

*A History of
Harmonic
Theory
in the United States*

by David M. Thompson

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HARMONIC THEORY

in the United States

DAVID M. THOMPSON

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Preface

This work traces the lines of development of the most important concepts in the theory of harmony in the writings of American theorists. Beginning with American editions of nineteenth-century European works on harmony, it follows the development of harmonic thought through the work of Percy Goetschius and his contemporaries and students to the writings of Walter Piston, Allen McHose, and Allen Forte.

It should be emphasized that this work is not intended as a history of theorists, but of ideas. Biographical information is sometimes included, but is kept at a minimum so that attention may be devoted to the development of theoretical concepts. Also, theories of twentieth-century harmony have been excluded, as have theories of jazz harmony. The development of these theories is presently at too early a stage to justify regarding them as history.

There has been an interest in the history of music theory ever since the appearance of Hugo Riemann's *Geschichte der Musik-theorie im IX.-XIX. Jahrhundert* in 1898. The interest in the subject is evident at the present time in the United States, as various schools and university departments of music offer courses in the history of theory. Interest in the subject is certainly laudable, for students who are preparing to become teachers of theory ought to know something of the history of their profession. However, Riemann's *Geschichte* does not relate theoretical developments later than the middle of the nineteenth century. The other vehicle, Matthew Shirlaw's *Theory of Harmony*,

stops at 1901 with the Victorian English theorists. Thus there is a gap between the periods covered by these works and the material which the modern American theory teacher finds himself teaching in class. I hope that the present work will help to fill that gap.

It would be impossible for anyone to undertake a project such as this one without the assistance of a number of people. I wish to express my gratitude to my wife, Patricia, for her valuable assistance with this project, especially for undertaking the typing of the original manuscript. Also, I am grateful to Dr. James Waters, Dr. Walter Watson, Mr. Hugh Glauser, and Dr. Terry Kuhn, my colleagues at the Kent State University School of Music, for their encouragement and for their numerous helpful comments and suggestions.

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1

Antecedents

European Theories of Harmony in the United States in the Nineteenth Century

In 1846 a German book on music, translated into English, appeared in print in the United States. The translator's Preface began thus:

The origin of the enterprise which the translator has undertaken, in rendering into English the present work, is traceable to a fact in his own experience. When, some years since, he commenced a more methodical and thorough course of musical studies, he at once found himself without the requisite helps. Notwithstanding he possessed himself of such books as could be found in this country, there still remained a most obvious and important deficiency. These books were all perceived to be defective in two particulars; first, in *the absolute want of matter*, and secondly, in *the manner of communication*. A great many things which were continually sought for, and which it is seriously important to every musical student to know, were not to be met with in any of them. Thus a deficiency was seen to exist, which must leave the mind in ignorance, conjecture, and doubt, on many points most vitally concerned with musical knowledge and musical practice. Indeed, this defectiveness extends even to matters involved in common, every-day musical performance; and so great is the chasm which it leaves in all the instructions relating to Harmony and Composition, that the latter can scarcely be said to be taught at all.¹

The translator was the American writer James F. Warner, of Boston. The work under translation was Gottfried Weber's

treatise *Versuch einer geordneten Theorie der Tonsetzkunst* (*Theory of Musical Composition*).

Warner was justified in his complaint about the lack of works on music theory available in the United States, for in 1846 music was considered by most Americans to be either a church activity or a recreational pastime and was rarely regarded as a fit subject for serious study. Only four years had passed since Lowell Mason had managed to persuade the Boston School Committee to become the first American school system to admit music to its curriculum. The openings of music academies and conservatories of music in Boston and New York were at least a decade in the future. Moreover, the pedagogical books on music available in the United States dealt with practical considerations rather than theoretical ones. Typical were the singing-school books with their shaped-note systems, which had been in print since 1803. It is no wonder, then, that Warner turned to the German writers for information on harmonic theory.

Warner recognized that most of the German treatises on harmony were too speculative for American tastes. The American reader, who was most likely unacquainted with even the rudiments of harmony, would certainly become impatient with extensive demonstrations of the harmonic series or lists of rules for discovering chords amid huge stacks of thirds. Warner selected the *Theorie der Tonsetzkunst* because he felt that Weber's unique practical approach to harmonic theory, which had made his treatise popular in Europe, would be ideally suited to American readers. "Weber's work is pre-eminently adapted to *this country*. Its admirably clear and simple style, taken in connection with the copious detail of its matter, renders it, as the author himself very justly observes, peculiarly appropriate to those who have but little or no present acquaintance with the subject. It is truly just the book that we need."²

Following the appearance of Weber's treatise on harmony, translations of several other German works were published in the United States. In 1851 the *Theory and Practice of Musical Composition*, a translation by Hermann S. Saroni of Adolph Bernhard Marx's *Kompositionslehre*, was published in New York by F. J. Huntington, and Mason and Law. The appealing features of the work, according to a review in *Dwight's Journal of Music*, were "the unity, the naturalness, the clearness, the completeness, and the charm" with which Marx presented his subject. The reviewer

went on to pronounce Marx's approach superior to Weber's: "Marx is a believer in musical Science, in the possibility of referring all the elements of the art back to a unitary central principle, and not a mere empiric like Godfrey Weber."³ It would seem, then, that at least a few American musicians were interested in a more "scientific" treatment of music theory than Weber's pragmatic approach gave them.

With the appearance in the 1860s of the first American music conservatories, a demand arose for a harmony textbook that had neither the great length of Weber's treatise (Warner's translation required two volumes totaling 826 pages) nor the speculative aspect of Marx's work. This need was answered by the publication of the *Manual of Harmony* (New York: G. Schirmer, 1867), a translation of the *Lehrbuch der Harmonie* of Ernst Freidrich Richter, professor at the Leipzig Conservatory. Richter was a follower of Gottfried Weber, and like Weber he believed in a practical approach to harmony. It was probably this element, as well as the brevity of the book, that made it popular in the newly formed conservatories and music departments of American colleges. Richter's *Manual* was used at the Conservatory of Music at Oberlin College. John Knowles Paine used it in his harmony class at Harvard University.⁴ Its popularity even extended into the twentieth century; its last American printing, by G. Schirmer, was in 1912.

Richter's influence in America extended beyond his *Lehrbuch der Harmonie*. Several important musicians in America had actually studied harmony with Richter in Leipzig. John P. Morgan, who made the first American translation of the *Lehrbuch*, was a former Richter student, as were Theodore Baker, of the staff of G. Schirmer, and Stephen Emery and James C. D. Parker, both professors at the New England Conservatory.

Moreover, a few Americans were writing theory texts themselves. James C. D. Parker's *Manual of Harmony and Thorough Bass* (Boston: Nathan Richardson, 1855) was among the first of these. It was a short work (190 pages) and largely echoed Richter. However, it contained a few deviations from Richter's theory, and the review of the work in *Dwight's Journal* took exception to one of them:

he adopts the usual confused and unscientific definition of the Minor Scale, a definition derived from the Signature rather than the thing

signified. "As this Minor Scale contains the same tones with the major scale, it must have the same signature." But the minor scale does *not* contain the same tones as its relative major. The scale of A minor has not the same tones with that of C major; it differs in that its G must be sharp. This the harmony requires; and the only true scale is that furnished by the harmony, i.e., the chords of the tonic, dominant, and subdominant.⁵

The reviewer's firm belief in the tonic, dominant, and subdominant triads as the origin of the scale, a basic concept in the Weber-Richter theory, is an interesting indication of the inroads that this theory had already made in the United States.

It was only in the last quarter of the nineteenth century that American musicians became interested in the speculative theory of harmony. This was supplied to them, not by German writers, but by the theorists of Victorian England. The first British work on harmony to appear in the United States was Sir John Stainer's *Harmony, with an Appendix Containing One Hundred Graduated Exercises*, which was issued by Novello, Ewer and Company in New York in 1877. It was only a short textbook, however, and contained very little of Stainer's unique theory of harmony.⁶ Later British works on harmony to appear in the United States were actually treatises on the speculative theory that had developed in England, such as Ebenezer Prout's *Harmony, its Theory and Practice*, which was issued by G. Schirmer in New York in 1889 (the same year it was first published in London), and George A. Macfarren's *Six Lectures on Harmony*, issued from New York in 1892. The influence of the British theorists, however, would be felt as much through the harmonic theory of Percy Goetschius as through the appearance of their own works in America.

The German Theorists: Gottfried Weber, Ernst Friedrich Richter, Immanuel Faisst

By the time Gottfried Weber's *Versuch einer geordneten Theorie der Tonsetzkunst* appeared in the United States in 1842, it had already achieved popularity in Europe. The reason for its wide acceptance among European musicians was its practical, uncomplicated approach to theory, the same feature that made it appropriate for American publication.

Weber's *Theorie der Tonsetzkunst*, written in 1817–21, was welcomed as a relief from the other writings on harmony and composition that were circulating in Europe at the beginning of the nineteenth century. There were essentially three schools of harmonic theory in the early 1800s. The oldest of these was the figured-bass system, a survival from Baroque practice. Its long lists of rules were based entirely on the intervals of notes above the bass. Another group of theorists, seeking to classify chords, took as a basis Rameau's concept of "chords by supposition" and developed huge "fundamental" harmonies by stacking thirds atop one another. A third group of theorists took the acoustical theory of Zarlino and Rameau as a starting point and tried to manipulate the harmonic series and derive from it the major and minor scales as well as the most common chords in musical use at the time. As these three schools developed alongside each other, criticizing each other and borrowing ideas from each other, they presented the European musician with an increasingly complicated and bewildering picture of harmonic theory. It was just this confusion that Weber sought to eliminate in his *Theorie der Tonsetzkunst*.

Weber's idea of the purpose of harmonic theory is shown in his criticism of the figured-bass approach to harmony. His objection to the litanies of rules, typical of the figured-bass treatises of the time, is that despite their copiousness these rules do not describe the qualities of the chords but are merely sets of directions. In one of his "Remarks" he asks,

How much rationality is exhibited in the fact, that all our books of instruction on musical composition hitherto have, from beginning to end, devoted themselves to the business of showing how a tone which stands at a distance of such and such a number of degrees from the bass tone, as e.g. the third or fourth of the bass tone, etc. may be treated, prepared, resolved—regarded as a so-called consonance or dissonance—and how it is to be doubled or not doubled, and the like, and the fact that all our theoretical writers hitherto have made the entire doctrine of musical composition depend solely and exclusively upon consideration of the distance of this or that tone from the bass tone, and instead of attending to the essential and fundamental *properties* of the different harmonic combinations and of each of their elements, they give us rather a troublesome set of mere casuistic prescriptions upon the treatment of the intervals of the bass tone.⁷

Weber's objection is certainly a valid one. Figured-bass symbols, taken alone, might indicate a few qualities of a chord, such as the relative stability of a $\frac{5}{3}$ chord in comparison with a $\frac{6}{3}$ chord, or the presence of dissonance in a seventh-chord. Nonetheless, the information provided by these symbols is inadequate as a foundation for a theory of harmony. The figured-bass system does not explicitly state the relationship between the inversions of a chord—for instance, that the $\frac{5}{3}$ chord on the first degree of the scale contains the same members as the $\frac{6}{3}$ chord on the third scale degree. Moreover, the same figured-bass symbol may represent chords requiring different treatment, depending on the scale degree of the bass tone. A seventh-chord on the tonic is treated differently than a dominant seventh-chord. The cause of these inadequacies is quite simply the early origin of the figured-bass system. Its rules had been developed long before the time of Rameau, who was the first to describe such phenomena as harmonic inversion and the unique qualities of the dominant seventh-chord. The figured-bass system had never been revised to include these concepts.

Weber argues that the rules of the figured-bass theories result from inadequate observation of musical practice. He accuses the figured-bass theorists of observing only a few examples in musical practice and then using these to formulate rules which they attempt to apply universally.⁸ Weber apparently does not realize that the underlying fault of the figured-bass system is that it is out of date not only theoretically but also musically. Figured-bass had been obsolete as an element of keyboard practice even before Mozart and Beethoven had begun to add new harmonic combinations to the musical vocabulary. Thus, the figured-bass theorists' observation of musical practice is understandably limited to the harmonic usage found in earlier Baroque music.⁹

Weber criticizes the theory of stacked thirds on the ground that it is needlessly complicated. The idea of constructing a number of "fundamental" ninth-, eleventh-, and thirteenth-chords by stacking thirds atop one another apparently originated with Georg Andreas Sorge¹⁰ and was developed in the works of Abt Vogler and more especially in the works of his student Justin Heinrich Knecht. With the appearance of Knecht's *Elementarwerk der Harmonie* in 1792, the system reached a disgraceful degree of

complication. Weber, in one of his caustic "Remarks," derides Knecht's theory of 3,600 different chords, among which 720 are "fundamental" chords with such elegant names as "the great-small-great agreeable thirteenth-eleventh-ninth-seventh-chords," or "the small-diminished-small sad-sounding thirteenth-eleventh-ninth-seventh-chords." Weber remarks that "the whole catalogue would fill more than fifteen pages quarto."¹¹

Weber's opinion is that neither nature nor musical practice determines any single "correct" system of classification of chords. Chord classifications are arbitrary delineations made by theorists: "Men dispute and contend and quarrel on the question, how many fundamental harmonies there are—a contention which, as it occurs to me, is about as illimitable as that on the question, how many *genera* of plants there are in nature, when nature herself certainly knows nothing of all the *genera* which have been invented by human ingenuity."¹² The theorist's duty, then, is not to search for some correct set of basic chord formations, but rather to invent the most convenient system possible, that is, "to bring the greatest possible number of species agreeing with one another in the largest number of characteristics under the smallest possible number of principal classes."¹³ As will be seen, Weber's own system of classification recognizes only seven basic chord types, a markedly more convenient arrangement than Knecht's 720 "fundamental" chords.

The main thrust of Weber's objections to the acoustical theories of harmony is aimed at the question of the appropriateness of their appearance in treatises dealing with harmonic practice. Weber recognizes that there are natural laws that govern musical sound (or any sound, for that matter). He even acknowledges the study of musical acoustics as an established branch of theory.¹⁴ However, he is opposed to the custom of using it as the basis for a practical study of harmony:

Most teachers of musical composition imagine that the theory of musical composition must necessarily be founded on harmonic acoustics, and on this account, commence their books of instruction with arithmetical and algebraic problems and formulas . . . it is, in my honest conviction, a mistake of teachers of musical composition,

betraying a decided want of understanding of the subject, to mix, as they do, with the doctrine of musical composition, such demonstrations by fractions, powers, roots, and equations, and other mathematical formulas, from which *to proceed* in teaching the theory of musical composition.¹⁵

Weber does take the opportunity to spar with the current acoustical theories. He contends that the inaudibility of the harmonics of a tone prevents these harmonics from affecting music at all. If even the first five harmonics were audible, he says, then upon the sounding of the chord at *a* in Figure 1, the several harmonic series shown at *b* would be produced, and the audible result would be the hideous combination shown at *c*.



Figure 1. Weber, p. 16

Weber thus declares that "the associated sounding of the accessory tones of a string is so far from belonging to the essential nature or to the beauty of a musical sound, that the positive injuriousness of such an imperfection is prevented only by the inaudibleness of these associated tones."¹⁶

Weber points out the folly of attempting to derive the major scale from the harmonic series. He correctly observes that if the C major scale were to be formed from the natural harmonics of C, then not only E and G would be produced but also a B-flat, which is foreign to the key and too flat anyway. Such a scale would also contain an F that is a quarter-tone too sharp and an A that is too high.¹⁷

Weber discusses the acoustical explanation of the minor triad which was proposed by Rameau and Tartini. According to this explanation, the fifth of the minor triad is not only the third (and sixth) harmonic of the root but also the fifth harmonic of the minor third. In the minor triad shown in Figure 2, G is a harmonic both of C and of E-flat. The minor harmony is then the opposite of the major; whereas the major triad is made up of a fundamental and two of its harmonics, the minor triad consists of a harmonic and two of its possible fundamentals. Although Weber presents this theory in a scornful tone, he offers no specific objections to it.¹⁸ Rather, he appends it to Rameau's derivation of the major and minor scales from the notes of the tonic, subdominant, and dominant triads¹⁹; and then criticizes Rameau for presenting a theory which is based partly on acoustics and partly on arbitrary explanation.²⁰ Weber actually uses the word "arbitrary" to describe this explanation of the origin of the scale; apparently he does not object to arbitrariness, since in another chapter he uses exactly the same explanation of the scale as did Rameau.

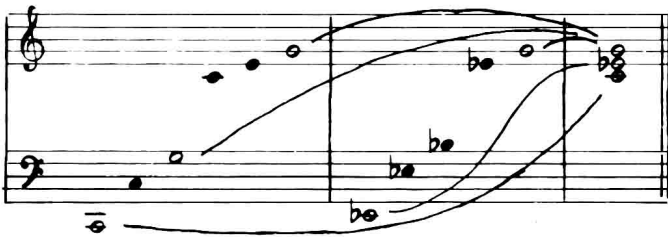


Figure 2. Derivation of the minor triad

In contrast to his predecessors, Weber does not base his harmonic theory on acoustics or long list of rules, and he uses only the leanest possible system of classification of chords. Rather than using the harmonic series as a source from which to