

# HARMONY.

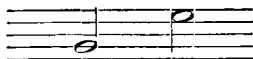
## CHAPTER I.

1. A musical sound differs from a noise in that the vibrations which produce it are isochronous, or of periodical recurrence.

2. Sounds differ from each other in quality, pitch, duration, and intensity. With the first of these it is out of our province to deal in this work; and we need only consider the last, with reference to the notation used for its regulation.

3. Pitch is dependent upon the quickness or slowness of the vibrations. Rapid vibrations produce a sound of a high or acute pitch: Slow vibrations, a sound of a low or grave pitch.

4. The relative pitch of sounds is represented to the eye by the position of notes on a staff of five lines and four spaces, thus:—




We here know that the latter of these notes is the sign of a higher pitch than that of the former.

Lines placed temporarily above or below the staff are called Leger lines:—



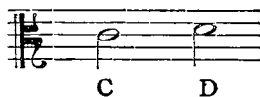
5. The absolute pitch is indicated by the addition of a clef:—




6. The C Clef  attaches the sound known as middle C to the line on which it is placed. There are several C clefs, but the Tenor Clef is the one most in use:—



7. The Alto Clef is used for writing the Viola or Tenor-Violin part:—



8. The Soprano Clef is rarely used except in full scores, where it is sometimes used for the first Treble voice part (as also is the Alto Clef for the second Treble part), in order that the conductor may not confuse the voice parts with the first and second violin parts, which are always written in the Treble Clef.

9. The Bass or F Clef,  is used for the music given to bass instruments, such as the violoncello, bassoon, &c., and invariably for the bass voice part:—



The high notes of the bassoon and violoncello, which would often require an inconvenient number of Leger

lines, are written in the tenor clef, but occasionally the high notes of the violoncello are written in the treble clef.

10. In order to simplify music, the Alto Clef has been very rightly superseded by the treble clef, for the alto voice part. But to give up the tenor clef, for the tenor voice part, is not a step in the right direction; because, if the treble clef is used in its place, it must be notified that the performer is to sing an octave lower, thus defeating the very object of a clef, which is to show the absolute pitch.

11. The relative Duration of Sounds is represented by the shape of the notes. Ex. :—



Breve. Semibreve. Minim. Crotchet. Quaver. Semiquaver. Demisemiquaver.

A breve is equal to two semibreves. A semibreve is equal to two minims, &c., each note being half the value of the one immediately preceding it.

12. The Rests, or directions for silence which correspond to the above notes, are respectively :—



13. A dot adds one half to the duration of the note or rest to which it is appended.

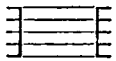
Ex.  $\circ \cdot$  is a note equal to three minims.



Ex.  $\neg \cdot$  is a rest equal to three semiquavers.

A second dot adds half the value of the first dot, that is to say, one quarter, to the value of a note or rest to which it is appended.

Ex.  $\circ \dots$  is equal to seven crotchets;  $\neg \dots$  is a rest of seven semiquavers. A note or rest thus lengthened is said to have a double dot.

14. The absolute duration of a sound may be determined by the use of a metronomic sign. Ex.  $\text{♩} = 100$  M.M. signifies that each minim, in the movement to which it is prefixed, will equal one beat of the pendulum of Maelzel's metronome when the moveable regulator is placed at 100 on the index.  $\text{♩} = 6$  inches signifies that a crotchet is to equal in duration the length of time a pendulum (with *any* weight attached) six inches in length will require for each oscillation.

15. Music cannot exist without Accent and Rhythm. Accent, or the laying of stress on notes at regularly recurring intervals of time, is secured by dividing every succession of notes into sections called Bars. Ex.  A Bar. The word Bar is used in two senses; first, for the name of the actual sign; secondly, for the portion of music lying between two such signs. An accent falls on the first note in every bar.

A Double Bar  denotes the close of a movement, or the temporary close which precedes a change of time or key. It is also generally placed after the direction termed a "repeat," *e.g.* 

16. Rhythm is the correct grouping of properly accented notes into musical phrases or sentences.

17. Time in music is the distance between the accents. Since then Accent is indicated by bars, Time is determined by giving at the commencement of a movement the aggregate duration of the notes contained in each bar.

Time is Duple or Triple. If the accent occurs at equal intervals of time, the music is in Duple Time; if at un-

equal, in Triple Time. For example, if a bar is divided into 2, 4, 6 (two threes), or 8, the time is duple; if into 3, 6 (three twos), or 9, triple. An equal number of groups of three notes comes under the class Duple; an unequal number of groups of two notes comes under the class Triple. Such kinds of time are called Compound.

Time is expressed by **C** and **♩** for duple, or by fractional parts of a semibreve for duple or triple time, as  $\frac{2}{4}$  two crotchets in a bar;  $\frac{3}{4}$  three crotchets;  $\frac{9}{8}$  nine quavers.

There are a few specimens of music containing five beats in a bar; in this measure, which is called Quintuple, there can be only one accent in each bar, and that of course on the first beat.

Time, in the sense of pace, is often expressed approximately by the use of the Italian words, *largo*, *adagio*, *lento*, *grave*, *andante*, *allegro*, *presto*, &c., with their diminutives and superlatives; and for greater definiteness with such qualifying words as *piu*, *assai*, *commodo*, &c.

The Italian words *forte*, *piano*, *sforzando*, *crescendo*, *diminuendo*, &c., are used in various ways to regulate the intensity of sound. It is unnecessary, however, to enlarge on this, or on some of the preceding subjects.

## CHAPTER II.

18. The ear feels that every sound, or succession of sounds, is capable of repetition at a certain distance above or below without any perceptible alteration or change, except in the pitch. The distance at which this repetition is found to take place is called the interval of an octave.

19. The Octave is divided into twelve parts called mean semitones, or commonly, semitones.

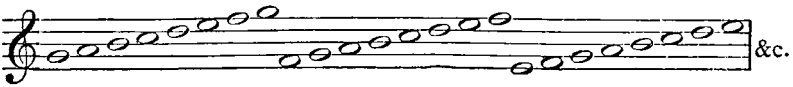
Two semitones make one tone. The word "degree" is used to express either a tone or a semitone.

20. A Scale is a succession of sounds which proceeds by single degrees, the nature of the degrees being determined by custom.

21. A scale consisting of semitones only is called Chromatic.

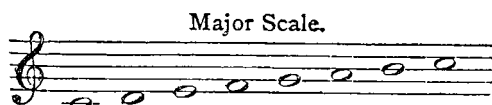
22. A Diatonic scale consists of a mixture of tones and semitones, and is of two kinds, major and minor. (When the word Scale is used by itself, a diatonic scale is to be understood). In the Major Scale the fourth and eighth degrees are semitones, the rest tones.

Taking a stave, and writing successions of eight notes, beginning from any line or space, it will be found that there is one note only, namely C, from which as a starting point the conventional arrangement of tones and semitones, termed the major scale, can be obtained, *e.g.*—



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The scale of C, therefore, is the normal scale, and hence the prominent position which it holds in musical treatises.

23. In order to construct scales on other notes than C, certain signs are used for raising and flattening notes. The sharp  $\sharp$  raises, the flat  $\flat$  lowers, the note to which it is prefixed a semitone. These signs, when placed at the beginning of a piece of music, show by their position on the staff the notes which are to be raised or flattened throughout.

For the purpose of temporarily restoring a sharpened or flattened note to its position in the normal scale, a natural  $\natural$  is used. Its duty is, therefore, twofold—to flatten a sharpened note, to sharpen a flattened note. A double sharp  $\times$  raises a note a whole tone; a double flat  $\flat\flat$  flattens a note a whole tone.

24. The Clef, sign of Time, and sign of Key placed at the beginning of a movement are called collectively the Signature. But the sign of the time and the sign of the key are also called separately the time-signature and key-signature. By key is understood the pitch of the scale employed; *e.g.*, key A, key B, key C, &c.

25. Any of the signs  $\sharp$ ,  $\flat$ ,  $\natural$ ,  $\times$ , or  $\flat\flat$ , occurring otherwise than in the signature are called Accidentals. The influence of an accidental extends through one bar, unless before the end of that bar it is contradicted by another sign. A doubly-sharpened note is reduced to a sharpened note by  $\natural$ , and to a natural by  $\natural$ . A doubly-flattened note is reduced to a flattened note by  $\natural$ , and to a natural by  $\natural$ .

26. The Minor Scale has several different forms.

Four musical staves illustrating different forms of the minor scale, labeled No. 1, No. 2, No. 3, and No. 4. Each staff shows a sequence of notes on a treble clef staff, with No. 2, 3, and 4 including sharps and naturals to indicate specific scale variants.

These are placed in chronological order, the first being one of the earliest forms of the minor scale, the last the most modern. It can scarcely be said that the first two forms are obsolete, for although rarely now used in their entirety, fragments are met with commonly enough.

The following are Examples of the use of the form No. 2:

HANDEL. "Judas," No. 17.

Musical score for Handel's "Judas," No. 17. The score is in C major, 2/4 time, and shows a piano accompaniment with a treble and bass clef. The melody is in the right hand, and the bass line is in the left hand.

BACH. "S. Matthew Passion," No. 10.

Musical score for Bach's "S. Matthew Passion," No. 10. The score is in D major, 3/8 time, and shows a piano accompaniment with a treble and bass clef. The melody is in the right hand, and the bass line is in the left hand.



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BEETHOVEN. P. F. Sonata, Op. 57.



It will be seen that No. 3 is a compromise between Nos. 1 and 2, borrowing its ascent from No. 2, its descent from No. 1. It is not surprising that such a compromise should be gradually giving place to the beautiful form of No. 4, which has the advantage of having its ascent and descent exactly similar to each other, and of containing the ingredients of one of the most important chords in modern music. (See Chap. VII. § 161.)

Music in any major key is said to be in the major mode; music in a minor key, in the minor mode.

It is, perhaps, hardly necessary to remind the reader that music has made the scales, not the scales music. No. 4 of the above forms was in use in fine compositions long before theorists ventured to write it out and dignify it with the name of a scale. It is wonderful that it has escaped being called a "licence."

27. A minor scale commencing on the note a minor third below any major scale is called the relative minor of that scale, *e.g.*, D minor is the relative minor of F major. The scale of a relative minor consists of the same notes as that of its relative major, with one exception, namely, the seventh degree (the fifth of its relative major) which is raised one semitone. A minor scale beginning on the same note as a major scale is called a tonic minor; *e.g.*, D minor is the tonic minor of D major. The tonic minor scale differs

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from its tonic major in its third and sixth degrees, both of which are flattened by one semitone.

In modern music the connection between the major and its *tonic* minor mode is much closer than was formerly the case. Some very beautiful effects are produced by their contrast.

BEETHOVEN. P. F. Sonata, Op. 31.

Musical score for Beethoven's P. F. Sonata, Op. 31. The score is in G major (one sharp) and 2/4 time. It shows a scale starting on G4, moving up to G5. The third and sixth degrees (B4 and E5) are flattened by one semitone. The score is written for piano with a grand staff (treble and bass clefs).

Continuation of the musical score for Beethoven's P. F. Sonata, Op. 31. The scale continues from the previous section, ending with an &c. The score is written for piano with a grand staff.

SCHUBERT. "Rosamunde."

Musical score for Schubert's "Rosamunde." The score is in G minor (two flats) and 6/8 time. It shows a scale starting on G4, moving up to G5. The third degree (B4) is natural. The score is written for piano with a grand staff. The first staff is labeled "(bar 4.)" and the second staff is labeled "Der".