the leading tone. In re-
gard to this latter chord he also states in §2 that the
third above the bass (i.e., the seventh) can be doubled
instead of the octave, but this doubling is expressly
forbidden in the ensuing discussion, §4. It should be
noted that the rather unusual typographic arrangement of
this paragraph in the original seems to indicate that
something is amiss.

186. The original text reads grossen und kleinen Sexte.
§4. The major sixth cannot be doubled in this case, for it is a leading tone to the following harmony. Also, the minor third should particularly not be doubled, because it is the seventh of the root; the fourth should expressly be played instead of doubling the third. Nevertheless this minor third is doubled without hesitation even by the best composers.

The chord of the diminished seventh is actually a six-five chord; its fifth, therefore, can be doubled, and one resolves down one degree while the other ascends a fifth or descends a fourth to the octave of the bass of the chord of resolution. In four-part harmony, for example in C minor, in which the minor sixth above the keynote ab is an essential note while a becomes an accidental note by use of the §, many composers have preferred, in the case of the unessential chord of the seventh on f-sharp, to leave out the third, a, which belongs to it and to double the diminished fifth in its place, letting one fifth resolve down one degree when the bass moves from f-sharp to g, and having the other fifth move either up a fifth or down a fourth to the octave of the bass note g.

187. See above, p. 162ff.

188. C. P. E. Bach, 282, makes a similar statement without further comment. Arnold, 315, suggests that these remarks are worth note as examples of the qualms which beset theorists in their dealings with accidentally sharped intervals.
§5. In six-part harmony the following intervals can be doubled: the octave and fifth of the bass note with which there is a third; the octave and third of the bass note with which there is a fifth; the octave of the bass note with two fifths and two thirds.

Note 1: In four-part, five-part, six-part, seven-part, and eight-part harmony the rule that the part directly above the bass be at least a fifth distant from the bass always has to be observed, because the first third which follows directly above the root obscures the root, unless another instrument, such as a double bass, plays along on the bass part an octave lower.

Note 2: For this very reason it is incorrect to include a sixteen-foot register in an accompaniment on the organ when another instrument plays along an octave lower; only the eight-foot should be used.

§6. In the case of a powerful chorus or a fugue in a number of voices, the best effect can be obtained by adding a four-foot register to the eight-foot for reinforcement on the organ.

§7. In seven-part harmony the third as well as the octave and fifth can be doubled.

§8. In eight-part harmony the third as well as the octave and fifth can be taken threefold.

§9. He who understands the doubling of intervals in up to eight-part harmony needs no instruction in how it should be done in harmony in still more parts.  

189. Kirnberger seems to have forgotten that this instruction
In the chord of the sixth and the six-five chord the same notes can be doubled as in the triad. But in the case of the chord of the sixth which arises from the dominant triad, the doubling of the octave of the bass is not good, because here the bass note is to be considered a leading tone. At any other time the octave of the bass can be doubled without hesitation in the case of the minor sixth with the minor third, and also in the case of the major sixth with the major third.

Doubling in the Case of Essential Dissonances

§10. In the essential dissonances, such as in the chord of the seventh, the six-five chord, the six-four-three chord, and the chord of the second, doubling occurs in the same way as in the triad, the chord of the sixth, and the consonant six-four chord; the essential dissonances, however, cannot be doubled in any chord, therefore in the chord of the seventh not the seventh itself, not the fifth in the $\frac{6}{5}$ chord, not the third in the $\frac{4}{3}$ chord [can be doubled], nor [can] the octave of the bass note [be played] in the chord of the second.

book was originally intended for children who must frequently "play chords such as they are able to span with comfort" (see above, p. 6). He now seems to have the composer or advanced accompanist in mind.
Note: The chords of the seventh and of the second admit doubling of the same notes that the triad of the root allows, the $7$ chord the same as the chord of the sixth permits, and $6$ those notes which the consonant six-four chord allows.

Doubling in the Case of Non-Essential Dissonances

§11. In the case of non-essential dissonances the doubling is taken from the consonant chord to which the non-essential dissonances resolve, as:

$$\begin{array}{c|c|c|c|c}
5 & 9 & 6 & 6 & 9 \\
4 & 3 & 5 & 3 & 8 \\
\hline
7 & 8 & 9 & 9 & 9 \\
4 & 3 & 7 & 4 & 8 \\
2 & 1 & 4 & 7 & 5 \\
\end{array}$$

Thus one takes the notes of the triad of the root, which is indicated by the figures following the non-essential figures, as in Figure 176(a). The doubling at (b) is without movement$^\text{190}$ in the case of a stationary bass. If one were to strike the bass $\sqrt{\text{at the beginning of the second measure of (b)}}$ while the notes $\sqrt{\text{in the upper parts}}$ remain stationary, then it would be somewhat more tolerable, although the complete $\sqrt{\text{coming to}}$ repose of a whole piece is not obtained as well at (b) as at (a).

§12. In the case of the following non-essential dissonances, the figures which result at the resolution on the

190. Or emotion?
The same is true in the case of the consonant six-four chord, as:

\[
\begin{array}{c|c|c|c|c|c|c|c}
7 & 6 & 4 & 3 & 9 & 8 & 6 & 7 & 6 & 9 & 8 & 7 & 6 & 9 & 8 & 7 & 6 \\
\end{array}
\]

\[
\begin{array}{c|c|c|c|c|c|c|c}
5 & 4 & 7 & 6 & 3 & 4 & 9 & 8 & 5 & 4 & 7 & 6 & 9 & 8 & 5 & 4 & 7 & 6 \\
\end{array}
\]

There is an exception in the case of the chord of the sixth on the supertonic which arises from the chord of the seventh on the fifth below the bass -- i.e., in the case of the dominant chord -- in which neither the major sixth as leading tone, nor the third as the essential seventh of the root, should be doubled; nevertheless, both are found doubled in the works of the greatest composers.

Whenever, in such a case, the sixth is doubled, one sixth ascends a half step and becomes the octave of the following bass note, \(6b \frac{8c}{d}\), and the other descends a third and becomes the fifth of the bass note, \(6b \frac{5g}{d}\).

Without these fundamentals no human being can know what to double when the harmony is in more than four parts.

**On Various Figurings of Thoroughbass**

Composers differ widely in the manner of figuring their basses in the case of irregular accented passing notes. Everyone who makes practical use of thoroughbass will
recognize the necessity of knowing these different figurings, because for the maintenance of harmony above them one does not have the choice of playing whatever chord he wishes above this or that note. Therefore in order to understand this difference more precisely, I intend to take note of the same in the following examples.

For the triad of the bass which follows the dissonance, some use the figuring marked at Figure 177(1)(a) where the intervals are afterward brought to their proper consonant degrees; others, to the contrary, use that at Figure 177(1)(b) where the true harmony is indicated by the diagonal stroke. This latter method is preferable to the former because of greater intelligibility.

In order, furthermore, to comprehend most of the figurings which occur in the case of the chord of the seventh and its inversions as well as in the triad and its inversions, I have given various examples in Figure 177 in which the second method of each pair is always the easiest way of figuring.

191. The original text indicates Figure 178.

192. In this matter Kirnberger was in perfect agreement with C. P. E. Bach, 196. The former method, which was commonly employed in the earlier part of the eighteenth century, was championed by Heinichen. See Arnold, 783-87.

193. The essential harmony is given before each group of numbered examples (1) through (8), except at (4). For a detailed discussion of the figuring of passing notes in the bass, see Arnold, 716-77.
Moreover, in the examples executed at (11) i.e., (11)(a) of Figure 1777 the bass is shown with these different kinds of figuring. At (b) the same figuring as at (a) has been retained, but differing in that the third beat (whose harmony should have already been played on the second beat) has been anticipated by a diagonal stroke above the note. At (c) this anticipation occurs in the bass, and the figuring indicated for it is easy and comprehensible. At (d) occurs the same accompaniment as at (b), but unquestionably with more difficulty, for in this method can be found figurings which one does not ordinarily see in a lifetime, and which by their appearance would seem to be dissonant figures, even though they indicate the true harmony.

Note: The examples at (d) and (e) show the most difficult figurings of 7, etc., whereby one is caused to think that these must resolve. This dilemma is understood only after a more careful inspection of these chords, and thus finds it immediately eliminated. At (e) occurs the same accompaniment as at (c), but with the same difficulty found at (d). Furthermore, at (c) of the Figure an example is produced which settles the whole difficulty of figuring.

Finally, in order to have conclusive proof of the necessity for the knowledge of different figurings, I have appended in Figure 178 an example from a trio by Johann
Sebastian Bach which, although it is only a trio, still must be accompanied in four parts; and this can serve to refute the common belief that trios, sonatas for a concerted part and bass, and likewise cantatas which are accompanied by only a harpsichord are not accompanied in four parts.

Note: The late Bach (Johann Sebastian) had the maxim that one must learn to read figurings correctly. The importance of this maxim becomes apparent particularly when three or four sixteenth-notes occur in the bass; it is doubtful that one would figure this with a diagonal stroke (as much, still, as it is to be recommended), whereas Bach's figuring with \( \frac{7}{5} \) is superior, because the harmony of the note to be played is immediately indicated in this way. Moreover, it is also commendable in that way because the copyist is liable to extend the strokes on to the wrong notes by mistake, whereas errors of this kind rarely occur with the use of the Bach

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194. The example is the Andante from the Sonata in C minor for flute, violin and continuo which is a part of the Musical Offering. This is probably the only surviving example of an accompaniment of an entire movement set down by a contemporary master (and a pupil of the composer as well). A realization of the complete sonata, previously attributed to Kirnberger, was published as such in the Anhang of vol. XXXI of Bach's Werke (Leipzig: Bach-Gesellschaft, 1851-1947), 55-56. It is now regarded, however, as the work of a student. See Hans T. David, J. S. Bach's Musical Offering (New York: G. Schirmer, 1945), 99-101. Cf. the version of the realization given by Arnold, 790-92, which is taken from the first edition of the volume of examples, and which differs in minor details from the version given here. In the present translation, the alto part in the last eighth of measure 7 has been changed from \( a^\# \) to \( a^b \). In measure 21, first quarter, Kirnberger has changed Bach's original by taking a long appoggiatura instead of a short one, and altering the figuring to suit the notes. Kirnberger's change has been retained here.
figuring; the latter is a case in point to illustrate that Bach's figuring is preferable.

The chord to be played does not harmonize with each of a pair of notes; therefore I have shown to which of the two the essential harmony should be struck.

A bass with correct figuring (of whichever type it may be) is one thing, and an unfigured bass is entirely another. The former can be played correctly without knowledge of the principles of composition; the latter, however, calls for nothing less than having to foresee the harmonic progressions in order to decide which of two notes determines the chord.195

It is bound up with even greater difficulty when one harmony occurs with three, four, or more notes in the bass. For this reason I am willing to give rules about the unfigured bass, without letting the flattering notion occur to me that the notes thus figured would not be capable of still another figuring according to the disposition of the character in the piece under consideration.196

195. I.e., in the case of a bass containing passing notes. A number of theorists had earlier attempted to set down rules for the reading of unfigured basses, among them Francesco Gasparini (L'Armonico pratico al cimbalo, 1708), Rameau (Traité de l'harmonie réduite à ses principes naturels, 1722), and Heinichen (Der General-Bass, 1728). These are surveyed by Arnold, 65ff. and 265ff.

196. These rules, unfortunately, are not forthcoming.
The necessity for this will not be doubted by anyone daring to undertake correct figuration of the eight notes on the title page, because the possible figurings of these eight notes border almost on infinity, and one may figure them in the major mode, though according to the design of the harmonist the minor mode may be the basis. Herr Benda in Gotha has told me that he has proved to someone who boasted that he could play every unfigured bass correctly, that this person was not only incapable of this, but also that he had chosen the wrong key by attributing the major mode to the character of the piece, whereas the minor mode should have been taken.

This is a difficult problem. There are many more of a similar nature about which one will read with pleasure.

197. On the title page Kirnberger gives the notes of the ascending C major scale in the bass (see Plate II, p. xxxiv). In *Die Kunst des reinen Satzes*, I, 25, he gives the following solution:

198. Jirá Antonín (Georg) Benda (1722-95), a Bohemian-born musician much admired by his contemporaries who was music director of the Thuringian court at Gotha from 1750 to 1778. His son Wilhelm Heinrich was also a composer and a pupil of Kirnberger.
in Herr Heinichen's discussion concerning the unfigured bass, which, however, needs a special treatise just as much as does the teaching of how to accompany fugues correctly, and which would have to be part of such a treatise. When the player has arrived at the point that he can determine all possible figurings correctly, then, to be sure, he will have made a great stride; in most cases a sure ear alone must still be the first judge, even when one particular figuration seems to be the surest solution.

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200. Cf. Translator's Introduction, p. xxiv. English equivalents have been used for the names of towns wherever possible, and therefore Brunswick (Braunschweig) and Vienna (Wien) appear out of alphabetical order here.
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Appendix B

TABLE OF CONVERSION NUMBERS FOR MUSICAL EXAMPLES

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| The numbers used in this translation are the same as those in the original. |
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und deren dissonirenden Vorhälten, herzuleiten und zu
erklären sind, als ein Zusatz zu der Kunst des reinen
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