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SCHMIDT'S EDUCATIONAL SERIES  
No. 181 a-b

# KEYBOARD TRAINING IN HARMONY

725

Exercises Graded and Designed to Lead from the Easiest First Year Key-Board Harmony Up to the Difficult Sight-Playing Tests Set for Advanced Students.

By

**ARTHUR E. HEACOX**

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PART I.

PART II.

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## Preface

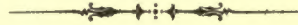
The object of this book is to furnish a graded series of exercises for practice in harmonizing melodies and figured basses at the key-board, so arranged that the pupil is led gradually from the easiest first-year work up to the difficult sight playing tests set for advanced students.

The material was prepared and arranged in the course of several years of harmony teaching, where pupils are required to "realize" each problem at the key-board, and pass annual sight-playing examinations before a committee of Theory teachers. Through this training alone, many students have been enabled to pass the harmony sight-playing tests required for membership in the American Guild of Organists.

The arrangement of the material is that of a handy manual for systematic daily practice at the key-board (preferably in short periods). The subjects are taken up in the usual order, and the key-board work may parallel any standard work in harmony. The figuring, in the figured bass, is that familiar to most American and European musicians. In order to include some representative French examinations, a short chapter is devoted to the peculiarities of the French system.

The sources of the exercises are various. The greater part of the first 630 were written expressly for this book. Those from examination papers are so indicated. Nearly one hundred (from 642 on) are typical examination questions from the sight-playing tests and paper work of many of the finest music schools and universities in both America and Europe, together with an important list of the problems set by the American Guild of Organists, covering the years '07 to '16. The Author's request for these materials, with permission to print them, was met with a most generous response, and he wishes here to express the keenest appreciation of the beautiful examples and the courtesy which accords their use. Full credit is indicated with each exercise. Especial mention should be made of the coöperation of Mr. Warren R. Hedden of the American Guild of Organists, of Mr. Frank E. Ward's contribution to the subject of "Sevenths", and of M. Vincent D'Indy's beautiful MS given in facsimile at the end of the book.

Oberlin, Ohio, 1917.



*Figured-bass is the whole foundation of the music, and is played with both hands in such a manner that the left hand plays the notes written down, while the right adds in consonances or dissonances, the result being an agreeable harmony to the glory of God and justifiable gratification of the senses; for the sole end and aim of general-bass, like that of all music, should be nothing else than God's glory and pleasant recreations. Where this object is not kept in view there can be no true music, but an infernal scraping and bawling.*

*Johann Sebastian Bach.*





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# Keyboard Training in Harmony

## PART I

ARTHUR E. HEACOX

### Chap. I. Triads

#### Primary Triads in Fundamental Position

1. To harmonize these basses (at the key-board) observe the following rules:

- The bass must be the root of I, IV, or V.
- The common tone is always kept, the other voices progressing to the nearest chord-tones.
- The soprano will begin on the root, third, or fifth, according to the figure over the first bass note.
- The alto and tenor, with the soprano, will form a complete triad in close position. (In review, solutions in open position are recommended.)

Ex. 1

(a) (b) (c)

C I IV I V I      F I V I IV I      e I V I IV I

1. 5. 2. 3. 8. #

4. 3. # 5. 5. 6. 3. #

7. 8. 8. 5. # 9. 5. #

2. To harmonize these sopranos observe the following rules:

- The bass must be the root of I, IV, or V, but the soprano may be the root, third, or fifth.
- The last chord will be I, the tonic.
- If the soprano repeats a note, do not repeat the chord but change to another. (Chord repetition has a legitimate place but the purpose of these first exercises is better served without it).
- The bass should not leap two fifths in succession in the same direction.
- The chords should be so chosen as to provide a common tone which must be kept, hence for the present the succession, IV-V, or V-IV, is not available.
- If the soprano does not end on the key-note, it may require some testing to decide whether the mode is major or minor. For example Nos. 12 and 18 must be solved in minor or the rule can not be kept. Let the pupil show why.

10. 11. 12.

C I V I IV I      C I IV      a I (Remember V is always major).

13. 14. 15.

a I IV      C      c



16. 17. 18.

gl V

3. If the soprano leaps from one note to another of the same chord, the inner parts may follow it above a stationary bass as in Ex. 2. Here the upper three parts must always present the complete triad. This kind of movement adds much to the very limited resources.

4. The change from one chord to another is most frequent at the bar. In chord repetition above the same bass note, the first appearance of the chord should be on an accent if possible, except at the first accent of a phrase which begins on a weak beat (Ex. 2).

Transpose the model to other keys, and then harmonize the following sopranos

Model of a chord-skip melody with chord repetition

Ex. 2

(a)

19.

C I — V — I — V — I — IV I — V — I

20.

I IV I V —

21.

I —

22.

23.

I I



5. When a given bass repeats a note the chord will remain the same but change its position. This is the converse of ¶ 3, and is illustrated in Ex. 2, if the bass be considered the given part. The leap of an octave is equivalent to a repeated note, Ex. 2,(a).

Harmonize the following basses taking advantage of repeated bass notes to make the soprano more interesting

24. 

25.  26. 

27.  28. 

29.  30. 

31. 

6. In all the previous exercises a common tone has been kept, but the progression IV-V or V-IV has been avoided. Triads whose roots are on adjacent degrees have no common tone.

RULE: If two successive chords have no tone in common the upper three voices must progress in contrary motion to the bass to the nearest chord-tones, to avoid Consecutive Fifths and Octaves.

The progression IV-V is better than V-IV. In the latter, avoid placing the third of V in the soprano. The bass should not leap the interval of a seventh, as at (a). Play all the following and compare them by ear.

Ex. 3

Con. 5 <sup>ths</sup>	Con. octs.	Bad.	Good.	Good.	Good.	Fair	Possible.	Bad.	Bad.
									(a)

L-Tone in Sop.



7. A closing Formula, or Cadence, is formed by arranging the primary triads as in Ex. 4. Cadences are Perfect or Imperfect according to the last note in the soprano; Authentic when the last two chords are V-I, and Plagal when IV-I.

The progression V-I is the typical so-called Cadencing Resolution or Progression.

Play the following Cadences in every key, then harmonize the basses

Ex. 4

Perfect Imperfect Imperfect Perfect

Authentic Authentic

V I V I V I V I

Imperfect Imperfect Perfect.

Plagal or Church Cadence.

IV I

32. 33.

34. 35.

36. 37.

38. 39.

40.







8. Thus far strict adherence to the rule of keeping a common tone (¶1) has been justified because of the importance of establishing, in both mind and fingers, the habit of observing this principle. It will, however, conduce to greater flexibility in the movement of the voices if the rule is now expanded to read as follows:

**RULE FOR THE COMMON TONE**

A tone common to two successive chords is usually kept in the same voice, but if not kept, the upper three voices progress in contrary motion to the bass, to the nearest chord-tones.

9. The first six tones of the diatonic scale may now be harmonized with I, IV, and V, in fundamental position as before, in both major and minor, ascending or descending (Ex.5). The unmelodic character of the bass, occasioned by leaping from root to root, may be excused until inversion is introduced.

**Transpose to other keys**

Ex. 5

10. Not all positions of the chords are equally good for the contrary motion allowed under the rule in ¶ 8. For example, the strong tendency of the Leading-tone in the soprano to progress to the key-note, in the progression V-I, prohibits Ex.6 (a). In like manner, but to a less degree, the downward tendency of the Subdominant (four in the scale) in the soprano, makes it best to reach it from below if it is to ascend. Play and compare (b), (c), (d).

Ex. 6

(a) Bad. C V I L-Tone in Sop.

(b) Good. Subdom. reached from below may ascend.

(c) Poor. Tendency of subdom. contradicted.

(d) Good. (c) corrected.

**Harmonize the following sopranos according to ¶¶ 8-10**

50.


51.


52.


53.


54.

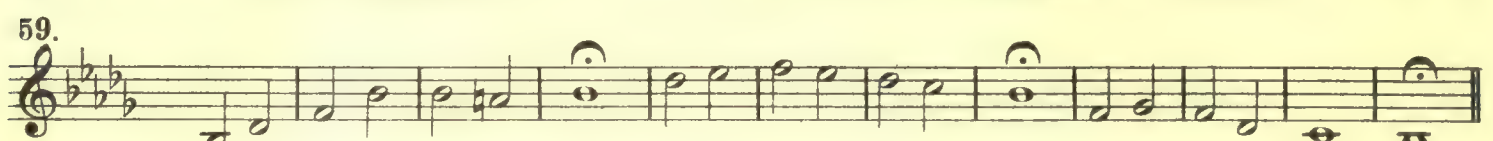



55. 

56. 

57. 

58. 

59. 

60. 


## General Review of the Primary Triads in Fundamental Position


Ex. 7 

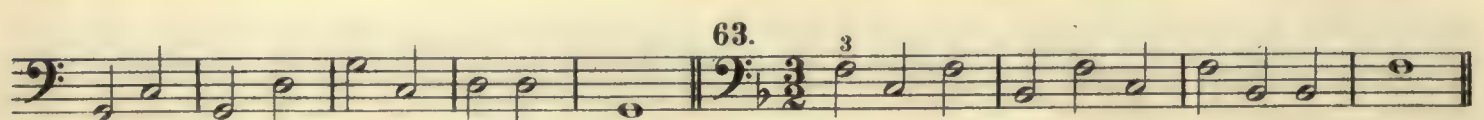
11. Example 7 contains essentially all the points involved.

- (a) Common-tone kept in the same voice.
- (b) No common-tone, contrary motion to the bass.
- (c) Repeated soprano, change to a different chord.
- (d) Repeated bass, chord changes position; or, soprano leaps from one chord-tone to another, the chord not changed.
- (e) Common-tone not kept but contrary motion to the bass.
- (f) Repetition of a harmony, from a weak beat to a strong, at the opening of a phrase.

All the following are to be played according to the above principles. The first few are very simple. Those who have studied harmony may be able to begin their harmony playing at this point.

61. 

62. 

63. 



64. 65.

66.

67. 68.

69. 70.

71. 72.

73. 74.

75. 76.

77. 78.

79. 80.

81. 82.

83.

84. 85.



## Primary Triads in their First Inversion.-Chords of the Sixth

12. The vocabulary is now I, I<sup>6</sup>, IV, IV<sup>6</sup>, V, and V<sup>6</sup>. The following examples contain essentially all the typical progressions:

Ex. 8

C I I<sup>6</sup> V I<sup>6</sup> I V<sup>6</sup> I IV<sup>6</sup> V I

Ex. 9

(a) (b) (c) (d) (e) (f)

- (a) The root doubled in the Chord of the Sixth  
 (b) The fifth doubled in the Chord of the Sixth.  
 (Avoid doubling the third until presented in ¶ 13)  
 (c) The common tone kept in an inner voice rather than in the soprano, for the sake of a better melody.  
 (d) Repeated note in the soprano, same chord used, but inverted under one of the two notes.  
 (e) Open position for a few chords permits a finer solution. Sometimes the whole exercise may be done in open position (at the option of the pupil).  
 (f) Rule for contrary motion (¶ 6) does not apply to successive chords where either one is inverted. The progression here (IV<sup>6</sup>-V) is called Mixed Motion.

Transpose Exs. 8 and 9 to other keys, then harmonize the following

86. 5 6 6 6 6 6 87. 8 6 6 6

88. 8 6 6 6 6 6 89. 5 6 6 6

90. 6 3 6 6 6 6



91.

92.

93.

94.

95.

96.

97.

98.

99.

100. Unfigured

Use the chord of the sixth as before

101.

102.

103.



**13.** In successive chords of the sixth in close position, with a stepwise bass, it is correct to double the third in one of the chords to avoid consecutive fifths and octaves. Certain positions permit doubling the root and fifth alternately, but for this some experience is necessary. In general, have the roots progress in parallel sixths with the bass, and if in doubt double the third in one of the chords, but never the third of V<sup>6</sup>, which is the Leading-tone. For exceptions, ♯ 27, 28.

Ex. 10

- (a) The third doubled in IV<sup>6</sup>, the root in V<sup>6</sup>.
- (b) The fifth doubled in IV<sup>6</sup>, the root in V<sup>6</sup>.
- (c) Consecutive fifths and octaves corrected at (a).
- (d) The fifth doubled in IV<sup>6</sup>, Leading-tone doubled in V<sup>6</sup> (poor).
- (e) If the Leading-tone in the soprano followed its tendency to the Tonic, consecutive octaves with the bass would result; furthermore, the leap downward in the soprano, when its strong tendency upward is so evident, produces a disappointing effect. Test at the Piano.
- (f) Successive chords of the sixth without a stepwise bass, no need of a doubled third.
- (g) All the voices progressing in similar motion while the chord remains the same, permissible if consecutives are avoided.

Transpose Ex. 10 (A) to other major keys, then harmonize the following figured basses and sopranos along the same lines

104. 105.

106.

107.

Use chords of sixth where suitable in all the following sopranos

108. 109.

110.

111.



## Primary Triads in their Second Inversion.- The Six-four Chord

**14.** The most important Six-four Chord is the Tonic Six-four in the authentic cadence. It must be on an accented part of the measure, or the accented fraction of a beat, and the V which follows it must be relatively unaccented. The bass-note of the six-four must be doubled, i. e. the fifth of the chord. So strong is this formula that any six-four chord on an accent tends to declare itself a tonic chord and promise a closing cadence which, if admitted at an unsuitable place in the phrase, gives it a weak and halting character.

Since this accented tonic six-four chord resolves so emphatically to the V (and in fact is a V with its third and fifth delayed), it should be preceded by some form of the subdominant or tonic harmony, for if preceded by V, virtual chord repetition from weak to strong beats results a poor progression, par. 4.

From the above, it is evident that the introduction of a six-four chord demands more than ordinary care, or it may spoil the phrase which contains it. In Ex. 12, the six-four chord is shown on unaccented beats, introduced in special ways. Under these restrictions the six-four chord is largely shorn of its power to promise a full close, and in this subordinate relation becomes a medium through which the voices pass, rather than an independent harmony.

### Closing Formulas, - The Authentic Cadence with $I_4^6$ on an accent.

Ex. 11

Ex. 11 shows three measures of a closing formula. The first measure (a) is in C major, showing a six-four chord on an accent. The second measure (f) is in C major, showing a partial close. The third measure (f) is in C major, showing a full close.

Ex. 12

Ex. 12 shows an eight-measure sentence or period. The first four measures form a phrase, and the last four measures form a partial close. The first four measures are labeled (d), (b), (c), and (e). The last four measures are labeled (a), (a), and (a).

(a) By far the most important six-four chord is the  $I_4^6$  on an accent, in the authentic cadence, - a full or complete close.

(b) The close is partial when the phrase ends with a V preceded by an accented  $I_4^6$ .  
Test these phrases at the piano.

(c) Secondary value - the root prepared, the bass progressing stepwise in one direction, seldom or never accented.

(d) The bass the second of three repeated notes. (Weak)

(e) The bass the second of three notes belonging to the same chord. (Little value till the bass is treated somewhat contrapuntally.)

(f) The figures ( $\frac{6}{4} \frac{2}{2}$ ) or ( $\frac{6}{4} \frac{1}{4}$ ) over one bass note, require first a six-four chord, then a chord in fundamental position - usually the progression  $I_4^6$ -V.


Transpose Exs. 11 and 12 to other keys, studying them thoroughly through the medium of both eye and ear; then harmonize the following exercises with vocabulary: I,  $I_4^6$ ,  $I_4^6$ , IV,  $IV_4^6$ ,  $IV_4^6$ , V,  $V_4^6$ ,  $V_4^6$ .



112. 

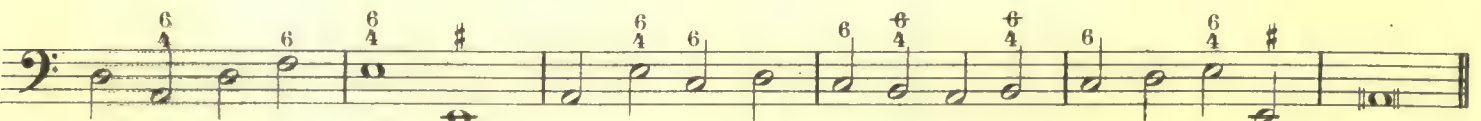
113. 

114.  115. 

116.  117. 

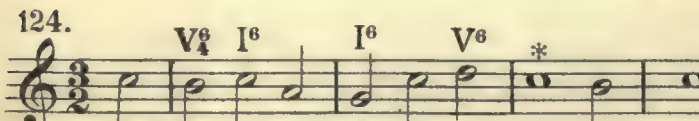
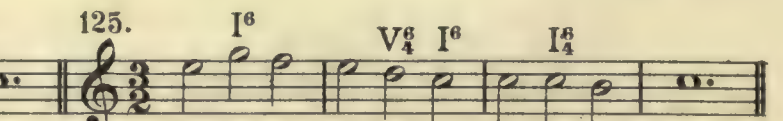
118. 

119.  120. 



121.  122.   
 Supply the alto and tenor. Transpose to A, B $\flat$ , F.

123. 

124.  125. 

At \* not I $\frac{6}{4}$ . Why?



126.  $V_4^6$   $I^6$   $I^6$   $V^6$   $I$   $I_4^6$   $I^6$   $IV$   $IV^6$   $I_4^6$

127.  $I^6$   $I_4^6$  128.  $V_4^6$   $I^6$   $I_4^6$

129. Unfigured. Seek to use suitable inversions in the following

130.

131. 8va Bass  $\frac{6}{4}$   $\frac{6}{4}$

132.

Use a  $\frac{6}{4}$  correctly at each +, otherwise treat as unfigured.  
 N.B. In meas. 6 the + is on the second beat.

## Secondary Triads in Fundamental Position in Major keys

15. The triads on ii, iii, and vi, are subordinate chords used in the following three ways:

- (a) As substitutes for the primary triads (ii for IV, etc.).
- (b) As connecting chords, preferably with the bass descending by leaps of a third to successive roots. Roots ascending in thirds are weak.
- (c) As independent chords.

Ex. 13 (a) The ii substitute for IV; the vi for I; the iii for i. (b)

(c)



**16** The thirds of the secondary triads are the principal tones of the key and may be doubled rather freely for the sake of a better melodic outline. The upward tendency of the leading tone and the downward tendency of the fourth and sixth degrees of the scale, especially when in the soprano, must more or less determine the chord to be used and the tone to be doubled.

With the introduction of the secondary triads and the resulting increase in the number of possible progressions ranging in value from good, to fair, or poor; the student must depend largely on the study of models compared and tested by ear at the keyboard. Here dependence on rules, or eye memory, will not at all suffice.

Ex. 14

**17.** In Ex. 14, study the various progressions from II to V.

(a)(b) The II an excellent substitute for IV, and with the same treatment, i.e., contrary motion to an ascending bass.

#### GENERAL RULE FOR II-V

Give up the common tone and lead the upper three voices contrary to an ascending bass. (Does not apply in inversions)

(c) The common tone kept. Possible here for the sake of the melody. Not recommended. Improved at (d).

(e) Bad on account of the objectionable Covered Octaves. These in the outer voices are especially bad because the soprano tone (F) has a downward tendency (§ 16) and is, nevertheless, compelled to ascend.

(f) Good. The inversion of V and the ultimate downward resolution of the (F) in the soprano are excellent. Here the common tone is best kept.

(g)(h) Freer treatment of the voices, but good.

(i)(j) The II after V. Use seldom. If used these are among the few fair progressions.

Ex. 15

**18.** In Ex. 15, study the various progressions from II to  $I^6_4$ .

(a) (b) An excellent substitute for  $IV-I^6_4$  in the closing cadence. (Compare with Ex. 11)

(c) Impossible on account of the consecutive fifths.

#### GENERAL RULE FOR II- $I^6_4$

Lead the upper three voices contrary to an ascending bass, and avoid having the fifths of the chords above the roots.

(d) The common tone is given up between  $IV-II$ , in order to keep the rule for  $II-I^6_4$ , immediately following.

(e) VI as a substitute for I (Tonic function). This is the best position of VI. Its third, the key-note (root of I), is best doubled. This is called a deceptive cadence because the I is expected instead of the VI.

(f) Complete descending scale in major, harmonized by the use of  $III-IV$  beneath its seventh and sixth degrees.

**Transpose (f) to every major key.**



Harmonize the following exercises  
(The II, III, and VI in major keys)

133.  134.  III

135. 

136. 

137.  138. 

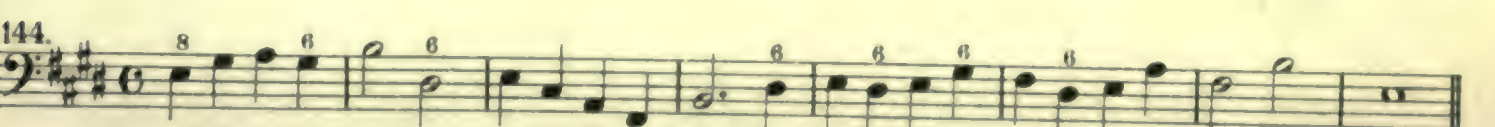
139. 


140. 

141. 

142. 

143. 

144. 

145. 

*Handwritten notes:* *Handwritten* →



146. VI IV II I<sup>6</sup> IV V I 147. iii II I<sub>4</sub>

148. V IV VI III

149. Unfigured  
Make suitable use of occasional secondary triads

150.

151.

152.

In the next few exercises are some of the less common progressions.

153. Study again Ex. 14 (g) to (j) and 15 (e).

154.

155.



## Secondary Triads in Fundamental Position in Minor keys

**19.** The subordinate triads in minor ( $\text{II}^\circ$ ,  $\text{III}'$ ,  $\text{VI}$ ) are used in the same three ways as those in major, but with far less freedom. The  $\text{II}^\circ$  and  $\text{III}'$  are both dissonant chords, sometimes approached, or left, with difficulty on account of the augmented interval (6-7) in the Harmonic minor scale. The most used progressions are shown in the following example which should be studied and transposed to other keys.

Ex. 16

(a) (b) (d) (c)

(IV)

$\text{II}^\circ$  V VI  $\text{III}'$  VI

Aug. 2. Aug. 2. Bad. Bad.

$\text{II}'$  V V VI

Special rules violated.

- (a) The VI as a connecting chord.
- (b) The  $\text{II}^\circ$  as a substitute for the subdominant. (Far oftener used in its first inversion, ♯21).
- (c) The  $\text{III}'$  as a simple triad, best resolved to the VI (the cadencing resolution).

**20.** In strict writing no voice may progress an augmented interval, and while this restriction is quite properly disregarded under certain circumstances, as for example, in chord repetition, the student should rigidly adhere to the following:

### TWO SPECIAL RULES FOR THE MINOR KEY

**Rule 1:** In the progression  $\text{II}^\circ$ -V, give up the common tone and lead the upper three voices in contrary motion to an ascending bass, Ex. 16 (b).

**Rule 2:** In the progression, V-VI or VI-V, double the third in VI and do not omit the fifth. Two voices move contrary to the bass (d).

### The $\text{II}^\circ$ , $\text{III}'$ and VI in minor keys

156. 3 # 6/4 # 157. 3 6 # 6 6

158. 3 # # #

159. # 5 6/4 6 160. 3 # #

161. 5 # 5 #

162. 8 # # #

163. 8 # 6 # 5 6/4 #



164. I V VI II° 165. VI VI III VI—

166. Unfigured. Locate secondary triads at suitable places.

167.

## Inversions of the Secondary Triads

**21.** The secondary triads are all used in the first inversion, frequently with doubled third, and preferably in the octave position, i.e., with the root in the highest part, but conditions may justify any position and any doubling.

The best of all these chords is the II<sup>6</sup> which in both major and minor is much superior to the fundamental position, and is the best substitute for the subdominant. Its bass, the third of the chord, is the subdominant and the best tone to double. The position of the fifth (fifth highest) is the poorest.

The treatment of the other first inversions is best learned from the examples, and through practice in harmonizing figured basses.

The second inversion of the secondary triads is of little value. If used at all it must conform strictly to the requirements of par. 14.

Ex. 17

(a) Same rule as for II-V and II-I<sub>4</sub> (§§ 17, 18).

## Inversions of Secondary Triads

168. 169.



170. 171.

172.

173.

174.

175.

176. IV<sup>6</sup> I<sup>6</sup><sub>4</sub> V VI II<sup>6</sup> I<sup>6</sup><sub>4</sub> V VI II<sup>6</sup> I<sup>6</sup><sub>4</sub> V

177. Unfigured

178. (VI)

179.



## The Triad on the Leading Tone

**22.** The Triad on the Leading-Tone is a dissonant, or tendency, chord and like the Dominant Seventh Chord from which it is derived (§ 36) it resolves regularly to the Tonic, rarely to the VI.

### GENERAL RULE FOR THE LEADING TONE TRIAD

Use the Leading Tone Triad in the first inversion only, double the third, or fifth, and resolve all parts stepwise to a complete I or I<sup>6</sup>. The fifth progresses up or down. The consecutive fifths which result from the proper treatment of this chord are unobjectionable, one of them being diminished and not appearing with the bass (outer part). Sometimes the third, and more rarely the fifth, may be left by a leap.

All the progressions in Ex. 18 are equally good in both major and minor, except that the deceptive resolution is best restricted to major only.

Ex. 18

- (a) to (f) Typical regular resolutions of  $\text{vii}^{\circ 6}$ .  
 (g) Doubled third, one third being left by a leap.  
 (h) Doubled fifth, one fifth being left by a leap, permissible but not usual.  
 (i) (j) Deceptive resolutions to VI, not frequent, avoid in minor.  
 (k) By using  $\text{vii}^{\circ 6}$  the major scale may now be harmonized. Transpose (k) to every major key.

**23.** As a rule consecutive fifths in the order diminished to perfect in an upward direction, and perfect to diminished downward, are permitted, provided the bass is not one of the voices which produce the fifths. In the case of triads, inverting one or both perfectly meets these conditions, Ex. 18 (d) (e) (f).

**24.** In three successive chords of the sixth with the bass ascending stepwise generally use close position, and double the fifth, third and root in succession; with a descending bass, double root, third and fifth, Ex. 19 (a), but see also §§ 25, 26.

**25.** If the upper three voices all move in contrary motion to the bass the third may be doubled in successive chords of the sixth as at 19 (b). This is frequently preferable to a merely mechanical observance of § 24, especially in approaching a cadencing six-four chord. Here, as in § 18, the fifths of the chords may not appear above the roots.

Ex. 19

**26.** From I or I<sup>6</sup> with doubled root, to  $\text{ii}^{\circ 6}$  with doubled third, similar motion of all the voices is permissible as at Ex. 19 (c), but here avoid the  $\text{ii}^{\circ 6}$  in the position of the fifth (fifth highest).



### Advanced Exercises in Triads

180. 5 6 6 181. 8 6 6 6 6 6 6 4

(d. Ex. 19)

182. 8 6 6 6 6 6 6 4 183. 3 6

184. 8 6 6 6 6 6 6 4

185. 8 6 6 6 6 6 6 4 186. 3 6 6 6 6 6 6 4

187. 5 6 6 6 6 6 6 4 188. 8 6 6 6 6 6 6 4

189. 8 6 6 6 6 6 6 4

190. 3 6 6 6 6 6 6 4

191. 3 6 6 6 6 6 6 4 192. 3 6 6

193. 3 6 6 6 6 6 6 4

194. 3 6 6 6 6 6 6 4

195. 196.



197.  $V^6$   $VII^{\circ 6}$   $I^6$   $I_4^6 = V$  198.  $VII^{\circ 6}$   $I^6$   $I_4^6$   $I^6$

199.  $II^6$   $IV^6$   $V^6$   $I_4^6$   $VII^{\circ 6}$   $I^6$   $II^6$   $I_4^6$

200. Unfigured

201.

202.

203.

### The Sequence

**27.** The Sequence is a succession of similar harmonies resulting from a symmetrical progression of the given part. The initial design, or pattern, is usually repeated twice, or more, in an ascending or descending series, and usual rules for chord progressions, doubling, etc., are frequently disregarded in order to obtain the required symmetry. Practice in both writing and playing sequences is strongly urged as one of the practical ways of gaining freedom at the keyboard, and familiarity with the vocabulary of chords, and chord progressions, in all the keys.

Ex. 20

Design Cadence

1 2 3  $VII^{\circ}$  4 5 6 7 8

Transpose to other keys

**28.** In Ex. 20 the first measure is the design of the sequence, the sequence unit. The third of the first chord is in the soprano and the progression to the following chord is regular, the common tone being kept in the tenor. This design which must be connected correctly with the following sequence unit is then repeated five times in an ascending series, and at measure seven, the symmetry of the bass being broken, a cadence is added in the usual manner. Several otherwise questionable progressions are here good because they serve to maintain the symmetry of the sequence. For example, in the third measure,  $vii^{\circ}$  is used in fundamental position, the bass leaps an augmented fourth, (e to  $b^b$ ), and the common tone is given up five times across the bar without regard to the chords used.



Ex. 21

(a) Design Free Cad. (b) Design

Transpose to every major key

29. In Ex. 21 (a) the design again fills one measure but this time embraces four chords instead of two. This design is then repeated, each time a third lower, but is altered in the fourth measure to make a cadence. The same design could be slightly altered and descend stepwise in the successive measures as at 21 (b). Let the student extend this sequence through several bars and add a cadence.

204.

Design Cadence

205.

Design

206.

207.

Par. 24

208.

Par. 24



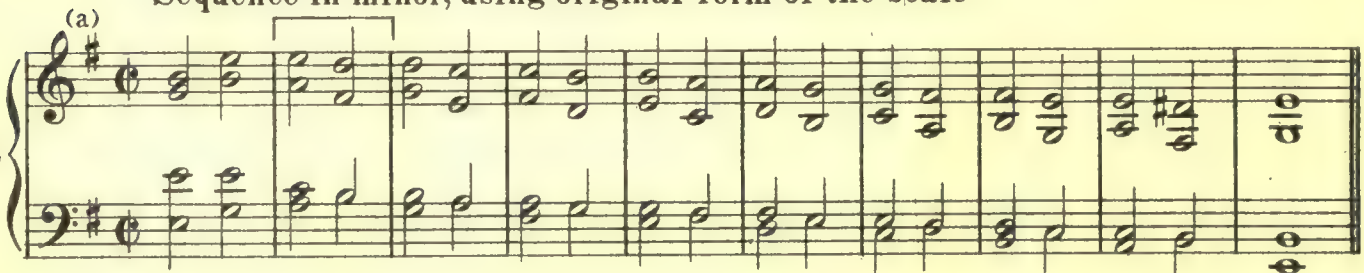
209. 

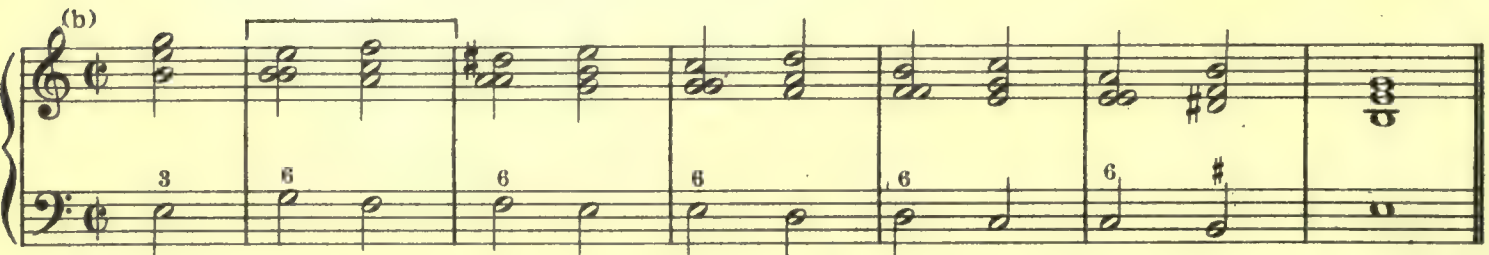
210. 

211. 

**30.** A sequence in minor usually employs the Original Form of the minor scale, thus avoiding the augmented second, but where the character of the design permits, the raised seventh is generally used, Ex. 22 (a)(b).

Sequence in minor, using original form of the scale

Ex. 22 (a) 

(b) 

**31.** The use of the Original Form of the minor scale provides major triads on III and VII. Either of these chords may harmonize the natural seventh of the scale in the Phrygian Cadences (Ex. 23). These cadences should be committed to memory. They are especially interesting in harmonizing certain fine chorals, and are a welcome relief from a too frequent use of the more common endings.

Note. Strictly speaking the Phrygian Cadence belongs to neither our major, nor minor key, although used in both. It is the closing cadence of the Phrygian Mode whose scale may be represented at the piano by playing the white keys from E to E. If played downward counting the upper E as one, the half steps occur between 3-4 and 7-8 and the F, which is 7, is a leading tone downward, the true leading tone of this mode. The G# was not originally any part of the mode and appears in the last chord only, to comply with a later demand for a major final chord. (*Tierce de Picardie.*)





220.

221.

**32.** A triad in fundamental position may precede or follow a chord of the sixth on the same bass note. The figuring is 5 6 or 6 5 according to the order of the two chords. The intervals, 6 and 5, must not be doubled and should appear in succession in one voice, usually, but not necessarily, the soprano. In most cases one of the two intervals (the 5 or 6) is a passing tone and as such is usually both taken and left stepwise (Ex. 24).

Ex. 24

Ex. 25

Transpose to other major keys

222.

224.

225.

226.

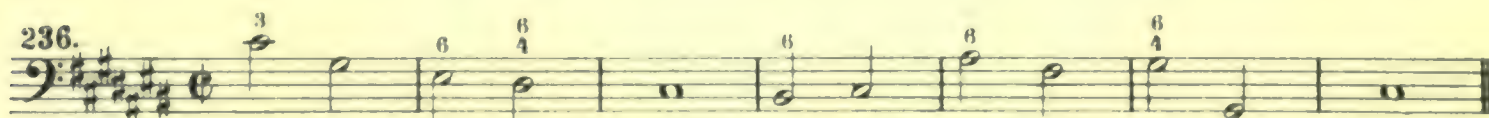
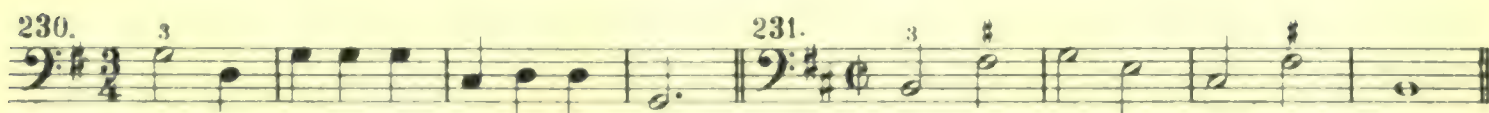
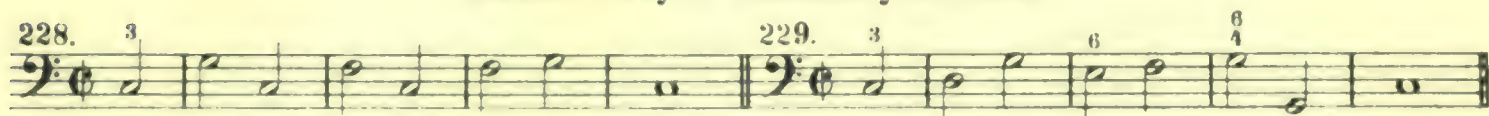
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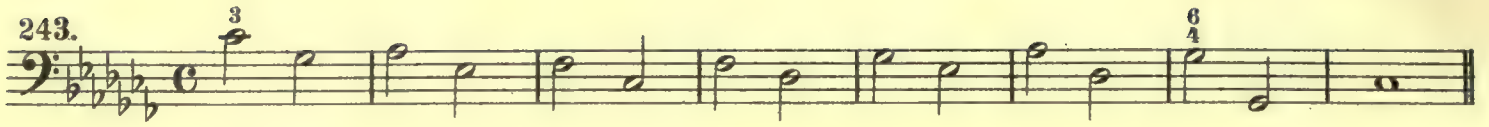


## General Review in the use of Triads

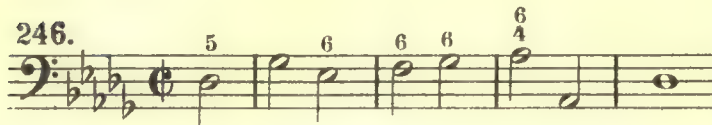
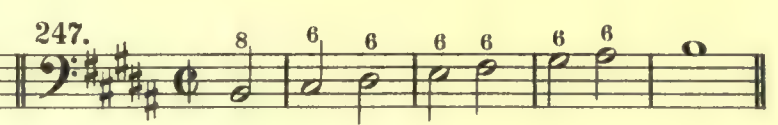
**33.** Mr. Walter R. Spalding in his treatise on Counterpoint says, "So let the student be persuaded to acquire a sound and facile technique in the treatment of triads. Nothing will give him such a good foundation for future development when he comes to free chromatic writing." In the following review exercises the problems are grouped under four general headings, according to their character, and the grade of advancement expected. Thus the first set of sopranos can be used as review before any inversions are reached, while the last list, selected from examination papers, demands a comprehensive grasp of all that has been presented in the foregoing pages.

### Basses—easy to moderately difficult

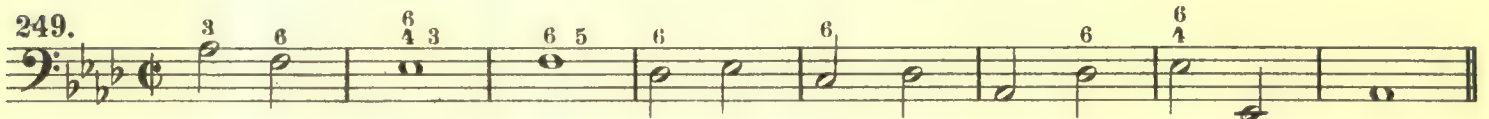


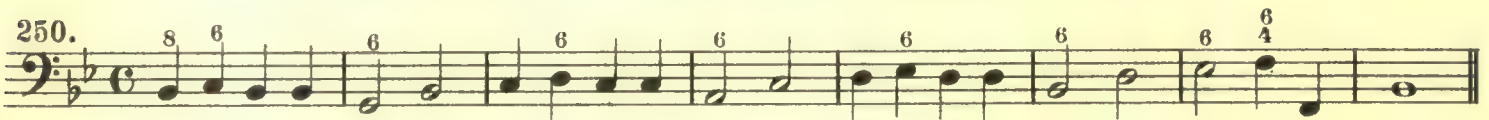
243. 

244.  245. 

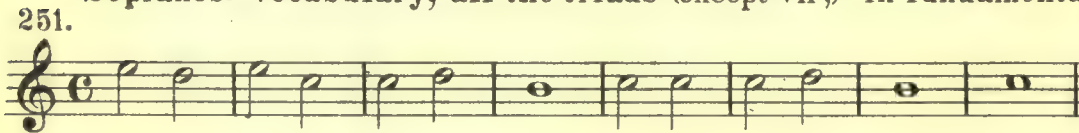
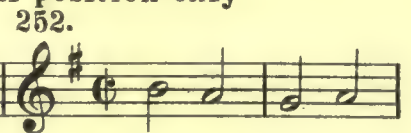
246.  247. 

248. 

249. 

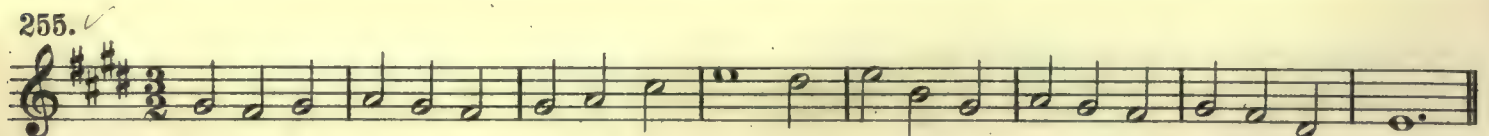
250. 

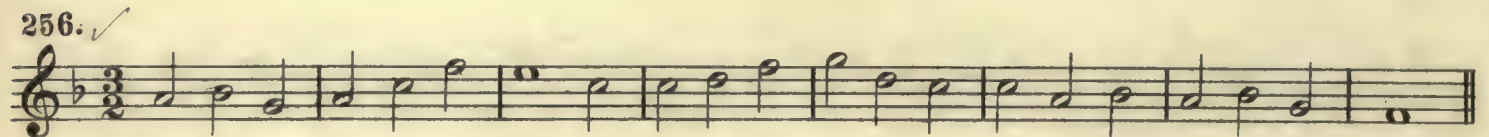
Sopranos—vocabulary, all the triads (except VII<sup>o</sup>) in fundamental position only

251.  252. 

253. 

254. 

255. 

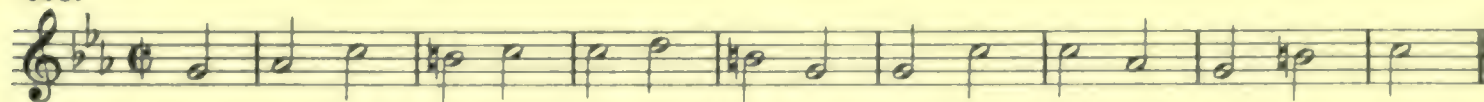
256. 



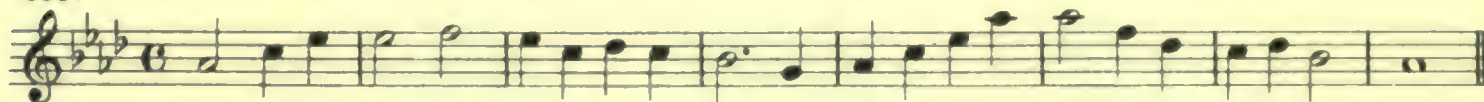
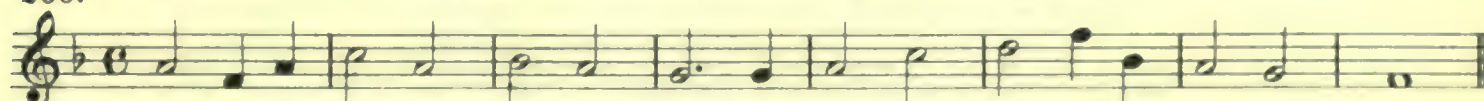
257.



258.



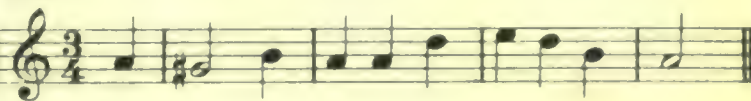
259.

260. Sopranos— All the triads and their inversions, including VII<sup>6</sup>

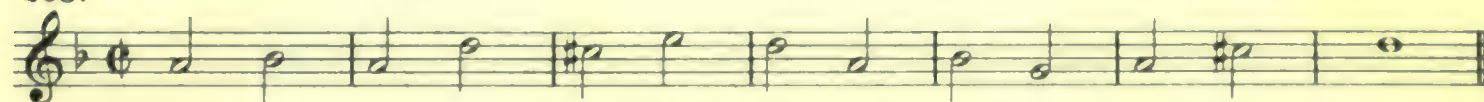
261.



262.



263.



264.



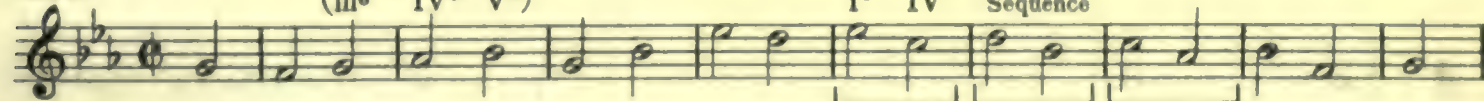
265.



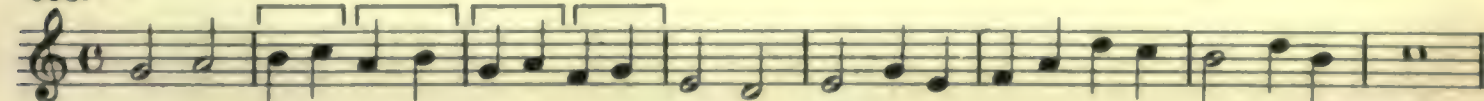
266.



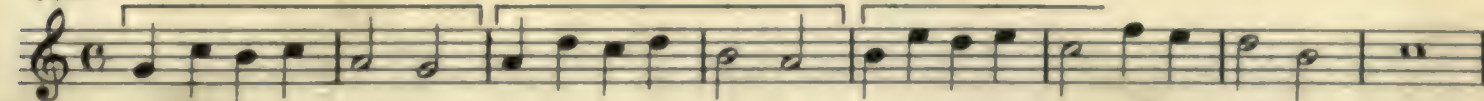
267.

(III<sup>6</sup> IV<sup>6</sup> V<sup>6</sup>)I<sup>6</sup> IV Sequence

268. ✓



269.



## 270. Old French Noël.

Musical score for 'Old French Noël' in G major, 6/8 time. It consists of three staves of music. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 6/8 time signature. The melody is written in a simple, folk-like style with eighth and quarter notes.

## 271. O Ewigkeit du Donnerwort. 1642

Musical score for 'O Ewigkeit du Donnerwort' in D major, 4/4 time. It consists of three staves of music. The first staff begins with a treble clef, a key signature of two sharps (F# and C#), and a 4/4 time signature. The melody features a prominent dotted half note followed by a quarter note, characteristic of the hymn.

## Examination Questions

All the following (272 to 289) are from examination papers that have been used in Oberlin Conservatory of Music for elementary classes. The student is advised to write as well as play them.

Musical score for exercise 272 in G major, 4/4 time. It is a single staff of music in bass clef. The exercise includes fingering numbers: 8, 6 5, 6 4, and 5 6. The melody consists of quarter and eighth notes.

Musical score for exercise 274 in D major, 4/4 time. It is a single staff of music in bass clef. The exercise includes fingering numbers: 3 6, 6, 3 6, 6 6, and 6 4 #. The melody consists of quarter and eighth notes.

Musical score for exercise 276 in D major, 3/4 time. It is a single staff of music in bass clef. The exercise includes fingering numbers: 3 6 6, 6 6 4, and 3 6 6 6 4 #. The melody consists of quarter and eighth notes.

Musical score for exercise 278 in D major, 3/4 time. It is a single staff of music in bass clef. The exercise includes fingering numbers: 3 6 6, 6 6 6 6 4 6, 6 6, and 6 6 6 4. The melody consists of quarter and eighth notes.

Musical score for exercise 279 in D major, 4/4 time. It is a single staff of music in bass clef. The exercise includes fingering numbers: 8 5 6, 3 6 4, 5 6, 6, 6, 6, and 6 5. The melody consists of quarter and eighth notes.



280. 281.

282. I V<sub>4</sub> IV<sup>6</sup> I<sub>4</sub> II<sup>6</sup> I<sub>4</sub>

283. Unfigured

284.

285.

At the + use  $\frac{6}{4}$  chords, otherwise this is an unfigured problem.

286.

These 6's mean first inversion, root in soprano. (Not usual marking)

287.

Supply alto and tenor

288.

289.

\* The fifth omitted.

## Chap. II. Chords of the Seventh

**34.** A Chord of the Seventh is formed by adding another (upper) third to any triad. This added third is a seventh above the root and, since the interval of the seventh is a dissonance, all chords of the seventh are dissonant or **tendency chords**, requiring resolution; that is they must progress (sooner or later) to consonant chords, chords of repose. The chord of most complete repose is the final tonic triad and toward this, as an ultimate goal, all the dissonant elements of a musical phrase tend to progress. The charm of many a passage depends chiefly upon an artistic treatment of these dissonant elements as they emerge from and disappear in the stream of the music. The dissonant chord which most conclusively resolves to the tonic, is the Dominant Seventh.

### The Chord of the Dominant Seventh

(Primary Dissonant Chords)

**35.** The Chord of the Dominant Seventh consists of the Dominant triad to which is added the next (upper) third, a minor seventh from the root. Ex. 26 (a) (b). This chord is the same in both major and minor yet different from all other seventh chords. Its third is always the leading tone, a major third, its fifth is perfect, and its seventh, minor. Containing as it does the most important tones of the scale except the tonic it may be said to hold a strategic position in the key as **Primary Chord of the Seventh**. It is flanked by the dominant as root, by the subdominant as seventh, while its third, the leading tone, unmistakably defines the key by its tendency toward the keynote, Ex. 26 (c)

**36.** The triad VII° is not an independent chord but an incomplete dominant seventh chord as may be seen at Ex. 26 (d). See also par. 22.

Ex. 26

(a) C V      V $\frac{7}{5}$  or  $\frac{7}{5}$  or  $\frac{7}{3}$  or 7      (b) c V      V $\frac{7}{3\sharp}$  or  $\frac{7}{3\flat}$  or  $\frac{7}{\natural}$       (c) Subdom. Tonic (d) VII°  
L. Tone      Dom. I      (V $\frac{7}{7}$ )  
V $\frac{7}{7}$       Root omitted

### Introduction of the Dominant Seventh

**37.** In general dissonances require careful introduction as well as resolution. The seventh of the V $\frac{7}{7}$  however enters with almost the freedom of a consonance. When the seventh is in the preceding chord it is usually kept as a common tone and then said to be introduced by **preparation**.

Ex. 27

(a) (b) (c) (d) (e) (f) (g) (h)  
C $\flat$  V $\frac{7}{7}$  V $\frac{7}{7}$  V $\flat$  V $\frac{7}{7}$  V $\frac{7}{7}$  V $\frac{7}{7}$  IV V $\frac{7}{7}$  V $\frac{7}{7}$   
Bad

Ex. 27 (a) the seventh prepared, (b) enters stepwise from above, called **passing seventh**, (c) seventh and root taken in similar motion in chord repetition, (d) consecutive fifths, admissible, see par. 23, (e) seventh taken by a leap in an upward direction, seldom leaped to from above, (f) neither seventh nor root prepared, but these tones approached in contrary motion, (g) bad consecutives, to avoid, omit the fifth of V $\frac{7}{7}$ , see (h).



### Resolution of the Dominant Seventh

**38** The regular resolution of the V7 is to I, the seventh descending a degree; the third ascending to the tonic, or leaping downward a third if in an inner voice with the bass ascending; the root leaping upward or downward to the root of the tonic; and the fifth usually descending a degree, but sometimes ascending for special melodic reasons. If the V7 is complete it may resolve to vi (deceptive). Among the many irregular, or less usual resolutions, shown later (Ex.32) the seventh may be found stationary (delayed resolution or none at all) or it may even ascend. The following examples are representative and, except (h), equally good in minor. In fundamental position as at (b), fifth omitted and root doubled, the upper root becomes a common tone - very good since this provides a complete triad on the I.

Ex. 28

\* Distinguish carefully the interpretations of  $\frac{8}{7}$  and  $87$ .

Ex. 29

Transpose to other keys.

### Exercises containing the Dominant Seventh Chord in fundamental position

290.  $\frac{5}{6} \frac{6}{6} \frac{7}{7}$       291.  $\frac{3}{6} \frac{7}{7}$        $\frac{6}{6} \frac{7}{7}$

292.  $\frac{6}{6} \frac{87}{87} \frac{6}{6} \frac{57}{57} \frac{6}{6} \frac{87}{87}$

293.  $\frac{5}{5} \frac{7}{7} \frac{6}{6} \frac{6}{6} \frac{7}{7}$

294.  $\frac{3}{3} \frac{87}{87} \frac{6}{6} \frac{6}{6} \frac{6}{6} \frac{7}{7} \frac{7}{7} \frac{6}{6} \frac{87}{87}$

295.

296.

297.

298.

299.

300.

301. Unfigured. Use the V7

302.

303.

304.



### Inversions of the Dominant Seventh

**39.** There are three inversions of the V7, all of which are useful. Regular resolution to the tonic triad is by far the most usual. In this resolution the voices usually progress as when in the fundamental position except the root itself which is generally retained as a common tone. Complete figuring is seldom used unless needed to indicate certain intervals altered, as the raised seventh in the minor scale. Unless the seventh is in the bass two figures are indispensable, those indicating the root and seventh.

**Ex. 30**

- (a) (b) (c) Usual resolutions.
- (d) Passing seventh in the bass.
- (e) The 3 2 over the same bass note requires first a triad in the fundamental position and then a seventh chord in the third inversion.
- (f) Chord repetition—the voice having the seventh last must resolve it.
- (g) The fifth of V7 resolves upward stepwise, the resulting doubled third in the I is not bad when passed through in such a way as not to emphasize it.
- (h) (i) Two solutions for the figures ( $\overset{6}{\underset{5}{}}$ ) equally good.
- (l) An apparent six-four chord formed by the flowing upper parts (read last lines of ¶ 14).
- (m) The third descends by a leap of a third with good effect.

#### Transpose to other minor keys

**Ex. 31**

#### Exercises containing the Dominant Seventh Chord in its inversions

308. 

309. 

310. 

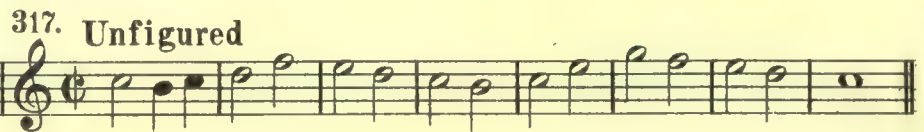
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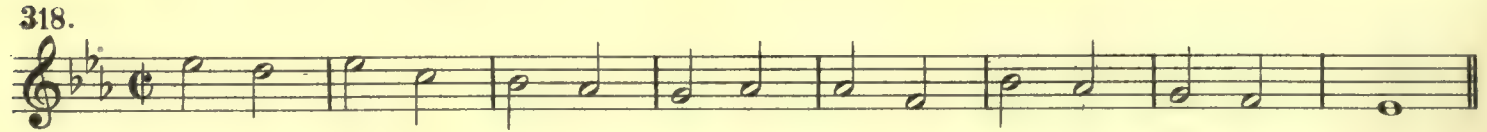
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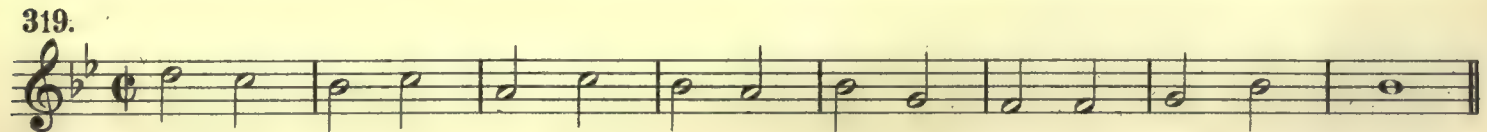
314. 

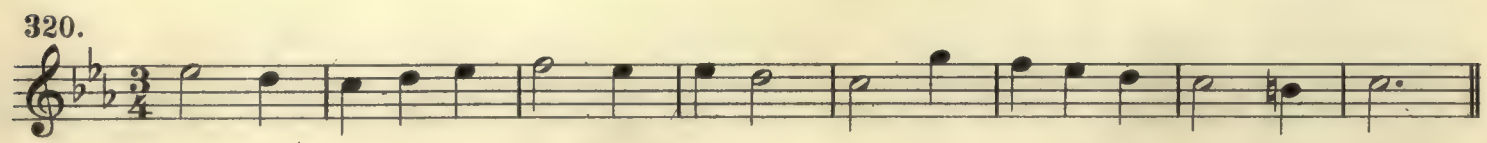
315. 

316. 

317. Unfigured 

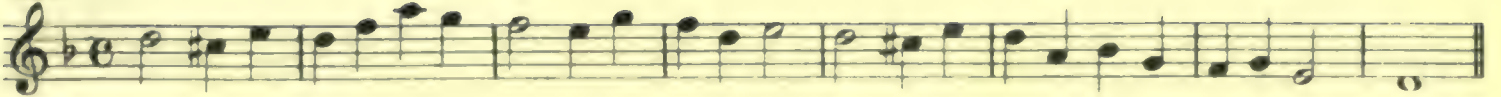
318. 

319. 

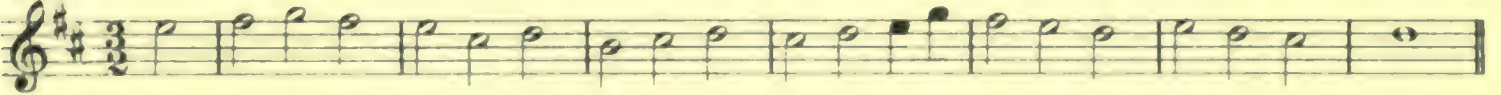
320. 



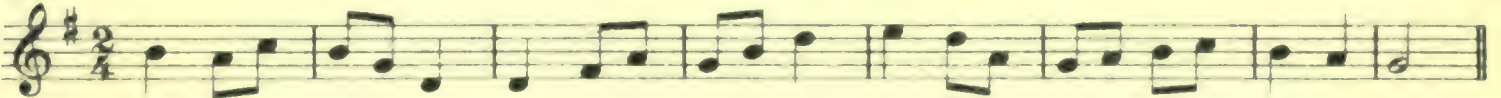
321.



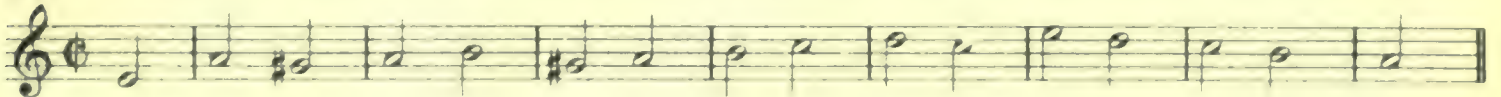
322.



323.



324.



325.

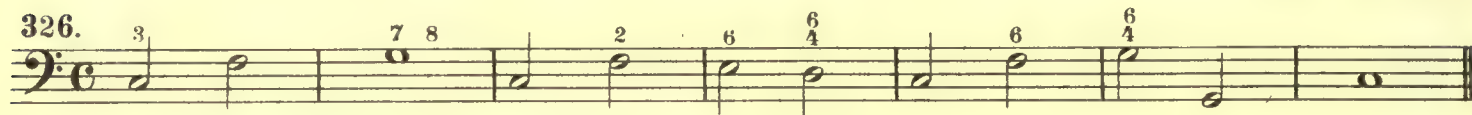



Some of the Irregular Resolutions of the Dominant Seventh

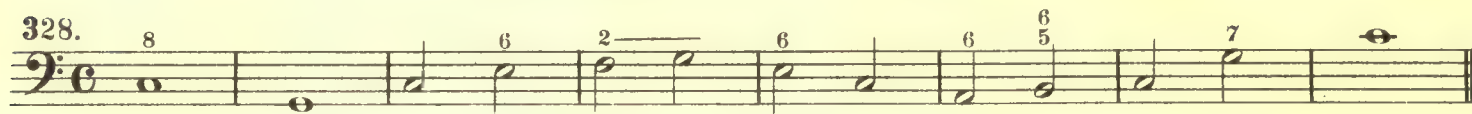
Ex. 32

- (a) (b) (c) (d) The seventh passes to some other note of the chord before resolving.
- (e) The bass takes the note (in lower octave) to which the seventh would resolve, a resolution by substitution.
- (f) Less fine than (e) but fair.
- (g) Shows the impossibility of resolving the seventh directly if a given bass resolves it as here, the resulting covered octaves being highly objectionable.
- (h) (i) Excellent progressions with the seventh ascending.
- (j) Poor to have any voice move stepwise into a unison with a stationary voice (oblique motion into a unison).
- (k) (l) Passive resolution, the seventh may or may not ultimately resolve.
- (m) (n) Some other figurings that will be found.

Exercises containing some irregular resolutions of the Dominant Seventh Chord

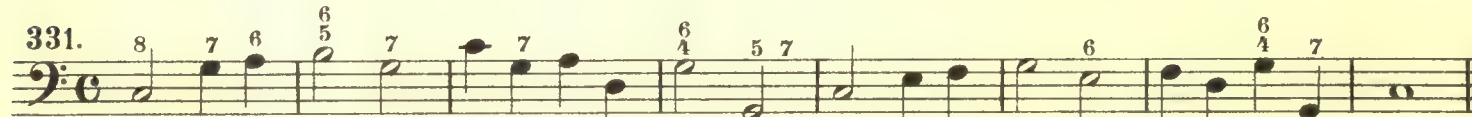
326. 

327. 

328. 

329. 

330. 

331. 

332. 

333. 

333. 



334.  $V_3^4$   $I^6$   $V_5^6$  II  $V_{N2}$   $I^6$   $VII_4^6$

335. Unfigured

336.

40. For the sake of obtaining a more advantageous position of the parts, a better melody, or to avoid monotony of treatment, the dominant seventh chord resolves irregularly in still other ways than those shown in example 32, but the progressions shown in the following examples should be regarded as licenses admissible to the student only after he has thoroughly established his technic and matured his judgment

Ex. 33

### The Chord of the Dominant Ninth

41. A dominant seventh chord enlarged or extended by the addition of a third above the seventh becomes a five tone chord named from its largest interval the Chord of the Dominant Ninth. In major keys this added tone is a major ninth above the root (sometimes minor by chromatic inflection, ¶ 63) and in minor keys it is always a minor ninth.

Ex. 34

### Regular Resolution

Ex. 35

**42.** In the dominant ninth and its resolution to the tonic triad is found the basis of construction and resolution of all the **Primary Dissonant Chords**. In other words the primary dissonant chords, in both content and tendency, show themselves to be more or less complete forms of the  $V^9$  (or  $V^7$ ). That an incomplete form whose apparent root is the leading tone, as for example the  $VII_2^7$ , does not take a cadencing resolution ( $\S$  44) is additional proof that the real root, which is always the dominant, is omitted. Before going further it will be well to examine a table of the primary dissonant chords.

## Table of the Family of Primary Dissonant Chords

The root of all these chords, whether present or not, is the dominant and they all resolve regularly to their tonic triad.

In major		In minor	
Leading tone triad		Leading tone triad	
Leading tone seventh chord		Dim. seventh chord (Frequently borrowed for use in major)	
Dom. major ninth (Never used in minor)		Dom. minor ninth (Sometimes appears in major by chromatic inflection)	
Dom. seventh		Dom. seventh	

### Introduction and Resolution of the Dominant Ninth

**Ex. 36**

Bad positions  
9th



## On the use of the Dominant Ninth Chord

**43.** In Ex. 36 (a) (b) (c) the ninth, like the seventh, being a primary dissonance, requires no preparation, but preparation of either ninth or root conduces to smoothness of entry, especially in minor.

(d) When neither ninth nor root is prepared they should be approached in contrary motion.

(e) Keep the ninth a full ninth above the root. This excludes contraction to a second and also makes the ninth below the root impossible. (The ninth below the root can be found in modern works).

(f) (g) In four-part writing, only two inversions are possible. Exactly as with  $V^7$  the root in an inversion is best kept as a common tone, the other voices following their tendency.

(h) Conservative treatment places the ninth in the highest voice. At (\*) the ninth in the tenor is clearly a passing tone.

(i) Here the ninth in the alto is a suspension. It is important to study these figurings (b) (i) (j) (k) for in higher examinations the student is likely to be confronted with similar problems. When the figures are given in full as here, it is a suggestion of the required interval for each voice respectively. Not a good practice but sometimes unavoidable.

(j) Interchange of chord members.

(k) Passive resolution as with  $V^7$ . There is usually ultimate resolution but this is not necessary.

(l) Given to illustrate a necessary procedure with this figuring. The 7 6 must be in the octave above the 6-, otherwise a second will appear between the root and ninth. Compare with (e).

Note in addition to these points the apparent resolution to  $I_4^6$  and to the  $III^6$  in (d). These are scarcely more than accidental chord formations occasioned by the flowing parts. They lie passively between two forms of the dominant harmony.

### Models to be transposed to other keys

(It is important to study closely every full figuring)

The descending scale using  $V^9$

Ex. 37

(a) (b)

(c)

(d)

(e)

Exercises containing the Dominant Ninth Chord

337.

338.

340.

341.

342.

344.

345.

346.

347. Unfigured. Use the V<sup>9</sup> and inversions where suitable

347.

348.

349.

350.



# The Chord of the Seventh on the Leading-Tone in Major

(Also called the Leading-Tone Seventh).

44. The Chord of the Seventh on the Leading Tone In Major is a dominant major ninth chord with root omitted. The omission of the generator (the dominant) does not affect the character of the remaining chord members which are introduced and resolved essentially as in  $V^9$ . Like the complete major ninth, this chord can not resolve to a minor tonic.

For simplicity this chord is figured as a chord of the seventh, and as such should be complete. The best positions keep the seventh (original ninth) in the soprano, or at least above the leading tone. The third inversion is rarely used since the original ninth is too harsh in the bass, except where skillfully handled. Arensky in his "1000 Exercises" and Tschaikovsky in his "Harmony" use this third inversion, always resolving it to a  $I^{\sharp}$  chord. For a typical example see Ex. 38 (e) below.

The typical resolution of the root position is to a tonic triad with double third. The consecutive fifths which result in this resolution when the third of the tonic is not doubled are objectionable and must be avoided, except as at (\*) where the fifths in the inner voices come under  $\sharp 23$ .

In 38 (\*\*) the  $vii^{\sharp}$  is such to the eye only. It may be explained that the  $b$  and  $d$  are passing tones and therefore the bass (root of  $IV$ ) is free to leap, or if preferred that the bass in  $vii^{\sharp}$  leaps a fourth downward to the root of the tonic.

The resolution to some inversion of the  $V_7$  and the passive resolution are natural derivatives of the regular  $V_9$  progressions.

Study the progressions in Ex. 38 by ear as well as eye. Learn the best ones and transpose them to other keys.

The seventh (original ninth) in soprano: these positions are best.

Ex. 38 (a)

VII<sub>7</sub> 7 6/5 6 7 6/5 6/4

Original ninth not in the soprano, less satisfactory, but possible.

(b)

6/5 6/4 4/3 6 IV (VII<sub>7</sub>) I 7 7 7 7

(c) (d) (e) Use of  $vii^{\sharp}_2$

Fair Bad 2 VII<sub>7</sub> 6/4 6

## Exercises containing the Leading Tone Seventh

351.

352.   
(Ex. 38, 4<sup>th</sup> meas.)

353.

354.

355.

356.   
(Ex. 38\*\*)

357.

358.

359.

360. Unfigured. Use the Leading Tone Seventh where possible

361.

362.

363.





Exercises containing the Diminished Seventh Chord

364. Supply the Alto and Tenor



# The Secondary Seventh Chords

(Secondary Dissonant Chords)

**46.** All chords of the seventh other than those on the degrees V and vi<sup>o</sup> are called Secondary Seventh Chords. Being for the most part more dissonant than primary sevenths these chords are generally introduced with greater care, the seventh, especially when major, requiring preparation or entry stepwise from above. While the modern tendency is toward an increasing freedom in the use of all dissonances the student should prepare and resolve every dissonance that needs it.

When the student's technic in the handling of dissonant sevenths is established along conservative lines it will be well for him to study the possibilities under a broad general rule like the one laid down by Frank E. Ward (Columbia University) as follows: "The seventh or the root must be prepared in every instance, although many of the preparations are by substitution. In advanced work I am guided more by my own musical experience and a decided taste for the rich dissonances of modern music than by what is set down in text books." This is excellent doctrine for every earnest student. Let him prepare all secondary dissonances at first directly if possible, later by substitution where the effect is not too harsh and the passage gains by it, and still later judge every dissonance on its own merits and use it as it best serves a musical purpose.

## The Cadencing Progression of all Chords of the Seventh

**47.** The first step toward an understanding of all the seventh chords is to construct sequences of the sevenths based on the cadencing resolution of the dominant seventh chord to its tonic. In such sequences every seventh chord will be led to the triad (or seventh chord) situated a fifth lower (fourth higher) just as V<sup>7</sup> resolves to I. The seventh of every secondary seventh chord will be prepared and resolve stepwise downward.

Play Ex. 41 (a), (b), (c), etc., in many other keys

Ex. 41

(a) Design Cadencing res. V<sup>7</sup> I IV<sup>7</sup> VII<sup>7</sup> III<sup>7</sup> VI II<sup>7</sup> V I

(b) NB VII<sup>7</sup> III<sup>7</sup> V<sup>7</sup> I 7 7 7 7 7 7

(c) In minor Har. sc. Orig. sc. Har. sc. V<sup>7</sup> I 7 7 7

(d) etc.

(e) etc.

(f) Har. sc. Orig. sc. etc.

(g) etc.

Fingerings: (d) 5 5 5; (e) 5 2 5 2 5 2; (f) 4 3 4 3 4 3; (g) 2 6 2 6 2 6

**48.** Double function of the Leading Tone Seventh. In a sequence of cadencing seventh chords the vii<sup>o</sup> loses its character, as incomplete V<sup>o</sup> progressing to the tonic, and resolves like the other seventh chords. See Ex. 41, N.B.

On account of the sequence the IV<sup>7</sup> to vii<sup>o</sup> is tolerated, though in itself a poor progression.

**49.** Cadencing chords of the seventh in fundamental position omit the fifth in alternate chords. The third of one chord prepares the seventh of the next. Ex. 41 (b) In minor keys the original form of the scale is used except where the leading tone is needed, as in the Cadence. See again § 31.

Sequences using inversions (d) (e) (f) (g) also consist of the cadencing resolution, that is the roots bear the same relationship as in (a) (b) and (c).

## The cadencing resolution of all Chords of the Seventh

374. 375.

376. 377.

378.

379.

380.

381.

382.

383.

384.

385. **Add alto and tenor**



## Significance of the Cadencing Resolution

**50.** Before examining other aspects of the secondary seventh chords it will be profitable to read again ¶ 34 and study more closely the significance of the cadencing progression of chords. Mr. Benjamin Cutter in his "Harmonic Analysis" says: "The succession  $iii, vi, ii, V$ , with or without sevenths, and in whatever form, is one which confirms the ultimate tonic; it is one in which...the total impression is that of pushing on to the close in that final tonic harmony which rounds out the whole." Now the roots of these chords are the successive fifths reckoned upward from the keynote, and the chord farthest removed tonally from its ultimate tonic is the one built on the most distant fifth in the series, namely the  $iii^{(7)}$ . The cadencing resolution is therefore a progression downward toward the tonic by stages of fifths. Thus the resolution of  $V^{(7)}$  is direct. Between  $ii^{(7)}$  and  $I$  is the  $V^{(7)}$ . Between  $vi^{(7)}$  and  $I$  are both the  $ii^{(7)}$  and  $V^{(7)}$ ; while  $iii^{(7)}$ , farthest removed and least used, must touch three intervening chords on its way (cadencing) to the ultimate tonic. This will be made clearer, perhaps, by the following table.

### Table of Secondary Seventh Chords in their Relation to the Ultimate Tonic Triad

Chart.

	4 <sup>th</sup> remove.	3 <sup>d</sup> remove.	2 <sup>d</sup> remove.	1 <sup>st</sup> remove.	Ultimate Tonic.
4 <sup>th</sup> 5 <sup>th</sup> Mediant		(iii)	(ii)	(V)	
3 <sup>d</sup> 5 <sup>th</sup> Submed.		(vi)	(v)	(IV)	
2 <sup>d</sup> 5 <sup>th</sup> Supertonic (2 <sup>d</sup> Dom.)	III <sup>7</sup>	VI <sup>7</sup> (VI <sup>9</sup> )	II <sup>7</sup> (II <sup>9</sup> )	VII <sup>7</sup>	
1 <sup>st</sup> 5 <sup>th</sup> Dom.		(I <sup>7</sup> )	(IV <sup>7</sup> )	V <sup>7</sup>	
Tonic				V <sup>9</sup>	I

Practical application.

Progress toward the Ultimate Tonic.

**51.** The tendency of  $IV_7$  to progress to  $V$  and of  $I_7$  to progress to  $ii$  inclines one strongly to the view, so well set forth by Percy Goetchius, that these two chords are incomplete  $ii_9$  and  $vi_9$  respectively just as the  $vi_7$  progressing to  $I$  is an incomplete  $V_9$  (¶ 44).

**52.** The cadencing resolution, though the most important, is but one of several progressions possible to secondary seventh chords; for, provided the general rules of good voice leading are observed, any of these chords may progress to any triad or seventh chord whose root, third or fifth is a proper resolution of the seventh (¶ 57).

## Conservative General Rules for the Seventh of All Secondary Seventh Chords

**53.** Introduction of the seventh: the seventh must be prepared, or passing (stepwise downward), or if a minor seventh, may enter by an upward leap from some other note of the same chord. The seventh of the supertonic seventh chord is prepared sufficiently by substitution, that is by being present in any voice in the preceding chord. This is because this chord (often called the **Second Dominant**) can be treated relatively almost like a  $V_7$  chord.

**54.** Resolution: Stepwise downward, passive (in which case the tone of resolution must not be doubled), stepwise upward if major, or the bass takes the note of resolution.

A strict adherence to these few general rules will greatly conduce to smoothness in the harmonic structure. The advanced student is referred to ¶ 46

# The Supertonic Seventh Chord

**55.** The most important secondary seventh is that on the supertonic. It is almost as valuable as the dominant seventh and is introduced with nearly the same freedom. The fundamental position may omit the fifth, the inversions should be complete. The finest form of this chord is the first inversion (Rameau's "Chord of the Added Sixth"). All inversions are possible, but the second inversion is rather weak in the major key. The chord is treated the same in both major and minor.

Ex. 43

- (a) Complete  $n^7$ , (b) incomplete (the seventh here also explainable as a suspension).
- (c) Passing seventh.
- (d) (e) (f) Preparation by substitution.
- (h) (i) Fine use of the first inversion in cadences.
- (j) (k) (l) Some of the commonest errors.
- (m) The passive resolution, except to a  $I_4^6$ , is usually followed by another form of the same chord, the voices moving stepwise.

# Supertonic Ninth

**56.** The Supertonic Ninth is recognized by some theorists and composers. For examples see below, Ex. 44 (a) (b) Others will call this ninth a suspension resolved when the  $V^7$  is reached. But still others will deny the existence of a dominant ninth, claiming it is always a suspension. The student must in any case prepare and resolve the ninth in  $n^9$  since it is dissonant. A few figured basses containing this supertonic ninth will be found, the first ones, Nos. 406-7.

Ex. 44

# The Supertonic Seventh and Supertonic Ninth

386. (Par. 49)

387.

388.

389.



390. 391.

392. 393.

394.

395. 396.

397. -398.

Unfigured. Cadence each line with II<sup>6</sup>-V-I or II<sup>6</sup>-I<sup>6</sup> V<sup>(87)</sup> I

399. 400.

401. 402.

403. 404.

405.

406.

407.

## Various Resolutions of the Secondary Sevenths

**57.** The general principles regarding resolution of the seventh (§ 52) may now be concisely stated as follows (under three heads):

**A.** The seventh **resolves downward** one degree to the root, third, fifth, or (rarely) seventh, of the succeeding chord. This is the true (active) resolution of a genuine seventh, whether prepared, passing, or taken by a leap.

**B.** The seventh **remains stationary** (passive resolution) becoming the root, third, or fifth of the succeeding chord. This is frequently a mere delay of the downward resolution; but when the seventh has become passive, by becoming a root, third, or fifth, it ceases to demand resolution.

**C.** The seventh **is led upward** one degree if the bass drops a third to the note of resolution (resolution by substitution), otherwise bad covered octaves would result, see Ex. 32 (g).

The major seventh may ascend whenever it functions as a retardation. It is not then a true seventh, nor can its progression be called "resolution of a seventh", but lists of secondary sevenths usually include it.

Ex. 45

Section A: (a)  $I^7 \rightarrow VI^6$  (7 5 to 6 4), (b)  $I^7 \rightarrow VI^6$  (7 5 to 6 5), (c)  $I^7 \rightarrow VI^6$  (7 5 to 7 5), (d)  $I^7 \rightarrow VI^6$  (7 5 to 7 5).

Section B: (e)  $I^7 \rightarrow VI^6$  (7 6 to 7 6), (f)  $I^7 \rightarrow VI^6$  (7 6 to 7 6), (g)  $I^7 \rightarrow VI^6$  (7 6 to 7 6).

Section C: (h)  $I^7 \rightarrow VI^6$  (7 6 to 7 6), (i)  $I^7 \rightarrow VI^6$  (7 8 to 7 8), (i)  $I^7 \rightarrow VI^6$  (7 8 to 7 8), (i)  $I^7 \rightarrow VI^6$  (7 8 to 7 8), (i)  $I^7 \rightarrow VI^6$  (7 8 to 7 8).

Section (j)  $cI^8 \rightarrow 7$  (Orig. min. scale), (k)  $cI^8 \rightarrow 7$  (Bad), (l)  $2 \rightarrow 2$ , (m)  $7 \rightarrow 6 \rightarrow 5 \rightarrow 4 \rightarrow 3 \rightarrow 2$ , (n)  $7 \rightarrow 6 \rightarrow 5 \rightarrow IV^{87} \rightarrow V$ .

Ex. 45. (a) Downward resolution to a root, (b) to a third, (c) to a fifth, (d) to a seventh. This last of limited application.

(e) Stationary seventh becoming a root, (f) becoming a third (g) becoming a fifth (of a seventh chord, not of a triad) unusual, not fine.

(h) Ascending seventh because the bass takes the note of resolution, (i) because the major seventh assumes the role of retardation, not a true seventh though so figured.

(j) Passing seventh in minor must be seven in original minor scale, (k) bad on account of the augmented second (except for special effect in instrumental writing), (l) passing sevenths, (m) successive roots a third apart, (n) seventh highest in  $IV^{87} - V$ , double the fifth in  $V$  to escape doubling the leading-tone.



Various Resolutions of the Seventh

408. 409.

410.

411. 412.

413.

414. 415.

416.

417. 418.

419.

420.

421. 422.

423.

424.

425.

426. 5 7 7 8 5 7 7 7 7 7 8 7 427. 3 8 7 5 7 6 6

428. 8 2 2 6 5 7 8 7 7 7 6 2 7

### Freer use of the Seventh

58. Credit is due to Mr. Frank E. Ward for the following interesting example of a freer use of the seventh. It will repay careful analysis. While it may be contended that some of the sevenths are merely passing tones; and certain apparent seventh chords the result of passing tones; it may be answered that passing sevenths are passing tones, and that more than one analysis is possible for many combinations of tones. The distinction between prepared sevenths and suspensions is also difficult to define since the same progressions may seem different in different surroundings. It should be noted that the entry of a major seventh is softened if the seventh and fifth are in outer parts, or at least fairly prominent. The free entry of the major seventh by an upward leap is smoothest when it is really a passing seventh "by substitution" as in the seventh measure of the illustration. In all cases much depends upon the disposition of the parts.

Ex. 46

C I III<sup>4</sup><sub>3</sub> VI<sup>7</sup> I<sup>4</sup><sub>3</sub> IV II<sup>2</sup> V<sup>6</sup><sub>5</sub> II<sup>4</sup><sub>3</sub> V<sup>7</sup> VII<sup>4</sup><sub>3</sub> I<sup>6</sup> V<sup>4</sup><sub>3</sub> I I<sup>2</sup>

IV<sup>6</sup> IV<sup>2</sup> VII<sup>6</sup><sub>5</sub> IV<sup>4</sup><sub>3</sub> VII<sup>7</sup> II<sup>4</sup><sub>3</sub> V<sup>7</sup> I<sup>6</sup><sub>5</sub> IV VII<sup>6</sup><sub>5</sub> I<sup>6</sup> I I dIII<sup>2</sup><sub>3</sub> V<sup>7</sup> VII<sup>4</sup><sub>3</sub>

I<sup>6</sup> CII<sup>4</sup><sub>3</sub> V<sup>7</sup> VII<sup>4</sup><sub>3</sub> I<sup>6</sup> I<sup>6</sup><sub>5</sub> IV<sup>7</sup> VII<sup>6</sup><sub>5</sub> III<sup>7</sup> VI<sup>6</sup><sub>5</sub> II<sup>7</sup> II<sup>2</sup><sub>5b</sub> V<sup>4</sup><sub>3</sub> V<sup>7</sup><sub>3</sub> I

Frank E. Ward.

### Exercises requiring a freer use of the Seventh

429.

2 6 2 6 5 4 3 7 4 3 7 6 5 7



430.

Exercise 430: Treble clef, 2/4 time. Bass clef with figured bass: 3 3, 4 3, 2, 6, 4 3, 7, 4 b, 6, 6, 5, 7, 6, 7, 6, 7, 6.

431.

Exercise 431: Bass clef, 2/4 time. Figured bass: 8, 6, 7, 6, 5, 6, 2, 7, 7, 6, 5, 4, 3, 7, 6, 5, 7, 4, 3, 7.

432.

Exercise 432: Bass clef, 3/4 time. Figured bass: 5, 9, 7, 6, 5, 6, 4, 6, 4, 3, 2, 6, 6, 6, 5, 4, 3, 7, 4, 3, 7, 6, 5, 7.

433.

Exercise 433: Bass clef, 2/4 time. Figured bass: 5, 6, 4, 3, 7, 4, 3, 6, 4, 3, 2, 6, 2, 6, 4, 3, 7, 4, 3, 7.

434.

Exercise 434: Bass clef, 2/4 time. Figured bass: 3, 4, 3, 2, 6, 4, 3, 7, 4, 3, 6, 6, 5, 7, 6, 5, 7, 6, 5, 7, 6, 7, 6.

59. Since figured bass in sight playing examinations is usually set for the purpose of testing the candidate's mastery of conservative usage, the student is advised to "look well to his dissonances," but at the same time it should be understood that this is not a plea for the rules of the "old school" as an end in themselves. In closing this study of dissonances used as parts of chords, attention is called to the following excerpts. In these examples consecutive fourths, fifths, sevenths and ninths, and dissonances neither prepared nor resolved come swarming in from some musical elfland to play their pranks upon the conservative pedagogue and challenge his disapproval. Even in Hucbaldus we have a prophecy of some ultra modern methods.

Ex. 47

(a) Moderato Elgar. (b) Larghetto Ravel.

(c) Debussy. (d) Strauss. (e) Hucbaldus, 840-930 A. D.

Tu pa-tris sempiternus es fi-li-us

Example (a) Elgar: Treble clef, 4/4 time. Bass clef with figured bass: 4, 3, 7, 4, 3, 7, 4, 3, 7, 5, 3, 4.

Example (b) Ravel: Treble clef, 4/4 time. Bass clef with figured bass: 9, 7, 9, 7b, 9, 7, 9, 7#.

Example (c) Debussy: Treble clef, 6/8 time. Bass clef with figured bass: 9, 7, 9, 7, 9, 7.

Example (d) Strauss: Treble clef, 2/4 time. Bass clef with figured bass: 6, 4, 3, 7, 7b, 8b, 6, 5, 3.

Example (e) Hucbaldus: Treble clef, 2/4 time. Bass clef with figured bass: 6, 5, 4, 3, 6, 5, 4, 3, 6, 5, 4, 3, 6, 5, 4, 3.



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## Chap. III. Alterations

**60.** One or more tones of a chord may be chromatically altered without producing a modulation or essentially affecting its original relation to the key. The alteration may be introduced chromatically or diatonically, that is the unaltered form of the chord may or may not precede the alteration. Furthermore all such alterations are essentially melodic and the tone combinations resulting therefrom should be considered ornamental variants of the original chord. In this sense only is it well to use the term "altered chord." Certain combinations containing the interval of the augmented sixth are usually termed Chords of the Augmented Sixth, another is popularly known as Neapolitan Sixth, another the Diminished Seventh on the Raised Fourth degree, and so on. These terms are convenient and are used in practically all the older treatises on harmony, but with the development of modern harmony along chromatic and horizontal lines and the resulting broader conception of the character of alteration in general these chords seem to have less claim to independence than was formerly accorded them. While this change of view point does not essentially change the treatment of the altered notes it does simplify the subject of alteration in general.

**61.** In playing alterations from a figured bass it is best to observe the following general rules although there are exceptions to them all.

### Rules for Alterations

1. The alteration is never doubled.
2. The note which is to be altered is not doubled unless one of these progresses stepwise in the opposite direction.
3. Raised notes continue to ascend, lowered notes, to descend.
4. The alteration is made in one and the same voice.
5. Chromatic alterations usually follow the chromatic scale\* which always lowers the seventh degree and raises the fourth degree, while all others are raised in ascending and lowered in descending. (A good rule but frequently ignored.)

Ex. 48

Part A: (a) Triad with lowered third; (b) Triad with lowered fifth; (c) Triad with altered note correctly doubled. Part B: (d) Neapolitan Sixth with doubled altered note; (e) Triad with altered note. Part C: (f) Poor alteration; (g) Poor alteration; (h) Raised note not continuing upward; (i) Altered note not kept in same voice; (j) Altered note not kept in same voice. Part C: (k) Bad cross-relation; (l) Bad cross-relation.

**62.** Ex. 48, A. The rules observed: - (a) Third lowered, introduction chromatic; (b) Fifth lowered, introduction diatonic; (c) The note that is to be altered, correctly doubled (rule 2).

B. Legitimate exceptions to the rules: - (d) Altered tone doubled in (so called) Neapolitan Sixth-exception to rule 1; (e) (f) (g) rule 2 broken, but poor only as indicated; (h) Raised note does not continue upward (rule 3); (i) (j) Altered note not kept in the same voice (rule 4).

C. Cross-relation (or false-relation). This not avoided by an intervening chord as at (i); but aside from such open contradictions, which are obviously offensive, very little attention is now paid to cross-relation, especially in modulatory or chromatic passages.

\* This is not the only form of chromatic scale in use.

Exercises in Alterations (General)

435.  $\frac{8}{3} 3\flat$  2 6— 6  $\frac{4}{6} 6\flat$  8 7      436. 5 5 3 3 $\flat$  2 6—  $\frac{6}{4}$  7

437. 5 5 2 3 5 5 6 6  $\frac{6}{5}$   $\frac{6}{4}$  7      438. 3 3 3  $\frac{4}{2}$  0  $\frac{9}{7}$  7 6 7

439. 3 5 5 $\flat$   $\frac{6}{5}$  6— 4 6 7 6 5  $\frac{6}{4}$  7      440. 8 5 5 $\flat$  6 6 6

441.  $\frac{8}{3}$  2 6— 2 6  $\frac{6}{3}$   $\frac{6\flat}{3\flat}$   $\frac{6}{4}$  7      442. 5 3 $\flat$   $\frac{6}{5\flat}$   $\frac{6\flat}{4}$  5 5 6 6  $\frac{6\flat}{3\flat}$   $\frac{6}{4}$  3

443. 5 5 5 2 5 5 5 2 6 6 5 4 7      444.  $\frac{8}{3}$   $\frac{5}{3}$   $\frac{5\flat}{3\flat}$  6 5 5 6 6 $\flat$  6 6  $\frac{6\flat}{4}$  6 2 5

445. 8 # 2  $\frac{7}{5}$   $\frac{6}{4}$  3  $\frac{7}{3}$  8 7 0 5 — 6 4 2  $\frac{6}{5\flat}$  6 6 $\flat$  6 4 #

Some Special Alteration in the Major keys

63. In the major, II, III, and VI, may appear by alteration as major triads, or as apparent dominant seventh chords, taking most frequently but not necessarily, the cadencing resolution (¶ 50). (See also ¶ 77). The usual indication is II $\sharp$ , II $\flat$ , etc.; with inversions the  $\sharp$  being placed in brackets to distinguish it from other figures (II $\frac{4}{3}$ ).

Other alterations frequent enough to justify special mention, are V $\flat$  in major with minor ninth (V $\flat 9$ ); the II $\flat$  with lowered fifth (II $\flat 5$ ); and the I $\flat$  with lowered seventh (I $\flat 7$ ), which functions as a dominant seventh, (apparently in the subdominant key).

Ex. 49

II $\frac{4}{3}$  [5]      V $\frac{4}{2}$  [9]      VI $\frac{6}{5}$  5      II $\frac{7}{5\flat}$

III      III $\frac{4}{2}$  [5]      III $\frac{6}{5}$  5      I $\frac{4}{3}$  [7]      II $\frac{7}{5\flat}$

G.S. Dickinson, by per.



Some Special Alterations in Major keys.

Supply the alto and tenor. Inversions as desired.  
All the tones are chord-tones.

446.

Figured bass: # 6 5 7 6 4 6 5 3b

Figured bass: 6 6 7 9b 7b 6 6 7

447.

Chords: I7b, II7 5b, II7 5b, II7

Chords: I7b, VI

G. S. D. by per.

Diminished Seventh Chords by Alteration, in Either Mode

64. In addition to the regular Dim. 7th chord on the leading-tone (in both modes, ¶ 45) Dim. 7th chords are freely used on the chromatically raised first, second, fourth, and (in maj. only) fifth degrees; and also on the major third. The resolutions usually resemble those of a regular vii°7 but resolutions with a passive, or an ascending, seventh are frequent. The Dim. 7th on the raised fourth is of special importance (¶ 84) resolving most often, with its root and seventh both ascending to a I7 (d). At (e) note the same progression, in sound, but notated as on the raised second.

Ex. 50

Figured bass: 7b, 7b, 6, III 6 6, IV 7b, 6 4, II 6 4, II 6 4, II 6 4

Chord symbols: [7b], [7b], [7b], [7b], [7b], [7b]

etc.

448. The Diminished Seventh Chord (by Alteration) on Various Degrees

Supply the alto and tenor

449.

450.

451. Inversions as desired

G. S. D. by per.

Alterations which produce the Chords of the Augmented Sixth

65. For purposes of comparison the Augmented Sixth in all the following examples is f-d# and always between the bass and soprano. The possible arrangements are numerous.

Ex. 51

(a) (b) (c) (d) (e)

At (\*) Aug. 6th in the V7

At (\*) the four forms of the regular Aug. 6th chords

(f) (g) (h) (i) (j)

(a) (b) Forms of V7 with raised fifth, not the so-called regular augmented sixth chords, although containing that interval.

(c) (d) (e) (f) Respectively the Chords of the Augmented Sixth, Augmented Six-five, Augmented Six-four-three, and Doubly Augmented Fourth. N.B. In (c) the third above the bass is the tone to double; neither member of the aug. 6th may be doubled, since these are both strong tendency tones.

(g) (h) (i) (j) Other resolutions of two of these chords.

Though the alterations have added a certain interest to these progressions, they need only be played without the alterations to show clearly that the chords unaltered may, and do, progress in the same way as before.



Exercises in the Augmented Sixth Chords

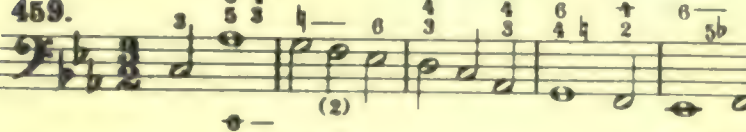
452.  453. 

454. 


455.  456. 

457. 

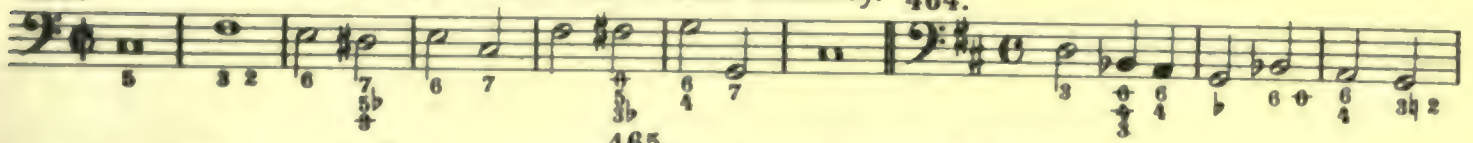
458. 

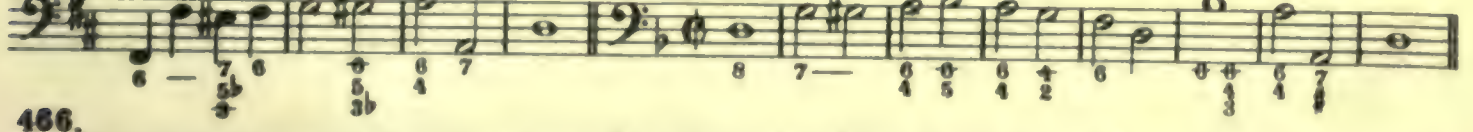
459.  460. 

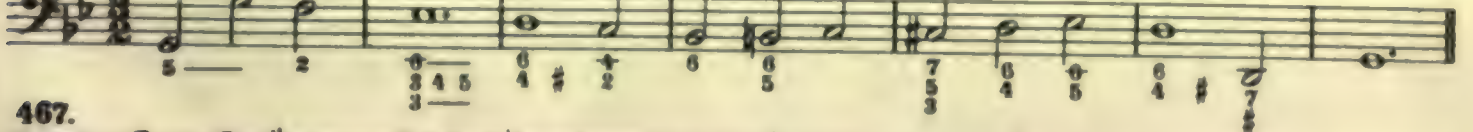
461. 

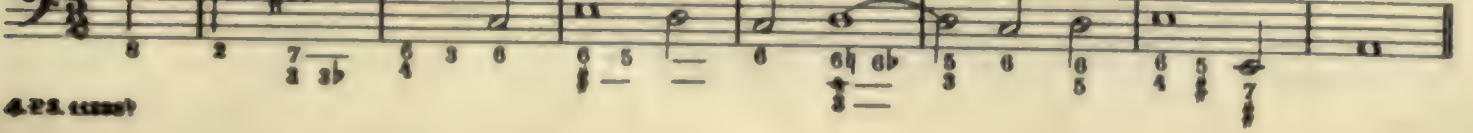
462. 

In the following exercises the augmented sixth sometimes becomes, by inversion, a diminished third or tenth. The dim. tenth is the better, but the third is admissible. No new principle is involved- the altered tones follow their tendency. 463.

463. 

465. 

466. 

467. 

# The Augmented Sixth Chords in Harmonizing a Melody

**66.** To use the augmented sixth chords in harmonizing a melody (or in modulation,  $\dagger$  88) it is necessary to be able to think their spelling and resolution accurately and readily. Here the support of figured bass is lacking and the problem demands mental concentration and more than ordinary care in leading the voices.

Learn first to construct the augmented sixth chord whose bass is a major third below the keynote. This is the legitimate "chord of the key" having subdominant function (derived from IV or II) and resolving to tonic, or dominant harmony. To build the chord at the piano proceed as follows:

1. Strike the keynote, add the major third below it for the bass, to these two add the augmented sixth above the bass in any upper part. (These three notes are the same in all four forms). Then for the fourth voice double the third (above the bass) in a  $6+$ , use an augmented fourth in  $\frac{6+}{4+}$ , a doubly augmented fourth in  $\frac{6+}{3}$ , and a perfect fifth in  $\frac{6+}{5}$ . This process is illustrated in Ex. 52. Resolve as indicated in the example.

**Ex. 52**

In C maj. or c min.      The four forms of Augm. Sixth Chord (The aug. 6<sup>th</sup> chord of the key)      Their regular resolution in the key

For 4<sup>th</sup> part use ———— or ———— or ———— or ———— (maj. only)

Key-note ————

The + means augmented

Fig.  $6+$      $\frac{6+}{4+}$      $\frac{6+}{5}$      $\frac{6+}{3}$

Read: Aug. sixth ————  
 " Aug. six-four-three ————  
 " Aug. six-five ————  
 " Doubly aug. fourth ————

C maj. I $\frac{6}{4}$     c min. I $\frac{6}{4}$     V

In major resolve all four forms to this ————  
 In minor the first three forms to this ————  
 In major or minor all but the last form to this. (Some exclude here the  $\frac{6+}{3}$ )

**Ex. 53**

**A Application of the chords in major. Transpose to all other major keys**

Usual sign of the chords:  $\frac{6+}{5}$      $6+$      $\frac{6+}{4+}$      $\frac{6+}{3}$

**B Application of the chords in minor. Transpose to all minor keys**

$\frac{6+}{5}$      $6+$      $\frac{6+}{4+}$      $\frac{6+}{3}$



**Some progressions better avoided**                      **Some exceptional progressions permitted**

**67.** Ex. 53 C, (a) The bass in a weak six-four is better led stepwise; (b) Consecutive fifths in reaching the chord, bad in outer voices; (c) Unnecessary cross-relation, - approach ff and ab chromatically; (d) Bad fifths in outer parts in resolving to V (now freely written with an inner part); (e) Beethoven, op. 57 (transposed), the true resolution to I<sub>4</sub><sup>2</sup> is elided, the suspension improves the progression; (f) Fifths now written freely; (g) Regular resolution, but by substitution, unvocal but possible; (h) For instruments any altered tone may be taken by a leap of an augmented interval, smoother in an inner voice.

The following simple sopranos invite regular use of the Augmented Sixth chords "of the key". There is no need of any but the smoothest progressions

475.

476.

477.

478.

Use four augmented 6<sup>th</sup> chords, any forms.

68. It has been shown (§ 65) that the augmented sixth chords are, so to speak, a by-product of certain chromatic alterations. Once thoroughly familiar with the so-called augmented sixth chord of the key and its regular resolution to I<sub>4</sub> or V, the student is ready to enlarge his view of the use of the augmented sixth chords by constructing them with the **bass note** on other than the major third below the keynote. The altered tones, following their tendency, tend to resolve these chords as before to a six-four chord or a triad (major or minor), though not necessarily to a I<sub>4</sub> or V. But when the chord of resolution is an accented six-four it tends strongly to assert itself as the tonic of some other key (inducing modulation, § 83). In a passage not intending modulation but serving as a medium for voices progressing more or less chromatically, the use of the Augmented sixth on various degrees in the key is sometimes effective as perhaps in building up a climax. This use of the chords is illustrated in the following example where resolutions are found to vi<sub>4</sub>, iii<sub>4</sub>, ii<sub>4</sub>, etc. However, such a passage has little to recommend it. It serves as an illustration of possibilities but is too overloaded with one device to be of much value.

Ex. 54

It is not recommended that the student remain long at these rather difficult problems. The advanced student might transpose Ex. 54 to other keys and solve the following in the same general style.



479.

480.

481.

69. Finally, there is no limit to the ways these augmented sixth chords may be resolved except that set by the taste of the composer. The interval of the augmented sixth itself, in addition to following its conventional tendency outward to the octave, may also be found in the works of the great composers progressing in all the ways shown at 55 (a). Here contrary, oblique and similar motion may be found, and either part may leap. In 55 (b) note excerpts from the masters illustrating this variety of treatment.

Ex. 55 (a)

(b) Handel Mozart Schumann Chopin Wagner

The alto and tenor may be added to the following:

(This may be omitted by the student who has not studied modulation, on account of the obvious inflection to related keys.)

482.

# Chap. IV. Modulation

## Modulation by means of Triads

70. This means of modulation is best illustrated in the Choral where the melody leads simply and naturally to cadences in nearly related keys, thus providing an interesting variety in the harmonic setting. Keys so reached are usually points of but momentary repose. The succeeding line of the choral may resume the original key directly if desired. That is, such modulations as we are considering are more in the nature of mere inflections to one side or another of the principal key. In the following models from Bach's Chorals note the brackets which indicate how one may consider the two keys as in a sense overlapping. The triad which seems to belong to either key and thus falls within both brackets is sometimes termed a pivot-chord. In Ex. 56 (e) a pivot-chord is lacking, but the modulation is quite satisfactory. Let the pupil solve this using a pivot-chord.

In 56 (g) note the accented six-four and how strongly it declares itself a tonic chord (♯14).

Ex. 56

Harmonize the following choral lines simply and modulate in each one by means of triads. It is assumed that  $V^{87}$ ,  $II_6^6$ , etc., will be used as desired.

From a to G also C to G



489. 490.

491.   
 From g to B $\flat$ , then to F, then back to g.

492. 493.

cf. Ex. 10 A

494.

495.

g1

**71.** If to the Phrygian cadence (see again § 31) is now added the half cadence, usually I-V, IV-V, or II-V; and the deceptive cadence, usually V $\hat{7}$ -vi; we shall have sufficient vocabulary to harmonize many chorals. Note the following cadences and transpose them to other keys.

Half Cadence Half Cadence Deceptive Cadence

Ex. 57

(d) (e)

Good Poor Good Poor

II $\hat{2}$  V $\hat{6}$  I — IV I — I I —

(f)

## Suggestions for Harmonizing a Choral

**72.** The following suggestions will be found in line with the best general usage.

1. The triad at each hold is usually in fundamental position and has tonic function, i.e., it can be figured as a tonic chord in the key of the choral, or as tonic in the related key to which the line may have led.

2. Since the hold marks a point of repose more or less complete, a chord of the seventh is obviously inappropriate at this point and is very rare.

3. If not tonic in function, the triad at the hold may appear as the V in a half cadence, Ex. 57 (a) (b); as the vi (really a tonic) in the deceptive cadence (c); or as the final major triad in the Phrygian cadence (♯31). The V in the half cadence may be reached through the ii or IV as well as through the I, but is less usual. The last two chords of a line may be I-IV, but this again is a cadencing formula explainable as V-I in the subdom. key.

4. In general do not introduce a chord on a weak beat and carry it over to the succeeding strong beat, unless beginning a line. Compare 57 (d) 1 and 2, and (e) 1 and 2. There may be occasional valid exceptions, but let the student find how many in one hundred lines of the Bach chorals.

5. It is generally in better taste to harmonize a repeated line in a different manner the second time, 57 (f).

6. The parts may cross occasionally, but do not cross the soprano.

7. Avoid many six-four cadences. Avoid many of any one form of cadence.

In the following list the more difficult chorals are mostly placed toward the end.

496. Ach Gott und Herr



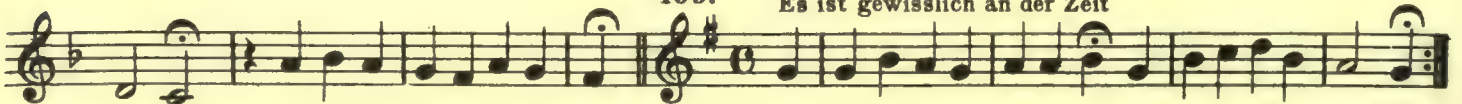
497. Christus der ist mein Leben



498. Errett mich, O mein lieber Herr



499. Es ist gewisslich an der Zeit



500. Freu dich sehr, O meine Seele





501. Gott des Himmels und der Erden

502. Herr Gott dich loben alle wir

503. Alles ist an Gottes Segen

504. Ermuntre dich, mein schwacher Geist

505. Erquickte mich, du Heil der Sünder

506. Gottes Sohn ist kommen

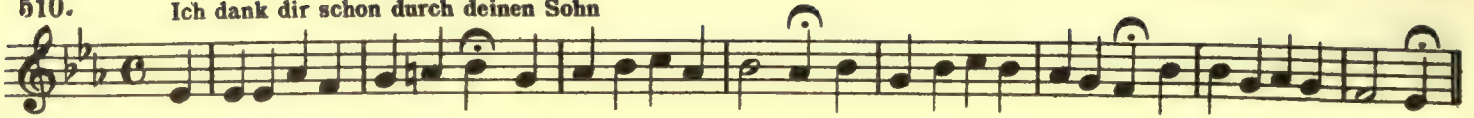
507. Herr, ich habe misgehandelt

508. Ach wie nichtig

509. Herzlich thut mich verlangen

A Phrygian melody

510. Ich dank dir schon durch deinen Sohn



511. Machs mit mir, Gott, nach deiner Güt



512. Meine Hoffnung stehet feste



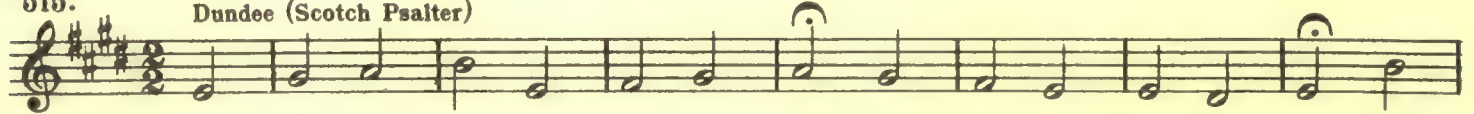
513. Fröhlich soll mein Herze springen



514. St. Ann's (With - f# as signature this is a true Lydian melody)



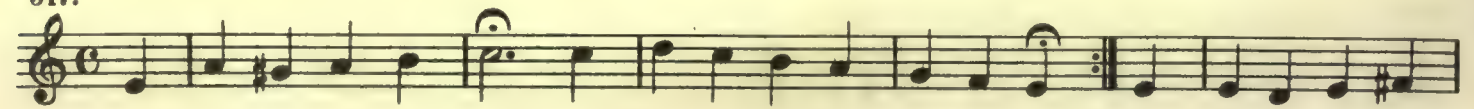
515. Dundee (Scotch Psalter)



516. Ein feste Burg ist unser Gott



517.

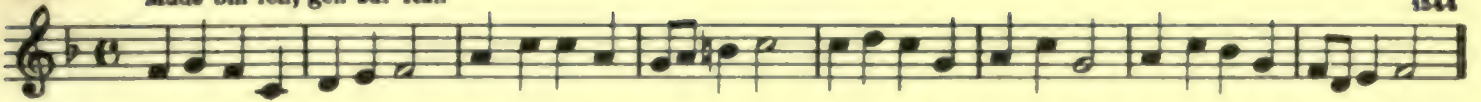


Hannover 1648



518. Müde bin ich, geh zur Ruh

1544



519. Der Mensch hat nichts so eigen



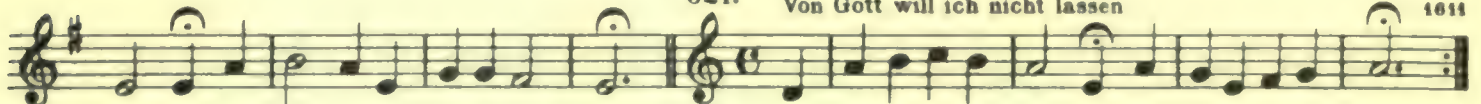
520. Verleih uns Frieden gnädiglich

Aeolian melody 1580



521. Von Gott will ich nicht lassen

1611



Dorian melody, Nos. 521-22-23



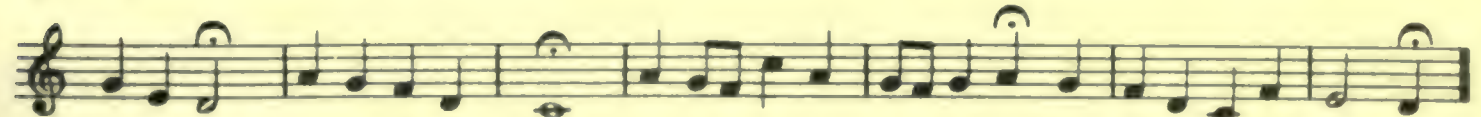
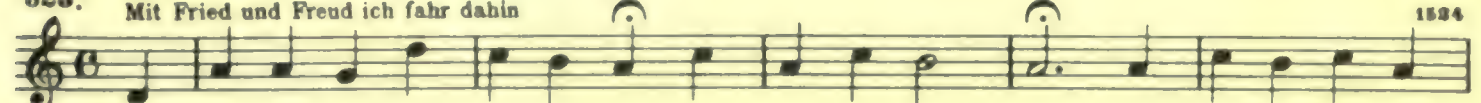
522. Singen wir aus Herzensgrund

About 1450



523. Mit Fried und Freud ich fahr dahin

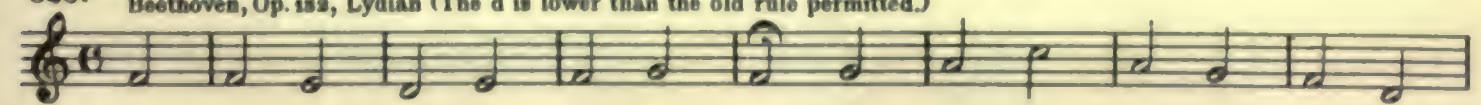
1584

524. A Mixolydian melody  
Komm, Gott Schöpfer, heiliger Geist

1585



525. Beethoven, Op. 132, Lydian (The d is lower than the old rule permitted.)



## Modulation to a key through one of its Tendency-chords

**73.** The tendency-chords of a key which resolve most emphatically to its tonic triad are (a) its Dom. 7th, (b) its Dim. 7th, (c) its Aug. Six-five, and (d) the Dim. 7th on its raised fourth degree. By means of any one of these chords one may modulate from any key major or minor to any other key, major or minor; but some modulations are much smoother than others and some are too abrupt to be satisfactory, especially when made through the Dom. 7th.

### (a) Modulation through the Dom. 7th of the new key

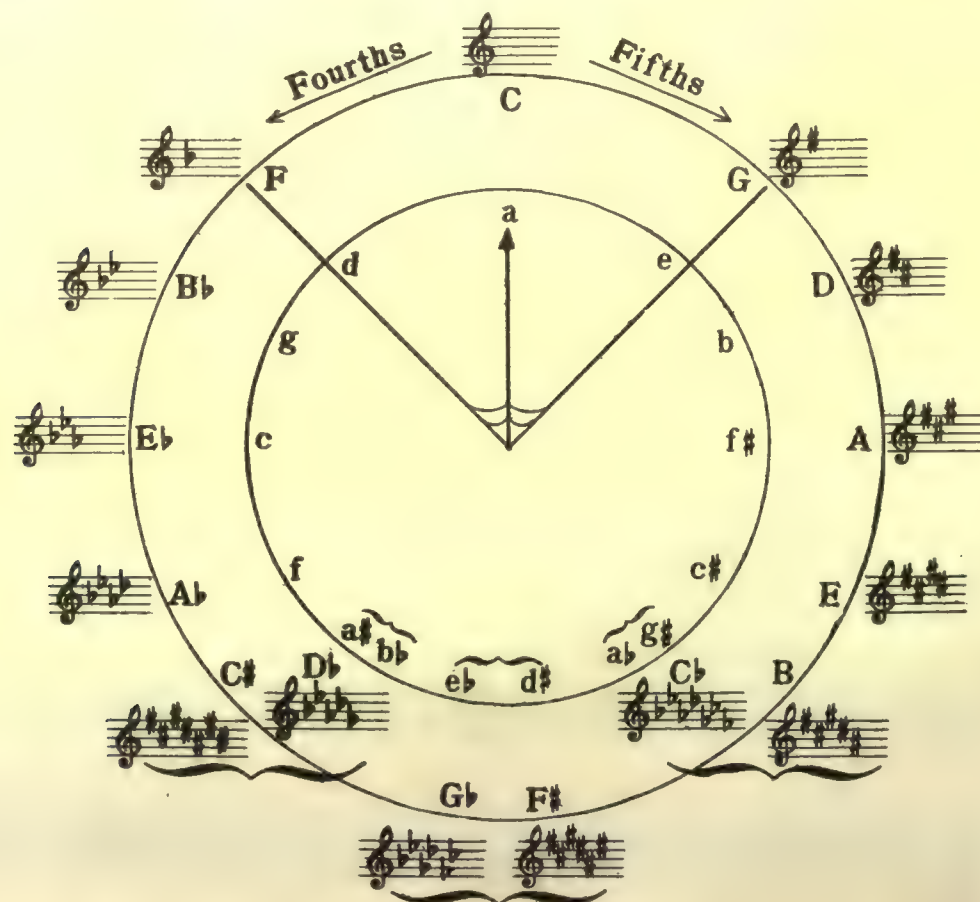
**74.** This modulation will be used first to next-related keys, i.e., to those whose signatures do not differ by more than one sharp or flat. The next-related keys to any given major key are its Dominant, Subdominant, and their three relative minors; and for any given minor its Dominant, Subdominant, and their three relative majors. The tonic triads of these keys can be formed from the scale of the given key, using the ascending major, and descending original minor, Ex. 58.

Ex. 58

Next-related keys to C major: C, dI, eI, FI, GI, aI

Next-related keys to a minor: aI, GI, FI, eI, dI, CI

**75.** Keys whose signatures differ by but one sharp or flat are said to be one remove apart, the difference in the signatures expressing exactly the number of removes from one key to another. From C to D is therefore two removes, C to F# six removes, C to f (minor) four removes. The relation of all the keys may be seen in the following chart. The arms will always inclose the next-related keys of any to which the arrow points. Brackets inclose enharmonic keys.





**76.** Modulation from any key to its five next-related keys may be made by progressing from the old tonic to the new Dom. 7th. Common tones are best kept, the other voices going to the nearest chord-tones. On reaching the new tonic it should be established by adding a closing cadence.

Modulation from C major to its five next-related keys:

Ex. 59

(a) Modulation (b) Closing cadence (c)

C I G V<sup>2</sup> I<sup>6</sup> IV I<sub>4</sub><sup>6</sup> V<sup>7</sup> I C I F V<sup>2</sup> I<sup>6</sup> Cadence C I a V<sub>4</sub><sup>6</sup> and Cad.

(d) (e)

C I<sup>6</sup> d V<sub>3</sub><sup>6</sup> and Cad. C I o V<sup>7</sup> I and Cad.

- (a) (b) Modulation through V<sup>2</sup>. In general modulation through an inversion of the Dom. 7th conduces to greater plasticity, and reserves the V<sup>(7)</sup> for the closing cadence.
- (c) Modulation by V<sub>4</sub><sup>6</sup>, chromatic soprano.
- (d) Begin with a I<sup>6</sup>, a fine road for this particular modulation.
- (e) No common tone, the third of the old tonic must be doubled to avoid an augmented second. (A rather abrupt modulation, made smoother by using a pivot chord, e.g., C I-v<sub>IV</sub><sup>6</sup>).

Modulate by the Dom. 7th from every major key to its five next-related keys

Modulation from a minor to its five next related keys:

Ex. 60

a) o V<sup>2</sup> I<sup>6</sup> and Cad. a I<sup>6</sup> d V<sub>3</sub><sup>6</sup> I and Cad. a I C V<sub>3</sub><sup>6</sup> I and Cad. a I G V<sub>3</sub><sup>6</sup> I and Cad. a I F V<sub>3</sub><sup>6</sup> I and Cad.

Con. 5ths permitted

Modulate by the Dom. 7th from every minor key to its five next-related keys

Exercises which Modulate by the Dominant Seventh Chord

526. 527. 528. 529. 530. 531. 532. 533. 534. 535.

# Modulatory Inflections Through Apparent Dominant Seventh

77. In the following exercises the apparent Dom. 7th resolving to its apparent tonic, can not be said to produce other than a fleeting impression of modulation. Such progressions may be termed modulatory inflections. See ¶ 63 under which the following exercises could also be placed.

## Exercises Which Contain Modulatory Inflections

78. Through some inversion of the V<sup>7</sup> (or fundamental position if necessary) reach a new tonic at each + as in the following model. As has already been shown, it may be questioned whether these are modulations at all. In any case the impression of the successive (apparent) tonics is fleeting.

Ex. 61

C    aV<sub>4</sub>    I    GV<sub>6</sub>    I    CV<sub>2</sub>    6    FV<sub>6</sub>    I    dV<sub>4</sub>    I    CV<sub>6</sub>    I



The bass is practically "unfigured." Use inversions and supply the needed accidentals as needed. The model is Ex. 61.

546.  $\text{aV}^{\text{+}}_{\frac{3}{3}}$  1

547. 3 2 6 4 3

548. 6 7 6 4 7

549. 3 6 7

79. In the following series pass from key to key through the Dom. 7th in the same manner as above. Any key in the series can be established by adding a closing cadence (4 76).

550. G - e - a - C - a - e - G and Cadence.
551. B $\flat$  - F - d - B $\flat$  - g - d - g - c - B $\flat$  and Cadence.
552. c - E $\flat$  - f - A $\flat$  - c - B $\flat$  - g - c - Cadence.
553. b - A - D - e - G - b - D - f $\sharp$  - E - A - b - Cadence.
554. e $\flat$  - G $\flat$  - a $\flat$  - C $\flat$  - G $\flat$  - b $\flat$  - e $\flat$  - Cadence.
555. F $\sharp$  - d $\sharp$  - B - g $\sharp$  - d $\sharp$  - C $\sharp$  - F $\sharp$  - Cadence.

80. Play originals as above, choosing next-related keys and making the smoothest progressions you can. Do this until considerable facility is acquired.

Finally, play the Dom. 7ths of 550 to 555 in succession (deceptive resolutions of the Dom. 7th) omitting all the tonic chords but the last, according to the following rule:

**RULE FOR SUCCESSIVE DOMINANT SEVENTHS (Deceptive resolutions):-** Use the successive Dom. 7ths in any inversion, or fundamental position, in such a way that no voice progresses more than a whole-step in any one move (i. e. no voice leaps), but may move either upward or downward. Avoid consecutive perfect fifths. The last Dom. 7th should resolve regularly to its tonic. Complete each exercise with a cadence formula.

22 (b) Modulation through the Dim.7th chord of the new key (♯ 45).

Exercises which modulate by the Diminished Seventh Chord

556.

557.

558.

559.

560.

561.

562.

563.

564.

81. Pass from key to key in exercises 550 to 555, by way of their Dim. 7th chords.



(c) Modulation through the Aug. Six-five chord of the new key

82. The new tonic is reached as an accented six-four, to which is added V7 - I. Other positions are sometimes used.

Ex. 62

(a) CI D (b) CI<sup>6</sup> G (c) CI F

(d) CI<sup>6</sup>  $\flat$  (e) CI F $\sharp$  or (f) CI G $\flat$  (g) CI B $\flat$  (h) I $\flat$  CI G $\flat$  I $\flat$

(a) (b) (c) (d) Some of the smoothest ways of reaching the Aug. Six-five:- at (b) from a I<sup>6</sup>, (c) through an Aug. Six-four-three to avoid con. 5ths, (d) the Aug. Six-five first in other than conventional form to escape con. 5ths, or a cross-relation.

(e) (f) (g) (h) Free yet quite permissible approaches to the Aug. Six-five. One should avoid con. 5ths, but may disregard augmented intervals and cross-relation in any modulation by altered chords.

565.

566.

567.

568.

569. **Modulatory inflections through 3**  
  
 Supply alto and tenor

570. Sequences of modulations by the use of  $\frac{6^+}{5}$ .

571.

Extend through the octave, ascending by half steps. This and similar sequences from F. J. Lehmann (by permission)

572.

Ascending by whole steps.

83. Also invent and play sequences similar to 570-1. Finally modulate from any key to every other in the circle, ♯ 75. (The other Aug. Sixth chords are also available for these modulations, but the Doubly Aug. Fourth leads to major only).

(d) Modulation through the Dim. 7th on the raised fourth degree of the new key

84. Use this chord preferably in its fundamental position (permissible in first inversion) and reach it through the nearest chord-tones. Resolve it to the new tonic six-four chord, on any accent, and add V7-I. The chord is often indicated by  $\text{IV}_7^\circ$ .

Ex. 63

- (a)(b) Typical models.
- (c) The old tonic taken in first inversion avoids an augmented second.
- (d) The modulating chord taken in its first inversion.
- (e) Cross-relation is unobjectionable as in practically all progression to modulatory (altered) chords, see under Ex. 62.
- (f) The augmented second, good. Compare this modulation with (b), which is identical in sound.
- (g) This chord is sometimes spelled as a Dim. 7th on the raised second of major keys (♯ 64).

Exercises which modulate by the Dim. 7th on the raised fourth

572.

573.

574.



85. Pass from key to key in exercises 550 to 555 by way of the Dim. 7th on the raised fourth degree of the new key, Add to each new I<sup>2</sup> a V<sup>7</sup>-I cadence.  
 In the same manner modulate from any key in the circle (p. 75) to every other key.

578. Sequence of modulations by the use of the Dim. 7th on the raised fourth

Extend through the octave, ascending by half steps.

579. C I D b F V 7 I 2 V 7 I etc.

Extend through the octave, ascending by major seconds.

C I D b F V 7 I 2 V 7 I E b F V 7 I 2 etc.

Also invent and play sequences similar to 578-9 ascending or descending by other intervals.

### Modulation through the Neapolitan Chord of the new key

86. The Neapolitan Chord is not, properly speaking, a tendency chord although produced by alteration: but its characteristic resolutions to the tonic six-four or to the dominant of its own key entitle it to a place among the musician's modulating materials.

Ex. 64

(a)<sup>1</sup> (a)<sup>2</sup> (b) (c)

{ C I V<sub>2</sub> I V<sub>2</sub> a N<sup>6</sup> I<sup>2</sup> F# N<sup>6</sup> V<sup>2</sup> }  
 { B N<sup>6</sup> V<sub>2</sub> I V<sub>2</sub> }

(d)

E<sup>b</sup> N<sup>6</sup>  
 (Enharmonic)

- (a)<sup>1</sup> (a)<sup>2</sup> Typical modulations using the N<sup>6</sup> with or without, its passing seventh.
- (b) The N<sup>6</sup> resolves to its accented I<sup>2</sup>.
- (c) The N<sup>6</sup> doubles its root and reaches the new tonic through V<sup>2</sup>.
- (d) If simpler to notate, the enharmonic equivalent of the Neapolitan chord may be used. (here e-g#-b for f#-a#-cb).

Exercises which modulate by the Neapolitan chord of the new key

580.

581.

582.

583. Unfigured bass. Introduce an  $6^+$ , a  $IV_7^o$  and modulate through the  $N^6$ .

584.

585. Sequence of modulations by the use of the  $N^6$  of the new key

586.  $C I D^b N^6 V_2^4 I D N^6 V_2^4$  I etc.

587.  $\left\{ \begin{matrix} C I^6 \\ B N^6 \end{matrix} \right. V_2^4$  I etc.

Invent and play sequences similar to 585-7, ascending or descending by other intervals.  
Also modulate from any key in the circle (♯ 75) to every other key by  $N^6$  or  $N^6$ .



## Modulation to more or less distant keys, Special Intervals up or down, Enharmonic Notation, Deceptive Resolution, Pivot Chords

Ex. 65

Up a per 4<sup>th</sup>                      Up a half-step                      Down a half-step

Up an aug. 4<sup>th</sup>  
(or dim. 5<sup>th</sup>)                      Down a half-step                      Up a min. 3<sup>d</sup>                      Down two min. 3<sup>ds</sup>

Down a maj. 3<sup>d</sup>                      Up a min. 3<sup>d</sup>                      Too abrupt

Ex. 65. Add a closing cadence to each of these except (e) which needs a V<sup>7</sup>-I only, and modulate all these distances in the same way from every major key.

(a) The old tonic is a pivot-chord quitted as V in the new key.

(b) The new Dom. 7<sup>th</sup> is the Aug. Six-five (enharmonically notated) of the old key (a pivot-chord).

(c) The old tonic is N<sup>6</sup> in the new key (a pivot-chord).

(d) The N<sup>6</sup> of the old key is the V in the new, to which is added the seventh. A pivot-chord, best in the third inversion. Note that (k) is the enharmonic equivalent of (d); avoid fifths as at (l).

(e) The old Dom. 7<sup>th</sup> is the Aug. Six-five (enharmonically notated) of the new,— a pivot-chord and must always be complete.

(f) (g) Deceptive resolutions. The vii<sup>7c</sup> of the old key is enharmonically vii<sup>7c</sup> of the new,— a pivot-chord usable in both minor and major keys, par. 45. By this means one reaches those keys one, two, or three minor thirds distant (or enharmonic equivalent).

(h) (i) Modulations by the Dom. 7<sup>th</sup> to rather distant keys. Good because the third of the new tonic does not produce any unpleasant, or too abrupt, contradiction of the old key. With scarcely an exception those modulations by V<sup>7</sup> which come within Mr. Lehmann's rule for pure modulation\* are sufficiently smooth for most purposes. The rule includes all the next related keys. However within the rule, C to a<sup>b</sup> (or g<sup>#</sup>) is poor. On the other hand C to f breaks the rule but is good, see (a) above.

(j), Not a pure modulation, obviously too abrupt.

\* Note. RULE: A modulation is pure in mode when the third of the new tonic triad or its enharmonic equivalent, is contained in the old key. In minor keys the notation of either the original or harmonic forms may be used. F. J. Lehmann-Lessons in Harmony.

# Chap. V. Non-harmonic Tones

## 1. The Suspension

**87.** The Suspension is a prepared discord a degree higher (or lower) than the chord-tone which it temporarily displaces, and to which it logically resolves. Three factors are involved:- the Preparation, The Suspension itself, and the Resolution.

In the following suspensions, locate the part to which each figure refers.

Ex. 66

Figure (a) shows a suspension of the third of a chord, with preparation, suspension, and resolution. Fingerings: 4 3. Labels: Prep., Sus., Res.

Figure (b) shows a suspension of the fifth of a chord. Fingerings: 7 6 5.

Figure (c) shows a suspension of the root of a chord. Fingerings: 9 8 7.

Figure (d) shows a suspension of the root of a chord, with preparation. Fingerings: 4 3.

Figure (e) shows a suspension of the root of a chord, with preparation. Fingerings: 9 8 6.

Figure (f) shows a suspension of the third of a chord. Fingerings: 8 7 6.

Figure (g) shows a suspension of the fifth of a chord, with retardation. Fingerings: 7 8.

Figure (h) shows a suspension of the root of a chord, with retardation. Fingerings: 5 2. Label: Bad.

### The Preparation

**88.** The Preparation may be any chord-tone, but preferably not a passing seventh, unless not tied to the suspension. Those sevenths and ninths which may enter through a leap from below are sufficient preparation (a) (b) (c) (d).

The preparation is usually as long or longer than the suspension. This rule is frequently relaxed when the preparation is not tied over to the suspension (d). Occasionally the rule is frankly disregarded.

Preparation by substitution is not permitted, since a true suspension is a prolongation of what was first a chord-tone. (Exceptions do not need place here).

### The Suspension

**89.** The Suspension should be foreign to the chord with which it appears, the more clearly so the better. Best when it is a seventh above, or second below, some legitimate chord-member.

The suspension should enter upon an accent, or an accented part of a beat. It is frequently more effective when not tied.

The suspension may delay the entry of a root, third, fifth, or diminished seventh, (a) to (f) Ex. 66. The delay of root or third is the more frequent, delay of the fifth best when restricted to a chord of the seventh, or in a sequence, (b) and later (Ex. 69 a, b).

The term, Retardation, is usually used to designate the suspension which resolves upward (g).

### The Resolution

**90.** The Resolution occurs upon an unaccented beat, or part of a beat, in triple measure on the second or third beats (a) (b) (c).

No voice but the bass may sound the resolution simultaneously with the suspension without some detriment to the harmony, and in any case this reduplication must appear at least a full ninth (with retardation a full seventh) below the suspension (c) (e) (g). Hence when the suspension is in the bass, no reduplication of the resolution is possible (h). Exceptions rare.

When the bass does sound the resolution simultaneously with the suspension, this resolution must be a root, or possibly (with good approach) a minor third, or other tone which would be satisfactorily doubled if the suspension were not used (c) (e).



The Suspension 7 6; Suspensions in the bass

Ex. 67

(a) (b) (c) (d) (e)

(f) (g) (h)

- (a) The figures (7 6) or  $\binom{7}{6}$  indicate a triad in first inversion with delayed root. In no case to be considered a chord of the seventh. Compare with the next example.
- (b) The figures  $\binom{7}{6}$  indicate what is here shown, i.e. two complete chords of the seventh, or a six-five chord with delayed root, the analysis depending on environment.
- (c) A triad in first inversion with a suspension and a retardation. The context makes this so obviously a tonic with delayed root, that analysis as a chord of the seventh is illogical.
- (d) A triad in first inversion with delayed root, through a retardation.
- (e) (f) Triads with suspension in the bass. Note the figures. Add no intervals to those indicated. Either interval may be doubled.
- (g)(h) Chords of the seventh with suspensions in the bass. Three figures are here required to indicate the chord.

The Suspension with Change of Harmony, with the Six-four Chord, and Double Suspensions

Ex. 68

(a) (b) (c) (d) (e)

(f) (g)

- (a) (b) A different harmony appears with the resolution of the suspension.
- (c) (d) (e) In each case a six-four chord. At (c) root delayed, (d) root and third delayed, (e) third and fifth.
- (f) Retardation delays the root and third.
- (g) A triad with the the third delayed, becomes a seventh chord when the third enters (also figured  $\binom{9}{7}$ ).





Suspensions in the soprano only

588. 8 4 3 4 5 9 8 6 9 8 4 589 5 6 4 3 9 8 4 3 9 8 6 4 5 7

590. 3 6 9 8 5 7 4 3 7 6 6- 5 4 4 3

591. 5 6 7 6 6 7- 6 5 4 3 5 7 6 6 9 8 7 6 7- 6 5

592. 3 6 4 3 6 5 4 3 4 3 6 4 3 9 8 7 6 7 6 6 4 7- 4 3

593. 3 7 6 4 7 6 7 6 7 8 7 6 6 6- 4 3 9 8 6- 8 G.S.D.

Begin in open position

Suspensions in any voice except the bass

594. 7 6 6 9 8 4 3 9 8 7 6 9 8 4 3 9 8 7 6 5- 4 3 4 3 7 5

595. 3 9 8 7 6 6- 5 4 2- 6 5 4 9 8 4 3 7- 4 3

596. 8 7 6 4- 3- 6 9 8 3 7 8 2 6 9 8 7 6 4 3 7 6 6 6 6- 7- 5 4 4 3 G.S.D.

597. 8 7 6 4- 3- 6 9 8 5 7 6 4- 3- 6 6 6 5 4 3 2- 2 6- 4 3 6 7 6 4- 3- G.S.D.

598. 8 3 6 5 4 3 6 5 4 3 6 5 4 3 4 3 5 6 7 6 5- 4 3 7 6 9 8 4- 3- 7 6 7- 6 5

Suspensions in the bass only

599. 

600. 

601. 

602. 

Note. The suspension in the bass is sometimes indicated by a diagonal stroke followed by the regular figures which would express the chord were there no suspension. This is simpler and clearer than the most usual figuring. Compare Nos. 601 and 602 the solutions of which should be identical.

Suspensions in any voice

603. 

604. 

605. 

606. 

607. 





## 2. Passing Tones and Embellishments

91. When Passing-tones and embellishments are to be used in a figured bass, dashes are used after the usual figuring as in the following example.

Ex. 71

(a) The chords are indicated as usual and the dash continues the chord while the bass moves.

Signs: (+) Unaccented passing-tone, (O) Accented passing-tone, (E) Embellishment.

These ornaments, together with the passing sevenths, afford a very flexible bass, as will be seen in the following chorals from J. S. Bach.

(b) (c) (d) (e) Some common faults and their correction.

(f) Good. No fault can be found with consecutive perfect fifths if either member of the second fifth is not a chord-tone.

Ex. 72

In Ex. 72 the fragments are from Bach's solution of the chorals which follow. (616-619)

(a) Passing tones in two voices.

(b) Passing tones and an embellishment. Here also a passing tone prepares a suspension in the tenor. Let the student consider this exceptional.

(c) The passing seventh temporarily crosses the bass. Par. 72.

(d) Bach here reduces the suspension, 9 8, to 2 1. This resolution into a unison may be justified between the tenor and bass by assuming that the latter will be played on a 16-foot stop, thus sounding an octave lower than written. Not recommended when 9 8 is available.

(e) Oblique motion of a passing tone into a unison. Generally forbidden in the books though to be found rather often. To avoid it makes for clarity. "Let each voice respect its neighbor's territory" is a good general rule.



Bach Chorals containing suspensions,  
passing tones and embellishments.

Supply the alto and tenor.

616.

Der Tag, der ist so freudenreich

8 2 3 2 3 2 5 6 5 7 8 7 5-7 4 3- 8 - 7 6 9 8 7 4 3 6 5 6 5 6 6 5

3 2 6 6 5 5-6 8 7 6 5 9 8 4 3- 3 2 6 6 7 6 5 6 5 8 7 3 2 3 2 5 6 5 7 4

8 7 5-7 4 3- 5 - 6 - 5 4 3 7 - 5 8 7 6 5 4 3 8 2 3 2 6 8 7

617.

Allein zu dir, Herr Jesu Christ

8 7 3 - 6 - 7 4 6 3 8 7 9 8 5 - 3 2 6 - 7 6 7 6 5 6 7 7 5 6 7

7 - 6 8 7 3 2 5 4 3 6 6 - 7 6 3 6 6 5 6 6 8 7 6 8 7

7 4 3 2 5 4 3 2 6 6 7 6 5 4 3 3 3 2 6 6 6 6 8 7

618.

An Wasserflüssen Babylon

8 7 8 7 5 - 6 - 3 - 7 6 3 2 6 6 8 7 5 4 7 3 6 7 6 - 7 6

9 8 7 4 3 5 - 3 2 6 - 5 4 3 - 7 8 3 - 6 8 7 6 - 6 9 8 # 6 5 5 - 6 6 7 4 2

6 7 4 4 3 5 6 6 8 7 6 b 6 - 9 8 7 - 3 2 5 - 3 2 8 - 6 - 7 - 4 - 8 7 3 4 3 # 3

619.

Herzlich lieb hab' ich dich, o Herr

8 7 4 3 3 2 3 - 6 - 5 6 8 7 8 7 6 - 3 2 7 6 7 9 8 8 7

6 5 7 5 3 - 2 6 5 7 8 7 8 2 2 6 5 3 - 6 - 3 2 6 8 5 3 3 2 6 - 2 - 8 7 5 6

3 - 6 # 6 5 8 9 3 2 8 7 3 2 6 5 7 6 7 2 6 9 8 6 6 5 3 3 8 7 8 # 5 6 7 5 6



5 6 3 3 6 - 6 4 6 - 3 2 7 5 6 6 # 6 5b 5 - 6 5 7 6 6 4 3

620. Harmonize simply in four parts

I V I V I IV II<sup>6</sup> IV<sup>6</sup> V<sup>6</sup>

Bach

621.

I V<sup>+</sup> 6/5

Complete in this style

Mozart

622. Play an accompaniment to this, one harmony to a measure except in the final cadence. All non-harmonic tones must be passing tones or embellishments.

### 3. Appoggiatura, Anticipation

**92.** The Appoggiatura is briefly defined as an unprepared suspension. It is most expressive when on the accent, but unlike the suspension it may appear on the unaccented beat. It is taken by a leap of an augmented second or more. It is commonest in the highest voice.

**93.** The Anticipation is the opposite of a suspension in that it becomes a discord by taking a tone of the following chord before that chord enters. The anticipation is unaccented. It usually enters stepwise but need not do so.

Ex. 73

- (a) (b) Appoggiaturas on the accent, and on the second half of the beat respectively. Sign, Ap.  
 (c) Anticipation in the soprano. Sign, A.  
 (d) Simultaneous appoggiaturas. (e), Simultaneous anticipations.

Ex. 74

B

**94.** Compare Ex. 74 A and B. If the unornamented harmony is correct the appoggiaturas used to enrich it may enter with great freedom, e. g. leaps of a major seventh, augmented and diminished intervals, apparent cross-relation, consecutive perfect fifths (if the second one contains an appoggiatura) are permissible. This general principle applies to the use of all ornaments, especially as regards consecutive fifths and cross-relation. The appoggiatura should not resolve obliquely into a unison.

In harmonizing a melody which contains appoggiaturas or other non-harmonic tones, think it first without any ornaments, choosing a harmonization that is clear and logical, with a decided predominance of the primary chords. This accomplished, the resumption of the ornamental tones should seem a simple matter.





The suspension ornamentally resolved

628. 

629. 

630. 

631. 

The Appoggiatura, Passing-tone and Embellishment ornamentally resolved. The Free Anticipation and Free Tone

Ex. 76 

- (a) The other neighbor of the resolution or any suitable chord-tone may precede the resolution.
- (b) (c) The passing-tone and the embellishment are distinguished from the appoggiatura merely by the way in which they are approached. The ornaments do not differ essentially from those of the appoggiatura.
- (d) The Free Anticipation is left by a leap and is a member (actual or understood) of the chord which follows. Sign: F. A.
- (e) The Free Tone is neither a member of the chord with which it appears nor to which it proceeds. Sign: F. T.

631. 

633. 

Relatively very few sight-playing tests demand ornamental resolutions. Those here given show in a measure what might be done with certain figures, but the student is advised to use moderation in this direction. Do not outline loosely a merely passable harmony and allow the fingers to skim over many notes which you call "ornaments of some kind".



## Part VI. The French System of Figured Bass

**95.** The Harmony Lessons and Examinations prepared by such eminent Frenchmen as Albert Lavignac, Auguste Chapuis, Alex. Guilmant, Theo. Dubois, Gabriel Fauré, Ch. M. Widor, Vincent D'Indy, Caesar Franck, and many others, afford such a wealth of material for advanced study and sight playing that it has seemed best to give here a brief explanation of the French system of figured bass.

**96.** In general the French system employs the same characters to indicate inversions, alterations, suspensions, etc., that we find in the American, English and German figured basses. For instance the use of 6 to represent a first inversion, a ♯ to refer to the third above the bass, are universal. The figuring of all secondary seventh chords that contain a perfect fifth is the same in all systems. But the figures used to denote the  $V^6$ ,  $V^7$ ,  $vii^{\circ 7}$ ,  $vii^{\circ 7\circ}$  (that is the whole family of primary dissonances) and the  $ii^{\circ 7}$  in minor are peculiar to the French system and must be committed to memory if any facility in their use is desired. In sequential modulatory passages, and anywhere that the primary dissonant chords are used, the special signs used by the French obviate the necessity of numerous signs of alterations impossible to avoid in our own method, as will be seen a little later in the examples to be given.

### The French figuring

(a) A stroke / through a figure indicates a diminished interval. For example  $\mathcal{F}$  means a diminished fifth; standing alone it means a diminished triad.

(b) A plus sign (+) before a figure denotes the leading tone, the (+) alone applies to the third above the bass, the figure 3 being then omitted.

(c) A zero (0) alone indicates silence; above or below other figures, the suppression of some chord member, e. g.,  $\overset{5}{0}$  denotes a triad with the third omitted.

(d) A major or minor triad is indicated by 5, 3 or 8; most often by the 5 which is by some authors placed over every triad-root. Some reserve the 3 for minor triads. When a ♯, ♭ or ♮ is used to indicate the third, the perfect fifth is always understood. The inversions of these triads (with any necessary signs of alteration) are expressed in the same manner as in our figuring.

(e) The special arrangement of chord members, as with us, is sometimes suggested by unusual groupings, e. g.,  $\overset{3}{5}, \overset{3}{8}$ .

(f) A + before 7 (thus +7) denotes the Dom. 7th chord over the Tonic, (the French *accord de 7me sur-tonique*); the  $+\overset{9}{7}$ , the Dom. 9th chord over the Tonic.

(g) Note carefully that the plus sign (+) is always used in connection with primary dissonant chords to designate the leading tone (unless already present in the bass). It is not however used to denote the leading tone in the triad on vii, but is reserved for chords of four or more tones. N. B. +6 denotes our  $V^{\frac{6}{4}}$  not  $vii^{\circ 6}$ .

Examples of French figuring

Ex. 77

The /      The +      The O      The 5, 3, or 8.

7 7 5      7 7 +6 5      O 5      3 8 5 5 5 5

Suggested arr.    The #, b      The V7      The Leading Tone 7th.

3 5 8    3 5 5    #7 #    b    #    7 +    6 5    +6    +4    7 5    +6 5    +4 3    4 +2

7 5    6 5    4 3    2

This when II<sup>o</sup>7 in minor.

The Dim. 7th.      Alterations if necessary.      The V<sup>9</sup>

7    +6 5    +4 3    +2    +4 b    +4 #    #6    9 7 +    b9 7 +    9 7 +    #9 7 +

The V7 and V9 over-tonic.      VII<sup>o</sup>7 and Dim.7 over tonic.      A few Suspensions.

+7    +7    6 +7 5    b6 +7 5    6 +7    b6 +7    +7 6    7 5 4 +    5 4 +4

Simplicity in denoting primary dissonant chords.  
Let the student figure this by the usual method and compare.

5 4    7 +    7 5    5 7 7 6    7 +    6 +    +6



Exercises in French figuring

634.  $\frac{6}{5}$   $\frac{6}{5}$   $\frac{6}{5}$  7 + +6 +7  $\frac{6}{5}$   $\frac{b6}{+7}$   $\frac{9}{7}$  + 7 6 +4 3 +4

7 +  $\frac{6}{5}$  +2  $\frac{6}{5}$  # +2 +4 3 +6  $\frac{6}{5}$  7 6 # + +6 +6 5

635.  $\frac{3}{8}$  +7 8 5 +6 3 6 7 + +7 8 636.  $\frac{8}{5}$   $\frac{5}{3}$  5 - 4 3 5 -

7 6 7 7 5 6 5 - 4 3 5 - 4 3 5 4 + 3 7 6 5 7 4 + 5

637. 5 # 5  $\frac{6}{b}$  5 # 5 6 6 6 5 5 5 6 4 7 + 5

638. 5 6 2 +6 5 2 6 5 2 +6 5 2 6 5 2 6 5 6 5 6 4 + 5 2 -

$\frac{5}{4}$  2 - 5 7 5 6 7 6 4 - 7 - 4 + +7 8 639. 5 6  $\frac{7}{4}$  3 +6 5 6  $\frac{6}{5}$  2 +4

6 5  $\frac{6}{5}$  +6 5 6 7 - 5 4 + 5  $\frac{6}{5}$  4 3 5 6 +6 3 - 5 - 4 3 7 - 6 5 + 5

640. 5 5 +6 7 6 # 7 (#5) 7 5 - +6 6 5 +6

+6 +6  $\frac{7}{5}$  6 7 6 4 7 + +7 8 641.  $\frac{3}{8}$  6 7 +2 5  $\frac{9}{8}$  7 6 5 +

5  $\frac{3}{8}$  +4 #  $\frac{6}{3}$  5 +4 +4  $\frac{b6}{3}$  5 6  $\frac{6}{4}$  7 8

# Chap.VII. Examination Papers

## From the A. G. O., Noted Conservatories, and Other Sources

From "Rules and Instructions for Playing  
Thorough-bass or Accompaniment in Four Parts,  
made for his Scholars in music by Johann Sebastian Bach"

642.

### Eight different basses under one choral

J. Ch. Kittel, last pupil  
of J. S. Bach

643. Herr Gott, dich loben alle wir.

(a) 6 6 6 5 6 6 4 3

(b) 7 6/5 7 3 6 8 7 9 8 5- 7 6 9 8 4 3

(c) 7 6/5 3/5 4/2 6 6 6 6 6 2 6 6 5 9 8 4 3

(d) 6 7 3/5 6 4 3 6 4+ 6 2 6 7 6 4 3

(e) 4 3 9 8 7 6 9 8 6 4 3 4+ 2 6 4+ 6 2 6 7 6 4 3

(f) 6/5 6/5 6 6 6 6 4/3 5/3 6 2 6 6 6 4 4 3

(g) 4 3/7 3/5 4/2 6 6 6 5/3 6 2 6 7 6 5 4 3

(h) 6 7- 6/3 3/5 4/2 6 6 6 6 4+ 6 6 4 3 4 3

\* The + calls for a raised four; cf. French figuring par. 96(b) - at least a family resemblance.



(643 con.)

6 6 8 7 6 6 6 6 5 4 3 2 1

6 6 6 6 7 7 8 4 3 6 6 5 7 6 4 3 2 1

6 6 6 6 7 7 8 4 3 6 6 7 7 8 7 6 5 4 3 2 1

7 6 9 8 4 3 9 8 7 6 9 8 7 6 5 3 6 4 3 2 1

3 5 4 2 6 6 6 4 2 6 4 3 6 6 5 6 6 6 4 3 2 1

6 6 6 4 2 6 6 6 6 6 6 5 6 6 4 3 2 1

6 6 8 7 5 6 6 7 6 6 6 9 8 7 6 5 4 3 2 1

6 6 6 8 7 8 7 9 8 7 6 7 6 8 7 6 5 4 3 2 1

Through the courtesy of Mr. Warren R. Hedden, Chairman of the Examination Committee of the American Guild of Organists, permission is given to present the following sight-playing tests from the years 1907 to 1916 inclusive, - thirty-four examples. The papers for '07, '08, and '09, contained no sight-playing from figured bass.

### Given Melodies

644.

A. G. O. Assoc. 1907



645.

A. G. O. Fellowship. 1907



646.

A. G. O. Assoc. 1908



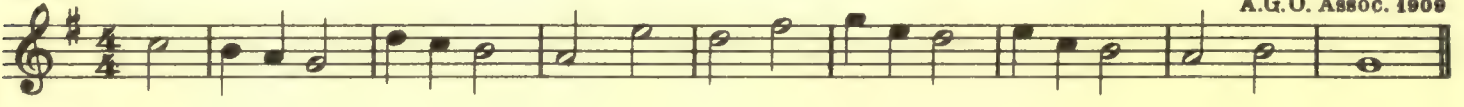
647.

A. G. O. Fellowship. 1908



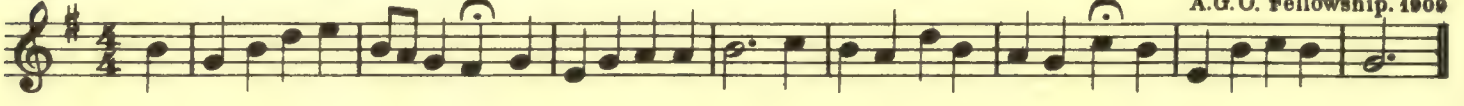
648.

A. G. O. Assoc. 1909



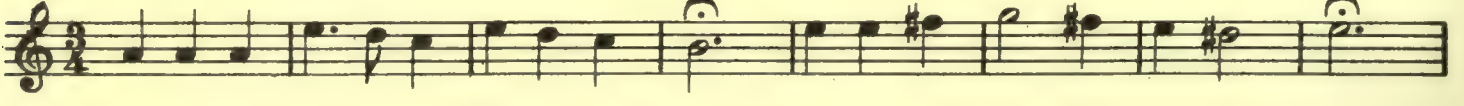
649.

A. G. O. Fellowship. 1909



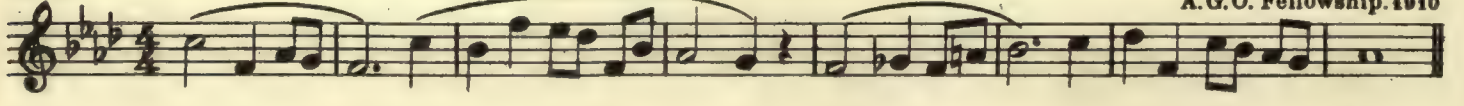
650.

A. G. O. Assoc. 1910



651.

A. G. O. Fellowship. 1910





652.



A. G. O. Assoc. 1911



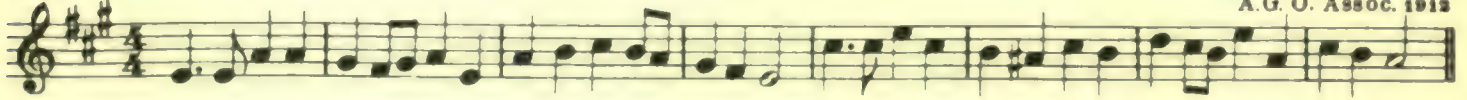
653.

A. G. O. Fellowship. 1911



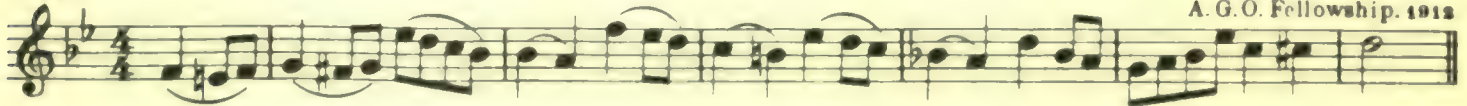
654.

A. G. O. Assoc. 1912



655.

A. G. O. Fellowship. 1912



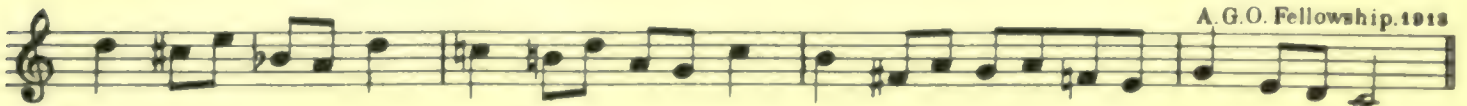
656.

A. G. O. Assoc. 1913



657.

A. G. O. Fellowship. 1913



658.

A. G. O. Assoc. 1914



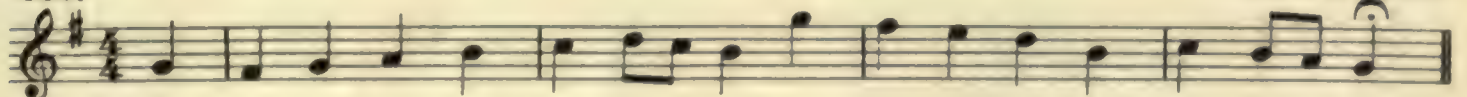
659.

A. G. O. Fellowship. 1914



660.

A. G. O. Assoc. 1915



661.

A. G. O. Fellowship, 1915



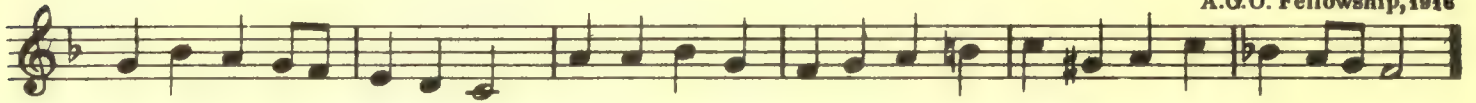
662.

A. G. O. Assoc., 1916.

663.



A. G. O. Fellowship, 1916



### Figured Basses

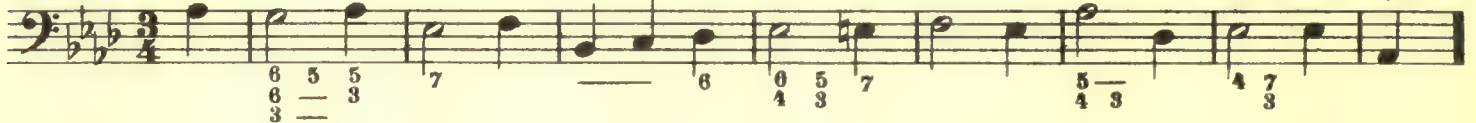
664.

A. G. O. Assoc., 1910



665.

A. G. O. Fellowship, 1910



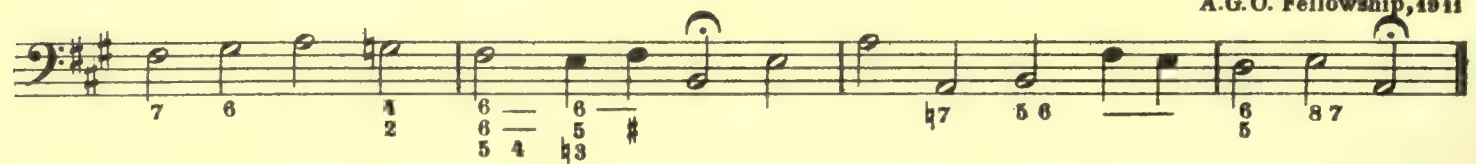
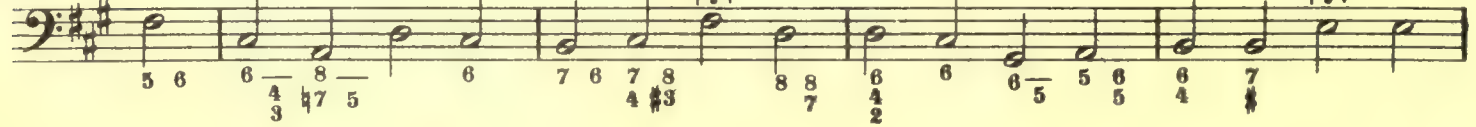
666.

A. G. O. Assoc., 1911



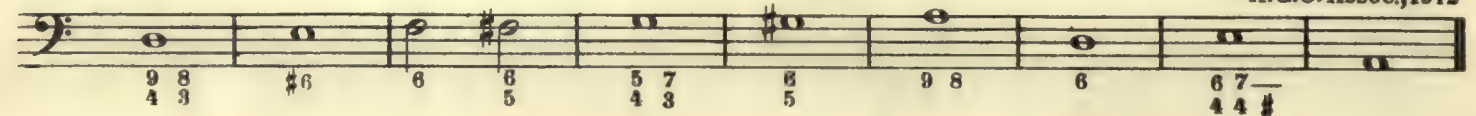
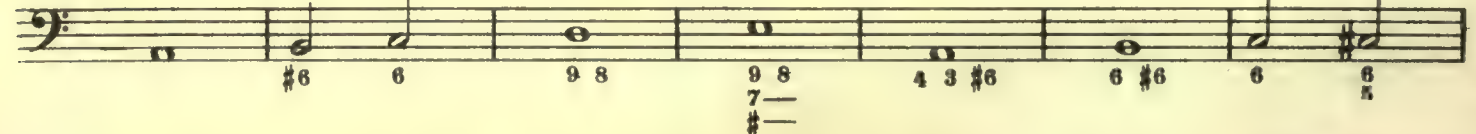
667.

A. G. O. Fellowship, 1911



668.

A. G. O. Assoc., 1912





669.

A. G. O. Fellowship, 1912. 670.

A. G. O. Assoc., 1913.

671.

A. G. O. Fellowship, 1913.

672.

A. G. O. Assoc., 1914

673.

A. G. O. Fellowship, 1914

674.

A. G. O. Assoc., 1915.

675.

A. G. O. Fellowship, 1915

676.

A. G. O. Assoc., 1916.

677.

A. G. O. Fellowship, 1916.

**KNOX CONSERVATORY OF MUSIC**

Examinations in Harmony

John W. Thompson, by per.

678.

5 9 6 4 7 8 6 3 6 7b 6 6 8 5b 8 5b 6b 8 6 6-7- 3 2 6 3 5b 3 4 2 3 5b 4 4 3

679.

**CORNELL CONSERVATORY OF MUSIC**

Examinations in Advanced Harmony

(See # 58, freer treatment of the seventh; similar tendency in these from Cornell.)

Horace A. Miller, by per.

680.

3 4 2 2 3 7 6 9 8 2 7 6 5 3 4 3 2 4 3 4

3 6 4 7 6 6 7 2 3 8 6 5 6 7 4 3 7 6 3 7 6 4 3 3 3 5 3

681.

8 4 6 4 6 5 9 7 5 6 8 5 4 6 7 6 5

4 4 6 6 8 7 8 7 6 4 4 6 8 3 9 8 9 3 3 3 2 5 8 3 6 7 4 3 5

**OBERLIN CONSERVATORY OF MUSIC**

Geo. S. Dickinson

682. Dim. 7th chords

Inversions as desired

Geo. S. Dickinson

683. Various Alterations

Inversions as desired



684. Unfigured

From O. C. M. Ex. papers. (Written)

Add alto and tenor using seven Aug. 6th chords as follows:  $\frac{6+}{4} \frac{6+}{4} (\frac{6+}{5}) (\frac{6+}{3}) \frac{6+}{5} (\frac{6+}{4}) \frac{6+}{3}$

Parentheses indicate unconventional positions.

685.

From O. C. M. sight-playing examinations

$\frac{6+}{5}$   $\frac{6+}{4}$   $\frac{6+}{3}$   $N^6$   $\frac{6+}{5}$

686.

Sequence upward by major thirds

Ibid.

$IV_7^o$   $IV_7^o$   $IV_7^o$   $II^6$

HARVARD UNIVERSITY  
Final Examinations

687. (Written work.)

Walter R. Spalding, by per.

Harvard Univer. 1910

*a* *b*

At *a* use one of the augmented sixth chords; at *b* a Neapolitan sixth.

688.

Harvard Univer. 1910

$8 \ 7 \ 6 \ 6$   $5 \sharp$   $5 \sharp$   $6 \ 6$   $5$   $2$   $7$   $6 \ 7$   $x-$   $6$   $2$   $6 \ 6$   $5$   $2-$   $6 \ 6 \ 6$   $4 \ 5$   $7$   $9 \ 6$   $5 \sharp$   $7$

689.

Harvard Univer. 1911

Use where appropriate any of the material at your command.

At *g* sharp near the end employ an augmented sixth chord.

690.

Harvard Univer. 1911

Harmonize using several of the chromatically altered chords.

**COLUMBIA UNIVERSITY**  
Examination papers (written work)

Frank E. Ward, by per.

691. Secondary seventh chords

I III<sub>3</sub><sup>4</sup> VI<sup>7</sup> I<sub>3</sub><sup>4</sup> IV II<sup>2</sup> V<sub>5</sub><sup>6</sup> II<sub>3</sub><sup>4</sup> V<sup>7</sup> VII<sup>o</sup><sub>3</sub> I<sup>6</sup> V<sub>3</sub><sup>4</sup> I I<sup>2</sup>

IV<sup>6</sup> IV<sup>2</sup> VII<sub>6</sub><sup>6</sup> IV<sub>3</sub><sup>4</sup> VII<sub>7</sub> II<sub>3</sub><sup>4</sup> V<sup>7</sup> I<sub>5</sub><sup>6</sup> IV VII<sub>6</sub><sup>6</sup> I<sup>6</sup> I I dII<sub>3</sub><sup>4</sup>

V<sup>7</sup> VII<sub>3</sub><sup>2</sup> I<sup>6</sup> CII<sub>3</sub><sup>4</sup> V<sup>7</sup> VII<sub>3,3</sub><sup>2</sup> I<sup>6</sup> I<sub>5</sub><sup>6</sup> IV<sup>7</sup> VII<sub>6</sub><sup>6</sup> III<sup>7</sup> VI<sub>5</sub><sup>6</sup> II<sub>7</sub><sup>5b</sup> V<sub>4</sub><sup>7</sup><sub>3</sub>

692. Ex. in the use of the appoggiatura, passing tone, etc:

(The sign is here used to indicate any non-harmonic tone, A. E. H.)

Columbia Univer.

693. Ex. illustrating the alterations of various scale steps.

Bb: Step, 2<sub>4</sub><sup>#</sup> -6b 1<sub>6</sub><sup>b</sup> -4<sub>4</sub> -g: F: 2<sub>4</sub><sup>#</sup> 2<sub>4</sub><sup>#</sup> Bb:

2<sub>4</sub><sup>#</sup> -6b Eb: 1<sub>6</sub><sup>b</sup> -5<sub>4</sub> F: Bb: 4<sub>3</sub><sup>b</sup>

(These alterations are nonharmonic (embellishments etc.) or may be part of an altered chord. A. E. H.)

Columbia Univer.

**NEW ENGLAND CONSERVATORY OF MUSIC**

694. Examination questions (written work)

G. W. Chadwick, by per.

5 4 6 4 8 7-8 6 4 3 6 6 6 6 7 7

2 2 5 3 6 4 5 6 3 5

695.

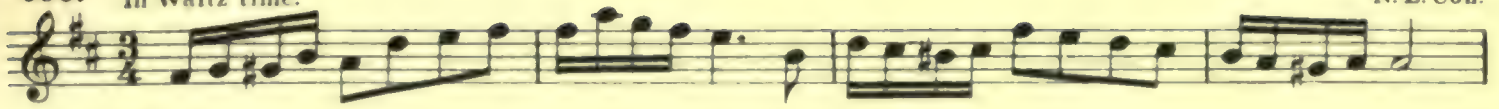
N. E. Con.

Harmonize according to the rhythmic indication below the staff, analyze carefully, marking each non-harmonic tone with its distinctive sign.

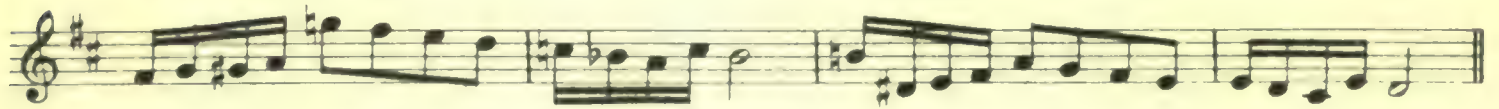
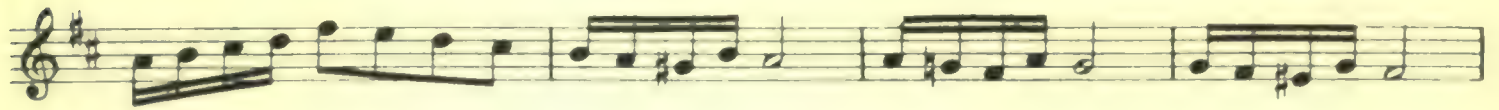


696. In Waltz time.

N. E. Con.



Write (or play) an accompaniment to this melody.

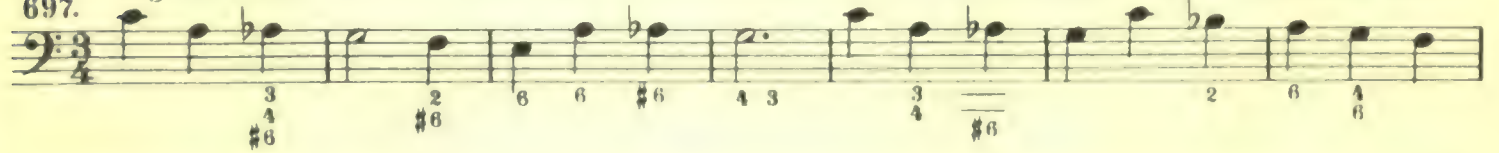


ROYAL CONSERVATORY OF MUSIC, MOSCOW, RUSSIA

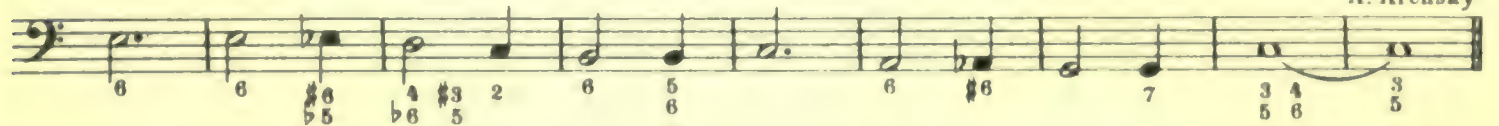
Three figured basses

with the permission of P. Jurgenson, Moscow

697. Aug. 6th Chords

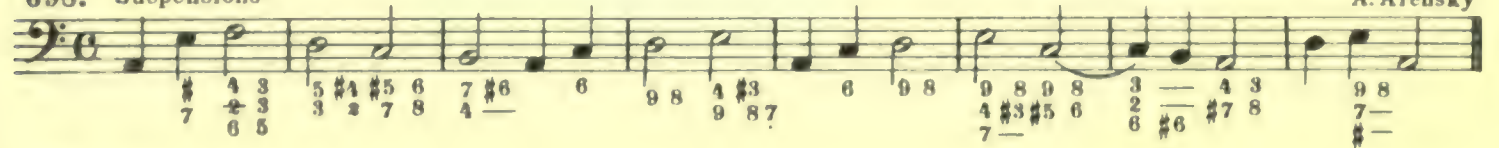


A. Arensky

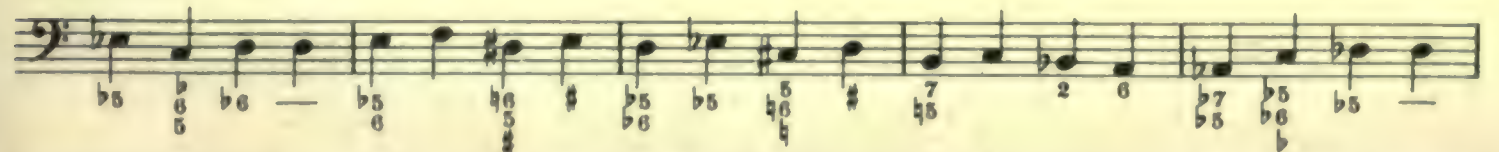


698. Suspensions

A. Arensky



699. Modulations



A. Arensky



TRINITY COLLEGE OF MUSIC, LONDON

Higher Examinations, Jan. 1913.

Five parts. Passing tones (6th notes), and crossing of inner parts permitted. (Written.)

(Licentiate in Music)

700.

By per.

701. Four parts. (Written.)

(Associate in Music)

Trinity Col. Mus. by per.

702.

(Associate in Music)

Trinity Col. Mus. by per.

From Examinations in the Art of Teaching. (L.Mus. and A.Mus.)

- (a) Describe concisely, as if to a pupil, all faults in the harmony in this Double Chant.
- (b) Criticise the order of modulations.

703.

Trinity Col. of Music by per.















Five staves of musical notation in treble clef with a key signature of two sharps (F# and C#). The music features various dynamics including *p*, *sf*, *nf*, and *pp*, along with slurs and accents.

Examination in accompaniment

From "Leçons d'Harmonie" by  
Albert Lavignac (of the National Cons., Paris).

722.

Four staves of musical notation in bass clef with a key signature of two flats (Bb and Eb). The music includes numerical figures and fingerings for accompaniment.

6-7 6 7 3 3 7 6 6 7 6 6 6 5 +4 6 6  
5 4 + 3 4 + 3 5 5 7 6 6 7 +6 6 4 +2 5 #5  
5 4 + 3 4 + 3 5 5 7 6 6 7 +6 6 4 +2 5 #5  
5 4 + 3 4 + 3 5 5 7 6 6 7 +6 6 4 +2 5 #5

9 8 #6 6 7 6 7 5 4 +7 5  
7 6 5 4 +7 5

With the permission of  
Henry Lemoine & Co., 17 Rue Pigalle, Paris

723. Modéré

Per. of Henry Lemoine & Co.  
17 Rue Pigalle, Paris.

724. Cantabile

Per. of Henry Lemoine & Co.  
17 Rue Pigalle, Paris.



THE SCHOLA CANTORUM, PARIS  
Three final examinations in advanced harmony;

by permission of the composer, M. Vincent D'Indy. 1909

725.

A.....

B.....

In M. D'Indy's own solution of this melody (facsimile from his pen, p.62), Theme B, transposed to  $E^b$ , is made to serve as bass in the first six bars, and both A and B appear entire under the tonic pedal. Such possibilities however are intended to be discovered by the candidate, the themes being merely indicated. The following problems from the Schola Cantorum (also Nos. 719 and 723) are of this nature, demanding a high degree of skill and some good training in counterpoint.

726.

Vincent D'Indy, 1910,  
by per.

A.....

B.....

727.

Vincent D'Indy, 1911,  
by per.

A..... C.....

A.....

B.....

The following beautiful manuscript from the hand of the composer, M. Vincent D'Indy, is his own solution of N<sup>o</sup> 725. By permission.

Examen 0. fin d'année 1909

A

C.D.

Realization

B

C.D.

B

C.D.



c. D

B

A

c. D

A



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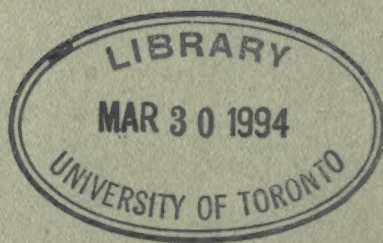












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