## CUMULATIVE HARMONY

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## CUMULATIVE HARMONY

BY
WILLIAM J. McCOY

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## PREFACE

Inasmuch as there are already available textbooks on harmony, a title list of which would form an imposing array, and among which may be noted a number of thoroughly sound and admirably constructed works by American theorists of distinction, the question would naturally arise, Why add another ?

The greatly deplored apathy of music students toward the study of harmony is largely due to the fact that harmony methods, in general, are prepared for mature minds, which are often too much engrossed with an already acquired proficiency in executive music to welcome readily the thorough course that is necessary in order to absorb the apparently inelastic mass of facts presented, which, they subsequently discover, requires a supplementary course to determine definitely its mission in music practice.

It has been the earnest effort of recent theorists so to modify the prevailing modes of procedure that a more kindly attitude toward this subject may be encouraged.

It is with this object in view that the author, through many years of experience in teaching, has evolved a course in chord practice by means of which the problem of covering thoroughly all phases of the science of harmony and at the same time creating, on the part of students, a direct interest in the subject for itself has, he believes, been successfully solved.

By means of the plan here presented, the student is led, step by step, through the process of theory and practice, and becomes himself a party to the building up of the system.

The work is made continuously cumulative. As each new unit is added it enters at once into the practice of music-making, and continues in homogeneous action until the entire work is absorbed.

Melody-making (as a superstructure) from harmonized given bass sets, and the harmonization (as a substratum) of given melodies, are introduced almost at the outset and continued with constantly cumulated harmonic elements through the work.

The forming of melodies from combined harmonic units is regarded by the author and those who have practiced this method as a most
valuable innovation; by this means the enlistment of creative effort becomes at once a source of fascination to the student, which, as new chords are involved and his own efficiency becomes greater, increases continuously throughout the course.

The author desires to direct attention to the following innovations peculiar to this work:
I. The evolving of melodies from harmonic structures.
2. A tabulated system of modulation to directly related keys, considered harmonically and melodically.
3. A recognition of this principle : the fact that the positive identification of a key is dependent upon an assured Dominant chord is sufficient justification for assuming that the appearance of such chord, in any circumstance, serves fully to identify a key.
4. The harmonization of melodies by the three-point mode, involving the grouping of all chords into three general harmonic families, by means of which a freedom in authoritative harmonization of given melodic lines is easily acquired.
5. The use made of the secondary chords of the Subdominant, Tonic, and Dominant, regarding which the author asks only that those who may already have acquired a working knowledge of chords as based upon all degrees of the scale will give to this mode of grouping for harmonization of melodies a thorough consideration entirely disassociated from and unprejudiced by the edicts of former affiliations, in order to become convinced of its simplicity and superior practicability.

The author is confident that a careful contemplation of the family of augmented chords as presented in this work and verified by the accompanying illustrations will easily disperse the "bogy" mysteries with which this chord has been persistently surrounded.

The study of harmony should be pursued simultaneously with the study of instrumental and vocal music. It should be thoroughly mastered and absorbed during the receptive periods of childhood and youth, not deferred until the musical character has been already formed and new lines of thought become unwelcome.

This textbook is an offering of method and material from which the instructor and the pupil are expected to develop a wide scope of musical study that will prove a true preparation for other steps toward analysis and composition.

WILliAM J. McCOY

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## CUMULATIVE HARMONY

## CHAPTER I

## NOTATION

Notes are written symbols representing tones (musical sounds) to be uttered by the human voice or other medium of musical expression.
The terms "steps" and "half steps" are used as a medium of reference to the difference in pitch of varying tones. By a half step is meant the distance (difference in pitch) from any one note to the nearest note in general use above or below it.


The distance of two combined half steps constitutes a whole step (or a step).


## Scales

The plans of scales used in various periods and by various peoples differ materially. For a description in detail of the many forms that have been employed, the student is advised to refer to a suitable history of music and become fully informed on this very important subject.

Attention will be directed for the present to the major and minor diatonic scales.

Diatonic is the name given to music that conforms entirely to the immediate tonality or key in which it occurs, as would be indicated by the signature of that key.

It also refers to a series of such notes proceeding by degree in one direction.


A scale is a series of eight tones at distances of a whole or a half step apart, as represented by corresponding notes upon contiguous degrees of the staff.


The eighth note in this series - which is, in reality, a duplicate in the octave of the first - not only serves as the last of the series in one scale, but may constitute at the same time the first in the next scale series above.


The diatonic scales are in two genders - the major and the minor.

## The Major Diatonic Scale

The succession of whole steps and half steps separating the eight members of the major diatonic scale is as follows: a whole step between each two contiguous notes except between three-four and seven-eight, which are a half step apart.

A major diatonic scale beginning with the note C would appear in whole step and half-step distances, as follows:


Beginning with F and with D , similar scales would appear as follows:


The Relative Minor Diatonic Scale (Normal)
This scale, with the same signature, is located two staff degrees below the major, and occurs in the following succession of steps and half steps: a whole step between each two contiguous notes except between two-three and five-six, which are a half step apart.

A minor diatonic scale beginning on A would appear as follows,

and similar scales beginning on D and on $\mathrm{F} \ddot{\vec{\pi}}$, as follows:



Here follow two excellent illustrations of the employment of the Normal Minor Scale.

Illustration No. 1
Schubert, "Symphony B Minor"


This scale is subject to alterations due to certain harmonic and melodic conditions, which will be considered later.

## The Tonic Minor Scale

The form of the diatonic content of the tonic minor is identical with that of the relative minor; but, while the tonic of the relative minor is a third below the tonic of the major, that of the tonic minor is the same note as in the major. The tonic minor scale of the key of C major is as follows:


The technical names of the various members of the diatonic scale are as follows:
The first of the scale is called the Tonic; the second of the scale is called the supertonic; the third of the scale is called the mediant; the fourth of the scale is called the Subdominant; the fifth of the scale is called the Dominant; the sixth of the scale is called the
submediant; the seventh of the scale is called the subtonic or leading tone; the eighth of the scale is called the octave or Tonic.

Of these the Tonic [T], Subdominant [S], and Dominant [D] are classed as primary notes, the others as secondary.

A diatonic scale may be formed with any note as the Tonic, or keynote.

In order to aid the student in becoming familiar with the succession of sharps and flats placed in signatures to form and indicate the various keys and scales in general use, two rules are submitted :
From the key of C major with a signature of no sharps or flats, proceeding by sharps:

Sharp the fourth and take the fifth for a new Tonic, or keynote.


With the fourth [F] sharp and the fifth [G] as the new Tonic, or keynote, a signature of one sharp and the key of $G$ appears.


From the key of G with the fourth [C] sharp and the fifth [D] as the new Tonic, or keynote, a signature of two sharps and the key of D appears.
Proceeding by flats:
Flat the seventh and take the fourth for a new Tonic, or keynote.


With the seventh $[B]$ flat and the fourth $[F]$ as the new Tonic, or keynote, we have a signature of one flat and the key of F.


In like manner, with the seventh flat we have the key of Bb with two flats in the signature.

A thorough familiarity with the various keys, as indicated by their signatures, is a necessity at this point in the student's work, and considerable oral drill should be given in the manner of the following patterns:

Note. References to the Tonic, or keynote of tonalities, will be made by symbolized capital letters for the major keys, and symbolized small letters for the minor; thus: C major, $\hat{C} ; A$ major, $\hat{A} ; F$ minor, $\hat{f} ; D$ minor, $\hat{d}$.

Give the signatures in as rapid succession as possible of the following major keys: $\hat{G}, \hat{F}, \hat{D}, \hat{E}, \widehat{B} b, \hat{A}, \hat{E} b$, etc. Give the signatures of the following minor keys: $\hat{d}, \hat{a}, \hat{b}, \hat{g}, \hat{e}, \hat{d} \#, \hat{g} \#, \hat{e} b, \frac{\hat{f}}{\#}$, etc. Name the major keys represented by the following signatures: I flat, 3 flats, 3 sharps, 2 flats, 5 sharps, etc. Name the minor keys represented by the following signatures: i sharp, 3 flats, 4 sharps, 5 flats, 2 sharps, etc.

Chromatic alteration is a term used in raising or lowering a note a half step by means of an accidental sharp, flat, or natural other than those established by the signature. Chromatic alterations may raise or lower the pitch of notes without causing a change of key, or they may aid in effecting modulations. When a note is raised by means of an accidental, it is said to be elevated; when it is lowered by the same means, it is said to be depressed.

By chromatic progression (or motion) is meant the proceeding from one note to another a half step higher or lower. This may be accomplished with or without chromatic alteration.


At (a) is a chromatic progression without chromatic alteration; at (b), (c) chromatic progressions formed with the aid of chromatic alterations. The progression at (a) is also diatonic.

The student should frequently play and have played for him the scales, both major and minor, in all keys. The same may be said of all examples and exercises throughout the course of study as they occur and are worked out. It is a matter of the utmost importance that attention be given to frequent playing, hearing played, and analyzing all examples and exercises as they occur and are worked out.

## CHAPTER II

## INTERVALS

An interval consists of two tones (or the difference in pitch of two tones as determined by the corresponding notes on the staff) to be heard simultaneously or in succession. Intervals are computed upward from the lower note.

The general name of an interval is determined simply by the number of staff degrees involved.


Intervals greater than an octave are given the same interval names as similar ones within the octave, and the octave itself is treated as a duplicate of the lower note at a higher altitude.


The specific name includes, also, an estimate of the number of steps and half steps the interval contains.


Taking C for the lower note, the specific intervals obtainable without chromatic alteration are the perfect prime, fourth, fifth, and octave; the major second, third, sixth, and seventh.



From the examples above the student may learn that the two notes forming a perfect prime are similar in all respects, the one being a duplicate of the other, on the same staff degree; that the two notes forming a perfect fourth are two and a half steps, and a perfect fifth, three and a half steps apart; and that the upper note of a perfect octave may be seen to be a duplicate of the lower, in the octave. Also that a major second contains one step, a major third two steps, a major sixth four and a half steps, and a major seventh a half step less than an octave.

The student will now form and write perfect fourths upon each note of the scale of $\hat{C}$; also upon its depression and its elevation, thus:

24
Perfect 4 ths


Form and write perfect fifths similarly.
25
Perfect 5ths


Form and write in like manner, successively, major seconds, thirds, sixths, and sevenths.



The distance of a minor interval is a chromatic half step less than that of the major.

Form and write, successively, minor seconds, thirds, sixths, and sevenths.


31
Minor 3ds


32
Minor 6ths


33
Minor 7 ths


The distance of a diminished interval is a chromatic half step less than that of the perfect or minor.

Write, successively, diminished thirds, fourths, fifths, sixths, and sevenths.

34


Intervals on notes marked * are not expressible in notation and are not used in harmonic combinations.

38
Diminished 5ths


37
Diminished 6ths


38
Diminished 7 ths


The distance of án augmented interval is a chromatic half step greater than a perfect or major.

Form and write augmented primes, seconds, thirds, fourths, fifths, and sixths.



44
Augmented 6ths


The student should be required to become thoroughly familiar with the number of steps and half steps contained in the various intervals.

Oral practice, such as follows, is invaluable:
What note is a third from C? from E? from G, etc.
What note is a sixth from D ? etc.
What general interval does E-C form?
How many steps and half steps are contained in a major third? a perfect fifth? a minor sixth, etc.

What specific interval does $\mathrm{C}-\mathrm{A}$ form? $\mathrm{Eb}-\mathrm{A}$ ? D 葡-A? etc.
It is a matter of the utmost importance to the student that he should take a thorough course in musical dictation or ear training in conjunction with these studies, in order to attain the power of readily
distinguishing tone intervals upon hearing them sounded together or in succession. Too much consideration cannot be given to this recommendation.

In the formation of an interval, care should be taken to determine the number of staff degrees involved, to conform to its general name, and then to arrange the interval, by proper use of accidentals, in such manner that it will contain the required number of steps and half steps.


At (a) the number of staff degrees involved is two [C and D], forming a general interval of a second. As the distance in steps and half steps is $\mathrm{I} 1 / 2$, the specific name is an augmented second. At (b), while the number of steps and half steps is $\mathrm{I} 1 / 2$ as at $(a)$, the number of staif degrees involved is three [C, D, and E], resulting in a specific interval of a minor third. In like manner the number of steps and half steps at $(c)$ and $(d)$ is the same; the number of staff degrees involved shows them to be respectively a diminished fifth and an augmented fourth.

The inversion of an interval is effected by raising the lower note an octave.


By inversion:
A prime becomes an octave.
A second becomes a seventh.
A third becomes a sixth.
A fourth becomes a fifth.
A fifth becomes a fourth.
A sixth becomes a third.
A seventh becomes a second.
An octave becomes a prime.



Also by inversion:
A perfect interval becomes a perfect.
A major interval becomes a minor.
A minor interval becomes a major.
An augmented interval becomes a diminished.
A diminished interval becomes an augmented.


Therefore by inversion:
A perfect fifth becomes a perfect fourth.
A major sixth becomes a minor third.
A minor second becomes a major seventh.
An augmented prime becomes a diminished octave.
A diminished seventh becomes an augmented second.


Intervals are consonant or dissonant.
A consonance is an interval, which, from its nature and quality, does not suggest or require a further progression or resolution; it may be classed as an interval of repose.


By playing these intervals separately (as they have no connection with each other) the student will readily recognize the effect of repose; that is to say, they do not seem to demand a progression or resolution to an interval of different nature and quality in order that a sense of completeness may be reached, as is the case with the intervals in the following example of dissonances:


By playing these intervals (the unbracketed ones) the student will at once recognize a feeling of incompleteness and lack of repose, a demand for a succeeding interval of different quality (as bracketed), in order that a sense of repose and completeness may be realized. Therefore,

A dissonance is an interval, which, from its nature and quality, suggests or requires a further progression or resolution, and may be classed as an interval of motion.

The consonances are the perfect intervals, and the major and minor thirds and sixths.


The dissonances are the major and minor seconds and sevenths, and all augmented and diminished intervals, as in the following table:


While this classification is clearly represented by the notation, certain consonances and dissonances which are enharmonically similar may be identified by the hearer only through progression to a succeeding interval.


The perfect fourth was formerly considered a forbidden dissonance, and while it is now classed as a consonance, it possesses a strong element suggesting further progression.

Play these exercises, and have them played.

## CHAPTER III

## CHORDS

A chord is a combination of three or more tones built in a series of thirds upon a given tone called a fundamental (or root) as represented by corresponding notes on the staff.

A triad is a combined third and fifth.


At (a) the combined third and fifth form the triad of C ; at (b) the triad of E ; and at (c) the triad of B.

A major triad consists of a (combined) major third and perfect fifth.


At (a) a combination of the major third $\mathrm{D}-\mathrm{F}$ 告 and a perfect fifth $\mathrm{D}-\mathrm{A}$ forms the major triad of D ; at (b) the major triad of $\mathrm{E} b$; at (c) the major triad of B ; at (d) the major triad of $\mathrm{G} b$.

Combine and write major triads on each degree of the scale of C , also its elevation and its depression.


A minor triad consists of a minor third and perfect fifth.


At (a) the combination of a minor third, $\mathrm{C}-\mathrm{E} b$, and a perfect fifth, C-G, forms a minor triad on C ; at (b) the minor triad on E ; at (c) the minor triad on A ; and at (d) the minor triad on $\mathrm{B} b$.

Form and write minor triads on each degree of the scale of $\hat{\mathrm{C}}$, also on its elevation and its depression.


An augmented triad consists of a major third and an augmented fifth.


At (a) the major third, C-E, and augmented fifth, C-G\#, combined, form the augmented triad on C ; at (b) the augmented triad on E ; and at (c) and (d) the augmented triads on Ab and Bb respectively.

Form and write augmented triads on each note of the scale of $\hat{\mathrm{C}}$, also on its elevation and its depression.


The augmented triad on $\mathrm{B}_{\boldsymbol{N}}$ cannot be expressed, and is not used in harmonic combination.

A diminished triad consists of a minor third and diminished fifth.


At (a) the minor third, $\mathrm{C}-\mathrm{E} b$, and the diminished fifth, $\mathrm{C}-\mathrm{Gb}$, form the diminished triad on $C$; at $(b),(c)$, and (d) are examples of diminished triads on $\mathrm{E}, \mathrm{F} \ddot{\pi}$, and A 華 respectively.

Form and write diminished triads on each degree of the scale of $\hat{\mathrm{C}}$, also on its elevation and its depression.


## CHAPTER IV

## HARMONIZATION IN FOUR VOICES OVER A GIVEN BASS

As a triad contains but three notes, one of them must be duplicated in four-part writing. This is called doubling. The fundamental is considered the most suitable for doubling, the fifth may be freely doubled, but for the present the student should avoid doubling the third.


At (a) the fundamental, C, is doubled; that is to say, it occurs in two different voice parts.
At (b) the fifth, G, is doubled; at (c) the fundamental, F, is doubled; while at (d) the doubled note is the fifth, A.

In four-part writing the voices are known by the names given them in vocal music; from highest to lowest they are called, respectively, soprano, alto, tenor, and bass.


## Progression of Voices

When a voice moves from one note to another a scale degree above or below, it is said to progress by degree (or diatonically); when it moves more than one scale degree, it is said to progress by skip; wher it moves in a succession of half steps by means of chromatically altered notes, it is said to progress chromatically.


In this example each note proceeds to the next scale degree above or below, therefore progressing by degree (or diatonically).


Here, on the contrary, each note proceeds to another at a distance of a third or more, thus progressing by skip.


In this example most of the notes proceed a half step, by means of chromatic alterations, to the next, producing chromatic progressions.

Two voices moving in the same direction are said to progress in similar motion.


When they move in opposite directions they are said to progress in contrary motion.


When one voice remains stationary and the other ascends or descends, they are said to progress in oblique motion.


Notes common to two chords to be connected should be retained in the same voice, the other voices proceeding to the nearest available positions.

This is particularly applicable to the inner voices - the alto and the tenor; the soprano frequently requires considerable freedom of movement in order to obtain good melodic results; the bass often moves in succession of skips to good effect. Similar motion in all four voices should be avoided, care being exercised toward effecting contrary motion, or a common tone sustained in the same voice.


At (a) the note common to the first and second, and the second and third as well, is $G$, which occurs in the alto in the first voice, and should be retained in the alto in the second and third chords. At (b) the note common is C , which is retained in the tenor.


Transposition is a change of key by means of a corresponding change of notation and signature or the sounding of tones represented.

Exercise 73, transposed to $\hat{E} b$, appears as follows:


Taking the model (Exercise 73) as a pattern, the student should form triads on the following bass sets, in accordance with the instructions given above.


The student may use the 1st, 3 d , or 5 th for the initial note in the soprano; this presents three modes of working out each exercise.
Transpose these examples as in Exercise 74 to several keys, and work out as before.

The difference of altitude in the various voice parts does not affect their interval relation with the bass.
Hence all the following are major triads of C , with the fundamental as the actual bass.


The usual compass of the various voices in vocal music is given in the following model, the open notes indicating the preferred compass, the filled notes including a possible extension.


It is desired that the four voices be kept as nearly equidistant as possible, the upper three voices, as a rule, occurring within an octave of each other. The soprano and alto at times may exceed this distance, while the bass part is frequently written without regard to its distance from the tenor. These exercises should be worked out in both close and open position.

Play these exercises, and have them played.

## CHAPTER V

## INVERSION OF TRIADS

By inversion of a chord is meant the placing of one of its notes, other than the fundamental, in the bass.
When the fundamental of the chord is used as the bass, the chord is in fundamental position.


In the above model the triads of $\mathrm{C}, \mathrm{F}$, and G are given with the fundamentals $\mathrm{C}, \mathrm{F}$, and G in the bass part, and are therefore in fundamental position.

In the inversions, avoid doubling the bass except in the chord of $\frac{6}{4}$. When the third is used as the bass, it is in the first inversion.


In this example the same chords are given, with the thirds $\mathrm{E}, \mathrm{A}$, and B in the bass; they are, therefore, in the first inversion.

When the fifth is in the bass, the chord is in the second inversion.


24

The same chords, with the fifth from the fundamental in the bass, are in the second inversion.

Figured bass is the employment of figures placed above or below the bass notes, to indicate the intervals represented in the various chords. Intervals are computed upward from the lowest note (the bass).


We have here given an example of figuring the triad of C , which, complete, is ${\underset{3}{3}}_{\frac{8}{3}}$. For the sake of abbreviation, the figure 8 is rarely used; 3,5 , or both, are used only when the particular interval represented is to be affected by an accidental sharp, flat, or natural; also, for abbreviation, the figure 3 , when affected by an accidental, is omitted, the sharp, flat, or natural alone representing the third so altered; thus:


At (a) the $b$ alone indicates the triad with the third flat - C, Eb, G. At (b) the $b_{5}$ represents the triad with the fifth flat $-\mathrm{Eb}, \mathrm{G}$, $\mathrm{B} b$; and at (c) the $\#$ and $\# 5$ represent the triad with the third and fifth sharp - B, D , and F \#.

In the first inversion of the triad the third from the fundamental is assigned to the bass, forming the intervals of a third (3d) and sixth (Gth) from that note. Figured, $\frac{6}{3}$ or 6 .


At (a) is given the first inversion of the triad of C , with the third, E , in the bass; the intervals appearing from the bass note are as follows: E to G a 3d, E to C a 6th.

The figures $\frac{6}{3}$ are abbreviated to 6 . At (b) is given the first inversion of the minor triad of C , with $\mathrm{E} b$ as the actual bass.

At $(c)$ is given the first inversion of the major triad of $\mathrm{E} b$, with G in the bass, and with the third flat and sixth flat (as the figure 3, when chromatically altered, is represented by the chromatic alteration alone, in this case the $b$ represents $b_{3}$ ); and at (d) occurs the first inversion of the major triad of B , with $\mathrm{D}=$ in the bass, B being the sixth and F 节 the third from the bass.

In the second inversion of the triad, the 5th from the fundamental is assigned to the bass; the intervals thus formed from this bass being the 6 th and the 4 th. Figured, $\frac{6}{4}$.


At (a) is given the second inversion of the major triad of C , with G, the 5th from the fundamental, in the bass, forming the intervals of a 6th, E, and a 4 th, C. At (b) the inversion of the triad of C minor is the same in all respects as at (a), except that the sixth is Eb ; at (c) the major triad of Eb appears in its second inversion, with $\mathrm{B} b$ in the bass; and at (d) is the second inversion of the major triad of B , with $\mathrm{F} \#$ in the bass.

In the following exercises, the student will add the proper notes of harmony in the soprano, alto, and tenor, as indicated by the figured
bass, and with the various voice parts progressing according to the directions given above. An example of this mode of procedure is given in the following model.


In cases, as at $(a)$, where the doubled note is the one common to that chord and the succeeding one (b), it is not necessary that this note should be retained in both voices, as good chord connection may be obtained through one common note being retained.

At $(c)$ the figuring (6) indicates the $3 \mathrm{~d}, \mathrm{G}$, and the 6 th, C , as the notes to be added to the given bass, forming the first inversion of the triad of C ; as the bass, E , is not to be doubled in this inversion, the available notes in the three upper voices are $G$ and $C$, and of these the nearest one to which the soprano note, $A$, in the preceding chord, may progress is G. This is likewise the nearest point for progression of the alto note, F , at (b), which results in a doubling of the $G$ on the same degree of the staff.

As the most satisfactory progressions are in contrary motion of a part or all of the upper voices with the bass, the $C$, which is common to the chords at $(a)$ and $(b)$, is retained in the tenor rather than in the soprano, thus causing the soprano and alto to move contrary to the bass, in the preferred progressions.

A similar case is at $(c)$, where the $G$ of the soprano moves upward to $B$, in contrary motion to the bass.


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91


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93


In these exercises examples of chromatically altered notes appear, both in the bass and in the other voices as indicated in the figuring. Care must be exercised, in transposing to other keys, toward correct chromatic indications of notes that are marked to be elevated (chromatically raised) and depressed (chromatically lowered).

In vocal music the four voices are generally written in open (or dispersed) position, with a note place of the initial chord vacated between the soprano and alto which is occupied on the bass staff (an octave lower) by the tenor. This mode of writing the tenor on the lower staff with the bass should be practiced quite as frequently as that of writing the three upper voices on the upper staff.


It will be seen that the notes assigned to the alto in Exercise 87 are given to the tenor in Exercise 94, by being lowered an octave.


When a combination of notes forming a chord is arranged in such manner as to appear in a series of thirds, the lowest note (when the chord is complete) is the fundamental.


At (a) the chord $\mathrm{E}, \mathrm{G}, \mathrm{C}$, when rearranged to appear in a series of thirds, is seen to have C for its fundamental; at (b) G appears as the fundamental; at (c), Db ; and at (d), B. At (e) the bass note, A, is the fundamental as it stands.

The following examples should be worked out as above, in both close and open positions, and transposed to other keys for similar treatment.


Exercise 95 may be utilized in the same manner.
Play these exercises and have them played.

## CHAPTER VI

## THE CONSTRUCTION OF MELODIES OVER ACCOMPANIMENTS

In constructing melodies from a prepared accompaniment such as may be formed from the worked-out Exercise 94, the student is at liberty to use the notes contained in the upper three voices as freely as desired, and at any altitude. Any of these three notes may be duplicated at will, as it is not to be considered faulty doubling; but it must be remembered that such doubling as is disallowed between the bass and any of the upper voices is also forbidden between the bass and the melody.

The student should make a table of rhythmic figures in common $\binom{4}{4}$ time, using half, quarter, dotted quarter, eighth, and combined dotted eighth and sixteenth notes, from which he can draw for use in the construction of melodies.

It is desirable, at present, that the melodies should be of broad song style, and as tuneful as possible.

At the fourth, eighth, and sixteenth bars, greater length of notes may be used, forming points of repose, in order to conform to certain practices of musical form.

Exercise 94 will now be used as an accompaniment upon which an example of melody is to be constructed.



It may be noticed at (a)-(b) care has been taken to avoid using the E of the bass in the attending melody, as it would be a faulty doubling with the three upper voices, and consequently not allowed in the melody during the life of that chord. At $(c)-(d)-(e)-(f)$, etc., the third is freely duplicated without the effect of faulty doubling of the third from the fundamental.
The soprano, alto, and tenor should be placed at an altitude quite near the bass, in order that a more sonorous sound body may be obtained for the accompaniment, and a clearer field for occupation by the melody. At (a) in the following exercise the $\mathrm{D}^{5}$ ascends to the $\mathrm{T}^{5}$, in order to provide four different notes for various forms of accompaniment.

At the fourth, eighth, twelfth, and sixteenth measures, the melody rhythms consist of notes longer than the prevailing ones; this is done in order, through the effect of rhythmic repose thus obtained, to aid in dividing the melody into phrases.



The positions of the various voice parts may be changed from one note of a chord to another, provided it is done without altering the tonal content of the chord. The most frequent mode of accomplishing this is by exchanging notes assigned to various voices, one with another, during the life of the chord; this may affect one, two, or three notes, or the entire chord.


An additional exercise for similar treatment follows.


We will now pass on to the consideration of accompaniments in various forms - prepared for piano performance by amplification of exercises in four-part writing.

Accompaniments are formed in a diversity of ways, such as the use of the various notes of a chord in repetition, in alternation, as afterbeats, by the formation of melodic figures from arpeggios, and even in imitation and other contrapuntal forms.

A number of examples of the more common accompaniment figures are here given.



It will be seen that the harmonic content in each of these amplified examples is the same as that in the first measure of Exercise 95, with the understanding that each note of the chord (which may occur in repetition) represents a half-note duration, as in the former exercise. It is, in fact, harmonic accompaniment expressed in arpeggio figures or broken chords. By amplifying the accompaniment as submitted in the second figure of Exercise 104, the melody and accompaniment in Exercise 95 would appear as follows:


This should also be prepared for performance of the combined melody and accompaniment as a piano solo, with the four voices of the harmony on the bass staff.


The harmonic content of the accompaniment at (a) is illustrated by the same chords at (b), as they appear before being amplified.

The above given basses, as well as those that follow, should be transposed to various keys, harmonized in various accompaniment forms, and new melodies constructed upon them in accordance with the given directions.

When preparing them for piano solo performance, the three upper voices should generally be kept quite within the following compass.

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Two illustrations of melody formation from a harmonic structure are submitted


* The C is a passing note which will be considered later.



The pedal note (a) will be discussed later; the bass represented is D .
An application of Exercise 95 transposed to $\hat{A} b$ is here given. 109


Also other examples for similar treatment.

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113


114


115


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Play all these exercises and examples, and have them played.

## CHAPTER VII

## PARALLEL FIFTHS AND OCTAVES

In the examples for chord connection given thus far, one or more notes are common in each two chords to be connected. In such circumstances good binding of contiguous chords is easily obtained, the notes common to both being given to the same voice, and the other voices moving naturally from their positions in one chord to positions lying nearest in the succeeding one.

In cases where two chords to be connected have no note in common the various voices should move to the nearest available position in the next chord, in such manner that there will appear no faulty parallel (consecutive) 5ths or 8 vs .

Faulty parallels occur when two voices moving in similar direction progress chromatically or by degree in perfect 5 ths or 8 vs .


Parallel perfect 5ths or 8 vs progressing by skip are generally disagreeable in the outer voices.


A diminished 5th followed by a perfect 5 th is objectionable in the outer voices.


The faulty parallels referred to above, while forbidden by the laws of harmony and generally offensive to the cultivated ear, are often used by modern composers for dramatic and other effects, the justification for which may not be readily understood by the immature student; he is therefore cautioned against their employment in any circumstances until his work is sufficiently mature to warrant him in assuming an authoritative judgment in their use.


At (a) may be seen parallel 8 vs between the soprano and tenor, and parallel 5 ths between the alto and tenor.

At (b) are parallel 5 ths between soprano and tenor, and 8 vs between tenor and bass. At (c) are parallel 8 vs between alto and bass and 5 ths between tenor and bass. In the soprano is, also, a bad progression of an augmented 2 d from F to $\mathrm{G}_{\mathrm{N}}{ }_{\text {, }}$, which should be avoided, particularly in the outer voices.

At (d) there are parallel 8vs between soprano and bass, and 5ths between alto and bass.


The same bass with the upper three voices added in such manner that there appear no faulty parallels. This is accomplished by causing the offending voices to move in contrary motion; these progressions frequently prevent the tones common to two chords from being placed in the same voice.

Additional exercises to be worked out as above, in various keys, follow.


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It is suggested to the instructor that the foregoing exercises be thoroughly worked out in simple harmonization of the basses in the given key, transposed to many other keys and worked out similarly before attempting to construct melodies thereon. A good writing technique in chord connection is an absolute necessity through all the preliminary stages of the work.

Play all these exercises and examples, and have them played

## CHAPTER VIII

## THE DOMINANT SEVENTH CHORD

Discords are chords containing dissonant intervals.
First and most important of these is the $D^{7}$ chord.
This chord is formed by adding a minor 7 th to the D triad (which should always be major) and must contain the intervals of a major 3d, a perfect 5 th, and a minor 7th; figured 7. This is applicable alike to major and minor keys.

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The $\mathrm{D}^{7}$ chord is of peculiar value in that it determines absolutely the key or tonality; so that, regardless of the initial signature, any combination of notes that consists of a major triad and minor 7 th, or an inversion of the same, is a $\mathrm{D}^{7}$ chord, the fundamental of which is the Dominant of a key whose Tonic is a perfect 5 th below.


At (a) the chord $\mathrm{Bb}, \mathrm{E}, \mathrm{G}, \mathrm{C}$, when arranged in its fundamental position $\mathrm{C}, \mathrm{E}, \mathrm{G}, \mathrm{Bb}$, is seen to contain the intervals of a major 3 d , perfect $5^{\text {th }}$, and minor 7 th, and is therefore an inverted $\mathrm{D}^{7}$ chord, whose fundamental, during the life of that chord at least, is the Dominant of the key of $\hat{F}$ or $\hat{f}$.

At (b) the chord, when arranged in its fundamental position, indicates B as a Dominant, and is consequently in the key of $\hat{E}$ or $\hat{\text { e }}$.

At (c) the rearrangement of the chord indicates a Dominant $\mathrm{D} b$, therefore a Tonic Gb , and this occurs with a signature indicating the key of $\hat{C}$ or $\hat{a}$.

## Resolution of the $\mathrm{D}^{7}$ Chord

The $\mathrm{D}^{7}$ chord is generally followed by the T triad, to which it resolves. The combination of T triad preceded by the D chord forms the authentic cadence, which will be considered at length under the head of cadences.

By resolution is meant the progression of the various voice parts from a dissonant chord, or chord of motion, to a consonant chord, or one of repose.

A note dissonant with its fundamental may not, as a rule, be doubled. Its dissonant character gives it exceptional prominence, in addition to which, notes with compulsory resolution would if doubled be likely to cause faulty parallels.

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In all forms of chords of the 7 th, the 7 th itself has a natural tendency to progress downward one degree; this is notably true of the $\mathrm{D}^{7}$, which inclines persistently to the $\mathrm{T}^{3}$ in its resolution (a).

The $\mathrm{D}^{3}$, by reason of its proximity to the $\mathrm{T}^{8}$ and its isolation from the $\mathrm{T}^{5}$, is almost as strong in its tendency upward one degree to the $\mathrm{T}^{8}$; for this reason it is known as the leading tone (b).

Because of the urgency in the progression of these two members of the $\mathrm{D}^{7}$ chord, known as the sensitive tones, they are said to have, compulsory resolution, and may not be doubled, as, in additi, their distinctive prominence in the chord, faulty parallels probably result.

With the tendency of all members of the D chord toward finality, the $\mathrm{D}^{5}$ inclines distinctly to the $\mathrm{T}^{8}$, which may be said to be its note of resolution; for melodic purposes, however, it very frequently proceeds to the $\mathrm{T}^{3}$, in which case the $\mathrm{D}^{7}$ should be omitted, in order to prevent a doubling of the $\mathrm{T}^{3}$ in the succeeding chord. It may also proceed to the $\mathrm{T}^{5}$ for melodic purposes, or to aid in forming accompaniment figures. For these reasons the $\mathrm{D}^{5}$ is said to have optional resolution (c).

While the $D^{7}$ is occasionally retained with this progression of the $\mathrm{D}^{5}$, and the $\mathrm{T}^{3}$ doubled in the resolution, the student is cautioned against such modes of procedure as will result in a doubled 3 d , in any case for the present, and until it may be done advisedly.

Following the rule applied to chord connection in the triads, the $\mathrm{D}^{8}$, being a tone common to both chords, is retained in the same voice, becoming the $\mathrm{T}^{5}(d)$.

From the above details we form the following table of resolutions of the $\mathrm{D}^{7}$ chord to the triad of the Tonic:

The $\mathrm{D}^{7}$ resolves to the $\mathrm{T}^{3}$.
The $\mathrm{D}^{3}$ resolves to the $\mathrm{T}^{8}$.
The $D^{5}$ resolves to the $\mathrm{T}^{8}$ or $\mathrm{T}^{3}$.
The $\mathrm{D}^{8}$ is retained as a tone common to both chords and becomes the $\mathrm{T}^{5}$.

In the fundamental position of this chord the student, for the present, should omit the $\mathrm{D}^{5}$ and double the D fundamental, in order to obtain a complete triad in the resolution.


At (a) the complete $\mathrm{D}^{7}$ chord, consisting of four different notes, when strictly resolved, leads to an incomplete triad of the Tonic whose ${ }^{\text {thing }}$ but two different notes, C and E , thus resulting in an unDomina lance of the harmonic content of the two chords. The follow${ }_{\mathrm{r}} \mathrm{r}$ the present, preferred:


Here, it will be observed, the Dominant and Tonic chords each contain three different notes, resulting in a better balance between the two chords.

The $\mathrm{D}^{7}$ chord may at times retain its four notes complete, the 5 th ascending to the 5 th of the Tonic for resolution.


The $\mathrm{D}^{7}$ is classed as an intensifying chord. By intensification is meant the use of chords with compulsory resolution. This subject will receive more extended comment in another chapter.

It may be stated in this connection that while with certain conditions (to be made clear in a subsequent chapter) the 7 th may be doubled, it is absolutely forbidden to double the leading tone in any circumstances, except when necessary in order to preserve a harmonic or melodic figure in sequence.

Work out the following exercises in various keys as before. In the $\mathrm{D}^{7}$ chords omit the 5 th and double the fundamental.


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These exercises may be employed to form harmonic plans for accompaniments, over which melodies are to be constructed, as before. It may be stated that where, for the sake of good voice progression, a member of the chord has been omitted (as the $\mathrm{D}^{5}$ ) in the fundamental position of the $\mathrm{D}^{7}$ chord, such notes may be freely included among those available for use in the melody.

Play all these exercises and examples, and have them played.


* The harmonic scheme is shown at (a).


## CHAPTER IX

## INVERSIONS OF THE $D^{7}$ CHORD

The $\mathrm{D}^{7}$ chord, containing four different notes, is susceptible to three inversions.
The first inversion places the third from the fundamental in the bass, the other members of the chord forming the intervals of a 3 d , 5 th, and 6 th; figured $\frac{6}{5}$, the figure 3 being omitted for the sake of brevity. As the $\mathrm{D}^{3}$ has a compulsory resolution to the $\mathrm{T}^{8}$, this position is to be followed by the Tonic triad in fundamental position.


At (a) is an example of the first inversion of the $\mathrm{D}^{7}$ chord, the fundamental of which is G, with B as the bass, and is followed by the Tonic triad on C . At $(b)$ is the first inversion of the $\mathrm{D}^{7}$ chord on A, with $\mathrm{C}^{*}$ as the bass. At (c) the first inversion of the $\mathrm{D}^{7}$ chord on Eb requires a chromatic alteration of each of the interval figures; and at (d) the 3 d from the actual bass, F , is indicated by the sharp alone. In each case the chord is resolved into its Tonic triad.

The second inversion places the $\mathrm{D}^{5}$ in the bass, the other members of the chord forming the intervals of a 3 d , 4 th, and 6th; figured ${ }_{3}^{4}$.

As the $\mathrm{D}^{5}$ has optional resolution, this position of the chord may be followed by the T triad in fundamental position, observing the given rules for resolution of the $\mathrm{D}^{7}$ chord; or it may be followed by the first inversion of the T triad, in which case the $\mathrm{D}^{7}$ should be omitted (in order to prevent faulty doubling of the $\mathrm{T}^{3}$ ), and the chord of ${ }_{4}^{6}$ used instead of $\frac{4}{3}$.


At (a) is the second inversion of the $\mathrm{D}^{7}$ chord on G , with D as the bass; the other members of the chord forming the intervals of a 3 d , 4th, and 6th; figured ${ }_{3}^{4}$. At (b) is the second inversion of the $\mathrm{D}^{7}$ chord on A , with E as the bass, and the rest of the chord represented by the figures ${ }_{\substack{6 \\ 8 \\ 8 \\ \text {. }}}$. At $(c)$ is the second inversion of the chord of Eb and at (d) the second inversion of the chord of B , each of which is followed by its corresponding T triad.

At $(e),(f),(g),(h)$, the second inversions of the same D chords are given, with the $\mathrm{D}^{7}$ omitted in order to avoid doubling the 3 d in the resolution to the T chord.

The following exceptional resolution may be noted, which may be occasionally employed to good effect:

When the second inversion of the $\mathrm{D}^{7}$ chord is followed by the first inversion of the T chord, the $\mathrm{D}^{7}$ may resolve by degree upward to the $\mathrm{T}^{5}$.


This is given primarily to aid in analysis.

The third inversion places the $\mathrm{D}^{7}$ in the bass, the other members of the chord forming the intervals of a $2 \mathrm{~d}, 4$ th, and 6th, the figuring abbreviated to $\frac{4}{2}$ or 2 .

As the 7 th has a compulsory resolution downward one degree to the $\mathrm{T}^{3}$, this position of the chord is to be followed by the first inversion of the T triad.


Here we have the third inversion of the four $D^{7}$ chords given in the preceding example, with the $\mathrm{D}^{7}$ in the bass resolving to the $\mathrm{T}^{3}$, and with the T chord in its first inversion.


The student should transpose the following exercises to many different keys, and work out in all the different forms that have been given.



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Additional attention will be directed to the $\mathrm{D}^{7}$ chord in a subsequent chapter.

Play all these exercises and examples, and have them played.

## CHAPTER X

## SERIAL MODULATIONS

A modulation is a change of key without a change of signature, and is generally transitory.

Modulation is effected, melodically, by chromatic elevation or depression of one or more members of the diatonic scale based upon one Tonic, in such manner as to form a correct diatonic series based upon a different Tonic.


At (a) is given the accepted form of the diatonic major scale based upon the Tonic C. At (b) the diatonic succession is architecturally identical, with half-step successions between $3^{-4}$ and $7^{-8}$, based upon the Tonic G. This involves the chromatic elevation of F to F $\because$.

In like manner, at ( $c$ ), by chromatic depression of B , a major diatonic scale is formed with F as the Tonic.

At $(d),(e)$, and $(f)$ are examples, in similar manner, of the scale of $\hat{a}$ and the modulated scales to the directly related keys, $\hat{e}$ and $\hat{d}$.

Modulation is effected harmonically through the introduction of the D chord of a foreign key.


At（a），by the introduction of the $\mathrm{D}^{7}$ chord on D ，a modulation to the key of $\hat{\mathrm{G}}$ is effected．

In like manner，at（b）occurs a modulation to $\hat{\mathrm{F}}$ ，and at（c）a modu－ lation by the Dominant triad on E to the key of $\hat{\mathrm{a}}$ ．

Attention will be directed，for the present，to harmonic modu－ lations．

The harmonic modulations in the following six forms should be worked out serially．Other forms of modulation，as well as deviations from these，will be given later．

Modulation in each form should proceed serially，until the tonality represented by six flats or six sharps is reached，at which point the enharmonic change（without modulation）should be made，and the modulations continued as before，until a return to the original key is accomplished，thus completing the circle in that form of modulation． By enharmonic change is meant different notation for the same tones；for example， $\mathrm{B} ⿻ 二 丨 刂 灬, ~ C, ~ D b b$ represent the same tone．The en－ harmonic change from the key of Gb is to F \＃．

Rule I．Take the Tonic for a new Dominant，proceeding from major to major，and from minor to minor．


Beginning with the key of $\hat{\mathrm{C}}$ and following Rule I, we select the Tonic C for a new Dominant. By building a $\mathrm{D}^{7}$ chord consisting of $\mathrm{C}, \mathrm{E}, \mathrm{G}$ (omitted) and $\mathrm{B} b$ upon it, that note becomes a Dominant, which resolves to its corresponding Tonic, F.

Again, selecting the Tonic F for a new Dominant, by the same mode of procedure we accomplish a modulation to the key of $\hat{B} b$.

Continue in this manner through keys of major gender, until the key of $\hat{G} b$ (represented by a signature of six flats) is reached, at which point the enharmonic change (without modulation) to the key of F 部 made.

Modulation should then proceed in similar manner until a return to the initial key of $\hat{\mathrm{C}}$ is accomplished.
ill. No. 8 Beethoven
"Symphony I"


In like manner by the same rule, the keys of minor gender modulate to minor.


Beginning with the key of $\hat{a}$, and following the rule by taking the Tonic A for a new Dominant, we modulate to the key of $\hat{d}$; thence by the same means to $\hat{\mathrm{g}}$, and continuing until the key of $\hat{\mathrm{e}} \mathrm{b}$ is reached.

By making the enharmonic change to $\hat{d} \#$ and continuing as before, we finally return to the initial key of â, thus completing the circle, proceeding from minor to minor.


Rule II. Take the supertonic for a new Dominant, proceeding from major to major, and from minor to minor.


Beginning with the key of $\hat{C}$, taking the supertonic D for a new Dominant, we modulate to $\hat{\mathrm{G}}$, thus resolving to a major triad in conformity to the requirements of the rule. As the supertonic in the key of $\hat{G}$ is $A$, this note in turn is selected for the next Dominant, effecting a modulation to the key of $\hat{\mathrm{D}}$, etc.

$$
\text { Ill. No. } 10
$$

Schumann, op. 21, No. 1 - Novellette


Also by Rule II - from minor to minor - we commence with the key of $\hat{a}$ and modulate to $\hat{e}$, thence to $\hat{b}$, etc.


Rule III. Take the mediant for a new Dominant, proceeding from major to minor, and from minor to major.


Beginning as before with the key of $\hat{\mathrm{C}}$, and selecting the mediant E for a new Dominant, we effect a modulation to $\hat{a}$, conforming to the requirements of this rule in proceeding from major to minor; as the mediant in the key of $\hat{a}$ is C , that note is selected for a new Dominant, with a modulation to $\hat{F}$. Continuing after this plan until the key of $\hat{\mathrm{G}}$ b is reached, the enharmonic change is made, followed by the return to $\hat{\mathrm{C}}$.
As the minor keys obtainable by this rule are included in the above, the student will not be required to use $\hat{a}$ as an initial key.

IIl. No. 11
Schubert, " Unfinished Symphony in B Minor"


From $\hat{\mathrm{b}}$ to $\hat{\mathrm{G}}$.
Play all these exercises and examples and have them played.

## CHAPTER XI

## SERIAL MODULATIONS. (Continued)

Rule IV. Take the Subdominant for a new Dominant; major to major (a), and minor to minor (b), also singly, minor to major (c).


The student should also commence with the keys of $\hat{F}$ and $\hat{d}$, by this rule, to reach a number of keys not included in the circle when the initial key is $\hat{C}$ or $\hat{a}$.


Rule V. Take the submediant for a new Dominant; major to minor, minor to major.


Beginning with the key of $\hat{\mathrm{C}}$ and proceeding from major to minor, we reach the key of $\hat{d}$. As the signature of that key is one flat, the submediant would necessarily be $\mathrm{B} b$, which is the note to select for the new Dominant, effecting a modulation to $\hat{E} b$.

The student may also use $\hat{F}$ as the initial key.
ill. No. 13

$\hat{F}_{\text {并 to }} \hat{g}_{\text {尘. }}$
Rule VI. Take the subtonic for a new Dominant; major to minor, minor to major.


With $\hat{C}$ as the initial key, we select the subtonic $B$ for the new Dominant, modulating to $\hat{\mathrm{e}}$. As the signature of $\hat{\mathrm{e}}$ is one sharp, the subtonic in that key is D , which is the note to select for a new Dominant.

I11. No. 14
Chopis," Nocturne," op. 15, No. 3


From $\hat{\mathrm{g}}$ to $\hat{\mathrm{B}}$.
Let the student clearly understand that it is not the 3 d in the $\mathrm{D}^{7}$ chord (the subtonic elevated to serve as a leading tone) that is indicated as the note for selection by this rule for the new Dominant.

The 7 th of the scale in the minor mode is required to be raised chromatically when it forms a part of the $\mathrm{D}^{7}$ chord in order that the $3^{d}$ in that chord shall be major, but this fact in no wise affects its scale existence for serial modulation, which must conform absolutely to its signature indication.

Chromatic alterations of the 7th and 6th of the scale for melodic uses will be discussed later.

For the purpose of acquiring a thorough familiarity with the various inversions of the $\mathrm{D}^{7}$ chord and their resolutions to the Tonic, the student should review the preceding modulations (or at least a considerable part of them), using the $\mathrm{D}^{7}$ chord with its resolution not only in its fundamental position, but in all its inversions.

In order that they will appear in the most agreeable succession, the third inversion may be used first, to be followed by the second and first. Care should be taken to resolve each member of the chord in accordance with the rules.



By Rule I - taking the Tonic for a new Dominant - the modulation with the D chord in fundamental position, as already used, appears first; following this the third inversion of the same chord with the $\mathrm{D}^{7}, \mathrm{Bb}$, in the bass, resolving to the $\mathrm{T}^{3}$ in the succeeding chord; next the 2 d inversion of the same chord resolving to fundamental position, and, finally, the first inversion similarly resolved. This completes one modulation.

By this rule the succeeding key is $\hat{\mathrm{B}} b$, in which the same plan should be followed.

The student is advised to do this work by several of the rules, and in both major and minor genders.

## CHAPTER XII

## DIRECTLY RELATED KEYS

The directly related keys to any given key are those that may be represented by the same signature, or by one sharp or one flat more or less; also the Tonic minor of a major key and the Tonic major of a minor key.

Hence, the directly related keys to $\hat{\mathrm{C}}$, with the corresponding rules for modulation through which they may be reached, are as follows:

By the same signature, $\hat{a}$; by one sharp more, $\hat{G}$ and $\hat{e}$; by one flat more, $\hat{\mathrm{F}}$ and $\hat{\mathrm{d}}$ and the Tonic minor, $\hat{\mathrm{c}}$. As a signature of one sharp or one flat less than that of $\hat{C}$ is obviously impossible, they are not considered.
$\hat{\mathrm{F}}$, modulation by Rule I;
$\hat{\mathrm{G}}$, modulation by Rule II;
$\hat{\mathrm{a}}$, modulation by Rule III;
$\hat{\mathrm{d}}$, modulation by Rule V;
$\hat{e}$, modulation by Rule VI;
and the Tonic minor key of $\hat{c}$ with the same Dominant.
In like manner, those directly related to the key of $\hat{a}$ are:
By the same signature, $\hat{\mathrm{C}}$; by one sharp more, $\hat{\mathrm{G}}$ and $\hat{\mathrm{e}}$; by one flat more, $\hat{F}$ and $\hat{d}$ and the Tonic major, $A$.

One sharp or one flat less are, of course, not considered.
$\hat{\mathrm{d}}$, modulation by Rule I;
$\hat{e}$, modulation by Rule II;
$\hat{\mathrm{F}}$, modulation by Rule III;
$\hat{\mathrm{G}}$, modulation by Rule IV:
$\hat{\mathrm{C}}$, modulation by Rule VI;
and the Tonic major key of $\hat{\mathrm{A}}$ with the same Dominant.

The ones most closely allied among indirect modulations are those by Rule IV from major to major, and Rule V from minor to major.

Thus from $\hat{\mathrm{C}}$ and $\hat{\mathrm{a}}$, by these two rules the indirect modulation to $\widehat{\mathrm{B}} b$ is attained in both cases.

Indirect modulations are frequently effected by combinations of , two or more different rules.

In order to modulate from the key of $\hat{\mathrm{C}}$ to $\hat{\mathrm{g}}$, Rules I and V may be used in combination, thus:


To modulate from $\hat{\mathrm{G}}$ to $\hat{\mathrm{F}}$, Rules V and III are employed, thus:


Modulations are frequently effected through a repetition of the same rule.


Here, by repetition of Rule II, a modulation from $\hat{\mathrm{C}}$ to $\hat{\mathrm{D}}$ is accomplished.
By what rules or combination of rules would the following modulations be accomplished:
$\hat{\mathrm{C}}$ to $\hat{B} b, \hat{\mathrm{C}}$ to $\hat{\mathrm{F}}, \hat{\mathrm{C}}$ to $\hat{\mathrm{G}}, \hat{\mathrm{G}}$ to $\hat{\mathrm{e}}, \hat{\mathrm{G}}$ to $\hat{\mathrm{F}}, \hat{\mathrm{F}}$ to $\hat{\mathrm{g}}, \hat{\mathrm{F}}$ to $\hat{a}, \hat{\mathrm{C}}$ to $\hat{\mathrm{e}}$, $\hat{G}$ to $\hat{b}, \hat{D}$ to $\hat{a}, \hat{d}$ to $\hat{C}, \hat{F}$ to $\hat{e}, \hat{B}$ b to $\hat{A} b, \hat{A}$ to $\hat{b}$ ?
The instructor should add many other modulations by combination of two or three rules, all of which should be thoroughly expounded, both orally and by writing.

The following oral practice should accompany the above:
Modulating from $\hat{C}$ by Rule I, what key would be reached? By Rule II? III? IV? V? VI?

Modulating from $\hat{A}$ by Rules I and II? III and IV? V and VI?

## CHAPTER XIII

## HARMONIZATION OF MELODIES

From this point the practice of harmony will continue under given melodies.
The entire scheme of harmonization of melodies will be conducted through the use of the three primary notes, the Tonic [T], Subdominant $[\mathrm{S}]$, and Dominant [D], and their chords in various forms; and it may be stated here that the scope of this three-point mode of harmonization will include the employment (as tributaries of these chords) of all harmonies to be found in the works of the standard composers, together with their progressions and general treatment.

The student will, for a time at least, place the primary initials T , S, D, in capitals above the notes of melody, to aid in selecting desirable basses, and to assist in subsequent analysis.

Rule I. Harmonize the first, third, or fifth of the scale with the Tonic [T] (a), the fourth or sixth with the Subdominant [S] (b), and the second or seventh with the Dominant [D] (c).


The 7 th should be used in the Dominant chord when it is followed by the Tonic, unless its use causes a doubling of the $\mathrm{T}^{3}$ in the resolution, in which case the 7 th should be omitted.


At (a) the given melody moves from the second of the scale to the thircl, that is, from the $\mathrm{D}^{5}$ to the $\mathrm{T}^{3}$; as the $\mathrm{D}^{7}[\mathrm{~F}]$ has a compulsory resolution it must, of necessity, resolve to the $\mathrm{T}^{3}$ [E], causing an undesirable doubling of that note. At (b) the $\mathrm{D}^{7}$ has been omitted, the complete triad of the Dominant progressing regularly to the triad of the Tonic, without the offending doubled 3 d .

An example of a melody harmonized as directed above, using fundamental basses only, and adding the 7 th to the Dominant triad when it can be done without doubling the 3d in the resolution to the succeeding Tonic triad, is here given.


At (a) the first of the scale, C, is harmonized with the Tonic, C, the triad of which is $\mathrm{C}, \mathrm{E}$, and G , with C in the soprano, and G and E assigned to the alto and tenor in a position as near the soprano as is possible. We have thus properly harmonized the initial note.

At (b) the seventh of the scale is harmonized with the Dominant, G. As the $\mathrm{D}^{7}$ chord is $\mathrm{G}, \mathrm{B}, \mathrm{D}$, and F , it follows that with the $\mathrm{D}^{5}$ omitted and the B already in the soprano, the doubled G and the F would be available for the alto and tenor. As the $G$ is the note common to this and the preceding chord, it should be retained in the same voice (the alto), thus leaving the seventh, F , for the tenor.

At (c) the common note $G$ is retained in the alto, and the $D^{7}$ resolved to the $\mathrm{T}^{3}$ in the tenor.

As the melody note at (d) procceds to the $\mathrm{T}^{3}$ at (e), it is obvious that if the 7 th should appear in the Dominant chord at (d), it would demand a resolution to the $\mathrm{T}^{3}$ at (e), thus doubling that member in the latter chord. To obviate this, the 7 th is omitted, and the D triad used instead.

As the note common to the two chords, G , is in the alto, the remaining note B is assigned to the tenor, thus placing the chord in open (or dispersed) position, as are, by natural progression, the next six chords.

At $(f)$ the fourth of the scale is harmonized with the Subdominant, the note common, C, being retained in the tenor. At (g) the fifth of the scale is harmonized with the Tonic; in order to retain the note common in the tenor, the alto descends a 4th to E, a distance of more than an octave between it and the soprano note, G.

This distance is lessencd in the next chord.
At ( $h$ ) are applications of the following rule:
When the second of the scale is followed by the first, the $\mathrm{D}^{3}$ in the fundamental position of the $D^{7}$ chord may be omitted and the fundamental doubled, thus assuring a complete triad in the resolution.

The omission of the 3 d from the Dominant is always of a passing or temporary character, and should never occur in the penultimate chord, the following solution being preferred:

When the $\mathrm{D}^{7}$ chord is in fundamental position, the $\mathrm{D}^{3}$, if it occurs in the alto or tenor, may descend to the $\mathrm{T}^{5}$, resulting in a complete triad as the chord of resolution. The bass, in this case, should move in contrary motion.


This resolution of the 3 d of the Dominant is, at times, quite effective, particularly when the second of the scale, followed by the first, appears in the given melody.

Rule II. When the first of the scale is repeated, it may be harmonized with the Subdominant.


Rule III. When the fourth of the scale is followed by the third, the fourth may be harmonized with the Dominant.


As may be readily seen, the fourth of the scale with this harmonization is the 7 th in the $\mathrm{D}^{7}$ chord, duly resolved to the $\mathrm{T}^{3}$.

It is not to be assumed that this rule applies to all cases, as the fourth followed by the third, notably in the cadence, is frequently harmonized with the Subdominant.

Harmonize the following melody, conforming to the above three rules; transpose to several different keys and harmonize.


At (a) the first of the scale C, repeated, is harmonized with the Subdominant. At (b) the same note, again repeated, is given the T harmony. At (c) the positions in the chord of the alto and tenor notes are changed to improve the voice leading and bring the various voice parts to better relative distances from each other.

At (d) the fourth of the scale is given the S chord; while at (e) the fourth, being followed by the third, has the D harmony.

At $(f)$ the $\mathrm{D}^{3}$ descends to the $\mathrm{T}^{5}$, giving better relative positions to the voice parts than would have otherwise been the case.

At $(g)$ the positions of the alto and tenor have again been changed within the chord to get better subsequent voice leading, such as avoidance of parallel octaves and of all voices moving in similar direction.

Rule IV. The fifth of the scale may, at times, be harmonized with the Dominant; when it occurs several times in succession, it should be harmonized alternately with the Tonic and Dominant, generally selecting the Tonic for the first harmonization.


This harmonization is particularly applicable wher the fifth of the scale is followed by the first above or below, in which case the T chord of resolution is generally incomplete by its 5 th being omitted, as at (a) in the following example, unless the 3 d in the alto or tenor descends to it.


Ill. No. 15
Lowell Mason, "Hebron"


These exercises should be transposed to various minor keys and harmonized in accordance with given directions.

As the 3 d from the fundamental in all D chords is required to be major, and as that note, according to the key signature, is minor, it must necessarily be elevated in order properly to form such chord.

The subtonic thus becomes a leading tone with a tendency to resolve upward to the Tonic.

This necessitates, therefore, the elevation of the seventh degree of the scale in such transposition.

Exercise 167 transposed to â would appear as follows:


## CHAPTER XIV

## HARMONIZATION OF MELODIES. (Continued)

Rule V. When a primary note or fundamental is followed by another a fourth higher, a $\mathrm{D}^{7}$ chord may be formed upon it, effecting a passing modulation.

This frequently occurs when the T chord is followed by the S chord, the T chord becoming a passing Dominant to the key of the Subdominant as by Rule I of Serial Modulations. The Tonic chord thus becomes temporarily a Dominant of the Subdominant [DS].


At (a) is the usual harmonization of the first of the scale with the Tonic, and repeated with the Subdominant.

At (b) the minor 7 th $\mathrm{B} b$ is added to form a $\mathrm{D}^{7}$ chord and a passing modulation, as by Rule I of Serial Modulations.

*Passing modulation as a Dominant of the Subdominant.
The following exercise involves the application of the preceding five rules, and should be worked out in several keys.


At (a) the first of the scale is harmonized with the Tonic; but, as the fundamental C moves upward a fourth to F , a passing modulation may take place by forming a $\mathrm{D}^{7}$ chord on the primary note C .

As the initial chord should be the T triad, the 7 th is added only in the latter half of the chord, thus effectually forming from the Tonic a passing Dominant of the Subdominant [DS].

At (b), in order to separate the upper three voices more equally, the tone common to the two chords is not retained in the same voice; at (c) the fifth of the scale is harmonized with the Dominant to conform to the rule; at (e) the fourth, followed by the third of the scale is harmonized with the Dominant; and at $(f)$ the $\mathrm{D}^{3}$ descends to the T ${ }^{5}$.
At (d) the primary note C again moves upward a fourth, inviting a passing modulation to the Subdominant. As this is preceded by the $\mathrm{D}^{7}$ chord on the note G , the use of two $\mathrm{D}^{7}$ chords in immediate succession is involved.

This may occur when a normal $D^{7}$ chord, followed by its $T$ chord, is in turn succeeded by a $S$ chord, inviting a passing modulation through forming a seventh chord on the Tonic and making that note temporarily a Dominant.

It may be seen in the above example that the $\mathrm{D}^{3}[\mathrm{~B}]$, instead of resolving to the $\mathrm{T}^{8}$, is chromatically altered to become the 7 th in the passing Dominant chord. The effect of this is as though the 3d [B] had resolved to the $8 \mathrm{va}[\mathrm{C}]$ and then proceeded to the Bb to aid in forming the new Dominant.
Therefore, when a $D^{7}$ chord is followed by another in immediate succession, the 3 d or 5 th need not be omitted, as the usual resolution
to the T triad is not affected. The 3 d of the first Dominant, instead of resolving to the 8 va of the Tonic, is chromatically altered to become the 7 th in the succeeding chord.

The student is cautioned against the employment of a note in one voice part immediately followed by its chromatic alteration in another.

This leads to the announcement of the following most important principle in the theory of music.

As a chord consisting of a major 3 d , perfect 5 th, and minor 7 th, or an inversion of the same, is, and may be considered only as, a $\mathrm{D}^{7}$ chord whose fundamental, regardless of the key indication of the signature, must itself be a Dominant, it is obvious that wherever it appears it clearly identifies an individual tonality, whether or not it is followed by a resolution to a corresponding Tonic triad.


* A series of $D^{7}$ chords representing the following keys: $\hat{C}$ or $\hat{c}, \hat{F}$ or $\hat{f}, \hat{B} b$ or $\hat{b} b$, $\hat{E} b$ or $\hat{e} b, \hat{A} b$ or $\hat{a} b, \hat{D} b$ or $\hat{d} b, \hat{G} b$ or $\hat{g} b$ and $\hat{C} b$ or $\hat{c b}$.



Transpose these exercises to many keys and harmonize similarly.
Transpose to minor keys and harmonize similarly. As the T chord in the minor mode is a minor triad, the 3 d must be elevated in forming a DS chord.


At (a) the second quarter appears as a DS chord, the $\mathrm{T}^{3}$ having been elevated as required.

Progressions of voice parts by augmented interval should generally be avoided. This applies particularly to augmented 2 ds and 4 ths ascending. Augmented 2 ds are, however, sometimes unavoidable at present in given melodies transposed to minor keys.

## CHAPTER XV <br> HARMONIZATION OF MELODIES. (Continued)

## Employing Inversions

The following exercises should be harmonized in accordance with the preceding rules, the student employing the inversions of the various chords in such manner as to form diatonic passages of greater or less length, with a view to making the bass part as melodious as possible.

These exercises should be worked out in both close and open position.
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At (a) the seventh of the scale is harmonized with the Dominant, the chord consisting of $\mathrm{G}, \mathrm{B}, \mathrm{D}$, and F . In selecting from these a note for the actual bass, care must be taken to avoid choosing such one as would occasion faulty doubling with the given melody note; therefore the B in the melody, which is the 3 d from the fundamental, must not appear in the bass. By selecting F a diatonic bass passage of several notes may be obtained. As F is the 7 th of the Dominant, it must be followed by the $\mathrm{T}^{3}$ for resolution, as at (b).

At (c), as the fourth of the scale followed by the third receives the D harmonization, and as D is one of the available notes of the chord, it is selected in order that the passage may be continued diatonically downward. The bass passage continues in the next chord, where the bass note, C , being the resolution of the $\mathrm{D}^{5}$, is one degree further in the same direction.

At (d) the $\mathrm{D}^{7}$ is not available, as its resolution appears in the soprano at the next chord. At (e) the primary note, ascending a fourth, invites a passing modulation by Rule I.

Exercises 173, 174, and 175 should be worked out similarly in many keys.

The same exercises may be worked out in quarter-note motus, using fundamental positions and inversions as follows:


Before proceeding further with this section of the work special consideration of the ${ }_{4}^{6}$ chord is necessary.

This chord, which is the second inversion of the triad, is a peculiarly dependent one, and is seldom used with good effect except in connection with other chords upon which it directly depends for a satisfactory existence.

It is best employed with the following conditions:
I. When preceded and followed by a triad or seventh chord upon the same bass.


At (a) the ${ }_{4}^{6}$ chord is preceded and followed by the triad on the same bass note, C. At (b) the ${ }_{4}^{6}$ chord is preceded by a triad and followed by a $\mathrm{D}^{7}$ chord on the same note, G .
II. When it occurs between two bass notes a diatonic degree above and below its bass.


At (a) the ${ }_{4}^{6}$ chord occurs between the bass notes E and C . At (b) it occurs between the bass notes F and A . In both instances it acts as a passing chord between two different positions of another chord.
III. When it is preceded or followed by other positions of the same chord.

IV. When it is followed by a triad or seventh chord on the same bass for the formation of a cadence (to be considered later), or when as the second inversion of the T chord it is followed by the third inversion (or the first inversion) of a D chord.


At (a) the ${ }_{4}^{6}$ chord is followed by a triad; at (b), by a $\mathrm{D}^{7}$ chord, both of which in turn are followed by a triad on the Tonic. At (c) the ${ }_{4}^{6}$ chord is followed by the third inversion of the $\mathrm{D}^{7}$ chord on G , figured ${ }_{2}^{4}$, which is resolved to the first inversion of the Tonic, C. At (d) and $(e)$ it is followed, respectively, by the first inversion of the $\mathrm{D}^{7}$ chord and of the D triad.

The bass in this chord is generally doubled.
The initial, final, and penultimate notes of the bass part should be in fundamental position.

The S chord should not, for the present, follow the D chord.
The student should carefully avoid overlapping the voice parts, particularly the bass, which must not appear above the tenor.

## The Abbreviated $\mathrm{D}^{7}$ Chord D)

With the fundamental omitted from the $\mathrm{D}^{7}$ chord, the three remaining notes present a series of thirds forming a triad on the subtonic, as a leading tone.
The subtonic is here considered its nominal fundamental, its real fundamental being the Dominant. Symbol, D).

This chord is at its best in its first inversion ( $\mathrm{D}^{5}$ in the bass), and with the $D^{3}$ in the soprano; it is, in fact, otherwise not very satisfactory, and is rarely employed.

In this position the $\mathrm{D}^{5}$ is doubled when the chord is followed by the first inversion of the T triad (a); when it is followed by the T triad in fundamental position, the 7 th is doubled, one resolving to the $\mathrm{T}^{3}$ and the other ascending to the $\mathrm{T}^{5}$ (b).

The second inversion ( $\mathrm{D}^{7}$ in the bass) is acceptable only with the - $\mathrm{D}^{5}$ doubled (c).


The chord is rarely used in its fundamental position, and the student would do well to avoid it.

This chord was much fancied by the old masters, who generally omitted the fundamental in the second inversion of the $\mathrm{D}^{7}$ chord.


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## CHAPTER XVI

## SECONDARY CHORDS ON THE SUBDOMINANT

In the Subdominant chord, the 6th may be substituted for the 5 th, to form the Subdominant substituted 6th chord. Symbol, $\lfloor$ S.

This chord is an application of the triad of the supertonic (which is its fundamental) to Subdominant harmonization, and will be directly considered only in connection with and as a member of the family of $S$ chords.

It has the greater local significance as a primary chord when it appears in its primary position with the Subdominant as the bass, although in both its fundamental and ${ }_{4}^{6}$ position the Subdominant character is always present, excepting when in its fundamental position it is preceded by such dissonant chord as would tend to localize it as a point of destination or partial repose. As in the triad, it is the $S^{3}$ that is not suitable for doubling. This is particularly true, as to its application, in the major mode. It may be understood that the minor 3 d from the fundamental of any chord is not as objectionable for doubling as is the major 3 d .

This chord may be freely used in all inversions, as exemplified with symbolized figuring in the following:


At (a) is the triad of the Subdominant, F, in the key of $\hat{\mathrm{C}}$. At $(b)$ the 6th is substituted for the 5th. At (c), (d), and (e) are given the chord in its various positions, with symbolized figuring.

The secondary Subdominant symbol $L$ is used in connection with this chord for purposes of immediate identification, and as an aid in subsequent analysis.


In the Subdominant chord the 6th may be added to the triad to form the Subdominant added 6th chord. Symbol, $\Perp \mathrm{S}$.

This chord, in like manner, is an application of the supertonic 7 th chord for Subdominant harmonization, and will be classed directly as another member of the family of $S$ chords.

It may be freely used in all positions, the figuring for which should have the special symbol $(\Perp)$ attached.


At $(a)$ is the S triad in the key of $\hat{\mathrm{C}}$. At $(b)$ the 6 th is added to the triad. At $(c),(d),(e)$, and $(f)$ the various positions of the chord, with symbolized figuring, are given.


Although the fundamental of the chords of the substituted and added 6th on the Subdominant is the supertonic, the Subdominant remains the primary note of the chord, and the passing modulation effected by one primary note being followed by another a fourth higher, is, therefore, applicable; this occasions one form of what is known as the deceptive cadence, which will be brought more extensively to notice later on.


The progression of the various notes of this chord is, in general, to the notes lying nearest in the succeeding chord, but in such manner that no faulty parallel 5 ths or 8 vs appear. The probability of the occurrence of such faulty progressions is, in this connection, yery great.

When the fundamental position of the $\| \mathrm{S}$ chord (expressed, Subdominant added 6th chord) is followed by the fundamental position of the D chord, the $\mathrm{S}^{3}$ may be omitted, and the fundamental (supertonic) doubled, as in the $\mathrm{D}^{7}$ chord.


In the major keys, the $S^{3}$ may be depressed. This applies to the $\leq S$ and the $\lfloor\mathrm{S}$ chords as well as to the triad.


As the tendency of elevated notes is to progress upward and of depressed notes downward, the depressed 3 d in the S chord should progress downward one degree, rather than an augmented second to the degree above, when the S chord is followed by the D chord.


The extension of the list of S chords as given above suggests the following additional rule for harmonization.

Rule V. The second of the scale may, at times, be harmonized with the Subdominant.

As the second of the scale is the $\mathrm{S}^{6}$, it is obvious that only the $\lfloor\mathrm{S}$
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At (a) the second of the scale is harmonized with the Subdominant, using the $\Perp S$ chord in primary position.

At (b) the second of the scale is harmonized with the Subdominant, using the $\lfloor$ S chord in fundamental position. As the primary note is the Subdominant, F, the preceding primary note, C, being followed by another a fourth higher, is converted to a temporary Dominant by addition of the 7 th.

The simple existence of the $\mathrm{D}^{7}$ chord on C involves a temporary modulation to the Subdominant, and is resolved equally well to all forms of the S chord.


At (a) the primary note, C, being followed by the primary note, F, is converted into a temporary Dominant by addition of the 7 th, $B$ b. At (b) the depressed 3 d is used in the first inversion of the S triad. At (c) the second of the scale is harmonized with the $\underline{S}$ chord in fundamental position. The primary note, C, at (d) is converted to a temporary Dominant moving to the primary note, F , with the $\lfloor S$ chord. At $(f),(g)$ the harmonization of the second of the scale is divided between the $\| \mathrm{S}$ and the $\mathrm{D}^{7}$ chords. At (h) the fourth of the scale is harmonized with the Subdominant, and at (i) the second of the scale is given the $\|$ S chord with depressed 3 d.

The following examples should be worked out with application of the given forms of the S chord, alternately, for practice.


## Dominant of the Dominant [DD], Passing Modulation

The admission of the $\lfloor\underline{S}$ to the list of those available for harmonization invites in turn a second application of the rule for passing modulation as given on page 73 .

The one already in use occurs when the Tonic as a primary note is followed by the Subdominant as another primary note, a fourth higher.
When the $\| S$ chord, whose fundamental is the supertonic, is followed by a D chord, the fundamental of which is a 4 th higher, a $\mathrm{D}^{7}$ chord may be formed upon it, effecting a passing modulation as a Dominant of the Dominant [DD].
As the given melody may not be altered, the necessary chromatic alteration must be made in the lower voices.



At (a), in order to prevent the soprano and alto from being too far apart, the inner voices have been exchanged. At (b) the second of the scale, harmonized with the $\lfloor S$ chord, is followed, at $(c)$, by the third inversion of the $\mathrm{D}^{7}$ chord, F serving as the bass in both chords. At (d) the first of the scale, C, repeated, receives the $\lfloor$ S harmonization, with a supertonic fundamental, which, being followed by a fundamental (G) a fourth higher, is altered to become a $\mathrm{D}^{7}$ chord [DD]; this has been done in the last half of the note, thus effecting a passing modulation (as DD) agreeing with Rule II of the Serial Modulations.

A similar case is at (c), where the chromatically altered note appears in the alto. This may be accomplished also by chromatically altering the $3 \mathrm{~d}(\mathrm{~F})$ immediately upon reaching the fundamental located a fourth higher, leaving the $\lfloor\mathrm{S}$ form of the chord to be implied; but the student is advised to do so but rarely, until its meaning is thoroughly absorbed, in order that the original idea in the harmonization should not be lost.


At (a) the first inversion of the $\mathrm{D}^{7}$ chord is resolved to the T triad, upon the last half of which at $(b)$ a DS chord is formed leading to the $\Perp S$ chord; this in turn is altered at (c) to become a DD chord succeeded at (d) by the triad and 7 th chord on the normal Dominant.

In the following example the same harmonizations are given with the intermediate normal progressions omitted, although implied, and the passing modulatory progressions approached directly.


As will be seen from the above, $D^{7}$ chords may follow one another in immediate succession, thus effecting a series of passing modulations by successive D chords.


* The $D^{7}$ chord on $D \#$ followed by the $D^{7}$ chord on $G$ \# .

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IIl. No. 25
Mendelssohn, "St. Paul"
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*The $\mathrm{D}^{7}$ chord on A , followed by the D chord on D , with an interpolated ${ }_{4}^{6}$ chord.

The application of $\mathrm{D}^{7}$ chords in this manner may be regarded in general as an effort toward intensifying the harmonic progression toward the cadential Dominant, which, with its resolution, is the real point of destination.

This intensification is enlisted primarily by the substitution of dissonant chords, as chords of motion, for those of resolution which create an impression of partial or complete repose, thus deferring the effect of finality until the concluding Tonic harmony through its Dominant has been reached.

Work out the following exercises in both major and transposed minor keys, introducing passing modulations through the DS and DD chords, opportunities for which occur with the following harmonic successions: $T$ to $S$ chord and $\| S$ to $D$ chord.



## CHAPTER XVII

## MELODIC MODULATION

We have learned from a previous chapter that modulation is effected melodically by establishing a correct diatonic scale series based upon a Tonic other than the prevailing one.

It is not necessary, however, that a complete new scale series should appear in order to bring about such modulation. A section of one key, consisting, possibly, of no more than two or three notes, may be assumed to be in a foreign key, and when harmonized accordingly may be positively identified as belonging to that tonality.


At (a) we may assume that the two notes G and F (which are the fifth and fourth of the scale in the key of $\hat{C}$ ) are the second and first of the scale in the key of $\hat{\mathrm{F}}$, and by harmonizing them accordingly, they become positively identified with that tonality.

At (b) the D may be assumed to be the fifth of the scale in the key of $\hat{G}$, which becomes positive by harmonizing it accordingly. At (c) the C and B may be assumed to be the fourth of the scale followed by the third in the key of $\hat{\mathrm{G}}$. At (d) the depressed B, which is not a part of the diatonic scale of $\hat{C}$, may be readily assumed to be the fourth of the scale in the key of $\hat{\mathrm{F}}$, and at (e) the elevated F may be taken as the seventh of the scale in the key of $\hat{\mathrm{G}}$. All of which is substantiated by corresponding harmonizations.

Here follows a series of rules for melodic modulation, at indicated notes, to directly related keys. As modulation is effected harmonically through the Dominant of the new key, the indicated notes must necessarily receive Dominant harmonization. In each modulation the new key will be retained until the next indicated note is reached.

Rule I. When the indicated $(+)$ note of modulation descends a half step, it goes to the third of the scale in the new key.


At (a) the indicated note of modulation, C , descends a half step to $B$, which becomes the third of the scale in the key of $\hat{G}$, and as C is the fourth of the scale followed by the third, it is harmonized with the Dominant.

The key of $\hat{\mathrm{G}}$ is retained until we reach the next indicated note of modulation, F , which descends to the third of the scale in the key of $\hat{\mathrm{C}}$. The note of modulation $\mathrm{B} b$ descends to the third in the key of $\hat{F}$, and finally the note $F$ descends to $E$, the third in the initial key of $\hat{C}$.


Rule II. When the indicated ( + ) note of modulation ascends a half step, it may go to the first of the scale in a new major key, or to the first or third of the scale in a new minor key.


At (a) the note of modulation, E , ascends a half step to the first of the new scale, $F$. As the E is the seventh of the scale in the key of $\hat{F}$, it is harmonized with the Dominant, $C$, thus definitely effecting a modulation to that tonality.

At (b) the E again moves upward to $F$, but, as the key of $\hat{F}$ is already in force, a modulation cannot be made to that key; therefore the E moves to the third of the scale in the key of $\hat{\mathrm{d}}$.

Since the $\mathrm{T}^{3}$ occurs in the soprano, the 7 th may not appear in the preceding D chord, as its use would cause a faulty doubling in the resolution.

In the second measure a chord with C in the tenor is succeeded by one with $\mathrm{C}=$ in the bass, which is the employment of a note in one voice part, immediately followed by its chromatic alteration in another. This is known as a false relation, which, while usually forbidden, is allowed when the fundamentals of the two chords involved are a 3 d apart. As $F$ and $A$, the fundamentals of these chords, fulfill these requirements, the objection does not apply.

At (c) the indicated note, F\#, ascends a half step to G. As $\hat{\mathrm{G}}$ is not directly related to $\hat{\mathrm{F}}$, the modulation would be to $\hat{\mathrm{g}}$, which being represented by one flat more than the key of $\hat{F}$, is a directly related key.

At (d) the F \# again ascends a half step to G and may invite a modulation only to the tonic major key of $\hat{\mathrm{G}}$. At (e) the modulation back to $\hat{\mathrm{C}}$ is obvious. At $(f)$ the note of modulation, $\mathrm{C} \#$, ascends to D . As the key of $\hat{D}$ is not directly related to the key of $\hat{C}$, the modulation must be to $\hat{d}$. At (g) the modulation returns to the initial key of $\hat{C}$.


An exercise is here given, involving the application of Rules I and II, which should be transposed to several initial keys and worked out as before.


Rule III. When the indicated ( + ) note of modulation descends a whole step, it goes to the first of the scale in a major key, or to the first or third of the scale in a minor key.


At (a) the note of modulation descends a step to the first of the scale, F , in the new key. G, being the second of the scale in the key of $\hat{F}$, is harmonized with the Dominant of that key. At $(b)$ the indicated note descends to D . As the key of $\hat{\mathrm{D}}$ is not directly related to $\hat{\mathrm{F}}$, the modulation is to $\hat{\mathrm{d}}$; at (c), a modulation in the same manner to $\hat{\mathrm{C}}$. At (d) the same succession of notes involves a modulation to â; at (e), in like manner, a modulation to the directly related key of $\hat{\mathrm{d}}$; at $(f)$ to $\hat{\mathrm{F}}$, and at $(g)$ the return to $\hat{\mathrm{C}}$.


Rule IV. When the indicated ( + ) note of modulation ascends a step, it goes to the third of the scale in the new key.


It will be noticed that the modulations by this rule are effected without the use of the 7 th in the D chord, the resolution of which would cause a doubling of the 3 d in the succeeding T chord.

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\text { 111. No. } 29 \text { Ahle, 1664, "Choral" }
$$



The student will work out the following examples after Rules III and IV from several initial keys.


Rule $V$. When the indicated ( + ) note of modulation is repeated, it becomes the fifth of the scale in the new key.


The application of Rule V will be readily understood by the student without special comment.


The following examples, including the application of all the five rules for modulation, should be worked out from various initial keys.


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Rule VI. When the indicated ( + ) note of modulation ascends a fourth or descends a fifth, it goes to the first of the scale in the new key.



Work out the following exercises for application of the six rules, from various initial keys.

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Two examples follow in which the student will be expected to select and indicate suitable notes of modulation, endeavoring to apply all of the six rules. Care should be taken toward effecting modulations only.to directly related keys. The instructor may utilize the preceding examples with the indicatory symbols eliminated for the same purpose.



Double indications $(\overparen{+}$ ) will be in frequent use in this work. The second symbol determines the modulation, which goes into effect at the first.


Ill. No. 32
Barnby, "Bethlehem"


Additional examples follow:



In example 2 I 8 the following modulations occur: $\hat{\mathrm{C}}$ to $\hat{G}, \hat{e}, \hat{D}, \hat{d}$, $\hat{F}, \hat{a}$, and $\hat{C}$.

## CHAPTER XVIII

## EMBELLISHMENTS

An embellishment is a note used in connection with a chord of which it does not form a part. (It may also be a deviation from a given melody.) The list of embellishments includes: suspensions, retardations, passing notes and auxiliaries of various species, arpeggios, etc., which will be marked for identification by the diagonal stroke through the body of the note. Symbol,

## Suspensions

A suspension is a note, which, having occurred as a note of harmony in one chord, is sustained or repeated in the same voice through a portion of the time of the succeeding chord, of which it does not form a part.


A suspension is said to be prepared when it occurs as a member of the chord of preparation, as at (a); suspended when it is sustained as a dissonance in the succeeding chord, as at (b); and resolved when it descends one degree to a harmony note in the same chord, as at (c). At $(d)$ is given the two chords as they appear without the suspension.

The classification figures 8-4-3, that is, preparation 8, suspension 4 , resolution 3, indicate a suspension of the fourth, prepared by the octave, and resolved to the third.

Such classification figures, representing the preparation, suspension, and resolution, placed above the notes so represented, may be used with excellent results to impress upon the mind the functions of the various notes and to serve as a medium of identification and reference.

In the classification of suspensions it must be understood that the various species are distinguished by the interval distances of the various notes involved from the primary note, and not from the actual bass notes as in the case of symbolized figuring.


At (a) the classification figures $3-6-5$ indicate that the preparation E is a 3 d from the primary note C , and that the suspension is a 6 th, and the resolution a 5 th, from the primary note $G$.

At (b) the preparation is a 5 th from the primary note $G$, the suspension is a 9 th, and the resolution an 8 va , from the primary note C. Classification figures 5-9-8.

At (c) the preparation is a 7 th from the primary note G , and the suspension and resolution a 4 th and 3 drom the primary note C . Classification figures 7-4-3.

This mode of classification may be used for some time to good advantage as an aid in impressing on the mind of the student the plan of the various elements of the suspension.


Suspensions generally occur on the accented part of a bar (b) or the stronger part of a beat ( $f$ ).

While the preparation of a suspension usually occurs on the unaccented part of the bar (a), it may also appear on the accented part (c), and when tied over to the suspension should be of at least equal duration; when it is not tied to the note of suspension, it may be shorter (d).

The resolution of a suspension should occur on the unaccented part of the bar $(e)$, or the weaker part of a beat $(g)$.

Progressions that are faulty without suspensions are equally or more so when suspensions are employed.

The resolution of a suspension should not be heard in another part simultaneously with the suspension, excepting in the bass and at a distance of not less than an octave. When the suspension occurs in the bass, the resolution should not be heard in any upper part except when it is the primary note, or fundamental, approached by degree in contrary motion; in such circumstances, the simultaneous employment of the resolution is allowed at a distance of a seventh or more above the suspended note.

Note. For the present, at least, the student is advised against doubling the resolution of a suspension in any case, except when it is the primary note, or fundamental.

With the figured bass, the symbol for suspensions is the radical $\wedge$ placed before, and inclined downward toward, the figure representing the note of resolution, and indicates that the note on the degree above it has been suspended.


At (a) the symbolized figure $\wedge 3$ represents the triad with the note above the 3 d suspended ( C suspended above B ). At (b) the symbolized figures represent a chord of $\wedge_{4}^{6}$, with the note above the 6th suspended (C suspended above $B$ ).

When the suspension occurs in the bass, the figure with symbol representing the suspension and resolution, thus, $\wedge \mathrm{I}$, is abbreviated to the symbol alone, $\wedge$, which is understood to mean that the actual bass forms the resolution of a suspension from the degree above, as at (c).

Note. This system of bass figuring with suspensions is submitted by the author to satisfy demands that may be advanced for general systemization of bass figuration; but, while he is satisfied that it is the simplest as well as the most comprehensive that has thus far been offered, he would advise instructors that satisfactory results, both for clarity in comprehension and for subsequent analysis, may be obtained through the employment of the classification figures above the staff and without the use necessarily of the symbolized bass figuring.

Rule I. When a primary note is followed by another a fourth higher, we may suspend the 9th, prepared by the 5 th and resolved to the 8 va .


The primary note $G$ is followed at (a) by the primary note C, wnich is a fourth higher, granting a suspension of the 9th prepared by the 5 th and resolved to the 8 va . This is illustrated by the classification figures $5-9-8$, indicating a suspension of the 9 th prepared by the 5 th and resolved to the 8 va ; the notes and the symbolized figuring $\wedge 8$ indicating a suspension of the note above; that is, the 9th, D , resolved to the $8 \mathrm{va}, \mathrm{C}$.

At (b) the primary note C is followed a fourth higher by the primary note F , with a suspension of the 9th, prepared by the 5 th and resolved to the 8 va , occurring in the alto. At $(c)$ is an example of the same suspension, with the chord of preparation in the second inversion and the chord of suspension and resolution in the first inversion. At (d) the chord of suspension and resolution appears in the second inversion. At (e) the suspension occurs in the bass with the symbolized figuring as described above.

The symbolized figuring will be readily understood by the student without further comment.


Rule II. When a primary note is followed by another a fifth higher, we may suspend the 4th, prepared by the 8 va and resolved to the 3 d .


At (a) the primary note is followed by another primary note a fifth higher, inviting the suspension of the 4th, prepared by the 8va and resolved to the 3 d . At (b) the primary note is followed by another a fifth higher, with the suspension of the 4th in the alto. At (c) is shown the same suspension with the second inversion of the chord and the attendant figuring. At (d) the suspension appears in the bass.

The following exercises should be worked out employing the suspensions admitted by Rules I and II, transposed to other keys for similar working out.


Rule III. When a primary note is followed by another a fourth higher, we may suspend the 4 th, prepared by the 7 th and resolved to the 3 d .


At (a) the 7 th, F , as a note of preparation, is suspended in the following chord as the 4 th, resolving to the 3 d in the same chord. At (b) the chord of suspension and resolution is in the second inversion. At (c) the chord of preparation is in the first inversion. At (d) the suspension is in the bass.


## CHAPTER XIX

## SUSPENSIONS. (Continued)

Rule IV. When a primary note is followed by another a fifth higher, we may suspend the 6th, prepared by the 3 d and resolved to the 5 th.


At (a) the primary note C is followed by another a fifth higher, with a suspension of the 6th, prepared by the 3d and resolved to the 5th. At (b) the chord of preparation is in the second inversion, and the chord of suspension and resolution in the third inversion. At (d) the suspension occurs in the alto, and at (e) in the bass.

The following exercises should be worked out by Rules III and IV, observing closely the restrictions given above.



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I11. No. 37
L. M. Gottschalk, "Last Hope"


When a suspended note is affected by an accidental, a similar sign should be placed before the symbol of suspension in the bass figuring, thus:


At (a) the note of resolution (the $\mathrm{D}_{3} \mathrm{~d}$,) is preceded by a suspension of the depressed note above, Eb. At (b) the note of resolution ( $\mathrm{C} \#$, figured $\# 6)$ is preceded by a suspension of the note above, which is not chromatically altered. At (c) the note of suspension is indicated
as a 4 th affected by a sharp $(\mathrm{C} \#)$. At (d) the suspension occurs in the bass, where, with a chord of ${ }_{\frac{\pi}{3}}^{\frac{6}{3}}$, the actual bass F , as the resolution of a suspension, is preceded by a suspension a degree higher, which is affected by an accidental sharp ( $\mathrm{G}=$ ) ). The relative position of members of a chord may be changed to provide a preparation for a suspension.

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Two examples are here given of the primary note ascending a fourth, inviting a passing modulation in which the addition of the 7 th provides a preparation for a suspension of the 4 th in the second chord.

Occasionally the bass note changes to another note of the chord simultaneously with the entrance of the resolution of the suspension.



Double suspensions are formed by combining Rules I and III, or II and IV. Other suspensions of this species will be given later.


I11. No. 39
W. H. Niedlinger, "The Bumblebee"


The following exercises are appended, to be worked out with suspensions according to the four rules given above.



Add the three upper voices to the following bass sets, employing suspensions of the various species (with classification figuring). Transpose to numerous keys for similar treatment.


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## CHAPTER XX

## RETARDATIONS, OR ASCENDING SUSPENSIONS

Retardations are similar to suspensions, except that they resolve by ascending one staff degree to the note of resolution, instead of descending, as in the case of the latter.

The resolution may be heard in the bass during the life of the suspension, at a distance of a 7 th or more.

Retardations are, in general, much less agreeable to the ear than are normal suspensions, and of less frequent occurrence. Dissonances, as a rule, are acceptable only when they progress downward one staff degree to a consonance. Normal dissonances of suspension are agreeable for this reason, and because during their existence the hearer experiences the anticipation of a well-defined resolution.

Among retardations, those that progress by a minor second to the note of resolution are the most acceptable, those progressing by a major second rarely serving to enhance the beauty of the harmony.

Of the progressions by a minor second, the seventh of the scale resolving to the octave is the most popular, although the third of the scale to the fourth in the major keys and the second to the third and the fifth to the sixth in the minor are often used, particularly in combination with normal suspensions.

The uninviting progression of a major second in the resolution of a retardation has led composers to modify the harshness and relieve the uncertainty of the anticipation by chromatically elevating the note of suspension. By this means the anticipation of the resolution becomes more intensified and quite definite through the preferred progression of a minor second. Examples of this form will follow.

The symbol for retardations is the radical ( $v$ ) inclined upward, indicating that the note on the diatonic degree below has been retarded.

Rule I. When a primary note ascends a fourth, we may retard the 7 th, prepared by the 3 d and resolved to the 8 va .


At (a) the 3 d , as a preparation, is sustained at (b) as a retardation of the 7 th, resolving at (c) to the 8 va ; the classification figures above indicate a retardation of the 7 th, prepared by the 3 d and resolved to the 8 va , with the symbolized figuring below showing a retardation below the 8 va . At (d) is an example of the retardation of the 7 th in the bass, figured as a retardation below the actual bass.


Rule II. When a primary note is followed by another a fifth higher, we may retard the 6 th, prepared by the 3 d and resolved to the 7 th.


At $(a)$ is an example of the retardation of the 6 th, prepared by the 3 d and resolved to the 7 th; at (b), the same, with the chord in its second inversion and the retardation in the alto.


Rule III. When a primary note is followed by another a fourth higher, we may retard the 2 d , prepared by the 5 th and resolved to the 3 d .


At (a) is a retardation of the 2d, prepared by the 5 th and resolved to the 3 d, indicated $5-2-3$ and figured as a retardation below the 3 d ; at (b), the same retardation in the bass, figured as a retardation below the actual bass in a chord of ${ }_{3}^{6}$.


Rule IV. When a primary note is followed by another a fifth higher, we may retard the 4 th, prepared by the 8 va and resolved to the 5 th.

An application of this rule is here given, with the retardation in the soprano.


Retardations, by the above four rules, are equally suitable in all respects for use in minor keys.

Work out the following exercise after the four rules in various keys.


Double and triple suspensions, or retardations, or combinations of suspensions and retardations, are fully suitable for use as the occasion may seem to demand, providing they are used with due regard for prescribed limitations.


At (a) we have an example of a double suspension of the 4 th and 9th; at (b), a double suspension of the 4th and 6th; at (c), a double retardation of the 2 d and 7 th; at (d), a combined suspension and retardation of the 4 th and 7 th; at (e), a combined suspension and retardation of the 4 th and 6th; at ( $f$ ), a combined double suspension and retardation of the 4 th, 7 th, and 9 th.


Chord suspensions are also to be found occasionally when all voices are included.


Retardations by Rules III and IV, in the major mode, and II and IV, in the minor, which resolve by whole steps, may be chromatically elevated above their respective preparations, in order to intensify their progressions to the notes of resolution.



At (a) is an elevated retardation of the 2 d ; at (b), of the 4 th; at (c). of the 6th, in $\hat{\mathfrak{a}}$; at (d). of the 4 th, in $\hat{\mathfrak{a}}$; at (e), a double retardation of the 2d, elevated, and the 7 th; at $(f)$, of the 4 th, elevated, and the 6th; and at $(g)$, a double retardation of the 6th, elevated, and 4th, elevated, in e.


IIl. No. 47
Beethoren, "Symphony II"


Work out the following exercise, employing the elevated retardations in various keys.


Work out the exercises given in the chapter on suspensions, as accompanied melodies, using retardations in like manner.

## CHAPTER XXI

## PASSING NOTES

A passing note is a diatonic embellishment used in passing melodically from one harmony note to another a third above or below it.


At (a) the passing note D occurs between the two harmony notes C and E . At (b) the passing note B occurs between two harmony notes of different chords. At (c) the passing note occurs in the bass, and at (d) in the tenor.


Passing notes may be accented (a), or unaccented (b).


Successive passing notes may occur, with the T chord, between the fifth of the scale and the octave, ascending or descending.

*An example of successive passing notes.

What is said of passing notes occurring in the accented or unaccented parts of the bar or beat is true of all succeeding species of embellishments.

In the minor mode, in order to escape the disagreeable ascending augmented second, the sixth of the scale, as well as the seventh, is generally elevated, thus effecting what is frequently termed the melodic form of the ascending minor scale.


At (a) is an example of successive passing notes between the fifth of the normal scale and the octave in the key of $\hat{\mathrm{a}}$. The normal subtonic, G, through its isolation of a whole step from the Tonic, lacks in ascending tendency; it consequently fails in the capacity of a leading tone, which is an important melodic function of this degree of the scale. The elevation of the subtonic gives it a leading-tone quality, strongly inviting an ascending progression to the Tonic (b). Here again, however, the melodic tendency upward of this passage is interrupted by the normal sixth of the scale, F , which, because of its proximity to the fifth, E, has a tendency downward; this fact, combined with the unmelodious ascending progression of an augmented second, makes the elevation of the sixth of the scale (c), as well as the seventh, in a passage from the fifth of the minor scale to the octave, practically a melodic necessity.

This is true more particularly in vocal music; in instrumental music, the elevation of the seventh only is frequently practiced.

The successive passing notes descending between the octave and the fifth of the scale may be employed without elevation of the sixth and seventh, or with elevation of the seventh only, the progression of the augmented second descending being melodically quite satisfactory, as well as serving to aid in identifying the minor mode.



An extended consideration of the various forms of minor scales would seem to be quite in place at this time.

I. The first reference was to the normal minor scale, consisting of whole steps except between two-three and five-six, that is, as indicated by its signature (a).
II. With the introduction of the D chord, the seventh of the scale is necessarily elevated from the signature indication, in order that the third from the fundamental of that chord may be major (b), thus causing the subtonic to serve as a leading tone.

This forms what is commonly known as the harmonic minor scale, although it may be considered merely as a table of the notes employed harmonically in that key.
III. With the introduction of passing notes the melodic element enters freely, and by their aid we are enabled to construct the ascending melodic scale with the sixth and seventh elevated and the half steps between two-three and seven-eight (c). While this form is generally employed with the T and D chords, it is impracticable with the $S$ chord, as the normal sixth of the scale is an essential member of that chord and is not subject to alteration. The form best suited for employment with the S chord, both ascending and descending, is the normal scale, although the seventh is frequently elevated in both directions.

Ill. No. 52
Mozart, "Rondo in A Minor"


Ill. No. 53 W. W. Gilchrist, "Home they Brought her Warrior Dead"


Ill. No. 54
Gilchrist, "Dolphin Lullaby"


A classification of the minor scales to be used melodically with the three primary chords is as follows:

With the Tonic chord: ascending, the elevated sixth and seventh, and, occasionally, the elevation of the seventh only ; descending, the seventh elevated and the normal scale (a). (Also, conforming with certain ancient modes, ascending as a normal scale.)


With the Subdominant chord: ascending and descending, the normal scale, and at times the elevated seventh $(b)$.
(b)


With the Dominant chord: ascending, the elevated sixth and seventh, and, occasionally, the elevated seventh only; descending, the seventh only $(c)$.
(c)


Faulty consecutives or other improper progressions may not be formed by passing notes, nor, in fact, by embellishments of any kind.


Passing notes may not proceed by degree to a unison (a) unless they appear as compound passing notes (b).

Passing notes proceeding by degree to an octave (c) are not objectionable.

Compound passing notes consist of passing notes occurring in two voices simultaneously, as at (d).

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\text { Ill. No. } 56
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Cesti



I11. No. 58
Chopin, " Nocturne," op. 27, No. 2


Compound embellishments should, in general, be consonant one with another.

Passing notes may be repeated, as at (a).

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(a)
(a) (a)


Work out the following exercises, employing passing notes singly in alternate voices. Cause the basses to move by skip of a third, where practicable, to aid in presenting opportunities for embellishments. Compound passing notes also may be occasionally used.


## CHAPTER XXII

## CHROMATIC PASSING NOTES

A chromatic passing note is a chromatic embellishment used in passing melodically from one harmony note to another a major second above or below it.


At (a) appears a chromatic passing note between the harmony notes C and D , followed by others in the soprano. At (b) is a chromatic passing note in the alto, and at (c), a chromatic passing note in the bass.
The following given melody, called a germ set, is to be harmonized in such manner as to present the best opportunities for the employment of passing notes and chromatic passing notes tending toward the formation of a continuous eighth-note motus in alternate voices. By motus is meant the melodic change of one or more voice parts from one pitch to another; when such changes take place in a continuous succession of eighth notes, a continuous eighth-note motus is presented.

Transpose to other keys for similar exercise.


. Ill. No. 59 Mozart, "Rondo in A Minor"


An extended passing note is an embellishment used in passing melodically from one harmony note to another more than a third distant, in such manner as to approach the second note by degree from the side upon which the first is located. The approach should be diatonic from above, and chromatic from below.


At (a) an embellishment, A , is used in passing melodically from the harmony note C to another harmony note, G . It approaches the second note, G, by diatonic degree from the upper side, the side upon which the first one is located. At (b) the extended passing note D 类 approaches the harmony note E chromatically from below, the side upon which the preceding harmony note is located. At (c) the extended passing note F approaches the E diatonically from above, and at (d) a similar embellishment, B, approaches the harmony note C chromatically from below.


An extended passing note may be used between two harmony notes a third apart, providing it ascends to the second note chromatically altered from below, as at (a) (a).


Ill. No. 61
Schumann, " Novellette," op. 21, No. 2


The following exercises may be worked out in several keys, using extended passing notes, after which passing notes and chromatic passing notes may be added to form a continuous eighth-note motus in alternate voices.


## CHAPTER XXIII

## AUXILIARIES

An auxiliary is an embellishment located a degree above or below a harmony note, which precedes and follows it. It is diatonic above and chromatic below the harmony note. (Chromatic auxiliaries above are occasionally used by composers.)


At (a) and (c) are auxiliaries above, and at (b) and (d), auxiliaries below. In each case the embellishment is preceded and followed by the harmony note upon which it depends for existence.

Work out the following exercises, using auxiliaries above and below wherever practicable. Subsequently add preceding embellishments to form a continuous eighth-note motus, first, in the soprano, then in the alto, tenor, and bass in succession; this may be done also in alternating voices.



Note. When embellishments are to be employed in the soprano, three staves should be used, in order that the given germ set may, for comparison and analysis, remain unchanged.
Ill. No. 82
Mozart, "Variations"


The auxiliaries below the third and the seventh of the scale in the major mode, and below the second and the fifth of the scale in the minor, may be diatonic.

Auxiliaries a diatonic whole step below these notes are particularly satisfactory when used in melodic connection with auxiliaries a diatonic half step above.

The auxiliary below the seventh degree of the minor scale may be a chromatic whole step.

Occasional examples are to be found of auxiliaries a diatonic whole step below the second of the scale in both major and minor modes.


At (a) is given an example of the auxiliary below the third, and at (b) of the auxiliary below the seventh, of the major scale. At (c) and (d) are examples of the auxiliary below the second of the scale in major and minor modes. At (e) is shown the auxiliary below the seventh of the minor scale as a chromatic whole step.

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\text { Ill. No. } 83 \text { Giulio Caccini, 1546-1614, "Madrigal" }
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An illustration of the auxiliary below the seventh degree of the minor scale is here presented.

Work out Exercise 272 with the eighth-note motus in the bass and in the tenor, as in the following models:



Successive auxiliaries may occur above the fifth or below the first of the scale with the T chord, involving the use of the sixth and seventh of the scale as embellishments.


In the minor mode successive auxiliaries above the fifth should be from the normal scale (a) (a) and below the first with elevated sixth and seventh $(b)(b)$. Normal scale successive auxiliaries above the fifth occasionally occur with the Dominant D chord (c) (c).



Ill. No. 65
David Stanley Smith, "The Dark" $3-6-5$
$8-4-3$


An extended auxiliary note is used in passing melodically from one harmony note to another, approaching the second note by degree from the side opposite that on which the first is located. The approach should be diatonic from above, and chromatic from below.


At (a) is an extended auxiliary above the harmony note E, which it approaches from the side opposite the first harmony note, C. At (b) is an extended auxiliary, B , below the second harmony note, C ; it is preceded on the opposite side, above, by the harmony note E . At (c) is an extended auxiliary, F\#, below G ; and at (d) an extended auxiliary, C, above B. At (e) is an extended auxiliary below the seventh (as a leading tone) of the minor scale.


The student may work out the following exercise, using extended auxiliaries in the soprano wherever possible, as indicated in the first four measures.


Also, the same exercise with extended auxiliaries in alternating voices, as follows:


From the same germ set form a continuous eighth-note motus, first in the bass, then in the tenor, alto, and soprano successively, utilizing the various embellishments thus far admitted. To the germ set, notes may be added in the soprano, only as embellishments. When such embellishments are also harmony notes, they must be given due consideration as such in the selection of harmony notes for the other voice parts. A separate staff for the germ set, when embellishments are to be employed in the soprano, is necessary.



This may be followed by a continuous sixteenth-note motus in each voice in succession, also in alternating voices.



Combinations of various rhythmic figures may be formed in alternating voices, some examples of which are given herewith:


Also a continuous sixteenth-note motus in two voices simultaneously.


Ill. No. 69
J. S. Bach, "Choral Prelude" (for organ)



Additional exercises for similar treatment follow.


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## CHAPTER XXIV

## INTRODUCTORY AUXILIARIES

Auxiliaries not preceded by the harmony note upon which they depend occur frequently at the beginning of a composition or phrase, and for that reason are referred to as introductory auxiliaries. An introductory auxiliary may be used on the accented or unaccented part of a measure or beat; it may appear as a grace note, in which case it is termed an appoggiatura, or in combination with other notes may form a turn; or it may occur as an indepenḍent note of definite rhythmic value.


At (a) it appears as an introductory auxiliary below the harmony note G, on the unaccented part of the beat; at (b), as an auxiliary below 148

E, on the accented part of the beat; at (c), as an auxiliary above E, on the accented part of the measure; at $(d)$, in syncopated rhythm, on the unaccented part of the bar; at $(e)$, as a grace note, and at $(f)$, to aid in forming a turn before the harmony note C. Work out the following germ set and bass set using introductory auxiliaries.


III. No. 70

Moskowski

III. No. 71

McCoy, "Prelude to The Hamadryads"


Progressive auxiliaries are of two kinds: an auxiliary above, returning to a harmony note a third or more below; and, conversely, an auxiliary below, returning to a harmony note a third or more above. It may return to a harmony note of the same chord, or of another.


The student will have no difficulty in comprehending this embellishment as exemplified in the above example.


Accented passing notes and auxiliaries are frequently longer than the harmony notes to which they belong.

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Changing notes are formed by a combination of two embellishments located a diatonic degree above and a chromatic (generally) degree below a harmony note that follows.


At (a) the changing notes are formed by a combination of auxiliaries below and above; at (b), by a combination of an extended auxiliary above and an extended passing note; at (c), of a passing note and an extended auxiliary above, and at (d), by an extended auxiliary below and an extended passing note.

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\text { Ill. No. } 74 \quad \text { Spohr, "Nonet" }
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An anticipation is the use, in the same voice, of a harmony note of one chord during the latter part of the time of the preceding chord,
of which it does not form a part. It is generally short, although it may occupy a half of the time of the chord to which it is attached. It occurs in one, two, or three voices, and may, in fact, involve the entire chord.


The student should continue the use of all embellishments in his work.

A false relation is the employment of a note in one voice part, and its chromatic alteration at the same time or immediately following in another part.

False relations do not seem to be objectionable: when they are produced by embellishments (a), when the fundamental of the second chord is a third above or below the first (b), and when the note and its chromatic alteration progress in opposite directions (c).


The following exercises should now be worked out in several keys, with a continuous eighth-note motus in alternating voices, and then in individual voices, employing introductory auxiliaries, progressive auxiliaries, and changing notes.

The same may be subsequently done with a continuous eighth- and a continuous sixteenth-note motus, employing all preceding embellishments.



At (a) we have an introductory auxiliary below; at (b), the chromatic passing note $\mathrm{C} \#$ and the extended auxiliary E , forming changing notes on the harmony note D ; at $(c)$, the harmony note C used as a progressive auxiliary above the B b, for motus; at (d), the retardation E and the extended auxiliary note G forming changing notes on F ; at (e), (e), progressive auxiliaries; at ( $f$ ), a passing note in the tenor, for motus; at $(g)$, the suspension D and the extended auxiliary B forming changing notes; at ( $h$ ), a progressive auxiliary in the alto; at ( $i$ ), the passing note and extended auxiliary for changing notes; at ( $j$ ), ( $j$ ), double changing notes in the alto and tenor, moving in sixths; and at ( $k$ ), an introductory auxiliary beginning a phrase.

The following germ sets should be worked out in like manner in several different keys.



Double and triple embellishments in combination may be used with excellent effect in passages of thirds and sixths in similar motion, and in contrasting passages moving alternately and together in contrary motion. When embellishments occur thus in combination, they should, as a rule, be consonant one with another. Dissonances, even extremely harsh ones, may appear singly, to be followed by a combination of more consonant intervals, but a series of extremely dissonant chords in immediate succession should be avoided.

I11. No. 77 Arthur S. Sullivan, "The Mikado"


At (a) are auxiliaries above; at (b) auxiliaries below and extended passing note; at $(c)$, retardation; at $(d)$, changing notes, extended
auxiliary below and extended passing note; at (e), chromatic passing note; at $(f)$, changing notes; and at ( $g$ ), extended passing note.

Occasionally an entire definite chord belonging to some related key is built up from embellishments.

Special effort should be directed toward acquiring a good writing technique in this section of the work. A ready facility in four-part writing, with independently moving voices, constitutes a strong element toward future success in analysis and composition.



The next step will be the further utilization of a germ set as a basis for the formation of a melody with piano accompaniment.

In these exercises four staves should be used in score. The first or upper staff is to be occupied by the given germ set, the second by the completed melody, while the third and fourth, in brace, are to be used for the piano accompaniment.

Harmonize the germ set in accordance with the rules for harmonization of melodies, placing the chords in four voice parts on the two lower staves in accompaniment form as heretofore. Care should be exercised, in constructing the chords for the accompaniment, toward correct voice progressions and other established laws.

In the following exercises each chord should have a duration of a half or whole bar. Embellishments are to be used wherever necessary in the construction of a plain, broad melody in song style, employing only half notes, dotted half notes, quarters, dotted quarters, eighths, and the combined dotted eighth and sixteenth notes when the exercise is in common time. In ${ }_{8}^{6}$ or ${ }_{8}^{9}$ time, series of sixteenth notes are admitted. Rests may be used wherever they are considered advantageous. The time value of germ notes may be shortened or lengthened when admitted by the harmonic requirements.

The harmonization in the accompaniment must be so constructed that the given germ notes will consist only of duplicates in unison or octave of the notes comprising the three upper voices of the chords so employed. The harmonic content of the accompaniment thus becomes the substratum of the melody, as the melody forms a superstructure to the harmony.

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These exercises should be worked out in similar manner, with different melody and form of accompaniment, after which they should receive new treatment for piano solo. Additional germ sets are here appended, also other suggestions for accompaniment.



## CHAPTER XXV

## THE DOMINANT NINTH CHORD

To the $\mathrm{D}^{7}$ chord, the 9th may be added, thus forming the chord of the Dominant ninth $\left[\mathrm{D}^{9}\right]$, which must consist of a major triad, a



As the $\mathrm{D}^{9}$ chord contains five different notes, one, usually the 5 th or the fundamental, is omitted in four-part harmony.


As this chord with the fundamental omitted requires special treatment, it will be discussed at length later on, consideration being given, for the present, only to the chord with the fundamental included.

When the 5 th is included, the 7 th is usually omitted, although at times the 3 d is omitted instead.

When the 5 th is present and is located below the 9th, it should resolve upward to the $\mathrm{T}^{3}$, which may be doubled in the resolution to the T chord. This is in order to avoid the faulty parallel 5ths that would result were the $\mathrm{D}^{5}$ to resolve to the $\mathrm{T}^{8}$.


While the $\mathrm{D}^{7}$ chord positively determines the identity of a tonality, it does not, owing to its similarity in the major and minor modes, definitely indicate its gender. On the other hand, the $\mathrm{D}^{9}$ chord is used in two distinct forms, dependent upon the gender of the key from which it is derived, the 9 th being a major interval in the major mode (major $\mathrm{D}^{9}$ chord), and a minor interval in the minor keys (minor $\mathrm{D}^{9}$ chord).


At (a) the chord of the $\mathrm{D}^{9}$ in the key of $\hat{\mathrm{C}}$ contains a major 9th, A , and at (b), in the key of $\hat{a}$, the gth, F, of the D chord is a minor interval.

As in the case of the $\mathrm{D}^{7}$ chord, the $\mathrm{D}^{9}$ chord resolves to the T chord.
The $\mathrm{D}^{9}$ resolves to the $\mathrm{T}^{5}$, the $\mathrm{D}^{7}, \mathrm{D}^{5}$, and $\mathrm{D}^{3}$ resolving as in the $\mathrm{D}^{7}$ chord.


When possible, the 9th should be prepared; otherwise it should be approached from below.

The $\mathrm{D}^{9}$ occasionally resolves by ascending to the $\mathrm{T}^{8}$ when it occurs in the soprano.


As this chord is composed of five different notes, it is subject to four inversions. Of these the first and third are most effective; the second is rarely used, owing to its harshness, which is due to the omission of the 7 th (made necessary by the use of the 5 th) ; the fourth inversion is not considered available, except when the gth, as the actual bass, is prepared by being heard in the same voice part as a harmony note of the preceding chord.




At $(a)$ is an example of the first inversion, at (b) of the third, and at $(c)$ of the second inversion. The harshness and ambiguity of this position of the chord, due to the omission of the 7 th, may be readily perceived; at $(d)$ the 9 th is prepared as the 3 d in the $\| \mathrm{S}$ chord.
III. No. 80

Sullivan, "St. Edmund"


The 9th is most effective in the soprano. This suggests an additional rule for harmonization of melodies.

When the sixth of the scale is followed by the fifth, the sixth may be harmonized with the Dominant. This will be easily recognized as the $\mathrm{D}^{9}$ resolving to the $\mathrm{T}^{5}$, as at (a).

The second choice for use of the 9 th is in the tenor. It should never appear a second above the fundamental, as its resolution would thus be anticipated; for that reason the fundamental should never appear within an octave below the 9th.
good


As in other chords, the position of the various notes of the $D^{9}$ chord may be transferred from one voice part to another during the life of the chord, the $\mathrm{D}^{9}$ resolving to the $\mathrm{T}^{5}$ in the part where it last appears, as at (a) (a) below; or when the $\mathrm{D}^{9}$ progresses by skip it may pass entirely from the chord without losing its identity as a note of harmony (b).


The 9 th frequently occurs as an embellishment above the $\mathrm{D}^{8}$ or below the $\mathrm{D}^{3}$ in the $\mathrm{D}^{7}$ chord, to which notes of harmony it progresses before the resolution to the $T$ chord.


At (a) A is introduced as an auxiliary above the $\mathrm{D}^{8}, \mathrm{G}$; and at (b) it appears as an extended auxiliary below the $\mathrm{D}^{3}, \mathrm{~B}$. This must not be mistaken by the student for a $D^{9}$ chord, which it temporarily resembles in appearance and quality.



To aid the student in understanding the distinction between a $D^{7}$ chord with embellishments formed by the aid of the 9th and the $\mathrm{D}^{9}$ chord proper, let it be understood that:

When the 9th progresses by degree, either upward or downward, thus disappearing from the D chord before the resolution to the T chord, it must be considered an embellishment and not an integral part of the harmony.

If it resolves directly to the $\mathrm{T}^{5}$, or, progressing to a different note of the chord, it resolves from that note to the $\mathrm{T}^{5}$, or, in progressing by skip to another note of the chord, it disappears entirely, leaving only a $\mathrm{D}^{7}$ chord to.resolve to the T chord, it is an essential member of the Dominant harmony as an interval of a 9th.

I11. No. 83
Haydn, "Quartette in G"


II1. No. 84
Massenet, "Elegie "



The $\mathrm{D}^{9}$ is occasionally ornamentally resolved by the interpolation of the $D^{3}$ (in the form of an embelishment) before its resolution to the $\mathrm{T}^{\mathrm{j}}$.

In such cases the quality of the $\mathrm{D}^{9}$ as a harmony note is not lost, as it is when the succeeding $\mathrm{D}^{3}$ is attended by its compulsory resolution to the $\mathrm{T}^{8}$.


A chord of the $\mathrm{D}^{7}$ may progress to a $\mathrm{D}^{9}$ chord.


Harmonize the following, using $\mathrm{D}^{9}$ chords wherever practicable, in accordance with the directions given above.



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## CHAPTER XXVI

## THE ABBREVIATED DOMINANT NINTH CHORD D))

With the omission of the fundamental in the chord of the $\mathrm{D}^{9}$ the four remaining notes present a series of thirds in the form of a chord of the seventh on the subtonic as a leading tone. The subtonic is here considered as the nominal fundamental, the real fundamental being, of course, the Dominant, which is also the primary note of the chord. The symbol D)) will be used with the figuring for identification in analysis.


The treatment of the abbreviated form of the $\mathrm{D}^{9}$ chord is subject to the following conditions:
I. No member of the chord may be doubled or omitted.
II. The $\mathrm{D}^{9}$ may not progress to the $\mathrm{D}^{8}$ or $\mathrm{D}^{3}$ before the resolution of the D chord without losing its identity as a note of harmony. With such progressions the chord will be recognized as a $\mathrm{D}^{7}$ chord with an embellishment, as heretofore described.


At (a) the interval in question is shown as a form of suspension; at (b) as an auxiliary above the harmony note, G; and at (c) as an extended auxiliary below the harmony note, B.
III. This chord may be freely used without preparation in all inversions except, perhaps, the last one, in which the $\mathrm{D}^{9}$, in the bass, is preferably (not necessarily) prepared, as at (a) below.


This inversion, although prepared, is not as satisfactory as the others, owing particularly to the somewhat objectionable ${ }_{4}^{6}$ chord which follows as the resolution (b). This unsatisfactory condition may be overcome, in a measure, by a diatonic progression downward through a succeeding chord, as at (c).

The various positions of this chord may be described as follows:


The fundamental position ( $\mathrm{D}^{3}$ in the bass) is figured 7 )) ; the first inversion ( $\mathrm{D}^{5}$ in the bass) is figured ${ }_{5}^{5}$ )) ; the second inversion ( $\mathrm{D}^{7}$ in the bass) is figured ${ }_{3}^{4}$ )) ; the third inversion ( $\mathrm{D}^{9}$ in the bass) is figured $\left.{ }_{2}^{4}\right)$ ).

The resolution of the various members of the chord is the same as when the real fundamental is included.

The $\mathrm{D}^{5}$, except when in the bass, may resolve upward or downward to the $\mathrm{T}^{5}$.


The $D^{5}$ with the $D^{9}$ above it is at times resolved to the $T^{8}$ in the minor keys, as the first of the resultant parallel fifths is a diminished interval.

7))

The student is advised, however, to avoid such progressions, at least for the present, preferably doubling the $\mathrm{T}^{3}$ in the resolution.

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III. No. 88 Moscheles, "Study," op. 70, No. 4


The resolution of the $\mathrm{D}^{9}$ to the $\mathrm{T}^{5}$ suggests an additional rule for modulation in a given melody:

When the indicated $(+)$ note of modulation descends a step, or a half step, it may go to the fifth of the scale in the new key. The modulation must be, of course, to a directly related key. The note of modulation will here be, obviously, the $\mathrm{D}^{9}$ (major or minor), resolving to the $\mathrm{T}^{5}$.


As may be seen, the alternate notes of the melody in the exercise above should receive D$)$ ) chords. It should be transposed to other keys, and harmonized both with fundamentals present and omitted.

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\text { Ill. No. } 87
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Grieg, "Gavotte," op. 40, No. 3


* The $\mathrm{D}^{7}$ here resolves to the $\mathrm{T}^{8}$ in order not to anticipate the subsequent $\mathrm{T}^{3}$ in the melody.

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\text { III. No. } 88 \text { Schubert }
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"Grand Duo," op. 140


The minor D)) chord, commonly known as the diminished 7 th chord, has long held an important place in the harmonic structures of all forms of composition. It contains a minor 3 d , diminished 5 th, and diminished 7 th, and appears as a series of minor 3 ds from the nominal fundamental.

The four notes constituting it, therefore, stand as points dividing the octave into segments, distant a step and a half apart. Members of the chord frequently occur with enharmonically changed notation for purposes of simplification and for improved voice leading. For analysis the student should mentally arrange the chord in a series of thirds and then identify the major third below the lowest note as the fundamental Dominant. Altered notation may generally be corrected by consideration toward directly related keys. This chord is frequently used in the major mode.

Harmonize the following exercise, using $\mathrm{D}^{9}$ and D$)$ ) chords where feasible.

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At (a) (a) the diminished seventh chord appears.

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\text { Ill. No. } 89
$$



As an additional factor in the harmonization of melodies, following the rule for forming a $D^{7}$ chord with a passing modulation when the
primary note or fundamental ascends a fourth, the student may now include the $\mathrm{D}^{9}$, which may be applied with or without the fundamental.


At (a) the primary note $G$ ascends a fourth, inviting a passing modulation, which is accomplished by adding the minor 7th, F ${ }^{\text {n }}$. A DS is thus formed which resolves at (b) to the $\mid S$ chord. At (c) the $\mathrm{D}^{9}$ resolves directly to the T triad. At (d) the primary note G ascends a fourth to the primary note C , involving a passing modulation [DS] through the use of the $\mathrm{D}^{9}$ chord on G . At (e), where the fundamental A ascends a fourth to the fundamental D , the formation of a $\mathrm{D}^{9}$ chord is accomplished by the elevation of C and the inclusion of the 9 th, B , effecting a passing modulation [DD]. At ( $f$ ) the diminished 7 th chord is introduced in the major key. At (g)
(h) the D)) chord is again employed to good effect. The student should complete the exercise in similar manner, then work it out in several transposed keys.

In the following examples the $\mathrm{D}^{9}$ chord is to be worked out, both by omitting and by employing the fundamental, according to the judgment and taste of the student.

Effort should be exercised toward the introduction of passing modulations (using the $\mathrm{D}^{9}$ ) on the basis of the primary note or fundamental ascending a fourth when such opportunities are presented. This includes the chord progressions of $T$ to $S,\lfloor\underline{S}$, or $\lfloor S$, and of $\lfloor S$ to Dominant.




Melodies should be constructed from the following germ sets, using the $\mathrm{D}^{9}$ and $\mathrm{D}^{7}$ chords where they may seem most effective. They may be worked out, for solo with accompaniment, and for piano solo.

THE ABBREVIATED DOMINAN'T NINTH CHORD I79



Beginning with the harmonization of melodies, the work of the student has been conducted, generally, under a given melody or germ set. From this practice, the ability to develop good melodies, it is confidently hoped, has been assiduously cultivated. The formation of melodies with full knowledge of, and due consideration for, their germ content is of the utmost importance toward the attainment of success in melodic composition within the bounds of such limitations as circumstances may demand, as well as to a better appreciation of the same in the work of others.

The plan of harmonization and melody formation over a given bass set, must, however, be considered of equal importance, and should be diligently pursued throughout the work.

While, heretofore, melodies have been evolved over a given bass set, using duplications from the upper three voice parts of the harmonic structure, the student may now enlist the employment of embellishments upon the harmony notes as may be desired in such melody construction.

In the following exercise the student should fill out the three upper voice parts, as indicated by the symbolized figuring of the given bass, in the same manner as heretofore.


Also work out the above exercise with an eighth-note motus in the soprano, the alto, and the tenor, in turn and alternately. In like manner work out a sixteenth-note motus and various other rhythmic figures.


Harmonize the same bass set for accompaniments, in various forms, from which melodies are to be constructed, employing harmony notes from the three upper voices and their embellishments.


An additional exercise is appended for similar treatment.

THE ABBREVIATED DOMINANT NINTH CHORD 183



## CHAPTER XXVII

## IMITATION

With the introduction of embellishments the student has been brought directly to the practice of certain phases of counterpoint.

Counterpoint is the art of combining separate melodies in such manner as to conform to the laws of harmony.

By separate melodies is meant two or more sets of single-note successions that differ melodically or rhythmically from each other. If in placing these melodies in immediate association (to be sounded at the same time) the laws of harmony have been complied with, the parts will necessarily appear in satisfactory harmonic agreement; ideal contrapuntal results are not obtained, however, without due consideration for individual melodic succession in each part.

In the following example a single-note succession of five notes, called a subject or motive, is presented at different locations in the scale; as the rhythmic and melodic figure in each case is identical, they are to be considered as melodic duplications.


If we were to combine the first statement of the subject with either of the others in immediate association, the result would be harmonically satisfactory.


The effect of such combination is the delivery of the subject in the soprano with a duplicate of the subject serving as a harmonic support in a second voice, but the element of rhythmic or melodic independence is entirely lacking.

If, however, the melodic succession of the contrasting melody is distinctly at variance with the subject, its individuality directly becomes apparent.


Here the two tone successions are melodically at variance, and the independent melodic effect is evident.

Now cause the contrasting melody to appear in a different rhythmic succession, thus:

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and the effect of independence becomes at once more pronounced.
As will be perceived, rhythmic variance is a most effective medium toward independence and individuality of voice parts. The same medium is equally necessary in three or more parts.


One of the most important divisions of contrapuntal writing is that of Imitation.

Imitation is a musical device consisting of the announcement of a phrase in one voice part and its immediate recurrence in another.

An imitation may be a repetition of a complete subject or fragments of its stronger sections.

In the imitation the rhythmic figure is required to be an exact reproduction of the rhythmic figure in the subject. The melodic form must agree with the following conditions:

The melodic figure in the imitation ascends and descends as in the subject. Where the progression is by degree in the subject, it should proceed similarly in the imitation. Where it progresses by skip in the subject, it must also proceed by skip in the imitation, but the skip may be greater or less than in the subject when made necessary by harmonic limitations.

It may be understood that chromatic exactitude in the imitation is not required; where in the subject a progression of a major interval occurs, a minor may occur in the imitation; for a diatonic progression a chromatic may be used, and so on.

A skip of a third in the subject may not be made a degree less in the imitation, as it would thereby become a progression by degree.

It is at all times desirable that the melodic figure in the imitation appear as nearly like that in the subject as the harmonic limitations will permit.

## Imitation in Two Voices

Using the notes of the given germ set and such embellishments as may be desired, form a melodious subject in the first measure of the following exercise. This is to be succeeded in the second measure by an imitation of the subject in the second voice, formed from such harmony notes and attendant embellishments as may be necessary for its construction. At the third measure, form a new subject, to be imitated as before in the fourth measure. This process is to be continued in each succeeding two measures to the end.

In selecting notes for the imitation, choose such as will, in conjunction with the germ notes, best represent the chord of which they form a part, care being exercised toward the use of harmony notes other than those contained in the germ set. These are preferably the ones forming intervals of major and minor 3 ds or 6ths, augmented 2 ds or 4 ths, and diminished 5 ths or 7 ths. Perfect intervals and minor 7 ths are also admissible, although they do not form as satisfactory combinations in two-voice writing as do the others.

Attendant embellishments should be added in such manner as to result in the least possible harmonic friction, one with another; rhythmic discrimination should be observed toward the employment of successive shorter notes in one voice simultaneously with longer ones in the other, thus giving to each an independence and individuality especially desirable in contrapuntal composition.

Limited successions of 3 ds or 6 ths may be admitted to good advantage, although if continued beyond the number of three or four, the voices lose more or less of their character of rhythmic independence.


At (a) the subject formed from germ notes and embellishments is announced, to be imitated in the second voice at the second measure.

At (b) the time of the second germ note is anticipated during the latter part of the first quarter, in order that the way may be cleared for the approach of the notes of imitation at that point.

In the last two measures (c) the imitation is not expected to be complete, a portion of the subject only being imitated, in order to effect a satisfactory ending, as at $(c)(d)$ in the following:


The germ set given above, as well as those that follow, should be worked out in several keys, and with different subjects.

While always following implicitly the directions given, the student should persistently seek to make the resultant work sound musically satisfactory.

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Ill. No. 91


I11. No. 92
Horatio Parker, " Overture, Fairyland"


## CHAPTER XXVIII

## CADENCES

The cadence (or close) is a harmonic device consisting of the final and penultimate chords of a composition or phrase, which serve the purpose of effecting a more or less complete finality.

Cadences are divided into three general classes: the complete, the incomplete, and the deceptive.

The complete cadence consists of a final Tonic preceded by a penultimate Dominant or Subdominant chord. Of these the authentic cadence (Tonic preceded by the Dominant) is the most common, as well as the most complete and effective.

It appears to advantage at the end of a composition or phrase, and is practically a necessity in effecting modulation. While the identification of all forms of cadence may be readily determined by the last two chords, in most instances, one or more additional chords are included immediately preceding the penultimate Dominant which have an important bearing on the progress toward complete or temporary finality, and tend to confirm the real tonality.

Of these preparatory harmonies, classed as pre-Dominant chords, the one in most common use, and which seems to be most effectual, is the pre-Dominant ${ }_{4}^{6}$ chord, or second inversion of the T triad, with the Dominant in the bass. This chord generally appears, as does the final 'T chord, on the accented part of the measure, in double or quadruple time. Next in importance for this purpose is the S chord, which is used in all its various forms and positions as pre-Dominant harmony.

The chords of the DS (Dominant of the Subdominant), followed by the Subdominant, and of the DD (Dominant of the Dominant), preceding the penultimate Dominant, seem effectually to prepare the ear for that chord as the real dominating factor in key identification.

Here follow a few examples of authentic cadences extended by pre-Dominant chords in various plans; these chords are so enlisted for the purpose of intensifying the harmonic progress toward the penultimate Dominant.


The student should form cadences in the manner indicated above, employing three, four, or five of the $\mathrm{S}, \mathrm{DS}, \mathrm{D}\lfloor\mathrm{S}$, and DD chords in their several species, including those of the D ) and the D )). This should be done in various patterns and in many keys.



Here is shown a DD with interpolated $T_{4}^{6}$, the $\mid S$ and $\| S$ chords, and a $S$ deceptive cadence, followed by the D)) as a confirming chord.

The pedal notes (described in a subsequent chapter) A in the third and fourth measures and D in the fifth measure should not be considered as members of the attending chords.


Here may be seen the DS to the S chord, and the DD to the D with interpolated $\mathrm{T}_{\ddagger}^{6}$ chord.

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\text { Ill. No. } 96 \quad \text { Carl Busch, Song, "Crossing the Bar" }
$$



The plagal cadence is essentially a final T chord preceded by a S chord. This cadence in its simple form has long been in common use in church music. It has, however, at times attained prominent positions and become an important factor in the works of the master composers.


Modern composers have employed it extensively, using the many different forms of the $S$ chord to good advantage.


I11. No. 98
Campbell-Tipton, Song," The Crying of Water"



Many of the earlier composers, as well as some of the modern ones, have made effective use of the Tierce de Picardie, or final major T triad in compositions of the minor mode.

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111. No. 99

BaCh, "Prelude IV in C $\#$ Minor"

111. No. 100

Arthur Whiting, "Blow, Blow, Thou Winter Wind"



The incomplete cadence (half cadence, or imperfect cadence) may be viewed as an authentic cadence, incomplete because of the omission of the final T chord. Its most familiar form is a reversal of the complete cadence from Dominant - Tonic to Tonic - Dominant, the T chord appearing in its second inversion as a pre-Dominant ${ }_{4}^{6}$ chord; any directly related chord, however, may precede the Dominant in this form of cadence.


See last measure of Ill. No. 85, and Ill. No. 121.
Ill. No. 102


This illustration supplies an example of the incomplete cadence, SubdominantDominant, establishing a point of partial repose.


The deceptive cadence (false cadence, or interrupted cadence) consists of the D chord followed by a chord other than the T triad. generally by the submediant chord of a major key or of its tonic minor, or by a form of the Subdominant chord.


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Ill. No. 104
W. J. Baltzeli, "Thistle-Down"

N. Clifford Page


Ill. No. 106 Edward Elgar, " My Love dwelt in a Northern Land "


An interesting example of the $\mathrm{D}^{7}$ chord of $\hat{\mathrm{C}}$ to the T chord of $\hat{\mathrm{A}}$. It also presents a form of plagal cadence in $\hat{a}$, intensified by an interpolated $D^{7}$ chord of $\widehat{\mathrm{C}}$, and ending as a Tierce de Picardie in $\widehat{\mathrm{A}}$.


This subject is extensively considered in a subsequent chapter. These chord combinations are of frequent occurrence at points other than at the end of a phrase or of a composition, with the chords in their various positions, and are termed passing cadences.

The $\mathrm{D}^{9}$ is rarely used in the penultimate chord at the end of a composition as a part of the final cadence; in other parts of a composition, however, where only temporary finality is sought, it is used quite frequently.

## CHAPTER XXIX

## EXTENDED CADENCES

An extended cadence consists of an authentic cadence (described in the previous chapter) preceded by a succession of chords directly related to the key of destination, that serve to intensify the harmonic progress toward the penultimate Dominant.

The effect of the employment of such successions of chords is to create an increased atmosphere of expectation and suspense, subsequently to be gratified by the arrival at a definite point of destination formed by the authentic D and T chords of finality and repose.

Extended cadences may be employed at the close of a composition or at the end of a division; in the latter case serving in the prevailing key of the work or aiding to effect an important modulation.
The chords admissible for the formation of extended cadences are as follows: the chords of the T, S, D, the DS, and the DD. These are acceptable in all positions excepting the primary positions of the D and T chords, which are to be reserved as the penultimate and final positions in the authentic cadence.


In the above example the problem set forth is to proceed by ascending chromatic progressions in the bass from the Tonic toward the Dominant, to which note the chord of the ${ }_{4}^{6}$ is given, followed by the penultimate $\mathrm{D}^{7}$ and final Tonic chords.

It will be readily perceived that there is no point of distinct repose until the final T chord，preceded by the D chord，is reached．The direct point of destination is the Dominant，which is，of course， followed by the Tonic as the true goal．

At（a）appears the third inversion of the D））chord as a DS．This is followed at（b）by the supertonic as the fundamental of the $\lfloor\leq$ chord．At $(c)$ is the third inversion of the D$)$ ）on the DD ；at（d），the first inversion of the DS；at（e），the S chord；at（ $f$ ），the fundamental position of the D））as a DD，leading to the pre－Dominant ${ }_{4}^{6}$ of the authentic cadence．


Here the bass progressions are downward from the Tonic，F，in similar manner．

Form extended cadences in various keys，proceeding from the Tonic to the Dominant，both ascending and descending，as directed．

The student may now form extended cadences，modulating to the following keys in the given succession，using the final Tonic in each key as a note of departure from which the basses should proceed chromatically to the penultimate Dominant of the succeeding key． The bass progressions are to ascend or descend（as the case may be） in the direction of the greatest distance from the note of departure to the note of destination，for the sake of practice in acquiring harmonic technique．The chords available for this purpose include those of the $(\underline{S}, 4 \mathrm{~S}$ ，and S depressed 3 d ，and the D$)$ ）in the $\mathrm{D}, \mathrm{DS}$ ，and DD chords．

$$
\hat{\mathrm{C}}-\hat{\mathrm{a}}-\hat{\mathrm{c}}-\hat{\mathrm{G}}-\hat{\mathrm{b}}-\hat{\mathrm{A}}-\hat{\mathrm{f}} ⿱ 卄 一{ }^{-}-\hat{\mathrm{D}}-\hat{\mathrm{d}}-\hat{\mathrm{F}}-\hat{\mathrm{g}}-\hat{\mathrm{d}}-\hat{\mathrm{B}} ;-\hat{\mathrm{F}}-\hat{\mathrm{a}}-\hat{\mathrm{C}}
$$



Starting with the initial key of $\hat{C}$, the first modulation is to $\hat{\mathrm{a}}$, whose Dominant, E , is the point of destination. As its greater distance is downward, the progressions, for the sake of practice, are made in that direction and continued as in the previous examples, to the Dominant (E), upon which the preparatory ${ }_{4}^{6}$ chord is followed by the penultimate Dominant leading to the final Tonic. It must be understood that the harmonic successions from (a) to (b) inclusive act as intensifying chords in the key of $\hat{a}$. As the Dominant in the next key of modulation, $\hat{d}$, is reached at a greater distance by ascending, the progression should be made in that direction, and so on through the given series of modulations.

This mode of procedure is not to be considered as the best means of reaching a new key by modulation, but rather as a means of gaining a familiarity with the various harmonies at one's disposal for such purpose through an intensified close, the student ultimately selecting, in composition, such as may seem most desirable for the purposes in
view. It must also be borne in mind that the enlistment of these chords serves to create an atmosphere of homogeneous harmonic variety, and always tends toward confirmation of the ultimate Tonic.

The harmonic schemes evolved from this process may be formed into accompaniments, over which melodies may be constructed as in previous exercises. In each key the duration of chords may be reduced or extended as may be necessary in order to make the entire length of eight, sixteen, or thirty-two measures.

## CHAPTER XXX

## EXTRANEOUS MODULATION

Extraneous keys are either indirectly related or foreign.
Modulation has been practiced thus far only to directly related keys, a passing reference, only, having been made to the exceptions in serial modulations by Rule IV (in both genders) and by Rule V (from minor to major), in which cases the modulations effected are not to keys that are directly related.


At (a), following Rule IV, by taking the Subdominant for a new Dominant a modulation occurs to $\widehat{\mathrm{B}}$ b, which being represented by a signature of two flats more than the key of departure, $\hat{\mathrm{C}}$, is not a directly related key. At (b), following the same rule but proceeding from minor to minor, the key of modulation, $\hat{\mathrm{g}}$, is indirectly related. At $(c)$, proceeding from major to minor, by Rule V , the key of $\hat{\mathrm{d}}$, having one flat more than $\hat{\mathrm{C}}$, is directly related. At (d), on the other hand, proceeding by the same rule but from minor to major, we reach the key of $\hat{B} b$, which is not directly related.

A modulation may be immediate or deferred. It is immediate when it is accomplished through the use of the D chord of the key of destination only.

A modulation is deferred when two or more D chords are utilized in order to reach the key of destination.

It may be seen that by the rules governing serial modulations the note for a new Dominant is, in each case, selected from the diatonic content of the key of departure (the key from which the modulation is to occur). By following this plan modulations may be accomplished to keys which, by reason of their gender, do not bear as intimate relationship to the key of departure as is borne by directly related keys, but are sufficiently close to invite immediate modulation to them without impairing the general harmonic homogeneity. Such modulations are to indirectly related keys.

## Indirectly Related Keys

Included in this class are the following:
(I) Those reached by the rules for serial modulation proceeding from major to major and minor to minor, when they proceed, instead, from major to minor and minor to major, as illustrated in the following example.


Modulation from $\hat{f}$ to $\hat{C}$ instead of to $\hat{c}$.
(2) Those reached by the rules proceeding from major to minor and minor to major when they proceed, instead, from major to major and minor to minor, as in the following example.

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C (III) $\hat{A} \quad \hat{a}$ (III) $\hat{f} \quad \hat{C}$ (V) $\hat{D} \quad \hat{C} \quad$ (VI) $\hat{E}_{0} \quad \hat{a}$ (VI) $\hat{c}$


I11. No. 109 DvoйÁк, "Walzer," op. 54, No. I


Modulation from $\hat{A}$ to $\hat{F}$ 开instead from $\hat{A}$ to $\hat{f}$.
(3) As exceptions in the above two classes, those reached by Rule IV when proceeding from major to major and minor to minor, and by Rule $V$ when proceeding from minor to major.

(4) Those that proceed from major to minor when proceeding, instead, from a major key as though from its Tonic minor.


At (a), by taking the mediant of $\hat{c}$ instead of $\hat{\mathrm{C}}$ we reach the key of $\hat{A} b$ instead of $\hat{a}$; at (b), by taking the submediant of $\hat{c}$ instead of $\hat{C}$ we reach the key of $\hat{D} b$ instead of $\hat{d}$; and at (c) the subtonic of $\hat{c}$ leads to $\hat{E} b$ instead of to $\hat{e}$.

Ill. No. 110 Chopin
"Nocturne," op. 37, No. 2


Proceeding from $\hat{\mathrm{G}}$ to $\hat{\mathrm{B}}$ b instead of from $\hat{\mathrm{G}}$ to $\hat{\mathrm{b}}$.


$$
\text { Ill. No. } 112 \quad \text { Carl Deis, " Waiting" }
$$



Proceeding from $\hat{\mathrm{C}}$ to $\hat{\mathrm{A}} \mathrm{b}$ instead of from $\hat{\mathrm{C}}$ to $\hat{\mathrm{a}}$.
For additional reference see Ill. No. 102.

A table of the indirectly related keys to $\hat{\mathrm{C}}$ would be as follows:

$$
\text { (I) } \hat{\mathrm{f}} \hat{\mathrm{~g}}, \text { (2) } \hat{\mathrm{A}} \hat{\mathrm{D}} \hat{\mathrm{E}},(3) \hat{\mathrm{B}} b, \text { (4) } \hat{\mathrm{A}}, \hat{\mathrm{D}} b \hat{\mathrm{E}} b ;
$$

and of the indirectly related keys to $\hat{a}$, as follows:

$$
\text { (I) } \hat{D} \hat{E}, \quad \text { (2) } \hat{\mathrm{f}} \hat{\mathrm{C}}, \quad \text { (3) } \hat{\mathrm{B}}, \hat{\mathrm{~g}}
$$

It is not to be understood that modulations are to be effected solely from the T chord of the key of departure; they are fully as satisfactory when proceeding from the S chord or the D chord.


Foreign keys are those extraneous keys not included among the indirectly related keys.

Modulations of this class are rarely satisfactory, except when accomplished by the enlistment of two or more Dominant chords, involving one or more passing modulations before the key of destination is reached.


Among the foreign keys to the key of $C$ are the following: $\hat{c}_{\#}, \hat{f}_{n}$, $\hat{\mathrm{G}} \mathrm{b}, \hat{\mathrm{B}}, \hat{b}, \hat{d}_{\#}^{\#}$, etc.

Modulation may be satisfactorily effected through the medium of the $\mathrm{D}^{7}$ chord, confirmed by the T chord of the key of destination; or by means of other forms of the family of D harmonies, such as the chords of the 9th, augmented 6th, and of the S group such as the Neapolitan 6th, etc.; or it may be accomplished through the aid of ambiguous chords, that is, those belonging to both keys; or by the various intensifying chords of the extended cadence, involving, perhaps, passing modulations, all of which may serve more fully to confirm the harmonic change, and thereby tend to increase the beauty of its general tonal effect.

I11. No. 113


I11. No. 114


The student would do well to evolve and classify all available modes of modulation, and through practice become expert in applying them in problems such as the following: modulate, and indicate by what rules, from $\hat{C}$ to $\hat{A} b, \hat{d}$ to $\hat{f}, \hat{A}$ to $\hat{C}, \hat{g}$ to $\hat{C}, \hat{F}$ to $\hat{b} ;, \hat{A} b$ to $\hat{\mathrm{C}}\rangle, \hat{B}$ to $\hat{\mathrm{C}}, \hat{\mathrm{A}}$ to $\hat{\mathrm{F}}$, etc.

Transition consists of passing into a new key without the process of modulation through the use of a new Dominant. Transition is generally to the major or minor mediant or submediant, to the Tonic major of a minor key, or the Tonic minor of a major key.

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Occasional employment of transitions in the composition of chorals is advised.


Ill. No. 116
Charles Wakefield Cadman
"Sonata in A Major"


## CHAPTER XXXI

## SECONDARY CHORDS ON THE TONIC

In the chord of the Tonic the 6th may be substituted for the 5th to form the Tonic substituted 6th chord. Symbol T] .

This is an application of the submediant triad for Tonic harmonization, and will be utilized and analyzed as a tributary member of the family of $T$ chords. It is most frequently used in fundamental and primary positions, although it is occasionally employed in its second inversion as a ${ }_{4}^{6}$ chord.


The Tonic substituted 6th chord has a more positive local significance as a primary chord in the major mode than in the minor, and the Tonic quality is most in evidence when the chord is in its primary position, with the 6th in the soprano, and preceded by the D chord in one of its various forms.

When the $\mathrm{D}^{7}$ chord is followed by the primary position of the T chord, the $\mathrm{D}^{8}$ resolves to the $\mathrm{T}^{6}$.


When the $\mathrm{D}^{9}$ chord is followed by the primary position of the $\mathrm{T} \downarrow$, the 9th is retained as a common tone and becomes the $\mathrm{T}^{6}$.


The Dominant chord, in one of its various forms, followed by the major T chord in primary position, as above, constitutes a novel and very satisfactory authentic cadence. The 5 th is rarely omitted in the fundamental position of the $\mathrm{D}^{7}$ chord when so resolved.

The resolutions as given above may be applied in the minor mode, but only with immediate further progression in view.

In the minor mode the primary position of this chord, owing to the closeness of the 6th to the 5 th, has a distinctly dependent quality, as though the 6 th were an embellishment above the 5 th (a).


In the fundamental position, on the contrary, it has a bold individual character, although suggestive of further important progression (b).

When the Dominant chord resolves to the fundamental position of the $T$ chord it constitutes one form of the deceptive (false or interrupted) cadence.

In this form of resolution the $D$ fundamental is not doubled, as parallel octaves would result, the $\mathrm{D}^{3}$ resolving to the $\mathrm{T}^{6}$ or $\mathrm{T}^{8}$ in the major mode and to the $\mathrm{T}^{8}$ in the minor, the restriction in the latter case being a precaution against augmented progression.


The deceptive cadence of the tonic minor mode may be used in major keys. To prevent the unsatisfactory progression of an augmented second, the $\mathrm{D}^{3}$ should resolve to the $\mathrm{T}^{8}$.


In the above example the $D^{7}$ chord resolves to the $T$ of $\hat{c}$ instead of to $\hat{C}$.
The student should give considerable attention to the analysis of chorals, hymns, and other forms of composition, marking the various chords with symbolized figuring.



Notice the double 3 d in change of position.


In $\hat{c}$ with a deceptive cadence, followed by a modulation to $\hat{f}$ through the diminished 7 th chord.

Ill. No. $119 \quad$ OsCar Weil, " Just You and I," op. 31, No. I


$T$ and $\|$ S chords alternating over the Tonic acting as a pedal, and an auxiliary above, depressed to prevent the progression of an augmented 2 d .

IIl. No. 121
Alexander Ewing, "Choral"


## CHAPTER XXXII

## THE TONIC ADDED SIXTH CHORD T

In the Tonic chord the 6th may be added to the triad to form the Tonic added bth chord. Symbol T\|.

This is an application of the submediant 7 th chord to Tonic harmonization, and as such is classed as a tributary member of the family of T chords.


It may occur in any of its positions, but, as in the case of the $T$ chord, the Tonic quality is most in evidence when it is in the primary position of the major mode, with the 6th in the soprano, and preceded by the D chord:

The $D^{3}$ generally resolves to the $T^{3} \mid$ in four-part writing. When the D or $\mathrm{D}^{5}$ is in the bass, the $\mathrm{D}^{3}$ moves downward to the $\mathrm{T}^{5}$.

Examples of the cadence using various positions of the Dominant chord follow.

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The $T \mid$ chord preceded by the chord of the $\mathrm{D}^{9}$ is much more satisfactory in primary position when written in five voices, particularly when the $\mathrm{D}^{9}$ chord is in fundamental position.


As the notes contained in the 6 forming certain $S$ chords in other keys, a positive identification may, at times, be obtained only through the succeeding chords, which may indicate a modulation to the key of the Dominant or of its relative minor, in which case the chord in question becomes an intensifying factor in approaching the cadence to the new tonality.


Here the indicated $T \|$ and $\underline{T}$ chords act in reality as $\Perp \mathrm{S}$ and S chords in the keys of $\hat{G}$ and $\hat{e}$.

Further discussion of these chords will appear in another chapter.
From a harmonic structure indicated by the following bass set, develop melodies for solo voice with accompaniment. Transpose to other keys for similar treatment.


Also as a piano solo, thus:


An additional bass set for similar treatment follows.


Transpose the above bass sets to several keys for new treatment.
The enlistment of this new branch of the family of T chords suggests an additional rule for harmonization of melodies.

The sixth of the scale may, at times, be harmonized with the Tonic. This is applied to best advantage when the sixth of the major scale, preceded by the fifth or sixth with D harmony, occurs on the accented part of the measure.


The $T \|$ chord as an additional factor in harmonic material admits the third application of the rule for passing modulations, those previously noted being the DS and the DD.

When the T added 6th chord, whose fundamental is the submediant, is followed by the S substituted 6th chord, the fundamental of
which is a fourth higher, the $T$ chord may be altered to form a $D$ chord, effecting a passing modulation as the Dominant of the supertonic, symbol D S.


At (a) appears the $T \|$ chord followed by the $\lfloor$ chord, inviting a passing modulation as at (b).

All forms of the D chord are admitted in passing modulations.


The pre-Dominant ${ }_{4}^{6}$ chord is frequently interpolated between the chord of the DD and the succeeding D chord.


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DS
D $\mid$ S
DD
D $\lfloor$


DD
D $\mid$ S
DD
D


DD
DS
DD


It was noted in a previous chapter that the DS may be succeeded by the $[\underline{S}$ or $I S$ chord.

Extended cadences, as given in a preceding chapter, should now be formed to include the $\underline{T} \mid, T \|$, and $\mathrm{D}[\underline{S}$ chords.
III. No. 122

Wm. J. McCoy, "The Only Voice"


Ill. No. 123
Barnby, "Nightfall"


Harmonize the following germ set, applying the new harmonic material as given above.


## CHAPTER XXXIII

## COMPOSITION OF CHORALS

The student will now select several chorals from a standard hymnal or choral book, to be used as rhythmic patterns for original melodic and harmonic treatment.

The harmonic structure should consist of chords belonging to the tonality that may be selected for the composition, with certain specified modulations in the form of authentic cadences at the end of each section.

The hymn is to be divided, at points suggested by the divisions in the original, into four sections, the conclusion of each of which should be in the form of an authentic cadence to a directly related key, preceded by a few preparatory or intensifying chords selected from those available in extended cadences.

As examples of such chord extensions the following plans are submitted:
$\mathrm{T}^{6}, \quad \mathrm{~S}^{6}, \mathrm{~T}_{4}^{6}, \mathrm{D}^{7}$, and $\mathrm{T} ; \mathrm{S}, \mathrm{DD}_{5}^{6}, \mathrm{~T}_{4}^{6}, \mathrm{D}^{7}$, and $\mathrm{T} ; \mathrm{DS}_{2}^{4}, \mathrm{~S}^{6}$,
 chords refer to sectional keys of modulation.

A plan of modulations for a choral is here suggested:
The first section modulating to key of mediant, the second section modulating to key of Dominant, the third section modulating to key of Subdominant, and the conclusion in the initial key.

Two other plans follow:
Modulations to Dominant, supertonic, submediant, and the initial key.

Modulations to mediant, Subdominant, Dominant, and the initial key.

Other plans may be selected and modulations indicated by the student.

Modulations should be to directly related keys.
For model see Ill. No. ir 7 .

## CHAPTER XXXIV

## CHROMATIC OR ALTERED CHORDS

Chromatic or altered chords are those in which one or more harmony notes are chromatically elevated or depressed from the diatonic content of the immediate key without necessarily causing a positive or passing modulation.

This chromatic alteration generally affects the $\mathrm{D}^{5}$, which, by reason of its having an optional resolution, readily invites an elevation or depression to determine definitely the direction of its course and to aid in intensifying its progression.

Chronologically, this was at first accomplished progressively, by the aid of chromatic passing notes (a) (a), but subsequently the chromatically altered notes were engrafted as essential members of the chords (b), and the chords classified accordingly.


An augmented 6th chord consists of a $\mathrm{D}^{7}$ or $\mathrm{D}^{9}$ chord with the fundamental 5 th depressed. Symbol $\Varangle$ D.

This chord was originally used in the second inversion with the depressed 5th as the bass, and as the depression of the 5 th serves to extend the normal interval of a major 6th with the subtonic leading tone to that of an augmented 6th, it became known as the augmented 6th (sharp 6th) chord. The four principal species in their several positions and with their resolutions are given below, with symbolized figuring attached.

I. The second inversion of a $D^{7}$ chord, with the bass depressed, is known as the French 6th chord. Symbol $\Varangle \mathrm{D}$. This chord may resolve to the T chord direct ( $a$ ); to the D chord with interpolated ${ }_{4}^{6}$ chord (b); as a DD direct to the $\mathrm{D}^{7}$ chord (c); as a DD to the $\mathrm{D}^{7}$ with interpolated ${ }_{4}^{6}$ chord $(d)$; as a DS to the S chord, toward the authentic cadence $(e)(f)$; and to aid in intensifying modulations to other tonalities.

When the depressed 5th appears in the soprano, it has the quality of the elevated 4 th, inviting a progression to the degree above it, and is not to be considered a very definite presentation of the chord (g).

The depressed 5 th and the 3 d should not progress to a unison, as .
one of the voices, failing to give the impression of resolution, practically disappears $(h)(i)$. At $(j)$ these two voices are a 6th apart, permitting both voices satisfactorily to resolve.


At (a) (a) the fundamental is D , at $(b)(b)$ it is C ; the two chords at $(c)$ and (d) (fundamental B) are alike in every respect, excepting that at (d) the $\mathrm{D}^{5}, \mathrm{~F}$, is depressed to F .


II. The second inversion (from the D fundamental) of the D ) chord, with the bass $\left(\mathrm{D}^{5}\right)$ depressed and the $\mathrm{D}^{7}$ doubled, is known as the Italian 6 th chord. Symbol $\Varangle \mathrm{D}$ ). Its resolution is to the triad, one $\mathrm{D}^{7}$ resolving to the $\mathrm{T}^{3}$, and the other to the $\mathrm{T}^{5}$, as at (a). It is also used, for intensification, as a DD toward the authentic cadence (b). Like all augmented 6 th chords, it is best in the original position (with the depressed $\mathrm{D}^{5}$ in the bass); it may, however, be used in all positions.

III. The second inversion (from the D fundamental) of the minor D$)$ ) chord, with the bass ( $\mathrm{D}^{5}$ ) depressed, is known as the German 6 th chord (a). Symbol $\Varangle \mathrm{D})$ ). Its best resolution is to the ${ }_{4}^{6}$ chord. It appears to great advantage before the pre-Dominant ${ }_{4}^{6}$ in the authentic cadence. In the example the D )) chord, fundamental D (DD), with the fundamental 5 th, A, depressed, progresses to the preDominant ${ }_{4}^{6}$ chord on $G$ (fundamental C). For simplicity of notation the minor $\mathrm{D}^{9}$ is frequently written as the elevated $\mathrm{D}^{8}(b)$.

This is equally good in major and minor keys.

Ill. No. 128 Frank van der Stuecken, " Weave in, my Hardy Life"


At (a), the $\mathrm{C} \#$ is an enharmonic change from $\mathrm{D} b$, so expressed for simplicity of notation.


Here is shown a French 6th chord constructed from a DD, with interpolated $\mathrm{T}_{4}^{6}$, a retardation, a suspension, and a $\mathrm{D}^{9}$ chord merging into a $\mathrm{D}^{7}$ chord. The resolution of the retardation appears with the interpolated $\mathrm{T}_{4}^{6}$ chord which temporarily represents the D chord that follows.

IV. In addition to the three species given above, the second inversion (from the D fundamental) of the major D )) chord, with the actual bass ( $\mathrm{D}^{5}$ ) depressed, is frequently used by modern writers. This also appears to excellent effect in five voices with the fundamental included. The resolution is similar to that of the German 6th species.


For the purpose of identification the fourth form will be known as the modern augmented 6th chord.

While all species of this chord are best in the original position (second inversion from D fundamental), they appear also in the fundamental position and all inversions, to greater or less advantage.

Resolutions of the augmented 6th chord to the various species of the T ] chord present many very novel, as well as charming, harmonic effects, that are much practiced by modern composers.

The student should practice in framing original harmonic plans from which bass sets may be arranged for development, as heretofore.

The following table presents some examples of such combinations. The student would do well to experiment with these chords, as he may be assured that a mine of harmonic resources will be opened to him.


Work out extended cadences, effecting modulations to the following succession of keys as before prescribed, utilizing the $T\rfloor$ and $\Varangle \mathrm{D}$ chords in their various forms where practicable.



Fill out the remaining three voices from the following figured bass set, working out various forms of motus in the individual and alternate voices. This may be done in several keys.


The following bass sets are to be used in the development of accompanied melodies, both for solo with separate accompaniment and for piano solo. Transpose to other keys for varied treatment.


Harmonize the following germ sets, making especial effort toward enlisting the various classes of harmonies that have been thus far offered.



## CHAPTER XXXV

## THE NEAPOLITAN SIXTH CHORD

This is a chromatically altered $\lfloor$ chord, with the 6th in the minor mode, and the 6th and 3 d in the major, depressed. Symbol $I \underline{S}$.

In the formation of the authentic cadence the most common and effective formula for extension is the use of the pre-D ${ }_{4}^{6}$ chord immediately preceded by the S chord in one of its many forms, the most popular being the $\lfloor S$ or $\lfloor S$ chord.

The particularly forceful progressions occurring between the $\lfloor S$ and the Tonic ${ }_{4}^{6}$ chords are those from the $\mathrm{S}^{8}$ to the $\mathrm{T}^{3}$ and the $\mathrm{S}^{6}$ to the $\mathrm{T}^{8}$.

It may be noticed that in the minor mode both of these progressions proceed by whole step, giving the impression of a lack of harmonic affinity between the two chords. In order to overcome this, early composers frequently employed chromatic passing notes between the $\mathrm{S}^{6}$ and the $\mathrm{T}^{8}$, thereby bringing the two chords into more intimate harmonic connection.
The chromatic passing note (the depressed 6th) ultimately became an integral part of the chord. Following the usual custom of enlisting chords of the minor mode for harmonic application to the major, this chord, composed of a minor 3d (S depressed 3d) and minor 6th, is frequently used as a form of the $\lfloor$ chord in the major keys.

It is most commonly followed by the pre-D ${ }_{4}^{6}$ chord, often by the D chord, and at times by the chord of the DD in a passing modulation.



At (a) the chromatic passing note is between the diatonic $S^{6}$ and the $\mathrm{T}^{8}$; at $(b)$ and $(c)$ the $B$; is an integral part of the Neapolitan 6th chord, which is followed by the pre-D ${ }_{4}^{6}$ chord; at $(d)$ and (e) it takes the place of a pre-D chord followed by the $\mathbf{D}$ chord; at $(f)$ and $(g)$ it is followed by the chord of the DD, the two serving as intensifying pre-D chords; at ( $h$ ) the Neapolitan 6th chord on the S of the relative minor is enlisted to form a species of plagal cadence. Work out extended cadences using this chord.

While in modern music it is employed in all positions, care should always be exercised toward preventing disallowed progressions.

Il1. No. 131 Chopin, "Waltz," op. 34, No. 2


While this chord progresses more frequently to the $\mathrm{T}_{4}^{6}$ chord, the progression to the $\mathrm{D}^{7}$ chord, as seen above, is not uncommon and is very effective.

II1. No. 132
Loewe, "Ballad of Edward "


Ill. No. 133
Eugene Blanchard, "The Sea Gipsy," op. 5, No. 2


* An example of the Neapolitan 6th chord on the $\mid \mathrm{S}$ of the relative minor, borrowed for use in the major mode.

Fill out the following figured bass sets in four voices with varied motus, after which the same harmonic structure should be formed into accompaniments, with melodies constructed thereon in different forms, as heretofore.

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The student may also write a melody from the following germ set, which is to be harmonized in four voice parts, using various species of motus; also prepare as solo with accompaniment, and for piano alone, applying the new harmonies given above.


## CHAPTER XXXVI

## AUGMENTED FIFTH CHORDS

An augmented 5 th chord consists primarily of a major or minor triad with the 5th elevated. Symbol $P$. It is the outcome of the practice among early composers of intensifying the progression of voice parts that move a whole step from one chord to another, by means of chromatic passing notes.

They occur in the T, S, and D chords of major keys and in the S chord of minor keys. As the diatonic degree above the $\mathrm{T}^{5}$ and $\mathrm{D}^{5}$ in the minor mode is only a half step, the opportunity for chromatic intensification by elevation is not available in those chords.


At (a), (c), and (e) are given examples of intensification of progression by chromatic passing notes in the primary chords of $\hat{\mathrm{C}}$, and at $(\mathrm{g})$ the same in the S chord of $\hat{\mathrm{a}}$.

At $(b),(d),(f)$, and $(h)$ the chromatic passing notes are enlisted as integral parts of the chords; at $(i)$ and $(j)$ the $\mathrm{T}^{5}$ and $\mathrm{D}^{5}$ in a proceed upward a half step, forbidding the entrance of a chromatic passing note and, for the same reason, the formation of an augmented 5th chord.

A table of augmented triads available for use in immediate succession is given in a subsequent chapter.
111. No. 134 Arthur Foote, "Flying Cloud," op. 73, No. 4


The harmonic plan of the above is as follows:
Ill. No. 135


The S augmented 5th chord ( PS ) of the relative minor mode is used in the major, and, conversely, that of the relative major is used in the minor; the progression to the following chord in both cases being governed by the prevailing gender.


At (a) the PS of â is used in the key of $\hat{\mathrm{C}}$, to the D triad of which the chord progresses. At $(b)$ the S augmented 5 th chord of $\hat{\mathrm{C}}$ is used in the key of $\hat{a}$, the progression being to the $\mathrm{D}^{7}$ chord of the latter key.

Augmented 5th chords may appear in any of the various positions, those with the major 3d being most satisfactory for inversion. The PS chord in the minor mode occurs less frequently as a chord of 6 or ${ }_{4}^{6}$.

In the chords of the $\mathrm{D}^{7}$, the $\mathrm{D}^{9}$, and the D$)$ ), the augmented 5 th is frequently used with most satisfactory results, particularly in the $\mathrm{D}^{7}$ chord. In the resolution of this chord the $\mathrm{T}^{3}$ is usually doubled, although the $\mathrm{D}^{7}$ frequently resolves upward to the $\mathrm{T}^{5}$.

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Ill. No. 138
Oley Speaks, "The Lassie I loved Best"


The demands in resolution of the $>\mathrm{D}$ chord frequently overshadow those of the resolution of the $\mathrm{D}^{7}$ to the $\mathrm{T}^{3}$, as may be seen below.
III. No. 137

Wm. R. Chapman, "This would I Do"


The chord and symbol at (a) will be described in a subsequent chapter.
Ill. No. 138
Wilson G. Smith, "Fulfilment"

I11. No. 139
George W. Chadwick
"A Ballad of Trees and the Master"


$$
\left.\left.\left.\left.\left.\left.\begin{array}{r}
7 \\
b 5
\end{array}\right)\right) \begin{array}{r}
b 6 \\
4 \\
2
\end{array}\right)\right) \quad\left(\begin{array}{r}
b 6 \\
4 \\
2
\end{array}\right)\right) \quad\left(\begin{array}{r}
6 \\
4 \\
3
\end{array}\right)\right)
$$

The harmonic plan, without the embellishments, follows. Note the $\mathrm{D}^{7}$ resolving to the $\mathrm{T}^{8}$ in the bass, as may be found in the works of Haendel end his contemporaries.

Ill. No. 140


Other chords of the 7 th with augmented 5 th will be referred to in another chapter.

Additional rule for harmonization of melodies: When the elevated 5 th of the Tonic, Subdominant, or Dominant is followed by the next diatonic degree a half step above, it may be harmonized with the augmented 5 th chord ( $\ngtr 5$ ).

The following bass set is submitted for various modes of treatment, without and with embellishments:


Here also is given a germ set to be harmonized in various forms without and with embellishments.


In recent compositions the $\mathrm{D}^{5}$ is occasionally elevated and depressed simultancously, the elevation resolving to the $\mathrm{T}^{3}$ and the depression to the $\mathrm{T}^{8}$. The $\mathrm{D}^{7}$ here frequently resolves to the $\mathrm{T}^{5}$. This double chromatic alteration of the $\mathrm{D}^{5}$ is employed in the $\mathrm{D}^{7}, \mathrm{D}^{9}$, and D)) chords as well as in the D triad.


It may be noticed that this form of the D chord contains, only, units of the so-called whole-step scale based on the Dominant.

Of this subject, an extensive treatment will appear in a subsequent volume.

II1. No. 141


The symbolized figuring here given is with disregard of the pedal notes.
The augmented 6th chords in the Tonic, Dominant, Subdominant, and Dominant of the Dominant supply the units for a scale series in whole-step successions beginning on the Tonic, Dominant, Subdominant and Dominant of the Dominant, upon which they also supply the material for a series of augmented triads and their inversions. These chords with their inversions may, by enharmonic change, appear as a series of augmented triads in fundamental position.


## CHAPTER XXXVII

## IMITATION OVER GIVEN FUNDAMENTALS

The student may now undertake the writing of two voice parts contrapuntally, over a given fundamental set, with specific effort toward imitation.

The subject or motive may be chosen, which is to be uttered (frequently alone) in the first measure either by the first or second voice and imitated in the succeeding measure by the other voice. During the progress of the imitation the voice part announcing the subject in the first measure should continue in different melodic and rhythmic succession, as heretofore practiced.

In the third measure the same subject, accompanied by a contrasting melodic succession, may again occur, to be imitated, as before, in the fourth measure, and so on throughout, always with due consideration for the harmony as indicated by the fundamental set.

Effort should be continuously enlisted toward the evolving of tuneful melody lines in both the subject and the contrasting voice part.

The parts should be so prepared that disagreeable successions of dissonant intervals may be avoided and that the general effect may be musical.


245


The subject is announced by the upper voice in the first measure, imitated in the second, reannounced in the third, and imitated again in the fourth, to agree with the foregoing directions.

The student should seek to individualize the various voice parts by the application of distinctly different rhythmic and melodic figures.

Invent new subjects for similar treatment in different keys. Two exercises follow for further practice.



$$
413
$$



Imitation in three voices is developed in similar manner, with the subject appearing in a selected voice part at the initial measure and imitated by the other two voices in succession. The subject may be announced in the first measure and imitated by the other two voices in the two succeeding measures, the fourth measure being occupied by fragments of the subject or by other contrasting melodic successions in the various voice parts.

At the fifth measure the subject may be taken up as before.



The student may utilize the bass sets given for imitation in two voices, for similar practice in three and four voices.



## CHAPTER XXXVIII

## ADDITIONAL EMBELLISHMENTS

An arpeggio is a melodic deviation from a note of the germ set to another harmony note of the same chord.

A direct arpeggio returns to the germ note from which it deviates, before the succeeding germ note is reached.


An indirect arpeggio is one of two or more arpeggios occurring in succession before returning to the germ set; it may return to a germ note other than the one from which it deviated.


Other embellishments may be applied to arpeggio notes.


Form various figures of motus in the soprano from the germ set in the following exercise, employing combined arpeggios and other embellishments.

The same may be done in the alto and in the tenor, care being taken to prevent unnecessary overlapping of the voice parts.


Utilize the following germ set as a basis for sprightly melody to be constructed with the aid of arpeggios and attendant embellishments.


Chromatic passing notes may be used between harmony notes and diatonic passing notes to form chromatic scale passages.

III. No. 144

Chopin, Etude, op. io, No. 2



Harmonize the following exercise and apply chromatic passing notes to form a sixteenth-note motus, first in the bass, then in the tenor, alto, and soprano in turn, and finally in alternating voices. Other rhythmic figures may be employed in like manner.

The customary orthography of the chromatic scale is by elevations of diatonic notes in ascending passages, and by depressions in descending.

The following exceptions to the above may be noted: in ascending passages the depressed seventh of the scale is occasionally used instead of the elevated sixth, and in descending, the elevated fourth should be used instead of the depressed fifth. (In chromatic notation, it must be admitted, composers of the past have been very uncertain.)



Ill. No. 145
Mozart, "Symphony in D Major"


Ill. No. 148
Beethoven, "Sonata for Violin and Piano," op. 96


An ornamental anticipation occurs when one or more harmony notes of one chord are interpolated between the anticipation and the anticipated note of the succeeding chord.

Embellishments or combined embellishments and harmony notes may be employed in the same manner.


Ill. No. 147
Adam, "Cantique de Nöel"


Anticipations of passing notes are occasionally employed with excellent effect.


Suspensions are frequently resolved ornamentally by the interpolation of other notes of the chord or of embellishments on the suspended note.
424
(a)
(b)
(c)

(d)
(e)
(f)


Example 424 shows a suspension ornamentally resolved in various forms, such as: at (a), (b), and (c) the 5th of the chord above and below interposed; at (d) the 3d of the chord interposed; at (e) the 3 d and 5 th alternating with the suspended note; at $(f)$ changing notes on the suspended note; at (g) combined auxiliaries and harmony notes; and at ( $h$ ) combined anticipation and auxiliary.


In addition to the suspensions already given, others may be added; in fact, modern composers admit and practice the suspension or retardation of any note of one chord that progresses a diatonic degree to its position as a harmony note in the next.


Extended passing notes are frequently inverted, the embellishment departing by degree from the first harmony note, instead of approaching the second one by degree. The departure is generally diatonic above and chromatic below. They are classed as extended passing notes inverted.


## CHAPTER XXXIX

## IRREGULAR RESOLUTIONS OF THE $\mathrm{D}^{7}$ CHORD

Reference to the transference of the $\mathrm{D}^{7}$ from one voice part to another has already appeared in this work. The 7 th is also subject to ornamental resolution, effected by deferring its progress to the $\mathrm{T}^{3}$ through the interpolation of other notes of the chord, of embellishments, or of combinations of harmony notes and embellishments.

In all circumstances the 7 th must finally resolve to the $T^{3}$ in the same voice and at the same altitude as that in which the 7 th appears.


At (a) and (b) the $\mathrm{D}^{3}$ above and below is interpolated; at (c) the 5 th is interpolated; at (d) the 5 th and 8 va alternate with the 7 th; at (e) appear the changing notes E and G; at $(f)$ the 5 th and $8 v a$, and at $(g)$ the 8 va above and below, occur in conjunction with the 7 th.

In the chapter on cadences the deceptive cadence was mentioned with special reference to the $\mathrm{D}^{7}$ chord followed by the T chord of a major or minor key or of the tonic minor of a major key.

The effective device of deferring the resolution of the $D$ to the T chord by interpolation of one or more of the several species of the Subdominant family is considerably practiced. The interpolated chord, which may appear in any of its various positions, should, when thus followed by the ' T chord, be considered as a form of plagal cadence.


In other parts of a composition the progression of the D fundamental bass is to the S chord in fundamental or inverted position, which may be succeeded by the D chord in one of its various positions.


When the resolution of a $\mathrm{D}^{7}$ chord is to be followed by a $\mathrm{D}^{7}$ chord representing a different tonality, the chord of resolution is frequently omitted, the $\mathrm{D}^{7}$ chords following each other in immediate succession. (See DS and DD chords.)


At (a) the $\mathrm{D}^{7}$ chord on D is resolved to the corresponding T triad on G , which in turn is succeeded by the $\mathrm{D}^{7}$ chord on G duly resolved to the T triad on C . At (b) the resolution of the $\mathrm{D}^{7}$ chord on D is eliminated, the $\mathrm{D}^{7}$ chord on G following in immediate succession. At (c) and (d) the same process is carried out, the successive $\mathrm{D}^{7}$ chords on G and D appearing in the same manner.

This process may be carried out in sequence through a considerable number of tonalities, each succeeding $\mathrm{D}^{7}$ chord representing an implied resolution, as well as a positive declaration of a new key.


The passing modulations with resolutions at $(a)$ and (b) are repeated with the resolutions eliminated, leaving only the successive $\mathrm{D}^{7}$ chords in sequence.
III. No. 152

Chopis, "Mazurka in G Minor," op. 67, No. 2


Each of the $\mathrm{D}^{7}$ chords above is understood simultaneously to resolve to its corresponding T chord and progress to a $\mathrm{D}^{7}$ chord for a succeeding modulation. See Ill. I 53.


Successive $D^{7}$ chords frequently appear with an interpolated ${ }_{4}^{6}$ as a pre-Dominant chord to the $\mathrm{D}^{7}$ chord on the same note immediately following it.



When the $\mathrm{D}^{7}$ progresses melodically one degree upward to the $\mathrm{T}^{5}$ in one roice, the 7 th may be doubled in another voice for resolution to the $\mathrm{T}^{3}$. This resolution of the $\mathrm{D}^{7}$ to the $\mathrm{T}^{3}$ may not occur in the bass part.


In the minor mode when the bass part descends by degree from the Tonic to the Dominant, involving successively the chords of the Tonic, Dominant, Subdominant, and Dominant, the normal 7 th of the scale, as the minor 3 d of the Dominant, is sometimes used, to avoid the descending progression of an augmented second. This is known as the Phrygian cadence, and is found occasionally in modern works, as well as in those of the older masters.

III. No. 155

Mendelssohn, "Scotch Symphony"


## CHAPTER XL

## SECONDARY CHORDS ON THE DOMINANT

In the Dominant chord the 6th may be substituted for the 5 th to form the Dominant substituted 6th chord. Symbol $\overline{\mathrm{D}}$.

This is an application of the triad of the mediant to Dominant harmonization, in which general capacity it will be considered in this work, both for harmonizing melodies and for analysis.

As in the cases of the $\lfloor\underline{S}$ and the $T$, this chord has the greater local significance as a primary chord when in the primary position. It may be used, however, in all its various positions to greater or less advantage.

In the resolution to the T chord the $\mathrm{D}^{6}$ may remain as a tone common to both chords and becomes the $\mathrm{T}^{3}$, or it may ascend to the $\mathrm{T}^{j}$ or descend to the $\mathrm{T}^{8}$. The $\mathrm{D}^{6}$ appears to best advantage in the soprano.

The 3d of the scale may at times be harmonized with the Dominant.
Discrimination must be used in this chord similar to that in the $\mathrm{D}^{9}$ and the D$)$ ) chords. If the $\mathrm{D}^{6}$ ascends or descends one degree before the resolution of the chord, it is not an essential member of the chord and must be classed as an embellishment.


Examples of various positions of the chord with resolutions to the T triad are here given.

436


The student should work out serial modulations by several rules, using the secondary chords on the Tonic and Dominant.

Following are some examples of various resolutions to the $\mathrm{T}_{\rfloor}$chord. 437



The student should, at this point, select numerous rhythmic figures from standard hymns, as before, for application of the additional harmonies here given to original harmonic and melodic combinations. Analysis of all forms of composition should be unremittingly pursued.

It is hoped that diligence in playing these examples and exercises and hearing them played has not been relaxed. The value of the practice of mental analysis cannot be overestimated.

With the inclusion of the 7 th, the $\sqrt{\mathrm{D}}$ chord attains an additionally distinctive Dominant quality. (Expressed, Dominant substituted 6th chord with 7 th included.) Symbol $\sqrt{\mathrm{D}^{7}}$.

In the $\overline{\mathrm{D}^{7}}$ chord the 6th resolves preferably to the $\mathrm{T}^{5}$ or $\mathrm{T}^{8}$; the presence of the $\mathrm{D}^{7}$, which has a compulsory resolution to the $\mathrm{T}^{3}$, causes a doubling of the 3 d when the $\mathrm{D}^{6}$ is retained in the same roice, which is generally not as satisfactory in four voices as in five or more.

The $\mathrm{D}^{3}$ resolves to the $\mathrm{T}^{8}$ or descends to $\mathrm{T}^{5}$. When the resolution is to the T 」 chord, the $\mathrm{D}^{3}$ may descend to the $\mathrm{T}^{6}$.

A few examples of various positions of this chord and their resolutions to the chords of the $T$ and $T$ are here given.

438



The sixth is rarely good below the seventh. Such arrangements of the chord with progressions as are given in Exercise 439 are uninviting or altogether inadmissible.


Add the three upper voices to the following given bass in accordance with the figured indications; transpose to other keys and work out as before. The student should then take the harmonic structure thus formed as a basis for an accompaniment, from the upper three voices of which a melody should be constructed as before.


Use the following germ sets toward the constructing of melodies for solo with accompaniment and for piano solo, including $\mid \overline{\mathrm{D}}$ chords in the harmonization when practicable.


442
Germ Set


444
Germ Set



Ill. No. 157 McCor, "Song of the Flint" - Cave Man

III. No. 158

Wilson G. Smith, "Fulfillment"


6
In Illustrations $\mathrm{I}_{57}$ and $\mathrm{I}_{5} 8$ occurs the $\overline{\mathrm{D}}$ chord with $\mathrm{D}^{7}$ included.

## CHAPTER XLI

## DOMINANT ADDED SIXTH CHORD

To the D triad the 6th may be added to form the Dominant added 6th chord. Symbol $\overparen{\mathrm{D}}$.

This is an application of the mediant 7 th chord to Dominant harmonization, and is included in the family of D chords. As with other secondary chords, its primary significance is most pronounced in its primary position, with the 6th in the soprano.

The resolution to the T chord is much the same as that of the D chord. The $\mathrm{D}^{3}$ and $\mathrm{D}^{5}$ resolve as in the $\mathrm{D}^{7}$ chord.

The $D^{6}$ has three resolutions: it may remain as a common tone and become the $\mathrm{T}^{3}$; it may ascend to the $\mathrm{T}^{5}$; or it may descend to the $\mathrm{T}^{8}$.


The resolution in various forms and positions of the $\Pi \overline{\mathrm{D}}$ to the T and $T \|$ are here amply illustrated.


The fundamental position of the $\sqrt{\mathrm{D}}$ and $\sqrt{\bar{D}}$ chords is quite effective when followed by the fundamental position of the $T$ chord. In the resolution of the $\| \bar{D}$ chord to the $\underline{T}\}$ chord the $D^{5}$ may be omitted, the various voices proceeding as in the $\mathrm{D}^{7}$ chord.


Add the proper voice parts to the following bass set as indicated by the symbolized figuring and subsequently use the harmonic structure for accompanied melody, as heretofore. In the formation of the accompaniment the student may employ occasional embellishments, by aid of which most interesting accompanying figures may be evolved.


Harmonize the following bass set as indicated, and work out with various rhythmic figures as motus, in each voice and in alternate voices.


Ill. No. 159
Wm. J. McCoy, "Egypt," Act III


Ill. No. 180
William Arms Fisher
"The Night has a Thousand Eyes"


The application of the $\pi \bar{D}$ chord followed by the T/ chord presents the opportunity for the third in the series of passing modulations.

When the D added 6th chord, whose fundamental is the mediant, is followed by the T substituted 6th chord, the fundamental of which is a fourth higher, the $\Pi \overline{\mathrm{D}}$ chord may be chromatically altered to form a $\mathrm{D}^{7}$ or $\mathrm{D}^{9}$ chord, effecting a passing modulation as the Dominant of the submediant ( $\mathrm{D} \underline{\mathrm{T}}_{\mathrm{J}}$ ).


At (a) occurs the fundamental position of the $\Pi \overline{\mathrm{D}}$ chord followed by the $T \mid$ chord in $\hat{C}$, with the fundamental ascending a 4th; at $(b)$, with the same fundamentals, the $\Pi \overline{\mathrm{D}}$ chord is altered to become a $\mathrm{D}^{7}$ chord as the Dominant of the submediant [D T] effecting a passing modulation. At (c) occurs the $\Pi \overline{\mathrm{D}}$ chord followed by the T$\rfloor$ chord in a: at (d) the $\overline{\mathrm{D}}$ chord is altered to become a $\mathrm{D}^{7}$ as a D T$\rfloor$, forming a passing modulation.





Utilize the following germ set for composition in various forms, applying the chords recently submitted.


Extended cadences with chromatic bass progressions from Tonic to Dominant in selected keys and from final Tonic to the succeeding penultimate Dominant through a series of other keys, as in other successions, may now be worked out, to involve applications of the $\mathrm{T}\left|, \mathrm{T}_{\|},\right| \overline{\mathrm{D}}, \| \overline{\mathrm{D}}$, and $\mathrm{D} \mathrm{T}_{\jmath}$ chords.

There are to be found in the works of recent composers (and older composers as well) occasional examples of the $\mathrm{D}^{4}$ substituted for the $\mathrm{D}^{3}$. This unit (otherwise known as the Dominant irth) is, with very rare exceptions, an embellishment over the $D^{3}$ or under the $D^{5}$, to one of which it progresses during the life of the D chord.

If, therefore, it progresses upward or downward one degree before the resolution of the chord, it is to be classed as an embellishment and not an actual member of the chord. The $\mathrm{D}^{7}$ here often resolves to the $\mathrm{T}^{j}$.

It occurs also in conjunction with the substituted 6 th to form the D substituted 6th and 4 th chord. Symbol $\left.\right|_{4} ^{6}$.

It may be employed with the $\mathrm{D}^{7}$ or $\mathrm{D}^{9}$.

111. No. 162

Henry Holden Huss, "Crossing the Bar "


## CHAPTER XLII

## CHORDS OF THE TONIC SEVENTH AND subdominant seventh

By adding a diatonic 7 th to the triad of the Tonic or of the Subdominant, the chord of the Tonic seventh $\left[\mathrm{T}^{i}\right]$ or the Subdominant seventh $\left[S^{i}\right]$ may be formed. In the major mode these chords consist of a major triad and major 7 th. In the minor mode the $\mathrm{T}^{7}$ chord consists of a minor triad and major 7 th, and the $\mathrm{S}^{7}$ of a minor triad and minor 7 th.


The fundamentals of all chords of the 7 th are naturally inclined toward other fundamentals located a perfect fourth higher. As may be seen in Exercise 456. the fundamental of the $D^{7}$ chord followed by that of the T triad (a), of the supertonic 7 th [ S] followed by the D triad (b), of the mediant 7 th [ $\overline{\mathrm{D}}$ ] followed by the submediant triad [T] (c), and the submediant 7 th [T ] followed by the triad of the supertonic $[15](d)$ are examples of this tendency:


This is equally true of the fundamental of the $\mathrm{T}^{7}$ chord. which is best succeeded by the S chord, as seen at (e) in the example above.

The progression of the iundamentals in each case, as may be seen, describes an ascending interval of a perfect fourth, which is recognized as being the most satisiactory fundamental progression toward temporary or permanent repose.

I1. No. 163
Edgar S. Kelley, op. 8. No. z."Israfel"


Ill. No. 168 Schumann, "Novelette," op. 21, No. 2


The fundamental of the $S^{7}$ chord is, however, denied this natural progression, owing, first, to the fact that the diatonic fourth above the Subdominant (which, harmonically, is the leading tone) is not a real fundamental, assuming as it does the position of a nominal fundamental to the D ) chord.

In addition, this ascending progression is that of an augmented fourth, which is not considered available; the descending progression of a diminished 5 th is but little better, involving as it does a doubling of the leading tone and an absolute failure to contribute an impression of resolution.

457


It is for these reasons that the most acceptable progression of the fundamental of the $\mathrm{S}^{7}$ chord is to the real fundamental of the triad on the leading tone, which is the Dominant.


In modern music, chord progressions from the $S^{7}$ chord to the $D$ )) chord are, however, occasionaily employed.

459


These chords may be used in all inversions, no member being omitted and none doubled; in the fundamental position, however, the 5 th omitted and the fundamental doubled, with the 7 th in the soprano (Ex. 456), is quite satisfactory.

Harmonize the following bass sets in accordance with the figuring, and construct melodies, as before.



481


In addition to the chords tabulated above, modern compositions contain many effective examples of the chord of the 9th on the Tonic, the Subdominant (see Ill. No. ${ }^{165}$ ), and the supertonic.

This subject, as well as the more extended utilization of material drawn from the overtonal system, such as the so-called whole-tone scale, successions of augmented fifths, etc., will be treated at length in a subsequent volume.

The exercises offered in this chapter may, as heretofore, be utilized as the basis for accompaniments upon which melodies are to be constructed. Extended cadences may also be worked out in the usual manner, involving the recent chords contributed.

A table of the direct and tributary chords included in the three primary families - Tonic, Subdominant and Dominant - is here given in $\hat{C}$.

THE TONIC GROUP


## THE SUBDOMINANT GROUP



S substituted 6th chord [Supertonic triad]
(Also with depressed 3d
in major keys)


S augmented 5th chord


Neapolitan 6th chord in $\hat{a}$


THE DOMINANT GROUP


D triad


13

$\sqrt{7}$
D substituted 6th chord with 7 th included
14

15
16


D substituted 6th chord with 7th and 9th included

$\mathrm{D}^{9}$ chord complete
(In five voices)


D augmented 5 th chord with 7 th included


D augmented 5th chord with 7 th and 9th included


French 6th chord with
D added 6th


French 6th chord with elevated $\mathrm{D}^{5}$


## CHAPTER XLIII

## SEQUENCES

A sequence is the repeated occurrence of a melodic or rhythmic figure upon different degrees of the staff


A sequence is tonal or real.
The tonal sequence is confined to the diatonic limits of the key, and is subject to the following conditions:
I. It is the general name of the intervals (as 3 d , 5 th, 6 th, etc.). not the specific name (as major, minor, etc.), that is to be considered.
II. Augmented intervals may freely occur in any part.
III. The leading tone may be doubled.
IV. The diminished triad may be used in any position.

The above privileges (II, III, IV) are allowed only in the repetitions of the sequence, not in the original figure. The final repetition also must be free from disallowed progressions.
$V$. The second inversion of the triad is usually considered unavailable.
VI. The original figure may consist of two or more chords, with embellishments if desired, and may be repeated upon higher or lower degrees of the staff.


The tonal sequence may consist of harmony notes only or it may include embellishments, as desired.


The real sequence is of a different character, in that the intervals employed melodically and harmonically in the repetitions must be identical in quality, that is, they must be of the same specific distance (as major 2d, perfect 4 th, diminished 7 th, etc.). This generally necessitates a passing modulation at each repetition.


This form of sequence is not as satisfactory as is the tonal sequence; a compromise of a much more agreeable character is frequently formed of modulations alternating to major and minor keys.

III. No. 187

Bach, "Organ Fugue in G "


Il1. No. $188 \quad$ BACH, "Organ Prelude in E Minor"



Pedal point, organ point, pedal note, pedal bass, or pedal, is the use of a note sustained continuously through a definite portion of a composition while a succession of alternating consonant and dissonant chords are being sounded in the other three voices.

The pedal point, in most cases the Tonic or Dominant, is placed generally in the bass, although it is used with excellent effect in any of the other three voices.
When occurring in a voice other than the bass it is termed inverted pedal point. The first and last chords should be in accord with the pedal note, that is, they should be chords of which the pedal is a note of harmony.

The harmonies in general use as passing chords are the primary chords of the prevailing key and of the directly related keys. In the works of modern composers, however, no restrictions seem to be considered in the employment of harmonies formed by combinations of diatonic and chromatic embellishments. The student is advised against the use of any chords excepting those drawn from directly related keys until his work has reached a mature stage in its progress.

In the following example of the Dominant pedal point the chords are all of the prevailing key. The embellishments are marked.

469


An example of pedal point on the Tonic is also given.


In the following examples chords from directly related keys are included.

471


$$
\begin{array}{lllllllll}
{ }^{472} \mathrm{~T} & \mathrm{DS} & \mathrm{~S} & \mathrm{~T} & \mathrm{DD} & \mathrm{D} & \mathrm{~T} & \mathrm{DD} & \mathrm{D}
\end{array}
$$




Double pedal point is frequently used to excellent effect, particularly in compositions of a pastoral character. The combined Tonic and Dominant are most generally used for this purpose, the lower note being the Tonic.


Illustrations of various species of pedal point are appended.

Ill. No. 170
W. J. McCor, " The Hamadryads"


111. No. 171
G. W. Chadwick, "Piano Quintette in Lb"


Ill. No. 172
Cherubini, "Quartette in C Major"


An excellent illustration of Tonic pedal with embellishments.

Ill. No. 173
Wallace A. Sabin
Prelude to "St. Patrick of Tara"


Ill. No. 175
Heller, " Dans les Bois," op. 128


Ill. No. 176 E. A. MacDowell, "Shadow Dance"


In five-part harmony avoid doubling such members of the chords as have compulsory resolution. Those best suited for doubling are: (I) in the $\mathrm{D}^{7}$ chord, the $\mathrm{D}^{5}$ and $\mathrm{D}^{8} ;(2)$ in the D$)$ ) chord, the $\mathrm{D}^{5}$ and $D^{7}$. Crossing of the parts should generally be avoided.

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