

ELEMENTS OF HARMONY

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Elements of Harmony by Stephen A. Emery

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STEPHEN A. EMERY

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By

STEPHEN A. EMERY.

BOSTON :

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146 TREMONT STREET.

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PREFACE.

After repeated solicitations from professional friends and former pupils I have reluctantly consented to prepare this elementary book on Harmony. My hesitancy arises from the fact that two of my former instructors in Leipzig, Dr. Moritz Hauptmann and Prof. Ernst Friedrich Richter, have issued text-books rendering their profound learning accessible to students in this department. Yet most educators have learned to adopt as their constant guide the one word *Simplify*; and in a long experience with pupils I have found it necessary for most students in their first year's course to omit exceptional cases and other collateral instruction until later, confining themselves exclusively to the rules, illustrations and exercises of each lesson. The results have been such as to warrant the belief that a book simpler than any yet published would be relatively more useful to the student. *Greater simplicity*, therefore, is perhaps all that can be claimed for this series of lessons, which are based upon the admirable system of Prof. Richter, now so generally approved throughout the musical world.

This book is not an experiment; but its rules as here printed, with but slight changes of phraseology, have been successfully used for years by those studying with me. Explanations and other remarks that might at first appear superfluous, had their origin in the repeated corrections of pupils' exercises. In view of this I can but hope that this book may open a little wider than before, the gate to that path which all must travel before entering upon the limitless field of musical composition, or even before truly understanding the compositions of others.

STEPHEN A. EMERY.

BOSTON, July, 1879.

TO TEACHERS.

Your cooperation is earnestly requested in the following particulars:

1. Students, whether reciting singly or in classes, are to repeat accurately from memory, either in substance or literally, every rule, and be able to write an illustration of each.

2. Roman numerals, with their proper distinctions in size and signs, must invariably be written under the chords, unless otherwise directed in the book.

3. The lessons must not on any account be changed by the student after the teacher's corrections — the marks of errors will be found the most useful part of the lesson for future reference.

4. Students must be able to state at each lesson that they have carefully played over the previous lesson, at least three times, as corrected by the teacher.

5. Students must have as regular an hour at which to begin their daily study of Harmony as they have for vocal or instrumental music. The too common habit of placing Harmony last, as though it were a study to be attended to only when body and brain are already weary with other work, is a plain and sufficient reason why some find it dry and difficult. Let the fact be understood that every hour devoted to the intelligent study of Harmony is itself an indispensable part of one's study in every other department of music, enabling one to sing or play recognizably better than could otherwise be possible.

6. One should trace the application of each rule and principle that may occur in other musical studies, special attention being given to naming difficult chords and analyzing intricate modulations — in short, making the whole study of Harmony *practical* to the last degree.

Open harmony, requiring more skill in its management, is delayed till elementary principles shall have become familiar. So long as a figured Bass is used, clearness of notation suggests that the Tenor be written on the upper staff. Where the exercises under each rule are insufficient to make it plain through frequency of application, the instructor should add others. The somewhat unmusical character of some exercises is necessitated by their being limited to the illustration of the principle under which they appear.

ELEMENTS OF HARMONY.

LESSON 1.

INTERVALS.

Degrees refer to lines and spaces — visible distances.

Steps and half steps refer to tones and semi-tones — audible distances.

An interval, in harmony, is the difference in pitch between two notes, or tones.*

An interval takes its *general* name (prime, second, third, &c.) from the number of *degrees* it occupies; and its *specific* name (perfect, imperfect, major, &c.) from the number of *steps* it contains.

Two notes standing on the same degree, whether sounding alike or not, are called a *prime*.

Two notes standing on contiguous degrees are called a *second*.

Two notes occupying three degrees (counting the intervening degree) are called a *third*.

Intervals are reckoned in this way to ninths, inclusive; but those still larger are named as though their notes were distant from each other less than one octave, as: a tenth is called a third; an eleventh, a fourth; &c.

An enharmonic interval is different notations of the same pitch (on a keyed instrument) as: C \sharp to D \flat , etc.

The following should be committed to memory:

- { A perfect prime occupies 1 degree and contains no step — unison.
- { An augmented prime occupies 1 degree and contains $\frac{1}{2}$ step.
- { A major 2nd occupies 2 degrees and contains 1 step.
- { A minor 2nd occupies 2 degrees and contains $\frac{1}{2}$ step.
- { An augmented 2nd occupies 2 degrees and contains $1\frac{1}{2}$ steps.

* By common consent, of two notes mentioned but *not written*, the first named is usually understood to be the lower, as: C to G means C up to G; G to C, G up to C.

- { A major 3rd occupies 3 degrees and contains 2 steps.
- { A minor 3rd occupies 3 degrees and contains $1\frac{1}{2}$ steps.
- { A diminished 3rd occupies 3 degrees and contains 1 step.
- { A perfect 4th occupies 4 degrees and contains $2\frac{1}{2}$ steps.
- { A diminished or imperfect 4th occupies 4 deg. and contains 2 steps.
- { An augmented 4th occupies 4 degrees and contains 3 steps.
- { A perfect 5th occupies 5 degrees and contains $3\frac{1}{2}$ steps.
- { A diminished or imperfect 5th occupies 5 deg. and contains 3 steps.
- { An augmented 5th occupies 5 degrees and contains 4 steps.
- { A major 6th occupies 6 degrees and contains $4\frac{1}{2}$ steps.
- { A minor 6th occupies 6 degrees and contains 4 steps.
- { An augmented 6th occupies 6 degrees and contains 5 steps.
- { A major 7th occupies 7 degrees and contains $5\frac{1}{2}$ steps.
- { A minor 7th occupies 7 degrees and contains 5 steps.
- { A diminished 7th occupies 7 degrees and contains $4\frac{1}{2}$ steps.
- { A perfect 8th occupies 8 degrees and contains 6 steps.
- { A diminished or imperfect 8th occupies 8 deg. and contains $5\frac{1}{2}$ steps.
- { An augmented 8th occupies 8 degrees and contains $6\frac{1}{2}$ steps.
- { A major 9th occupies 9 degrees and contains 7 steps.
- { A minor 9th occupies 9 degrees and contains $6\frac{1}{2}$ steps.
- { An augmented 9th, as an *harmonic interval*, has no existence.

The above table shows that intervals may contain the same number of *steps* (not *degrees*) and yet bear different names, as: an aug. prime and a min. 2nd, each, contains $\frac{1}{2}$ step. Neither can be properly substituted for the other; and in writing intervals the student must preserve the same number both of degrees and steps as shown in the table. One should now write each of the foregoing intervals from each note of the scale of C (C, D, E, F, G, A, B) and likewise from each of these notes when sharped or flatted, though never in such a way as to require the use of three sharps or flats before the second note, which should here be higher than the first.

A *chromatic* semi-tone has both its notes written on the same degree (an augmented prime — f to f \sharp): a *diatonic* semi-tone occupies contiguous degrees (a minor second — f to g \flat).

The intervals are otherwise divided into consonances and dissonances and the former are also subdivided as follows:

Perfect Consonances.	{	Perfect Primes.	Imperfect Consonances.	{	Major Thirds.	Disso- nances.	{	All of the remaining intervals.
		" Fourths.			" Sixths.			
		" Fifths.			Minor Thirds.			
		" Octaves.			" Sixths.			

The student should have constant practice in naming particularly any intervals in published music, reckoning as well from any note to a succeeding lower note as to one higher, and exercising the ear alone, as well as the eye in recognising them.

An interval is *inverted* when by transposing its upper note an octave lower, or its lower an octave higher, they exchange their relative positions, the upper note becoming the lower and *vice versa*.

The interval resulting from inversion is readily found by subtracting the original interval from nine, as: a third inverted becomes ($9-3=6$) a sixth, &c.

Inverted primes become octaves.

Inverted octaves become primes.

Inverted seconds become sevenths.

Inverted sevenths become seconds.

Inverted thirds become sixths.

Inverted sixths become thirds.

Inverted fourths become fifths.

Inverted fifths become fourths.

Major intervals inverted become minor.

Minor intervals inverted become major.

Diminished (or imperfect) intervals inverted become augmented.

Augmented intervals inverted become diminished (or imperfect).

Perfect intervals inverted remain perfect.

NAMES OF THE OCTAVES.

For convenience in speaking or writing, each octave has its distinguishing name beginning on each C. The lowest C in music (a 32 foot tone of $16\frac{1}{2}$ vibrations a second) is called Sub-octave C, or Sub-C, and each letter above has the same prefix until the next C is reached which is called Contra C, and this octave, Contra octave. Beginning on each C the octaves succeed each other upward as follows:

Three-lined. Four-lined.

This note and all below it are said to be in the Sub-Octave.

Contra Octave. Great. Small. One-lined. Two-lined. ^{Sub} Three-lined. Four-lined.

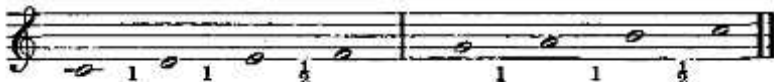
BBB CC BB C B C b c b¹ c¹ b² c² b³ c³ b⁴ c⁴

The use of the letters alone indicates quite as plainly as the notes which octave is intended. Frequent exercises on blackboard or paper should render these octaves familiar.

LESSON 2.

SCALES.

The Greek tetrachord was a diatonic passage of four notes comprising, from the lowest to the highest, a fourth; and the Lydian tetrachord presented an upward succession of two whole steps and one half step. The modern diatonic major scale consists of two Lydian tetrachords combined.



As the two halves of our major scale have quite the same intervals, the second half of one scale could readily be used as the first half of another, or the reverse, which suggests the most natural order of scale transposition. By writing the second half of each scale as the first half of a new one, we find ourselves beginning each new scale on the fifth degree of the preceding and obliged each time to introduce one new sharp to preserve the same succession of intervals. Read from left to right.



This may properly go on till we cease to get an *audibly* new scale, when, although the notation may be new, no real variety of effect will be obtained. Likewise in using the first half of one scale as the second half of another (beginning at the *right* hand of the following example) we shall necessarily begin each new scale on the note which was the fourth of the former and be obliged to introduce one new flat with each new scale. Read from right to left.



These two forms will be found, on their twelfth transposition, to give the audible effect of C major, thus returning to their original