# The Study of Harmony: An Historical Perspective

Diether de la Motte / Jeffrey L. Prater

# The Study of Harmony
## An Historical Perspective

By

Diether de la Motte

Translated from the Original German

by

Jeffrey L. Prater

**Book Team**

Editor *Meredith M. Morgan*
Developmental Editor *Dean Robbins*
Production Coordinator *Peggy Selle*

**Wm. C. Brown Publishers**

President *G. Franklin Lewis*
Vice President, Publisher *Thomas E. Doran*
Vice President, Operations and Production *Beverly Kolz*
National Sales Manager *Virginia S. Moffat*
Group Sales Manager *John Finn*
Associate Executive Editor *Edgar J. Laube*
Senior Marketing Manager *Kathy Law Laube*
Marketing Manager *Kathleen Nietzke*
Managing Editor, Production *Colleen A. Yonda*
Manager of Visuals and Design *Faye M. Schilling*
Production Editorial Manager *Julie A. Kennedy*
Production Editorial Manager *Ann Fuerste*
Publishing Services Manager *Karen J. Slaght*

**WCB Group**

President and Chief Executive Officer *Mark C. Falb*
Chairman of the Board *Wm. C. Brown*

Cover photo by Jeanne M. Regan



Library of Congress Catalog Card Number: 91–70881

ISBN 0–697–11966–1



Printed in the United States of America by Wm. C. Brown Publishers, 2460 Kerper Boulevard, Dubuque, IA 52001

10 9 8 7 6 5 4 3 2 1

## About this Book

(translated and edited from the Fourth German Edition)

The ten chapters in this book cover the harmonic vocabulary of different eras from music history. The first two chapters deal with the materials of broad musical periods, whereas the later chapters, with the exception of a single chapter devoted to harmonic practices in opera, focus on the innovations of specific composers and their personal harmonic styles. The historical treatment of this topic avoids many of the anonymous and artless rules which are regularly associated with "strict" part-writing approaches to the study of harmony *(strenger Satz)*. *The Study of Harmony: An Historical Perspective* is offered as an alternative to the many texts which present "rules" of harmony without reference to actual music. All of the rules and principles found in this book were derived from an examination of numerous musical examples, and each example was chosen to be representative of the specific period or composer under study. Instead of a music theory text, this book is actually a study of musical practice, where harmonic materials and techniques are presented within their appropriate historical and musical contexts.

This text is primarily analysis-centered. Nevertheless, musical exercises are included to provide extra drill and practice for those who wish to thoroughly assimilate the materials and techniques presented in each chapter. It is not necessary to do the musical examples in order to benefit from this text, however. Many readers will find this book to be an excellent source for review of harmonic materials or a tool for building a better understanding of the roles harmony has played in Western music over the past four centuries.

This book is not limited only to compositions that employ functional harmony, although the approaches to such pieces take the largest share of this book. It also covers a number of important topics from the twentieth century, which many texts up to this point have neglected.

*The Study of Harmony: An Historical Perspective* by Diether de la Motte has been translated into Finnish, Japanese, Italian, Portugese, Polish, Swedish, and now English. The German edition is also available in braille.

## About the Author

Diether de la Motte was born in 1928 in Bonn. He studied composition with Wilhelm Maler at the Nordwestdeutsche Musikakademie in Detmold and attended summer courses at Darmstadt under Leibowitz, Krenek, Fortner and Messiaen. He was appointed lecturer at the Evangelische Landeskirchenmusikschule in Düsseldorf (1950). From 1955 he has also been active as a music critic. Between 1959 and 1962 he was a reader/reviewer for the publishing house of Schott. In 1962 de la Motte was appointed lecturer and then professor (1964) at the Hamburg Musikhochschule. He was then elected vice-president of the Free Academy of the Arts in Hamburg in 1972. In 1982 he was appointed Professor of Music at the Hochschule für Musik und Theater in Hannover, and in March of 1988 he took the post of Professor of Composition and Theory at the Hochschule für Musik in Vienna, Austria. He has written operas, orchestra works, chamber, choral, piano and organ works and has many published and recorded compositions. In addition to his *Study of Harmony*, he has published a text on counterpoint, written a number of important journal articles on music theory, and has published several analyses of major works.

## About the Translator

Jeffrey Prater is a member of the music faculty at Iowa State University, where he is Associate Professor of Music and Associate Chair of the Music Theory and Composition Division. Born in Endicott, New York, he received the Ph.D. in Music Composition from the University of Iowa, the Master of Music degree from Michigan State University, and his baccalaureate degree from Iowa State University. Among his teachers are William Bergsma, Richard Hervig, H. Owen Reed and Gary White. Before coming to Iowa State University, he held faculty positions at the University of Wisconsin Center-Marinette and Northern Michigan University.

Dr. Prater pursues a strong interest in musical analysis, analysis for the performing musician, and the history and pedagogy of music theory. He has regularly presented lectures and papers to professional meetings, and has written an acclaimed article on "The Great War's Effect on Schönberg's Development of the Twelve-Tone Method" *(College Music Symposium, 1986)*. He has also been active as a program annotator for the Des Moines Symphony and a reviewer of music textbooks and scholarly works. As a composer, Prater has written and published works in a variety of genres and has been the recipient of numerous grants, awards and commissions for composition.

During the 1988-89 academic year, Prater received a faculty improvement leave from Iowa State University. He spent his leave time in northern Germany, where he began the translation of this and another book on music.

## Author's Preface

Which pitch of a first-inversion triad should be doubled? If we seek an answer in ten different harmony texts, we are likely to find ten different answers, which lie somewhere between the extreme positions of Bumke ("the third should never be doubled"),[1] and Moser ("all three doubling possibilities are possible").[2] We face the same problem if our question is about hidden parallel perfect intervals. According to Bölsche, hidden parallels are incorrect if they occur between the lower voices or between the two upper voices.[3] Lemacher-Schroeder forbids them only, "if the upper voices leap, for example, when all the voices move in the same direction."[4] Dachs-Söhner prohibits only one special case of hidden parallels,[5] and Riemann holds that all hidden parallels are forbidden.[6]

In specific cases, any of these individual positions could be correct. The problem is, that the authors developed their rules and prohibitions from different musical examples. Furthermore, they made systematic generalizations based these examples without always sharing the examples with the reader.

The so-called "strict" part-writing style *(strenger Satz)* presented in many harmony books was never employed as the basis for actual musical compositions. Nevertheless, nearly all musicianship examinations require the student to write exercises in the "strict" style (where, for example, writing more than three parallel fifths is judged to be unsatisfactory). Even Hugo Distler [whose own compositions are full of contradictions to the "strict" style] taught his students by this method, nobly calling it "exercises for the study of harmony" *(Harmonielehresatz)*.[7] In one of his part-writing assignments, to name only a single example, Distler requires the student to include a dominant-ninth chord. Although this sonority was only first considered a discrete chord in the time of Schumann, the assignment is otherwise to be written in a strict pre-Bach chorale style. Nowhere in Distler's text is there any mention of the reasons for this stylistic mixture, however.

Such pedagogical exercises do not aid, but hinder a good music-history education (it is a wonder that music historians have not protested!). Furthermore, limiting the study of harmony to the "strict" style also tends to lock-out the study of music written before and after the periods dominated by tonal harmony. The "strict" style also ensnares composers, who shoulder the main responsibility of teaching composition, into a conformity with arbitrary rules that often effectively entombs their individuality. Instrumental exams take place on the stage, whereas harmony exams are held in the theory lab: "modulate from _____ to _____ as quickly and convincingly as possible," the junior faculty member [or teaching assistant] barks!

---

[1] Gustav Bumcke, *Harmonielehre* (Leipzig: C. Mersburger, 1927).

[2] Hans Joachim Moser, *Allgemeine Musiklehre* (Berlin: de Gruyter, 1940).

[3] Franz Bölsche, *Übungen und Aufgaben zum Studium der Harmonielehre,* 30th ed. (Leipzig: Breitkopf und Härtel, 1955).

[4] Heinrich Lemacher and Hanning Schroeder, *Formenlehre der Kunst Musik* (Cologne: Gerig, 1962).

[5] Michael Dachs and Paul Söhner, *Harmonielehre* (Munich: Kösel-Pustet, 1951).

[6] Hugo Riemann, *Handbuch der Harmonielehre,* 9th ed. (Leipzig: Breitkopf und Härtel, 1921).

[7] Hugo Distler, *Funktionelle Harmonielehre* (Kassel and Basel: Bärenreiter, 1941).

The past four-hundred years has been the most important time in history for the development and change of musical style. Furthermore, the study of these changes is so fascinating, that it is difficult to understand why the teaching of harmony has favored a "strict" approach. The employment of "strict-style" methods is particularly problematic, when we consider the major role that harmony has played as an agent of these stylistic changes. The "strict" style, though easy to present and correct, is not usually even modeled after the music of the greatest composers, such as Haßler, Praetorius and Osiander, but rather, on composers of somewhat lesser historical importance. It is an outrage that "strict" chorale-style exercises, which frequently contain chordal sonorities from the Romantic era, continue to be presented as the fundamental medium of harmonic training for future music teachers, conductors, instrumentalists and opera singers. The joylessness with which students face such exercises is often the silent comment on the pedagogical effectiveness of these methods.

Certainly, traditional manuals of harmony remain better sources than this book, if one wishes only to prepare for the usual [German] competency examinations. Nevertheless, it is my hope that this text will encourage music schools to offer pedagogical approaches (and examinations) that more closely follow the artistic practices found in actual music. Modulation and its various techniques during the course of history (with appropriate exercises), the differences in harmony between those in practice ca. 1600 and the time of Bach, the organ-mixture techniques of Debussy, the special problems dealing with harmony in opera, Liszt's pathway to atonality, the differences in harmonic progressions employed by Handel and Mozart, Wagner's four-tone sonorities, the form building role of the cadential progression in Mozart, Hindemith's sonority classification system, and Schönberg's methods of connecting harmonic sonorities, etc., would all make excellent topics for short lectures and demonstration at the piano. The materials and exercises found in this book could be also used to design examination questions for those pursuing professional study, and certainly, the analyses and approaches used in this book would benefit the professional musician, music educator, or music scholar.

From the very beginning, the great composers are the only master teachers in this book. I have not invented any of the rules or prohibitions; instead, I have derived each principle from actual musical practice and have checked the validity of each principle against numerous works. This text does not stir together, in the same pot, centuries of harmonic developments, but rather presents a new pedagogical method which discusses separate eras and individual composers in self-contained chapters. Each chapter corresponds to specific historical developments which yield corresponding changes in harmonic rules. There are no longer any fixed rules concerning first-inversion triads; it is treated differently in Chapter Three than it is in Chapter One. The major-minor seventh chord in late-Wagner does not [always] appear as a chord of harmonic tension, and it does not always carry dominant function like it did earlier. In Schönberg's music, the traditional consonances are the intervals that require special treatment, whereas, in earlier chapters, it was the dissonant tones that required special voice-leading considerations. Although this approach may seem somewhat confusing (and it certainly does not insure easier reading in every case), an historical approach to harmony brings the study closer to actual musical practice.

The compositional exercises in the first two chapters are isolated from one another. To my knowledge, Chapter One introduces a subject which has never been made available in a harmony

text—a study of homophony, ca. 1600.[8] No longer a strictly contrapuntal art, and not yet bound to tonality, this music has long remained without home between the domains of counterpoint and harmony. Nevertheless, this fascinating world of harmony has proved to be an effective starting point for this study. Bach's *well-tempered* music is shown to be a renunciation of pure [Pythagorean] sonorities. This development made possible the invention of harmonic progressions which do not depend upon a nature-bound ideology. In fact, the renunciation of this ideology provided the groundwork for great homophonic music.

The second chapter, which is the most extensive, comes the closest to other harmony texts. Nevertheless, it takes its direction from works written during the time of Bach and does not introduce harmonic vocabulary that was not in use during that period. The chapters dedicated to single composers such as Schumann, Wagner, Liszt, and Debussy contain models of various harmonic approaches which certainly have appeared in the works of other composers. Although not covered in this text, the harmony of Brahms, Bruckner, Mussorgsky, etc. could be handled in similar fashion. I wish to stress that sonorities and progressions, when presented in the context of musical-historical development, always become less anonymous and less instrumental for the construction of general rules. Instead, the study of harmony becomes more and more a study of individual inventiveness.

Up to this point, harmony texts have attempted to systematically bring together all types of sonorities, making it impossible to consider each sonority type in its proper context. The term *harmony textbook* has come to mean harmonization exercises, which further implies that the materials presented must be used properly. The widely-held doctrine that melodies are *invented*, but that harmonizations are simply *produced* may not have been consciously established, but neither has it been sufficiently challenged. It seems to me, that one of the most important tasks of a harmony course is to point out the vital relationship between individual creativity and the development of harmonic materials.

All of the assignments in this book are either excerpts from actual works or have been designed to match the style of the time period or composer in question. Therefore, the kind of examples and exercises change from chapter to chapter. Standard four-voice exercises are not avoided, but their use is limited to the study of those styles and composers where they can be beneficial. I am convinced that the large variety of assignment materials in this text will be more enjoyable for students. Going over the solutions to these assignments may actually be more useful and stimulating than the usual semester [or more] of writing traditional four-part harmonizations. Most important, the analyses in this text cover a wide range of subjects and materials that can be used as reference points for further study.

With three exceptions, the functional symbols used in this text correspond to those symbols in general use introduced by Wilhelm Maler.[9] Only the following symbols must be newly introduced: $D^{v}$ (instead of $D_7^9$ or $D^{v}$); $^{t}D^{v}$ (instead of $D_7^{9>}$ or $D^{v}$); and $D^{s7}$ (instead of $D_7^9$ or $VII^7$). These changes were made so that the forms of these sonorities employed during the Baroque and Classical eras no longer appear to be derivations of chords that were actually introduced in later periods. The revised symbols also show the precise functional content of their respective sonorities.

---

[8] [Transl. note] One reviewer points out that early homophony is indeed covered in: Eric Wolf, *Der vierstimmige homophone Satz. Die stilistischen Merkmale des Kantionalsatzes zwischen 1590 und 1630* (Wiesbaden: Breitkopf und Härtel, 1965); see Peter Rummenhöller, review of *Harmonielehre* by Diether de la Motte (Kassel: Bärenreiter, 1976), *Zeitschrift für Musiktheorie,* VIII/1 (1977), 48-52.

[9] Wilhelm Maler, *Beitrag zur durmolltonalen Harmonielehre,* 13th ed. (Munich: F.E.C. Leuckart, 1984).

My courage does not carry me past Debussy. Therefore, I am indebted to Dr. Wolfgang Rehm, not only for his patient and persistent encouragement and careful editing, but above all, for his insistence that this book continue into the twentieth century. Now that the work has been completed, I believe that he was correct. A chapter on the sonorities of our own century shows a continuing process of harmonic development which rounds out this study. Special thanks to Jürgen Sommer for his excellent editorial suggestions.

I published an article entitled "Pleading for a Reform of Harmony Pedagogy," with two of my former students, Renate Birnstein and Clemens Kühn.[10] This article precipitated a great deal of response. I had planned to complete this book under the watchful eyes of these two helpful co-workers and critics, but this would have conflicted with the beginning of their teaching careers in Lübeck and Berlin, respectively. So we remained together only until the section on secondary triads in minor keys [Chapter 2.11]. Nevertheless, this is grounds enough for me to offer Ms. Birnstein and Mr. Kühn the most sincere thanks for being my faithful collaborators up to that point. I would also like to thank those colleagues who are in agreement with my work and who have offered me many words of encouragement. They have all gone far beyond the teaching materials found in traditional systematic texts to provide their students with analysis-centered instruction in harmony. At last, my textbook is also ready to take this step.

This book presumes an acquaintance with *Allgemeinen Musiklehre* by Hermann Grabner.[11] As an accompanying discourse, I also wish to recommend *Melodielehre* by Lars Ulrich Abraham and Carl Dahlhaus.[12] Page 18 of the latter would make an excellent foreword and justification for this text.

As far as the musical examples are concerned, only those who would rather pay a higher price for this book shall be allowed to complain that the musical examples appear in my own hand.

Hamburg, Autumn 1975—Diether de la Motte.

---

[10] Diether de la Motte, Renate Birnstein, and Clemens Kühn, "Plädoyer für eine Reform der Harmonielehre," *Musica*, III (1973).

[11] Hermann Grabner, *Allgemeinen Musiklehre*, 11th ed. (Kassel: Bärenreiter, 1974).

[12] Lars Ulrich Abraham and Carl Dahlhaus, *Melodielehre* (Köln: Gerig, 1972).

## Author's Preface to the Fourth German Edition

Thanks to the following colleagues: Martin Tegen, who produced the Swedish translation, Robert D. Levin and Franz Zaunschirm who pointed out several errors, which the author had not noticed before the third edition went to press.

The reader will also notice that my hand-copied musical examples have been replaced by engraved examples from the Japanese edition.

A supplemental chapter on Chopin, which was dedicated to friends in Warsaw, Kraków and Poznan, will be reserved for the Polish edition, which is currently in preparation.

Sincerest thanks to Dr. Ruth Blume for the diligent and careful editing required to bring this edition into a new format.

Hannover-Herrenhausen, early 1983—Diether de la Motte.

## Translator's Foreword

During a professional visit to Germany in 1985, I had the opportunity to visit one of the author's classes at the *Hochschule für Musik* in Hannover. I was both impressed with his breadth of knowledge and the loving excitement with which he approached his lecture. As Professor de la Motte sat at the piano, he demonstrated and explained a surprising melodic-harmonic event in a Mozart concerto. In the course of the hour, he not only discussed the musical materials themselves, but also covered relevant historical and aesthetic factors and compared and contrasted the passage in question to the work of other composers from the Baroque, Classical and Romantic eras. I left his lecture exhilarated. Later that week, while browsing in a book store, I saw de la Motte's harmony text, which I bought and read with great interest. After returning to the United States, I accidentally came across several references to this book in the literature. My curiosity was piqued and I was able to locate no less than twelve reviews of this text in a half-day's search. It was only then that I realized this book was not only a best-selling harmony textbook, but that it had broken important ground in the area of harmony pedagogy in Europe.

In 1986, an article by Siegmund Levarie appeared in an American journal which advocated the use of functional analysis in lieu of the Roman-numeral/figured bass system.[1] In this article, Levarie explains the basic tenets of the functional system and its benefits to the music analyst. It was after reading Levarie, and then Martin Bresnick's insightful review in the *Journal of Music Theory* that this translation project began to gather momentum. In fact, it was Bresnick's final statement that decided the issue for me: "...Diether de la Motte's *Harmonielehre* is a significant book and deserves a careful critical reading by an Anglophone public, not only to provide a window into the state of current German pedagogy but to begin an exchange of views. That exchange can only raise our mutual awareness of the ways of understanding and teaching the practice of tonal harmony."[2]

This book is a textbook for entering music conservatory students in Europe; however, the students there are often older and better prepared in music theory and history than the average beginning college or university student in the United States. For that reason, this study of harmony is probably written at too advanced a level for the average American college freshman or sophomore, although an enterprising instructor might be able to successfully use this book (or parts of it) in a core-theory program. Instead of trying to aim this translation at the beginning music student, I have directed this translation toward the professional theorist/musicologist and the advanced music student. This translation is especially appropriate for those interested in understanding more about the history of theory and functional analysis; and because of its interesting historical approach, it would also make good reading for graduate-level music students who are preparing for preliminary or comprehensive examinations.

To make this book as useful as possible for readers trained in Roman-numeral analysis, and to aid an understanding of the functional harmonic basis of this text, I have added Roman-numeral/figured-bass symbols in brackets [ ] underneath the author's analytical symbols on nearly all of the musical examples. This double-annotation should make it easier for those unfamiliar with functional theory to better understand and correlate the comparative strengths

---

[1] Siegmund Levarie, "Harmonic Analysis," *College Music Symposium* XXVI (1986), pp.66-76.

[2] Martin Bresnick, review of *Harmonielehre* by Diether de la Motte (Kassel: Bärenreiter, 1976), *Journal of Music Theory,* XXII (1978), p.324

and weaknesses of the two systems. In the process of this annotation, it was necessary to re-engrave all of the musical examples in the book. Therefore, the artwork in this translation has been completely redrawn, and is not, as the author states in his Preface to the fourth German edition, borrowed from the Japanese translation. In addition, I have added numbers to the musical examples in each chapter so that the written text and the example to which it refers might be more easily cross-referenced.

The explanatory footnotes in this text are mine, although some of the notes contain citations of sources to which the author referred parenthetically within the German text. Since this book was not originally designed as a scholarly resource, the author did not always provide complete bibliographical citations for his outside sources, and only rarely did he include any reference to specific page numbers. Searching all of the author's sources for specific page references would have required an enormous additional outlay of time and resources. Although I run the risk of criticism for lack of scholarly pursuit on this point, I decided on compromise and have included complete bibliographic information, except for page number references in the footnotes.

The author did not completely reference all of the musical examples used in the book. Where sources were readily available to me, I added some additional information, such as the identifying first line of text in many of the Bach-chorale excerpts, or movement titles from Handel's *Messiah,* but in most instances, the scope of this project would not allow me to include complete measure-number references for every example. I took the liberty of changing the text in all examples from Handel's *Messiah* to read in English rather than German. All of the texts to the non-German examples cited in Chapter Six (harmony in opera) were also converted to their original languages and supplied with English translations.

The functional system and its symbols are introduced gradually throughout the book so that a lengthy explanation will not be necessary here. For additional information on the subject, I refer the reader once more to Levarie's excellent article.

There is one feature of the functional system that I find particularly helpful. It is possible, with functional analysis to directly indicate the chord factor that occurs in the bass. With the Roman-numeral $I^6$, one must know that a tonic chord with a sixth above the bass indicates that the third of the chord is in the lowest voice. With the functional symbol $T_3$, however, it is immediately obvious that the third of the chord is in the bass. Furthermore, with Roman-numeral analysis, it is not possible to directly show non-harmonic tones when they occur in the bass voice, but with the functional system it is only a matter of writing the appropriate chord factor numbers at the lower right of the symbol (e.g., $D_{43}$ = dominant with a dissonant fourth above the chord root in the bass voice resolving to a third above the root). Coming from a background in Roman-numeral analysis, two of the symbols that have taken the longest for me to assimilate are the chords-of-the-sixth and six-five sonorities. Following Rameau's principles, the functional system allows triads to be constructed either from a third and fifth above the bass (standard triad) or a third and sixth above the bass (chord-of-the-sixth). When a triad is built from a third and sixth above the bass, the functional system still considers the root of the sonority to be the bass note (and not the pitch a sixth above). In other words, the functional system recognizes two types of root-position triads. In order to interpret $S^6$ (subdominant chord-of-the-sixth) in the Roman-numeral system, however, it is necessary to assume a change of root tone. Thus, $S^6$ will be interpreted as $ii^6$. In the same fashion, a six-five sonority such as $S^6_5$ will be interpreted as $ii^6_5$.

Many of the technical terms found in this book are cognates in both languages. However, the musical term *parallel* has a fundamentally different meaning in German than it does in

English. In English, the term *parallel* is used to describe major/minor key-pairs which share the same tonic pitch (e.g., A-major/A-minor). In German, however, the term *parallel* is used to refer to major/minor key relationships that share the same key signature (e.g., C-major/A-minor). Therefore, the German term *parallel* and the English term *relative* are roughly equivalent. In order to ease any confusion on this point, I have translated the German *parallel* as *relative*. As suggested by Levarie, those functional symbols which refer to *parallel* (P or p) have also been changed to *relative* (R and r).

The six-four sonority, G-C-E in C-major, will only be considered a "tonic six-four" ($I^{6}_{4}$) if it shows clear tonic function within its musical context. Since the sixth and fourth above the dominant pitch often function as a double-suspension which then resolve to the dominant triad, this figure will be labeled (in Roman-numeral symbols) $V^{6}_{4}{}^{5}_{3}$ instead of $I^{6}_{4}$-V.

De la Motte makes no reference to theorists like Heinrich Schenker, who stand apart from the Riemann tradition, and who call for analytical reduction of entire compositions into "hierarchical" middle-ground and background levels. In his review, Bresnick levels the following criticism: "The problem... is essentially the same one found in Piston namely the setting of nearly all harmonic activity at a single fore-ground level. The central deficiency . . . is the over-determination of most fore-ground (chord to chord) activity and a corresponding inattention to the hierarchical relationships of the harmonies that direct the foreground."[3]

Why most German theorists have not warmly embraced other theoretical systems is a more complex question than this short foreword will allow.[4] Suffice it to say that theoretical models outside of the Riemann tradition have not produced many charismatic proponents in Germany. As my Austrian colleague, Franz Zaunschirm wrote me, "The history of German music theory is a history of functional theory (from Riemann . . . to Grabner. . . to de la Motte, etc.)."

Although de la Motte does defer to the Riemann tradition for his analytical procedures and many of his symbols, this book should not be judged as yet another traditional German *Harmonielehre*. In his Preface, de la Motte rails against the theory-minus-music approach which so many German manuals of harmony take; he deplores the customary teaching of partwriting by arbitrary and capricious rules that have little to do with harmonic procedures in actual music; and he encourages the reader to keep in mind the differences of approach among various composers, genres, and time periods. In promotional material for this harmony text, Carl Dahlhaus wrote: "*Harmonielehre* by Diether de la Motte fulfills the need, urgently promoted for years, for a harmony text that incorporates historically accurate models of style in place of abstract schemes. . ."[5] De la Motte's *Harmonielehre* attempts to put the study of harmony on a firm historical and analytical footing, with the hope of making the study of harmony more relevant to the music student, professional musician, or interested amateur.

---

[3] Martin Bresnick, review, p. 321-22.

[4] For more about Schenker and how his theories have been received in Germany, see Stephen Hinton, "Natürliche Übergänge," Musiktheorie V/2 (1990), pp.101-4.

[5] Carl Dahlhaus, promotional statement in an advertisement for Bärenreiter-Verlag, *Zeitschrift für Musik,* VI (1976), p.514.

Certainly no project the size of this translation could have been undertaken without support. I am grateful to my wife, Jane and my two daughters, Allyson and Brittany, who have provided me with encouragement and love, and who have sacrificed much of their usual time with me over the past several years. I am also grateful to Iowa State University, which granted me a faculty improvement leave during the 1988-89 academic year, in part, so that I could work on the first draft of this translation. Thanks to Meredith Morgan and her associates at W.C.Brown, who saw early merit in this project, and who provided the right mix of both encouragement and pressure to see this project through to completion. My sincerest thanks to Professor de la Motte, who supported this project in many ways, including a proofreading of the draft manuscript. I am especially indebted to my colleague, Gary White, who regularly discussed this translation project with me in its formative stages, and who has unselfishly shared his expertise of both music theory and computer technology with me. Special thanks to Sara Compton, who proofread hundreds of musical examples, and to reference librarian, Susan Knippel at the Parks Library on the campus of Iowa State University. The layout and proofreading of final copy could not have been accomplished without the tireless efforts of Eric Petersen, Greg White and Stephani Scherbart. Finally, thanks to Rob Hauser, Doug Fish and Collen Willcox who helped with the preparation of musical examples.

It is my hope that this translation will provide some fresh insights for the English-language reader into the fascinating technical and historical changes that have taken place in harmony since 1600. Further, it is my hope that the reader will also come to a better understanding of the strengths and weaknesses of functional harmony and the methods used to teach it.

Ames, Iowa, January 1991--Jeffrey Prater

## TABLE OF CONTENTS

# CHAPTER ONE

## Harmony ca. 1600 (Lasso-Palestrina-Lechner-Cavalieri)

The principle of equal temperament, in which the octave is divided into twelve equal half-steps, was first established in the time of Bach.[1] Since that time, the more or less universal adoption of equal temperament has done away with all purely-tuned intervals except the octave. In spite of fewer pure intervals, however, there are no longer any unusably out-of-tune intervals. Although the adoption of equal temperament meant renouncing absolute interval purity (the object of all earlier tuning systems), all equal-tempered triads have relatively acceptable intonation. Furthermore, equal temperament allows us to construct and play musical scales of reasonable intonation on any chromatic pitch.

If twelve purely-tuned perfect fifths are constructed upward in a series from the pitch C1, the pitch B♯7 is reached.[2] Because of the *comma of Pythagorus*, B♯7 is actually higher in pitch than C8 (derived by pure-octave transpositions above C1). This fact makes it impossible to construct a closed circle of purely-tuned perfect fifths. Furthermore, if a series of four purely-tuned perfect fifths is constructed upward from the pitch C1, the pitch E3 is reached. Because of the *syntonic comma*, E3, reached by this series of purely-tuned perfect fifths, is higher in pitch than the E3 that is reached by a two-octave upward transposition of E1 (a purely-tuned major third above the starting pitch C1). From these acoustical facts, it can be observed that purely-tuned perfect fifths and purely-tuned major thirds are mutually exclusive; that is, it is impossible to have both purely-tuned perfect fifths and purely-tuned major thirds at the same time.

After relinquishing the necessity to maintain pure perfect fifths, an important aspect of music theory in the Middle Ages (Pythagorean tuning), new systems of tuning came into vogue between the sixteenth and the eighteenth centuries. These systems, called mean-tone temperaments, are actually acoustical compromises between purely-tuned perfect fifths and purely-tuned major thirds. They provide excellent (almost purely-tuned) intonation for those triads which are closely related to a starting reference chord [usually C major]. However, those triads which are distantly related to the reference chord are noticeably out-of-tune. In spite of various methods used to calculate the compromise between pure thirds and fifths, those triads most distant from the reference chord are so out-of-tune that they are unusable for all practical purposes.

---

[1] There has been much controversy over the question of whether J.S. Bach actually employed equal temperament, with the strongest arguments presented on the side that he did not himself employ a truly equal-tempered scale, even in the *Well-Tempered Clavier*. Equal temperament began its rise to prominence only toward the end of Bach's life.

[2] The system of octave classification employed in this translation is the one suggested by the International Acoustical Society, where C at approximately 16 Hz. is represented by the symbol CØ and where middle-C is represented by C4.