



Yale University Department of Music

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Author(s): Erwin R. Jacobi

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HARMONIC THEORY IN ENGLAND

AFTER THE TIME OF RAMEAU

by

Erwin R. Jacobi¹

In the year that Rameau died, a man travelled from England to Paris whose personality and work were to have a decisive influence on the attitude of the English musical world toward developments on the European continent for decades to come: Charles Burney². Even though

1. This article is a translation from the German of the first chapter of a doctoral dissertation presented at the University of Zürich, Switzerland, the full title of which is The Development of Music Theory in England after the time of Jean-Philippe Rameau. The preface, introduction and first chapter of the dissertation, together with the complete table of contents and bibliography of sources, appeared earlier this year in German as Volume 35 of the Sammlung Musikwissenschaftlicher Abhandlungen, P. H. Heitz, Strasbourg. This first chapter of the dissertation is concerned with the developments in England from the time of Rameau's death in 1764 to the publication in 1845 of the most influential and all-embracing theory of harmony to come from nineteenth-century England, that of Alfred Day.

The translation is by David Kraehenbuehl. Those who compare this translation with any of the published versions in the original language will discover that all the direct quotations from the English treatises cited have been paraphrased in the German versions of the article. The author and editor felt that these would be most useful to English readers if they were presented in their exact wording. Readers who are unfamiliar with the technical terms of harmonic theory that appear in treatises of the time will find thorough explanations of these in Matthew Shirlaw's The Theory of Harmony, reprinted in 1955 in Dekalb, Illinois by Birchard Coar. The section of this article concerned with the work of Kollmann was published separately in German in the Archiv für Musikwissenschaft, Vol. XIII, Nr. 3/4, 1956, pp. 263-270.

2. Charles Burney (1726-1814) has gone down in history as a leading music historian on the basis of his A General History of Music (the first in the English language) which appeared in four substantial volumes in the years 1776 to 1789. With the exception of John Hawkins' historical work (cf. page 130), which appeared a few months later than Burney's first volume in 1776, it was almost 125 years before another work of equal stature and scope appeared in the English language in the form of the Oxford History of Music. In 1770, Burney began his journeys to France, Italy, Holland, Germany and Austria in order to gather authentic materials on the spot for his planned historical work; smaller publications appeared already in 1771 (on France and Italy) and in 1773 (on Germany and Holland). Burney married a sister of the English poet, William Cowper (also written Cooper); he knew how to work himself up into an almost unexampled position of influence socially and how to

Burney was no music theorist (as we shall see, some of his statements in this area demonstrate a considerable superficiality), he deserves prominent mention here because his comments on Rameau undoubtedly made a lasting impression in England. In the fourth volume of his great history of music, five and one-half pages (p. 612 ff.) are devoted to Rameau's theories:

"After frequent perusals and consultations of Rameau's theoretical works, and a long acquaintance with the writings of his learned commentator D'Alembert, and panegyrists, the Abbé Roussier, M. de la Borde³, etc. if any one were to ask me to point out what was the discovery or invention upon which his system was founded, I should find it a difficult task.

"The base to a common chord has been known ever since the first attempts at counterpoint; and it only seems as if Rameau had given new names to old and well-known combinations, when he calls the keynote, with 5, Generateur, Basse-fondamentale. But the Italians, ever since the time of Zarlino, have distinguished this lowest sound by calling it the first base, lmo. basso; and the other parts of the chord when made the base, basso rivoltato, or 2do. basso. But Brossard in his Musical Dictionary, published 1702, in defining Trias harmonica, or the three sounds of a common chord in its first state, calls the under-note basse, or son fondamentale; and afterwards remarks that among the three sounds that compose the Triade harmonique, the gravest is called basis, or sonus fundamentalis. And what has Rameau told us more, except that that the harmoniques produced by a string or pipe, which he does not pretend to have first discovered, are precisely the third and fifth in question. This is the practical principle of the fundamental base; the theoretic was surely known, of harmonical, arithmetical, and geometrical proportions and ratios of sound, with which so many books have been ostentatiously filled ever since the time of Boethius.

"The Abbé Roussier, his most learned apostle and able champion, candidly confessed in his first work, that 'the system of a fundamental base ought not to be regarded as one of those principles which precedes the consequences to be deduced from it. Le mérite du cette decouverte consiste, à avoir réduit en un système simple, commode, et facile à saisir, toutes les opérations des grands maîtres de l'harmonie.' Traité des Accords, 1764."

Burney continues:

"Rameau's system, as compressed and arranged by D'Alembert (Elemens de Mus. Theor. et Prat. suivans les Principes de Rameau,

make his house a center for the highest circles not only in the arts, but in the political and scientific worlds as well; Joseph Haydn visited Burney first after his arrival in England, and personal friendships bound him to George III, Queen Charlotte, Burke, Pitt, Johnson, Boswell, and numerous other leading personalities.

3. Jean-Benjamin de la Borde, as well as Abbé Roussier, were pupils of Rameau.

1752 and 1762—footnote by Burney) is perhaps the shortest, clearest, and best digested, that is extant; and yet, from the geometric precision with which it has been drawn up by that able mathematician, many explanatory notes and examples are wanting to render Rameau's doctrine intelligible to musical students in the first stages of their application; and even after that, the work, to be rendered a complete theory, would require many additions of late discoveries and improvements, both in the theory and practice of harmony. (Many opinions concerning melody, taste, and even harmony, which were current forty or fifty years ago, would now only excite contempt and laughter. Imagination, which had been manacled by narrow rules, formed on Gothic productions, at length broke loose and liberated, flutters and flies about from flower to flower, sipping like the bee its native food wherever it can be found.—footnote by Burney)

"About the year 1760, the System of a Fundamental Base, by Rameau, gave occasion to much discussion in Germany. By some it was adopted there as well as in Italy, by others disputed. It seems, however, as if this system, ingenious as it is, were somewhat overrated by French theorists, who would persuade the world that all Music not composed on Rameau's principles should be thrown into the flames—Jusqu'à mon système says Rameau himself; and M. de la Borde says, that 'Music since the revival of the arts was abandoned to the ear, caprice, and conjecture of composers, and was equally in want of unerring rules in theory and practice—Rameau appeared, and chaos was no more. He was at once Descartes and Newton, having been of as much use to Music as both those great men to philosophy.' But were Corelli, Geminiani, Handel, Bach, the Scarlattis, Leo, Caldara, Durante, Jomelli, Perez, etc. such incorrect harmonists as to merit annihilation because they never heard of Rameau or his system? Indeed, it may be further asked, what good Music has been composed, even in France, in consequence of Rameau giving a new name to the base of a common chord, or chord of the seventh? The Italians still call the lowest sound of Music in parts the base, whether fundamental or derivative; but do the French imagine that the great composers above-mentioned, and the little composers who need not be mentioned, were ignorant whence every supposed base was derived? The great harmonists of the sixteenth century seldom used any other than fundamental bases. And the fundamental base to the hexachords has always been the keynote, and the fifth above and fifth below, just as Rameau has given it in his theoretic tracts.

"But though the several merits of this musician have been too much magnified by partizans and patriots in France, and too much depreciated by the abettors of other systems and other styles, as well as patriots of other countries, yet Rameau was a great man; nor can the professor of any art or science mount to the summit of fame; and be elected by his countrymen supreme dictator in his particular faculty, without a large portion of genius and abilities."

So much for Burney on Rameau; there is not space here to undertake a critique of Burney; on the other hand, a few observations will help us to understand certain English attitudes of the time:

In eighteenth-century England, Italian influence was much stronger than French, both in public musical life and in the selection of teachers for England's youth. English theorists, as for example Charles Avison⁴, went to Italy for the most part to study. Italian opera held a commanding position in England; men like Geminiani⁵, the Castrucci brothers⁶, and Bononcini⁷ lived, worked, and wrote in England; nor can we overlook Handel's efforts to draw Italian personalities to England.

An opposition between the Italian and French styles in music can be demonstrated almost throughout history (already even in the periods of early polyphony; nor is it uninteresting, for example, to compare the style of harpsichord composing developed by Domenico Scarlatti in the eighteenth century with that of François Couperin, among others). It was impossible that Italian and French influences should exist at the same time and to the same degree in English music. For example, John Hawkins (see below) writes in 1776 in his music history: "as to the French music in general, the merit of it has at different periods been a subject of controversy; many think that in the art of musical composition the French are an age behind the rest of Europe: and many more are of the opinion that, having deviated from the path of nature, they may be two before they find their way back again."

It must further be remembered that the French revolution aroused comparatively little sympathy in England (the English

4. Charles Avison (1710-1770), a very popular organist and music scholar of his time, was recalled from virtual oblivion to a large public through Robert Browning's poem, "With Charles Avison," which appeared in his late work of 1887, Parlayings with Certain People of Importance in their Day. He studied first in Italy, later with Geminiani in England, published a book, An Essay on Musical Expression, in 1752, which received wide distribution and was translated into German in 1775 under the title, Versuch über den musikalischen Ausdruck. Therein Avison praises Marcello and Geminiani above all. The little book is worthily and ingeniously written but deals exclusively with aesthetic and general considerations.

5. Francesco Geminiani (1687-1762), violinist and composer, a pupil of Corelli, went to England in 1714 where he published, among other more elementary didactic works, his famous instruction book for the violin, The Art of Playing on the Violin, which appeared a few years ago in a facsimile edition by the Oxford University Press, London.

6. Pietro Castrucci (born 1679), likewise a pupil of Corelli, went to England in 1715 in the company of Lord Burlington, a genteel lover of music. He was concertmaster of the Handel opera orchestra for many years. His brother, Prospero, likewise a violinist, came to England later.

7. Giovanni Bononcini (1670-1755), an Italian composer (primarily of opera), came to London in 1720 in connection with the great rise of Italian opera in England at that time.

"Glorious Revolution" of 1689, exactly one hundred years earlier, was, considering the English temperament, conducted in a considerably milder fashion!); a single statesman, Edmund Burke⁸, succeeded in prejudicing the overwhelming majority of the English people in every class against the ideology of the French revolution with his own views regarding state government as presented in his Reflections on the French Revolution published in 1790, as well as his political actions while prime minister of England.

In the same year, but shortly after the appearance of the first volume of Burney's history, another history appeared in the English language: John Hawkins, A General History of the Science and Practice of Music (1776; new edition: London, 1853). Hawkins, long regarded as a rival of Burney, contented himself largely with the establishment and presentation of facts, with little personal commentary. With regard to Rameau, he writes (1853 edition, page 900 ff.):

"But the work for which Rameau is most celebrated is his 'Démonstration du Princip de l'Harmonie', Paris 1750, in which, as his countrymen say, he has shewn that the whole depends upon one single and clear principle, viz., the fundamental bass; and in this respect he is by them compared to Newton, who by the single principle of gravitation was able to assign reasons for some of the most remarkable phenomena in physics; for this reason they scruple not to style Rameau the Newton of Harmony ... As a theorist, the character of Rameau stands very high; and as a testimony to his merit in this particular, it is here mentioned as a fact, that Mr. Handel was ever used to speak of him in terms of great respect."

It should be pointed out here that, during Rameau's lifetime, the third part of his Traité de l'Harmonie, reduite à ses Principes naturels (Paris, 1722, Livre III, "Principes de Composition") was translated into English (appearing in London in 1737 under the title "A treatise of Musick, containing the Principles of Composition, wherein the several parts thereof are fully explained and made useful both to the professors and students of that science," second edition, 1752). Towards the end of the eighteenth century an English translation of the fourth part of the Traité ("Principes d'Accompagnement") was published in London (under the title "A Treatise on Harmony, in which the Principles of Accompaniment are fully explained and illustrated by a variety of Examples"). Around the turn of the century an English translation of Catel's instruction book, renowned in France, appeared under the title "A Treatise on Harmony, Written and Composed for the use of the Pupils of the Royal Conservatoire of Music in Paris."

In order to establish what portions of Alfred Day's system of theory were taken over from earlier works, what were revisions of earlier works, and what were original contributions by Day, it is necessary to know what theories existed in England prior to the publication

8. One of the greatest English statesmen and political writers, 1709-1797.

of his system in 1845.⁹ The reader will learn nothing concerning these questions from Day himself or from his disciples, opponents, or critics; only repeated and similar expressions are discovered to the effect that, prior to the publication of his work, there existed in music theory only a chaos of countless rules and exceptions to rules without any system at all.

Of the innumerable, often remarkably penetrating, complete, and clear publications whose titles indicate that they are basic tracts in the realm of harmonic theory, only those will be considered here that have significance for the development of English theory during this time. The remainder (for example, by Benjamin Stillingfleet¹⁰, John C. Heck¹¹, Dr. J. W. Callcott¹², William Shield¹³) are either more or less worthy instruction books for practical purposes (primarily for the playing of thoroughbass) or philosophical and aesthetic discussions that have little or nothing to do with theory in the sense that we are using the term here, i. e., as the scientific aspect of musical composition which orders the work-materials of the composer, primarily melody, harmony, and rhythm. (The word "theory" is often used erroneously in the sense of rules for harmony and counterpoint; consequently a manual or a primer with exercises according to those rules is often erroneously called a "theory book.") Although the period from 1770 to 1845 was one of earnest theoretical endeavor, its writers were not granted the opportunity, in the long run, to found any national school or tendency. Furthermore, the English theorists of this period were heavily influenced for the most part by continental theorists, which they often admitted openly. As in all times and in all lands, also in this period there are only a very few treatises which endeavor to attack, in any way whatsoever, the basic questions of the nature and derivation of musical materials.

9. It may be assumed, of course, that a person like Alfred Day, who had studied in France and Germany, knew the most important theoretical works of the eighteenth and early nineteenth centuries from those countries in the original.

10. Regarding Stillingfleet and his analysis of Tartini's Trattato, see footnote 29.

11. John C. Heck, a musician born in Germany in 1740, put out in London, among others, a book entitled A Complete System of Harmony (1768) which in no way deserves such a title.

12. Dr. John W. Callcott (1766-1821), a well-known organist and composer of his time, published in 1806 A Musical Grammar, a truly excellent and useful grammar of music for the practical musician which appeared in its eleventh edition in 1825 and was still being reprinted in 1883. This book is important because of its comprehensive references to literature and its accomplished correlation of the most various aspects of notation, melody, harmony, and rhythm.

13. Regarding Shield, see footnote 31.

William Jones¹⁴ (also called "Jones of Nayland") published A Treatise on the Art of Music in 1784 with the subtitle: "in which the Elements of Harmony and Air are practically considered and illustrated by an hundred and fifty examples in Notes, many of them taken from the best Authors; the whole being intended as a Course of Lectures, preparatory to the practice of Thorough-Bass and Musical Composition and dedicated to the Right Honourable, etc., the Directors of the Concerts of Antient Music." Among the subscribers to this book we find such prominent names as the Earl of Exeter, Lord Viscount Fitzwilliam, and Walter Scott of Arden, Esq.¹⁵ As would be expected from Jones's position as a prelate of the English church and as the dedication of his book demonstrates, he is a staunchly conservative personality; for him, "the Golden Age of Music is past." In England, it extended from Byrd, Tallis, Gibbons, past Purcell and Croft, to Handel; then Corelli, Geminiani, and Pepusch are given some recognition. From Jones's standpoint, the development of an independent instrumental music bears with it the danger that sound without meaning will predominate. He therefore proposes to organize his method after the examples of the masters rather than after some preconceived theories. He praises Burney for his vindication of the old church composers and his commentary on Josquin; and, further, Marpurg, whose writings had just appeared in an abridged English translation as Jones finished his work. He cites with pride "an old Italian professor in Oxford" and describes himself as always for the old style: "I confess very freely that my feelings give their testimony to the Style which is now called ancient," and speaks frequently of an existing rivalry: "we are now divided into parties for the old and the new Music."

Jones "considered the Theory of Musical Sounds as a branch of Natural Philosophy"; philosophical and aesthetic viewpoints carry much weight in his book. His many-sided education and extensive reading make whole chapters of his book interesting and still worth reading in their entirety today. He cites Rameau immediately in his introduction:

"The System of fundamental Bases, I am told is the property of Rameau: and I believe Rameau had great merit in extending and applying it: but there seems to be no occasion to go to any modern for the

14. William Jones of Nayland (1726-1800), a clergyman in the English church, achieved in his time a considerable reputation as such. As a theologian he had strong tendencies toward the followers of John Hutchinson (1674-1737), who had written a natural philosophy and had taught a mystical interpretation of the Bible that attacked Newtonian philosophy (according to Hutchinson, the Bible contained not only the elements of a true religion but also the basis for a rational philosophy). Jones studied at Oxford, occupying himself throughout his life with music and natural philosophy, as well as theology, publishing numerous works in all three areas. A complete edition of his works appeared in twelve volumes in 1801; a later one, 1810, in six volumes. The tract named above appeared in a second edition in 1827. Jones, who received his second name from the locality of Nayland in Suffolk where he lived for many years, published a few smaller treatises concerning musical philosophy and aesthetics, also a number of compositions.

15. Probably the father of the famous author.

principle itself, which regulated the antient Scale of Guido Aretinus, whose three Hexachords of the Gamut are accommodated to the three keys which constitute the fundamental Harmony of the Octave of the natural key of C,..."

Regarding the purpose of his book, Jones says first that he wished to write a consistent system of principles for thoroughbass and rules for modulation for a lady who was an exceptional harpsichord player; then, changing his purpose entirely, for a few young friends "who wished to know the reason of things, and to learn Music as Scholars learn other things, by learning the Principles of the Art in the first place; which in this art is contrary to the general practice." He wishes, however, to make no investigation of the theoretical premises of music since few readers would understand them and they have neither interest nor significance for the practical musician. As Geminiani, Pasquali¹⁶, C.P.E. Bach, and Bemetzrieder¹⁷, had already written on performance practice, he would begin with the first basic principles.

With regard to chromatic harmony, he observes in his introduction that it "is a Proteus capable of so many forms, that it is very hard to reduce it to a proper degree of simplicity...but there would be no end if a writer on Music were to follow his subject as far as it would lead him."

The whole work¹⁸ is divided into nine chapters: "of the Scale of Music..., of Concords, of the Octave as a System of Harmony, of the Inversion of Chords..., of the Harmonic Derivation and use of Discords, of Modulation..., of Harmonic Periods..., of the Chromatic System, on the Analysis of Air..., on the Application of all the foregoing Rules." Worthy of note is the following observation of the author regarding his book: "my rules are rather extracted from Musical Compositions than from Musical Treatises, especially in the eighth Chapter [i. e., on the analysis of air] which is the longest, and the most critical of all..."

Jones gives no theoretical derivation for the scales, but cites only the Greek tetrachords, Guido's hexachord system, and the tonal divisions of the octave as the current system of tonal steps, "those just Degrees and Distances of Sounds, which produce Harmony and are agreeable to the Ear, are comprehended within a certain System, the philosophical Reasons of which are not necessary to a practical Musician: it being only required of him to know what they are, and how to apply them according to the rules of art." He recommends Morley for

16. Niccolo Pasquali (died 1757 in Edinburgh), like Geminiani, came to England as an Italian violinist and composer around the middle of the century (1743), settling in Scotland where he published among other works a thoroughbass instruction.

17. Anton Bemetzrieder (1743-1817), an Alsatian writer on music and pedagogue, came to England in the second half of the century (1781) where he published, among other items, an English translation of his instruction book on harpsichord playing and harmony.

18. The book, consisting of 12 pages of introduction, 61 pages of text, and 40 pages of musical examples, is printed in quarto.

the study of monodic songs. His definition of consonance is primarily aesthetic in nature. "And the Bass which is the radical Base of the Chord is distinguished from figurative or artificial Bases as the Fundamental."

It is observed in the chapter "of the Octave as a System of Harmony" that "these three Keys [C, G, and F in the scale of C] comprehend all the native harmony of the Octave; and the three notes C, G, F are the fundamental Notes, because they carry all the degrees of the Octave in their Accompaniments. The fundamental Harmony of a key... teaches the art of keeping the key." Also here Jones makes an acknowledgement to Rameau of whom he adds, however, "though I think his work scarcely intelligible to Learners, and very badly arranged." (At all times we find this practical viewpoint stressed by the English music theorists more than on the continent—consideration for the reader in general and particularly for the student in the organization of books as well as in the introductory remarks. This circumstance should by no means be taken to indicate that there were fewer "scientifically" oriented or educated theorists among the English; it appears more to be the result of a kind of practical notion of education that is peculiar to the English national character; and finally, the English people had their revolution and parliamentary reform behind them, had already accomplished a more democratic way of life, while the culturally leading countries of the continent were still standing entirely under absolutist governments.) Therefore, while Jones declines to accept Rameau from the standpoint of method, he recommends strongly and repeatedly Dr. Pepusch's A Short Treatise on Harmony (published in 1730)¹⁹.

After Jones has demonstrated, in the same chapter, how the ascending and descending major scale can be harmonized without modulating, using only the acceptable scale tones from the basic harmonies of the tonic, dominant, and subdominant, he explains in closing: "I do not add an Example of the Minor Key in this place, because the case is not so simple, as the degrees of the Minor Key do not furnish an harmonic accompaniment to the Notes of the Octave when taken as Bases, even in descending, and much less in ascending: so I reserve this till we come to the Doctrine of Modulation."

"Bases by supposition" (e. g., the tone G for a diminished triad on the tone B in the C-major scale) are contrasted with "fundamental Bases"²⁰; as an analogous situation, the church modes are cited,

19. Dr. John Christopher Pepusch (1667-1752), born in Berlin, came to England about 1700 where he won recognition as a composer. Indeed, John Hawkins, in his music history, already placed Dr. Pepusch, almost forgotten today as a theorist, on a level with Zarlino: "those deep theorists, Zarlino and Pepusch."(!)

20. The concept of the "fundamental harmony," with whose help here in the diatonic system of the octave the original key is kept together, appears later in Day with a completely different meaning, namely as a concentration of the chromatic harmonies opposed to the diatonic. The concepts "fundamental" and "essential," specifying particular tones, intervals, chords, and harmonic systems, were used altogether inconsistently by the most various European theorists of the

where each step of the octave, with the exception of the major seventh, indicated a specific mode.

In dealing with the inversion of chords and their "internal consonance" it is observed: "if the Notes of which a Chord consists be taken severally from above, and put below as Bases, the harmony will be changed. This is called the Inversion of a Chord, to produce new relations and great variety arises in Music upon this principle." As he indicates, Jones directs his exposition here more to the thoroughbass player than to the composer. Of particular significance to him are various arrangements of the chord tones (above an identical bass tone), through which, according to him, the degree of "internal consonance" can be noticeably varied. From this observation he demonstrates also the admissibility of certain dissonances.

In order of importance, according to Jones, "the first and most agreeable of the discords" is the fourth taken together with the fifth and octave above the bass ($\frac{5}{4}$); next comes the ninth, as dominant of the dominant; and only third in his arrangement do we find the minor seventh, "commonly accounted the chief" discord, but which "is inferior on several considerations." Here again the abovementioned principle of "internal consonance" plays a role; and, further, the various possibilities for resolution are important in the designation and classification of dissonances. Of particular interest is Jones's basis for ordering individual dissonant chords: it is the sum of the consonant intervals in the chord compared with the sum of the dissonant intervals in the chord, the resulting relationship being in this case synonymous with the "internal consonance" (e.g., the chord G-B-D-F consists of four consonant and two dissonant intervals); and, on the basis of this relationship, certain dissonant chords are more bearable to the ear than others. In establishing the derivation of the fundamental bass from certain dissonant chords, Jones proceeds exactly as Rameau, whom he also cites in this case.

In the chapter "of Modulation, its Forms and Limits," the minor scale is explained as a kind of modulation of the major scale with no attempt being made to derive it theoretically. (In support of this, examples are introduced from Gibbons, Tartini, Corelli, and "from a Movement of Geminiani universally admired.")

Jones understands "Harmonic Periods" to mean sequences, for the study of which he again recommends Morley in particular, and then cites also certain passages from Pergolesi's Stabat Mater and from Carissimi. The "Chromatic System" has its sources, according to Jones, in the minor scale and in the variable nature of the sixth and seventh, as well as the third.

In the chapter "on the Analysis of Air, and the Conduct of Subject," Jones demonstrates his brilliant powers of observation and his capacity, schooled by broad studies, to recognize interdisciplinary re-

eighteenth and nineteenth centuries; it is necessary in every case to consider the context and the definitions.

lationships; the chapter remains however largely logical, philosophical, and aesthetic in nature, and we find only the barest beginnings for a technically useful system (but that is already a great deal in an area that had been almost completely neglected by theorists during the supremacy of the dominant-seventh chord in Europe). Jones refers back to that time when poetry and music were one and compares those aspects of rhetoric that may be learned with similar aspects of melody. "Harmony is enlivened by Air, and Air is supported by Harmony. But as Air is the production of the fancy or imagination, some have falsely supposed that it may be left, like the Nightingale, to the wildness of Nature; and that all rules can only serve to fetter and restrain it...yet there is no Science, nor any one part of a Science, in which Nature will not derive much assistance from Art and Experience... I am very sensible...that the attempt to reconcile Air with Reason, will appear like that of giving Laws to the Wind..."; ornamentation is also considered in this chapter devoted to the analysis of melody.

The section where Jones takes up the "meter-rhythm" problem is equally inspired. "But besides this Measure, which is as obvious as the measure of long and short Syllables, there is another Measure of Clauses, Sentences, and Paragraphs, by which the Air of a piece is to be regulated, and without which it is immethodical, and consequently obscure and without effect. This Measure is as different from the Measure of Time and Quantity, as Sense and Syntax are from Metre." Minuets, gigues, and gavottes arouse the most pleasure in the untrained listener (because of their regular meter), while "the Fugue, which is the most learned species of Music, strikes the memory and judgment with its proportion and symmetry, while it amuses the fancy with Air, and fills the Ear with harmony." ("Haydn and Boccherini merit a first place among the Moderns for invention.")

In the last chapter the author sums up briefly once again the purpose of his book: to bring the music student closer to the principles and rules of the various areas of music in order to make it possible for him "to acquire a learned Taste"; to this end, Jones assembles in closing all of his previous observations in the form of a set of rules for practical composition.

Since England and Germany were closely bound together by the relationship between the English royal family and the reigning line in Hanover, many German musicians left their homeland and went to England. Among these was Augustus Frederic Christopher Kollmann²¹.

21. Augustus Frederic Christopher Kollmann (born 1756 in Engelnbostel, Hanover; died 1829 in London), organist, theorist, and composer, was above all active as a teacher. He was called to London in 1784 as teacher and sexton for the German colony where, in 1792, he obtained the post of organist in His Majesty's German Chapel at St. James. It is this same Kollmann of whom Albert Schweitzer erroneously states in his book on J. S. Bach that he was an Englishman who prepared in 1799 the first edition of the WTC and in 1812 published an analysis of Bach's Preludes and Fugues (see Chapter XII, footnote 57, Chapter XV, the section on the WTC, and footnote 27 of the same chapter). It is true that Kollmann had announced his intention, in the first

In 1796 he published his first theoretical work on harmony: "An Essay on Musical Harmony, according to the Nature of that Science and the

edition of his Essay on Practical Musical Composition in 1799, to publish the WTC for the first time, but he never came to any realization of this plan. In the second edition of the aforementioned work on composition, appearing in 1812, Kollmann writes (Chapter 11, "Of Instrumental Music," section 21, page 62): "In the first edition of the present Essay, I announced an analyzed edition of his [J. S. Bach's] forty-eight Preludes and Fugues, entitled the Well Tempered Clavier, which had never been printed before. But as three editions of it were taken in hand soon after, viz. at Zurich, Bonn, and Leipzig, and numerous copies of them imported into this country, I relinquished the intended edition and attempted my Twelve Analyzed Fugues, which I have lately published." (This last refers to Kollmann's own compositions.)

Besides numerous examples from various works of J. S. Bach and other composers, Kollmann printed from the WTC only the Prelude and Fugue in C major (Book I) in his composition manual (1799) and, in the second edition (1812), the Prelude and Fugue in C major (Book II).

In the first number (only two numbers appeared altogether) of a trade paper, The quarterly musical Register, of which Kollmann was editor, he published merely a note on J. S. Bach and his works, in no sense "An Analysis of S. Bach's Preludes and Fugues," as W. Schmieder still writes erroneously on page 510 in the section on literature in his Thematisch-systematisches Verzeichnis der Werke Johann Sebastian Bachs, Leipzig, 1950. Kollmann himself gives us information about this in the same place cited above: "The greatest Composer for keyed instruments, as well as the greatest Performer on them ever known, has been John Sebastian Bach, some of whose works have been quoted in the preceding part of this Essay; and an account of him maybe found in the Musical Register, No. 1."

Schweitzer takes his erroneous statements regarding Kollmann from Hermann Kretzschmar's closing commentary to the old Bach Gesellschaft Edition (Volume 46, Leipzig, 1896, "Bericht und Verzeichnisse," page xxiv) which he expressly quotes. In this place, Kretzschmar deals with the English Bach-movement of the late eighteenth century and speaks indeed of the "important" Kollmann edition of the WTC from 1799!

It is possible that Kretzschmar, for his part, was under the influence of Ernst Ludwig Gerber's Neues historisch-biographisches Lexikon der Tonkünstler (1813), in the third part of which (page 91 ff.) is actually written that Kollmann had edited at London, in engraved form, Johann Sebastian Bach's WTC with explanatory remarks! In the same place, Gerber writes regarding Kollmann: "This active man took it upon himself to acquaint the English, through his pen, with what German industry and German art had accomplished in music. This was carried out especially in his Essay on Practical Musical Composition. In addition, he belongs among the prolific composers. And if his practical works seem of lesser import to German ears, accustomed to the works of Haydn, Mozart, and others; they gained without doubt their full merit among the English."(!)

Principles of the Greatest Musical Authors"²², dedicated to his friend, Burney; in 1779 there followed An Essay on Practical Musical Composition, shortly thereafter, A Practical Guide to Thorough-Bass, and, in 1806, "A New Theory of Musical Harmony, according to a complete and natural system of that science," dedicated to the President and Congress of the Royal Society²³. All of these theoretical and technical works were brought out in more than a single edition, and Kollmann occupied a central position in the musical life of London, particularly as a teacher in the German colony there. In his first work on harmony, he follows principally Johann Philipp Kirnberger, whose system he claims with pride to have introduced to England.²⁴ He holds it to be the best of the theoretical works known up to that time. Nevertheless, over a period of ten years following this publication, he discovered that this system was still not complete and he undertook to correct these deficiencies. The result of these efforts was his book, A New Theory, as he writes in the preface of this work.²⁵

22. Eighteen pages of Introduction, 128 pages of text, and 40 pages of musical examples, in quarto.

23. Eighty-four pages of text and 36 pages of musical examples.

24. Cf. the two principal works of Kirnberger: 1) Die wahren Grundsätze zum Gebrauch der Harmonie (1773), and 2) Die Kunst des reinen Satzes in der Musik (1774-1779). Kirnberger declares himself primarily against Rameau and still more against his prophet, Marpurg. He recognizes only the triad and the seventh chord, to be sure on every step of the diatonic scale, as the starting point for a complete harmony.

25. For the sake of completeness we must mention here the somewhat superficial comment on Kollmann's theoretical works in the Biographie universelle des Musiciens (second edition, 1866) of François Joseph Fétis: according to this, Kollmann wishes, in his first work, to amalgamate two contradictory theories, namely those of Kirnberger and Marpurg, and therefore could not realize any unified approach; Kollmann became aware of this himself in later years after he came to know the system of Ballière who had constructed, in 1764, a music theory based on the tones of the hunting horn, respectively those of the trumpet (Théorie de la Musique); Jamard (who is actually mentioned by Kollmann), in his own theoretical work in 1769 (Recherches sur la théorie de la musique), developed the ideas of Ballière and established a complete series of hunting horn tones instead of the diatonic scale, usual until then, in which he replaced the geometric ratios in the calculation of intervals of Ballière's reckoning with arithmetic ones which also proved to be wrong. (Kollmann refers to the indicated work of Jamard in a single place, and that only in his first theoretical work which appeared in 1796—in his second chapter on intervals, the fourth part concerning consonances and dissonances, page 11 ff., in conjunction with his description of the natural intervals 4:7 and 7:8.) This reference is of interest primarily because, seen through Fétis' eyes, it demonstrates an alleged error which can come about through a search for some "naturalistic" bases for music.

This comment of Fétis is taken up and reiterated similarly by Lucien Chevallier in his voluminous chapter on "Les Théories Harmoniques" in the Encyclopédie de la Musique (Alb. Lavignac—L. de la Laurencie), part 2, the volume entitled "Technique—Esthétique—

Kollmann begins the introduction of his first book with these words: "The science of music may be brought under two general heads, viz.: that, of just harmony, and that, of practical composition." He shows parallels to both in the field of language. He begins immediately with the scales, takes up thoroughly the problems of various tunings (where he demonstrates a noticable preference for the Kirnberger system of unequal temperament), harmonic and melodic intervals, and then, in several chapters, the various types of chords. "All musical harmony arises from two chords, called the fundamental concord and the fundamental discord; and from the different uses that can be made of them, by inversion, suspension, anticipation, and transition. And all musical harmony, even the most complicated, if only regular, is reducible to the said two chords; the fundamental note of which is called the fundamental bass... These two chords and their inversions therefore, may be called essential chords, in distinction from those which I shall call accidental ones." The harmonic system (i. e., in reality the Kirnberger system) which underlies all of Kollmann's work rests on the distinction between essential and accidental chords, in contrast with those systems in which each chord or each tonal combination was regarded as essential. In the chapter on "accidental chords," Kollmann quotes in detail how Rameau, Marpurg, and Kirnberger derive and use these chords. According to him, in Kirnberger the attention of the student and the performer is drawn to an essential chord by the appearance of any accidental chord while, on the other hand, in Rameau and Marpurg, the attention is diverted from the essential chords and each accidental chord must be recognized and figured as essential.

In the demonstration of cadences, Kollmann speaks of the then famous chord of the "sixte ajoutée" (F-A-C-D in C major), as it was named by Rameau. Kollmann distinguishes two kinds of "imperfect cadence":

- 1) the "half cadence" or "retrograde perfect cadence" which proceeds from tonic to dominant and in which the first chord must be a major or minor triad; the second, a major triad or a dominant-seventh chord.
- 2) the "real imperfect cadence" which proceeds from subdominant to tonic, in major and in minor.

Rameau added a sixth to the penultimate chord of these two cadence forms and designated it as an "essential but irregular dissonance," which, contrary to the nature of the "real essential dissonance," must resolve upward. In Kirnberger, this sixth is not es-

Pedagogie," Paris, 1925, page 561. This interpretation is in no way supported by Kollmann himself, in any case, not in any of his theoretical writings. But, in fact, it seems unlikely, since it does not correspond with Kollmann's method to avoid naming names when dealing with the origins of his ideas. The Fétis-Chevallier interpretation appears to emphasize a French national viewpoint more strongly than the facts justify!

sential but rather a passing tone which should be handled as such in its progression. (Parry²⁶, in his article on harmony in the first edition of Grove's Dictionary, points out that, for this chord, various theorists have given almost as many roots as there are tones: Rameau, originally, the subdominant; German theorists, the supertonic—as an inversion of a seventh chord; Day, the dominant—as an inversion of an eleventh chord without root and third; Helmholtz, again the subdominant in support of Rameau; and apparently Parry overlooked the fact that his countryman, Ouseley²⁷, established yet a fourth derivation for this chord—as the result of a "double root" common to both the supertonic and the dominant! As a fifth interpretation, Parry should have designated that of Kirnberger and Kollmann.)

On the title page of Kollmann's later harmony book, *A New Theory*, the first edition of which appeared in 1806 (cf. M. P. King's polemic against Kollmann's first harmony book on page 144), the musical example given below appears as a vignette. It is intended to be a concentrated demonstration of the complete "new" system:



Kollmann explains it in the last chapter:

"The two lowest staves contain the fundamental concord and discord, as the two only roots, from which all harmony arises, according to the nature of our modern scale. And the reason why I expressed only one part besides the fundamental notes, is to point that part out alone.

26. Charles Hubert Hastings Parry (1848-1918), professor of music at Oxford University and Director of the Royal College of Music, exercised an extensive influence on the English musical world as composer, musicologist, and teacher.

27. Frederick A. G. Ouseley (1825-1889), *A Treatise on Harmony* (1868).

"The third and fourth stave from below, shew the suspensions and interruptions, which arise from the mere syncopation of the very same notes. ["Interruption" is what Kollmann calls the opposite of a suspension, namely, the taking away of part of the value of a principle tone to allow an earlier beginning of the next following principal tone.]

"The fifth stave shews, how similar suspensions and interruptions arise, when the diatonic means are introduced, either before, or after, or on both sides of the same essential notes. N. B. The essential notes being expressed by larger, and the diatonic means, by smaller notes.

"And in the highest stave some chromatic means are introduced, as mere extremities of their respective diatonic degrees.

"The reason why no enharmonic changes have been added to that example, is: because they are as good as included in it. For they are nothing more than the same note treated like two notes of the difference of an enharmonic diesis (being the ratio 125/128—footnote by Kollmann), which the nature of our modern scale permits."

Each of the four variants shown in the four upper lines of the example may be used in any single voice of the harmony; "but wherever they are introduced, either single, or in any intermixture the ear will bear," the essential chords and tones remain the same as if they were not there. "And no essential chords or notes arise from any tolerable combination whatever, but the fundamental concord and discord expressed in the example in question, with their inversions, and with the different species of all of them, which the modern scale produces."

In this closing chapter, Kollmann himself raises the question of precisely why there should be no more and no less than two fundamental chords and establishes his viewpoint in detail. He makes the claim that, in contrast to his first study of harmony (cf. page 137), he has presented here a closed natural system as promised in the subtitle of this second work. Indeed, as stressed in the preface, it deals only with harmony as the grammatical aspect of the science of music; the rest, the nature and form of musical pieces, he calls the rhetorical, which he had written about separately in 1799 in An Essay on Practical Musical Composition.

In the first chapter of his late work — "of the System proposed in the present work" — Kollmann divides the existing systems into three groups:

"First, those by which all the intervals and chords are considered and explained according to their mere individual appearance.

"Secondly, those which depend partly, on the individual appearance, and in other parts on the proofs of the real nature of intervals and chords.

"And thirdly, those which depend entirely on the proofs, by which

a mere delusive appearance can be distinguished, from the real nature of intervals and chords."

The systems of the first group appear to be simple but are by no means so in reality. These systems know no rules by which to distinguish the false from the proper, the appearance from the fact; the variety of individual appearances requires an equivalent variety of rules in these systems; and should one desire to organize the plethora of instances under some general rules, one must also introduce countless rules for the exceptions. These systems were still possible as explanations of harmonic phenomenon so long as only a few chords and progressions were regarded as permissible; they were made obsolete as soon as the doctrine of a fundamental bass was recognized.

Kollmann includes Rameau's system in the second group (on the basis of the Traité, published in 1722 and translated into English in 1752)²⁸:

"The chief leading principle in Rameau's system is: that all harmony must be reducible to a regular fundamental bass, as the proof of it. And in that respect it is perfectly true.

"But its inventor endeavoured to reconcile that leading principle, to the more antient one of considering and explaining every interval and chord according to its individual appearance; and this led him into the mistake, of explaining some suspensions as a sort of essential chords, under the denomination of chords by supposition."

Kollmann regards it as remarkable how Rameau had realized that all his chords by supposition could be explained simply as suspensions. Roussier, in his Traité des Accords et de leur Succession selon le système de la Basse Fondamentale (1764), spoke of suspensions similarly but still more forcefully. Marpurg differed from Rameau insofar as he (in his thoroughbass handbook, 1755) made the "supposed" thirds into fundamental tones; but the whole doctrine of chords by supposition were an error since they concern, as previously said, only suspensions.

28. It might be assumed from Kollmann's formulations that the entire Traité existed in English translation; on the other hand, every official bibliographical source (the catalogues of the Library of the British Museum and of the Library of Congress in Washington, among others) speaks only of an English translation of the third and fourth parts of the Traité in the eighteenth century. It appears likely to me that Kollmann, because of the English title (see page 130) might have been led to the erroneous notion that it was a complete translation. My supposition is further supported by the fact that the second edition of the translation of the third part and the translation cited by Kollmann bear identical dates of publication and identical wordings for the main title. Burney fell into a similar error when he named "Rameau's Treatise on Music, translated. 1752" in his "chronological list of the important books which have been published on music in the present century in England" (at the end of the last volume of his music history, published in 1789).

Like Rameau, Tartini is said to belong also to this second group with his Trattato di Musica (1754), and his De Principiis dell' Armonia Musicale (1767). Tartini is said to understand (according to Stillingfleet's translation²⁹) only a complete chord under the concept of "system," but not the leading of one chord to another.

All the previous works written on harmony had favored more or less the old method—to designate each interval and each harmony for itself. But the more one does this, the more complicated the system must become. If rules have been given for a thousand combinations, so many other cases are omitted that were being successfully used in compositions. To the third and last group of systems belongs Kirnberger alone, who unfortunately stopped half-way — more than half of all the tones and tone-combinations that are useful in music are left unconsidered too arbitrarily and are not included in his system so that it remained incomplete. In completing Kirnberger, he, Kollmann, had succeeded, on the basis of his studies and teaching, in making a more comprehensive and complete system since 1796 "by which every note that is useful in music might have as positive a rule, as it denotes a positive sound," not, as with Kirnberger, just the principal and essential tones, but also as systematically all unessential and accidental tones. Kollmann, who generally achieves an objective tone, even when he speaks of his opponents, cannot resist observing the following: that just as America existed always before its discovery by Europeans, so did his system exist in the natural feelings of all previous good composers and authors, for all good tracts and compositions show that their authors felt what he (Kollmann) has demonstrated in his system, even if the authors could not have explained matters in the form of a complete theory; the stronger the natural feeling of these composers was, the less did their compositions take exception to the rules of his system. This fact is clearly evident from the compositions of Rameau, Tartini, Marpurg, and other famous composers whose theories differ from those presented in his present work.

The contents of his new system are summed up in his book, A Second Practical Guide to Thorough-Bass (1807), with the words: "all intervals and chords, which are in relation to others, shall not only be designated for themselves alone but also according to those qualities which they acquire from their relationship, and every note shall be given a positive rule as it has a positive sound."

29. Benjamin Stillingfleet (1702-1771), an English writer, occupied himself with botany, agriculture, poetry, and music. His last work, to which Kollmann refers here, appeared anonymously in 1771 and was an annotated analysis of Tartini's Trattato; Burney praised this work of Stillingfleet highly. Stillingfleet is as strong an opponent of Rameau as he is a follower of Tartini whose treatise, as he writes in his foreword, he wishes to explain in an easier form for music lovers.

In 1800, Matthew P. King³⁰ published "A General Treatise on Music, particularly on harmony or thoroughbass and its application in Composition," the second edition of which appeared in 1809. He begins his book with an empty polemic against Kollmann, who he assumes to have written primarily against himself and Shield³¹: "finally, since Mr. Kollmann has called for and provoked an opinion on his innovating system, I think myself fully justified, from the written testimonies of the highest authorities, as well as from the greatest Professors in this Country, to say, that it not only annihilates all the higher branches of Harmony, but, compared with the received principles, which he arrogantly attempts to overthrow and supplant, that the crude notions he would substitute in their place, are at once puerile, fallacious, and incomplete."³² King confesses unmistakably his high regard for Rameau and Marpurg. (The King-Kollmann controversy recalls the similarly conducted quarrel over similar matters between Marpurg and Kirnberger in Germany a few decades earlier.) The book contains some excellent practical compilations, as, for example, of all the usual ornamental signs in use up to that time and their performance, but it is a long way from being an independent theoretical work.

King takes over in its entirety the doctrine by which the whole harmonic system is built on two chords alone, the fundamental consonance and the fundamental dissonance; he calls them the chords of nature and, on the other hand, those which are derived from them, the chords of art. He understands the "new system" to be "another system, entirely different from either of the former, and wholly founded on the principles of vibration; or the natural succession of sounds," and that the chords of the ninth, eleventh, and thirteenth may be independently constructed by the stacking of thirds upward.

In the last part of his book, "on the Application of Harmony," King writes (at the beginning of Chapter I on "progression of the Fundamental Bass"): "the progression of the fundamental bass, is of so much consequence, that without a proper knowledge of its case, it is impossible to be either a correct harmonist, or a good composer."

30. M. P. King (1773-1823), a well-known and well-liked composer of his time, whose work, mentioned above, found great recognition.

31. William Shield (1748-1829), a composer much-loved by the English public, primarily on account of his serene operas and musical plays, published, like many of his contemporaries, a practical guide to harmony and an introduction to the principles of thoroughbass.

32. A sensitive ear might discern here a kind of injured national pride and animosity toward the stranger from foreign lands; it is well-known that, at this time, broad ranks of the English people, particularly in the countryside, were openly against the foreign ruling family and its associates.

William Crotch³³, perhaps the most popular personality in the English musical scene of his time and professor of music at Oxford for almost half a century, published his book, "Elements of Musical Composition: comprehending the Rules of Thorough Bass and the Theory of Tuning," in 1812. The unusually energetic musical activity and development in the English universities, in contrast with those on the continent, begins with the professorship of Crotch.³⁴ It is not an exaggeration to assert that the strongest impulse was given English musical life, and therefore naturally the development of music theory, by the universities.

The contents of Crotch's book, from the point of view of music theory, would not indicate, at least at the time of its appearance, a particularly high standard at Oxford University. (It is known that the significance of Oxford and Cambridge Universities was greater in the sixteenth than in the eighteenth century; the situation was improved again in the nineteenth century.) Only in the last chapter are questions of music theory considered. Until then, for the most part, rules and facts are listed without any foundation or derivation in any scientific sense. In this chapter, Crotch speaks, among other matters, of the derivation of scales, tuning, temperament, and the monochord. After a brief exposition of the scale derivations of Pythagoras, Ptolemy and Tartini, it is explained in great detail how it is possible to derive scales exactly only by means of a monochord.

It appears that, despite the presumptuous makeup of the book and the prominent position of its author, its content was designed primarily for musical beginners, as the author himself indicates at the beginning of the preface: "a knowledge of the Elements of Musical Composition and of Thorough Bass is happily become almost indispensable to a Musical Education."

Without doubt Kollmann's complete theoretical works are the most significant of this time in England, as much with regard to their

33. William Crotch (1775-1847) appeared as a musical prodigy already at four years of age; Burney reports on him in 1779. He became an organist, theorist, and composer, professor of music at Oxford at the age of 24, in 1822, director of the Royal Academy of Music in London. His book on composition appeared in a new edition in 1856; his oratorio, Palestine, as W. Barclay Squire writes in his article on Crotch in the Dictionary of National Biography (1888), "achieved a lasting success, and remains practically the one oratorio by an English composer which has survived for half a century."

34. In 1844 only the universities of Oxford and Cambridge had professorships for music; in 1944 around thirty English universities had music professorships, not counting the number of university colleges that had not yet been recognized as complete universities. With regard to this, see Percy A. Scholes, "The Mirror of Music, 1844-1944, A Century of Musical Life in Britain as reflected in the pages of the Musical Times," 1947, Vol. 2, Chapter XIX: "The Universities and Music," page 649 ff.

completeness and orderliness as with regard to their progressive outlook. However, since the author was a foreigner who was conscious of his reliance upon a master of his native land (Kirnberger), his work made no lasting impression on the future; his influence remained associated with his own person as an author and his immediate circle.

Of the remaining theorists of this time, who, unlike Kollman, are of English ancestry, Jones is undoubtedly the most serious. A churchman, and above all a scholar, rooted in traditions from the distant past and conservative in his musical theoretical attitudes, he found nothing of importance in the musical activities of the time in his homeland upon which he could fasten his attention.

The two mentioned works of King and Crotch remain in the area of guides for purely practical purposes put together out of tried and true materials; they are good and useful compendiums but nothing more.

These closing remarks may serve to explain the fact that the few modern works concerned with the history of theory — in England proper, Matthew Shirlaw's The Theory of Harmony (London, 1917; reprint: Dekalb, Illinois, 1955)—pass over this period in absolute silence in their discussion of English developments.