

### Chapter 3 – Musical Density: Triads, Seventh Chords, and Texture

Exercise 1: Each given pitch can function as the root, third, or fifth of major, minor, and diminished triads as shown in the sample solution. On a separate sheet of manuscript paper, notate and label the nine possible triads that can be generated from each given pitch.

Example:

A musical staff in treble clef showing ten triads. Below each triad is a label: G, GM, g, g°, Eb, e, e°, C, c, and c#. The triads are: G (G-B-D), GM (G-B-D), g (G-B-D), g° (G-B-D), Eb (Eb-G-Bb), e (E-G-B), e° (E-G-B), C (C-E-G), c (C-E-G), and c# (C#-E-G).

A. B. C. D.

A musical staff in treble clef with four empty measures labeled A, B, C, and D for student input.

Exercise 2: Identify the root, type of triad (major, minor, diminished, or augmented), and inversion (if any). Then, transpose each given sonority down a perfect fifth or its compound (or up a perfect fourth, or its compound), notating it on the given empty staff (above or below).

A. B. C. D. E. F. G.

A musical staff in grand staff (treble and bass clefs) with seven triads labeled A through G. Triad A is gm (G-Bb-D) in the bass clef. Triad B is G#m (G#-Bb-D) in the bass clef. Triad C is Gm (G-Bb-D) in the treble clef. Triad D is G#m (G#-Bb-D) in the bass clef. Triad E is Gm (G-Bb-D) in the treble clef. Triad F is Gm (G-Bb-D) in the bass clef. Triad G is Gm (G-Bb-D) in the treble clef.

Exercise 3: Error detection. Each of the following labeled triads is notated with various doublings. However, one of the pitch classes in each example is incorrect. Circle and correct the error in each example.

A. B. C. D. E. F. G.

A musical staff in grand staff with seven labeled triads for error detection. Labels below the staff are: D<sup>6</sup><sub>3</sub>, B<sup>b</sup><sub>4</sub><sup>6</sup>, A<sup>5</sup><sub>3</sub>, C#Major<sup>6</sup><sub>3</sub>, eb<sup>5</sup><sub>3</sub>, c<sup>o6</sup><sub>3</sub>, and ab<sup>6</sup><sub>4</sub>.

Exercise 4: Triad construction. Each triad notated below can occur in several keys (see the sample solution, in which an E minor triad is found in at least six different keys). Notate the given triad, the key, the key signature, and the Roman numeral of every major and minor key in which the given triad may occur. Use a separate sheet of manuscript paper.

sample solution

e: i      G: vi      a: v      b: iv      C: iii      D: ii

A.      B.      C.      D.      E.      F.      G.

Exercise 5: Analysis. A major or minor key is given as well as a triad. Add accidentals necessary to conform to the given key (do not add a key signature) and a Roman numeral and figured bass analysis.

A.      B.      C.      D.      E.      F.      G.      H.      I.      J.      K.      L.

D:      F:      Ab:      f#:      B:      f:      eb:      E:      Db:      Gb:      b:      eb:

Exercise 6: Writing Triads. Construct triads as indicated by the given major or minor key and the Roman numeral. Use accidentals, not key signatures.

A.      B.      C.      D.      E.      F.      G.

D:IV      Eb:vi      d:III      A:V      b:vii°      F:ii      B:V

H.      I.      J.      K.      L.      M.      N.

Ab:I      f:III      Eb:IV      C#:IV      bb:VI      B:vii°      Cb:vi

Exercise 7: Analysis. Determine the key, then, for each sonority marked with an arrow, add a complete figured bass (e.g., even root-position chords will receive  $^5_3$ ).

**Allegro assai**

The score consists of six staves: Horns in C, Flute, Violin I, Violin II, Viola, and Double Bass. The key signature has one sharp (F#) and the time signature is 3/8. The tempo is marked 'Allegro assai'. Dynamics include  $[f]$  and trills are marked with *tr.*. Arrows point to the following notes in the Double Bass staff: the first note of the first measure, the first note of the second measure, the first note of the third measure, the first note of the fourth measure, the first note of the fifth measure, the first note of the sixth measure, the first note of the seventh measure, the first note of the eighth measure, the first note of the ninth measure, and the first note of the tenth measure.

Exercise 8: Notation. Realize the following figured basses by notating two pitches at the required intervals immediately above the bass pitch to create complete triads (notate in the bass clef). Observe chromatic alterations in the figured bass. Then, add Roman numerals based on your realization.

A.

Figured bass notation for Exercise 8A: e:     $\flat$     6    6    6    #    6    6    6    4    5    #

B.

Figured bass notation for Exercise 8B: D:    6    6    6    6    6    6    6

Exercise 9: Triads within a key. In chorale style (SATB), notate the following triads based on the Roman numerals in the given key. Double the root of the chord except in vii, when you will double the third of the chord. Follow the indicated spacing: "O" for open and "C" for close.

A.

D: IV (o) I (c) iii (c) V<sup>6</sup> (o) I<sup>6</sup> (o) vii<sup>o6</sup> (c) IV<sup>6</sup> (c) I<sub>4</sub><sup>6</sup> (o)

B.

g: III<sup>6</sup> (o) V (o) i<sup>6</sup> (o) ii<sup>o6</sup> (c) V<sub>4</sub><sup>6</sup> (o) vii<sup>o6</sup> (c) iv<sup>6</sup> (o) V (c) VI (o) i (o)

Exercise 10: Triads within a key. In chorale style (SATB), notate the following triads based on the Roman numerals in the given key. Double the root of the chord except in vii, when you will double the third of the chord. The goal is to move from one chord to the next using as little motion as possible. This can be accomplished by holding common tones between chords and by moving to the next chord's members by step.

A.

I V<sup>6</sup> I iii vi ii V IV vii<sup>o6</sup> I<sup>6</sup> I<sub>4</sub><sup>6</sup> V i

B.

V<sup>6</sup> i iv ii<sup>o6</sup> V VI VI<sup>6</sup> i iv<sup>6</sup> V V<sup>6</sup> i

Exercise 11: Building seventh chords. Construct seventh chords based on the figured bass. Identify each type of seventh chord.

A. B.

7   #7   6   7   4   4    $b6$    #6   4   6    $b7$    4

#   #   5    $b5$    3   2    $b5$    5   2   #5    $b5$    3

Exercise 12: Analysis of seventh chords. Given the key and seventh chords (all of which appear in inversion), circle the root of each chord, then identify the following:

- type of seventh chord
- figured bass
- Roman numeral

A. B.

e: F:

C. D.

B $b$ : d:

Exercise 13: Verticalization. Each excerpt is cast in a florid style, yet depends on the flow of harmonies. Circle each harmony and provide an analysis of each chord type and inversion. Do not use Roman numerals.

A.

Soprano  
E - ter - ni - ty, O thun - d'rous word, O sword that through my

Alto  
E - ter - ni - ty, O thun - d'rous word, O sword that through my

Tenor  
E - ter - ni - ty, O thun - d'rous word, O sword that through my

Bass  
E - ter - ni - ty, O thun - d'rous word, O sword that through my

Exercise 13: Verticalization. Circle each harmony and provide an analysis of each chord type and inversion. Do not use Roman numerals. Cont'd

A. Cont'd

soul doth pierce, Be - gin - ning with - out end.

soul doth pierce, Be - gin - ning with - out end.

soul doth pierce, Be - gin - ning with - out end.

soul doth pierce, Be - gin - ning with - out end.

B.

C.

*p*  
Non è ver? Quan - do as -

## C. Cont'd

si - so a te vi - cin Ti par - lai, ben\_ mio, d'a - mor,

## D.

*f*

*f*

Exercise 14: Identifying Root Position Triads. Label the root and triad type of each of the triads in close and open position, maintaining the exact spacing of the model. Then, transpose each triad as required, maintaining the exact spacing of the model.

Musical notation for Exercise 14 showing seven triads on a bass clef staff. The triads are:
 

- Triad 1: Root G, notes G, B, D (Major 2nd). Label: ↑ M2
- Triad 2: Root G, notes G, B, D, F (Minor 7th). Label: ↑ m7
- Triad 3: Root F, notes F, A, C (Perfect 4th). Label: ↑ P4
- Triad 4: Root G, notes G, B, D, F# (Augmented 4th). Label: ↑ A4
- Triad 5: Root G, notes G, B, D, F (Perfect 4th). Label: ↓ P4
- Triad 6: Root G, notes G, Bb, D (Minor 3rd). Label: ↑ m3
- Triad 7: Root G, notes G, B, D, F# (Augmented 4th). Label: ↑ A4

Exercise 15: Constructing Root Position Triads. Given is the *third* of various types of triads. Construct close-position triads by adding the root and fifth as required.

Musical notation for Exercise 15 showing the third of six triads on a bass clef staff. The triads are:
 

- Triad 1: Root G, note B (Diminished). Label: d
- Triad 2: Root G, note B (Major). Label: M
- Triad 3: Root G, note B (Major). Label: M
- Triad 4: Root G, note Bb (Minor). Label: m
- Triad 5: Root G, note Bb (Minor). Label: m
- Triad 6: Root G, note B (Diminished). Label: d

Exercise 16: Constructing Root Position Triads. Given is the *fifth* of various types of triads. Construct close-position triads by adding the root and third as required.

Musical notation for Exercise 16 showing the fifth of seven triads on a bass clef staff. The triads are:
 

- Triad 1: Root G, note D (Major). Label: M
- Triad 2: Root G, note D (Diminished). Label: d
- Triad 3: Root G, note D (Augmented). Label: A
- Triad 4: Root G, note D (Minor). Label: m
- Triad 5: Root G, note D (Minor). Label: m
- Triad 6: Root G, note D (Major). Label: M
- Triad 7: Root G, note D (Augmented). Label: A



Exercise 17: Constructing Triads in Inversion. Construct the required triad type and inversion in *close position*.

Exercise 17 shows a single treble clef staff with six empty measures. Below the staff, the following triad types and inversions are listed:  $D_3^6$ ,  $f_3^5$ ,  $E+^6_4$ ,  $A^b_6$ ,  $b^{\circ}_4$ , and  $c^{\#}_3$ .

Exercise 18: Constructing Triads in Inversion. Construct the required triads in four voice (SATB) *open position* (use half note values and be aware of stem direction). Double the root in each triad

Exercise 18 shows a grand staff (treble and bass clefs) with eight empty measures. Below the staff, the following triad types and inversions are listed:  $g \text{ min }^6_3$ ,  $c \text{ minor}$ ,  $a \text{ dim }^6_3$ ,  $A^b_4^6$ ,  $D \text{ aug}$ ,  $b^b_3^6$ ,  $e \text{ dim }^6_3$ , and  $D^b_4^6$ .

Exercise 19: Analysis. Analyze each harmony using roman numerals and figured bass. For exercise 2, add stems in chorale style.

A.

Exercise 19A shows a grand staff with a key signature of one flat (G minor). The music consists of six measures of chords. The chords are:  $G^6_3$ ,  $F^6_3$ ,  $E^6_3$ ,  $D^6_3$ ,  $C^6_3$ , and  $B^6_3$ .

B.

Exercise 19B shows a grand staff with a key signature of two sharps (D major). The music consists of four measures of chords. The chords are:  $D^6_3$ ,  $E^6_3$ ,  $F^6_3$ , and  $G^6_3$ .

Exercise 20: Figured Bass Realization. Based on the given figured bass, add the tenor and alto voices. *Double the root.* Label root and type of triad.

6   b   #   6   6   #6/4   b6   #5/#

Exercise 21: Figured Bass. Using keyboard spacing, realize each of the figured bass examples. Double the root. Label the root and type of each triad.

6   b6   6   b6   #5   6   6   b6

Exercise 22: Figured Bases within a Key. The two figured basses below are each in a single key.

- Realize each of the two figured basses in keyboard style.
- Double the root except for the vii chord, for which you will double the third of the chord.
- Move each of the voices from one chord to the next by the smallest possible motion and if possible, keep common tones (that is, pitches that are the same between two chords).
- Add roman numerals

A.

#   6   #   6   6/4   6   6   6   6   6   6   5/#

B.

6   6   6   6   6   6   6   6   6/4   5/3

Exercise 22: Analysis. Label the type of each of the triads in the following examples. Include a figured bass analy-

A. ( $\text{♩} = 126$ )

*p*

Soprano I  
Chio - stri al - tis - si - mi e stel - la - ti,

Soprano II  
Chio - stri al - tis - si - mi e stel - la - ti,

Alto  
Chio - stri al - tis - si - mi e stel - la - ti,

Tenor  
Chio - stri al - tis - si - mi e stel - la - ti,

Bass  
Chio - stri al - tis - si - mi e stel - la - ti,

B.

S.  
Ho - ne - stum fe - cit il - lum Do - mi - nus, et cu - sto -

A.  
Ho - ne - stum fe - cit il - lum Do - mi - nus, et

T.  
Ho - ne - stum fe - cit il - lum Do - mi - nus, et cu - sto -

B.  
Ho - ne - stum fe - cit il - lum Do - mi - nus, et

Exercise 22: Analysis. Label the type of each of the triads in the following examples. Cont'd.

C.  $(d=b)$  **Tempo I**

S. *f* phans, di - vi - ti - as coe - lo con - di - dit

A. *f* phans, di - vi - ti - as coe - lo con - di - dit

T. *f* phans, di - vi - ti - as coe - lo con - di - dit

B. *f* phans, di - vi - ti - as coe - lo con - di - dit

D.

S. *pp* il - los tu - os mi - se - ri - cor - des o - cu - los \_\_\_\_\_ ad nos con - ver - te.

A. *pp* il - los tu - os mi - se - ri - cor - des o - cu - los \_\_\_\_\_ ad nos con - ver - te.

T. *pp* il - los tu - os mi - se - ri - cor - des o - cu - los \_\_\_\_\_ ad nos con - ver - te.

B. *pp* il - los tu - os mi - se - ri - cor - des o - cu - los \_\_\_\_\_ ad nos con - ver - te.

Exercise 23: Analysis of Root Position Seventh Chords. Identify the type of each of the following seventh chords notated in open position. Label each member of the triad (root, third, fifth, and seventh) as follows: 1, 3, 5, 7.

c# mm

Exercise 24: More Analysis of Root Position Seventh Chords. Identify the type of each of the following seventh chords notated in open position. Circle the seventh of the chord in each example.

Exercise 25: Analysis of Seventh Chords in Inversion. Circle the root and label the type of seventh chord and provide a full figured-bass analysis.

D Mm

Exercise 26: Writing Root Position Seventh Chords.

Exercise A: Given is the root of various types of seventh chords. Notate the chord in either close (C) or open (O) position. Label the fifth (5) and the seventh (7) in each chord.

Exercise B: Given is the third of various types of seventh chords. Notate the chord in close position.

Exercise C: Given is the fifth of various types of seventh chords. Notate the chord in close position.

Exercise D: Given is the seventh of various types of seventh chords. Notate the chord in close position.

A.

C C O O O C O

mm dd MM Mm mm dm Mm

B.

MM Mm mm Mm dd dm Mm

C.

mm mm Mm MM mm dd dm

D.

mm mm Mm MM mm dd dm

Exercise 27: Analysis within a key. For each of the following root-position seventh chords in the key of D major supply a roman numeral and label the type of seventh chord.

Exercise 28: Writing Seventh Chords Within a Key. Given is a key, roman numeral and figured bass. Notate the required chord in close position using accidentals (that is, no key signature). Label each type of seventh chord.

Exercise 29: Figured-Bass Analysis. Provide a full figured-bass analysis (including appropriate accidentals) for each of the following chords.

Exercise 30: Figured-Bass Realization. Based on the given figured bass, notate chords in four voices (SATB) and identify the type of seventh chord.