Learn from the Masters

Classical Harmony

WORKBOOK

ISBN 91-971133-5-2

Suggested method of study

The textbook has generally been designed with a steadily increasing grade of difficulty, although sometimes both the more advanced and the simpler techniques can be found side by side. For this reason, it may be easier to follow the order of exercises in this workbook, which has a more even progression. You will find references to the relevant textbook pages at the bottom of each page of the workbook.

You will find it very beneficial to have access to a piano or other harmonic instrument when you are working through the book. Being able to hear what you write is an important prerequisite for you to gain valuable knowledge of how written music sounds. This is how you can develop your inner ear.

Certain topics, such as becoming familiar with common chord progressions, including cadences and common voice leading patterns, are best carried out at the piano. This will require a little persistence, especially for those who have not previously played the piano. This practical application will result in greater knowledge retention, as more memory centres are activated. In addition to this, you will also be practising your ability to accompany on the piano, which will improve your aural harmonic perception. If you are a beginner on the piano, it is important to note that you may play the exercises *as slowly as you like*.

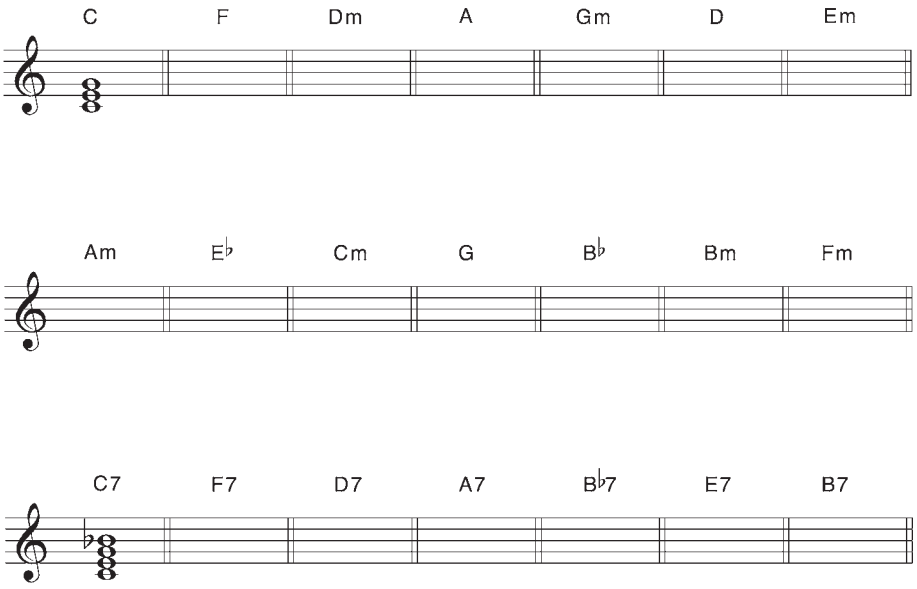
Explanation of the following symbols in the workbook: (IV) = analyse using Roman numerals. (A7) = notate your choice of chord using chord symbols (♫) = play the music example.

The symbol ∅ directly after the title of the piece indicates that the score is incomplete.

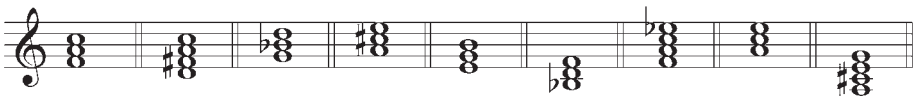
I, II, III, IV after the title of the piece indicates the movement of the piece.

Chapter 1

1 Write the following chords:



Label the following chords using chord symbols:



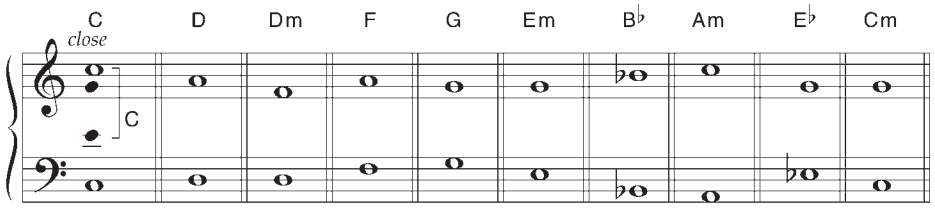
Text book: pages 10–11

Writing triads and 7th chords in four-part harmony

2 The following exercises are designed for you to practise writing triads and 7th chords in four-part harmony using close position, as described below and on p 13, eg 1.

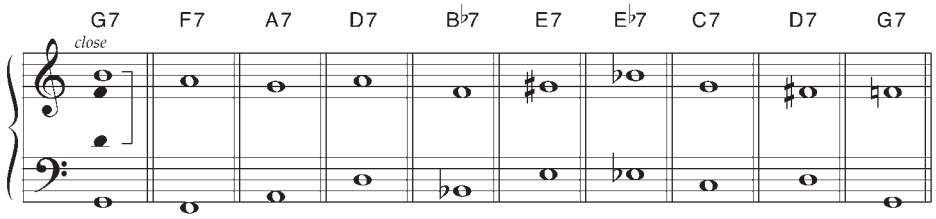
a *Triads with the root in the bass:*

- Add the two missing notes directly under the top part, so that the upper three notes form a complete triad in close position; see bar 1.



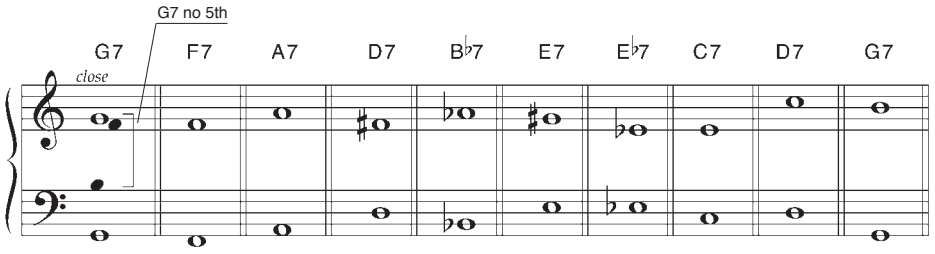
b *Seventh chords including all four notes, with the root in the bass:*

- Add the two missing notes directly under the top part, in order to form a complete 7th chord together with the bass note; see bar 1.



c *Seventh chords with the 5th omitted and the root of the chord in the bass:*

- Add the two missing notes directly under the top part, so that the upper three notes form a *dominant 7th chord with the 5th omitted*; see bar 1.

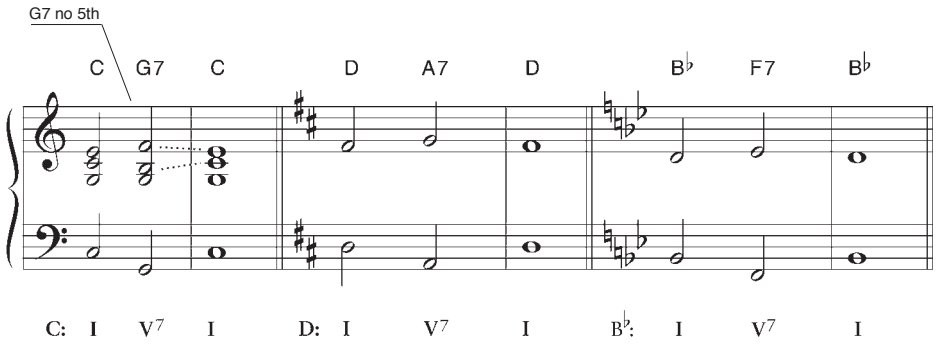


Text book: pages 12–13

3 Complete the inner voices in four-part writing using the least possible movement.

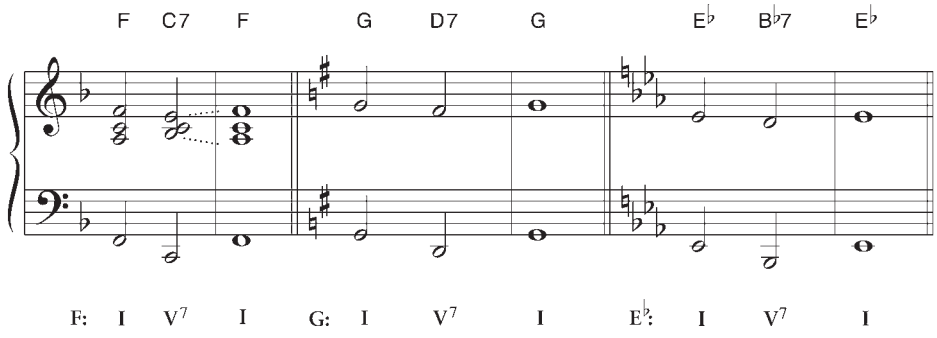
- The first example shows how the *dominant 7th chord with the 5th omitted* can be used, with the leading notes resolving as described on p 17, eg 3; see also bar 1 in eg a and b below.

a *With the tonic in 3rd position* (ie the 3rd in the melody):*



Also write these progressions in C, D and B♭ minor.

b *With the tonic in octave position (ie the tonic in the melody):*



Also write these progressions in F, G, E, A minor and A major.

Practise playing the cadences above on the piano. It would be an advantage to be able to play them without looking at the music.

* see eg 3 on p 13.

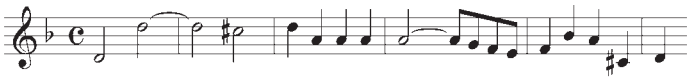
Text book: pages 14–17

Identifying the key signature

It is important to be able to identify the key signature of a particular melody in order to be able to choose the chords necessary for the harmony exercises that follow.

Hints preceding the exercises on the following pages

Method of determining the key signature of the following melody:



- Count the number of ♯ or ♭ in the key signature.

The example has one ♭ which is the key signature of F major or D minor.

- Play the melody and listen if it sounds like a major or minor key.

The melody in the example is in a minor key, so the key is D minor.

- Another method is to look at the last note of the melody, because simple melodies usually end on the tonic note.

The melody in this example ends on a D, so it is in D minor.

- Find the triad that fits in with the last note in order to check the key signature.

If the melody ends with an F chord, it is in F major, and if it ends with a Dm chord it is in D minor.

- If the 7th note is raised – which often occurs in a minor key – this will be indicated by writing a temporary accidental in the melody.

The melody contains a temporary accidental (C♯) which is the sharpened 7th degree of a D minor scale, confirming the key of D minor.

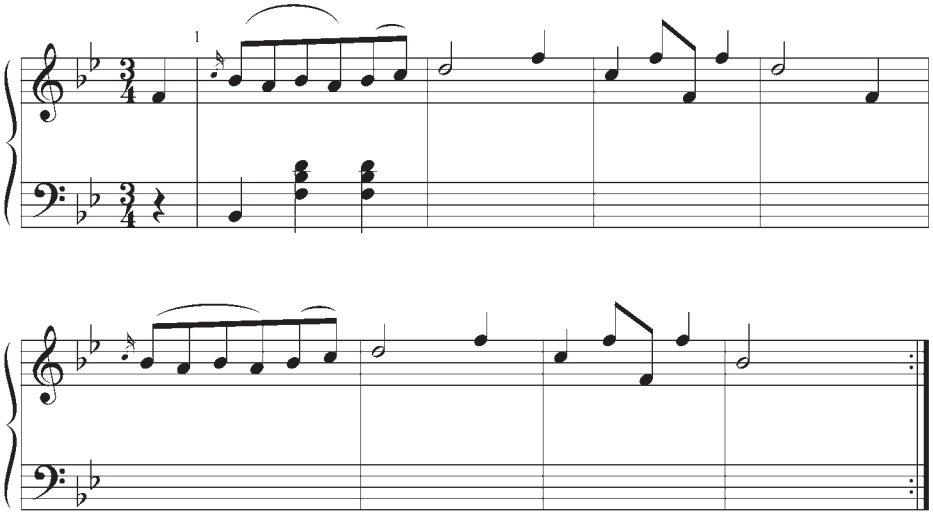
It is important to note that it is possible for a melody to end on another note apart from the tonic, and on another chord apart from the triad that is formed on the tonic note of the key.

Text book: pages 18–19

4

Harmonize the following melody and complete the given accompaniment for piano.

- Restrict your choice of chords to I and V7 in root position (p 13, eg 3).
- Label all the nonharmonic notes that occur in the piece using the standard abbreviation 'p' (passing note) or 'n' (neighbour note); see p 21.



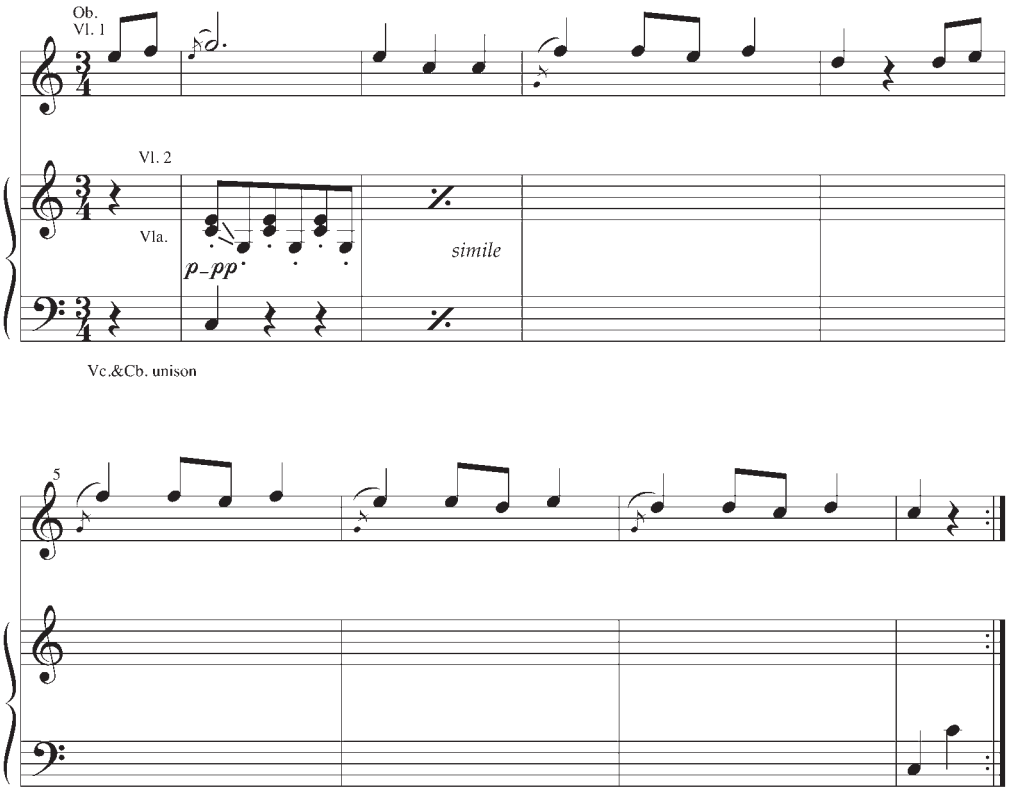
Schubert: 'Zwölf Deutsche Tänze', No 5 (Original: D major)

5

Harmonize the melody on the following page and complete the accompaniment for string orchestra – using arpeggiated chords and including a tremolo in the instrumentation of the vl. 2 and vla.

- When repeating a bar you can use the repeat sign shown in b 2.
- Restrict your choice of chords to I and V7 in root position.
- Label all the nonharmonic notes that occur in the piece using 'p' or 'n'.

Text book: pages 14–21



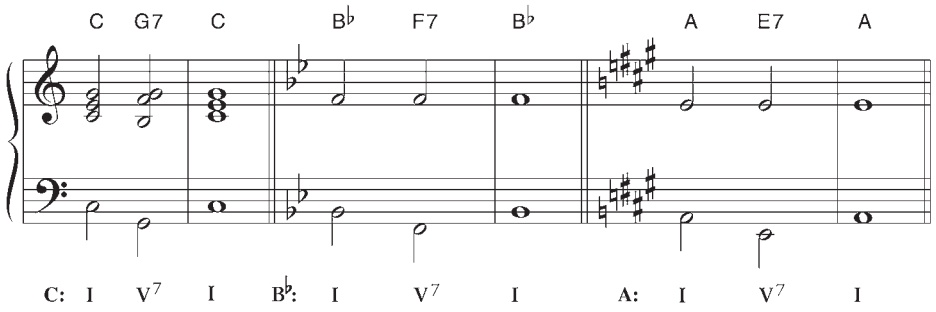
Haydn: Symphony No 97, III Trio

6

Complete in four-part writing using the least possible movement.

- In the chord positions of I–V7–I in the exercises below, the note in the upper voice will remain stationary and function like a pedal point*. Use the *dominant 7th with the 5th omitted* as you did in the previous exercises.

With the tonic in 5th position (ie the 5rd in the melody):



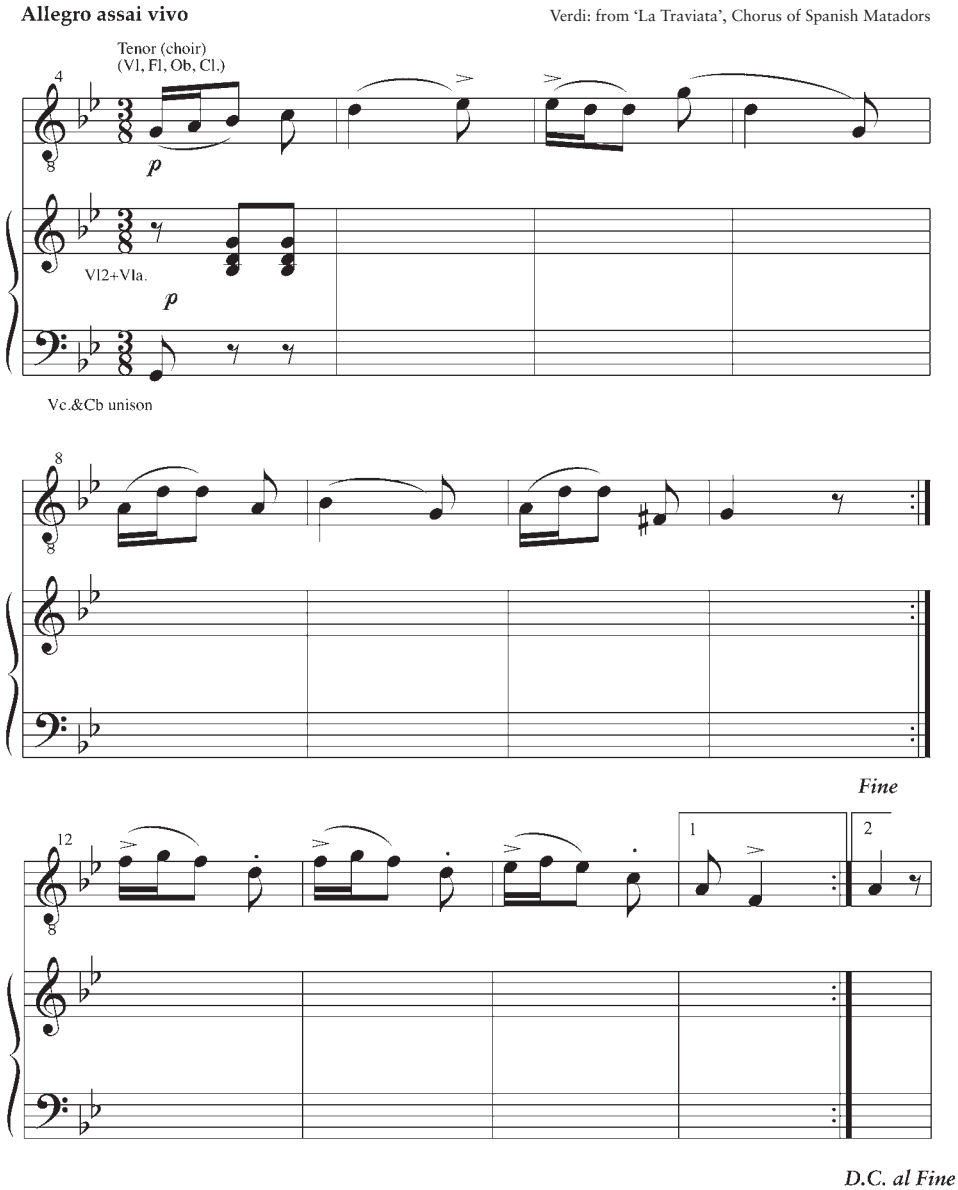
Also write these progressions in C, B and A minor!

* a note that is held while the chords change.

Text book: pages 14–21

7 Harmonize the following melody which consists of an A- and B-section, where *the B-section is in the relative key*. Write a waltz accompaniment for symphony orchestra.

- A section (b 4-11): Start on I in the position of the octave (exercise 3b, p 304)*.
- B section (b 12 to the end): Start on I in the position of the fifth (exercise 6, p 307).



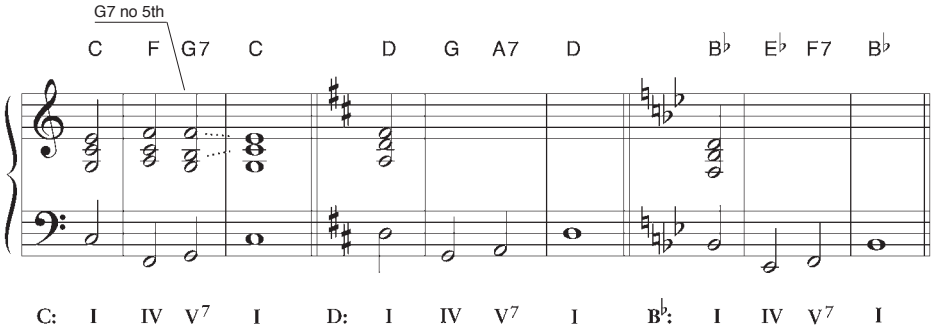
* Verdi uses the dominant without the 7th in the original (this is replaced by the 5th in the voice leading exercise which you completed on p 304).

Text book: pages 14–21

Authentic cadence – voicing

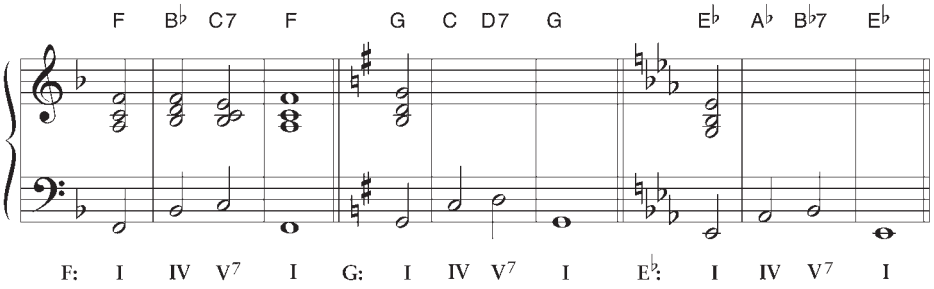
8 Write a chordal background for each progression below by completing the authentic cadences using voice leading with the least possible movement.
Use the first example as a model and follow the voice leading of V7–I as described in exercise 3 ie using a dominant 7th chord with *the 5th omitted*.

a *With the tonic in 3rd position (ie the 3rd in the melody):*



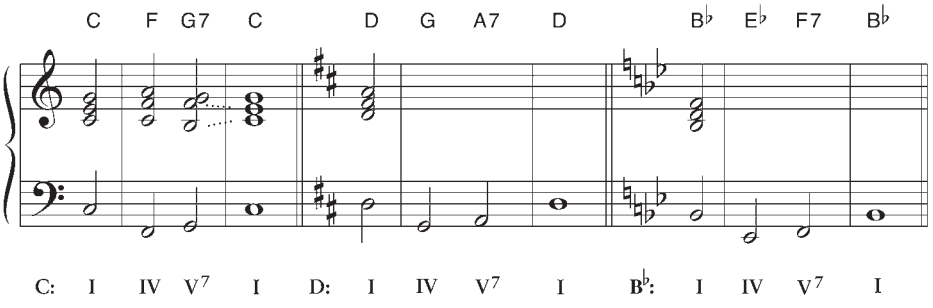
Also write these progressions in C, D and B minor!

b *With the tonic in octave position (ie the tonic in the melody):*



Also write these progressions in F, G, E, A minor and A major!

c *With the tonic in 5th position (ie the 5rd in the melody):*



Also write these progressions in C, D and B minor!

Practise playing the cadences above on the piano. It would be an advantage to be able to play them *without* looking at the music. You can further develop this skill by playing them in all keys.

Text book: pages 14–21

9

Analyse the harmony of the following music examples. Label each new chord using Roman numerals – but not the bass notes, where applicable.

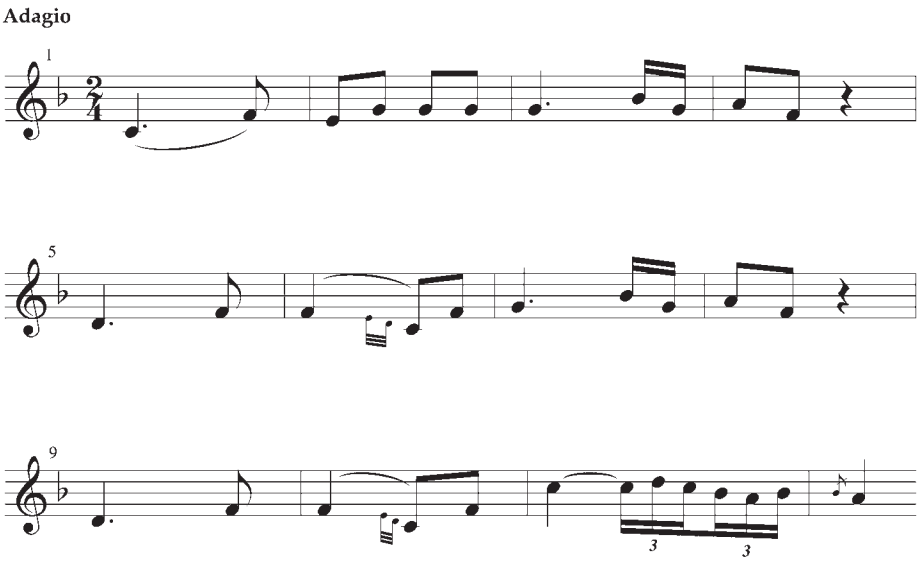
Schubert: Minuet, No 8, Trio (b 1-8), 'Zwanzig Menuette' (D41)
Schubert: 'Zwei Ländler', No 2 (D-V 679)
Haydn: Piano sonatina in F major, Scherzo from 'Sechs Sonatinen' (b 1-8).

10

Harmonize the following melodies. Notate your choice of chords using chord symbols (A7)* above the staff, and Roman numerals (IV)* below.

- Play the melody and chords, or sing the melody to your own accompaniment. (♫)*
- Use I, IV and V^7 with the root of each chord in the bass**.

a



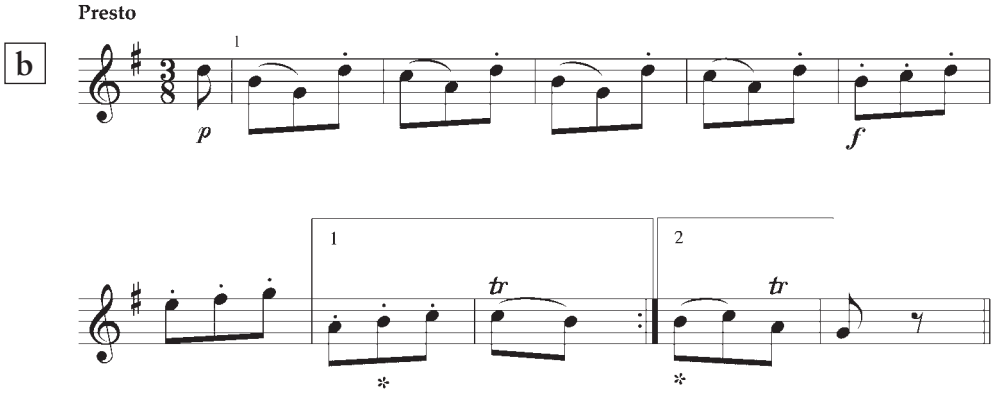
Haydn: Symphony No 60, V

* Explanation of the following symbols in the workbook: (IV) = analyse using Roman numerals (A7) = notate your choice of chord using chord symbols (♫) = play the music example.

** In the original score, Haydn uses IV with the 5th in the bass, which functions as a pedal point (a note that is held while the chords change). The last dominant 7th chord has the 3rd in the bass.

Text book: pages 14–21

Harmonizing I, IV and V



Mozart: Divertimento No 14 (K. 270), Presto
(Original: B♭ major)

Hints preceding the exercises on the following pages

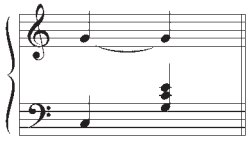
Earlier exercises have included *unaccented* nonharmonic notes in the melody, which usually do not cause problems in finding suitable chords. Accented nonharmonic notes require more careful treatment. It may be useful to read pages 20-21 under the heading 'Accented nonharmonic notes' before beginning the exercises.

Method:

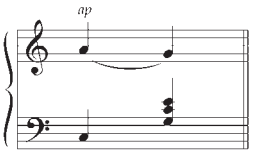
Study the melody and identify each appoggiatura and suspension. These are recognisable because – apart from being accented – they form a stepwise descending (sometimes ascending) motion to the note of resolution.

As the appoggiatura/suspension is a decoration, and the note of resolution/target note is a note of the chord, you may disregard the appoggiatura/suspension in the harmonization. In the following melodic figure:

think in this way:



and play/write in this way:

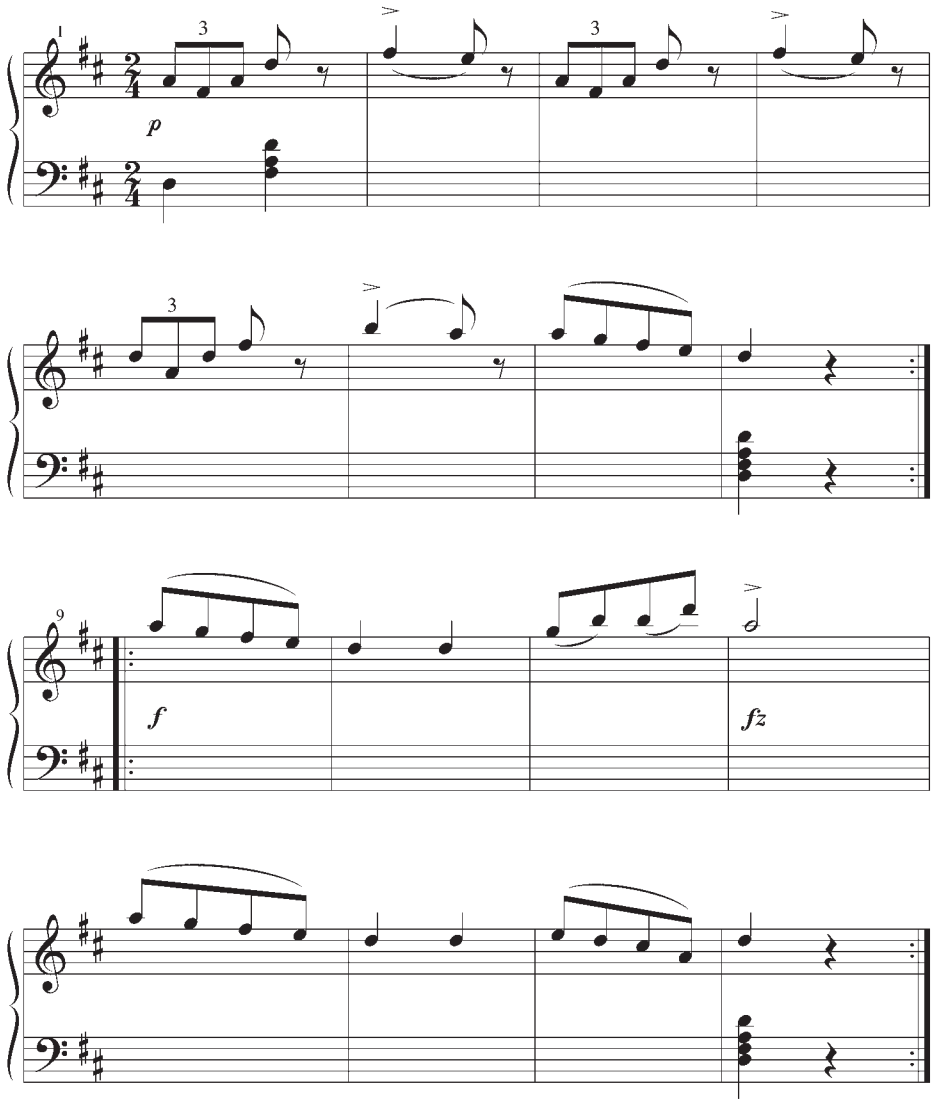


* Mozart uses G/D as a decoration of the primary chord in connection with the note B in his original score.

Text book: pages 14–21

11 Harmonize the following melody and complete the given accompaniment for piano. Bars 2, 4 and 6 contain accented nonharmonic notes as discussed on the preceding page.

- Utilise the voicings you practise in exercise 8.*
- Use I, IV and V^7.
- Label all nonharmonic notes using abbreviations; see p 21.



Schubert: Ecossaise from 'Acht Ecossaisen' (Deutsch-Verz. 977)
(Original: D♭ major)

* Schubert varies bars 9-14 with I in 3rd position (eg 8a) – in order to return to octave position (8b) in the last two bars.

Text book: pages 14–21

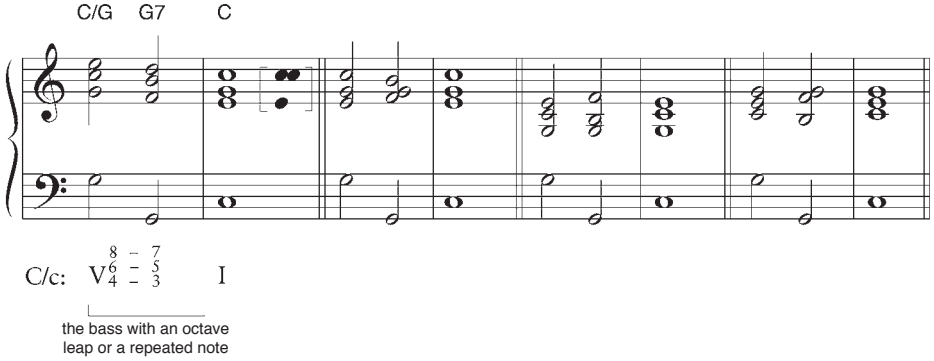
Cadences in major and minor

12 Play the cadential six-four and the cadential suspension below on the piano in all major keys up to 3 sharps and 3 flats (in a minor key: 2 sharps and 4 flats). Increase the number of sharps and flats later, so that you will be able to master all keys.

- All the positions are notated below. *Initially practise/write only the 1st and 2nd cadential patterns in a and b.*

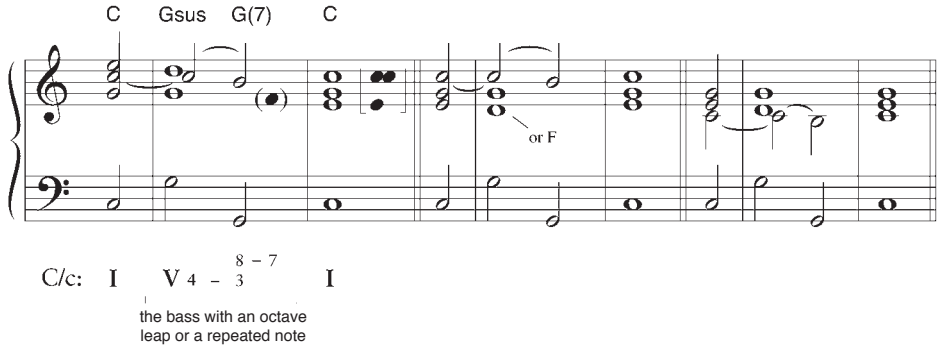
a *The cadential six-four*:*

Also practise these progressions in C minor.



b *The cadential suspension*:*

Also practise these progressions in C minor.



* see also p 17, eg 4 and 5.

Text book: pages 22–25

13

Complete the excerpts below in 4-part harmony using a final cadence, with the voice leading of V^{4-3} and V^{6-5}_{4-3} as shown in exercise 12 on the preceding page.

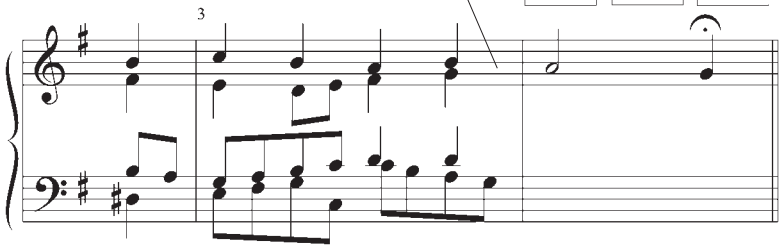
- Notate your choice using chord symbols *in* the boxes and Roman numerals *below* the staff. Note that D^{4-3} and V^{6-5}_{4-3} in the *example* is regarded as two chords (requiring two boxes).
- Choose the type of cadence you prefer if several alternatives are possible.

A7 IV

Mark with a tie if the note of preparation has been used. This applies to all the examples.

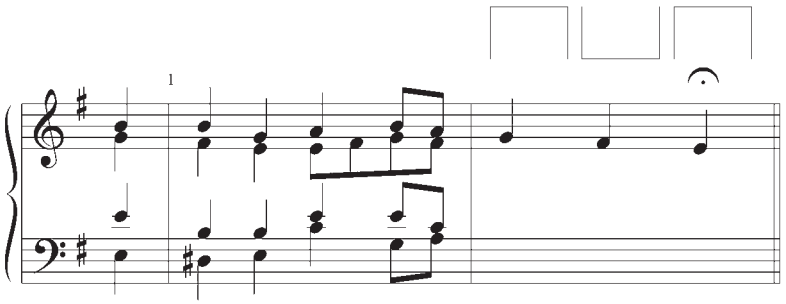
Note that the example ends in G major!

a



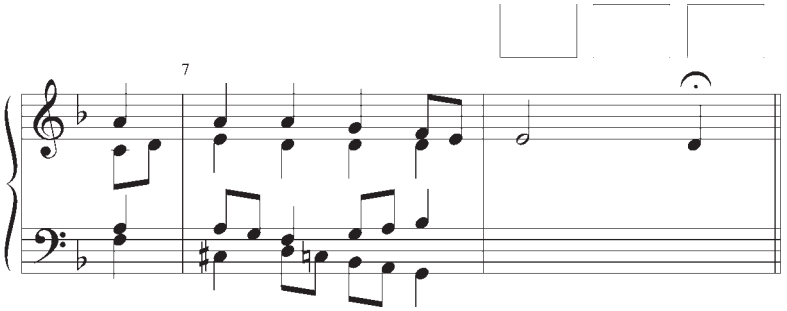
J. S. Bach: Christmas Oratorio, No 12 Chorale

b



J. S. Bach: 'Vater unser im Himmelreich', BWV 102
(Original: C minor)

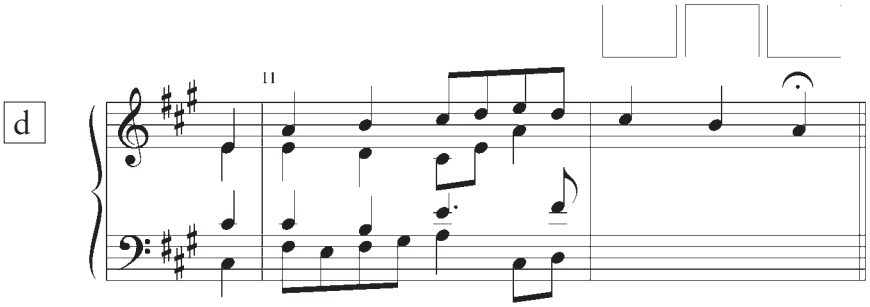
c



J. S. Bach: Cantata No 18
(Original: C minor)

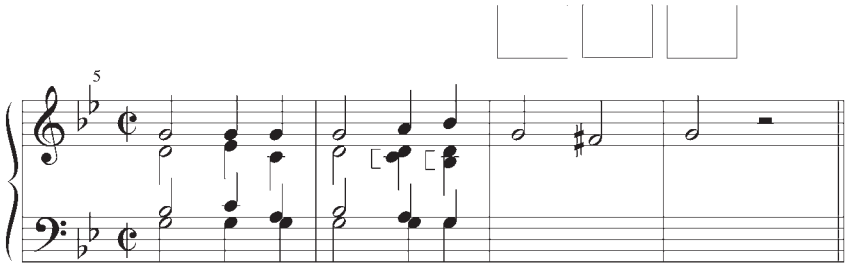
Text book: pages 22–25

d



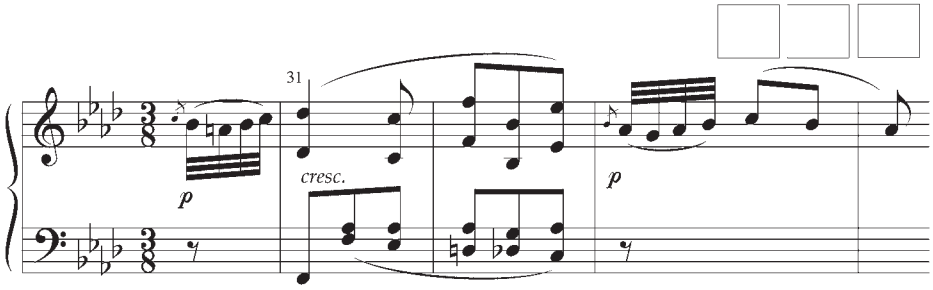
J. S. Bach: St. John's Passion, No 15 Chorale

e



Schubert: String Quartet No 14, II

f



Beethoven: Piano sonata, op 26, I

14 Analyse the harmony of the following music examples – but not the bass notes, where applicable.

Schubert: Minuet, No 5 (b 1-16), 'Zwanzig Menuette' (D41)
Schubert: 'Siebzehn Ländler', No 3 and 16 (Opus 18, D 145)

Text book: pages 22–25

15 Find suitable cadences in the music extracts below.

- Use from the previous exercise:

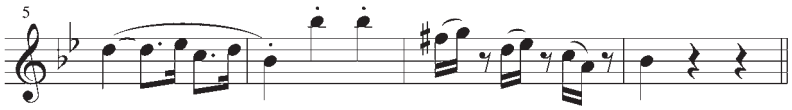
	$V\frac{6-5}{4-3}$ –I
Also use:	IV–V^7–I
	I–V^7–I

The latter is used when $V\frac{6-5}{4-3}$ –I *cannot be used, because the cadence is preceded by* V^7*;* see p 25, eg 4.

- Note that the melody in the cadences also contains nonharmonic notes (appoggiatura), which is resolved by ascending or descending to a note of the chord. Identify the nonharmonic notes, using standard abbreviations.

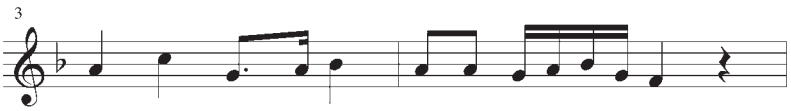
A7 IV

a



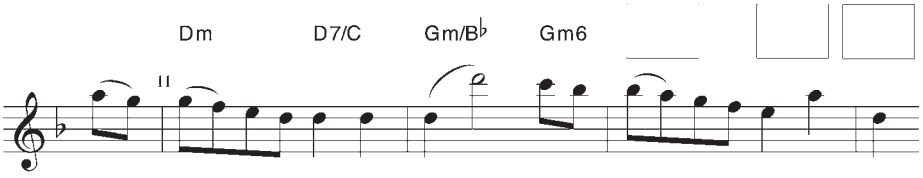
Haydn: Piano sonata No 5
(Original: C major)

b



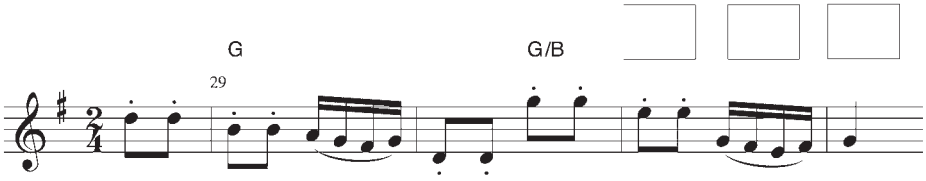
Schubert: Wiegenlied, op 98, No 2
(Original: G major)

c



Mozart: Piano concerto No 20, III

d



Haydn: Symphony No 88, IV

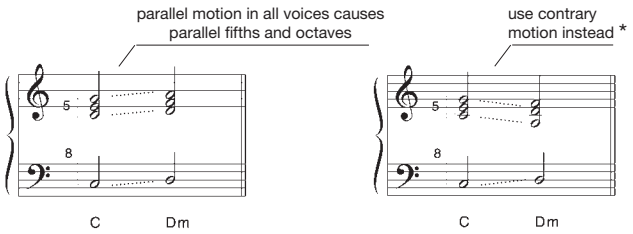
Text book: pages 22–25

Chapter 2

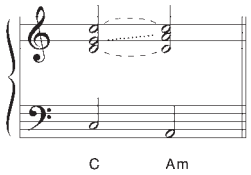
1 Complete the four-part chord progressions below with the 'least possible movement', see p 12-13.

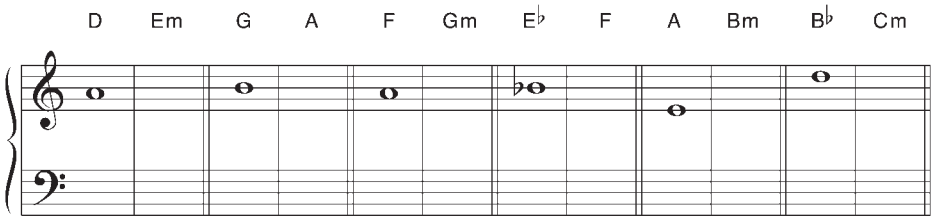
Hints:

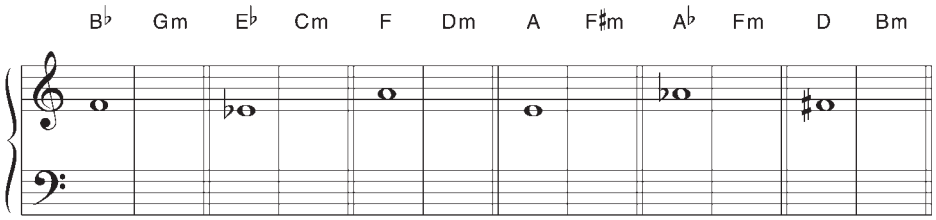
When working on the voice leading of chord I followed by II, and other chord progressions which form ascending seconds, it is important to make sure that the three upper voices move in contrary motion compared with the bass part. This is to avoid the occurrence of consecutive fifths and octaves (see 'Parallel octaves and unisons' on p 184, and 'Parallel fifths' on p 185).



When working on the voice leading of chords a third apart, for example I–VI or IV–II, keep the notes that are in common in the same part, while the other notes move to the closest note of the chord:







* an exception is in the deceptive cadence (V–VI) when the 7th degree of the scale is in the melody, see p 80.

Text book: pages 28–33

2 Practise playing the chord progressions below on the piano in all major keys up to 3 sharps and 3 flats. Increase the number of sharps and flats later, so that you will be able to master all the major keys.
Voicings for turn-around can be found on p 37, eg 2.

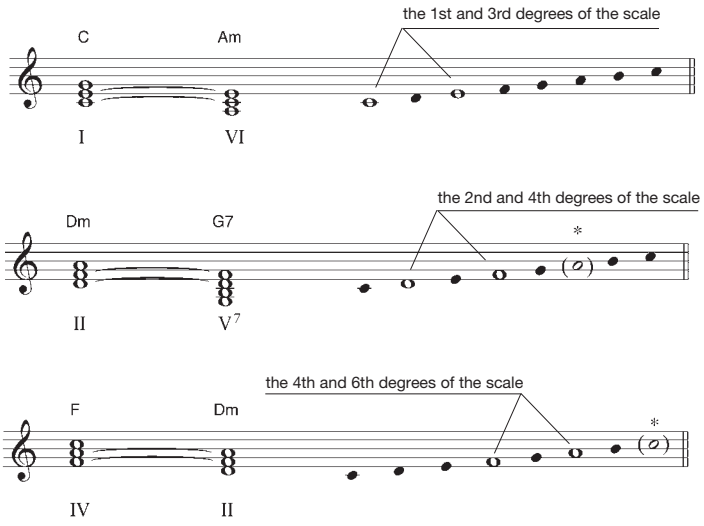
I – VI – IV – V^7 – I

I – VI – II – V^7 – I (alternatively, II^6 can be used, see p 331, eg b)

Also practice playing the chord progressions starting from the tonic chord with the third/fifth in the melody.

Hints preceding the exercises on the following pages

The notes which I, IV and V7 have in common with other chords provide the basis for harmonic variation. The melodic movement above these common notes – which can be decorated by passing notes, neighbour notes, appoggiatura etc – provides the possibility to vary the harmony:



For an example of how to use these substitute chords, see p 31, eg 2.

* Melodic movement including the notes in brackets also works well. Chords IV and II often have added notes, especially at a cadence, for example in C major: F6, Fmaj7 or Dm7, see p 74.

Text book: pages 28–33

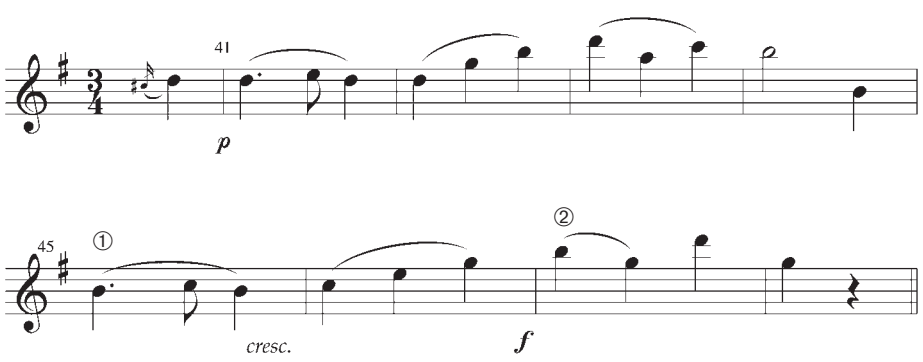
Secondary triads in major keys – II and VI

3 Harmonize the music examples a-b. Use the primary triads, as well as suitable secondary triads.

- Read 'Hints' on the preceding page, as well as the information on secondary triads in the textbook (p 28).
- You can work in two alternative ways to prepare for the exercises:
  1. First do some preparatory work such as the technical exercises I a-b and II a-c starting on p 321.
  2. Start harmonizing the melodies using the tips on the following page as necessary, which refer to the numbers (①) in the examples.

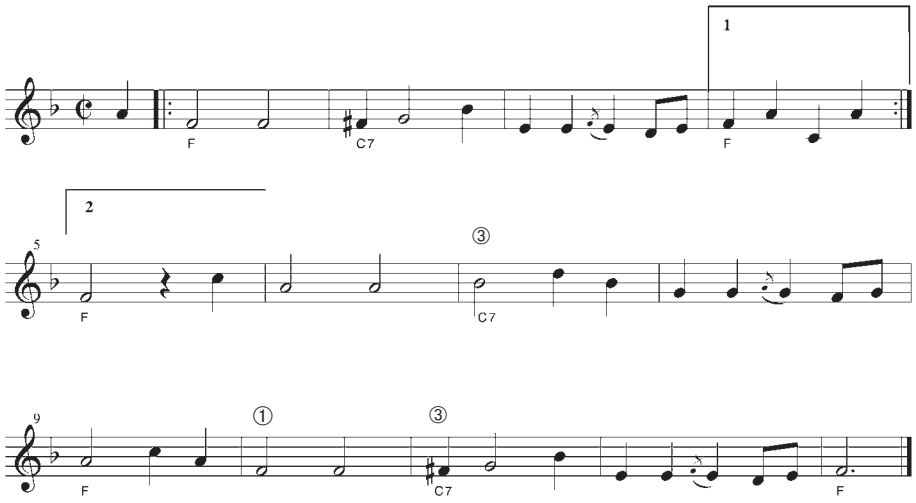
A7 IV

a



Schubert: from 'Letzte Walzer', Op. posth. 127

b (The simple 'folk' harmonization by Gluck has been notated under each stave as a reference.)



Gluck: Musette (from Armide)

IF YOU NEED HELP

… with sections marked with numbers ① – ③, see next page:

Text book: pages 28–33

① For the 1st or 3rd degrees of the scale, see 'Hints' on p 318.

② $V^{6\text{-}5}_{4\text{-}3}$ cadence.

③ Technical exercise Ia-b (especially b 'Expansion of V^7')* together with II a-c (p 321-322).

> ***It is important to remember that the technical exercises are of a general nature. This means that some examples are not directly applicable to the actual melodies or to every situation, and it may be necessary to make adjustments to suit your choice of chords.***

4

Indicate each new chord using Roman numerals (you do not need to indicate if the bass is not the root of the chord, we will deal with this in a later chapter) and make a fundamental bass analysis by notating the root of each chord and the intervallic relations on a separate stave, in the way described on p 33, eg 2.

Mozart: Piano sonata in D major (KV 284), III, b 1-4
Mozart: Piano sonata (KV 545), II (omit the chord in the 3rd bar, 3rd beat**)
Mozart: Eine kleine Nachtmusik, Minuet, Trio, b 1-8

* In the last bars of melody (b), it is better to put the third in the bass when using II to harmonize the melodic movement F♯-G.
** for analyse see p 135 eg 2.

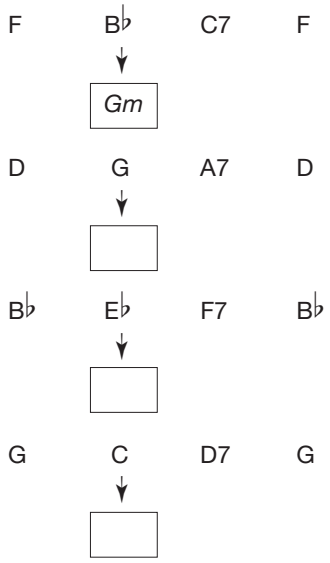
Text book: pages 28–33

Technical exercises: Substitute chords

I

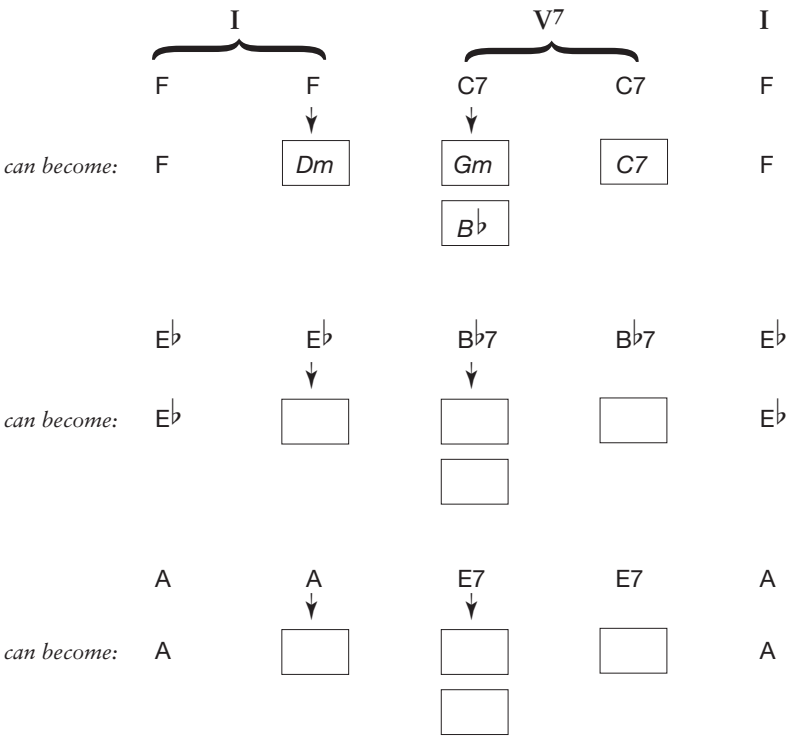
Which alternative chord can you use instead of IV in these chord progressions? See 'Substitute chords' on p 28? See also the first chord progression.

a



b

How can I and V7 be varied in the chord progressions below, so that the harmonic rhythm increases? See 'Substitute chords' on p 28 and 'Expansion of V7 to II–V7' on p 30. See also the first example.



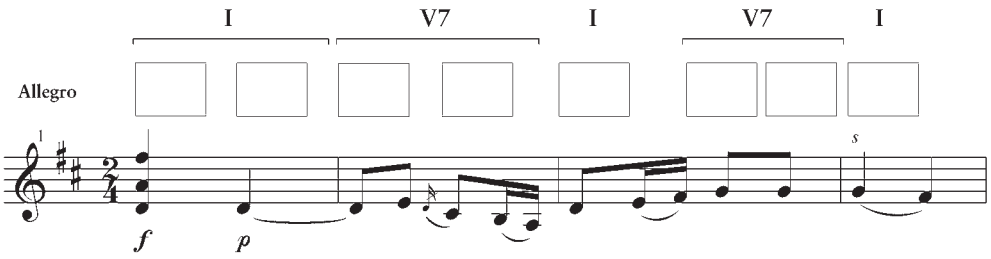
Text book: pages 28–33

II Harmonize music example a-c.

A7 IV

a

- Use the technique to vary chords I and V7 which you practiced in exercise Ib on p 321 and which is shown in eg 2 on p 31.

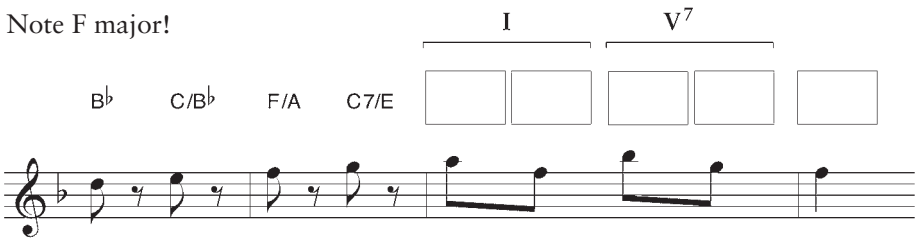


Haydn: Sinfonia No. 72, I *

b

- Use a turn-around to give weight at the end of a phrase:

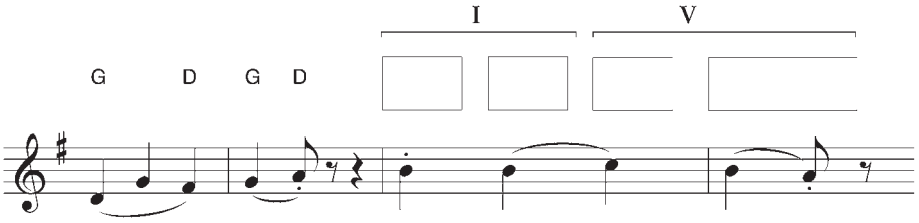
Note F major!



Haydn: Sinfonia No. 78, III

- A shortened turn-around preceding the half cadence:

c



Haydn: Sinfonia No. 75, II

* In bar 3 of the original score, Haydn uses added notes from the subdominant related chords (II^6_5 and II^7), as well as chord I with the third in the bass.

Text book: pages 28–33

Secondary dominant chords in a major key

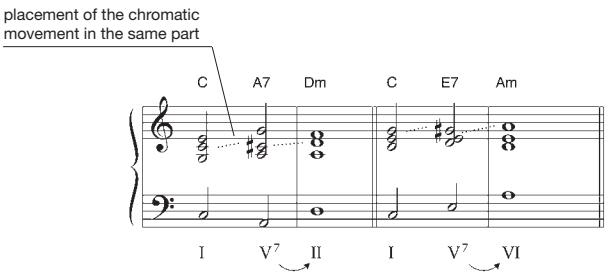
5 Harmonize the chord progressions below in four-part harmony with the chords in root position. Place the chromatic line in the same part.

Hints

The resolution of the secondary dominant chords occurs in the same way as for the dominant chord. There are, however, special voice leading problems that often occur in the movement *towards* a secondary dominant chord. It is not unusual for this to occur by introducing an ascending or descending third; for example:

C – A7 – Dm (I – V7/II – II)
C – E7 – Am (I – V7/VI – VI)

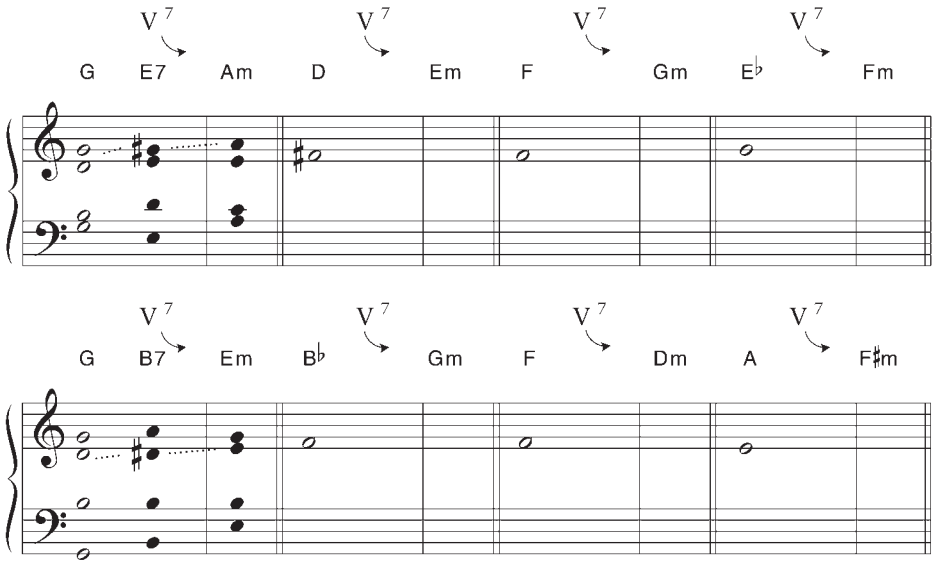
The chromatic notes that occur between the first two chords are placed in the same voice, which fits in with the voice leading principles of 'the least possible movement'. This avoids what is called 'cross relations' (see p 183).



It is not unusual for the seventh to enter by an ascending leap and then to descend, ie the stepwise motion occurs indirectly, as shown in the first example below.

Suggestions for completing these exercises:

- decide which secondary dominant chord you will use
- write the chromatic movement in the actual part
- write the V7 with its resolution, guided by the chromatic note and the voice leading principles you practiced on p 304. See also the introductory eg below.



Text book: pages 34–35

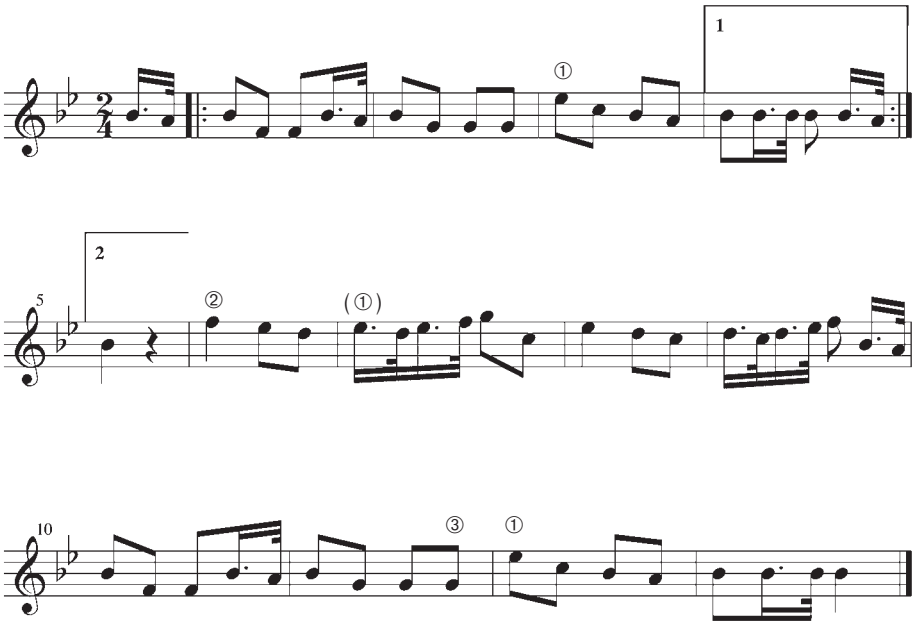
6

Harmonize melodies a-b below and on the next page, using the secondary dominants, as well as other chords.

- Remember that the aim of the harmonization exercises is not to use every secondary dominant in each melody, 2 or 3 would be sufficient.
- Read 'Hints' on p 327-328, as well as the information on secondary dominants in the textbook.
- You can work in two alternative ways to prepare for the exercises:
    1. First do some preparatory work such as the technical exercises III a-d on p 327-329.
    2. Start harmonizing the melodies using the tips below as necessary, which refer to the numbers (①) in the examples.

A7 IV

a



C. M. Bellman: Epistle No. 67

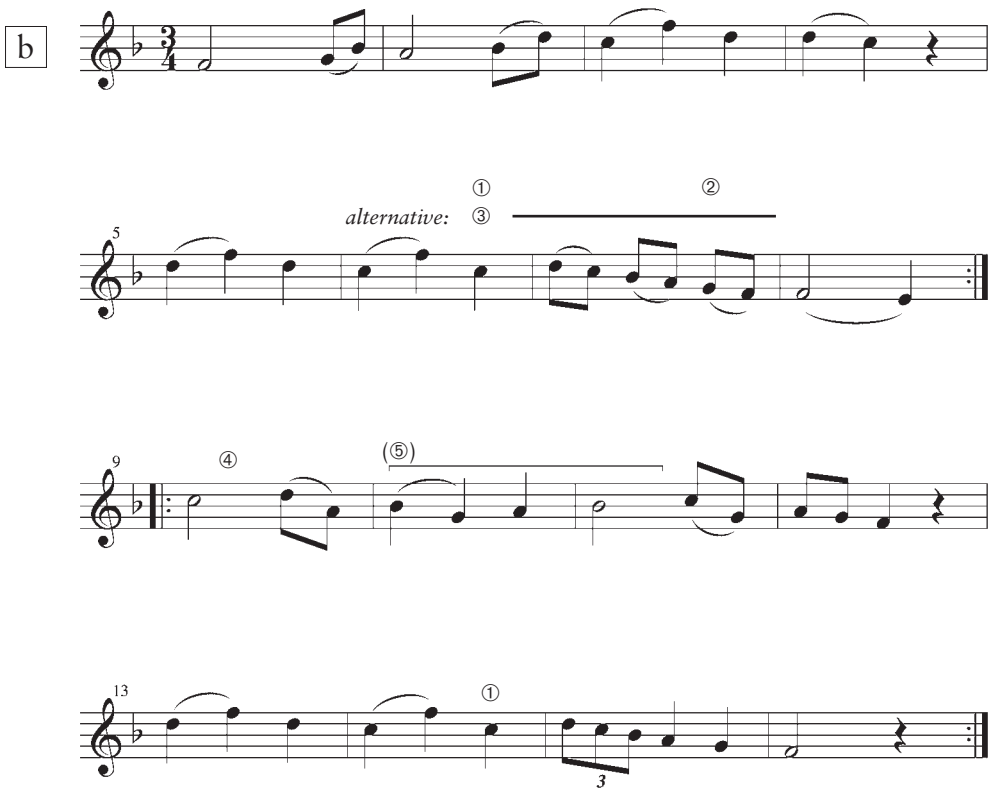
① The 2nd and 4th degrees of the scale (p 318, 'Expansion of V7').

② The 3rd and 5th degrees of the scale; see 'Hints' as well as technical exercise IIIc and d on p 329. Note that the technique in III c-d is similar, but not directly applicable regarding the choice of secondary dominant.

③ Preparatory secondary dominant (provided that the chord you choose for (①) is correct).

Text book: pages 34–35

Harmonization using secondary dominant chords



Heinrich Koch: Minuet

IF YOU NEED HELP

… with sections marked with numbers ① – ⑤:

> ***Remember that the exercises below do not provide the specific answers, but show the general harmonization technique.***

① Technical exercise IIIa (p 327).

② Technical exercise IIIb (p 328). Harmonize b 8 to imply a half close, using $V^{6\text{-}5}_{4\text{-}3}$.

③ Technical exercise IIId (p 329). Same conditions as ②.

④ For the 3rd and 5th degrees of the scale, see 'Hints' on p 328 (the choice of chord is determined by the next bar).

⑤ For the 2nd and 4th degrees of the scale, see 'Hints' on p 318 (also Ib on p 321).

Text book: pages 34–35

7 Analyse the harmony of the following music examples. Write the Roman numerals for each new chord – not the bass notes where applicable. Note that C/G – G = $V^{6\text{-}5}_{4\text{-}3}$.

Schubert: Quintet in A major (Die Forelle), IV (b 1-20)
Mozart: Piano sonata No. 7 (Kv 309), Rondo (b 1-19)
Schubert: Ländler, No 13, 'Sechzehn Ländler' (Op 67, D 734)
Schubert: Walzer, No 3, 'Erste Walzer' (Op 9, D 365)

8 Compose melodies or pieces (for example different dance forms like a minuet or trio section in a minuet) where you use primary and secondary triads as well as secondary dominants.

Text book: pages 34–35

Technical exercises: Secondary dominant chords in a major key

Hints preceding the exercises on the following pages

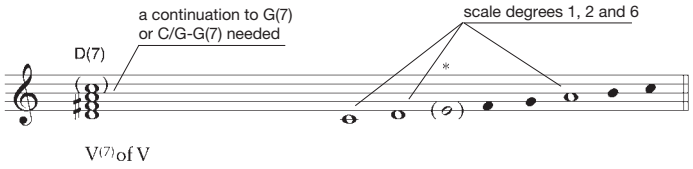
To develop a harmonization so that a quicker harmonic rhythm – and a richer as well as a more forward striving piece is obtained – secondary dominant chords can be added in the following way:

V/IV

V/IV is the easiest secondary dominant chord to use because it is just a tonic chord that has been turned into a dominant chord, ie the tonic chord with an added minor seventh (eg C7 in C major). Each I that is followed by chord IV can be turned into V^7/IV. However the melody may not retain the seventh degree of the scale (provided that this does not function as a neighbour note).

V/V

V(7)ofV can be placed before V(7) or V^{6-5}_{4-3}, provided that it harmonizes with the notes of the melody and continues smoothly from the preceding chord. At an expansion of the harmony, V(7)ofV can completely or partly replace the greater part of the diatonic chords. Normally it constitutes important melody notes of any or several of the scale degrees below:

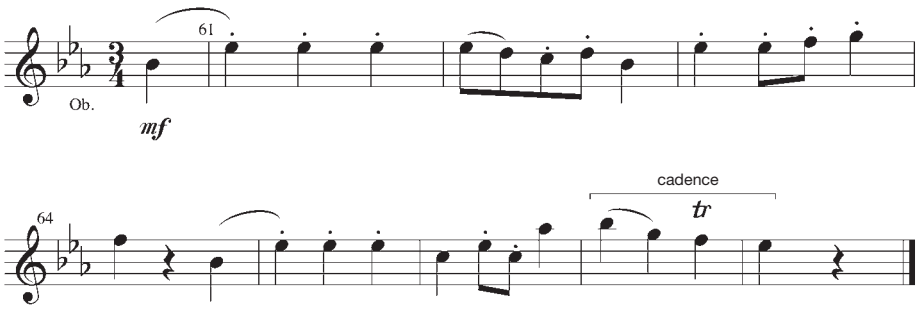


III Harmonize the following melodies.

A7 IV

a

- Schubert uses chords I, IV, V^7 as well as V^7/IV in his harmonization. Find the subdominant chord and prepare this with V^7/IV in the previous bar.



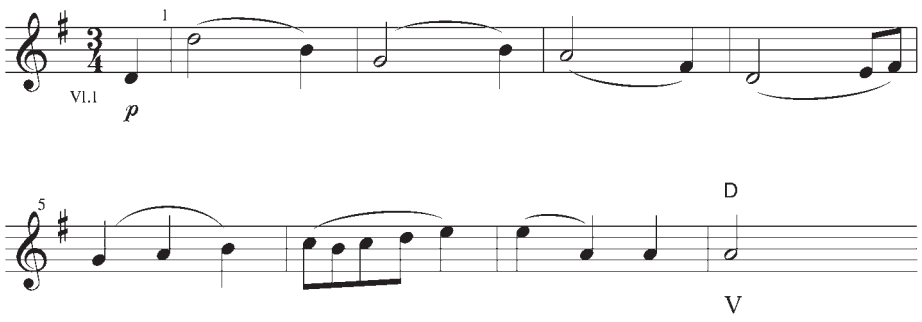
Schubert: Symphony No. 2, Minuet, Trio

* melodic movement containing the major 9th of the chord is also possible (see p 33, eg 2, b 2)

Text book: pages 34–35

b

- Here Schubert uses chords I, IV, V^7 as well as preparing V (in bar 8) and IV with secondary dominant chords.*



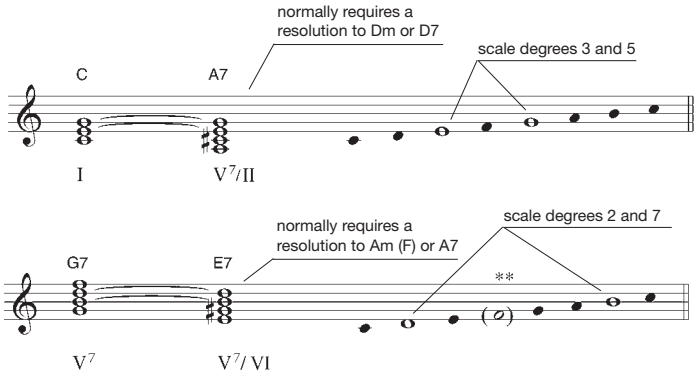
Schubert: Symphony No. 5, Minuet, Trio

Hints preceding the exercises on the following pages

The secondary dominant chords V/II and V/VI often replace certain chords. You can work out which scale degrees there are in common with the primary triads, in the same way as for the secondary triads; see below. What is different here is that the secondary dominant chord normally has an obligatory resolution because in its capacity as a dominant chord it strives to resolve to a chord that is down a fifth.

V/II and V/VI

With V/II and V/VI the possibilities to replace the tonic or dominant chords respectively is shown below:



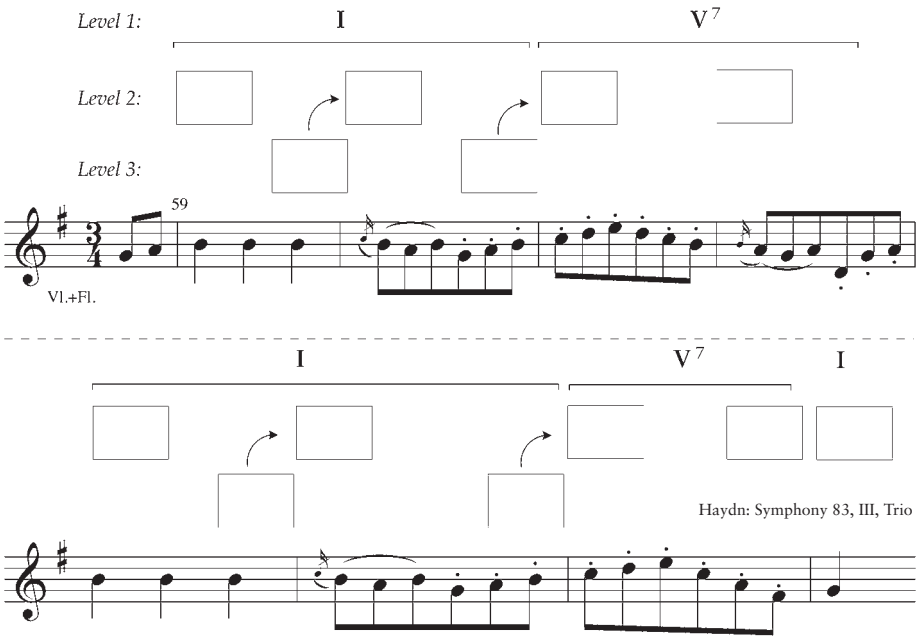
Naturally any note that occurs in a secondary dominant chord can be a melody note. However the chromatically altered notes occur mainly in the inner parts or the bass, and not in the melody.

* In the original score, alternative bass notes are used, but here the notation of the chords in root position is sufficient for the purposes of this exercise.
** the melodic movement containing the minor ninth also functions well.

Text book: pages 34–35

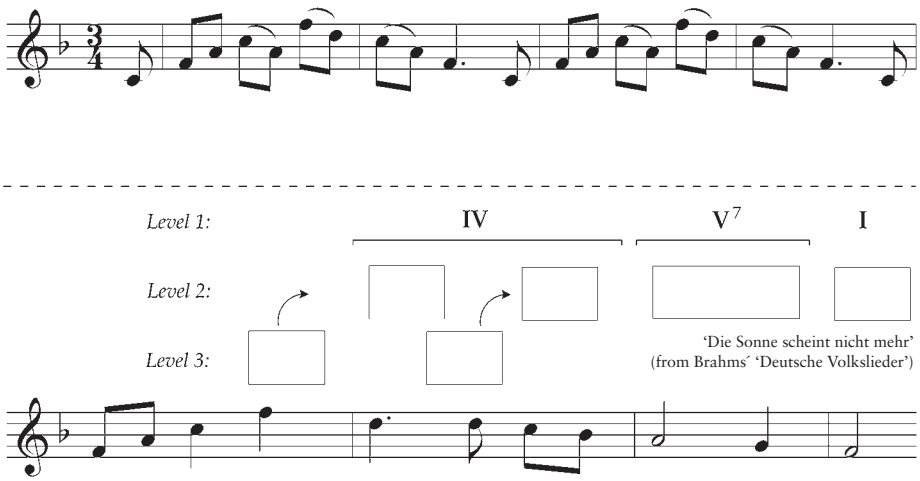
c

- Develop the harmony given in 'Level 1' (compare p 321, eg 1b), notating it in the 'Level 2' boxes using chord symbols. Increase the harmonic rhythm even further to 'Level 3' using secondary dominant chords (see 'Hints' on p 327-328).



d

- Expand IV in b 6 to two chords in 'Level 2' (compare p 321, eg 1a). Continue to prepare each chord using a secondary dominant in 'Level 3' as in the exercise above. Note that V7 in this example expands to a $V^{6\text{-}5}_{4\text{-}3}$ cadence. Also harmonize b 1-5.



'Das Feuer kann man löschen, die Liebe nicht vergessen,
da Feuer brennt so sehr, die Liebe noch viel mehr.'

Text book: pages 34–35

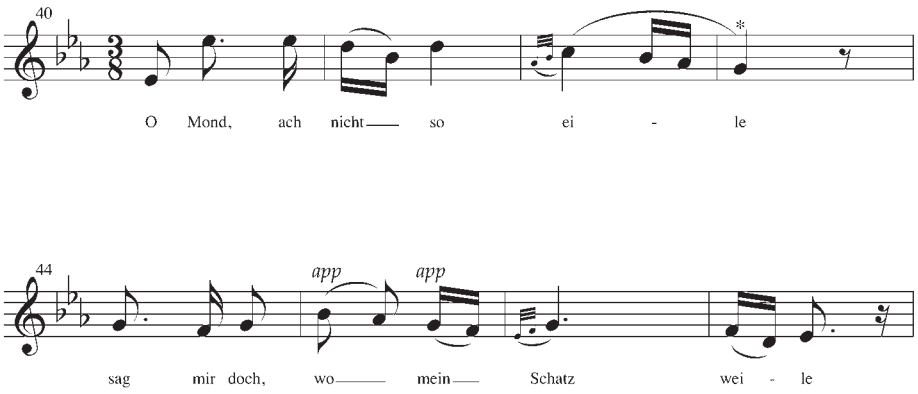
IV

Harmonize the following melody. Read 'Use of III' in the textbook regarding the harmonization of the scale degrees 8-7-6 in the melody (see p 30).

a

Dvorák: 'Song to the Moon', Rusalka, 1st act
Original: G♭

Larghetto



b

Which alternative chords can precede VI in the example below so that every chord is part of a cycle of fifths? This can either occur with III (see p 37, eg 1) or with the help of V^7/VI. See the first example:

Bm *B7*	Em – Am – D7 – G		Bm – Em – A7 – D
	Dm – Gm – C7 – F		Gm – Cm – F7 – B♭

* In the original score, Dvorak uses V/II without directly resolving to II.

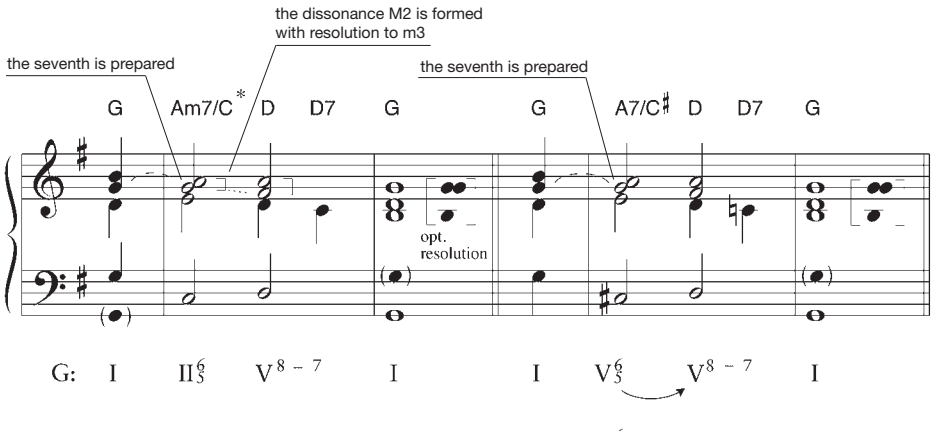
Text book: pages 34–35

Cadences in major

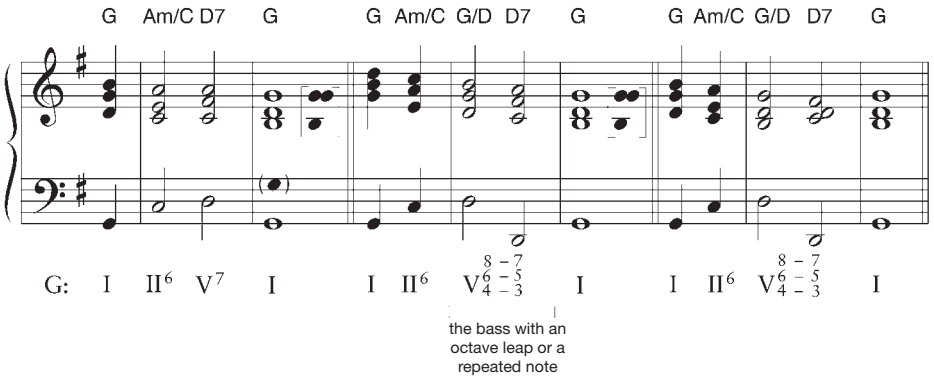
9 Practise playing the cadences below on the piano in all major keys up to 3 sharps and 3 flats. Increase the number of sharps and flats later, so that you will be able to master all the major keys.

- The positions that are most often found in connection with cadences have been notated here. It is important that you gradually practice the rest of the positions as well.

a *II7 and V7/V (both with the third in the bass):*



b *II6 followed by V or* $V^{6\text{-}5}_{4\text{-}3}$:



Note that the form of the cadence in the 2nd and 3rd examples above can also begin with Am/C on the strong beat of the bar, ie that Am/C – G/D – D7 – G in 4/4 can have the rhythm 𝅗𝅥 𝅗𝅥 𝅗𝅥 | 𝅝 and in triple time 𝅗𝅥 𝅗𝅥 𝅗𝅥 | 𝅗𝅥.

To create a strong phrase ending, it is common to finish with a descending fifth in the bass, but this means that in the first three examples, all the voices move in the same direction, see 'All parts in similar motion' on p 183.

* symbol in accordance with the method of notation using Roman numerals. Normally however it is described as the chord C6.

Text book: pages 36–39

10

Harmonize the melodies a-b below.

- Read 'Cadences in a major key' on p 38 and 'Tonicisation of V' on p 40 in the textbook (omit 'Tonicisation of IV, II, VI and III').

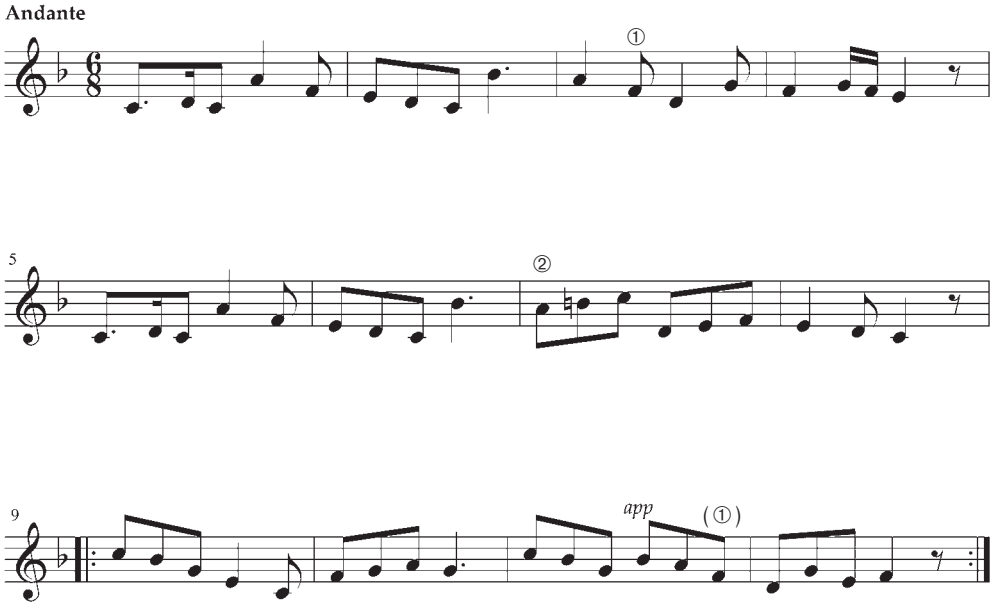
When harmonizing a melody, it is a good idea to choose the key for the end of the phrase, which will act as a guide for the cadences. This is applicable to all harmonization, but particularly in a chorale (b).

- You can work in two alternative ways, as we have done previously:
  1. First do the technical exercises V–VIII starting on p 334, as preparatory work.
  2. Harmonize the melodies, using the tips below as necessary.

A7 IV

a

(In b 1-2 and 5-6, Mozart uses one chord per bar.) Mozart



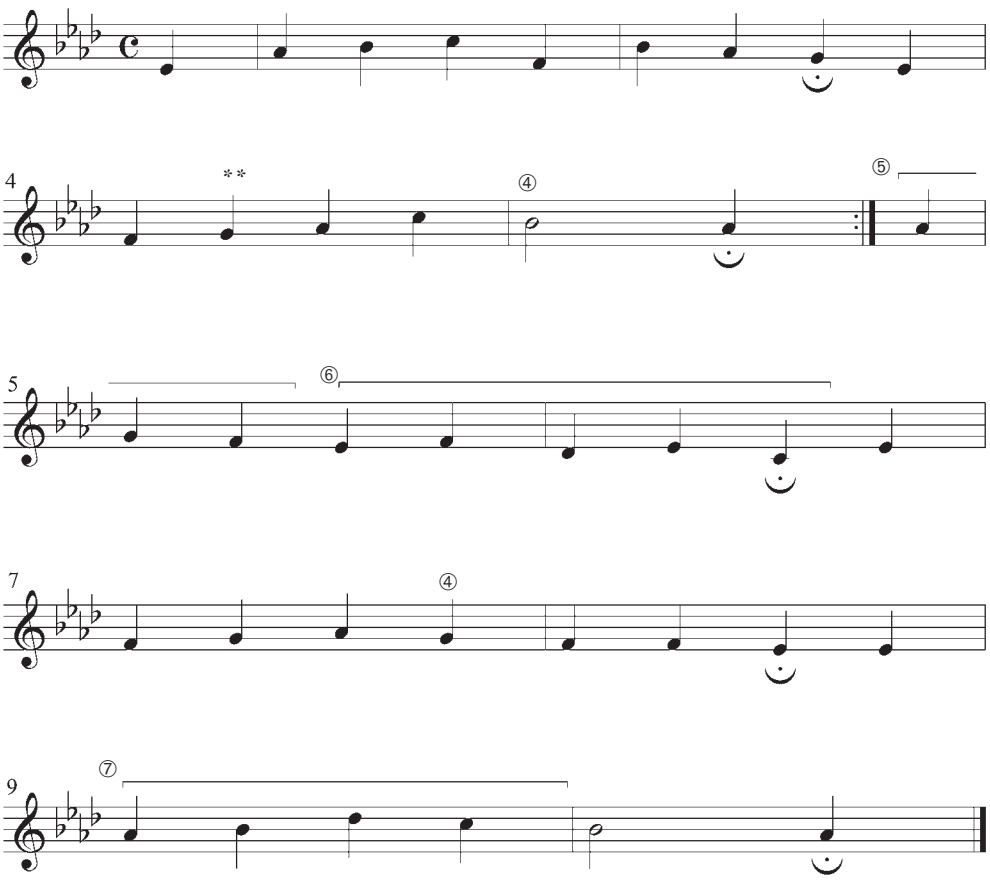
① Technical exercise V and VI, starting on p 334. (In the Classical period, these cadences were often used starting on I with the *third* in the bass.)

② Technical exercise VII and VIII a-d – especially b (without V^7/VI) and c (starting on p 338).

Text book: pages 38–41

Cadences in major (II^6, II^6_5) – Tonicisation

b Choose the cadence at the end of the phrase with a view to possible tonicisation.*



'Du Lebensbrot Herr Jesu Christ' ('Give praise and glory unto God')

④ Cadence (see p 331, also technical exercise V). Analyse bar 8 without a pivot chord.

⑤ VI often precedes or follows V. I–V followed by VI is one of two basic ways to harmonize the melody 8-7-6 (p 30). The other way is found in technical exercise IVa (p 330) – you may choose which alternative is most suitable.

⑥ Reverse the cycle of fifths from the final chord in the phrase – which must be I in this case (see p 37, eg 1 or p 330, technical exercise IVb).

⑦ Utilise the secondary triads II and VI, so you can 'save' the primary triads for the final cadence – with the exception of the note B♭.

* For a simpler exercise, harmonize the melody using two chords per bar – unless indicated otherwise – instead of the usual note-against-note chorale harmonization.

** for a more advanced harmonization, see p 55, eg 2.

Text book: pages 38–41

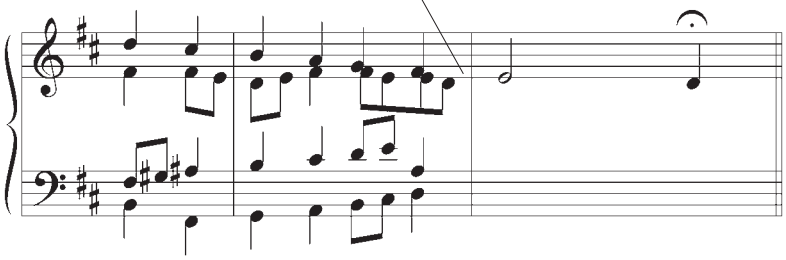
V Choose from the concluding phrases a-e below one of the cadences which you have practised in exercise 9 on p 331 (V^7/V *can* be omitted). Notate your choice in the boxes using Roman numerals and complete the given piece by adding a bass and two inner voices.

- Choose the type of cadence you prefer if several alternatives are possible.
- Note that $V\,^{6\text{-}5}_{4\text{-}3}$ in the example is regarded as two chords (two boxes), despite the fact that $^{6\text{-}5}_{4\text{-}3}$ is a decoration of one chord.

IV

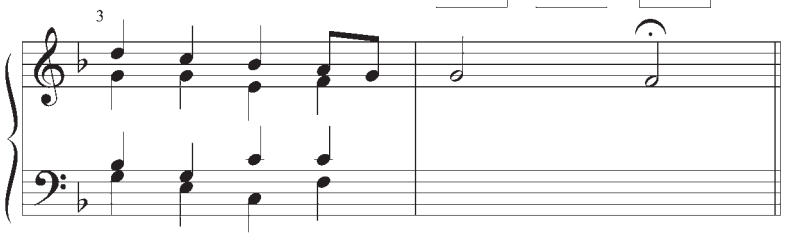
Mark with a tie if the note of preparation has been used. This applies to all the examples.

a



J. S. Bach: Cantata, No. 36, last phrase

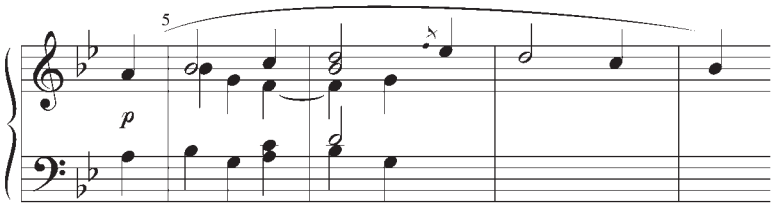
b



J. S. Bach: St. John's Passion, No. 56 Chorale
Original: A major

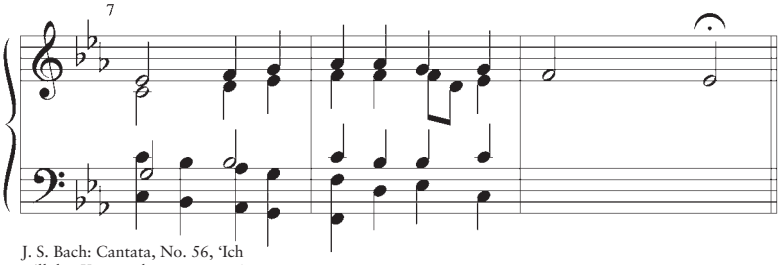
Notate both inner parts in the upper staff.

c



Beethoven: Piano sonata, Op 10 No. 2, II
Original: A flat major

d

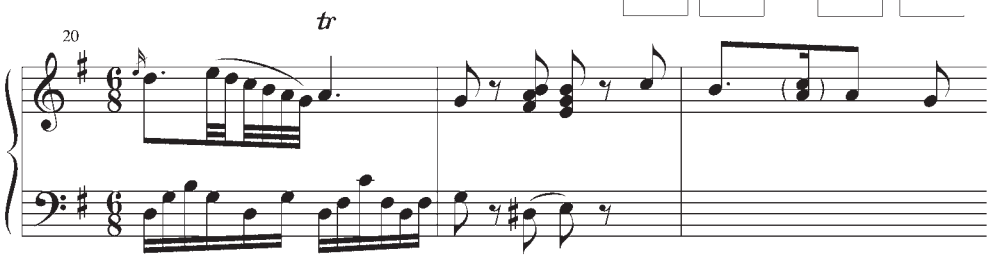


J. S. Bach: Cantata, No. 56, 'Ich will den Kreuzstab gerne tragen'

Text book: pages 38–39

Technical exercises: Cadences in major (II^6, II^6_5 and V^7/V)

e



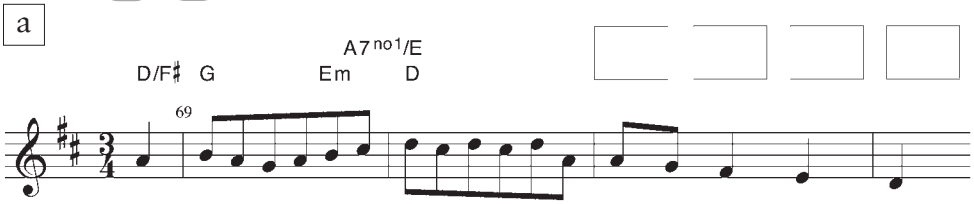
Mozart: Piano sonata No. 2, II (KV 280)
Original: A flat major

VI Write cadences using the formulae you practised in exercise 9 (p 331) as well as the technical exercise V on the preceding page.

- Note that the melody in the cadences also contains nonharmonic notes which is resolved down to a note of the chord. Identify the nonharmonic notes, using standard abbreviations (app., s. etc).

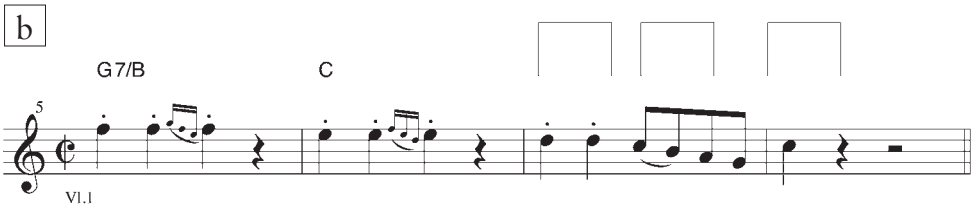
A7

a



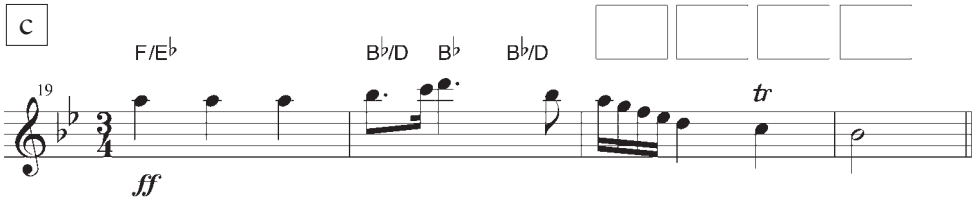
Haydn: Symphony No. 31, III

b



Haydn: Symphony No. 95, IV

c



Schubert: Zwanzig Menuette, No. 10

Text book: pages 38–39

VII Practise playing the chord progressions below on the piano in all major keys. You may begin with a cadence to establish the introductory key.*

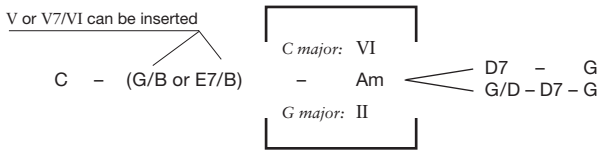
Hints

See below for common ways to modulate by the tonicisation of V, notated in C major. The pivot chords are marked with a frame.

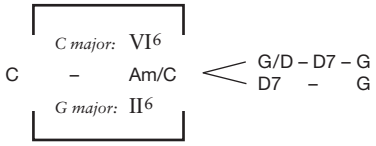
① ***direct (I is later perceived as IV in the dominant key)***

C < G/D – D7 – G
D7 – G

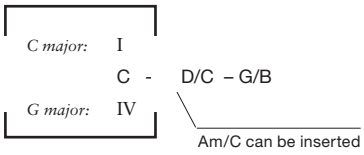
② ***via VI which pivots to II in the dominant key***



③ ***the fifth in I moves to the sixth, creating VI6 which pivots to II6 in the dominant key***



④ ***the tonic note remains when V/V enters, and creates a V7 in the third inversion which resolves to I6 in the dominant key.***



More alternatives are discussed in the section ‘Mixture in a major key’ on p 84.

* A prerequisite is to study the section on bass parts in Chapter 3.

Text book: pages 40–41

Technical exercises: Tonicisation of V in a major key

VIII

Harmonize music examples a-d on the following pages in order to practice the tonicisation of V according to the 'modulation types' on the preceding page.

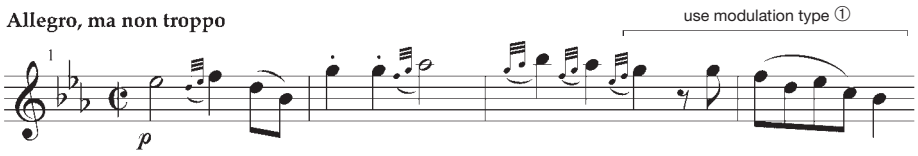
- Write the pivot chord twice in the analysis on two levels in the way shown on p 41, eg 2 and 3.

IV

a

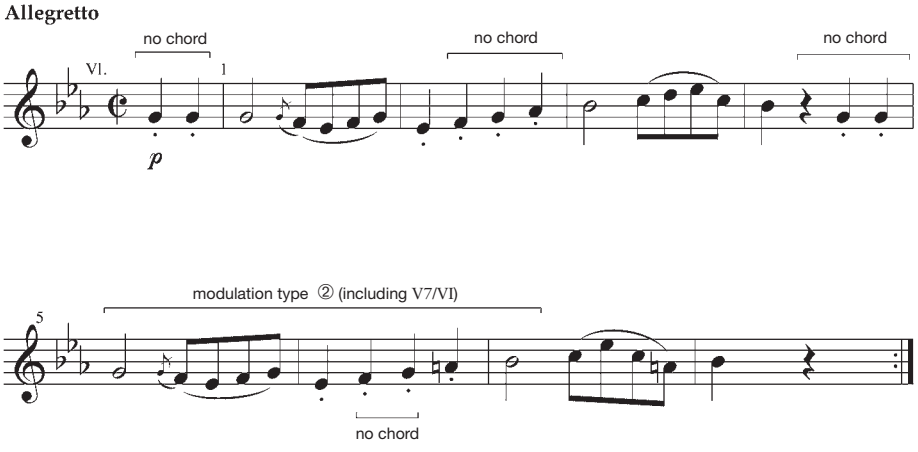
- A shorter tonicisation like the first example is usually analysed using Roman numerals, without a pivot chord or changing key.

Haydn: Sinfonia No. 76, IV



b

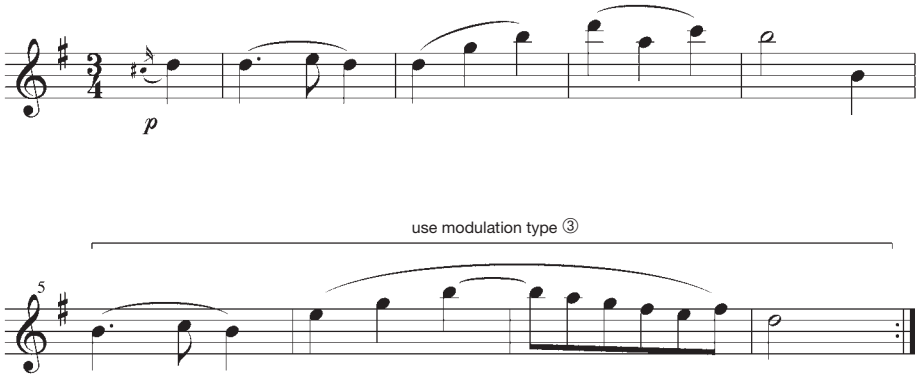
Haydn: Symphony No. 85, Romance



Text book: pages 40–41

c

Schubert: from 'Letzte Walzer', Op. posth. 127

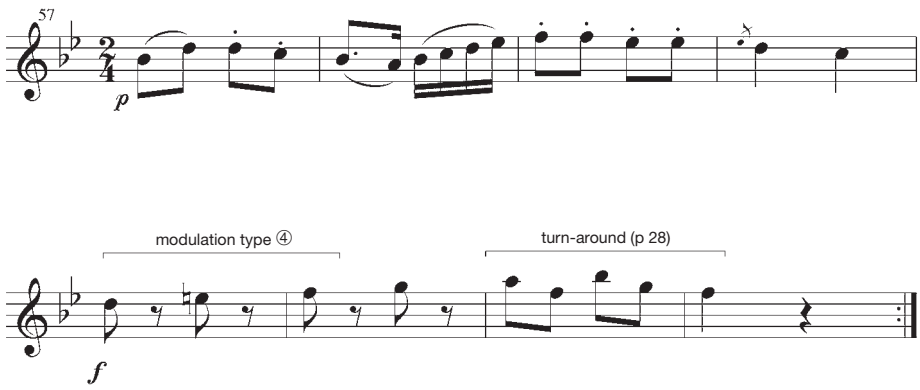


Schubert includes a chromatic passing note which appears in the third beat of bar 5 (5-♯5-6 from the tonic).

d

Allegretto

Haydn: Sinfonia No. 78, III



11 Analyse the harmony of the following music examples. Indicate each new chord using Roman numerals (you do not need to indicate if the bass is not the root of the chord, we will deal with this in a later chapter).

Schumann: 'Freisinn', Myrten, Op. 25
Schumann: 'Soldatenlied'

Piece suitable for harmonic reduction, see p 206:

Schumann: 'Wilder Reiter', Album für die Jugend (Op 68)

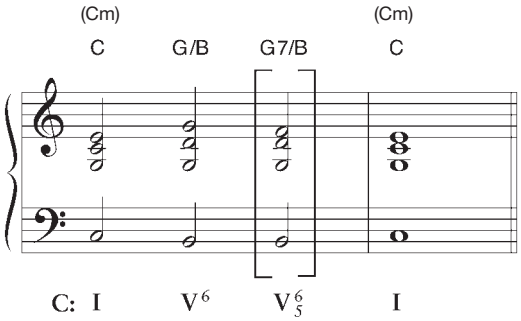
12 Compose melodies or pieces using the primary and secondary triads as well as the secondary dominants. Write cadences and tonicise V in the way you practised in the exercises.

Text book: pages 40–41

Chapter 3

Neighbouring chord in 1st inversion

1 Play the chord progression below on the piano in all major/minor keys.



2 Write a bass part according to your harmonization in exercise 10b on p 311.

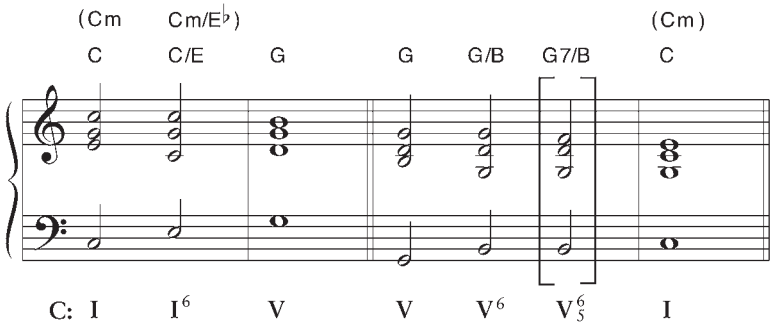
- Complete the given rhythmic patterns in b 1-4 and 5-7.
- Use the neighbouring chord which you have practiced in exercise 1 as well as the principle of 'strong ending'; see p 45, eg 3.

IV

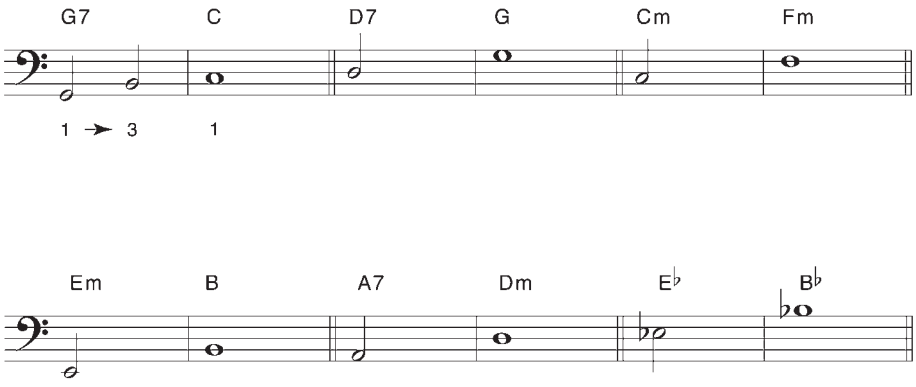
Mozart: Divertimento No 14 (K. 270), Presto
(Original: B♭-major)

Text book: Pages 44–47

3 Play the chord progression below on the piano in all major/minor keys.



4 Practice using a passing third in the bass between chords a fourth or fifth apart, as shown in the first example below and exercise 3 above. See also p 47, eg 2.



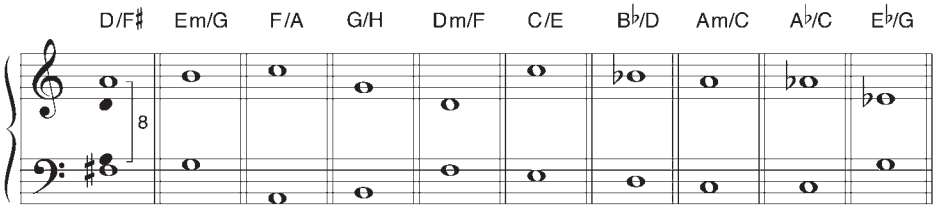
Text book: Pages 44–47

Triads in 1st and 2nd inversion

5 In the following example you will practice the spacing of triads with the third or fifth in the bass in four-part writing. In example b you will practice closed and open position as well.

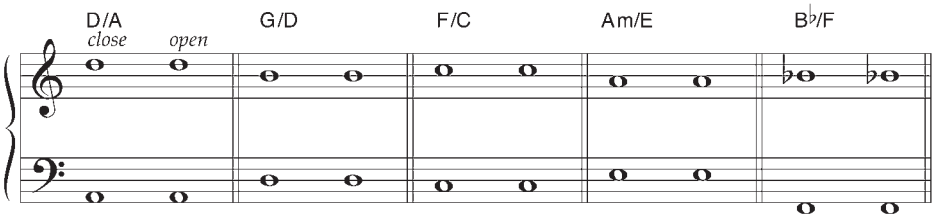
a *Triads with the third in the bass – 1st inversion chords:*

- Double the fifth or the root* – in those cases it is possible, double the melody note at the octave in the manner shown in the first chord. Remember that you may when necessary double at the unison, ie that two parts play the same note; see p 53, eg 2.



b *Triads with the fifth in the bass – six-four chords:*

- Add – as close to the melody as possible – the two chord notes which together with the melody form a complete triad. In this way the chord is spaced in closed position and the fifth is doubled in four-part writing, which is also the most common**. Then, spread the chord by changing to open position.



* see also 'Doubling the third for voice leading purposes' on p 208.

** see alternative under the heading 'Double' on p 53, eg 1.

Text book: Pages 52–53

6

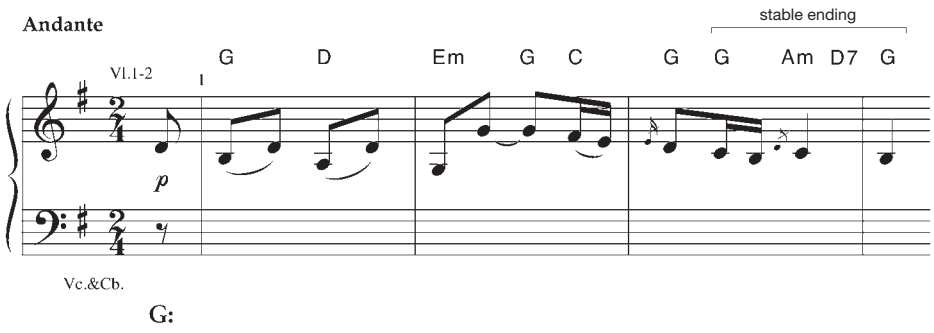
Add a bass part built on stepwise motion using passing $\frac{6}{3}$ and $\frac{6}{4}$ chords in the following music examples; see 'First inversion in stepwise motion' on p 46 (eg b) and 'The passing $\frac{6}{4}$ chord' on p 48.

- Except for the ending cadence, the bass should entirely consist of stepwise motion and move in the same direction in both exercise a and b.

(IV) (♫) as well as figured bass symbols.

a Shape the bass so it follows the rhythm of the chords.

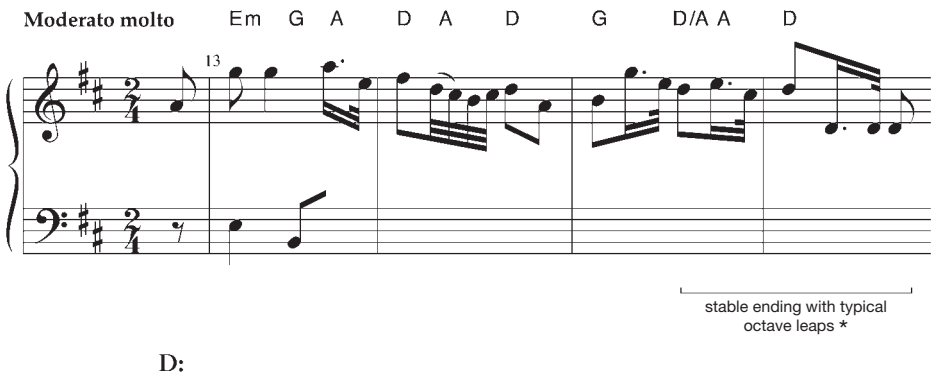
Haydn: Sinfonia No 60, II



Figured bass: (root position = no number)

b Use octave leap/repeated notes when necessary.

Haydn: Symphony No 31, IV



Figured bass:

* see 'Hints' on p 344.

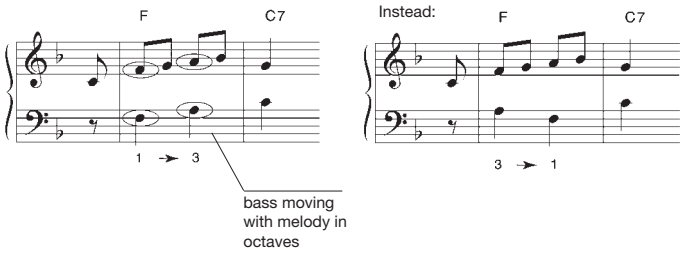
Text book: Pages 46–49

1–3 and 3–1 movement

7 Add bass parts to the following phrases in order to practice passing third (1-3) as well as 3–1 movement in the same manner as shown on p 35, eg 3. Determine if the 3–1 movement works together with the melody – see below.

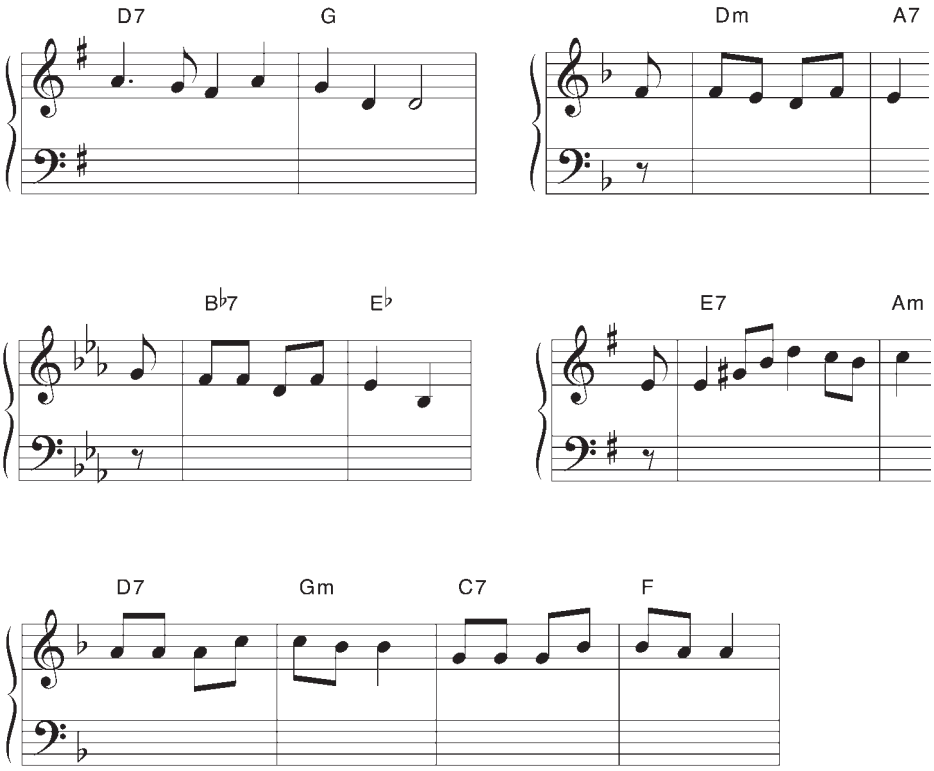
Hints

3–1 movement and the passing third (1–3) can sometimes be seen as alternatives to one another. In one situation however the passing third may create parallel octaves between the melody and bass – directly or indirectly. In this case, the 3–1 movement can present an alternative solution (and vice versa):



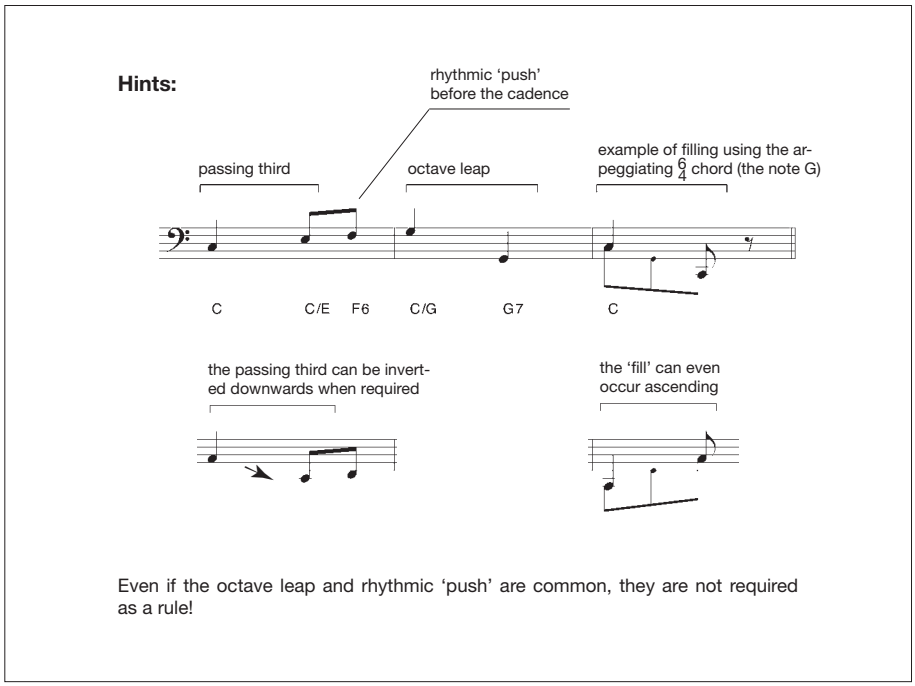
As shown in the examples above, the 3rd in the bass is normally avoided if it occurs in the melody.

Note that in some of the following examples, both alternatives are acceptable.

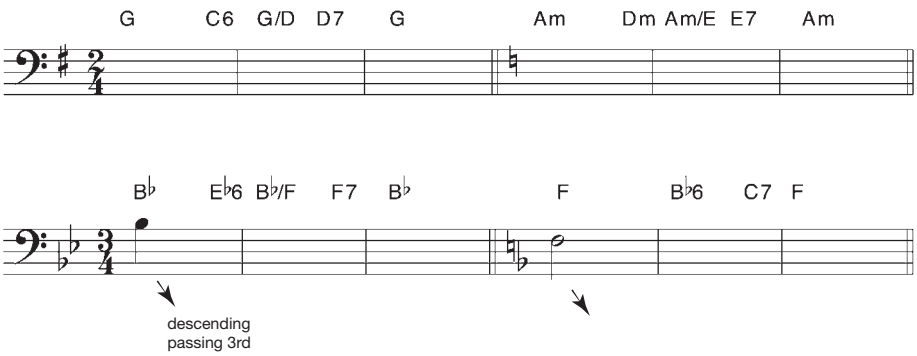


Text book: Pages 46–47

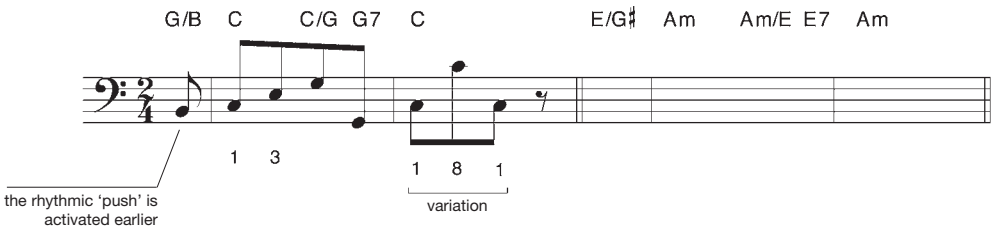
8 Expand the exercise of the passing third using an octave leap, increased activity towards a cadence and filling.



a The rhythm in the first two examples in a) is identical with the example above.



b The bass movement above occurs also without the subdominant; see the introductory example as well as p 47, eg 2 (the ending, b 6-8).

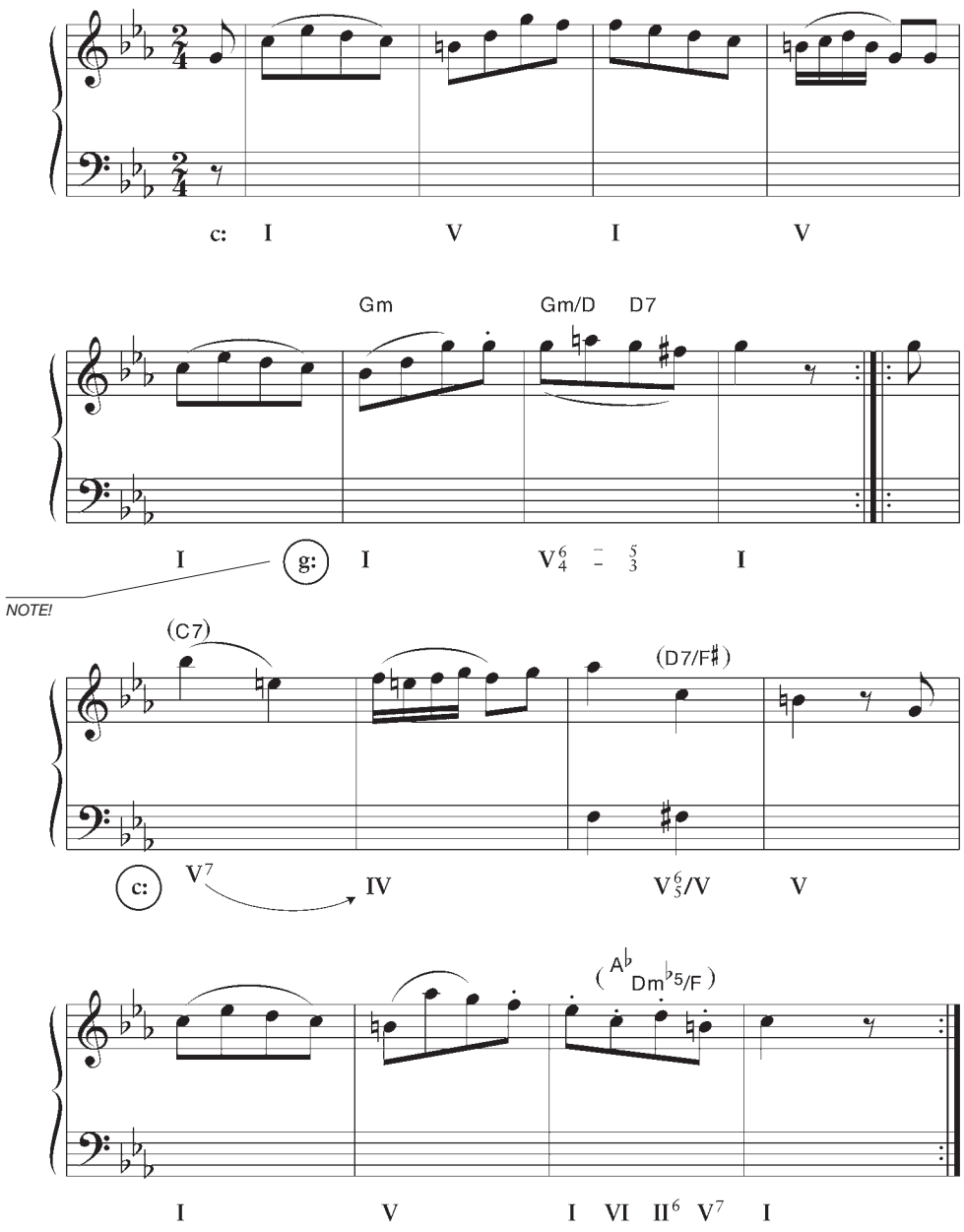


Text book: Pages 44–47

9 Write a bass part for bassoon for the melody below (suitable range is approx. D two octaves below middle C – middle C [D2–C4]). Assume an inner part that complete the chords. Add Roman numerals according to your choice of bass notes.

- Suggested rhythms: | ♩ ♩ | and | ♩ 𝄽 | or | 𝅗𝅥 | sometimes 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯(𝅘𝅥𝅯) for increased activity: | ♩. 𝅘𝅥𝅯 | or | ♩ 𝅘𝅥𝅯𝅘𝅥𝅯 |
- Use passing 3rd, octave leap as well as patterns you practised in the preceding exercise.

Mozart: Serenade No 12, IV (KV388)



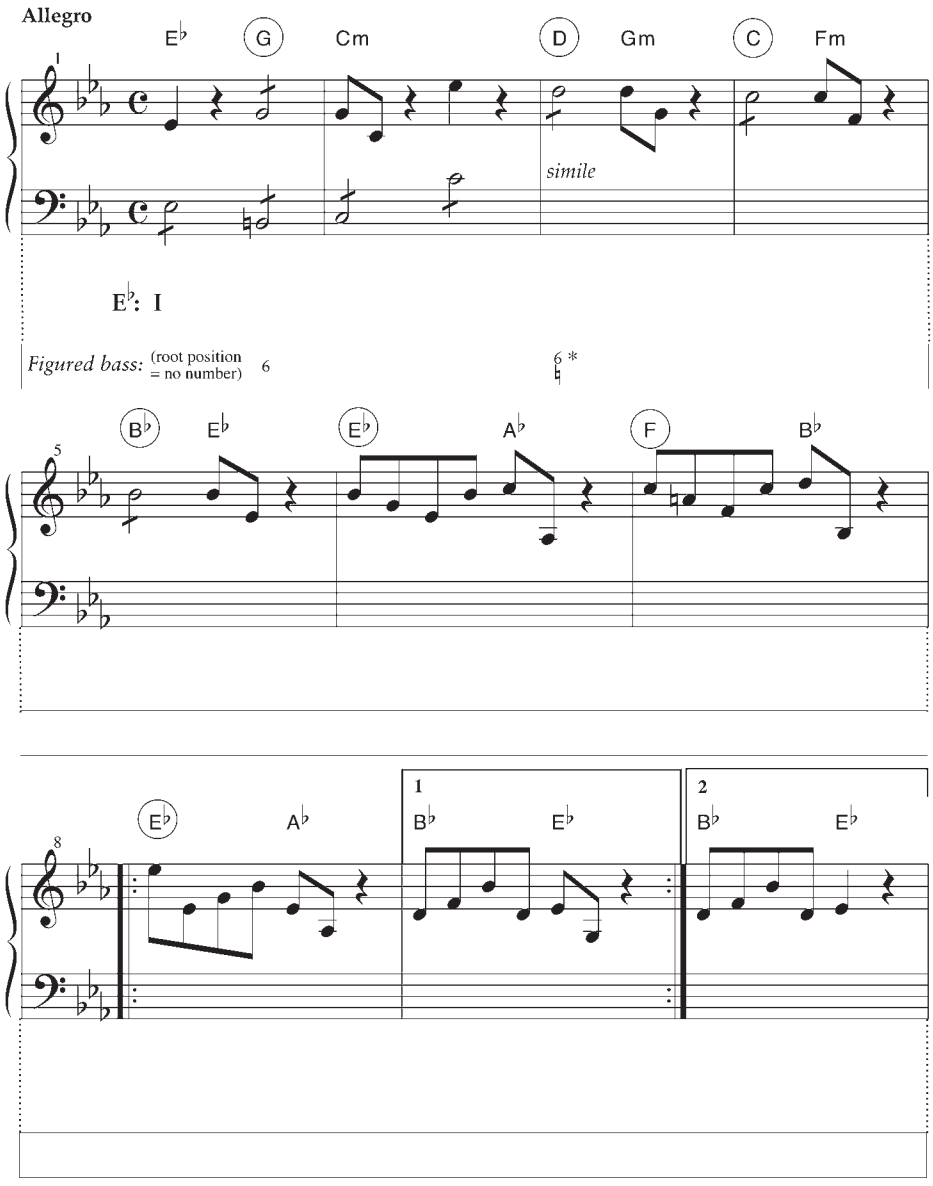
Text book: Pages 44–47

10 Write a bass part for cello for the melody below (suitable range is G two octaves below middle C – middle C [G2–C4]). Assume an inner part that complete the chords. Notate the bass part using half notes (interpreted as repeating eights; see b 1).

- Use 1st inversion chord for each chord symbol that is circled, while all the other chords are in root position.
- Throughout the whole piece the bass leaps down to the 3rd in all 1st inversion chords, except for bar 6-7 (A♭–F), where it ascends chromatically; see p 46.

(IV) (♫) and figured bass symbols.

Corelli: Christmas Concerto Op 6/8, IV
Chords in tremolo is used as an accompaniment

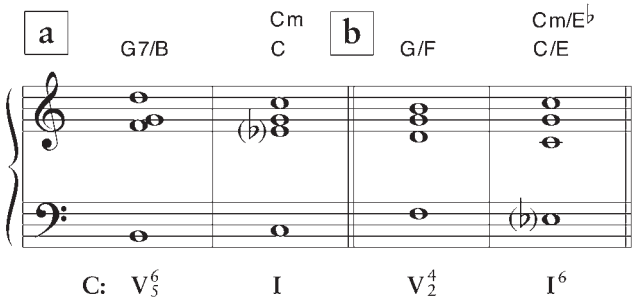


* indicates that the diatonic note A♭ is raised; see 'Figured bass' on p 200.

Text book: Pages 44–47

Dominant 7th chord in 1st and 3rd inversion

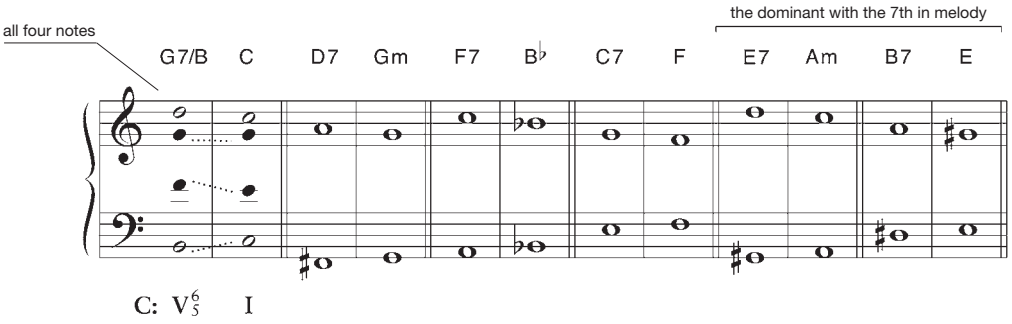
11 Play the chord progression below on the piano in all major/minor keys. You can further develop this skill by playing them in other positions.



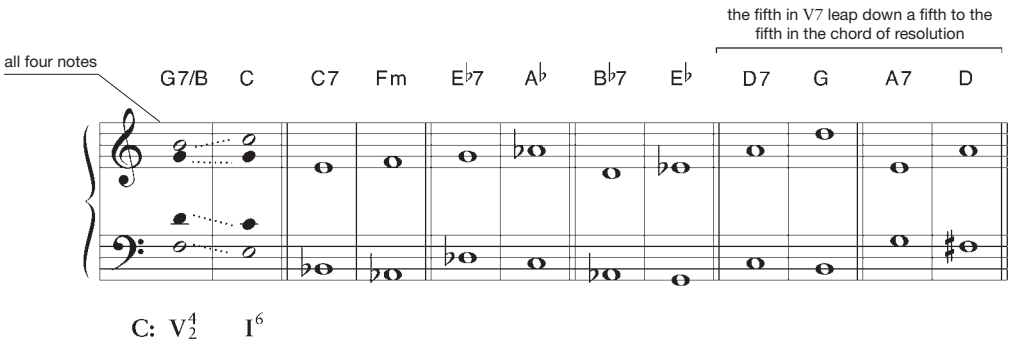
12 Resolve the following dominant 7th chords with the third (a) and the seventh (b) in the bass.

- Add the two missing notes directly under the top part, in order to form a complete 7th chord together with the bass note; see b 1. Resolve the chord as shown in bars 1-2 in example a and b.

a *Dominant 7th chord in 1st inversion (the third in the bass):*



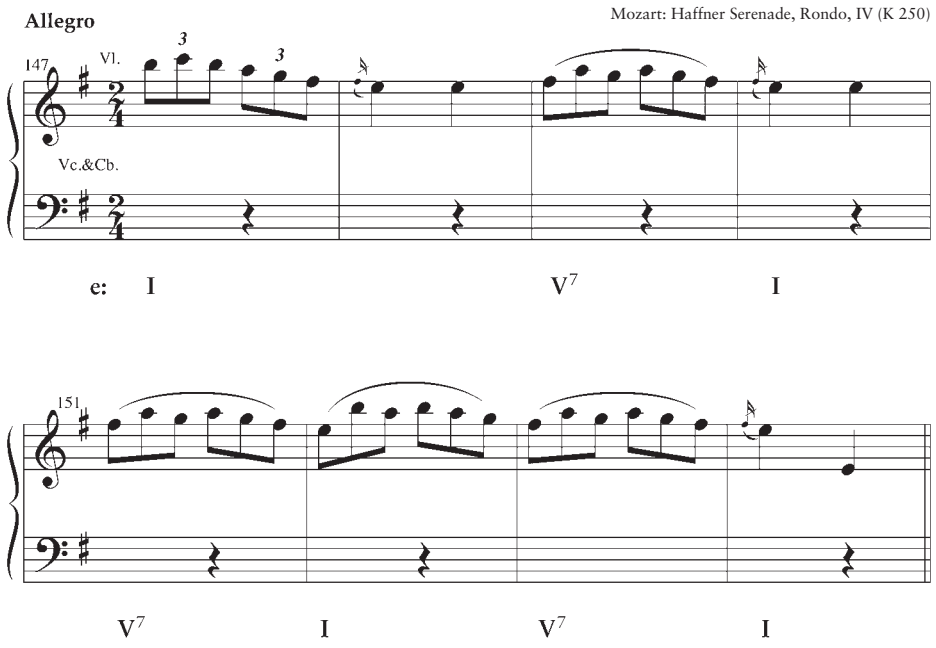
b *Dominant 7th chord in 3rd inversion (the seventh in the bass):*



Text book: Pages 50–53

13 Write a bass part for the melody below and model the rhythm as shown in the example. Add the relevant figured bass symbols to the Roman numerals according to your choice of bass notes.

- Mozart only uses the root of the chords, apart from b 151-152, where he introduces a dramatic effect by utilising the third inversion of the dominant seventh chord which you practised in exercise 11b; see 'Dramatisation created by the $\frac{4}{2}$ chord' on p 50, together with p 47, eg 3, b2 (C/B♭).



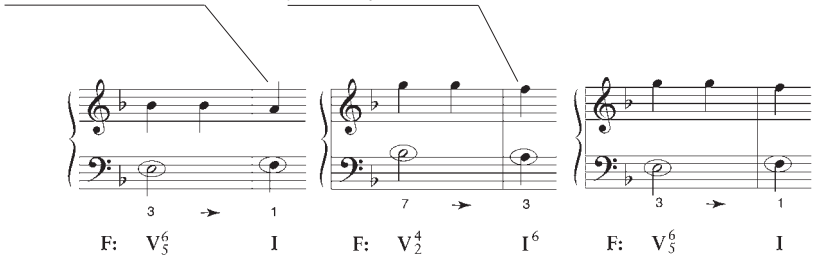
Hints preceding the exercises on the following page

It is common to avoid the root of the V7 in the bass within the phrase, in order to 'save' the root for a final cadence and attain a stronger ending. One of the two leading notes of V7 – the third or the seventh – can be placed in the bass.* Choose the alternative that matches the melody – especially with regard to the note of resolution:

when the melody resolves to the third of I, put the root in the bass, which is preceded by the third in V7

when resolving to the root (or fifth) of I, put the third in the bass, which is preceded by the seventh in V7, but…

... in this example, the root can also be preceded by the third in V7.



* The fifth of the V7 chord can also be used, which will be dealt with later.

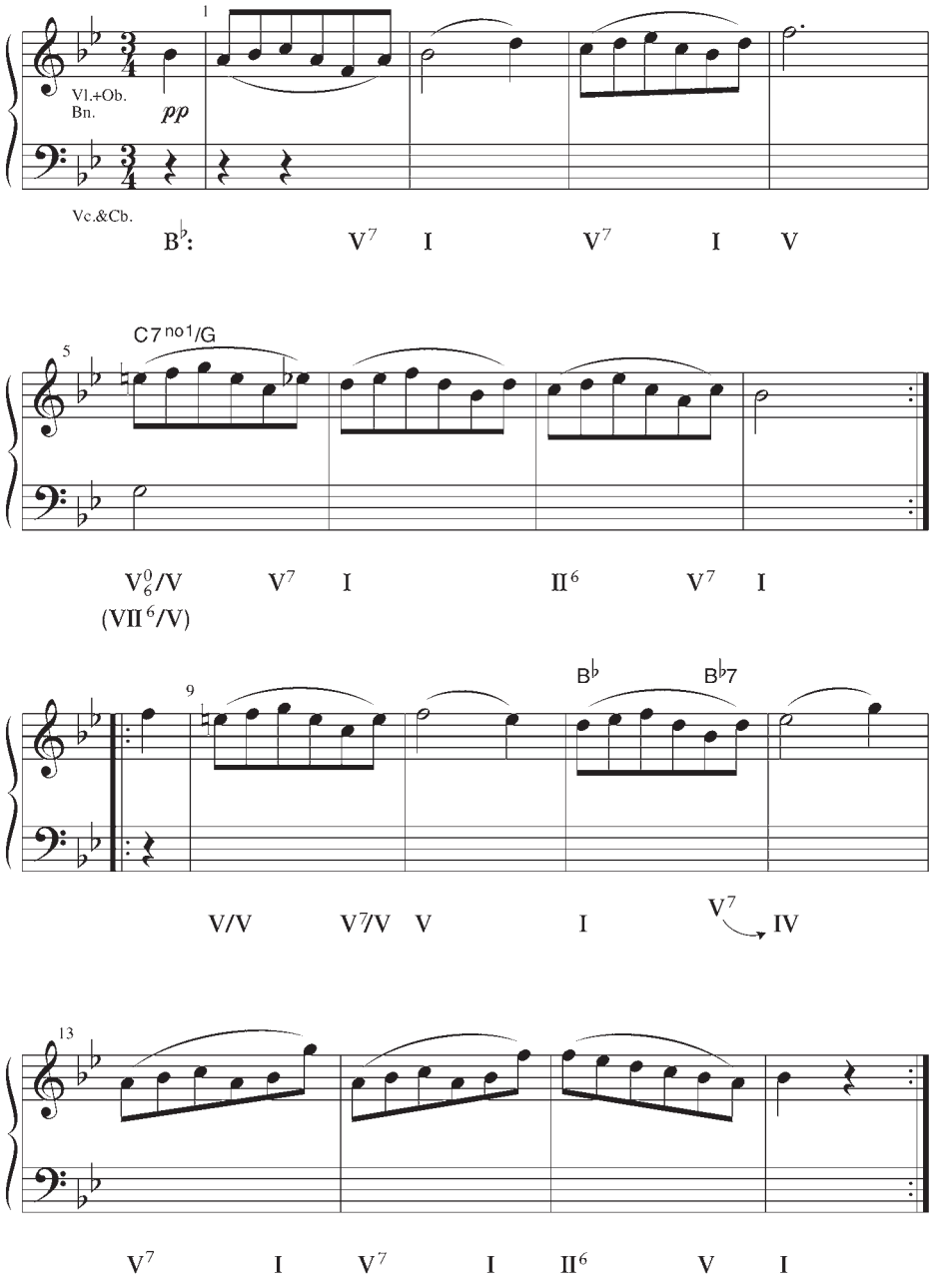
Text book: Pages 50–53

Leading-note motion

14 Write a bass part for the following melody to practice leading-note motion while resolving the dominant seventh chord. This is explained in the hints on the preceding page. Add the relevant figured bass symbols to the Roman numerals according to your choice of bass notes.

- The technique can be used for all dominants *containing the seventh* – with the exception of the cadences.*
- Haydn primarily uses the rhythm: 

Haydn: Sinfonia No. 66, III, Trio



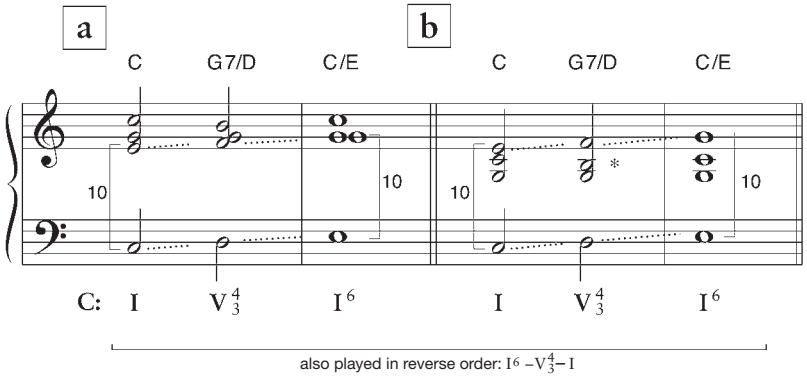
Text book: Pages 50–53

* In the original score, the seventh appears in bars 9-12 in an inner voice.

15

Practise playing the chord progression below on the piano in all major and minor keys. Both (a) and (b) are common in open position; see exercise 16b below.

In major and minor:

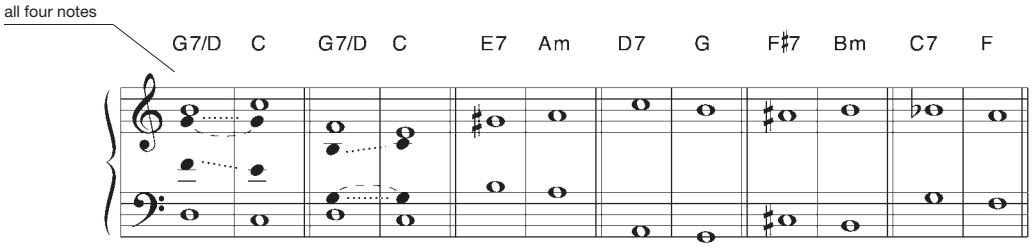


16

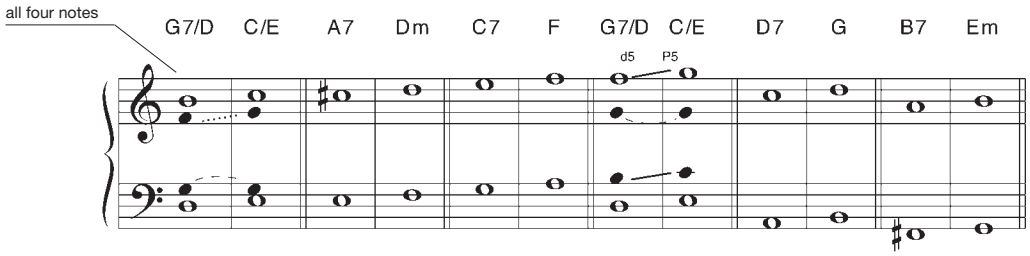
In the example below, resolve the dominant seventh chords with the fifth in the bass.

- Using the four notes of the seventh chord, add the two missing notes just below the melody, so that the chord contains all the notes. Resolve the chord in the way shown in bars 1-2 in example (a) and (b).

a *Dominant seventh chord as a $^{4}_{3}$ chord (fifth in the bass):*



b *Resolution of the V^{4}_{3} chord to I^{6} with an ascending seventh:*



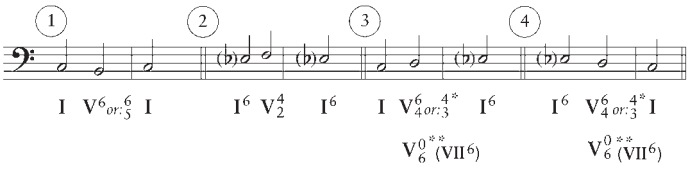
* The 1st and 2nd voices move in consecutive fifths (d5 – P5), which is acceptable in this particular type of voice-leading; see p 186.

Text book: Pages 50–53

Avoid V in root position in chord progression I–V–I

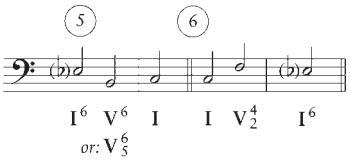
Hints preceding the exercises on the following pages

In exercise 14, you learnt how to avoid the root in the bass (especially in the V7 chord) within the phrase. This will now be expanded to three chords, including the V^4_3 chord. V7 in the chord progression I-V7–I can either function as a neighbour chord or passing chord. This creates stepwise motion in the bass (see also p 51, eg 1): ***



Examples 1 and 2 can also occur with the bass movement in the opposite direction.

The leading notes in the dominant may also enter via a leap:



When the first and last notes are not the same, in this case the root and third of the chord respectively, this forms an *incomplete* neighbouring movement, (see eg 5 and 6).

When choosing bass figures, consider the following:

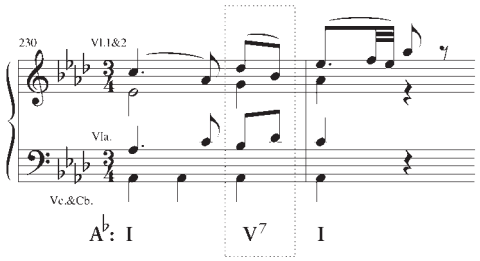
- if the third of the tonic is in the melody, this note is usually not used in the bass.
- the melody and bass often create thirds, sixths, octaves and in the V7 chord, even the tritone (or sometimes a ninth for increased tension).
- the melody and bass can move in parallel or contrary motion.

Despite what has been said above, there are many examples in the literature where the root is used in the beginning or within the phrase, for example the bass in eg 3 on p 45 begins with all the chords in root position (I–V7–I), which is quite common.

* used by composers of the Classical period or later

** indicates V7 with the root omitted, see p 54.

*** another commonly-used method to avoid V in root position is by utilising a pedal point (see p 52), which in this case means that V7 is played with the tonic in the bass:



Mozart: Piano concerto No 22, III ∅

Text book: Pages 50–53

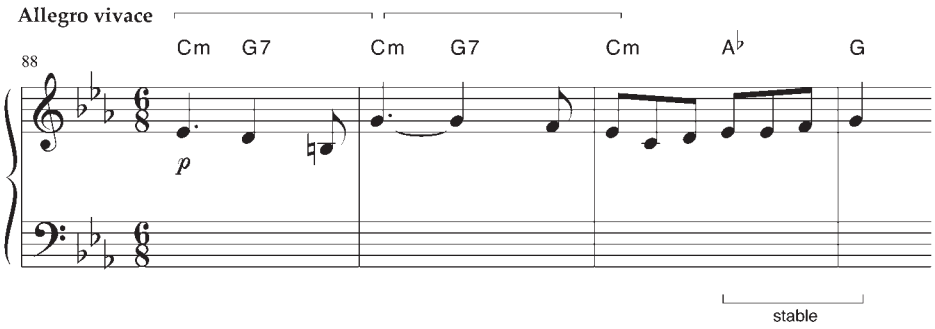
17

Write the bass part in examples a-d. Use the bass figures notation shown on the preceding page (1-6) with the intention of avoiding V in root position – unless instructed otherwise.

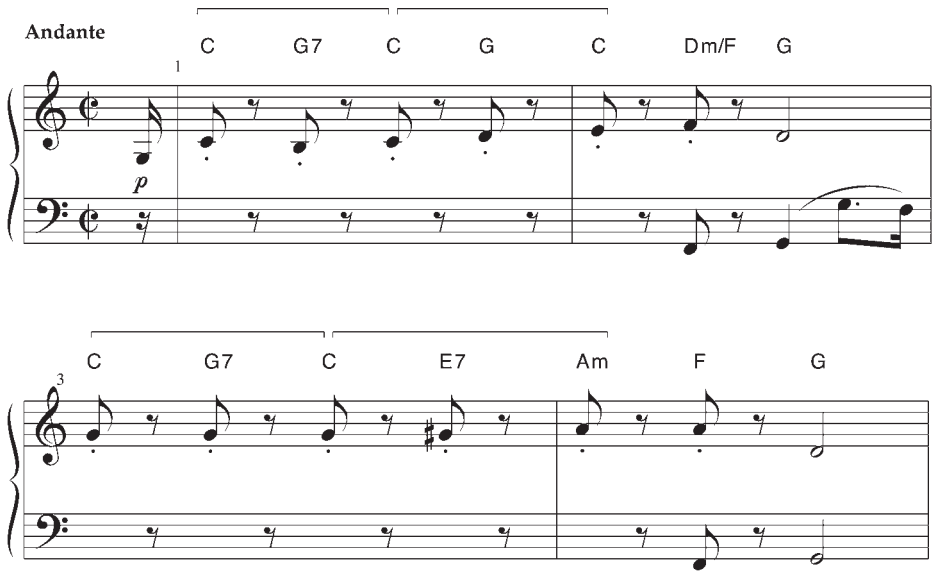
- As a guide, certain exercises have been marked 'stable' if the root is in the bass (see 'Strong/weak endings' as well as 'Stable/unstable' on p 44). All the examples below begin with the root in the bass ('stable'), which is the most common – but not imperative.
- The bass figures 1-6 can be combined so that the final note of *one* figure provides the starting note for the next, as shown by the brackets.
- Analyse using Roman numerals in exercises a-c.

a The bass follows the rhythm of the chords in example (a).

Mozart: Concerto in E♭ for horn, Rondo (KV 495)



b In this example, the brackets sometimes indicate where the first and final chords are not identical (b 3-4, C-E7-Am). Write the solution in a similar way.

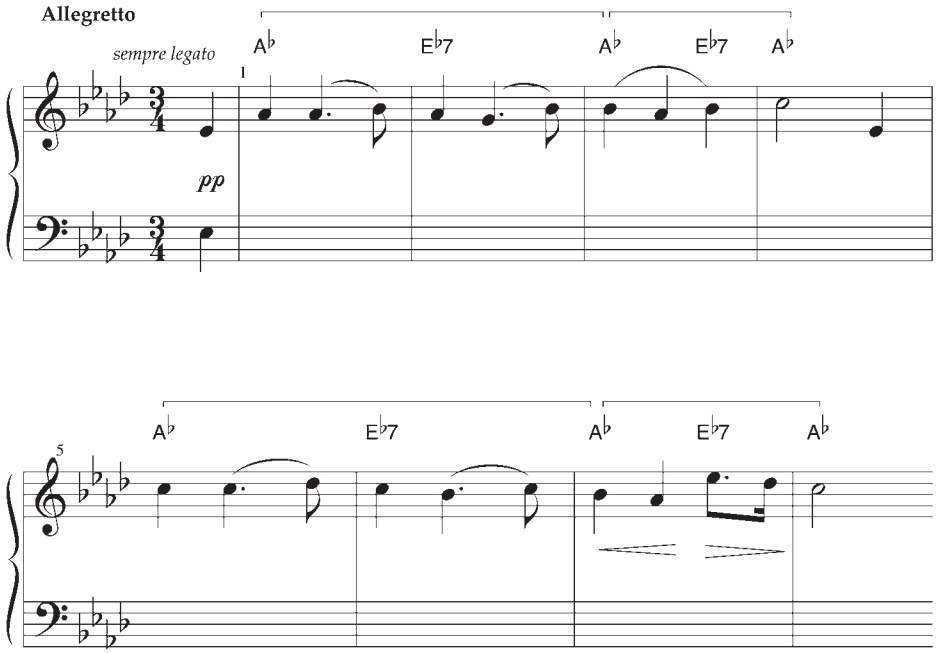


Beethoven: Piano Sonata, Op. 14 No. 2, II

Text book: Pages 50–53

Avoid V in root position in chord progression I–V^7–I

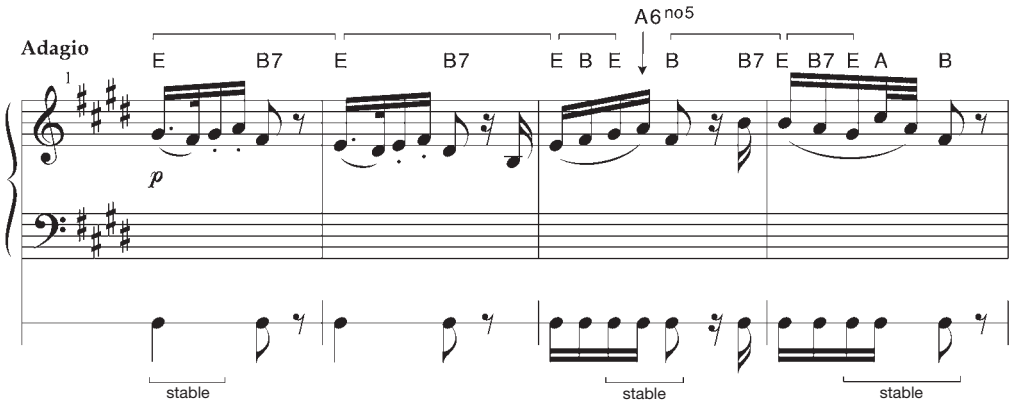
c Note that the bass in b 2-3 is chosen in reference to the 2nd note of the melody in the bar, because the 1st note is a nonharmonic note. Shape the bass so it follows the rhythm of the chords.



Schubert avoids the dominant in root position for the whole section, not even at the end of the phrase (b 7-8), which is unusual.

Schubert: Impromptu, D. 935

d Shape the bass using the rhythm below the staff.

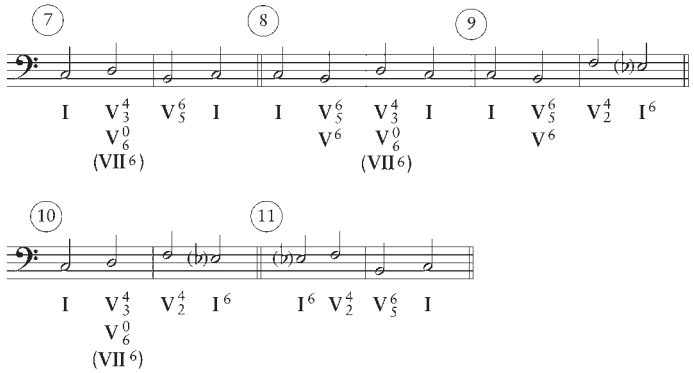


Beethoven: Piano Sonata No. 3, II

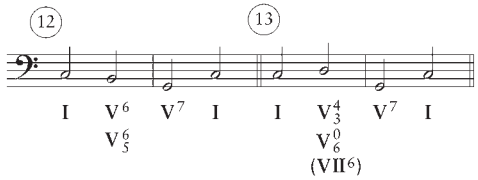
Text book: Pages 50–53

Hints preceding the exercises on the following pages

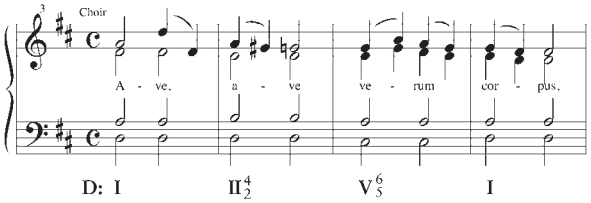
V7 in the chord progression I–V7–I can be expanded so that it appears in two inversions. Both halves I–V7 and V7–I can be interpreted as 'question and answer' in a melody.* The dominant acts here as a complete or incomplete **double-neighbour chord**, see eg 7-8 and 9-11 respectively.



The following bass figures often utilises variations of the above, but moving to the root in V7 makes it somewhat stronger:



Another variation of the above that is often used is transforming I–V7–I to I–II–V7–I. The bass is written so that the tonic note is retained when II enters, which creates a $\frac{4}{2}$ chord with a resolution down to the third of V7.



Mozart: Ave, verum corpus ∅ (the choir is doubled by strings)

* Although the rhythmic division according to the 'question/answer' pattern above is common, the tonic can also be introduced when the bass moves from the root to the third in eg 7, 10 and 13. This changes the emphasis; see p 45, eg 2.

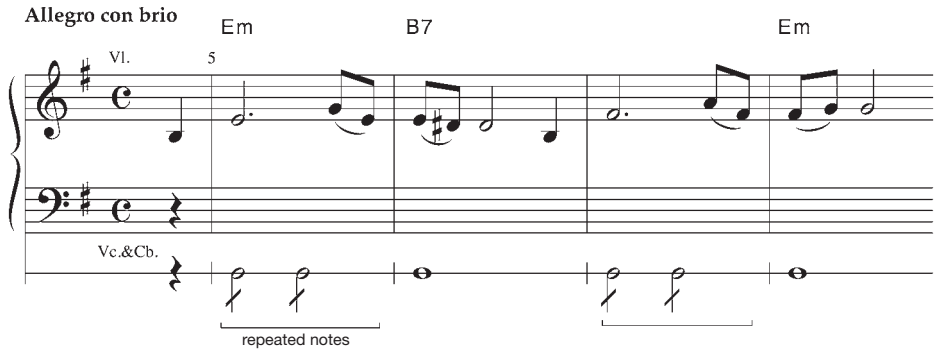
Text book: Pages 50–53

Avoid V in root position – double-neighbour chord

18 Write a bass part for the following examples using the rhythms as shown in the score. Use the bass figures (7-13) notated on the preceding page with the intention of avoiding V in root position. Analyse the chords using Roman numerals.

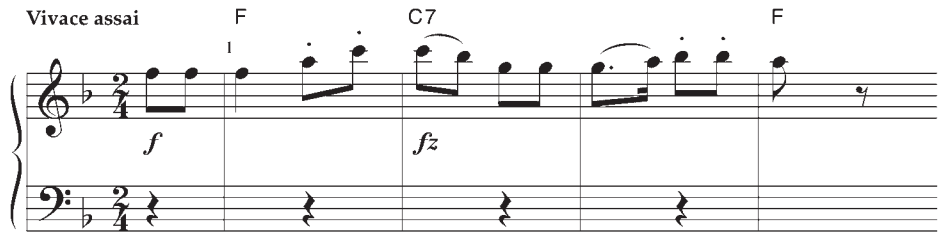
Haydn: Symphony No. 44, I

a



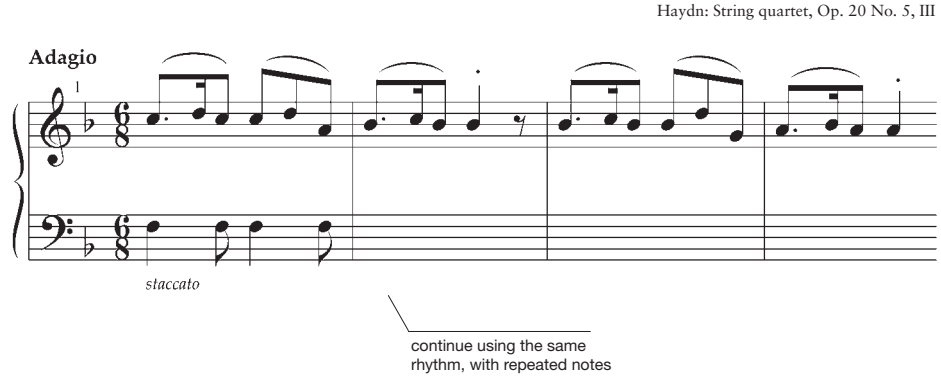
Haydn: Symphony No. 89, IV

b



c Use the alternative found in 'Ave, verum corpus' by Mozart on the previous page (the last music example in 'Hints').

Haydn: String quartet, Op. 20 No. 5, III



Text book: Pages 50–53

19

Write bass parts for exercises a-b, using the technique you practised in the preceding exercise.

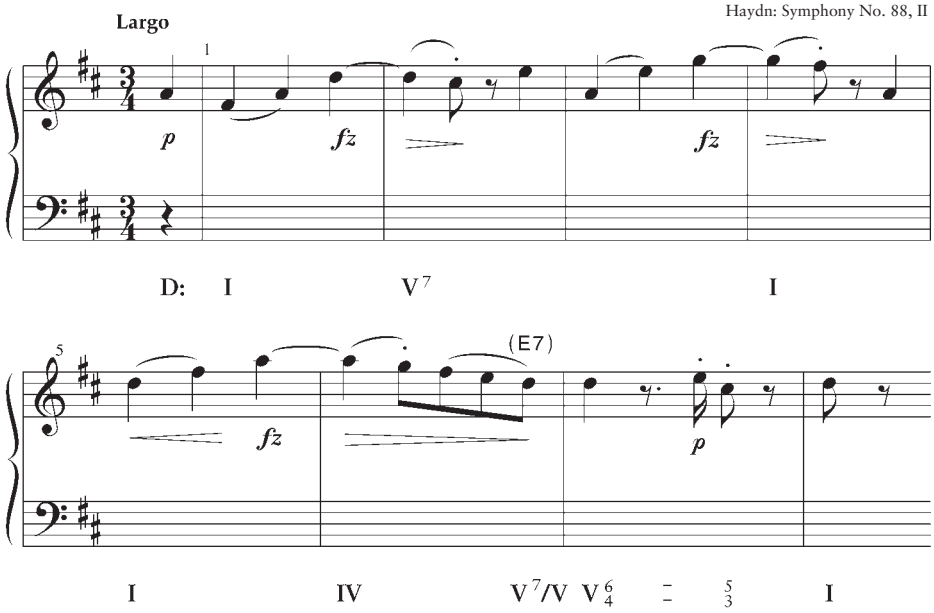
- 'Dramatise' the first half of the second period (b 5-8 in both examples) in two different ways:

a

A more gentle way, starting on the third of the tonic, as well as an ascending bass, cf 'The 1st inversion chord as a method of dramatisation' on p 189.

Haydn uses this rhythm more or less constantly | ♩ 𝄽 ♩ | 𝅗𝅥 𝄽 |

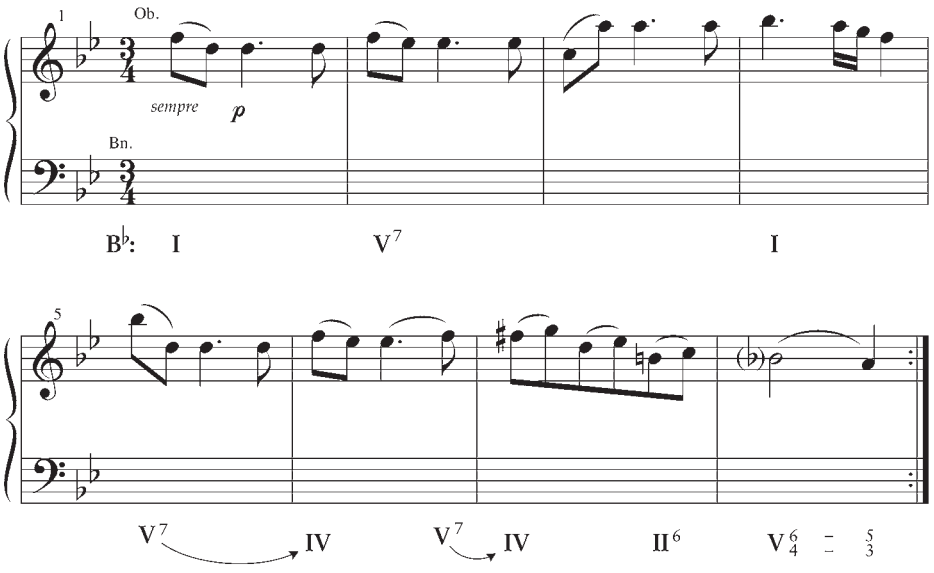
Haydn: Symphony No. 88, II



b

A more dramatic way, starting on the V$^4_2$ chord, as well as a falling bass (see 'Dramatisation created by the $^4_2$ chord' on p 50 together with eg 3 on p 47).
At first, Mozart uses the rhythm: | ♩ 𝄽 𝄽 | then provides a contrast in bars 5-6 using longer note values with legato phrasing.

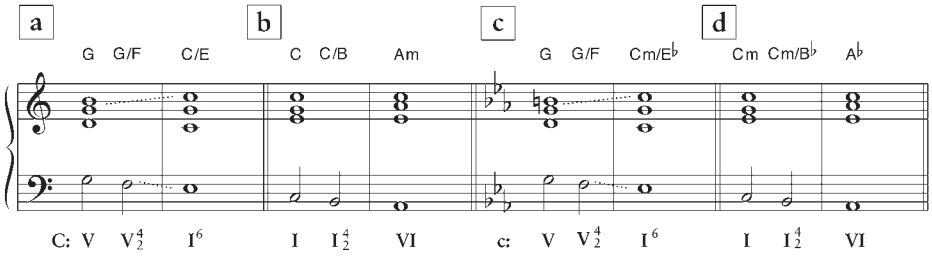
Mozart: Divertimento No 13, Trio (KV 253)



Text book: Pages 50–53

8-7 motion

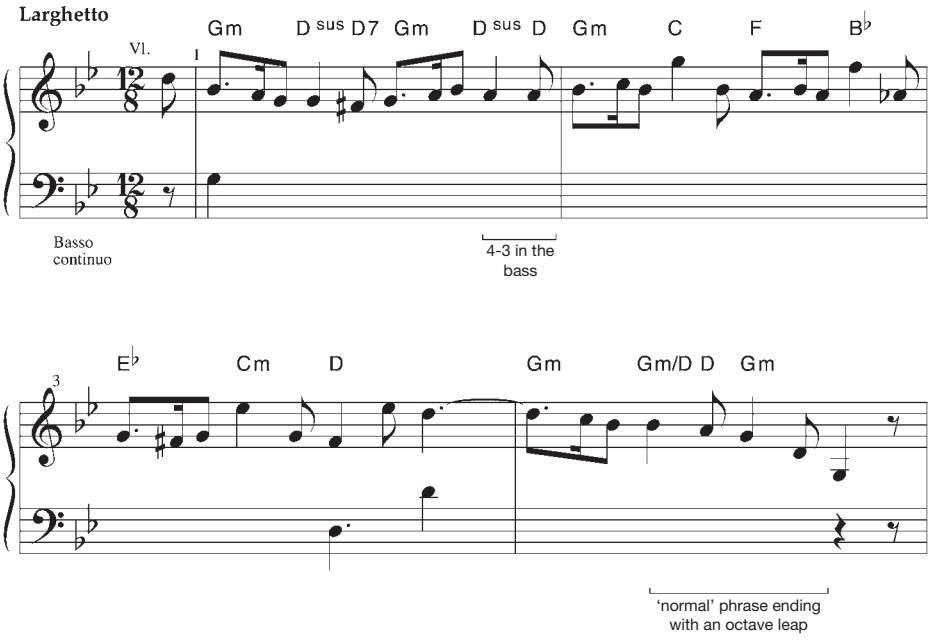
20 Practise playing the chord progression below on the piano in all major and minor keys. You have already encountered 8-7 motion arising from the dominant chord, which is notated in eg (a) and (c). However, in eg (b) and (d), the motion arises from I in major and minor respectively.



21 Write a bass part for the following Handel extract, which consists of a melody accompanied by a continuo group. Note that the melody and bass function as two-part writing – which differs from four-part writing technique.

- Use the 8-7 motion you practised in the previous exercise wherever possible in this exercise.* The note of resolution creates a third or sixth with the melody, which guarantees a full sound.
- Use 1-3 or 3-1 motion to attain fullness of tone between the melody and bass.
- Handel uses this rhythm throughout the piece: ♩ ♪ .

Handel: Aria No 36, 'The Messiah'



Text book: Pages 50–53

* the original score uses 5-7 instead of 8-7 in the 2nd chord of b 1.

22

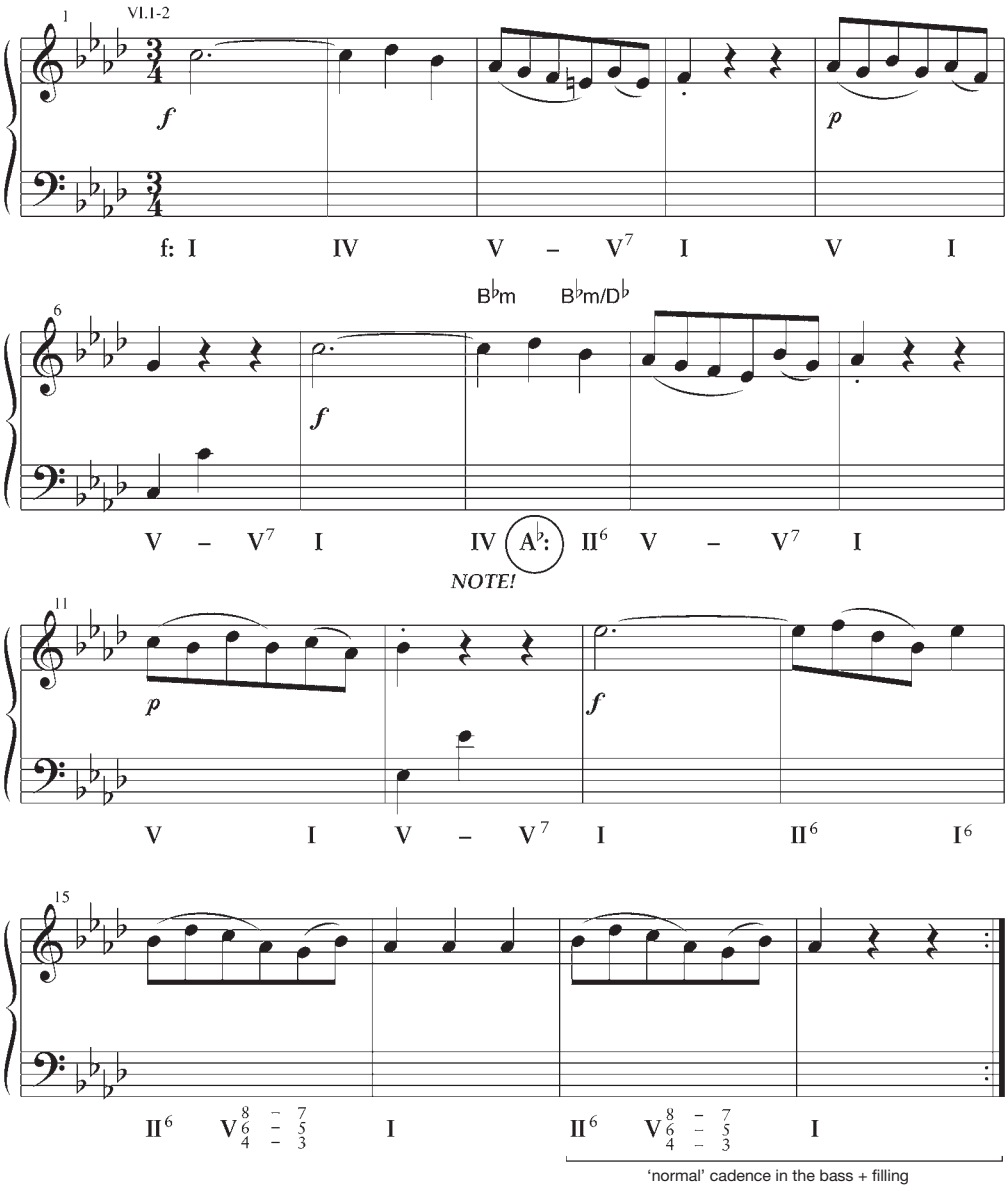
In the next music example, write a bass part for cello and double bass (sounding an octave apart). Haydn uses a relatively high register for the bass part (E♭ below middle C – E♭ above middle C, with the exception of A♭ in the last bar).

- Use 8-7 motion for all the dominant chords *with* the seventh – including V–V^7 and V$^{6\text{-}5}_{4\text{-}3}$.
- To complement the rhythm of the melody, Haydn uses:

  in bars with little activity (including repeated notes in b 16) | ♩ ♩ ♩ | – often as stepwise movement (1-3 or 3-1 *with* a passing note, eg in F minor: F-G-A♭ or in reverse A♭-G-F).

  in bars with activity in the melody: | 𝅗𝅥 ♩ | unless instructed otherwise (b 15-18).

Haydn: Symphony No. 49, III



Text book: Pages 50–53

Writing bass parts

23 Write bass parts for the following melodies:

C. M. Bellman: Epistle No 67, p 324.

Gluck: 'Musette', p 319.

Heinrich Koch: Minuet, p 325.

Text book: Pages 50–53

24 Compose melodies including a bass part:

a Compose two melodies and add a bass part. As a model for the two exercises you can use practice examples 19 a and b on p 356. Use for each composition the following guide lines:

- a noncadential introduction (I–V^7–V^7–I)
- 'dramatise' the first half of the second period using:

  composition 1: an ascending bass starting on the 3rd of the tonic

  composition 2: the $\frac{4}{2}$ chord based on V^7 or V^7/IV

b Use stepwise/chromatic motion in the bass in a composition for piano. Utilise techniques in the way you practised in the exercises 6a-b och 20. It is important to add one or more inner parts in order to get a complete sound when playing the melody and bass.

c Compose a melody including a bass part using 8-7 motion as well as 1-3 or 3-1 motion – with or without a passing note. Write the composition as a melody accompanied by a continuo group with the melody and bass functioning as two-part writing; see p 357 exercise 21 (also 22). Use the same instruments as in exercise 21.

Incomplete dominant

25 Name the root of each of these incomplete dominant 7th chords, with respect to the following chord of resolution, see p 55, eg 1:

D♯° – Em	F♯° – Gm	G♯° – Am
D° – E♭	G° – A♭	E° – Fm
C♯° – D	A° – B♭	A♯° – Bm

Hints preceding the exercises on the following pages

Below follows a summary of basic voice leading principles of the V_7^0 (VII) chord. On the following pages you will be working with all steps in detail:

- the 3rd in melody resolves almost without exception by step
- voices containing the doubled note – the 5th or 7th – resolve stepwise in contrary motion (can also move by leap, see below)
- to achieve a complete triad in I, the 7th rises when the 5th is doubled
- in order for both the 3rd and 7th to be resolved correctly as leading notes require

  doubling of the 7th
  incomplete chord of resolution
  leap in an inner part; see next point

- the parts in the incomplete dominant 7th chord usually move by step to the chord of resolution. However, similar to the resolution of the V7 an inner voice can move by leap, eg

  from the 5th in V_7^0 (VII) to the 5th in I
  from the 3th in V_7^0 (VII) down to the 5th in I

resolving the incomplete dominant to I in root position:

- the inner parts often move in parallel with the melody in close or open position when the 3rd is in the melody

resolving the incomplete dominant to I in 1st inversion:

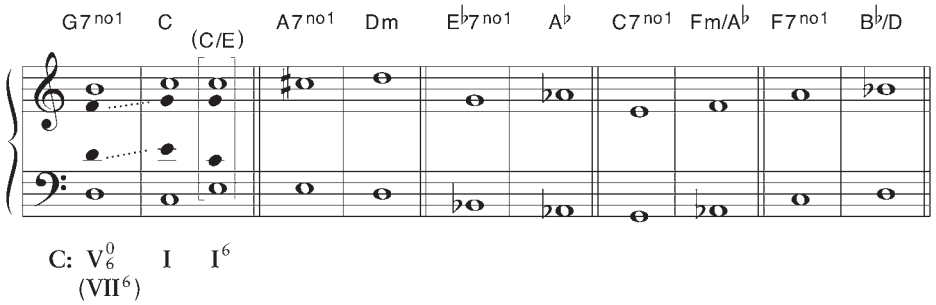
- the 7th often ascends, but can also descend resulting in a doubled third
- the consecutive 5th (d5-P5) occurring when the 7th in the melody rises to the 5th in I is accepted (the melody and the bass move in parallel 10th); see 'Perfect 5th – diminished 5th and vice versa' on p 186.

Text book: Pages 54–55

26 THE INCOMPLETE DOMINANT 7th CHORD WITH THE 5TH IN THE BASS

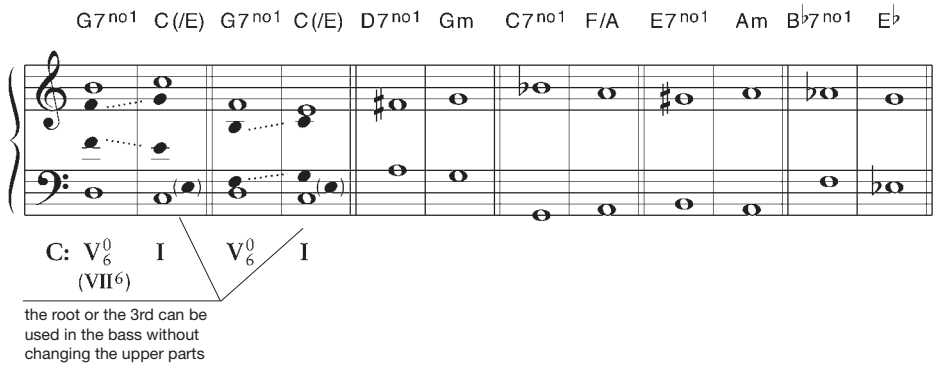
a *The 3rd in melody and doubling of the 5th (bass note):*

- Add the two missing notes directly under the top part, so that the upper three notes form a dominant 7th chord with the root omitted. This will result in a doubling of the bass – ie the 5th – which is the most common. Most often the seventh rises to the 5th of the chord of resolution.



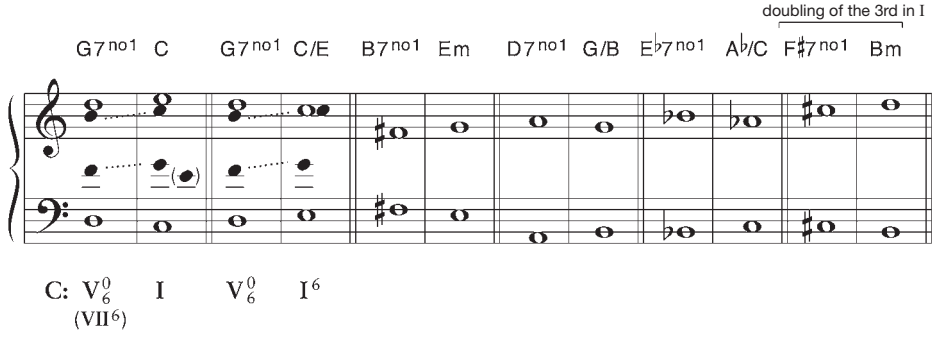
b *The 3rd or 7th in melody and the doubling of the 7th:*

- When the 7th is doubled one of the 7ths continues to its natural resolution, while the other will move freely to the 5th in the chord of resolution. If the 7th is in the melody this solution is most often preferred.



c *The 5th in melody as well as the doubling of this:*

- Add the two missing notes directly under the top part, so that the upper three notes form a dominant 7th chord with the root omitted. For a complete triad in I allow the 7th ascend, except for the last example where a descending 7th can be used, resulting in a doubled third.



Text book: Pages 54–55

Resolution of the incomplete dominant 7th chord

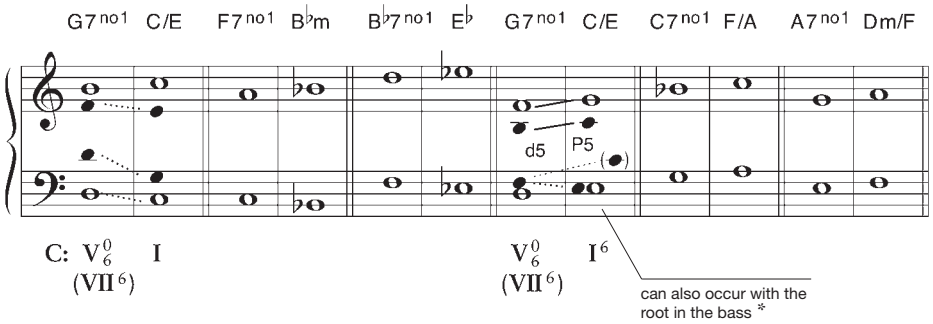
d *VOICE LEADING USED TO A LESSER EXTENT*

The 3rd in melody and resolution of both leading notes:

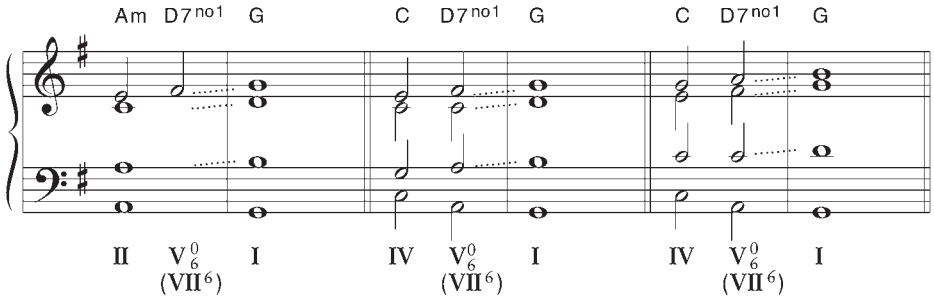
- Bars 1-6: In order to achieve a correct resolution of the 7th, the doubled 5th leaps to the fifth in the chord of resolution.

The 7th in melody rising to the 5th in I (the bass moves to I⁶):

- Bars 7-12: The 7th is doubled and resolves down to the 3rd in I, which gives rise to doubling of the 3rd (or by leap to the root in I). The acceptable consecutive 5th (d5-P5) that occurs can be camouflaged by the complete sound of the three voices moving in parallel 1st inversion chord (including bass and melody in 10th).*



27 Play the cadences below containing the incomplete dominant chord on the piano in all major/minor keys.



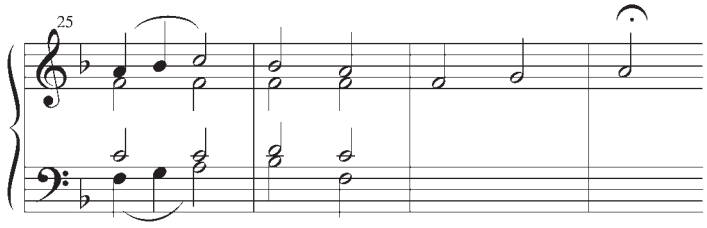
The chord progression is often used at the tonicisation of the dominant shown in the 2nd row above.

* see 'Perfect 5th – diminished 5th and vice versa' on p 186.

Text book: Pages 54–55

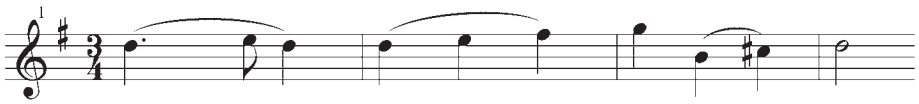
28 Use in the following music examples a suitable cadence you practised in the previous exercise.

a • Notate in 4-part harmony:



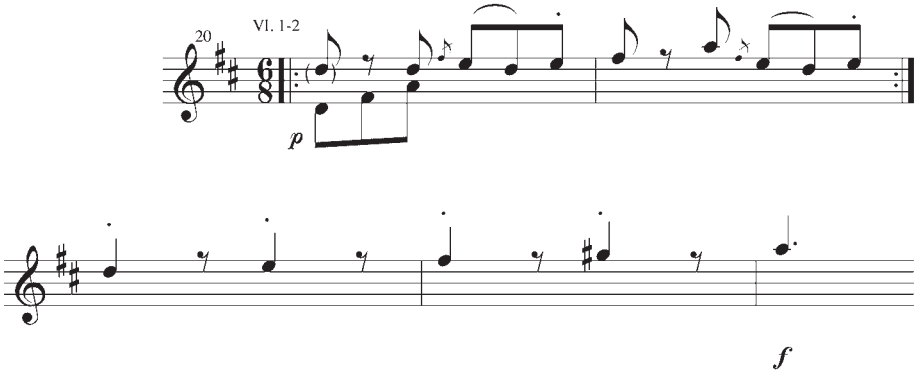
Schumann: 'Ein Choral', Album für die Jugend, Op 68
(Original C major)

b • Use the cadence formula at the tonicisation of V.



Haydn: Symphony No 54, III, Trio

c • Complete the broken chords in vl 2 and vla and use the cadence formula at the tonicisation of the dominant.



Text book: Pages 54–55

Analysis

29 Analyse the harmony of the following music examples:

Schumann: Album für die Jugend, 'Soldatenmarsch'
Schumann: Album für die Jugend, 'Ein Choral'
Mozart: The Magic Flute, Aria No 2, 'Der Vogelfänger bin ich ja'

Text book: Pages 54–55

1 Practise playing the chord progression below on the piano in all minor keys up to 2 sharps and 4 flats. Increase the number of sharps and flats later, so that you will be able to master all the minor keys.

Voicings can be found on p 59, eg 3 'Turn-around in C minor'.

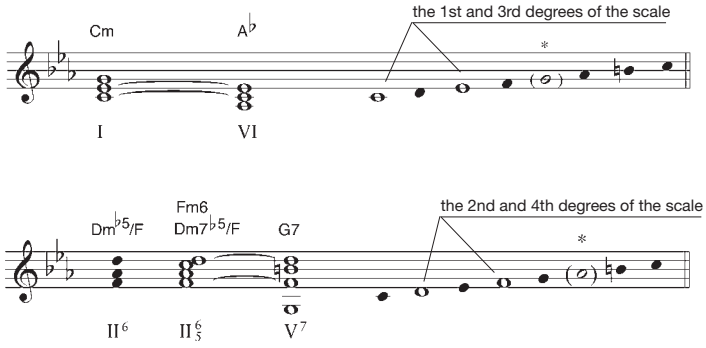
I – VI – IV – V7 – I

(alternatively, I – VI – II6 – V7 – I can be used, see p 373, exercise 4b)

Also practise playing the chord progressions starting from the tonic chord with the third/fifth in the melody.

Hints preceding the exercises on the following pages

The notes which I, IV and V7 have in common with other chords functions provide the basis for harmonic variation. The mode of application is the same as in major.



II6 is nearly always used in 1st inversion, while II7 occurs in all inversions.

* the notes in brackets also function well in melodic movement. Chords IV, II and VI often have added notes, especially at a cadence, for example in C minor: Fm6, Fm7 or A♭6, A♭Δ7, see p 74.

Text book: Pages 58–61

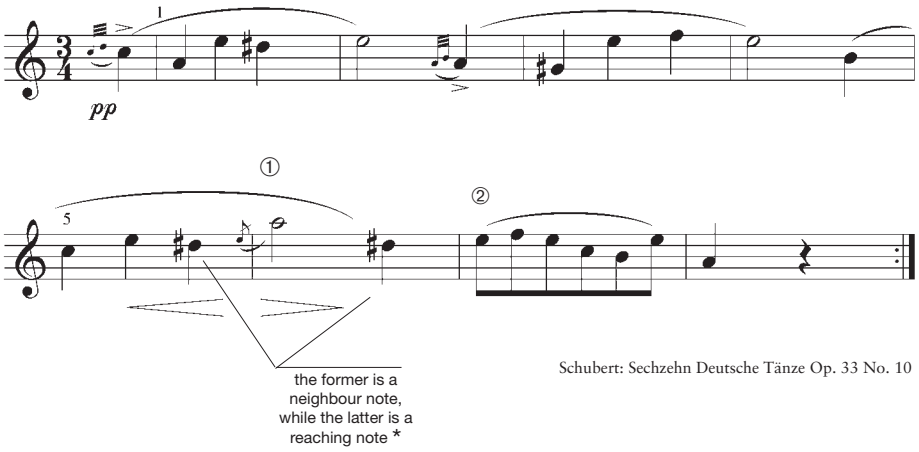
2

Harmonize music examples a-b. Use the primary triads, as well as VI (or other chords).

- Read 'Hints' on the preceding page, as well as the information on secondary triads in the textbook (p 58).
- You can work in two alternative ways to prepare for the exercises:
  1. First do the technical exercises I a-b and II a-d starting on p 370, as preparatory work.
  2. Harmonize the melodies, using the tips below as necessary.

A7 IV

a



Schubert: Sechzehn Deutsche Tänze Op. 33 No. 10

IF YOU NEED HELP

…with sections marked with numbers ① – ②:

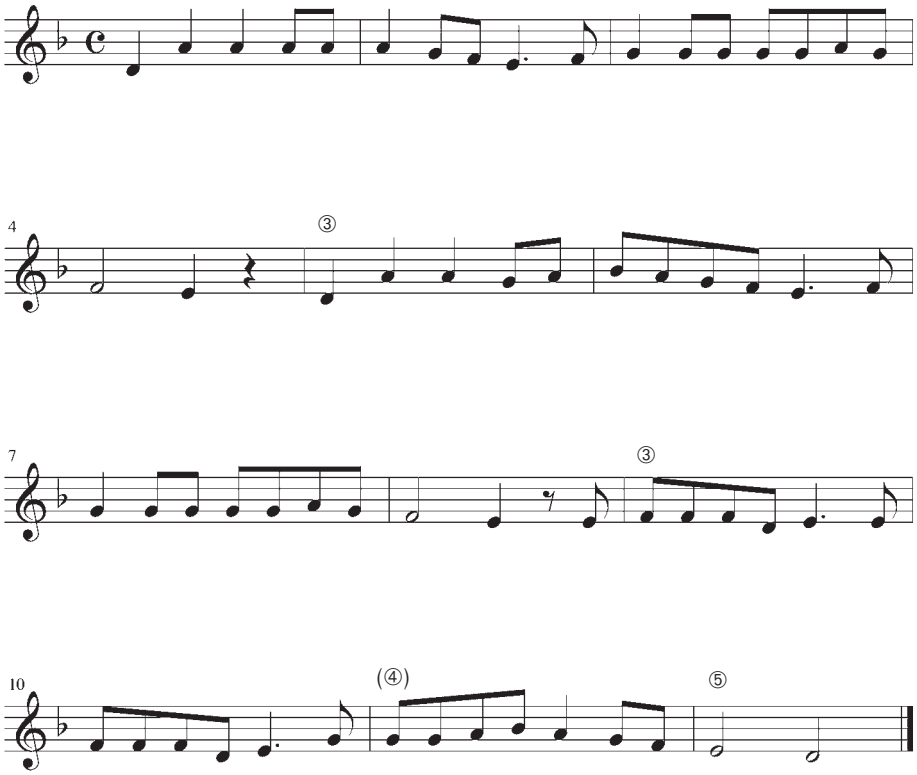
① The 1st or 3rd degree of the scale, see 'Hints' on the preceding page.

② $V^{6\text{-}5}_{4\text{-}3}$ cadence.

* alternatively the note D♯ can be interpreted as a note of the chord, see '$^{sub}V^7/V$' on p 114.

Text book: Pages 58–61

b **Lullaby**



Norwegian/Swedish folk song

③ Technical exercise Ia-b (especially b) together with IIa-d on the following pages. Also study 'Hints' on p 366 – in particular the footnote regarding 'added notes' in VI.

Remember that the technical exercises are general.

④ (Advanced tips: II^7 in root position (see eg b in the left column on p 60), there is an implied continuation to V^7 or $V^{6\text{-}5}_{4\text{-}3}$.

⑤ If you have chosen to harmonize the last part of bar 11 using A7 (for alternative solutions, see ④) this chord can be suspended in the final bar, ie A7/D–Dm.

Text book: Pages 58–61

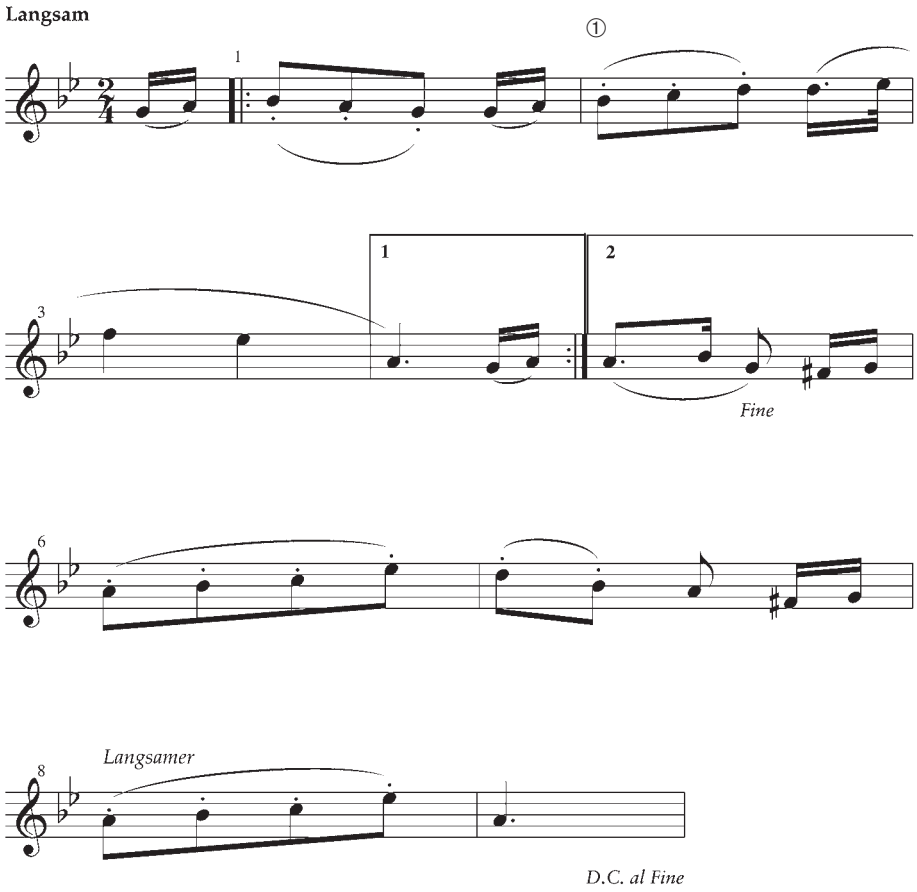
Secondary triads in a minor key

3 Harmonize the Schumann example below. Use primary triads as well as secondary triads.

- Read 'Use of III and ♭VII' on p 60 (♭VII = V/III).
- Harmonic rhythm: eighth notes as well as quarter notes.

A7 IV

Schumann: 'Armes Weisenkind', Album für die Jugend
Original: A minor



① The 3rd–4th–5th degrees of the scale: Complete the technical exercise III on p 372 (only some sections are directly applicable).

Text book: Pages 58–61

I

Which alternative chord can you use instead of IV in these chord progressions? See 'Substitute chords – VI' on p 58.

a

Cm	Fm	Cm/G	G7	Cm
	↓			
	A♭			
Dm	Gm	Dm/A	A7	Dm
	↓			
Gm	Cm	Gm/D	D7	Gm
	↓			
Em	Am	Em/B	B7	Em
	↓			

b

How can I and V7 be varied in the chord progressions below, so that the harmonic rhythm increases? See 'Substitute chords – VI' on p 58 and 'Expanding V7 to II6/5/II6–V7' on p 60. Write both alternatives, II6/5 and II6, as shown in the first example.

	I		V7		I
	Am	Am	E7	E7	Am
		↓	↓		
can become:	Am	*F*	*Dm6*	*E7*	Am
			Dm6no5		
	Bm	Bm	F♯7	F♯7	Bm
		↓	↓		
can become:	Bm				Bm
	Fm	Fm	C7	C7	Fm
		↓	↓		
can become:	Fm				Fm

Text book: Pages 58–61

Technical exercises: Expansion of I and V^7 (II^6, II$^6_5$ and VI)

Before starting the following exercises, it would be an advantage if you worked in parallel by playing the cadences included in exercises 4a and b on p 373.

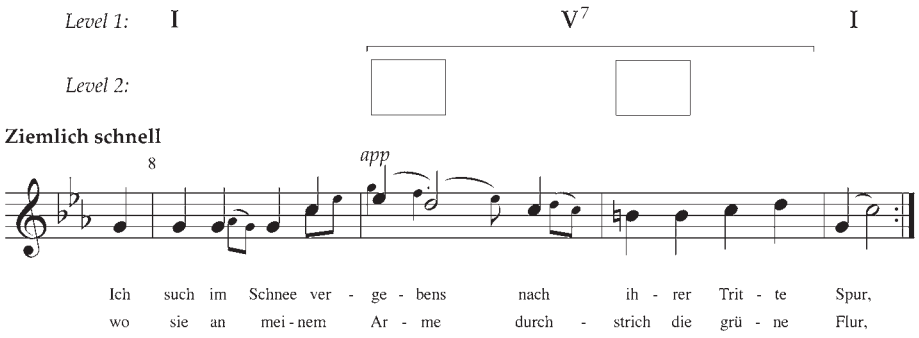
II

In the music examples a-d, expand the harmony by varying V^7 and I–V^7 in the same way as in eg Ib on the preceding page and the hints in the box on p 366.

- Develop the harmony given in 'Level 1', notating it in the 'Level 2' boxes.

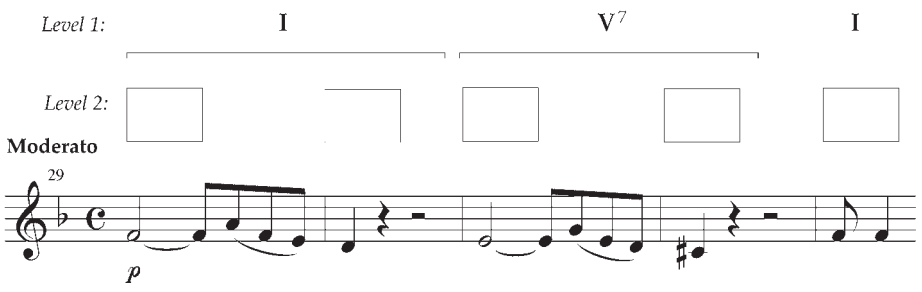
A7

a



Schubert: 'Erstarrung', Winterreise Op. 89 No. 4

b

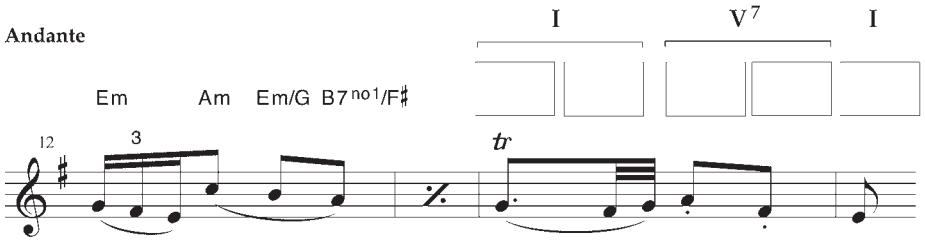


Haydn: Sinfonia No. 53, IV

Haydn varies the bass notes on the 3rd beat in bars 29 and 31, while all the other chords are in root position. Notate your suggestions for the bass notes in the bars indicated.

c

- Use a turn-around to give weight at the end of a phrase:

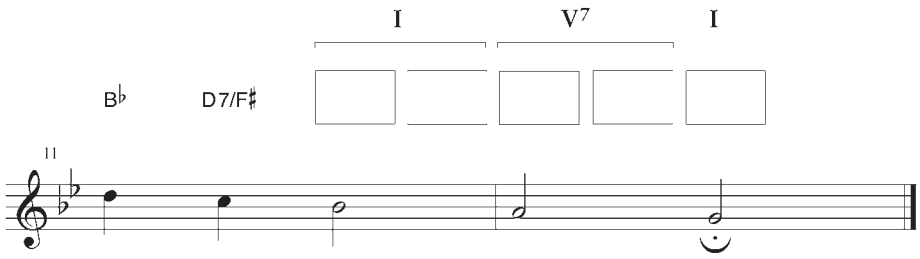


Haydn: Symphony No. 4, II
Original: D minor

Text book: Pages 58–61

d

- Use a turn-around to give weight at the end of a phrase:



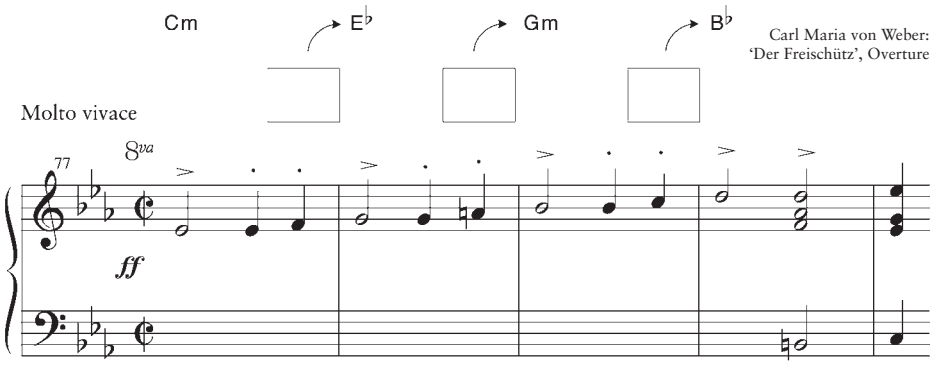
J. S. Bach: 'Christ lag in Todesbanden' Cantata No. 4
Original: E minor

III

Harmonize the melody below to practice using secondary dominants in a minor key, as well as harmonizing the 3rd-4th-5th degrees of the scale, see p 60.

A7 **IV**

- Write the example in 4-part harmony (close position*), with the root in the bass moving in contrary motion with the melody, using register transfer (an ascending octave leap in this case) as necessary.
- Notate the secondary dominants in the boxes, with respect to the chords written above.
- V as a minor triad is written V♭.



Carl Maria von Weber:
'Der Freischütz', Overture

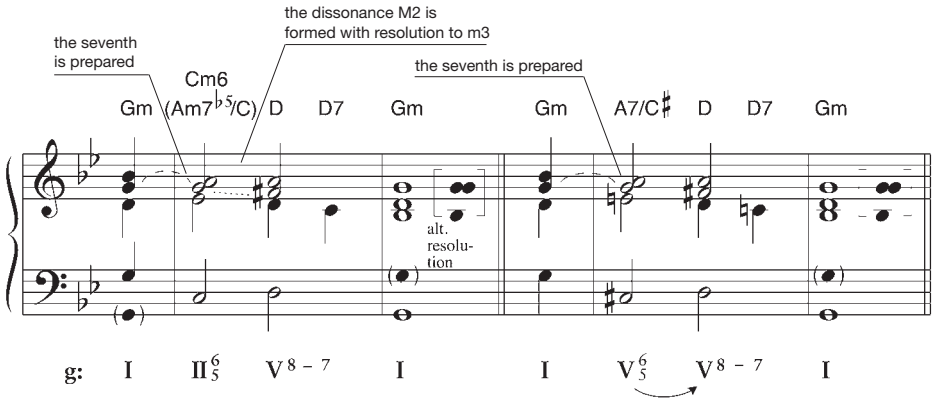
* See p 12 (the augmented interval that occurs in the second voice in bar 78 is found in Weber's original score).

Text book: Pages 58–61

Cadences in a minor key (II^6, II$^6_5$ and V^7/V)

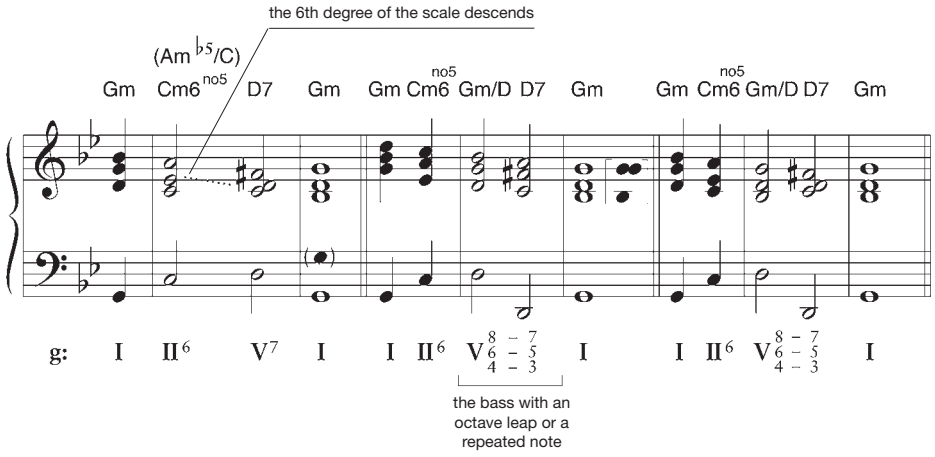
4 Practise playing the cadences below on the piano in all minor keys up to 2 sharps and 4 flats. Increase the number of sharps and flats later, so that you will be able to master all the minor keys.

a *cadences using II^{7}or V^7/V (both in first inversion).**



b *cadences using II^6 or II^6–V$^{6-5}_{4-3}$.***

Note that the voice-leading of II^6 continuing directly to V^7 (bar 1) is different from the corresponding chord progression in a major key (compare p 331). This is because in a minor key, voice-leading from a descending to an ascending leading note is avoided (see 'II^6 och II$^6_5$ ', p 62).



* using chord symbols, the first inversion of II7 is written as IV with an added sixth (in G minor: Cm6).
**II^6 is written Am^{-5}/C or Cm6^{no5}.

Text book: Pages 62–63

5 Harmonize the melodies a-b below and on the next page to practice cadences and tonicisation. (A7) (IV) (♫)

- Read 'Cadences in a minor key' on p 62 and 'Tonicisation in a minor key' on p 64 in the textbook.
- As before, you can work in two alternate ways:
  1. First do the technical exercises IV a-d and V a-c, starting on p 376, as preparatory work.
  2. Harmonize the melodies, using the tips below as necessary.

a *Harmonic rhythm:* change chords every other bar, or every bar, or sometimes on each quarter note. (It is possible for a chord to continue for more than two bars.)

C. M. Bellman: 'Minore' Epistle No 73 (2nd section)

① See 'Hints' on p 366, the 1st or 3rd degree of the scale (expansion of I).

② Technical exercises IVa-d and Va-c, starting on p 376.

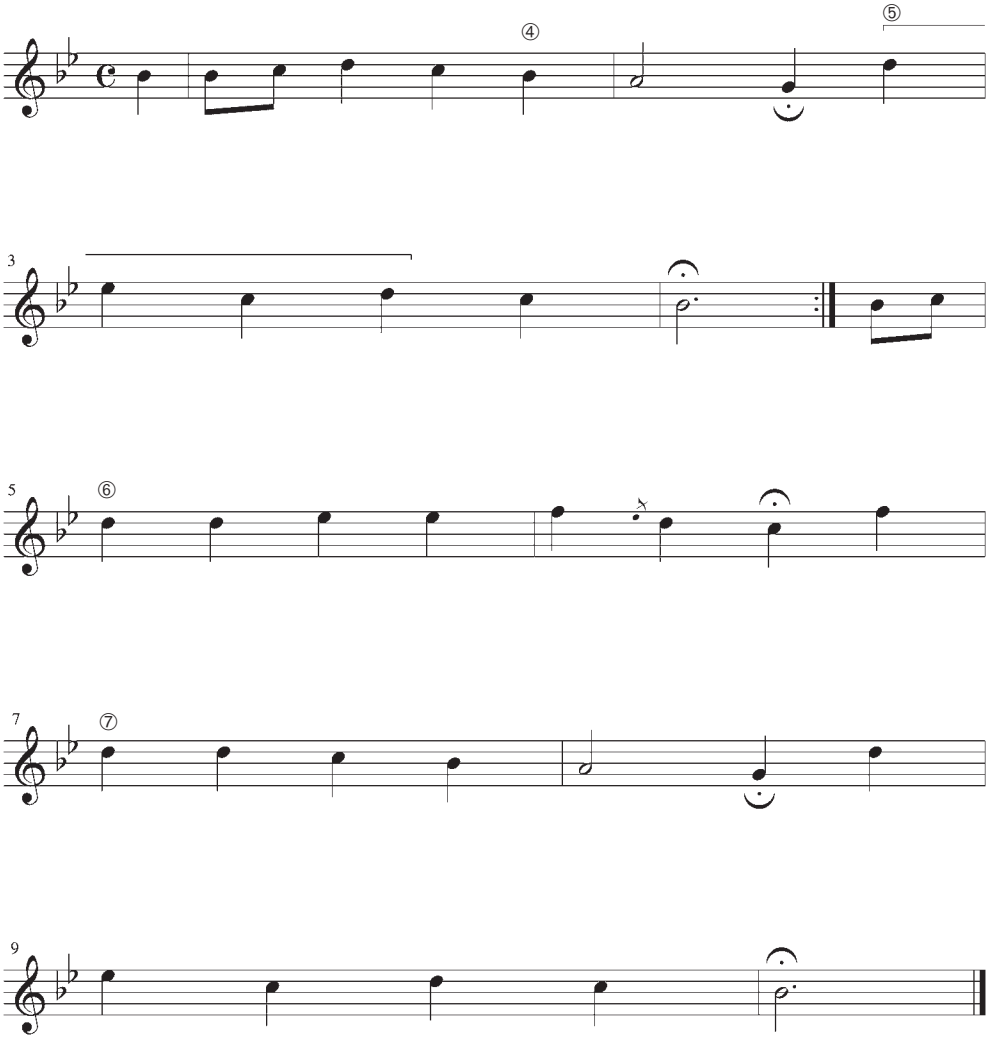
③ Determine the goal of the phrase, and prepare this with the appropriate secondary dominant, see 'Tonicisation of IV, V, VI and ♭VII' (also applicable to III) on p 64.

Remember that the technical exercises are general.

Text book: Pages 62–65

Cadences in a minor key (II^6, II^6_5) – Tonicisation

b *Note that the chorale below is in a major key.* This example will give you practice in changing between a major key and its relative minor, cf eg 2 on p 65. The changes are closer together in that example.



'Herr Christ, der ein'ge Gott's Sohn'
(J. S. Bach BWV 164)

④ Cadence, see p 373 (eg a).

⑤ Choose a goal for the phrase. Starting with the key of G minor, tonicisation can occur via a circle of fifths (see p 382, exercise 8, No. 3 or the music example in the right column on p 64).*

⑥ Starting from B♭, descending thirds can be used (eg 2 on p 37 including II).

⑦ Choose a goal for the phrase. Exercise 8, No. 1-4 (especially No. 2), in connection with the technical exercise VII, will give you hints on how to modulate from a major key to the relative minor (starting on p 382).

* The chord of B♭ is the goal of the cycle of fifths, which can be in first inversion in order to 'save' root position for the fermata in b 4.

Text book: Pages 62–65

IV

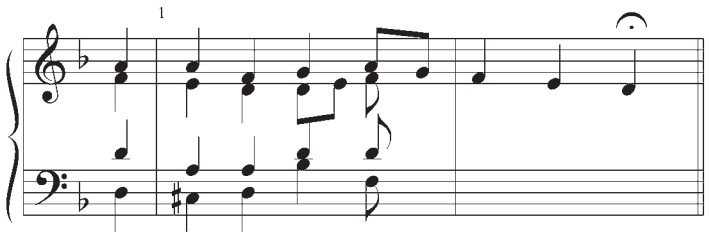
Choose one of the cadences, which you have practiced in exercise 4 on p 373, to finish the phrases a-d below. Complete the given piece by adding a bass and two inner voices.

- Choose the type of cadence you prefer if several alternatives are possible.
- Note that V $\frac{6\text{-}5}{4\text{-}3}$ in the example is regarded as two chords (two boxes), despite the fact that $\frac{6\text{-}5}{4\text{-}3}$ is a decoration of one chord.
- Choose between the following cadential alternatives – notated in C minor in this example:

Fm6	–		G(7)	–	Cm
Fm6^{no5}	–	(Cm/G –)	G7	–	Cm
D7/F♯		–	G(7)	–	Cm (can be omitted)

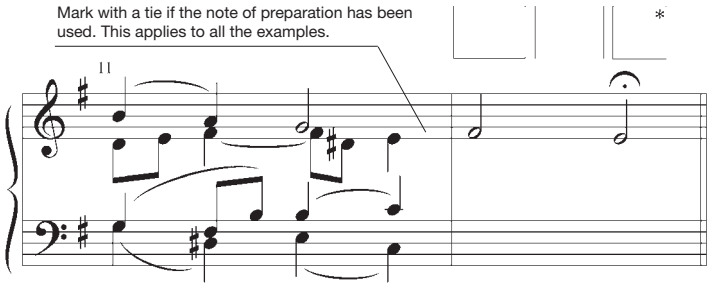
IV

a



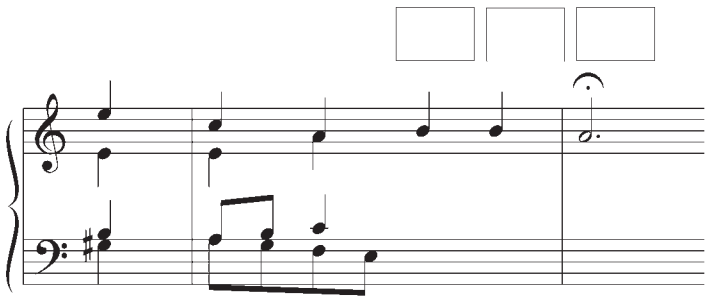
J. S. Bach: 'Vater unser im Himmelreich', BWV 102
(transposed up a major 2nd)

b



J. S. Bach: Cantata No. 4, 'Christ lag in Todesbanden'

c



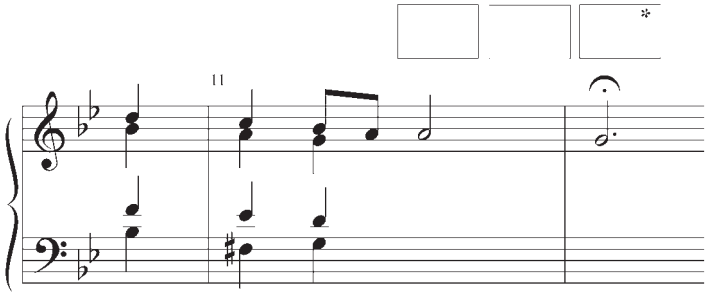
J. S. Bach: Chorale No. 88

* finish with the major tonic, called the Picardy third, which was common in the Baroque period, see p 88.

Text book: Pages 62–63

Technical exercises: Cadences in a minor key

d

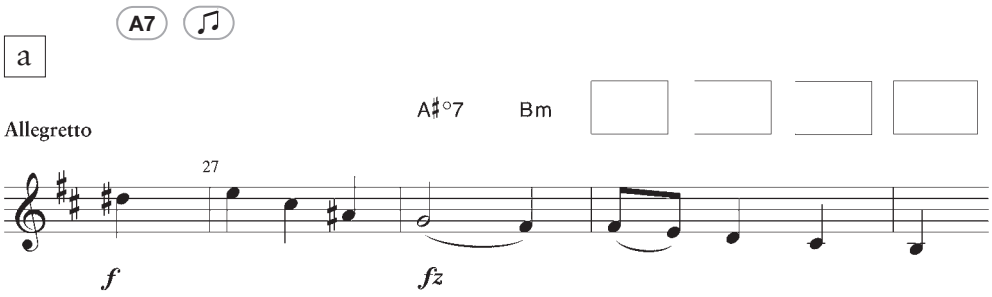


J. S. Bach: St. John's Passion, No. 7, last phrase

V Write cadences using the formulae you practiced on the preceding page.

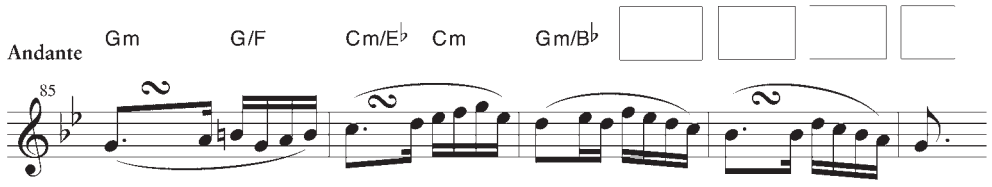
- Note that the melody in the cadences also contains nonharmonic notes which is resolved down to a note of the chord. Identify the nonharmonic notes, using standard abbreviations (app., s. etc).

a



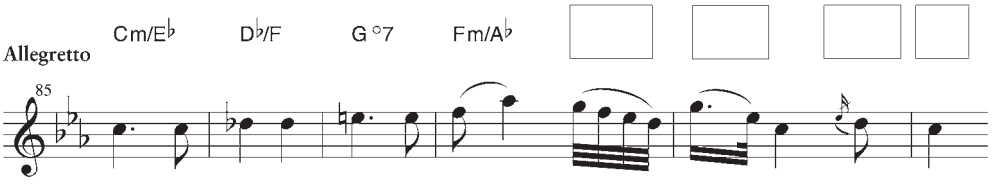
Haydn: Symphony No. 52, III Transposed

b



Beethoven: Piano Sonata No. 19, I

c



Mozart: 'Komm an mein Herz' Konzert-Arie (KV 374)

Text book: Pages 62–63

* see footnote on the preceding page.

6 Practise playing the chord progression 1-7 below on the piano in all minor keys up to 2 sharps and 4 flats. Increase the number of sharps and flats later, so that you will be able to master all the minor keys.

Hints preceding the exercises on the following pages

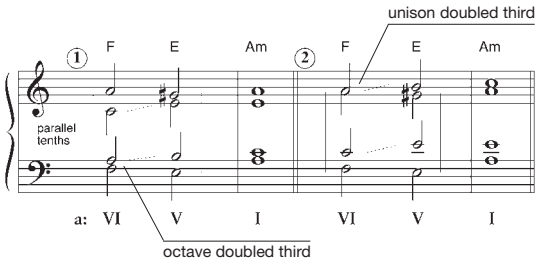
A particular type of voice-leading is necessary when connecting IV6 or VI to V, to avoid:
1) consecutive fifths and octaves 2) moving from the flattened 6th to the sharpened 7th (A2).

The following principles are applicable to four-part voice-leading in all examples below:

1. First notate the bass.
2. Write the part that moves in parallel tenths or thirds with the bass – if this is not already in the melody, as in eg 1.

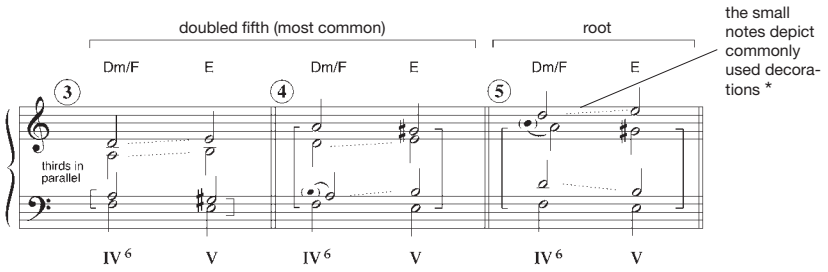
Applicable when using VI:

3. Add the parts so that VI is a complete triad with the third doubled as a unison or an octave.
4. The two voices that do not participate in the basic movement in parallel, rise to the nearest root and fifth respectively.

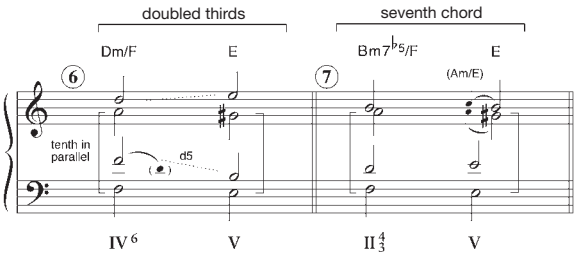


Applicable when using IV6 after applying the first two principles above:

3. Decide which note – the root or the fifth – is most suitable to double, as a unison or an octave, to make a four-part chord.
4. The voices which have the doubled notes move in contrary motion to the nearest note of the chord.



- Eg 6 below shows that the third sometimes can be doubled in IV6, and continue on via a tritone leap to the fifth in V, occasionally with melodic movement via the root.
- Parallel movement in thirds/tenths is also used in II7 with the 6th degree of the scale as a bass note, see eg 7. As this chord has four notes, there is no doubling.



* alternately eg 4 can be decorated with 9-8 (the notes E-D) or preceded by VI7, while the decorations B-A in eg 5 are sometimes inverted as B-A.

Text book: Pages 62–63

Cadences in a minor key – chords based on the 6th degree

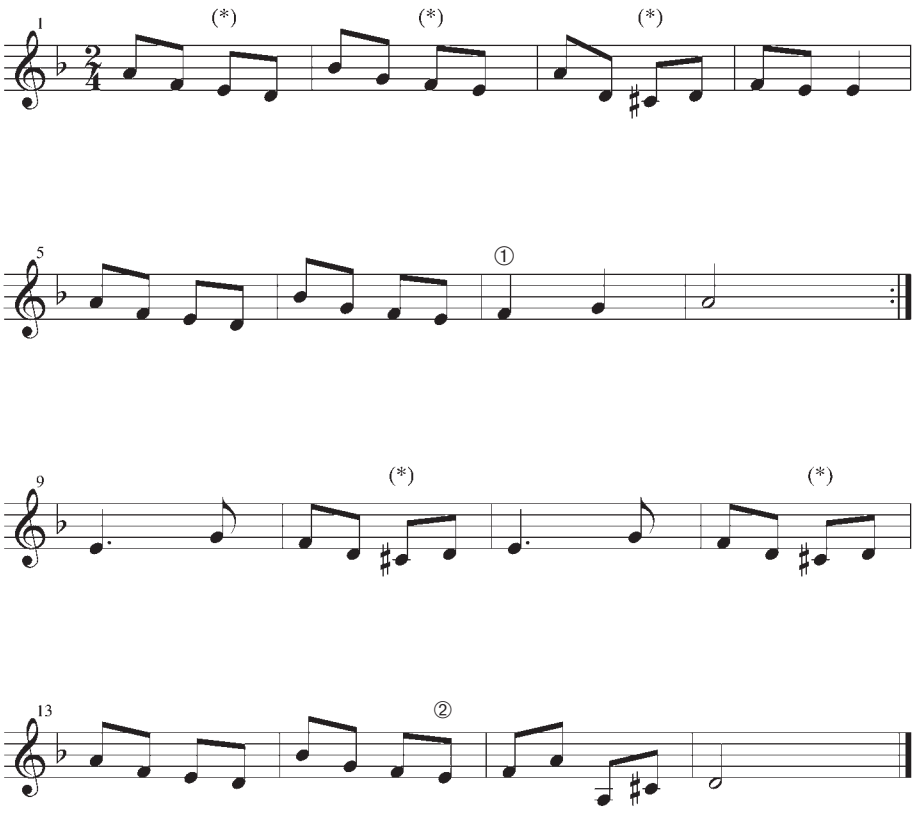
7 Harmonize the melodies a-b below and on the following page to practice writing cadences, and also tonicisation in b.

- Read the textbook regarding the Phrygian cadence at the half close, see 'Chords based on the 6th degree' on p 62 as well as 'Hints' on the preceding page.

- As before, you can work in two alternate ways:
  1. First do the technical exercises VI a-c on p 381, as preparatory work.
  2. Harmonize the melodies, using the tips after each melody, as necessary.

A7 IV

a Harmonic rhythm: change chords every bar* or every quarter note at a cadence. The harmonic rhythm can also increase (eighth notes), for example *before* a cadence.



C. M. Bellman: 'Minore' Epistle No 73

① Technical exercise VI a-c.

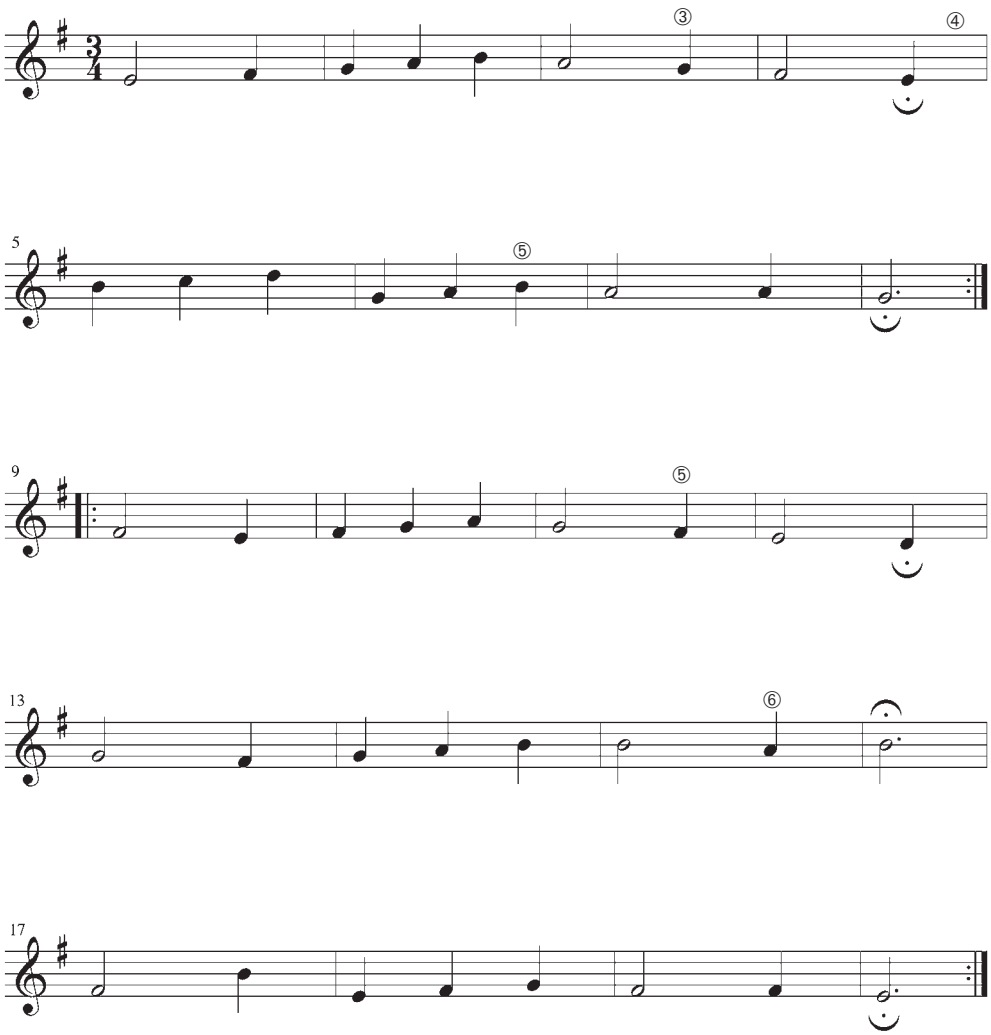
② Cadence (for example exercise 6, eg 7 on the preceding page)

* the third note in bars that have four eighth notes can be interpreted as an appoggiatura (app.).

Text book: Pages 62–63

Cadences in a minor key – Chords based on the 6th degree – Tonicisation

b First of all, choose an appropriate cadence at the end of the phrase, keeping in mind possible tonicisation.*



'Jesu, du mein liebsten Leben' (J. S. Bach: BWV 356)

③ Cadence, p 373, eg 4a

④ It is possible to use the nonfunctional chord progression I-III between two phrases in a minor key (see 'Hints', second last line on p 382).

⑤ Cadence, p 331, eg 9a.

⑥ Read 'Hints', p 378, eg 3 (and 5). The note B in b15 can be interpreted as a stepwise descending appoggiatura to the note A, so that the whole of b 15 will be harmonized by *one* chord.

* To simplify the exercise, harmonize the bars containing three notes (quarter notes) with one chord (or two) instead of the usual note-against-note chorale harmonization.

Text book: Pages 62–65

Technical exercises: Chords based on the 6th degree

VI In example a-c, use chords based on the 6th degree (VI, IV^6) for a Phrygian cadence at the half-close.

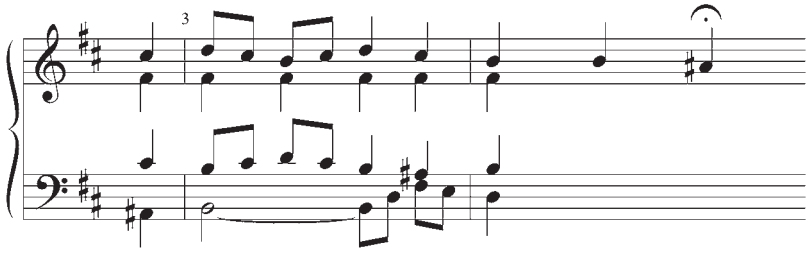
- Use the voice leading principles that have been given for each of the three chords on p 378 and notate the version you have chosen in four-part harmony:

A7

a

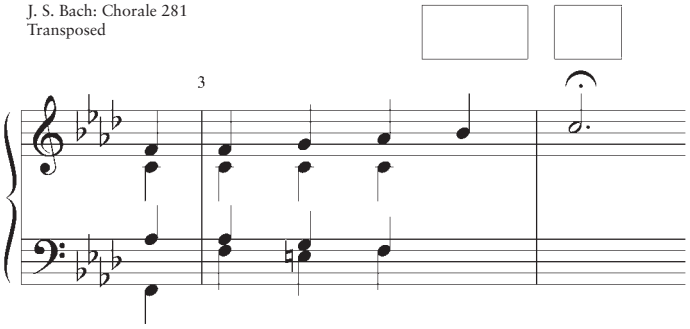
notate two different cadences
using chord symbols:

J. S. Bach: 'Da der Herr Christ zu Tische saß'
BWV 285, Transposed



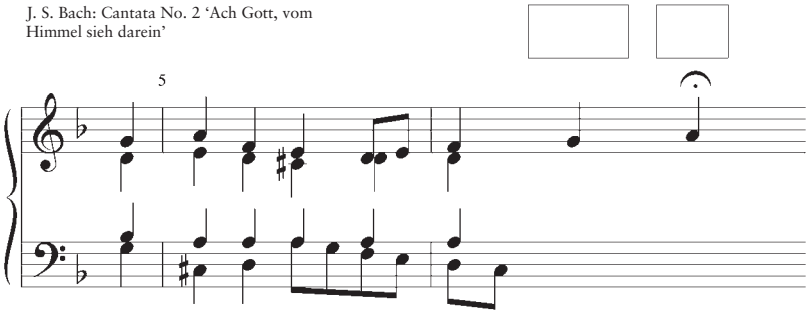
b

J. S. Bach: Chorale 281
Transposed



c

J. S. Bach: Cantata No. 2 'Ach Gott, vom
Himmel sieh darein'



Text book: Pages 62–63

8 Practise playing the chord progressions below on the piano in all minor keys.

- It is an advantage for the melody to consist of scale degrees 3-4-5 for the first three chords in egs ① and ②. It is also suitable to start with the 5th degree of the scale in the melody in egs ③ and ④.

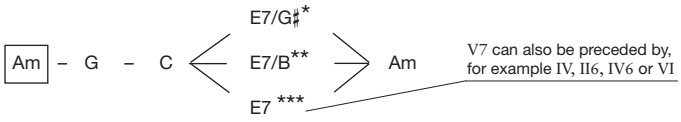
Hints

Here are the usual ways to modulate to and from the relative key, notated in A minor. The pivot chord is marked with a frame.

① ***via V/III to III as well as directly back to I***

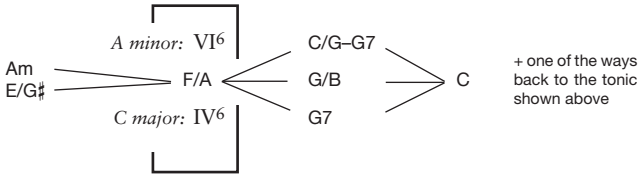
Am – G – C – (C/B) – Am

② ***via V/III to III as well as back via V7***



③ ***cycle of fifths via V7/III to III or alternatively back via a chromatic bass using V7***

④ ***via VI which pivots to IV in the relative key (often in first inversion)***



In eg 3 above, the harmonic movement is not completed to the goal III for the lower way. Despite this, the relative key is quite apparent. The chord progression can be analysed without the pivot, as follows:

a: I IV V7/III V7 I

Note that tonicisation can occur more freely between the phrases or sections, eg:

first phrase				second phrase			
Am	Am	E7	E7	G7	C	G7	C

The bridge to III can also occur directly via VI, see p 64.

* Baroque period or later.
** Classical period or later. As E7/B with the root omitted ie V^0_6 (VII6) also in the Baroque period.
*** Romantic period or later.

Text book: Pages 64-65

Technical exercises: Tonicisation of III and return to I

VII

Harmonize the following melodies to practice tonicisation of III in a minor key.

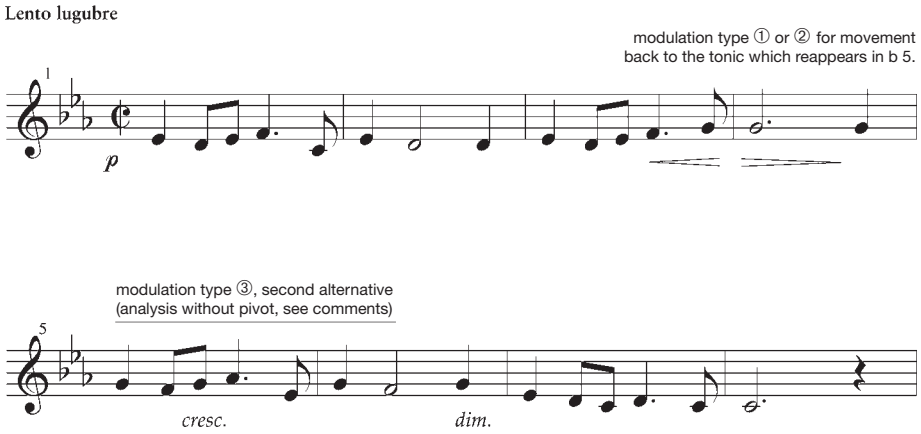
- Use the harmonic pattern for the tonicisation of III and the return according to examples ①-④ on the preceding page.

a

- Shape the tonicisation in b 3-4 from the melodic movement 3-4-5.*

A7 IV

Grieg: Lyric Pieces, Ballad, Op. 65, No. 5

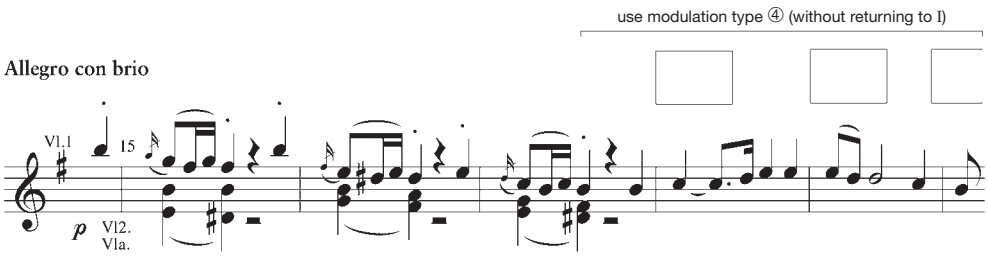


b

- In analysis, notate the pivot chord on two levels, as shown in examples 2 and 3 on p 41.
- Complete the background in vl 2 and vla – now in whole notes.

A7 IV

Haydn: Symphony No. 44, I



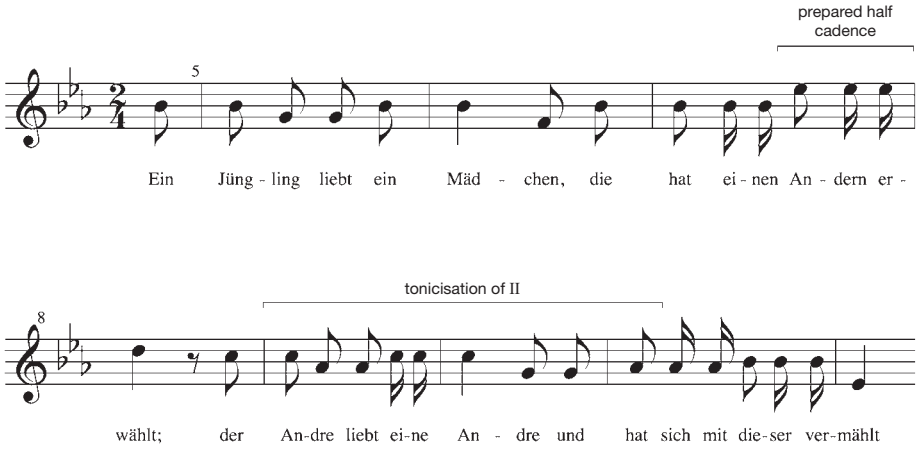
* Grieg utilises the possibility to vary V/III ie that V7 in the relative key becomes II–V^{0}_{6} (VII6) with an increased harmonic rhythm as a result.

Text book: Pages 64-65

VIII

Harmonize the melody below in a major key. IV

- Avoid the dominant/secondary dominant chord in root position except in a cadence.



Schumann: 'Ein Jüngling liebt ein Mädchen', Dichterliebe XI

IX

Practise playing the chord progressions below on the piano in all major keys. You may begin with a cadence to establish the introductory key.

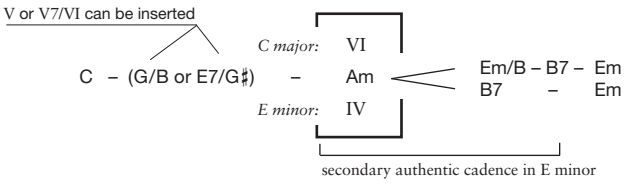
Hints

The tonicisation of III normally occurs according to two basic principles – notated here in C major:

ⓐ ***directly (where I is later interpreted as VI)***

C < Em/B – B7 – Em
B7 – Em

ⓑ ***via VI which pivots to IV in the mediant (III) key***



Text book: Pages 40–41

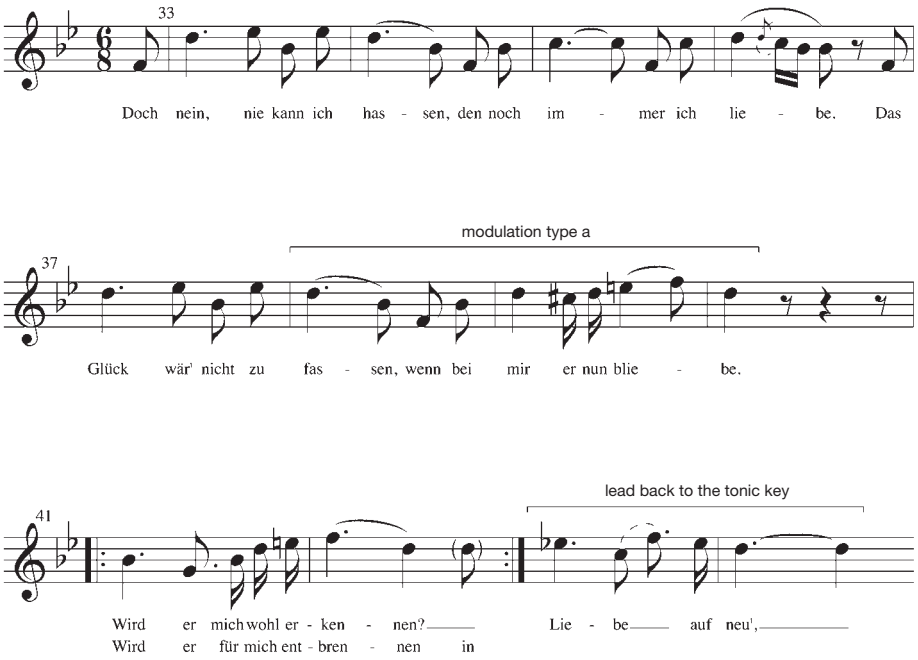
Tonicisation of III in a major key

X Harmonize the music example below in order to practise tonicisation of III according to the types of modulation shown on the previous page.

- Notate the pivot chord on two levels, as shown in examples 2 and 3 on p 41.

IV

Larghetto Adolphe Adam: 'Le Postillon de Lonjumeau', Aria, II



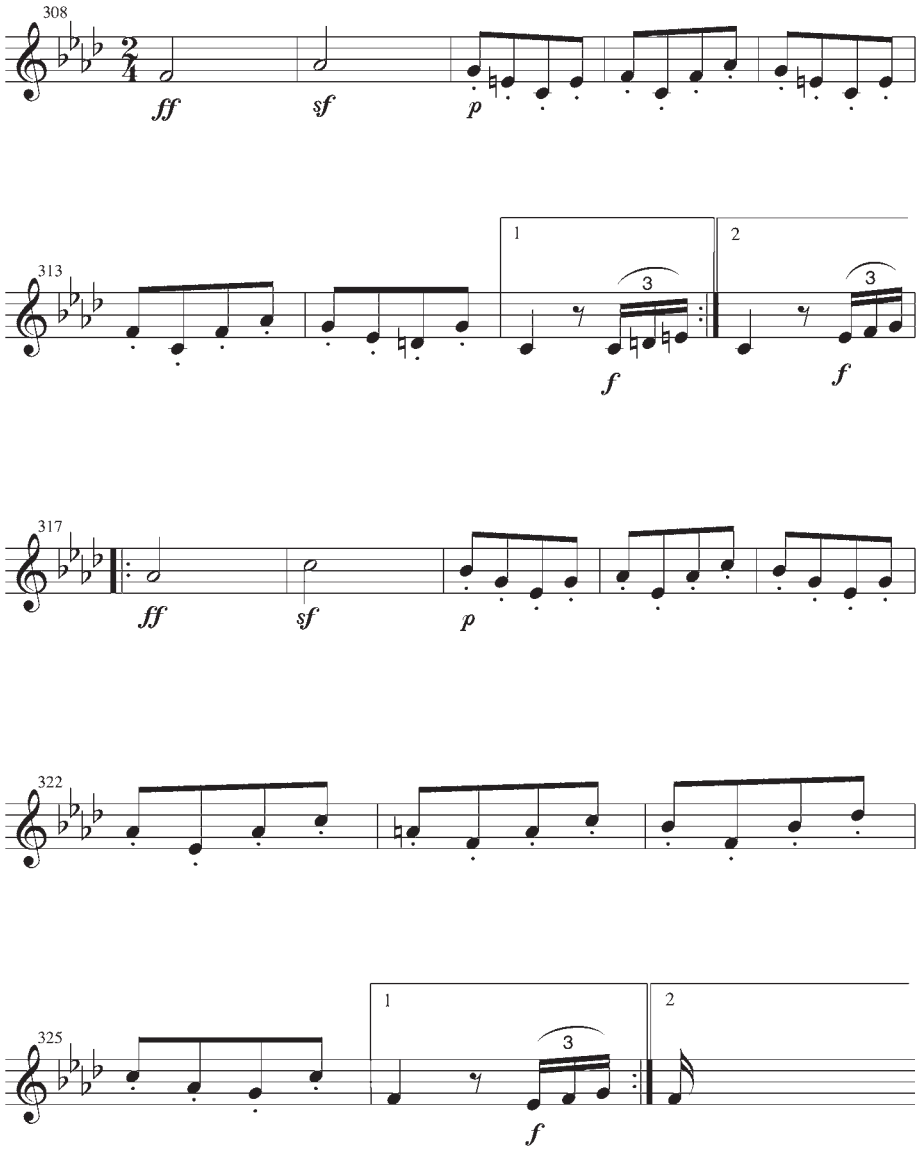
* Adam uses chromatic decoration in bar 37: F-F♯-G-G♭

Text book: Pages 40–41

9

- Decide which keys Beethoven chose as the goal for the tonicisation. End each section with $V^{6\text{-}5}_{4\text{-}3}$ cadence. *
- The introduction of the second part of the piece is analysed in the simplest way by modulating to a new key, and then returning to the main key at an appropriate place.

A7 IV



Beethoven: Piano Sonata No. 23, Op. 57

* The chords are in root position in Beethoven's original manuscript, with the bass and chords using the same rhythm as the melody.

Text book: Pages 64-65

10 Analyse the harmony of the following music examples. Use Roman numerals for each new chord.

Schubert: Minuet, No. 4 (b 1-8), 'Zwanzig Menuette' (D41)
Beethoven: 'Für Elise"(t 1-26)
Handel: Saraband
Schumann: 'Wilder Reiter', Album für die Jügend (Op 68)

11 Compose your own melody using tonicisations that Beethoven chose in exercise 9. Use Beethoven's form and chord progressions as a basis for your own melody, or write your own free composition.

Text book: Pages 64-65

Before beginning the following exercises, you should read the introductory facts on ninths chords on p 108, as well as completing exercise 9 on p 431.

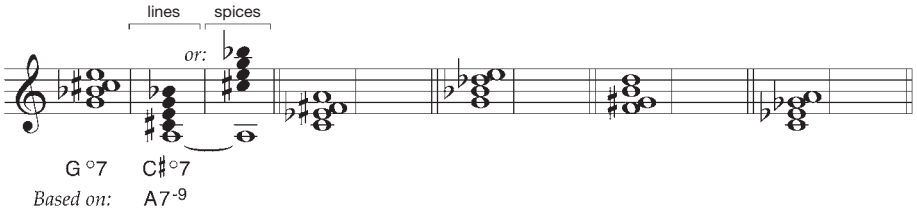
12

Name the root of each of these incomplete dominant ninth chords, with respect to the following chord of resolution, see p 67, eg 2:

D♯°7 – Em	F♯°7 – Gm	G♯°7 – Am
Dm7♭5 – E♭	Gm7♭5 – A♭	C♯m7♭5 – D
D°7 – E♭m	G°7 – A♭m	E°7 – Fm
Em7♭5 – F	Am7♭5 – B♭	G♯m7♭5 – A

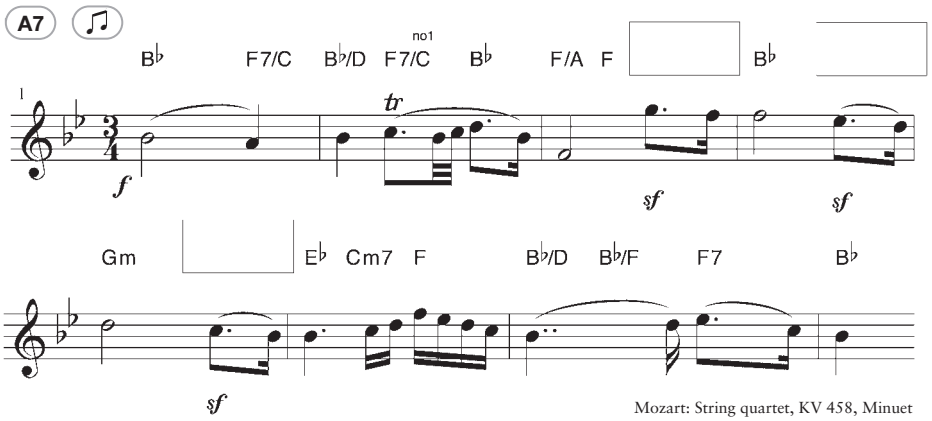
13

If the diminished seventh chord is not followed by the tonic or a temporary tonic, it can be more difficult to determine the root of the chord. In the exercise below, organize the notes so they create a seventh chord consisting of stacked thirds, ie the notes are either in the spaces or on the lines; see the example below. Notate one alternative. Choose the root of the chord in the same way as in the exercise above.



14

In bars 3-5, Mozart prepares every upbeat with a diminished seventh chord ($V_{\flat 9}^{0}$ or VII°7) or alternatively the half diminished chord (V_{9}^{0} or VII⌀7), as a dominant or secondary dominant related to the chord to follow. Choose suitable chords.



Mozart: String quartet, KV 458, Minuet

Text book: Pages 66–67

Resolution of the incomplete dominant ninth chord

Hints preceding the exercises on the following pages

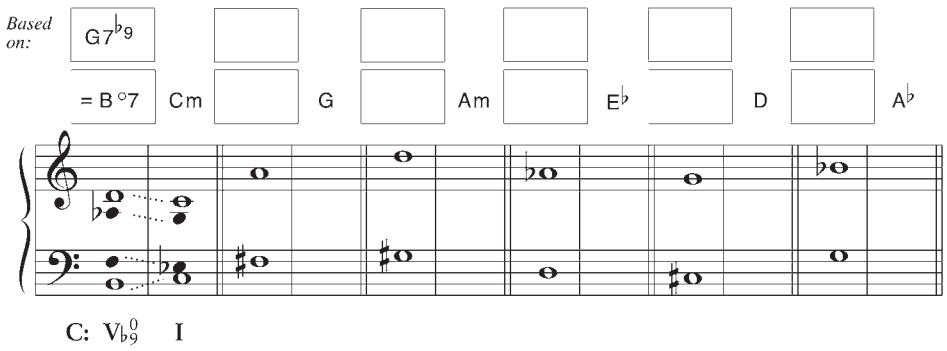
Page 66 deals with the basic principles when resolving the incomplete ninth chord. Before commencing the following exercises, which involve $V\flat^{0}_{9}$ with different notes in the bass, you may consider these points:

- if the fifth is placed below the ninth, the fifth will rise to the third in the chord of resolution.*
- the above ***cannot*** occur when the fifth is in the melody, or in close position with the seventh in the melody.
- there is *only one way* to resolve the bass, because the third, seventh and minor ninth are all leading notes, and when the fifth is in the bass, it must rise (point 1).
- the ***third*** and the ***ninth*** – and above all the minor ninth – resolve almost without exception by step.**
- the ***fifth*** is relatively free, except for the situation described in point 1.
- the ***seventh*** can sometimes rise (as in V7) – normally not in the bass.

15 *The incomplete dominant ninth with the third in the bass*

a

- Decide which dominant ninth chords will precede the tonic chords given in the introductory example below.
- If the chord of resolution is a major triad, the dominant ninth chord with a major ninth is used, while the minor ninth is used when resolving to a minor triad.
- Eliminate the root in the dominant ninth chord, creating $V\flat^{0}_{9}$ or V^{0}_{9}. Complete the given melody and bass, and resolve the chords.

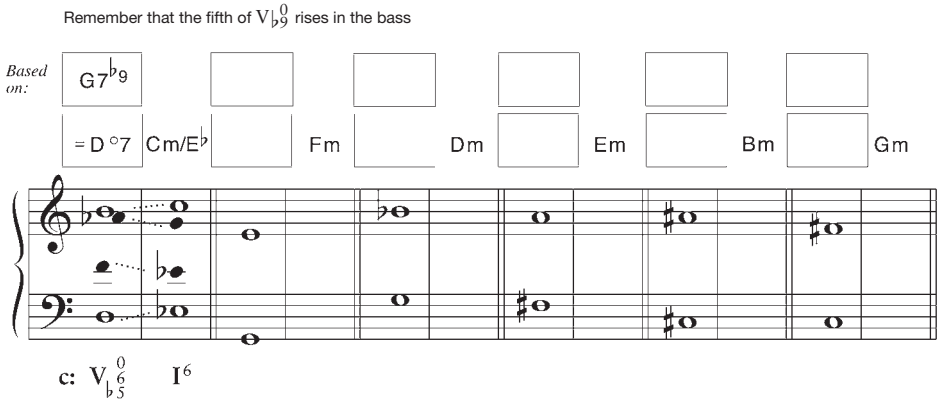


* sometimes falls to the fifth in the chord of resolution, see p 392.

** can resolve by falling to the seventh in the next chord in a cycle of fifths, see 'Chromatic diminished chord', p 194. The major ninth is quite free as a melody note; see 'Resolution of V9', p 108.

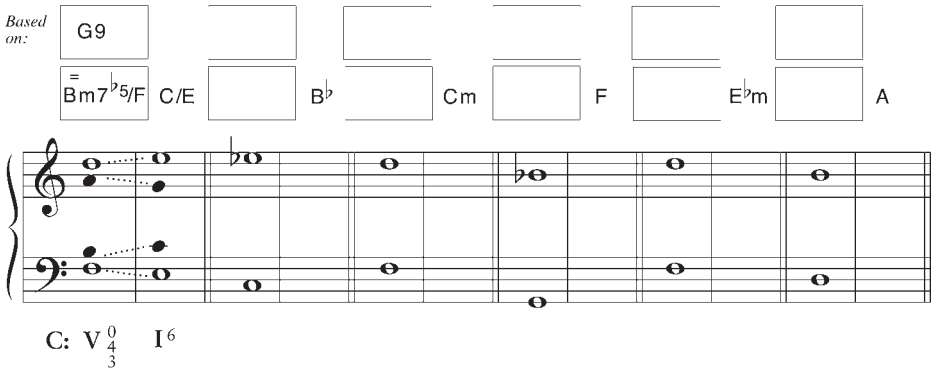
Text book: Pages 68–69

b *The incomplete dominant ninth chord with the fifth or seventh in the bass:*



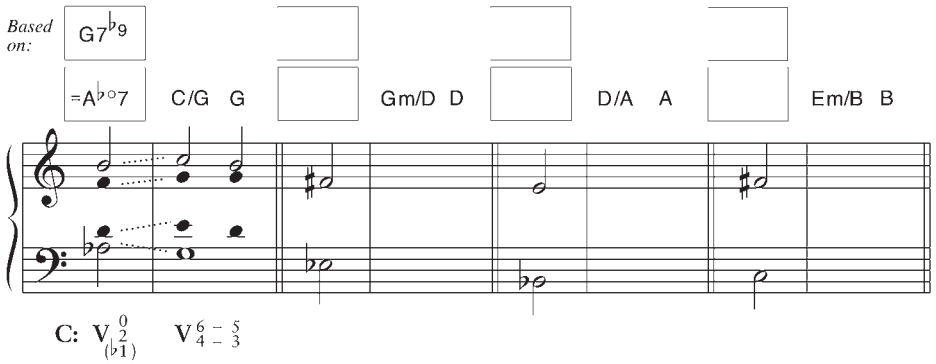
c *The incomplete dominant ninth chord with the fifth or seventh in the bass in open position:*

- As in the previous exercise, except in open position.



d *The incomplete dominant ninth chord with the minor ninth in the bass:*

- The following voice leading exercises take advantage of the fact that the incomplete ninth chord with the minor ninth in the bass leads to the cadential $\frac{6}{4}$ chord – which in turn continues on to the dominant. In the introductory example, the seventh rises so that it is possible to allow the bass to be doubled in the usual way in V^{6-5}_{4-3}.



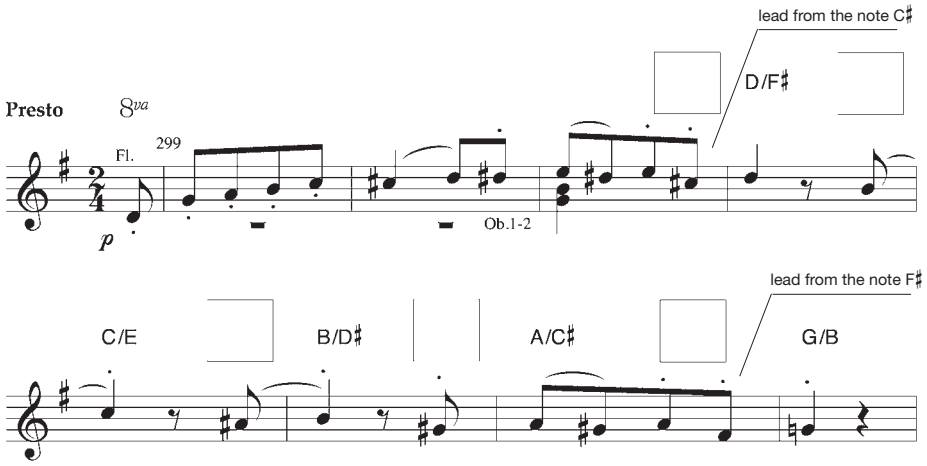
Text book: Pages 68–69

Resolution of the incomplete dominant ninth chord

16 Choose the dominant or secondary dominant for each notated chord of resolution, and write the $V_{\flat 9}^{0}$ of these dominants in the boxes. (Both composers have chosen to only use the minor ninth, whether the chord of resolution is major or minor).

a

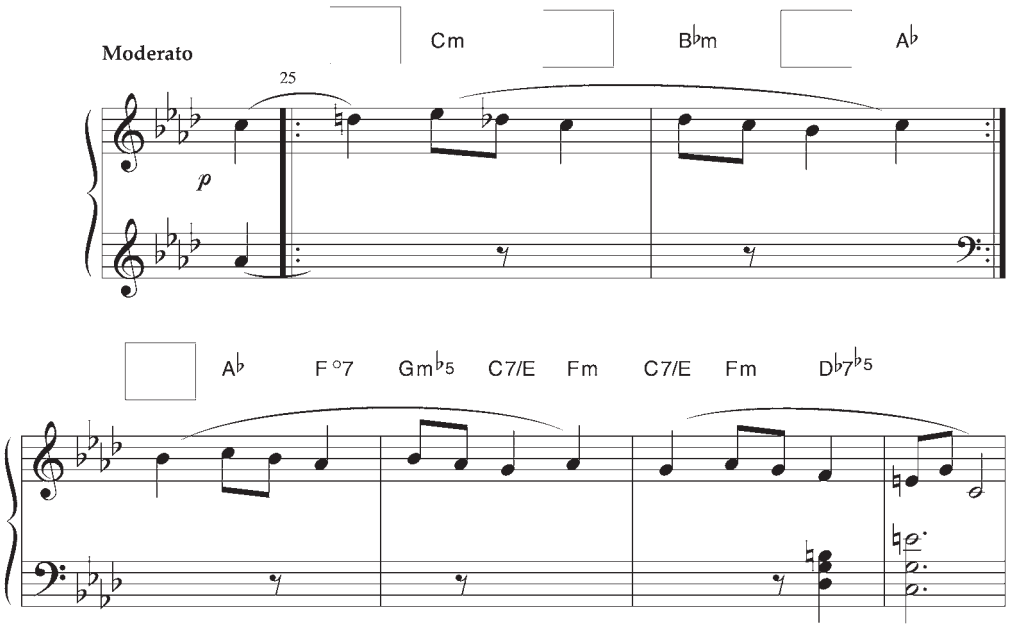
- Continue the two oboe parts which begin in bar 301. As the section is written for three voices, the fifth which is less important has been left out of each $V_{\flat 9}^{0}$ chord ie the note D in a B°7 resolving to C.



Haydn: Symphony No. 92, IV

b

- Complete the example by adding three parts below the melody, beginning in the treble clef. (Note the bass clef in bar 27).

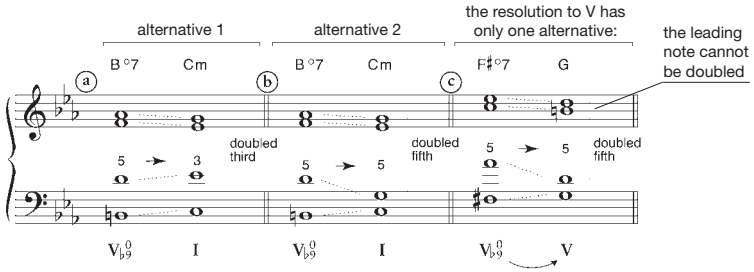


Chopin: Mazurka Op. 24 No. 3

Text book: Pages 68–69

Hints preceding the exercises on the following pages

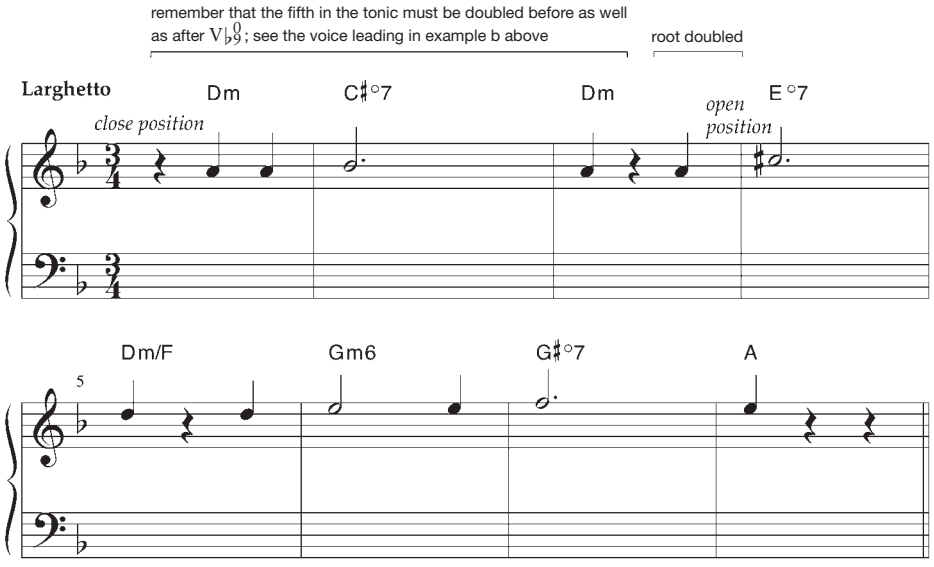
When resolving the incomplete dominant ninth chord written as stacked thirds, there are two ways to avoid consecutive fifths between the falling ninth and the fifth in a lower voice in the chord. The first way is to let the fifth rise to the third, resulting in a doubled third (a), which you have learnt in a previous exercise. The second way is to let the fifth in the chord leap down a fifth to the fifth in the chord of resolution, resulting in a doubled fifth (b).



Alternative 1 (with a doubled third) is not normally used for the incomplete ninth chord with a V/V function, because the leading note in the chord of resolution V is not usually doubled. In this case, only alternative 2 is applicable; see eg c above.

17 Mozart uses $V_{\flat 9}^{0}$ with the third in the bass (b 2 and 7) in the following chorale piece. He uses the voice leading with the descending fifth in the way described above.

- Notate the bass according to the chord symbols and fill in the alto and tenor parts – first in close position, then in open position.



Mozart: Requiem, Agnus Dei, VI

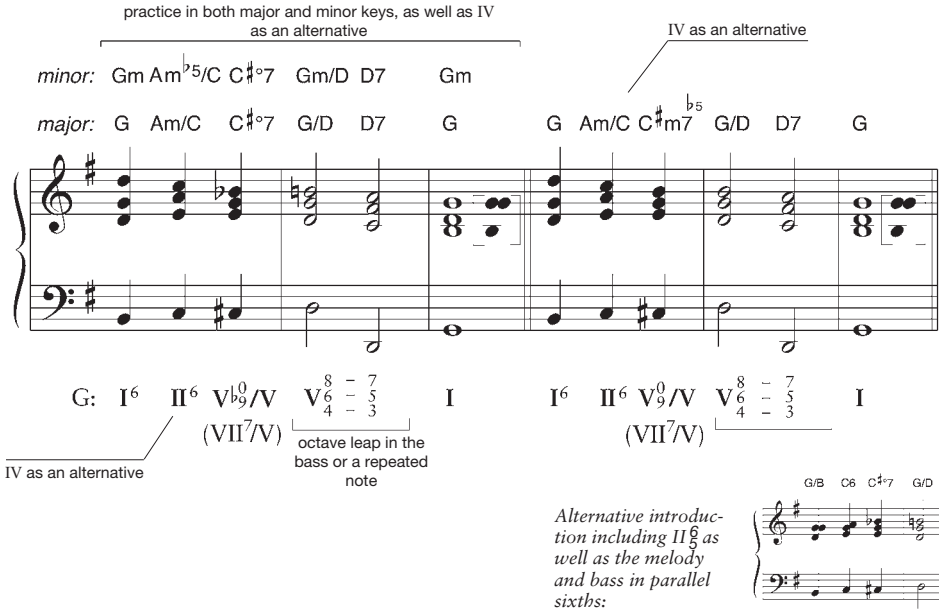
Text book: Pages 70–71

The incomplete dominant ninth chord in a cadence

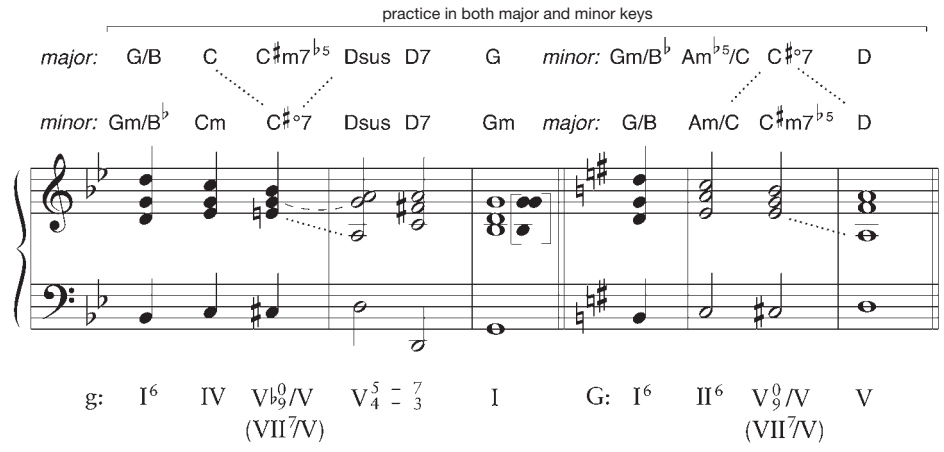
18 Play the cadences below on the piano in all major keys up to 3 sharps and 3 flats (in a minor key: 2 sharps and 4 flats). Increase the number of sharps and flats later, so that you will be able to master all keys.

- The inversions usually found in connection with cadences have been notated. It is important to practice the other inversions at some stage.

a $V\flat^{0}_{9}$/V and V^{0}_{9}/V (VII^{7}/V) followed by $V^{6\text{-}5}_{4\text{-}3}$:



b $V\flat^{0}_{9}$/V and V^{0}_{9}/V leading directly to V in an authentic cadence and a half cadence:



Text book: Pages 70–71

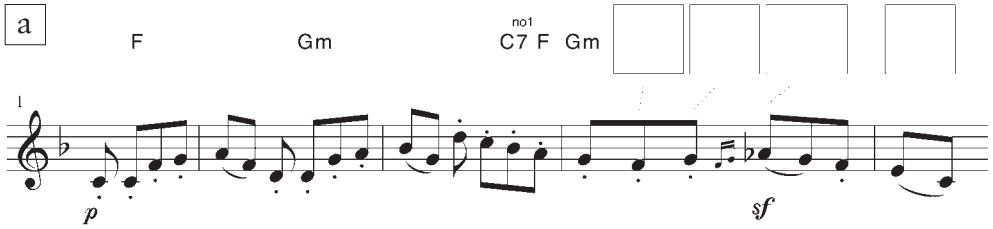
19

Complete each example below with a half cadence.

- Use the 2nd formula which creates a half cadence in eg 18b on the preceding page. Note the other possibilities in a major key (C♯m7♭5 and C♯°7)!

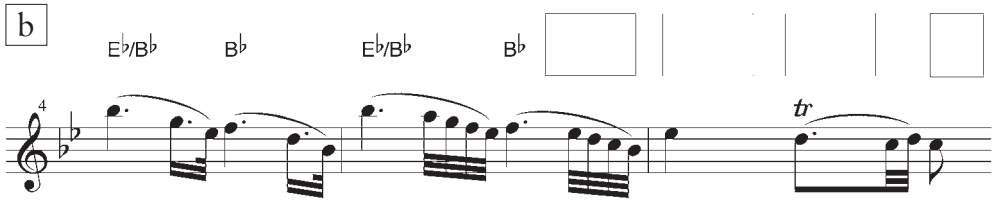
A7

a



Beethoven: Piano Sonata Op. 49 No. 1, II
Transposed

b

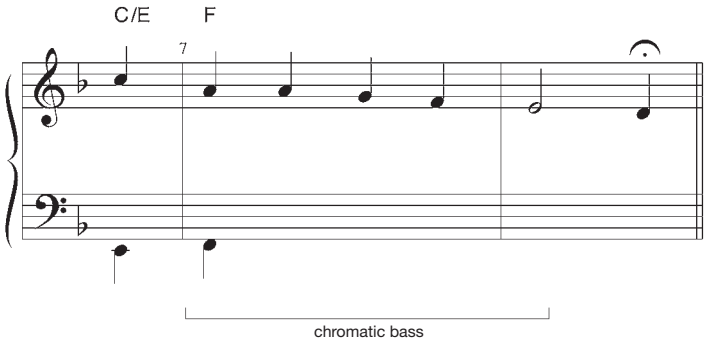


Mozart: Piano concerto No. 11 (KV 413), II

20

Complete the following phrase in four-part harmony for mixed choir.

- Write a chromatic bass part from the given notes until the first chord in b 8. The example starts in F major but ends with a suitable cadence in D minor. Write diminished chords above the chromatic notes, which function as secondary dominants of the diatonic chords that follow.



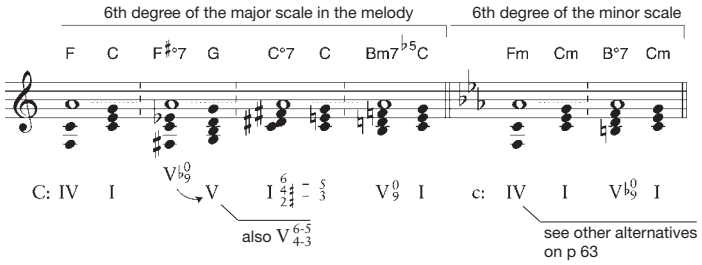
J. S. Bach: 'Herr Christ, der ein'ge Gott's sohn' BWV 96

Text book: Pages 70–71

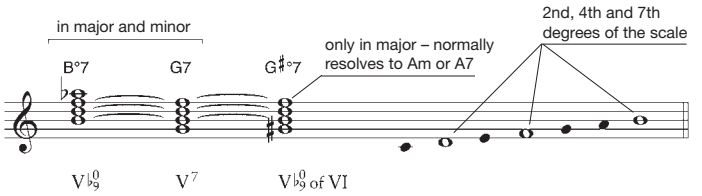
Harmonization using the incomplete dominant ninth chord

Hints

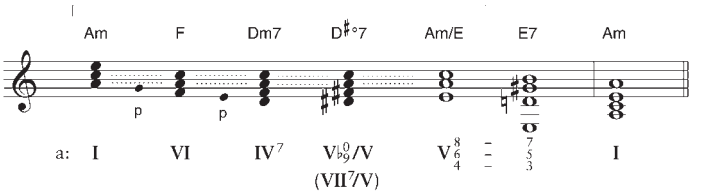
The 6th degree of the scale is usually harmonized using IV (continuing to I or V) or II (continuing to V). The incomplete ninth chord creates new possibilities. Here are some common alternatives in comparison with the harmonization using IV-V*. Other inversions of the chords can also be used.



$V\flat_9^0$ and V7 are identical except for one note, which means that $V\flat_9^0$ is often used as an alternative, and like the secondary dominants, it can also replace other chords. V7, $V\flat_9^0$ and $V\flat_9^0$ of VI have three notes in common:



There is yet another possibility that can be added to the long list of chords harmonizing the 1st and 3rd degrees of the scale, namely $V\flat_9^0$ of V:



See page 327 and 328 for the notes that the secondary dominants have in common for more possibilities. There is also a demonstration of the ninth in the dominant seventh chord.

* C°7–C in the example is explained on p 134.
V9 is another possibility, see p 426.

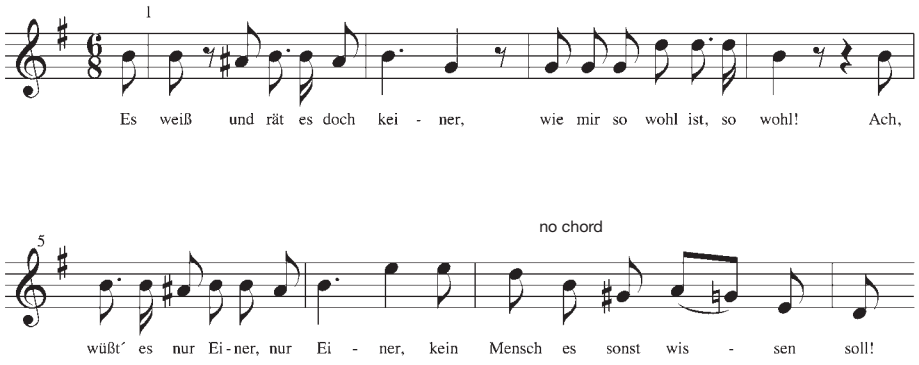
21 Harmonize the following two extracts from 'Liederkreis' by Schumann, where the harmonization of the 6th degree of the scale varies according to the interpretation of the text. Choose from the alternatives shown in the box on the preceding page (first example).

IV

a

Nicht schnell

Schumann: Liederkreis Op. 39 IV, 'Die Stille'

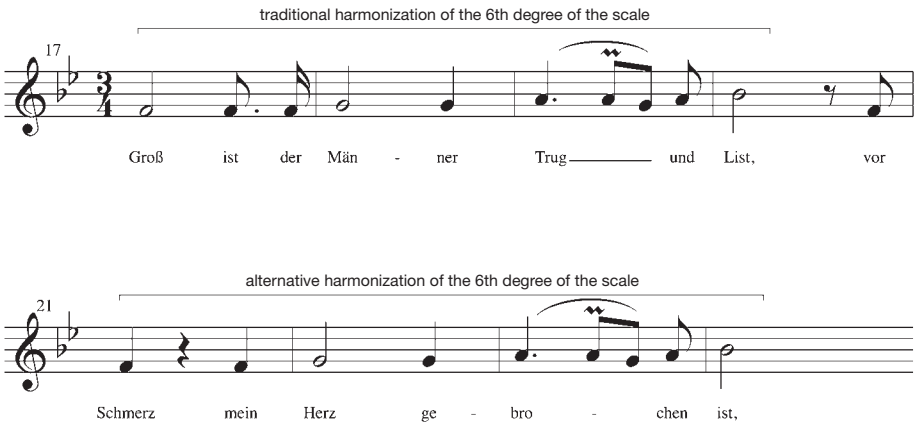


b

- Schumann uses a tonic pedal point in the bass of both phrases.

Schumann: Liederkreis Op. 39 III, 'Waldesgespräch'
Transposed

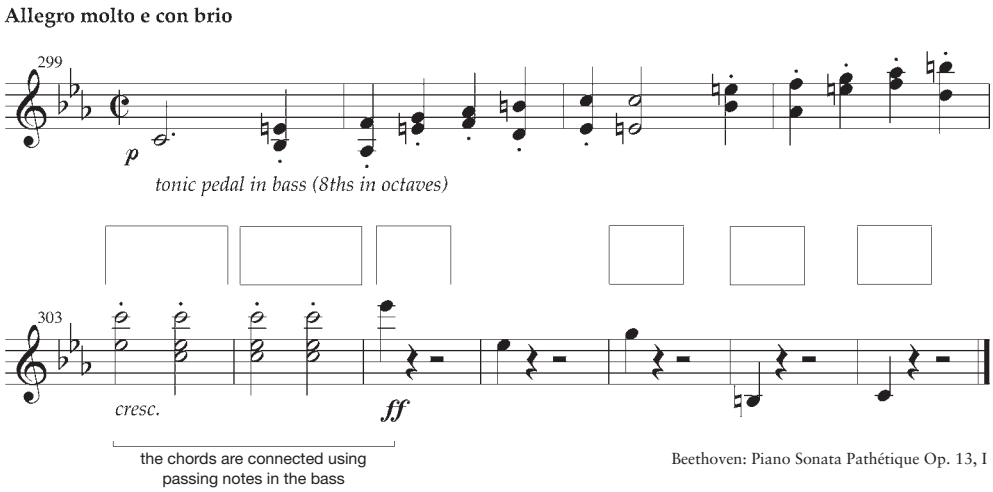
Ziemlich rasch



Text book: Pages 70–71

22 Beethoven utilises, at the end of the 'Pathétique' sonata, the alternatives to vary the 1st and 3rd degrees of the scale according to the pattern shown in the last example (with IV^7 omitted) in the hints on p 395.

A7



23 Analyse the harmony of the following music example. Write chord symbols for each new chord.

Schumann: Myrten, Op. 25, No. 12, 'Lied der Braut', No. 2

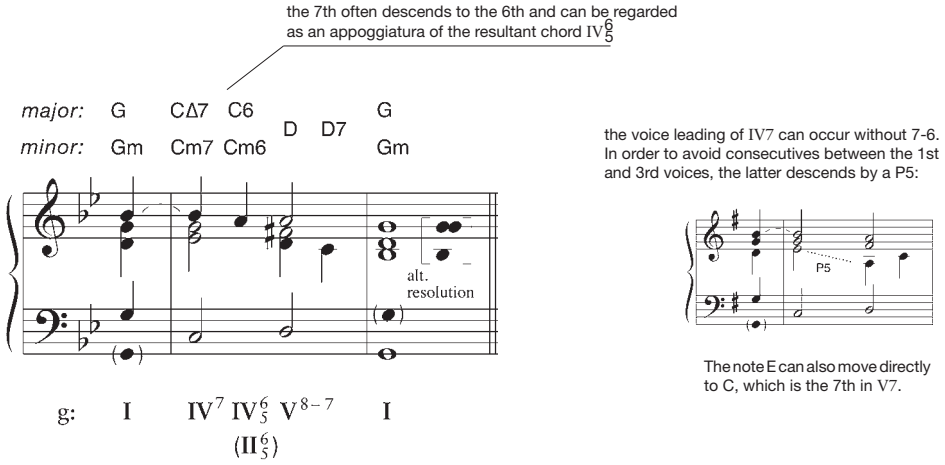
Text book: Pages 70–71

Chapter 5

Cadences using IV^7 and II^7

1 Play the chord progression below on the piano in all major/minor keys.

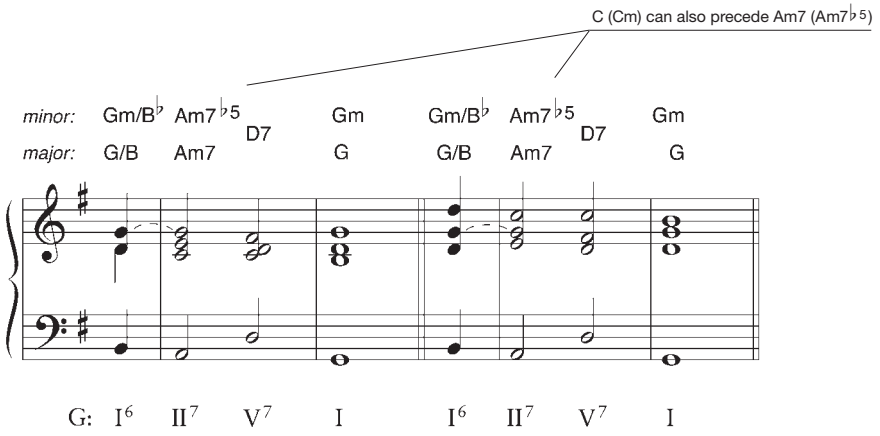
a *cadences using IV^7(–IV$^6_5$) in major/minor:*



the voice leading of IV7 can occur without 7-6. In order to avoid consecutives between the 1st and 3rd voices, the latter descends by a P5:

The note E can also move directly to C, which is the 7th in V7.

b *cadences using II^7:*



2 Choose one of the cadences above to finish the phrases a-d on next page. Complete the given piece by adding a bass and two inner voices.

- Choose the type of cadence you prefer if several alternatives are possible.

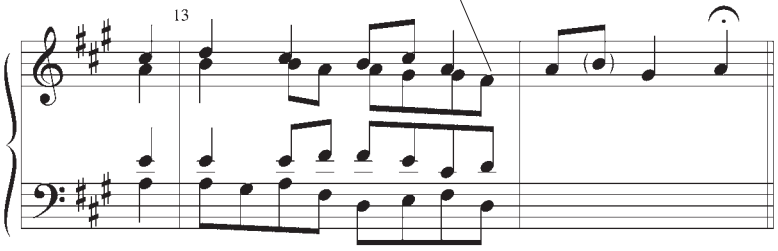
Text book: pages 74–75

Cadences using IV7 and II7

Mark with a dashed tie if the note of preparation has been used. This applies to all the examples.

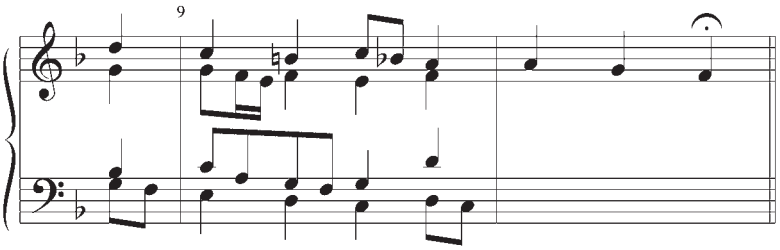
IV

a



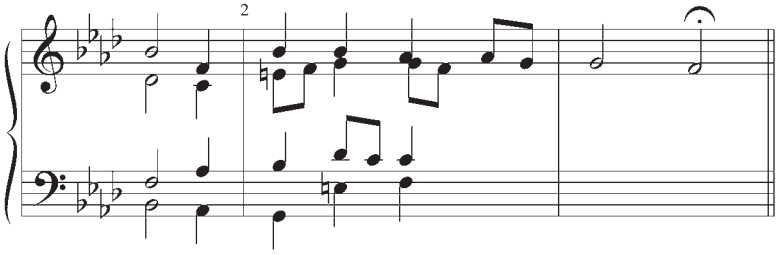
J. S. Bach: 'Herzlich lieb hab ich dich, o Herr', BWV 340
(transposed)

b



J. S. Bach: St. John's Passion, No 9

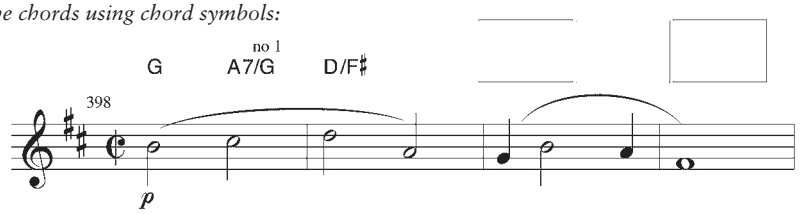
c



J. S. Bach: 'Du, o schönes Weltgebäude'
Cantata No 56 (transposed)

Name the chords using chord symbols:

d



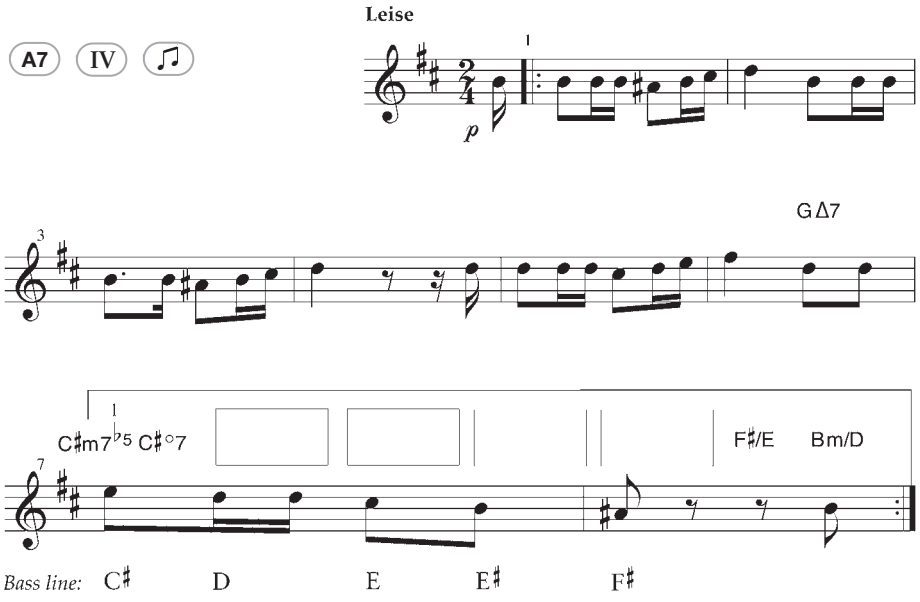
Schumann: Symphony No 2, IV
(transposed)

Text book: pages 74–75

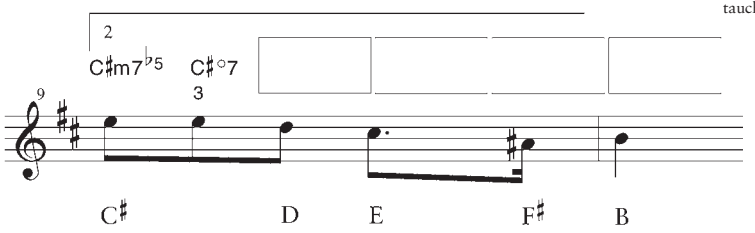
3

Harmonize the following music example:

- Schumann uses a harmonization that was common in the Romantic period in b 1-6, utilising the cadence II7–V7–I, which is repeated and then used in a sequence; see p 398, exercise 1b.
- Find a suitable cadence at the end of each phrase using the bass notes given below (b 7 and b 9). Vary the bass in bars 2 and 4 so that the rhythm is even.

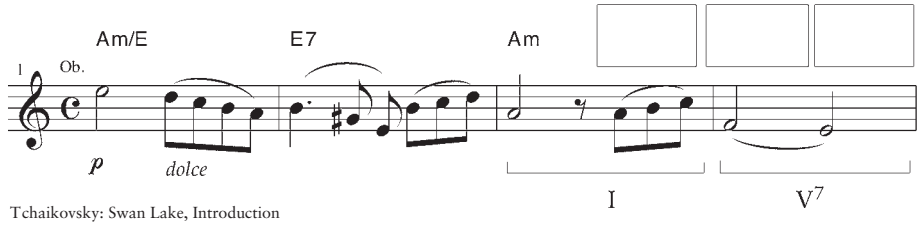


Schumann: 'Ich will meine Seele tauchen' Dichterliebe op 48



4

Find a way to vary the last two bars of the following example, by utilising the 'Romantic' cadence you learnt about in exercise 1b, p 398.



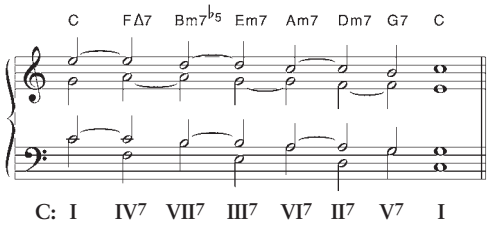
Tchaikovsky: Swan Lake, Introduction

Text book: pages 74–75

Sequences

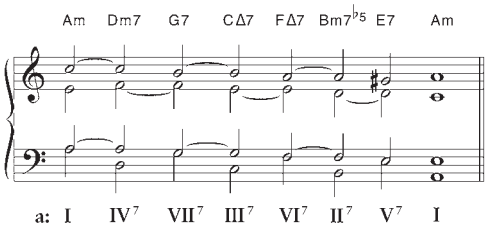
5 Practise playing the sequences below on the piano:

tonal cycle of 5ths in major (see p 76, column 1).

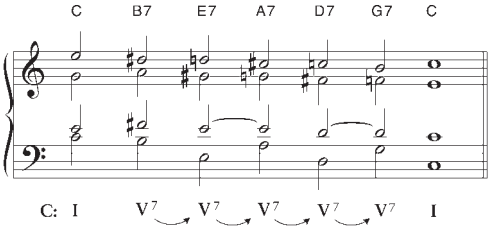


Also practise playing this example and the one below in close position starting with the fifth in the top part of chord I. The voice leading is calculated by moving the top part down an octave.

tonal cycle of 5ths in minor

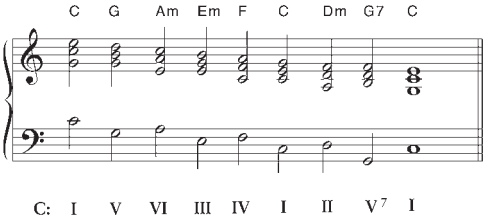


real cycle of 5ths (see eg 3, p 77).



Also practise the real cycle of fifths in three parts (leave out the tenor part) throughout the whole circle.

4th – 2nd sequence (see p 78, column 1).



Text book: pages 76–79

6

In the examples a-c, use a tonal cycle of fifths (a-b) and a real cycle of fifths (c) according to the pattern you learnt in the preceding exercise.

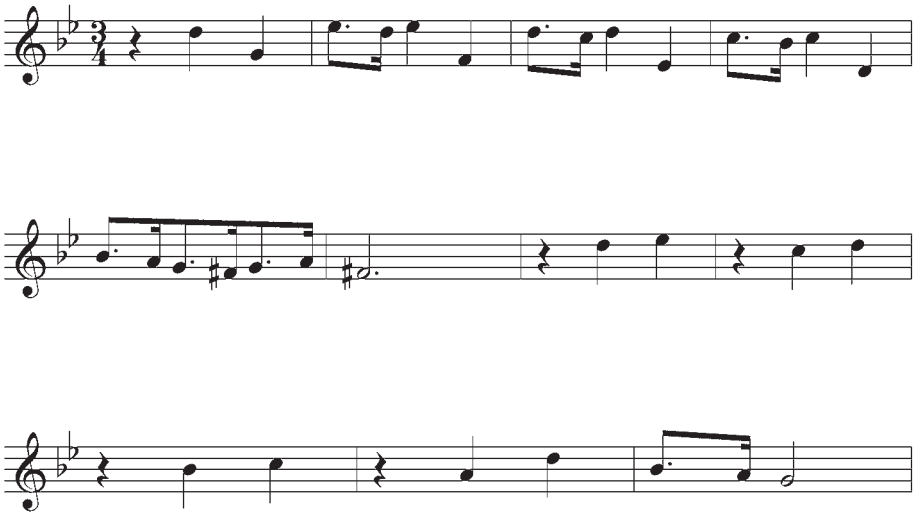
- Choose the key first and then find the sequence in the melody.

A7 IV

a Contains two sequences. One or two chords per bar.

Händel: Sonata No 1 for flute, piano and violoncello
'Hallenser sonaten' Original: A minor

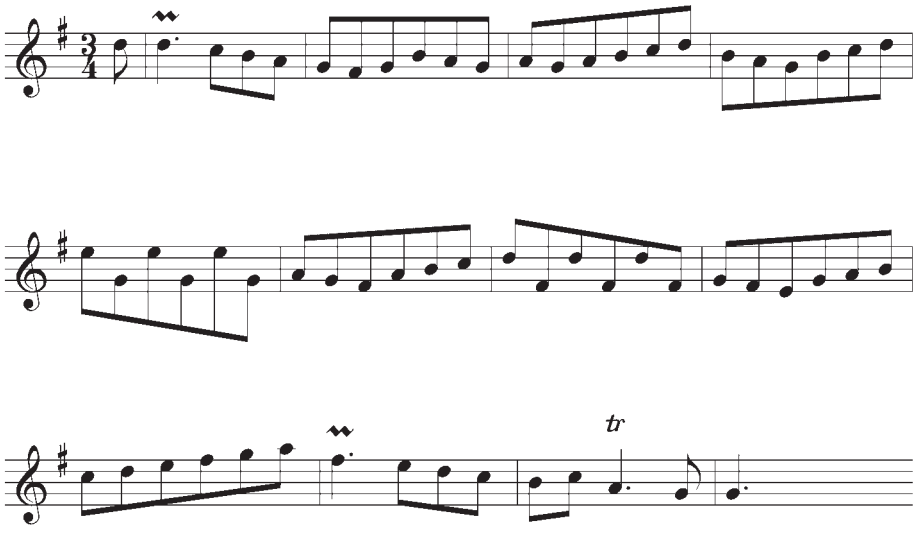
Adagio



b The cycle of fifths begins after several introductory bars which are not built using the harmony of the sequence.

Allegro vivace

Handel: Suite No 14, Courante



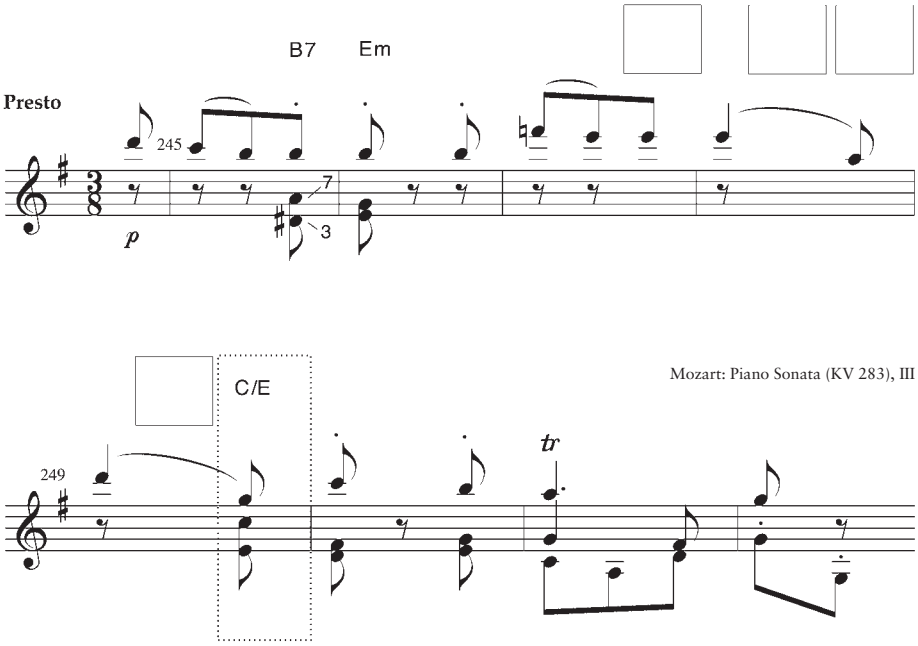
Text book: pages 76–79

Sequences

C Use a real cycle of fifths (see p 76 and eg 3 on p 77) in the example below based on dominant 7th chords – one chord in each box. Add two voices to the melody using the chords as a basis.

- Go backwards through the cycle of fifths, starting with the target chord C/E in b 249, then notate the chords using chord symbols in the boxes.
- Supplement the melody using the 3rd and the 7th of each dominant chord as shown in b 245 and continue the voice leading to the interval of a 6th in C/E as you did in the preceding exercise (3→7 and 7→3). You can also work backwards in this example.

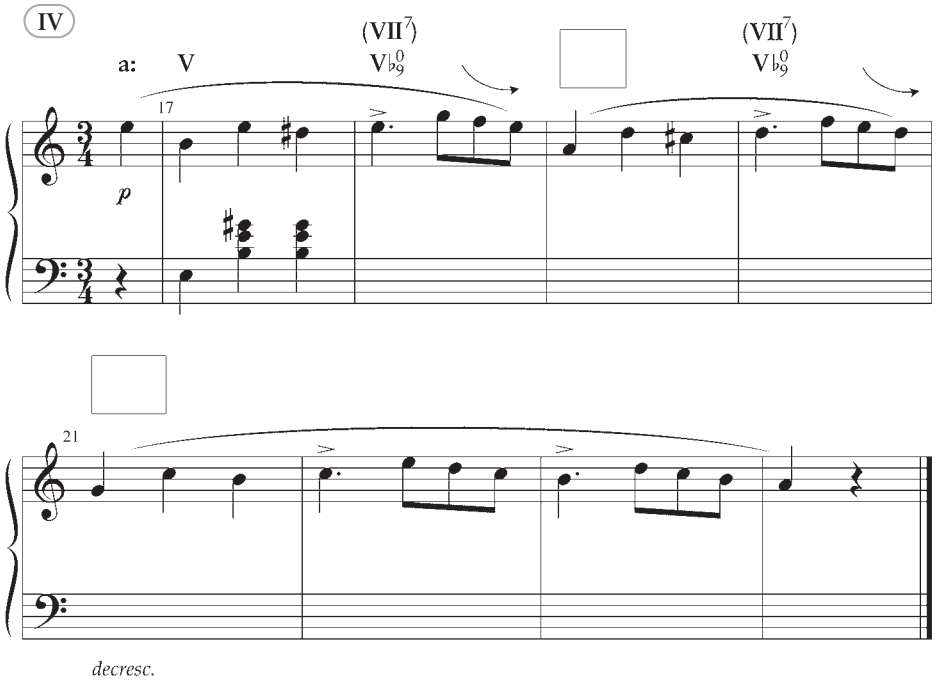
A7 IV



Text book: pages 76–79

7 Harmonize the following melody which can be found in the last 8 bars of Schubert's German dance (the score of the A section is on p 367). Complete the piano accompaniment from b 17. Write the voice leading of the offbeats using the least possible movement.

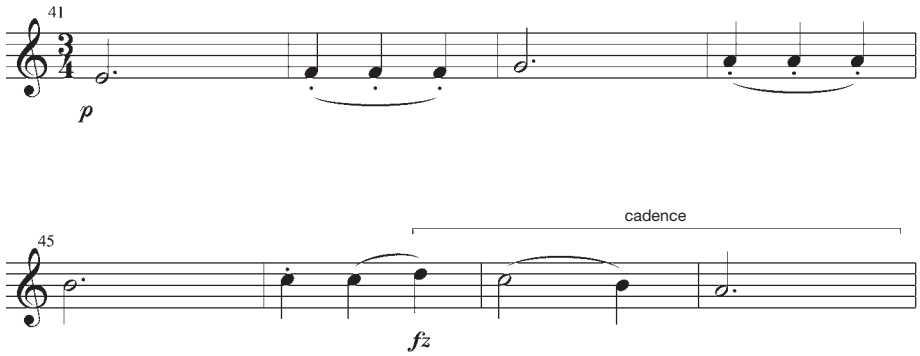
- Bars 17-21: Schubert uses a cycle of fifths where the dominant chord in bars 18 and 20 occur as an incomplete ninth chord, while the other chords consist of diatonic triads.



Schubert: Sechzehn Deutsche Tänze op 33 No 10

8 Find a suitable harmonic sequence with regard to the direction and interval between the pattern (b 41-42) and the two repeats (b 43-44 and 45-46) comprising the sequence in the Haydn example; see 'Other sequence constructions' on p 191.

A7 IV



Haydn: Symphony No 80, Minuet

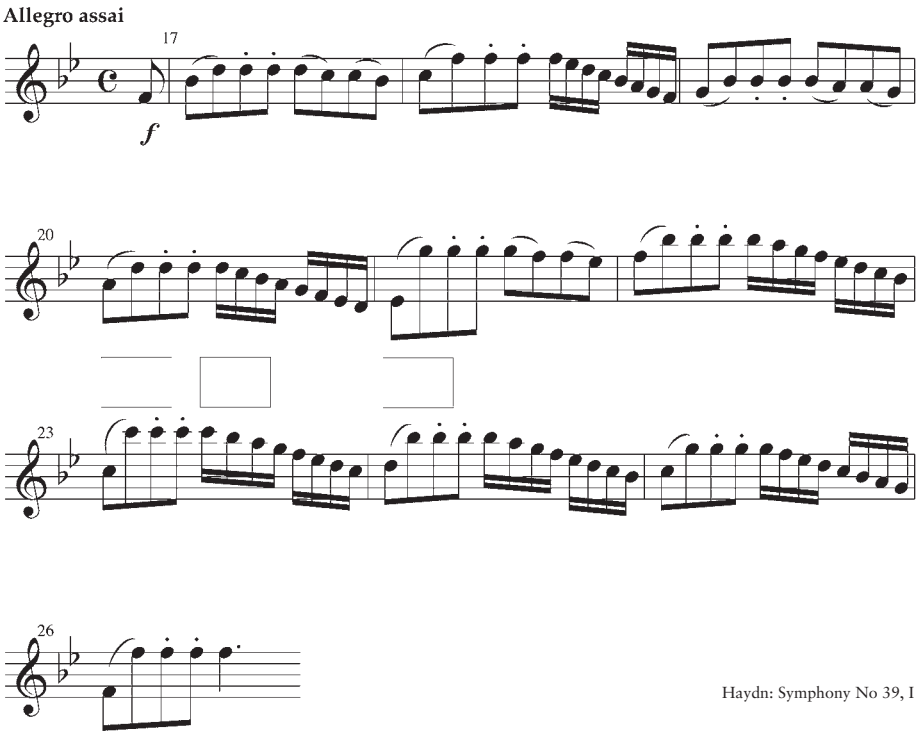
Text book: pages 76–79

Sequences

9 Find a suitable harmonic sequence with regard to the direction and interval between the pattern and the two repeats comprising the sequence in the Haydn example; see p 78.

- Find a cadence in bars 23-24.
- Create a stepwise bass using notes of the chord up to and including the first box (cf p 78 and p 79, eg 2).

IV



Haydn: Symphony No 39, I

10 Analyse the harmony of the following music examples:

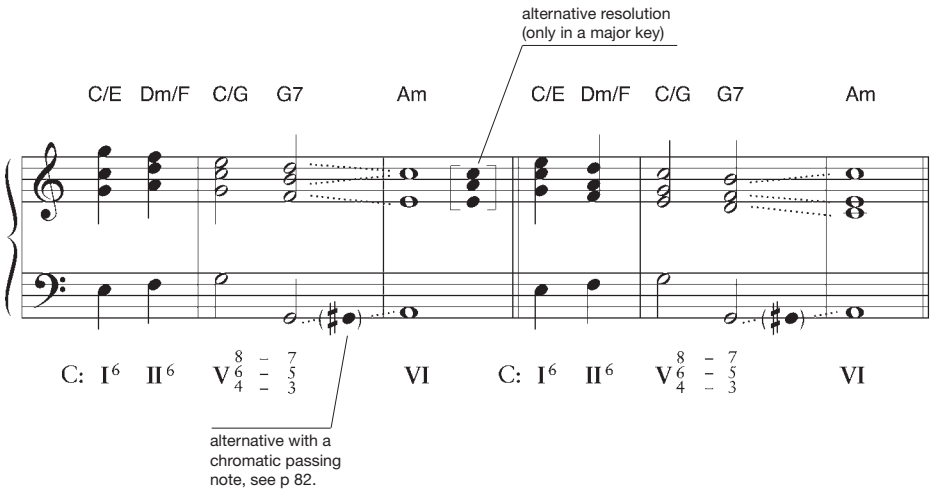
Mozart: Piano sonata No 15 F major (KV 533), Andante, b 95-102
Vivaldi: The Four Seasons, Op 8, IV, b 23-26.

11 Compose two melodies each containing a tonal cycle of fifths, one in major and one minor key.

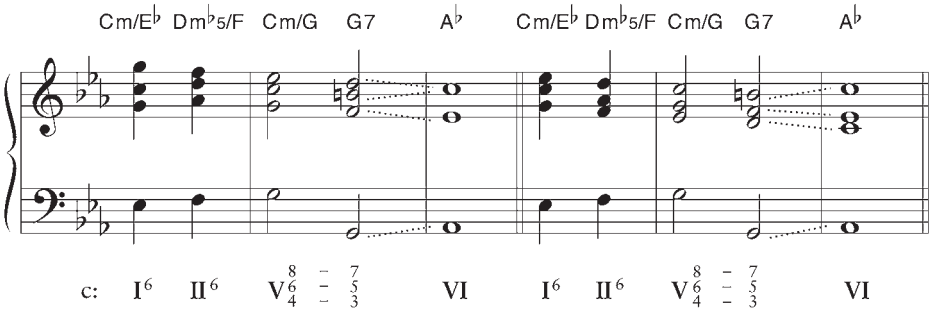
Text book: pages 76–79

12 Play the deceptive cadences below on the piano in all major keys (a) and all minor keys (b).

a *Deceptive resolution in a major key:*



b *Deceptive resolution in a minor key:*



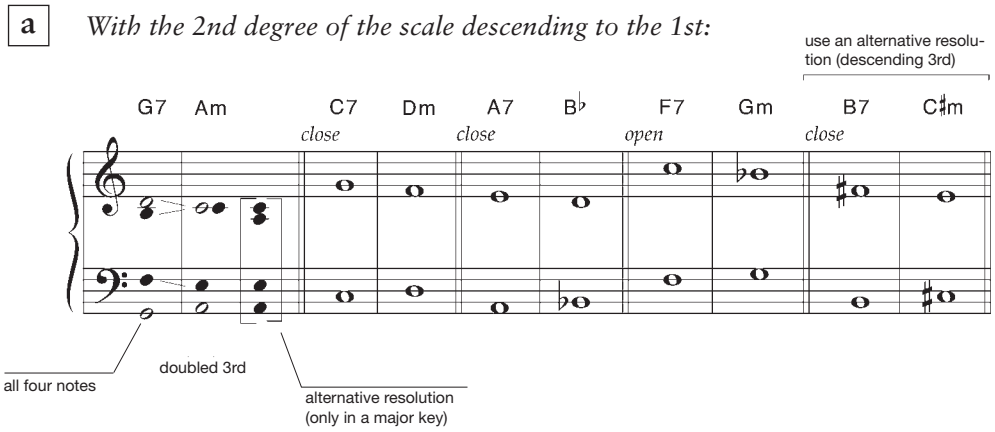
Text book: pages 80–83

Deceptive resolution

13 Practise four-part voice leading in a deceptive resolution in open and close position in the example below in the same way as on the previous page.

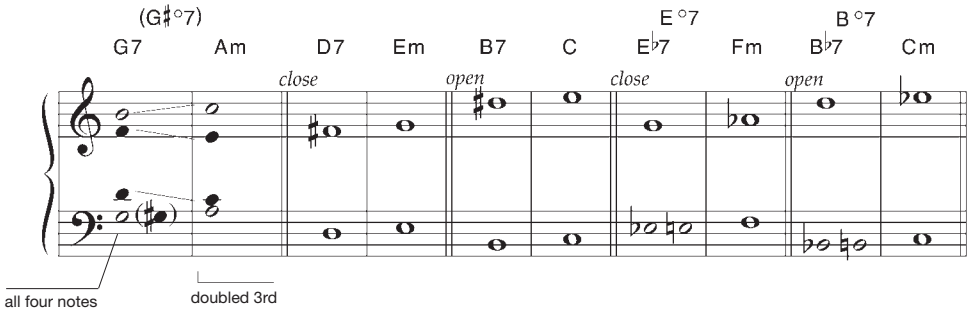
- Resolve both leading notes in the complete dominant 7th chord as though the subsequent chord were the tonic ie with the 3rd ascending and the 7th descending. As well as this, allow the 5th in the dominant 7th chord to descend by step to the 3rd in the chord of resolution – which will double the 3rd; see b1 in eg a and b.

a *With the 2nd degree of the scale descending to the 1st:*



b *With the 7nd degree of the scale ascending to the 1st:*

- In the last two exercises voice-leading and spacings is not affected by a chromatic passing note in the bass.



Text book: pages 80–83

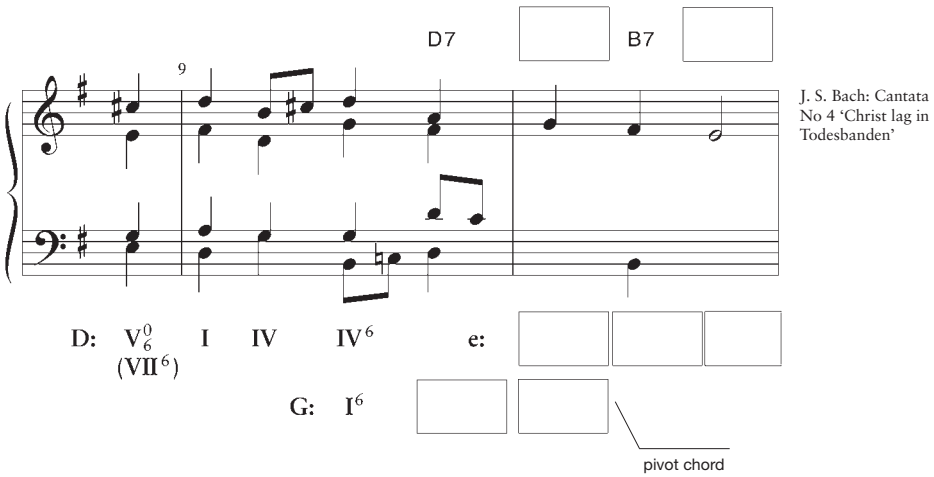
14

In the music examples a and b, use two deceptive resolutions, one after the other. This will require the use of a pivot chord as shown in the music example.

A7 IV

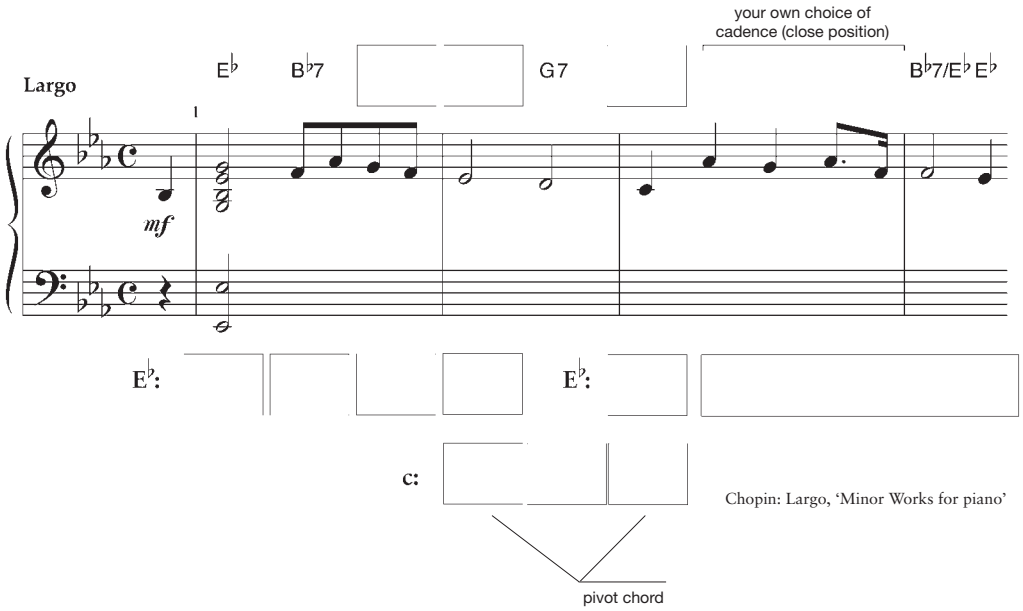
a

- Complete using 4-part harmony in the key of E minor and write deceptive resolutions by allowing the 3rd of D7 to descend, and the 3rd and 7th of B7 to resolve according to leading note principles.



b

- Complete the piano piece and design deceptive resolutions for B♭7 in b 1 (using a chromatic passing note – see exercise 12a) and G7 in b 2 (with the correct leading note resolution). The number of voices can vary, which is common for a piano piece.



Text book: pages 80–83

Deceptive cadence – 'Linking chords'

15 Play the chord progressions below on the piano in all major and minor keys. It is a good idea to combine these by introducing the deceptive cadence using exercise 12 as a basis.

Hints

Some common progressions arising from the chord of resolution in a deceptive cadence are notated below. The chord that functions as a 'linking chord' between the chord of resolution and the repeated cadence is marked by a box (eg 2-5).

① ***directly to the dominant ie without a linking chord:***

the cadential $\frac{6}{4}$ can be omitted (this applies to all the examples.)

V^7 VI $V^{6\text{-}5}_{4\text{-}3}$ – I

② ***the bass descends a 3rd to a position ③ chord eg:***

V^7 VI **IV (II^6)** or **$V^{0}_{\flat 9}$/V** $V^{6\text{-}5}_{4\text{-}3}$ – I

③ ***the bass descends a 5th to a position ③ chord eg:***

V^7 VI **II(7)** $V^{6\text{-}5}_{4\text{-}3}$ – I

④ ***the bass descends a 4th to chord I in 1st inversion:***

V^7 VI **I^6** + cadence (usually II^6 – V^7 – I)

⑤ ***the bass descends by step/leap to a secondary dominant followed by its position ③ chord eg:***

V^7 VI **V^4_3/IV** or **V^6_5/IV*** IV – V^7 – I

Note that deceptive resolutions can occur within a phrase and therefore do not necessarily need to end with a cadence.

* occurs also as $V^{0}_{\flat 9}$/IV (VII^7/IV). V^7/II or $V^{0}_{\flat 9}$/II (VII^7/II) can be used in a major key if the position ③ chord is II.

Text book: pages 80–83

16

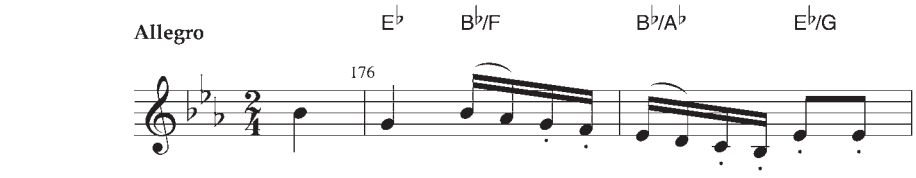
The following music examples uses a repeated ending. Resolve the first ending using a deceptive cadence, and the final cadence using the tonic chord.

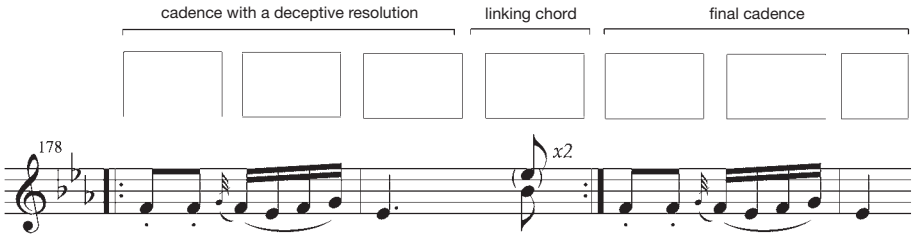
- Also find a suitable 'linking chord' to follow the deceptive cadence; see 'Hints' on the preceding page.

A7 IV

Mozart: Horn quintet (KV 407), Rondo

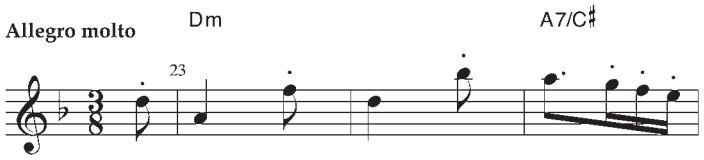
a

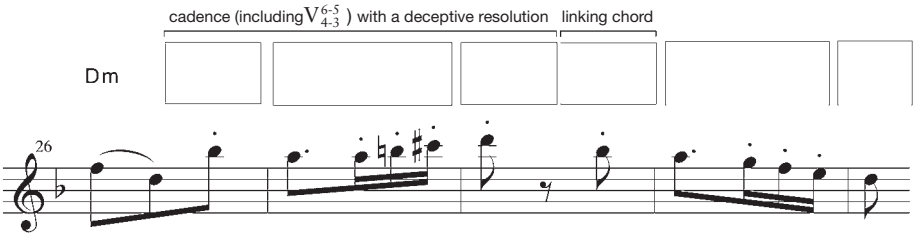




Beethoven: Serenade op 25, III

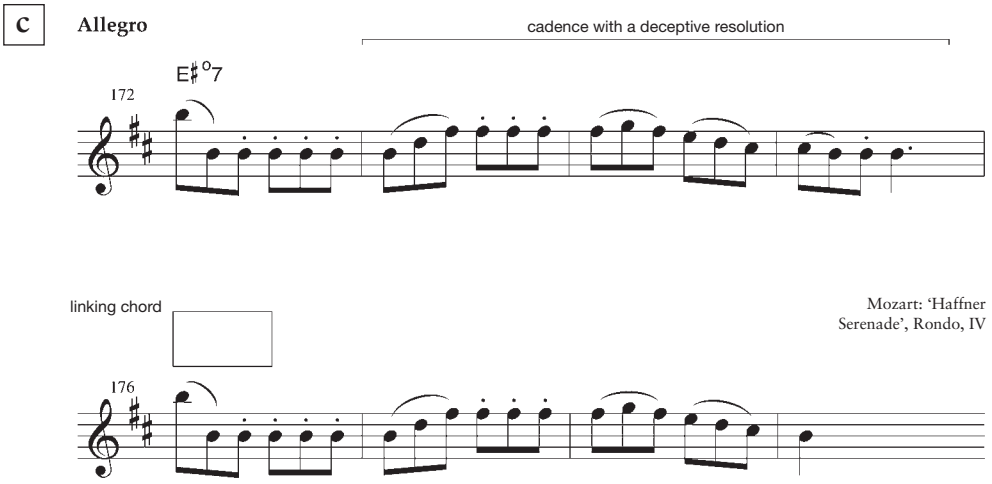
b





Text book: pages 80–83

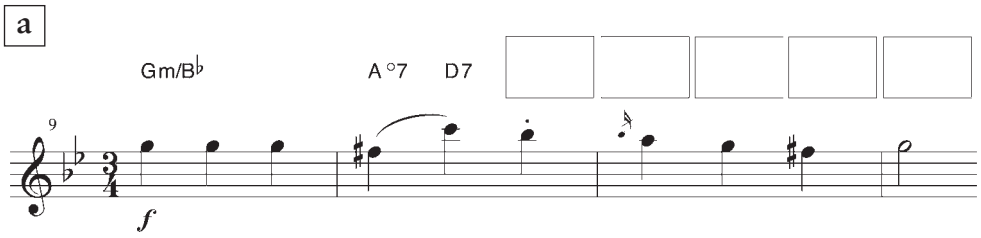
Deceptive cadences and linking chords



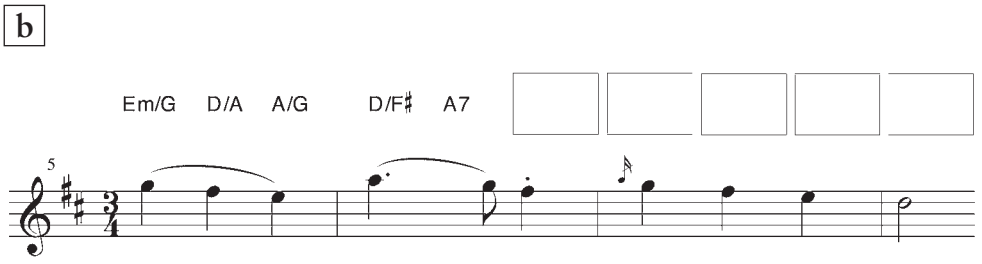
17 The following music example uses a deceptive resolution of the dominant chord *immediately preceding* the final cadence in order to save the tonic for the final chord.

- Study 'Hints' on p 409 regarding the linking chord, which in the exercises a-b below may be considered to be part of the cadence.

A7 IV



Mozart: Symphony No 25, III (KV 183/173dB)



Mozart: Symphony No 25, III Trio (KV 183/173dB)

Text book: pages 80–83

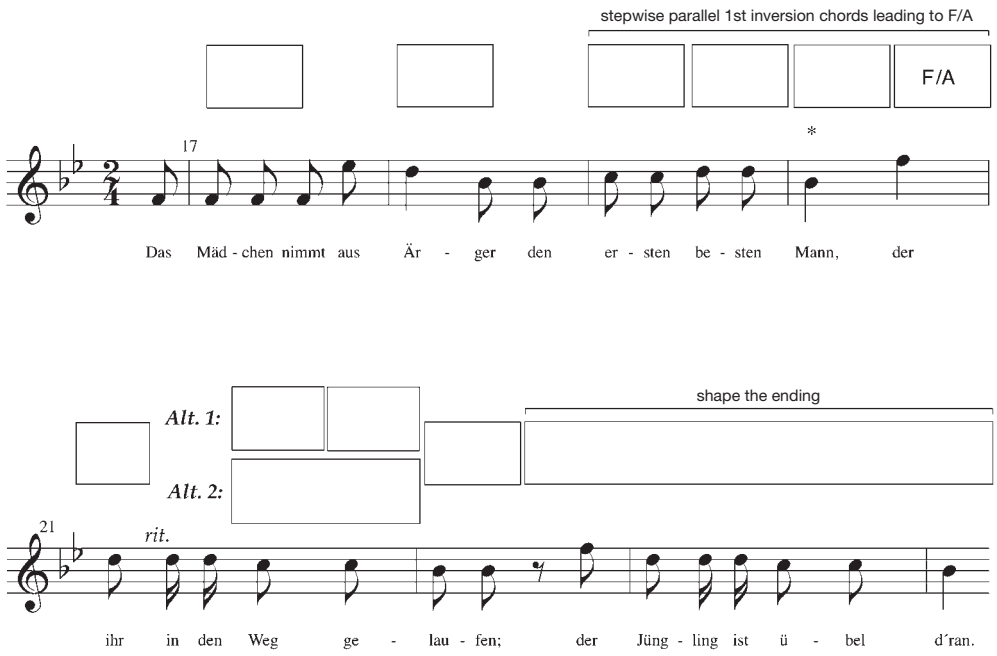
18 The following music example uses a repeated ending. Resolve the first ending using a deceptive resolution, but prepare the final deceptive chord with *its secondary dominant*; see 'Chromatic movement 5–♯5–6 in major' on p 82. Try both alternatives:

1: chromatic movement 5–♯5–6; see eg b (left column) on p 82.

2: the dominant of the key (F7) is substituted by the secondary dominant of the chord of deceptive resolution in b 22.

- Avoid root position in the dominant chord – unless it is necessary.

Schumann: 'Ein Jüngling liebt ein Mädchen' Dichterliebe No XI, op 48
The section of the melody preceding this example can be found on 384.



19 Write a deceptive resolution of the following dominant 7th chord – not to VI in this case, but one of the more unstable chords described on p 80 under the following headings:

Deceptive cadence leading to IV6 and V/V, p 80.

Deceptive cadence leading to ♯4th degree, p 80.

Deceptive resolutions of V^4_2, p 82.

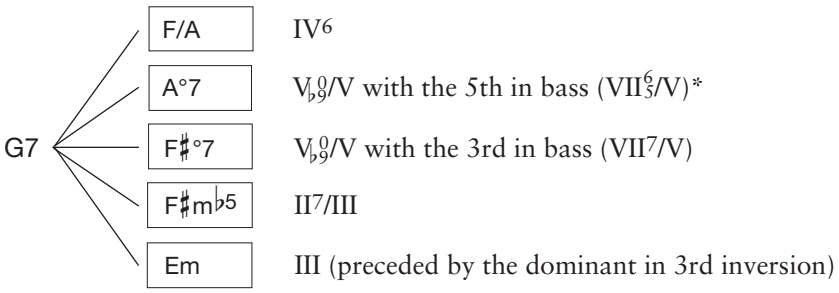
cont.

* In the original, Schumann uses only two of the three notes of the chord.

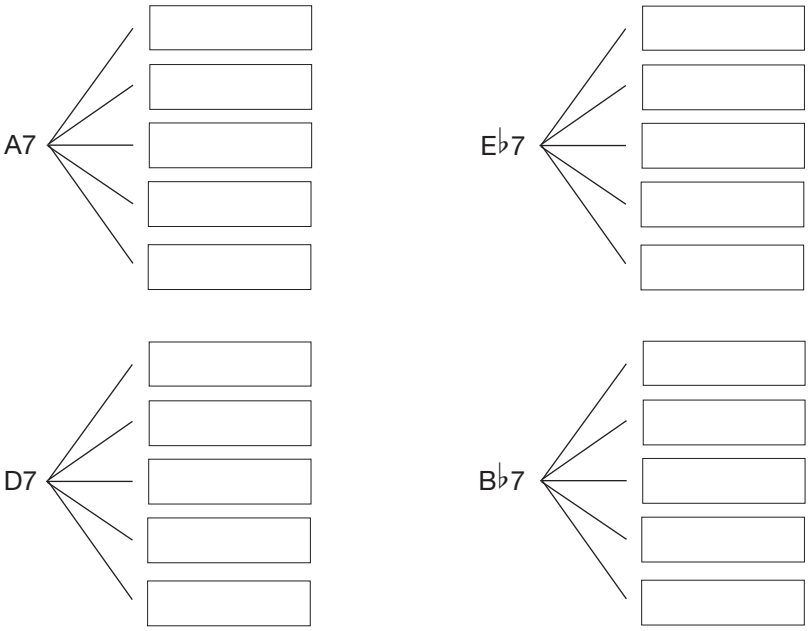
Text book: pages 80–83

Deceptive resolution

Example (in major):



Exercises:



20 Analyse the harmony of the following music examples using Roman numerals for each new chord.

Haydn: Sechs Sonatinen, No 1 in D major (Hoboken XVI:4), Minuet
Haydn: Piano Sonata No 4 in D major (Hoboken XVI:37), Finale, b 21-28
Schumann: 'Volksliedchen', b 1-8, Album für die Jugend (Op 68)

21 Compose melodies containing deceptive resolutions with a repeated ending – also within the phrase.

* V^0_6/V (VII^6 /V) is also possible in this case.

Text book: pages 80–83

Hints preceding the exercises on the following pages

The principles below apply to the voice leading in subdominant chords using the flattened 6th degree of the scale followed by chord I or V in a major key:

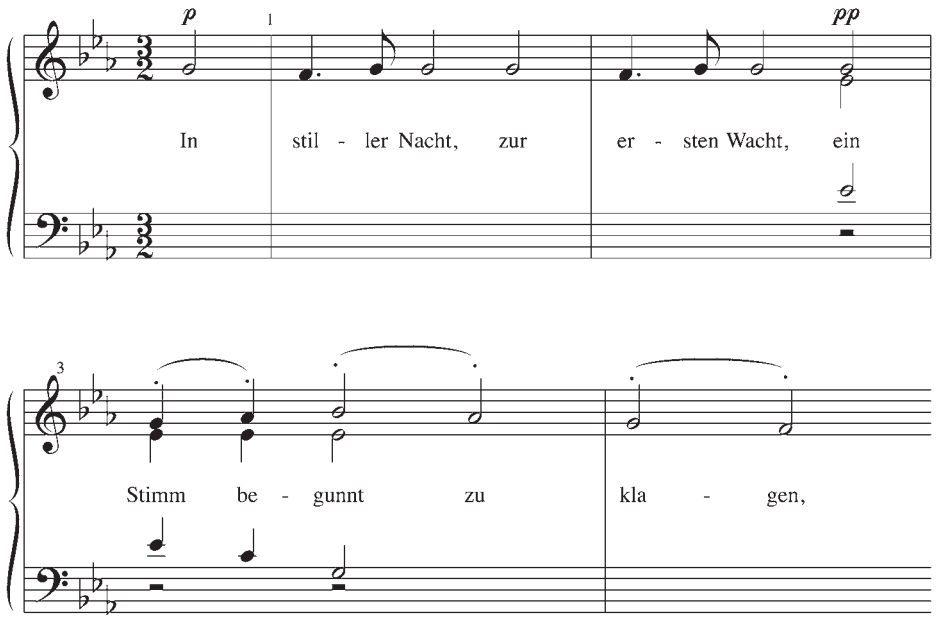
- By flattening the 6th degree of the scale in a major key, this will function as a leading note and descend to a note of the chord that is the 5th degree of the scale. This note is not normally doubled, but there are exceptions; see eg 6 on p 378.

22

Harmonize the following short extract from Brahms 'In stiller Nacht', and then arrange this section for 4-part mixed choir.

- Find a suitable chord containing the flattened 6th degree of the scale in eg 1 on p 85 (chords 2-5) to use instead of harmonizing bars 1-2 with chord V. Explain the difference.

Brahms: 'In stiller Nacht'

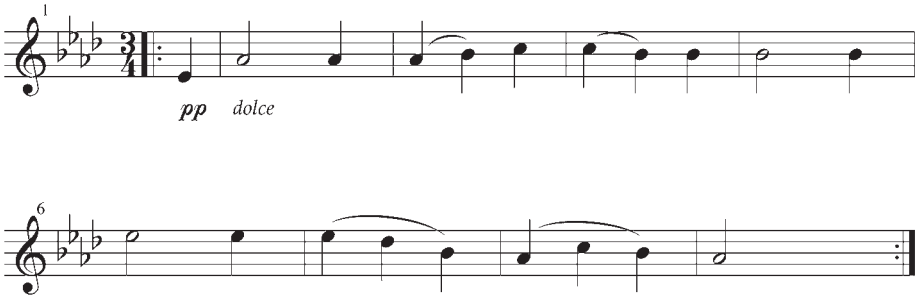


Text book: pages 84–85

Chords using the ♭6th degree of the scale

23 Harmonize the following melody and use a suitable subdominant chord containing the ♭6th degree of the scale. Note in particular the harmonization of the 2nd and 3rd degrees of the scale in eg 3 on p 85.

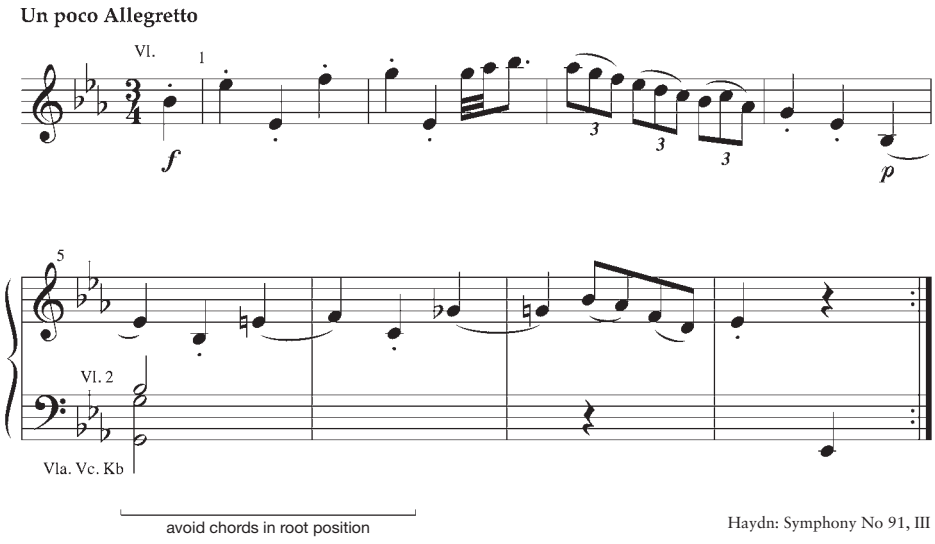
A7 IV



Schubert: 'Zwanzig Walzer' No 5, Trio

24 Harmonize the following Haydn excerpt. A7 IV

- Haydn utilises ♭VI which is a more dramatic way to harmonize the flattened 3rd degree of the scale.
- Bars 5-8: Complete the harmony from b 5 by continuing the background, consisting of the bass (in octaves) and an inner part.



Haydn: Symphony No 91, III

Text book: pages 84–85

Hints preceding the exercises on the following pages

The voice leading of subdominant chords containing the sharpened 6th degree of the scale in a minor key – IV♯ and II♯5 followed by V or V^{0}_{6} (VII6) – is applicable as follows (the main method of voice leading in the 18th century):

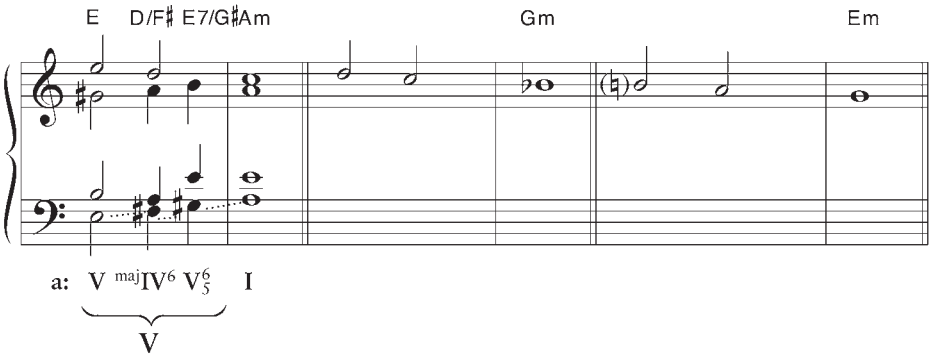
- the raised 6th degree is regarded as a leading note and rises to the raised 7th degree (for an example of an exception see eg 4 on p 87 as well as 'Sharpened 6th degree as a passing note in a minor key' on p 192). This note is not doubled.
- ♯6 and ♯7 often move in parallel 3rds (10ths) with one of the upper voices. The parallel motion can be increased so that more notes are included: 5–♯6–♯7–8 (see the example in exercise 25a).
- if the 7th is used ($IV^{7}_{\sharp}$) the voice leading is the same as in V7 ie the 7th resolves down to the 5th in the dominant (see the example in exercise 25b).
- if the 9th is used, it is prepared and descends to the 7th in the dominant (see the example in exercise 25c) or remains stationary. In the case of the latter, it forms the root of the dominant chord.

25

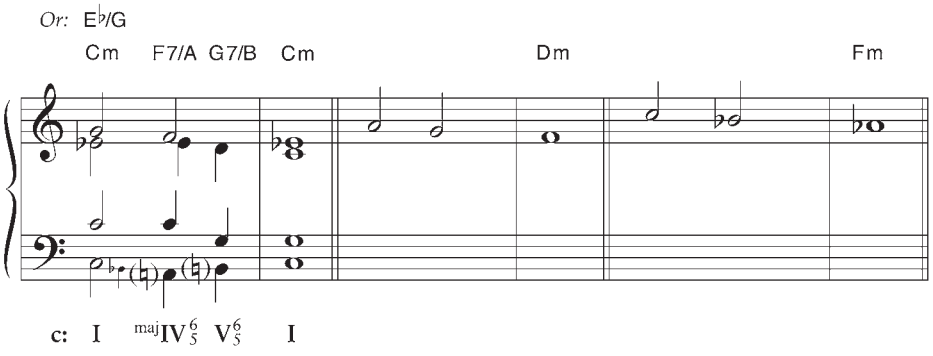
Complete the exercises a-d in 4-part harmony. Notate your choice of chord using chord symbols and practise playing the exercises in all minor keys.

- First of all choose the chord to begin the exercise – which is dependent on the given tonic chord – and then notate its bass note.
- Then shape the bass using the sharpened 6th and 7th degrees of the scale resolving to the tonic (applicable to eg a-c). Complete the two inner parts.

a *Subdominant major in 1st inversion:*



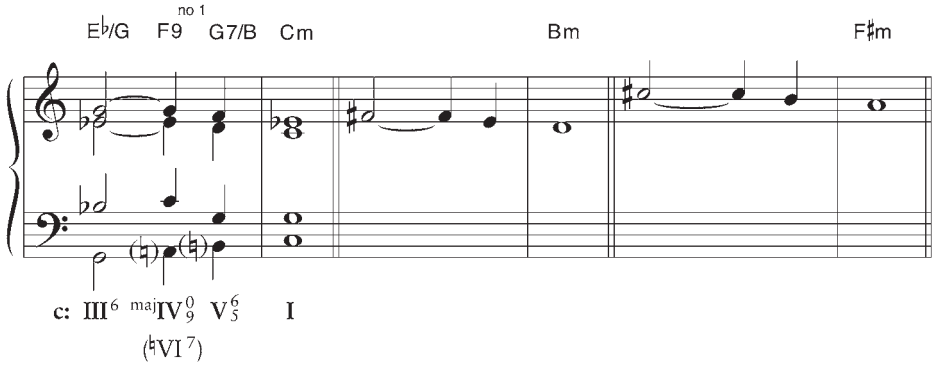
b *Subdominant major as a 7th chord in 1st inversion:*



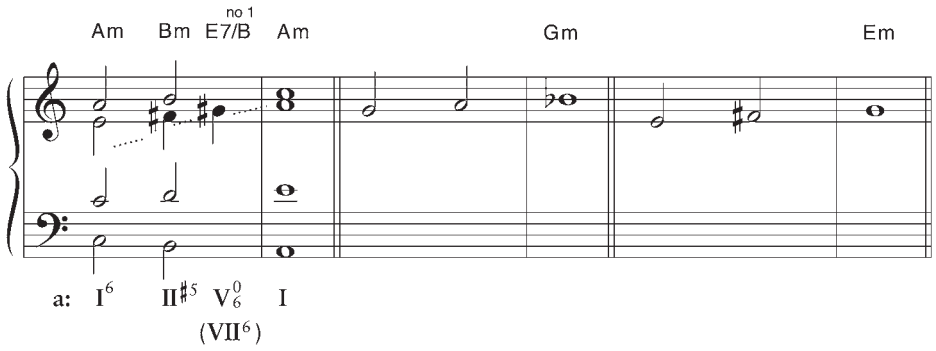
Text book: pages 86–87

Chords using the sharpened 6th degree in a minor key

c *Incomplete subdominant major as a ninth chord:*



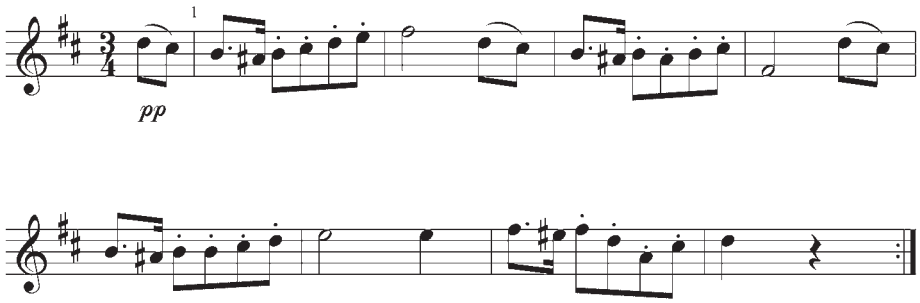
d *II♯5:*



26

Harmonize the following melody. A7 IV

- Schubert utilises the subdominant major to add colour, which does *not* lead to the dominant of the key in this case; cf the Grieg example on p 87 (eg 4).
- At the end of the Grieg example (b 19), the subdominant major (F7) pivots to V7/♭VII. Schubert shapes the ending in a similar way, but chooses to pivot $IV^{7}_{\sharp}$ to a secondary dominant leading to another chord. Which chord is this? The very distinct cadence ($V^{6\text{-}5}_{4\text{-}3}$) in the last two bars will reveal the answer.
- Notate the analysis of the pivot chord in two keys in the same way as in the Grieg example.



Schubert: Zwanzig Menuette, No 12, Trio

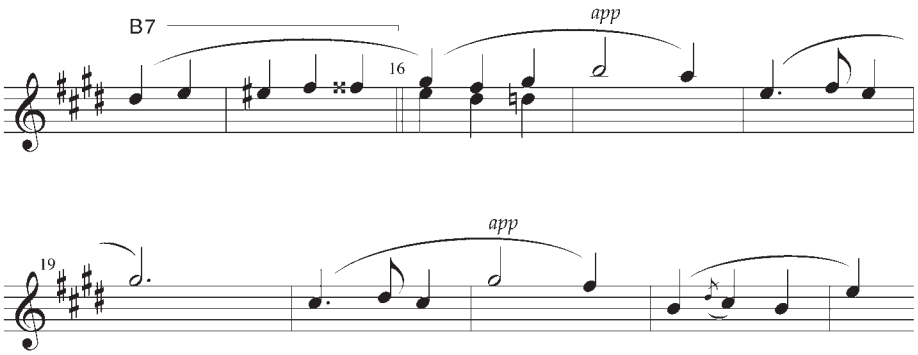
Text book: pages 86–87

27

Harmonize the following melody. The exercise is built to some extent on a type of chromatic motion described under the heading 'Changing a chord from major to minor' on p 88.

- Complete the 2nd part beginning in b 16, which will form chromatic motion in its entirety. From b 17, Chopin utilises a slower rhythm (𝅗𝅥.) in order to slow down even more in bars 21-22 (𝅗𝅥. 𝅗𝅥.). Harmonize the section by using the two voices as a guide.

A7 IV



Chopin: Valse, (Oeuvre posthume)

28

Analyse the harmony of the following music examples. Write the Roman numerals for each new chord.

Schumann: 'Nordisches Lied', Album für die Jugend (Op 68)
Schumann: 'Mit Myrten und Rosen', b 1-16 (Op 24, No 9)

29

Compose melodies containing mixture as well as chromatic motion as described under the heading 'Changing a chord from major to minor' on p 88.

Text book: pages 88–89

30

In order to counteract the inherent resistance that is found in nonfunctional chord combinations, you can utilise an inversion of one of the two chords; see p 91, eg 1 and 4 as well as the solution to the 1st example below.

G	B7	Em	G	C	D7	G
	B7/F♯		*G/B*			
D	F♯7	Bm	D	G	A7	D
B♭	D7	Gm	B♭	E♭	F7	B♭
D♭	F7	B♭m	D♭	G♭	A♭7	D♭

31

Notate a progression using chromatic mediant relationships starting with the given chord; see the description under the heading 'Chains of triads a M3 or m3 apart' on p 92 as well as the 1st example in a and b below.

a *Ascending chromatic mediant relationships a M3 apart (dominant direction):*

C	*E*	*G♯*
B♭		
D		

b *Ascending chromatic mediant relationships a m3 apart (subdominant direction):*

C	*E♭*	*F♯*	*A*
E			
F			

Text book: pages 90–95

32

Develop the chord progressions below by expanding the number of position ③ chords that are already given. Make use of the left column on p 98. The first example in exercises a-d below shows *one* possible solution.

- It is important to check your solutions by playing them. Following the basic principles of choosing chords from left to right in the chart is no guarantee that all possible combinations sound good.

a *Two position ③ chords in a major key (the 1st is given):*

		③			
C:	C	F	*F6no5*	G7	C
D:	D	G6no5		A7	D
F:	F	B♭		C7	F

b *Three position ③ chords in a major key*

		③				
C:	C	F	*F6no5*	D7/F♯	G7	C
E♭:	E♭	A♭			B♭7	E♭
A:	A	D			E7	A

c *Two position ③ chords in a minor key*

		③			
c:	Cm	A♭	Fm	G7	Cm
d:	Dm	B♭		A7	Dm
e:	Em	Am		B7	Em

d *Three position ③ chords in a minor key*

		③				
c:	Cm	A♭	Fm	D7/F♯	G7	Cm
g:	Gm	E♭			D7	Gm
a:	Am	Dm			E7	Am

Text book: pages 98–99

Expansion using position ③ chords

33

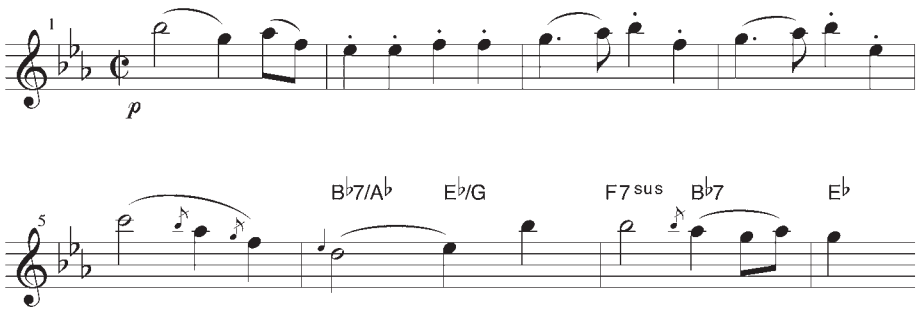
Harmonize the following melodies in a major key using *two* position ③ chords.

- Find a distinct subdominant chord and use that bar for the exercise.
- Otherwise use the simplest possible harmonization.

A7 IV

a

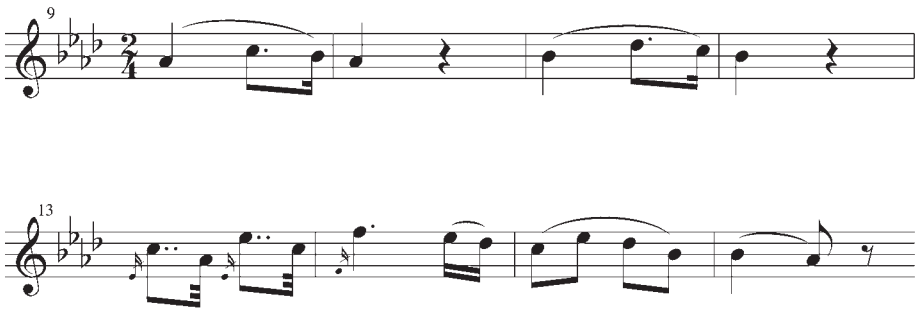
Allegro



Haydn: Symphony No 84, I

b

Adagio molto



Beethoven: Piano Sonata No 5, II

Text book: pages 98–99

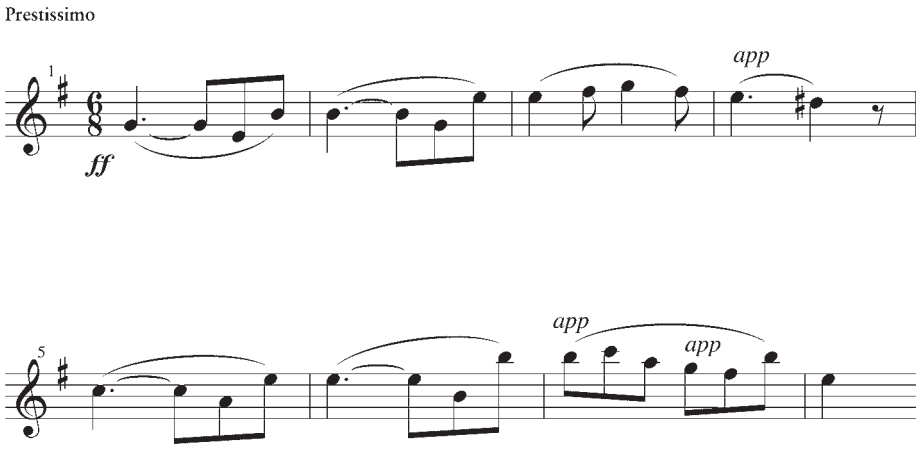
34

Harmonize the following melodies in a minor key using *two* position ③ chords.

A7 IV

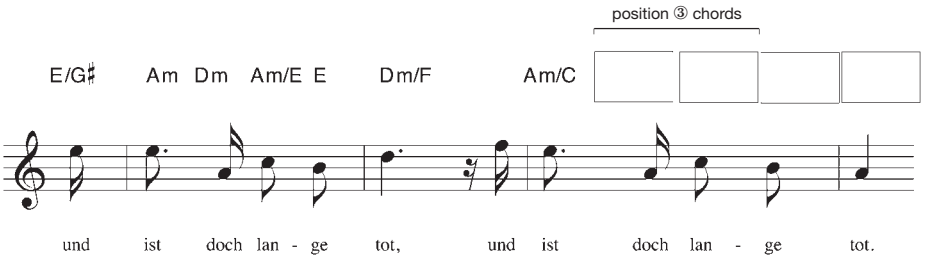
a

- As is often the case, the expansion of position ③ occurs before a cadential dominant chord, which only occurs in exercise a) as a preparation for the half cadence.
- In general, use the simplest possible harmonization.



Beethoven: Piano Sonata No 30, II

b

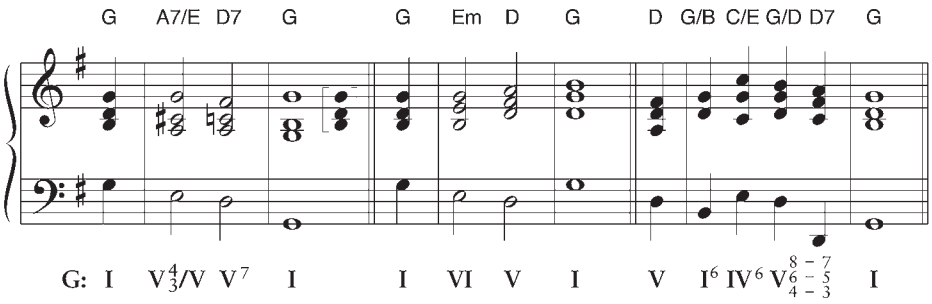


Schumann: 'In der Fremde', Liederkreis op 39 (the end)

Text book: pages 98–99

The 6th degree in the bass in a major key

35 Play the cadences below on the piano in all major keys. All the chord progressions contain the bass motion 6-5-1. The three chord progressions below follow the chord patterns in examples 1 and 2a and b on p 101.

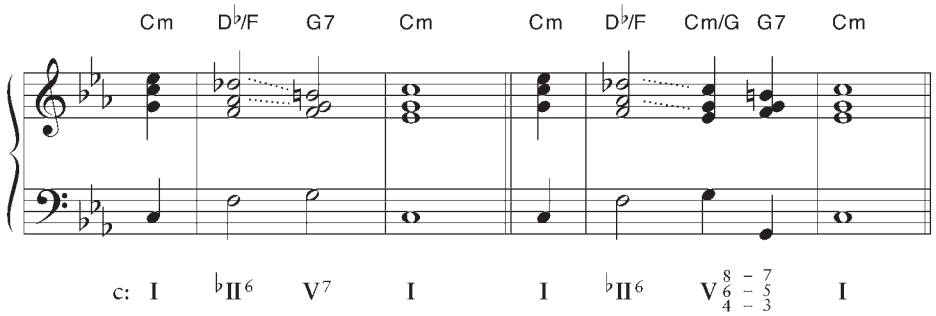


36 Compose melodies that involve expansion using position ③ chords, the 6th degree in the bass in a major key, and neighbour notes around a dominant axis.

Text book: pages 100–101

1

Play the cadences below containing the Neapolitan 6th on the piano in all minor keys.



2

Harmonize the following melodies (a-c) by using the Neapolitan 6th.

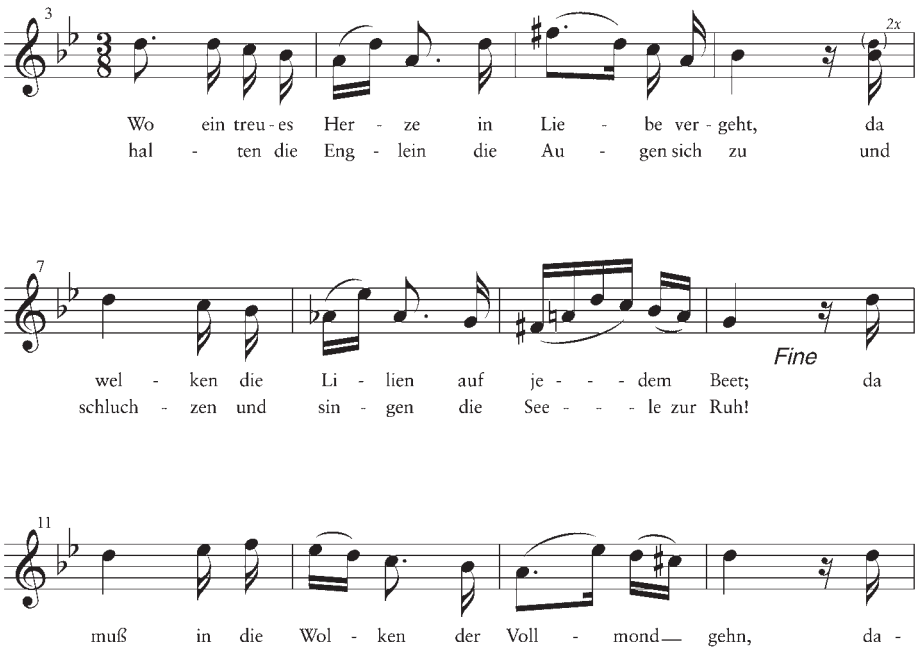
A7 IV

a

- Use ♭II6 in connection with the final cadence as well as in the half cadence in b 16-18 – in this case with the help of $V^{0}_{\flat 9}$/V (VII7/V) as a passing chord between ♭II6 and V (cf eg 3 on p 107).
- Use tonicisation, which occurs twice in bars 11-14 of the contrasting B section.

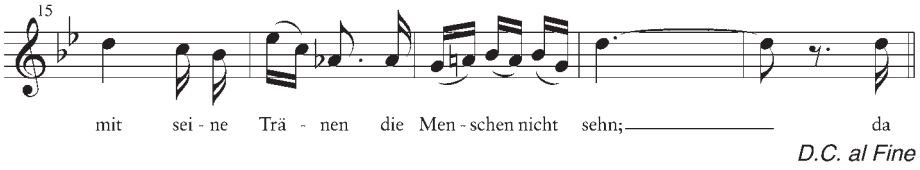
Schubert: 'Der Müller und der Bach', Die schöne Müllerin op 25

Mäßig



continued next page

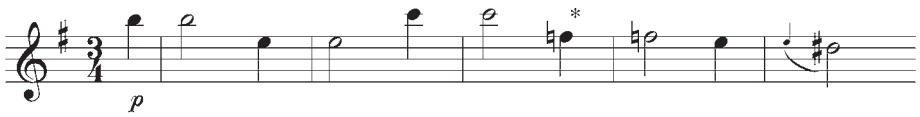
Text book: pages 104–107



b

- Use ♭II6 with a passing chord leading to V (cf eg 5 on p 105).

Haydn: Symphony No 26, Minuet
(transposed)

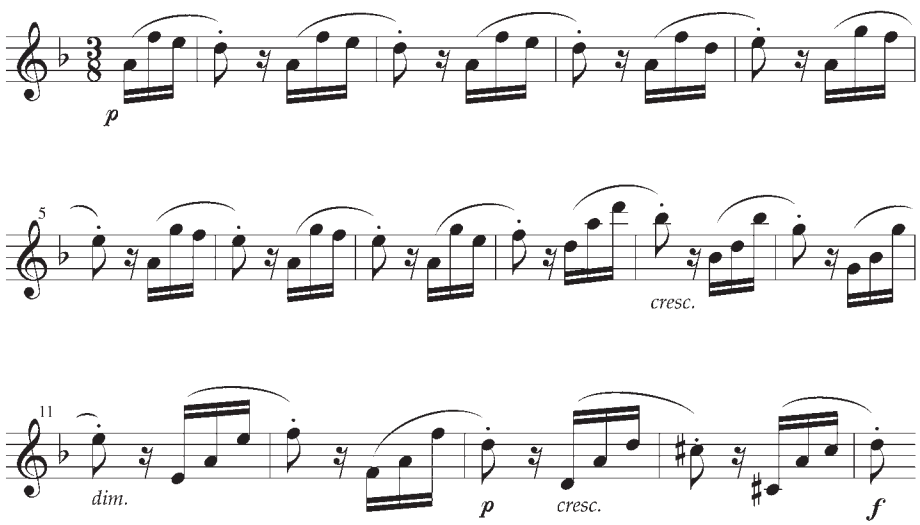


c

- Beethoven utilises ♭II6 with the root in the bass in order to create variation *after* a distinct subdominant ie the characteristic voice leading ♭2–♯7–8 occurs in the bass (cf eg 1 on p 107 – as opposed to the voice leading ♭2– 8 –♯7–8 in this case).
- Generally, Beethoven chooses the simplest possible chords.

Beethoven: Piano Sonata No 17, III

Allegretto



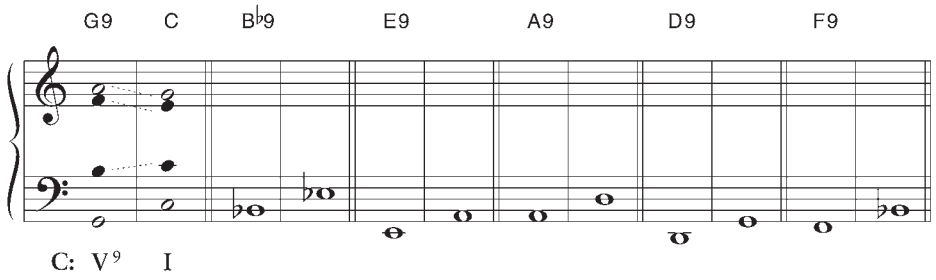
Text book: pages 104–107

* can be interpreted as belonging to the next bar (anticipation).

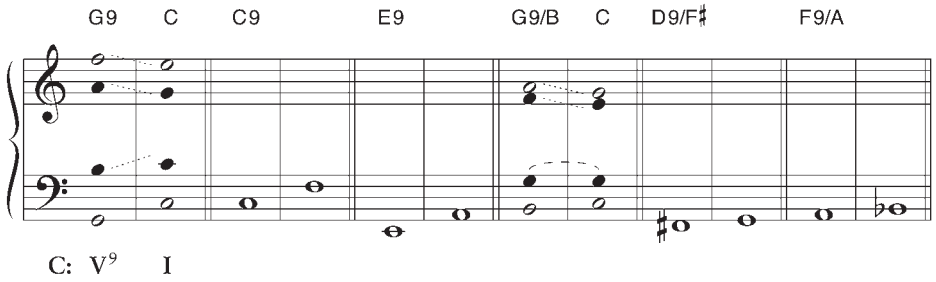
3 In the exercises below you will practice the resolution of the major ninth chords, see p 109, eg 1. Also practise playing the resolutions in all keys.

- the 5th of the 9th chord is usually omitted in four-part harmony, while important notes such as the *third* and *seventh* should be included.
- Resolve the leading notes as shown in bar 1.

With the root in the bass and the 9th in the soprano:

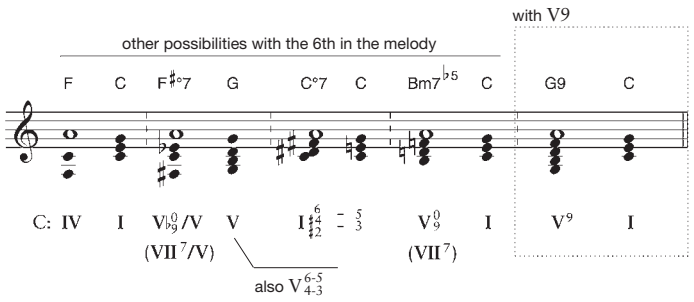


With the 7th in the soprano (examples 1-3) and the 3rd in the bass (examples 4-6):



Hints preceding the exercises on the following pages

Other harmonizations of the 6th degree of the major scale have been used in connection with the exercises in the section on the incomplete 9th chord (p 395). The 9th chord gives rise to another one of the possibilities, which is added below together with the others shown on p 395:



Text book: pages 108–109

How to use the dominant major 9th

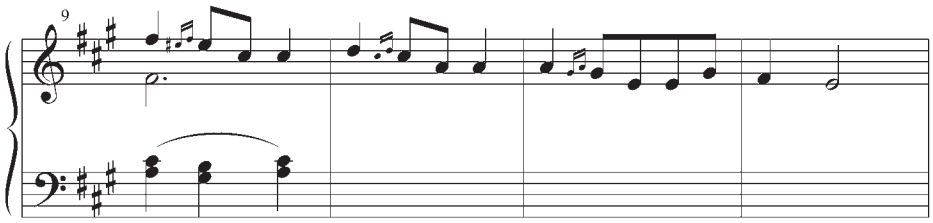
4 Utilise the V9 chord to harmonize the 6th degree of the major scale as described in 'Hints' on the preceding page. Consider how the other possibilities that are described on that page will function.

a

- Notate in 4 parts for piano.
- Complete the piano part using b 9 as a guide by utilising the sequence twice in bars 10-11. Note that although the excerpt begins with an F♯m chord, it is in A major.

Con moto

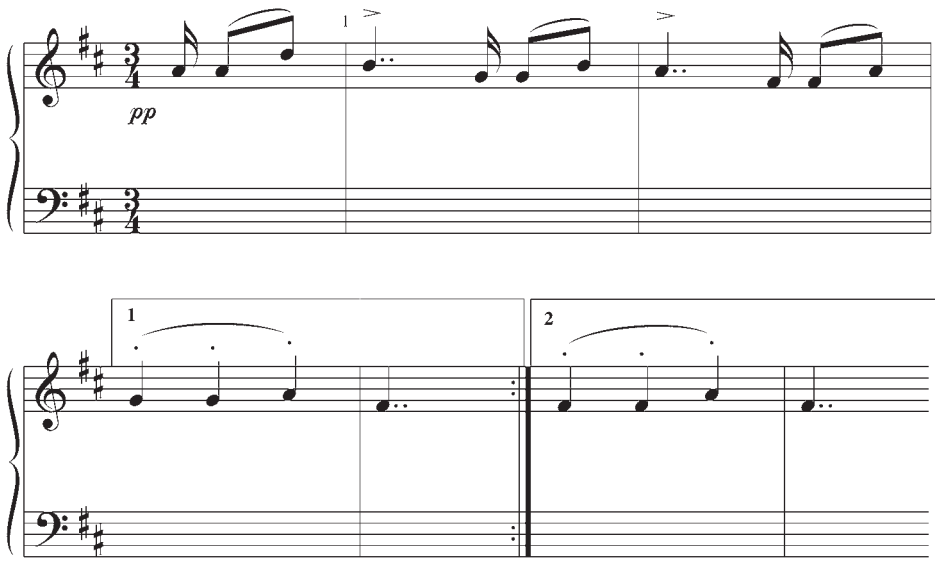
Grieg: Folksong



b

- Schubert uses 5-1 in the bass of the V9 chord.
- Notate freely for piano (using 4-5 notes in each chord) so that the chords follow the rhythm of the melody. Two eighth notes can be simplified to a quarter note. (Schubert repeats the sixteenth notes in the LH only of bars 1-2.)

Schubert: Deutsche Tänze op 33 No 2 (D 783)



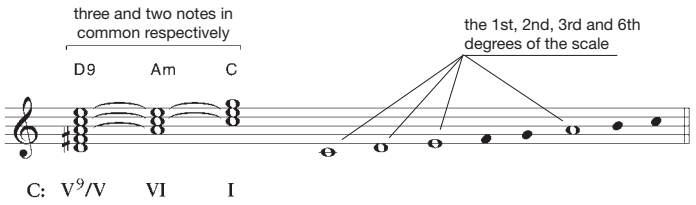
There are several possible solutions to the 1st and 2nd endings. Choose one that is suitable.
Schubert uses an unusual solution in the original that is quite complex:

1st ending: G^{add9}/B–A/C♯–D
2nd ending: F♯m/C♯–A7–D

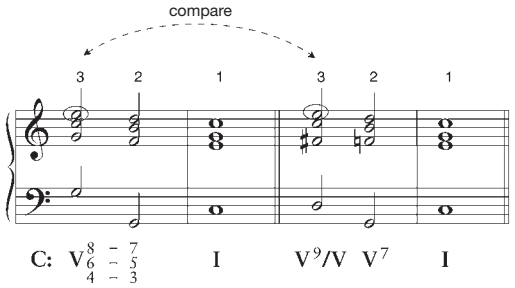
Text book: pages 108–109

Hints preceding the exercises on the following pages

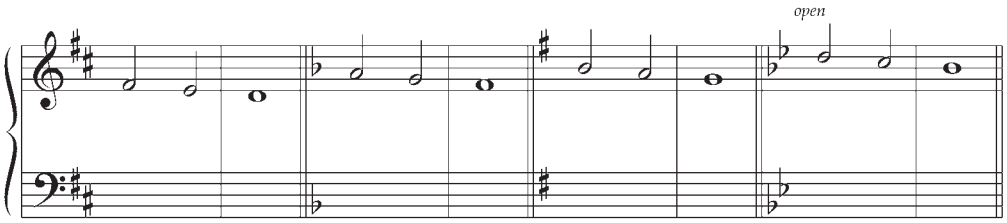
The dominant major 9th chord as an independent chord gave composers of the Romantic period new possibilities for harmonization, including the chord V9/V which has notes in common with both I and VI.



The 3rd degree of the scale – which composers of the Classical period often harmonized with V^{6-5}_{4-3} – has a new possibility with V9/V (see also eg 3 on p 109):

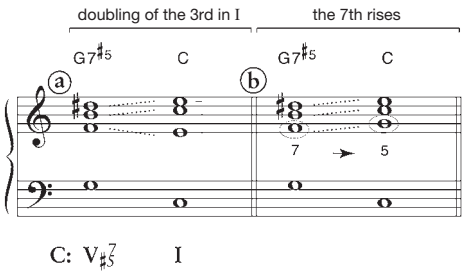


5 In the example below, practise harmonizing the 3rd degree of the scale in a major key with V9/V as shown in bars 3-4 in the example above.



Hints

Both the leading notes ♯5 and 7 are directed towards the 3rd in the chord of resolution, which gives rise to doubling of the 3rd (a). Alternatively, the 7th can rise (b).



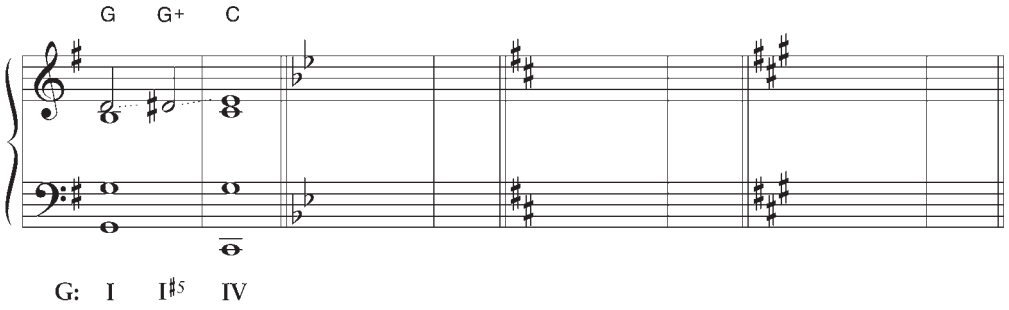
Text book: pages 108–111

♯5 as a chromatic passing note

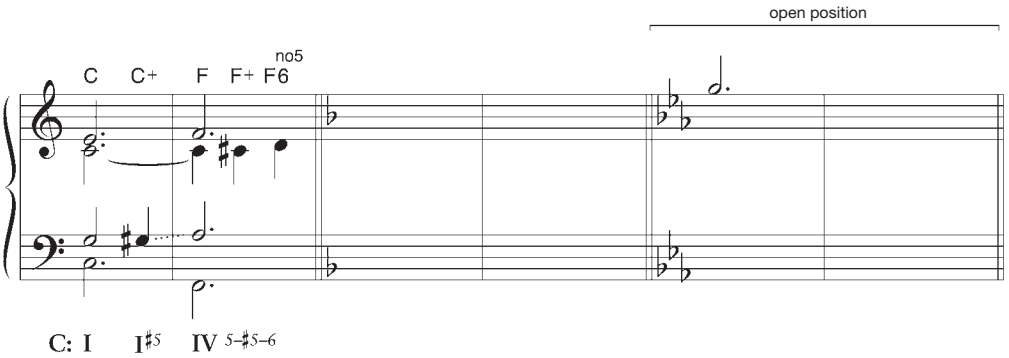
6 Practise using chromatic motion in the voice leading of I–IV, as described under the heading '♯5 as a chromatic passing note' on p 110 and also shown in the first two bars in exercise a and b below.

- Using the given key signature, notate in 4-part harmony by following the example in bars 1-2.
- Play the chord progressions in all major keys, adding a cadence such as $V^{6\text{-}5}_{4\text{-}3}$–I.

a

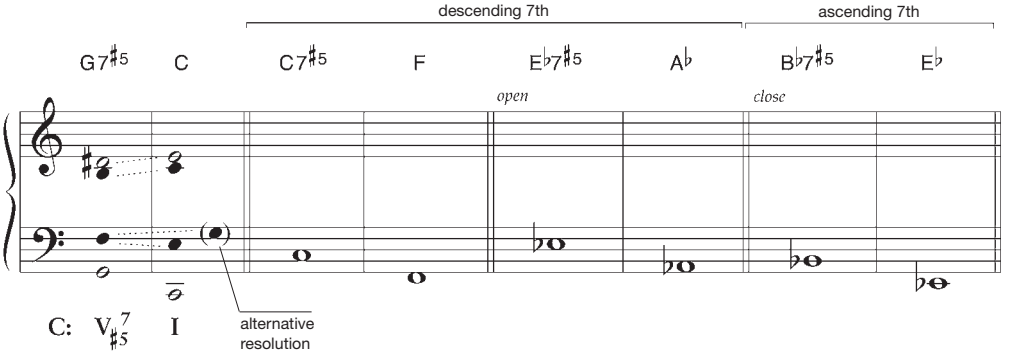


b In the following example, combine the exercise above with chromatic motion in chord IV (from the 5th to the 6th).



7 Resolve the following dominant 7th chords using a raised 5th.

- Place ♯5th at the top of the chord – which is most common when the seventh is used. Practice the two alternative ways to solve the ♯5 chord as explained in the box at the bottom of p 428.

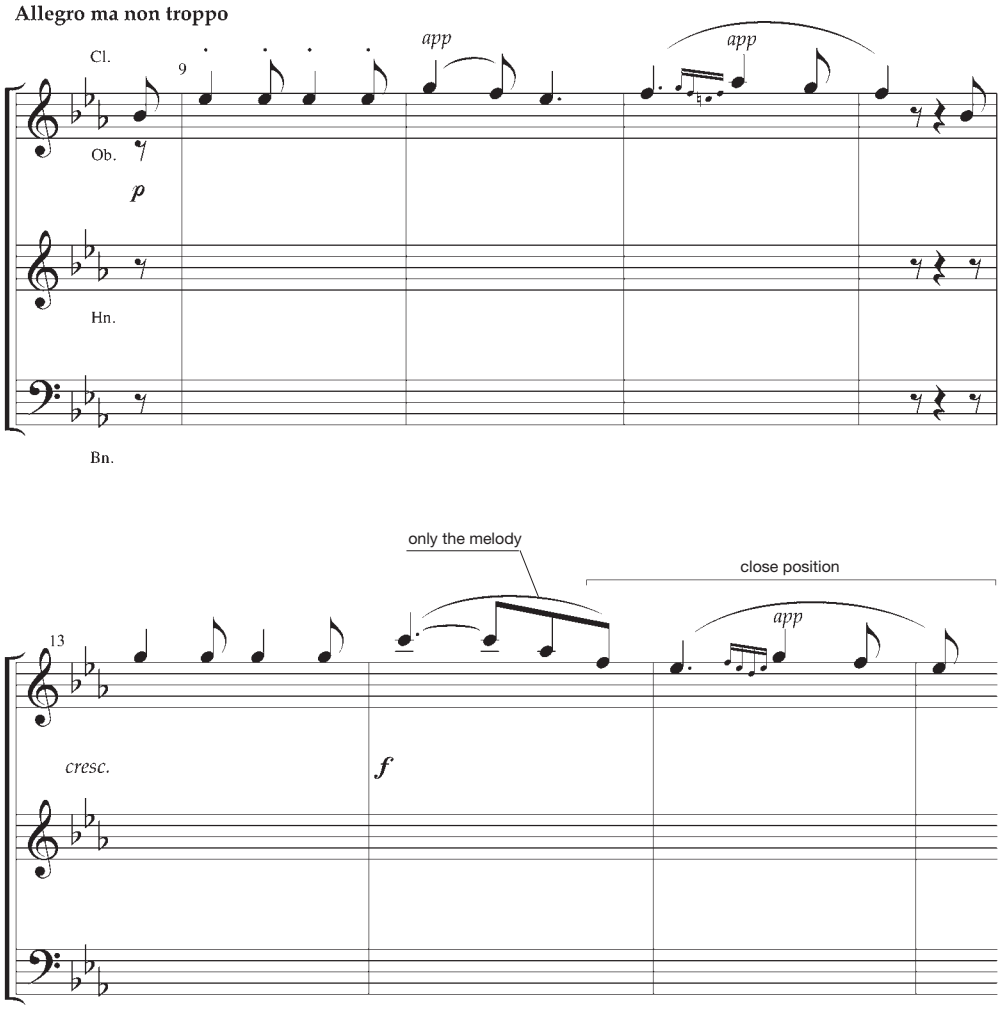


Text book: pages 110–111

8 Write in 4-part harmony for woodwind (cl and ob on the same staff) using the given melody.

- Harmonize the melody first and then write in 4-part harmony using open position, ending in closed position. The lower voices usually have the same rhythm as the melody. The appoggiatura marked (app) are only found in the melody.*
- Choose a distinct subdominant in order to find a suitable place for the progression I–I♯5–IV5–♯5–6 which you used in exercise b on the preceding page (last example). In general, use the simplest harmonization.

Beethoven: Quintet op 16, III Rondo



* In the original score, Beethoven also wrote an appoggiatura in the 3rd part in b 11.

Text book: pages 110–111

Resolution of the major and minor ninth chord

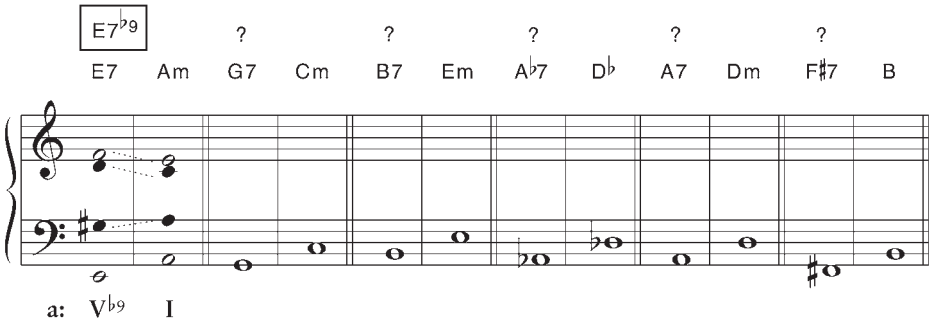
9 In the exercises below you will practise the spacing and resolution of the major and minor ninth chords:

- Add a ninth to each dominant seventh chord in the example. Choose either the major or minor 9th according to the basic principle:

  minor 9th if the chord resolves to a minor chord

  major 9th if the chord resolves to a major chord

- The resolution of V♭9 occurs according to the same principles as in the dominant major 9th chord; see p 109, eg 1. Use the 9th chord without a 5th as well as resolving the leading notes as shown in bars 1-2.
- Practise playing the m9th chord and its resolution in all minor keys.



10 Analyse the harmony of the following music examples:

Chopin: Waltz (b 53-84) Op 34, No 2
Beethoven: Elf neue Bagatellen, No 8, b 1-8 (Op 119)
Schumann: 'Kleine Studie', b 1-32, Album für die Jügend (Op 68)

11 Compose melodies which can be harmonized using the Neapolitan 6th, 9th chords and chords containing ♯5 as a chromatic passing note.

Text book: pages 112–113

12 Play the chord progressions in the box below in all keys. The progressions occurring in major and minor keys will be identical, because in a major key it is possible to borrow chord progressions from a minor key.

Hints preceding the exercises on the following pages

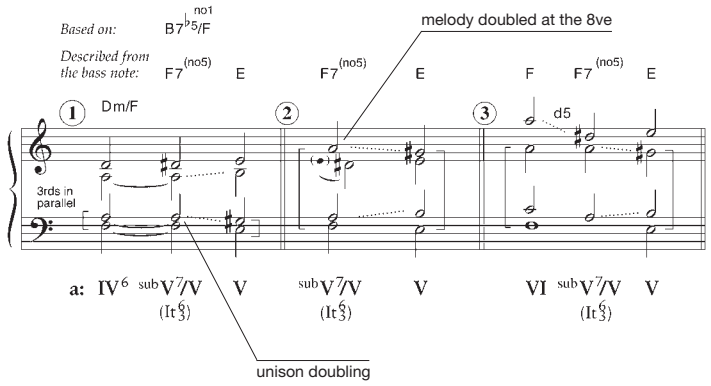
A particular voice leading resolving to V is necessary when dealing with the Italian, French and German 6th chords with the flattened 6th degree in the bass.

The following principles are common to the three chords in 4-part harmony:

- the 3rd and lowered 5th (the sharpened 4th and the flattened 6th degrees of the scale) are always resolved correctly as leading notes.
- one of the voices moves in parallel 3rds or 10ths with the bass – which in all the exercises arising from the lowered 5th of the chord (= the flattened 6th degree).
- taking into consideration the two points above, the voice leading of three of the four voices is always given.
- it is not unusual for the sharpened 4th degree to enter by a leap of a tritone or an ascending A2 (in another context the interval of an A2 is very unusual in traditional harmony).

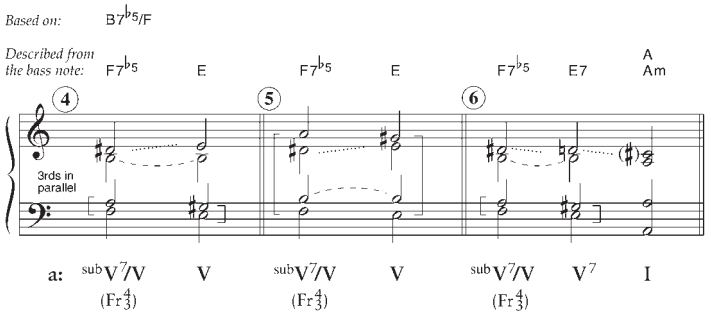
The Italian 6th

- the 7th is doubled at the octave or unison and continues in contrary motion.



The French 6th

- the chord does not need to double a note because it already has four notes.
- uses the root of the chord, which remains stationary to form the 5th in the chord of resolution.



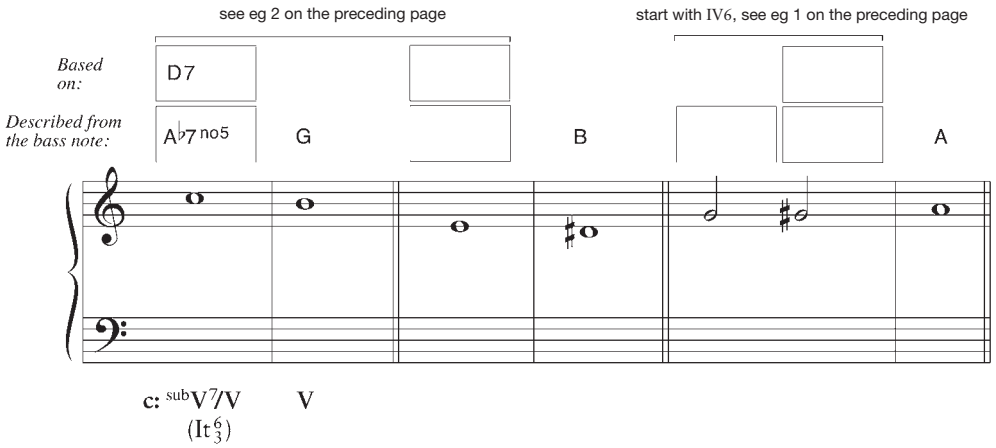
Text book: pages 114-117

13 *subV7/V as the Italian/French 6th chord:*

- Using chord symbols, notate both the chord derivation and the simpler notation working from the bass note (using enharmonic change of the leading note); see the 1st bar in example a and b below.
- write the voice leading of four-part harmony according to the principles given on the preceding page; see examples 1-2 (a) and 4-5 (b).

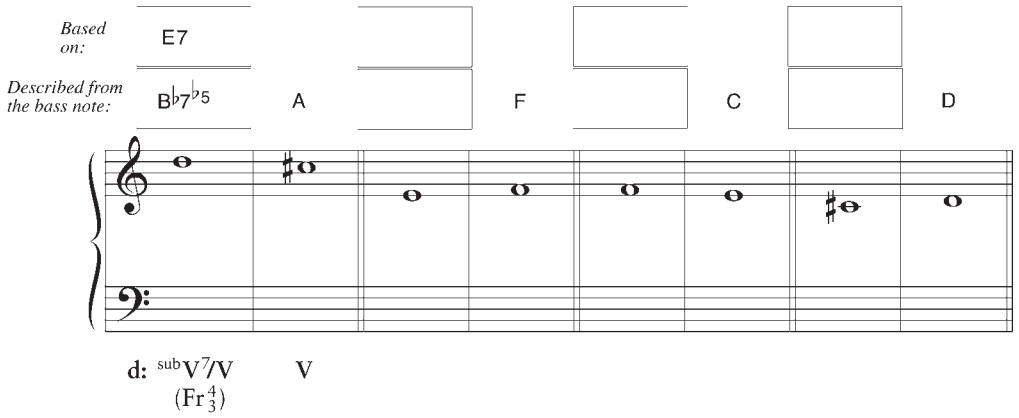
a *The Italian 6th*

- Choose an Italian 6th to precede the given dominant chord.



b *The French 6th*

- Choose an French 6th to precede the given dominant chord.



Text book: pages 114–117

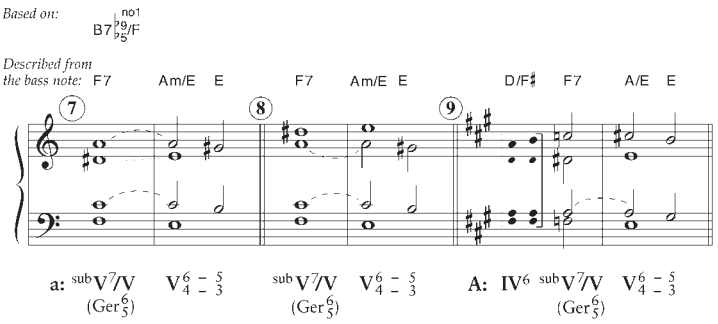
14 Play the chord progressions 7–12 in the box below in all keys.

Hints preceding the exercises on the following pages

Study the common principles for all augmented 6h chords ($^{sub}V^7/V$) on p 432.

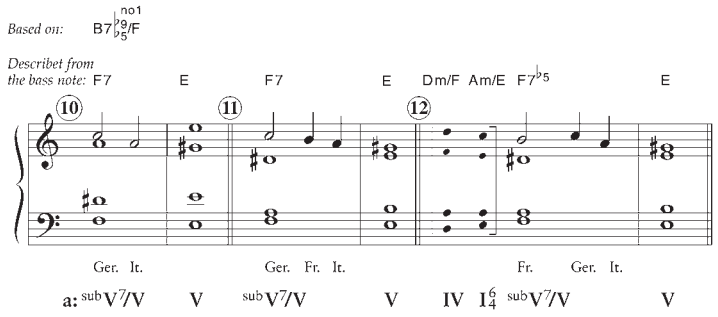
The German 6th resolving to V^{6-5}_{4-3}:

- no doubling is necessary because the chord already contains four notes.
- 7th and ♭9th (1st and 3rd degrees of the scale) remain stationary.*



Melodic motion of the augmented 6th ($^{sub}V^7/V$)

- The three types of $^{sub}V^7/V$ (It./Fr./Ger) are differentiated here, although when using Roman numerals, $^{sub}V^7/V$ alone is sufficient.

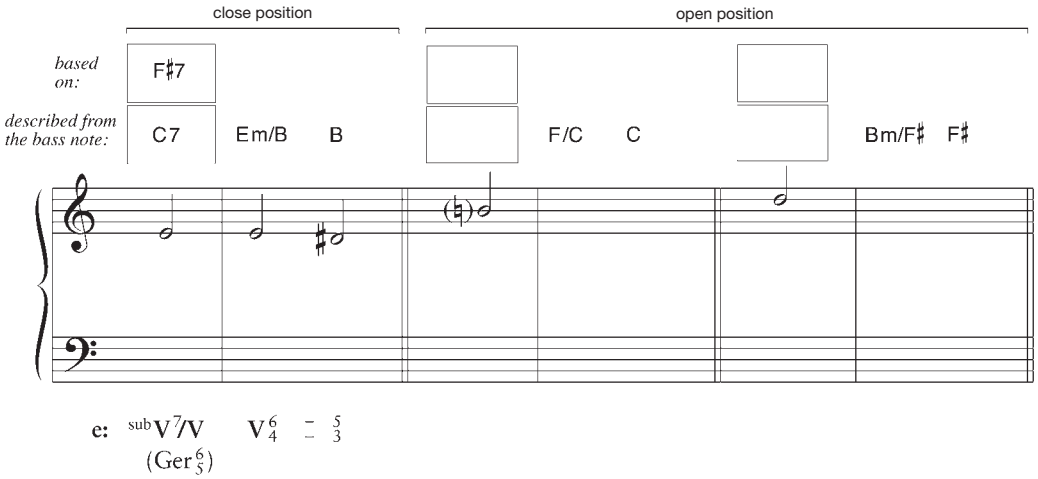


* ♭9 ascends a semitone in a major key; see eg 9 above.

Text book: pages 114-117

Resolution of the German 6th to V or cadential $\frac{6}{4}$

Write a German 6th resolving to V^{6-5}_{4-3} (see 'Hints' on the preceding page, eg 7-8):



e: $^{sub}V^7/V$ V^6_4 – $^5_3$
(Ger^6_5)

15 Play the chord progressions 14-16 in the box below in all keys.

Hints preceding the exercises on the following pages

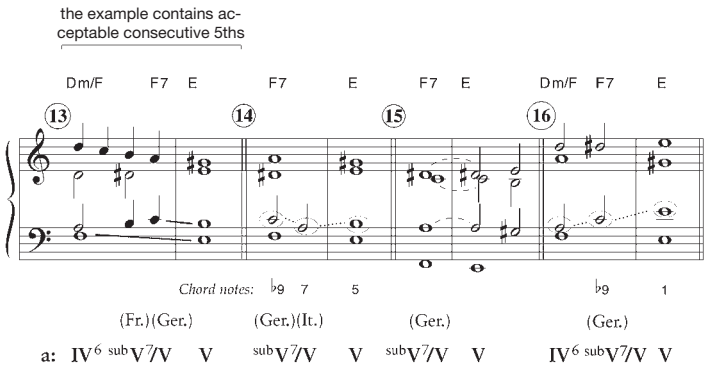
The German 6th forms consecutive 5ths when resolving using the least possible movement to V. See below for different ways to avoid consecutives. It is important to note that consecutive 5ths between the German 6th and V are acceptable – but rarely used; see eg 13 below.

The German 6th resolving to V:

Here are three common ways to avoid consecutives between the augmented 6th ($^{sub}V^7/V$) and V:*

1. within the $^{sub}V^7/V$, ♭9 descends to 7 (scale degree 3-1) with resolution to 5 in V – eg 14.
2. suspension of the $^{sub}V^7/V$ chord – eg 15.
3. ♭9 ascends to the root in V (in this case ♭9 preceded by the 1st degree of the scale) – eg 16.

In the example below, $^{sub}V^7/V$ is described from the bass ie F7 instead of B7 $^{\flat 9}_{\flat 5}$ no1.



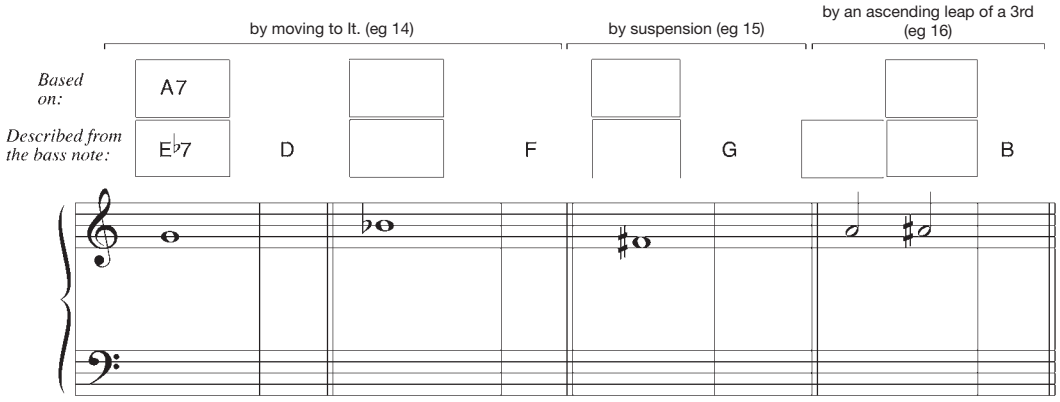
* It is common to arpeggiate chords in keyboard music, which does not lead to consecutive 5ths.

Text book: pages 114-117

16 *The German 6th resolving directly to V*

a *while avoiding consecutive 5ths:*

- See 'Hints' on the preceding page.



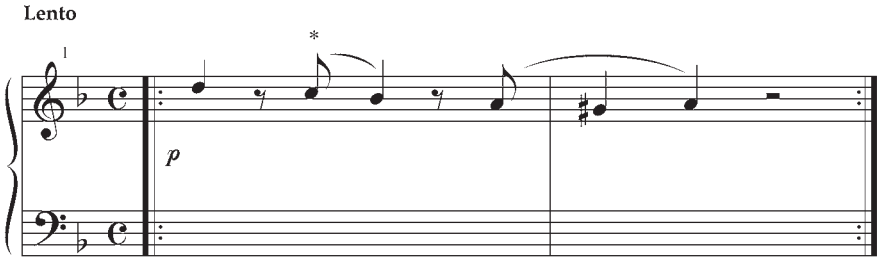
g: $^{sus}V^{7}/V$ V

(Ger $^{6}_{5}$)

b *with acceptable consecutive 5ths:*

- Write a 4-part piano arrangement in close position using the following short excerpt, so that the parts have the same rhythm as the melody.
- Use the German 6th.

A7 IV



Chopin: Nocturne in C♯ minor (Oeuvre posthume) Transposed

* Chopin harmonizes this note using I7 with the 3rd omitted.

Text book: pages 114-117

Motion to the augmented 6th

17 Play the following chord progressions on the piano in all keys.

Hints

See below for common harmonic motion to the It., Fr. and Ger. 6th chords (in the boxes) notated in A minor. These are described from the bass note.

① ***directly from I***

Am < [F7no5 / F7♭5 / F7] (Am/E) – E7 – Am

② ***from V♭ in 1st inversion***

Am – Em/G < [F7no5 / F7♭5 / F7] (Am/E) – E7 – Am

③ ***from IV–I$^{6}_{4}$ (or in a cadence IV–V$^{6\text{-}5}_{4\text{-}3}$)***

Am – Dm – Am/E < [F7no5 / F7♭5 / F7] (Am/E) – E7 – Am

④ ***from a chord with the ♭6th or ♯6th degree in the bass, eg VI, IV^{6} ****

Note that other chords apart from I can precede the progressions:

Dm/F
F – Dm/F
D/F♯ – Dm/F

> [F7no5 / F7♭5 / F7] (Am/E) – E7 – Am

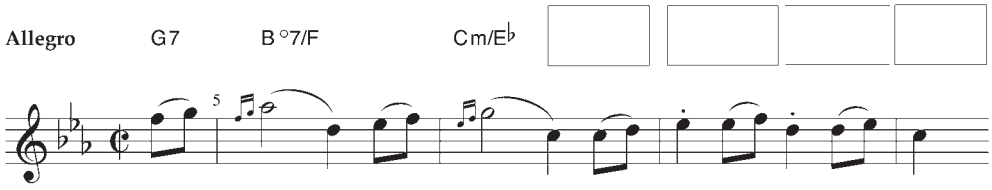
* or other chords with the ♯6th degree of the scale in the bass; eg VI–IV^{6}, V$^{0}_{6}$/V (VII^{6}/V), V$^{0}_{♭9}$/V (VII^{7}/V).

Text book: pages 114-117

18 In the practice example a-e, use the Italian/French/German 6th chord in an authentic cadence or a half cadence at the end. Using the hints on the previous page, also shape the harmonic motion so that it leads to one of these chords.

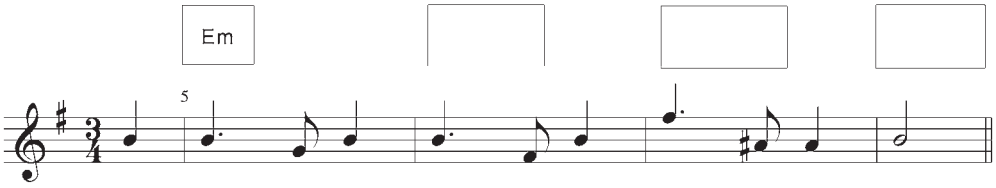
A7 IV

a *The cadence may also contain* $V\frac{6-5}{4-3}$.



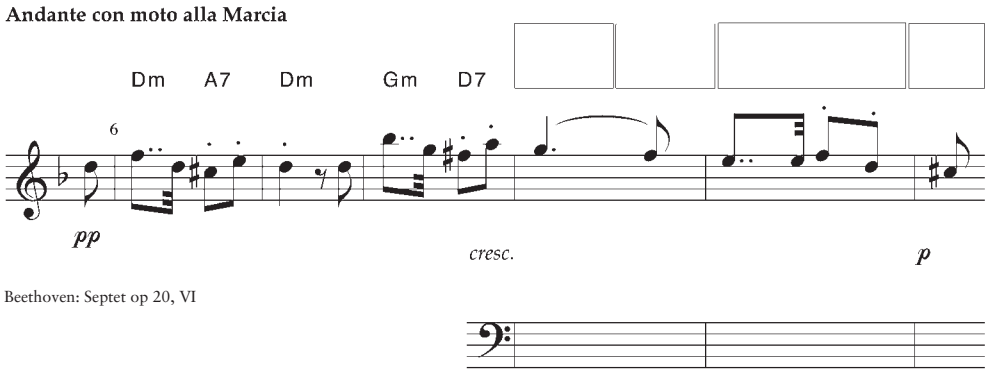
Beethoven: Piano sonata op 13 No 8 (Pathétique), Rondo

b *Also notate the bass starting from the first bar of the example:*



Schubert: Walzer (DV 979)

c *Notate using 4-part harmony in open position with the same rhythm as the melody. Study eg 1 (b 14) on p 117, in order to complete the second last bar.*

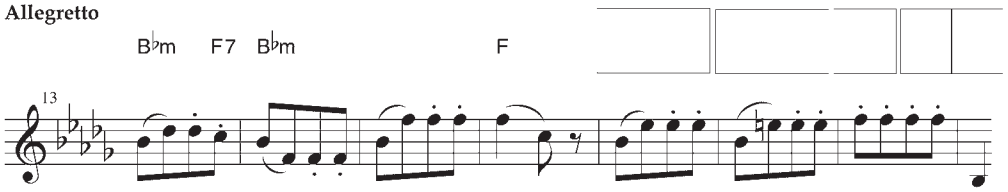


Beethoven: Septet op 20, VI

Text book: pages 114-117

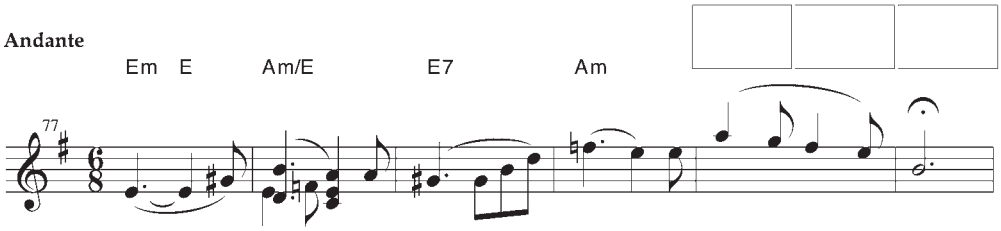
Harmonization using the augmented 6th

d *The cadence may also contain* V^{6-5}_{4-3}.



Haydn: Symphony No 63, II
(transposed)

e *Notate the last two bars of the bass as well as a chromatic line for one of the inner parts.*



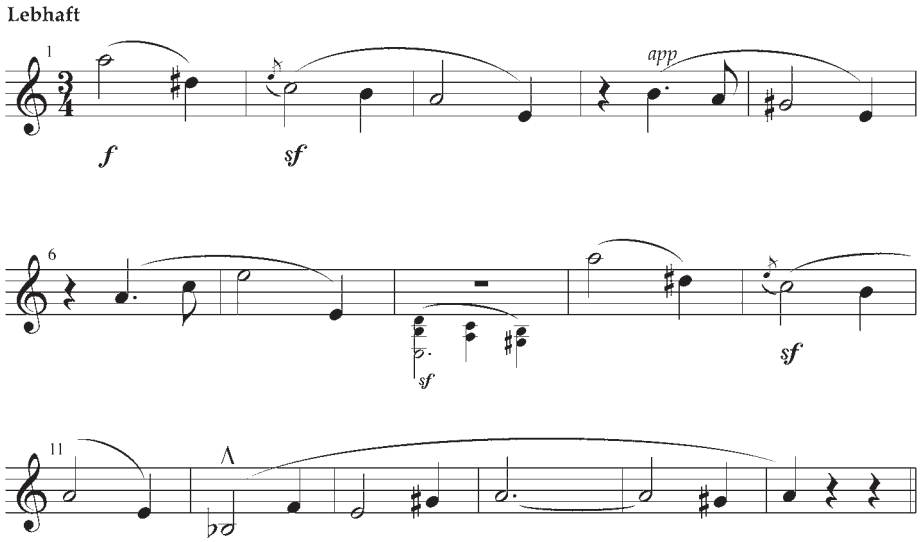
Schubert: Symphony No 1, II

19 Harmonize the following melody using an augmented 6th chord ($^{sub}V^7/V$) in another context apart from a final cadence.

- Temporary accidentals – apart from the leading note G♯ – provide a clue to Schumann's harmonization. These imply another chord (apart from the augmented 6th), which you have studied previously.

A7 IV

Schumann: 'Walzer' Albumblätter op 124 No 4

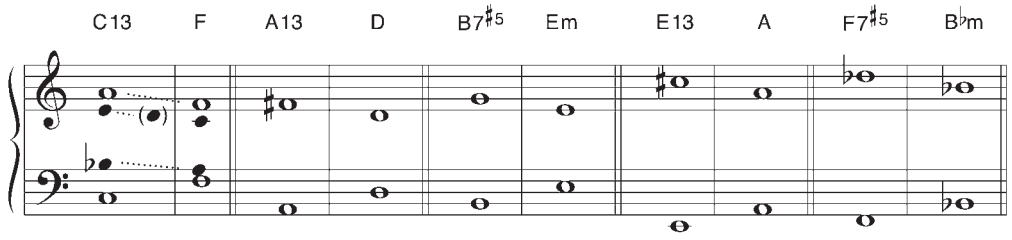


Text book: pages 114-117

20

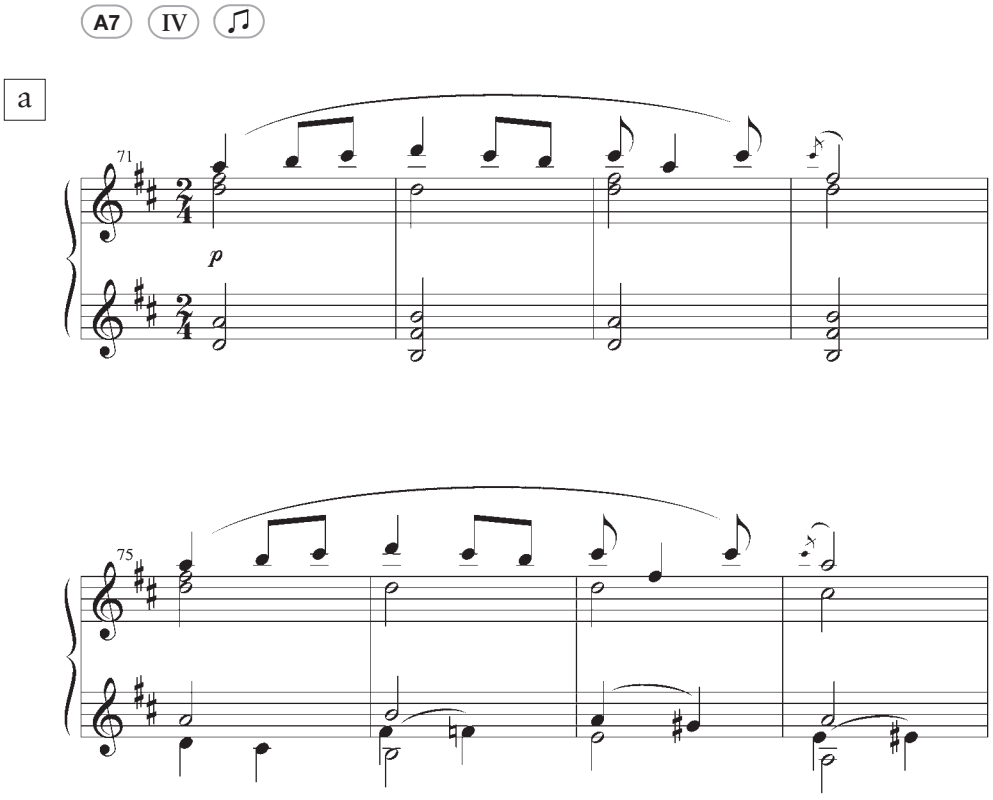
In the example below, practise resolving the dominant chord which includes the extension of the 13th or ♭13, depending on whether the chord has a major or minor resolution. Both of these are used *without* the 9th; see the first bar.

Note that ♭13 using chord symbols is labelled 7♯5.



21

Analyse exercises a and b below. Include the melody notes that are extensions of the chord – although not the passing notes (eg C♯ in b 72) – in the analysis.

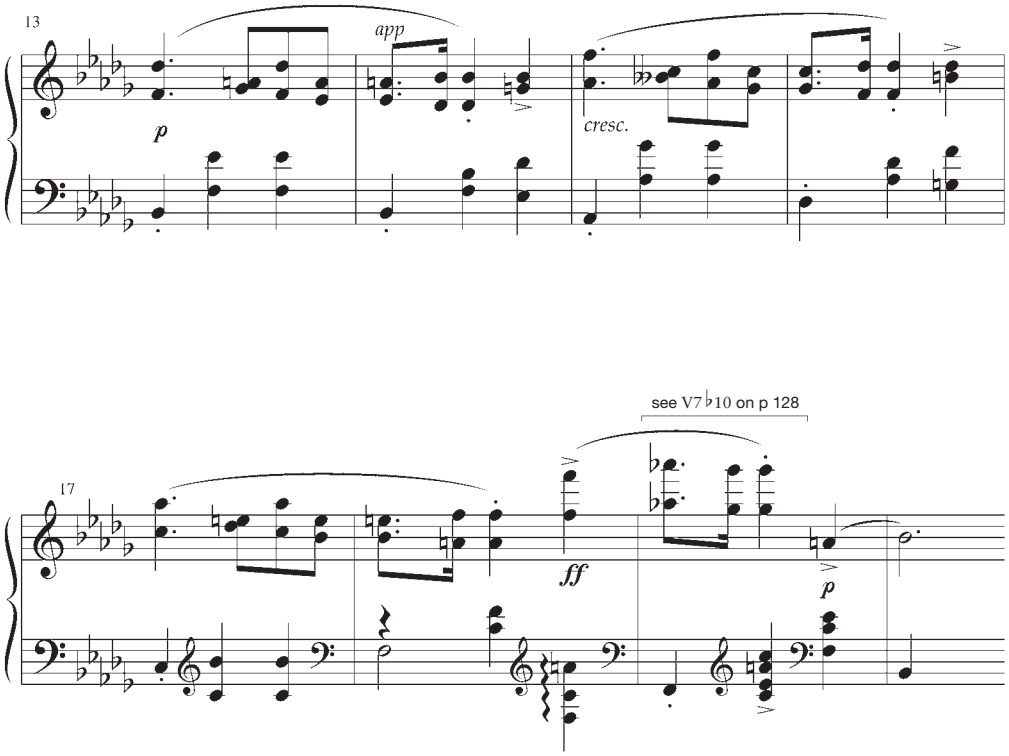


Grieg: 'March of the Dwarfs' Lyric Pieces, Op 54 No 3

Text book: pages 120–121

The 13th chord in major and minor

b In order to choose the chord, it is a good idea to analyse the harmony bar by bar – note, however, that bars 13*, 14 and 16 consist of two chords per bar.



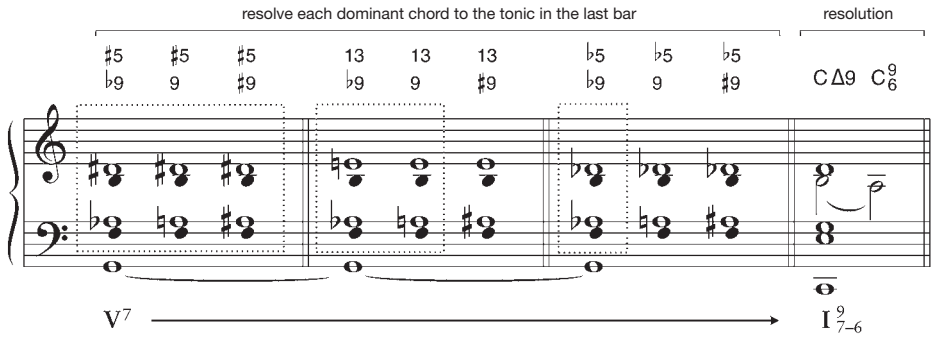
Chopin: Mazurka op 24 No 4

* the bass note B♭ can be regarded as a pedal point. (The harmony of the eight bars preceding this example is almost identical.)

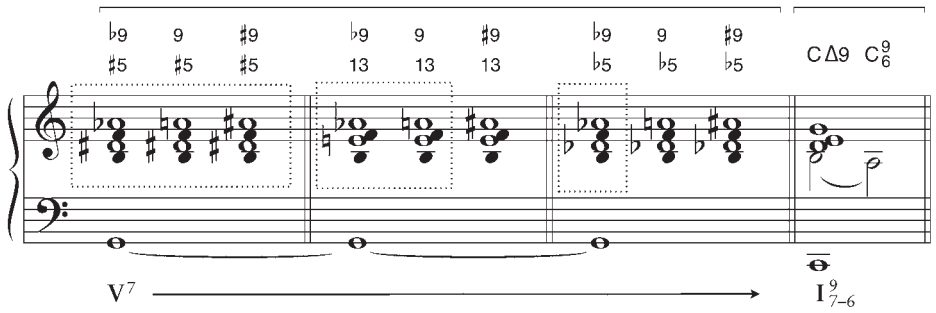
Text book: pages 120–121

22 Play each of the nine types of the dominant chord in all keys resolving to the tonic in the final bar*. The most common types are in the boxes, which may be chosen first. Examples a and b represent the two most common of the four possible positions.

a *The 5th or 13th in the upper part:*

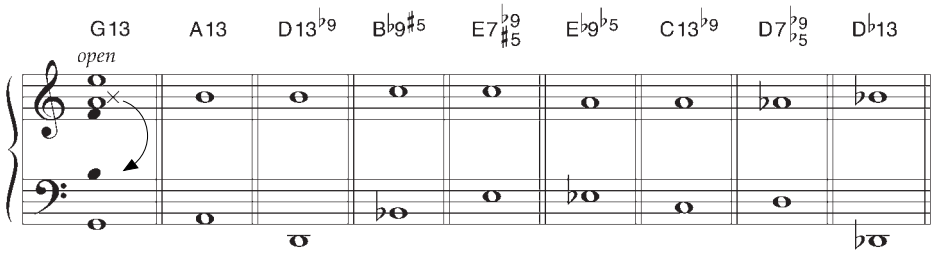


b *The 9th in the upper part:*



23 Write chords in *5* parts using open position with the given note at the top, as indicated by the chord symbols. Use the voicing of the previous exercise as a model and spread the notes by moving the 2nd voice down an octave; see b 1.

Note the enharmonic change (eg ♯5 = ♭6).



* the ending can also occur in minor by lowering the major 3rd.

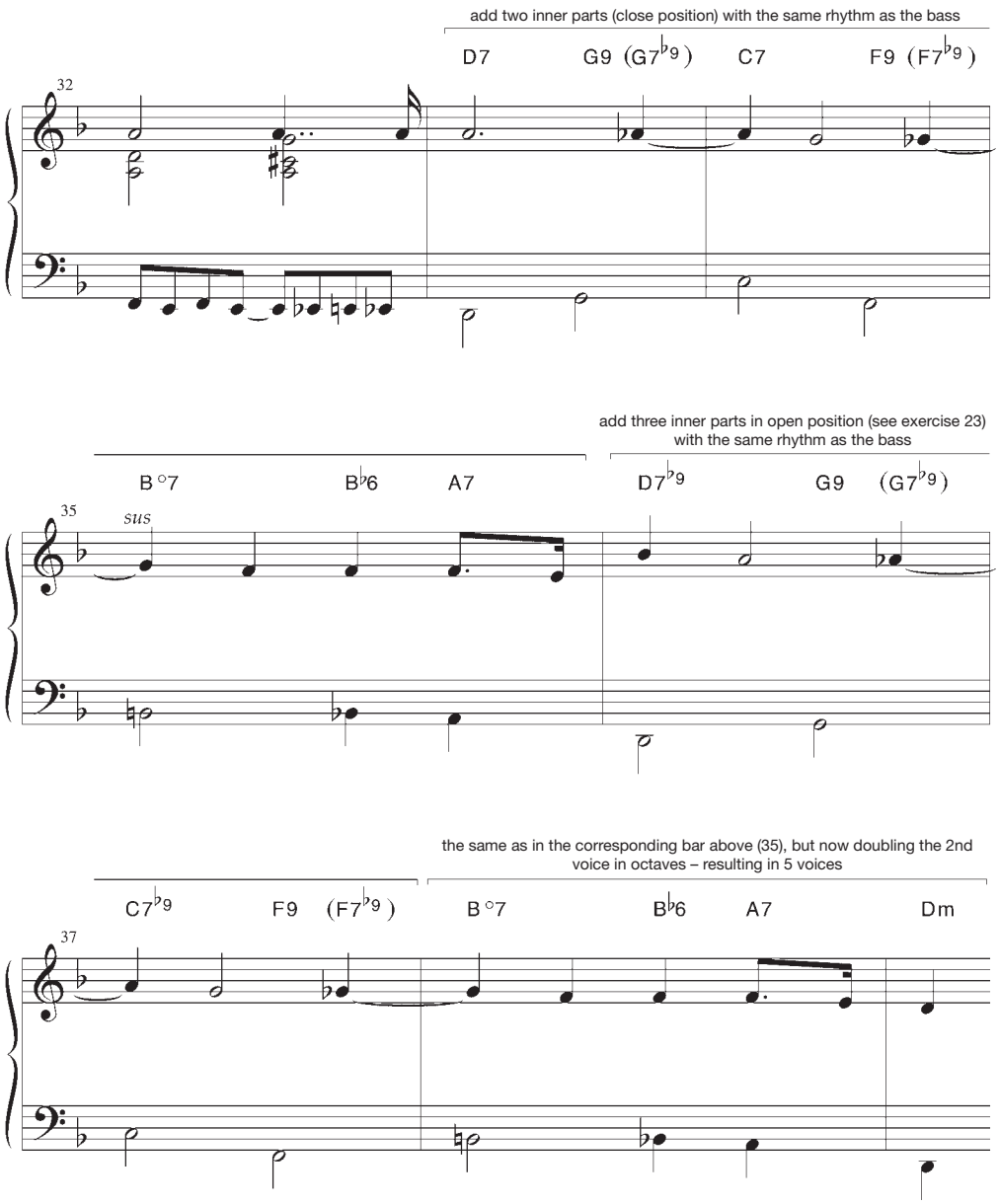
Text book: pages 128–129

24

Complete the inner parts using the given chord progression from a Liszt excerpt to form 4/5-part harmony.

- In the sequence of dominant chords (a real cycle of 5ths), the 3rd leads to the 7th and vice versa; see eg 3 on p 77.

IV



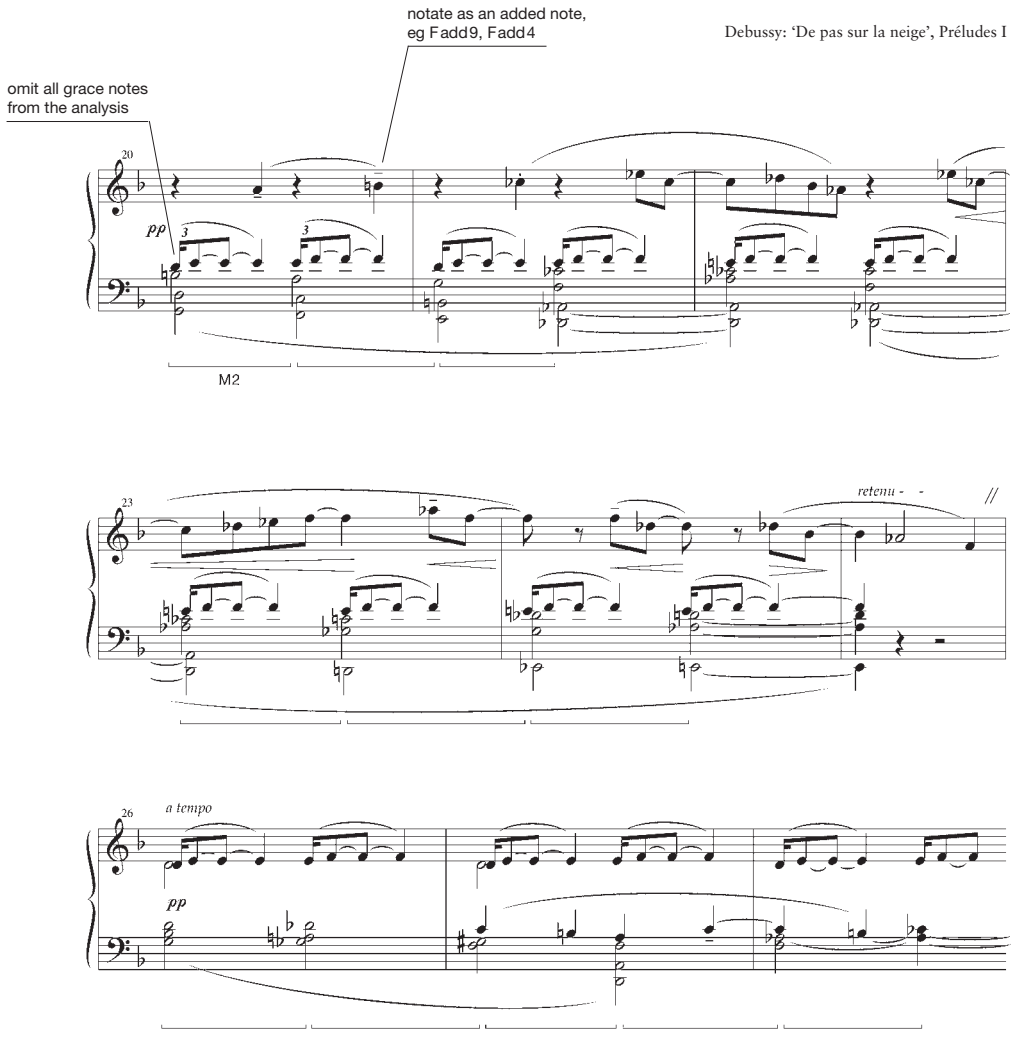
Liszt: 'Il penseroso'
Original: C♯ minor

Text book: pages 128–129

25 Describe each chord in the Debussy example below using chord symbols. The harmony is not functional, so Roman numerals are no longer useful.

- Apart from the notes of the chord, Debussy utilises unresolved extensions, which become a part of the chord and can therefore be included in the analysis.
- As Debussy does not always spell the chord so that it can be read as a normal triadic chord, it is necessary to hear the chord played on the piano and sometimes respell the notes (an example of this is the 2nd chord in b 26).
- Also analyse in such a way that the interval between the root of each chord is notated as shown in b 1 (in the whole example, the bass note = the root). See if you can find a basic concept that unifies the harmony – despite the fact that it is nonfunctional. Consider if there are any other contributing factors.

A7



Text book: pages 124–129

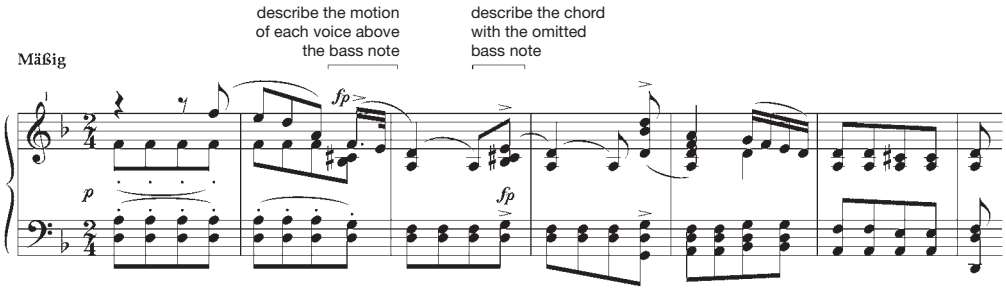
Chords above a common bass note

26 Analyse the following extract containing chords above a common bass note. The chord constructions that occur from the motion of the individual voices are described here using numbers related to the chord of resolution in a similar way as in V4-3; see p 131, eg 1.

IV

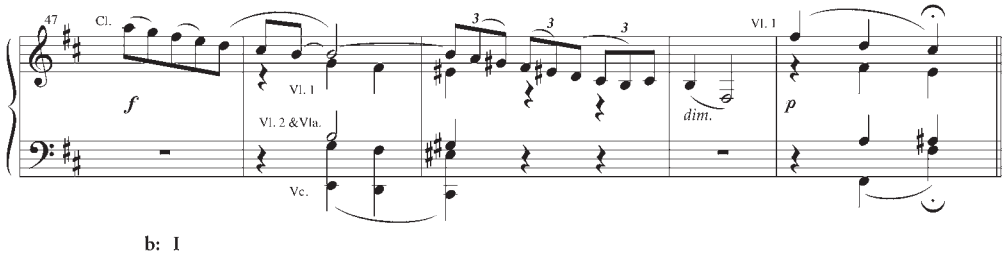
a In this example, analyse the chord indicated in b 3 in the usual way by writing the Roman numerals of the chord (without the pedal point); see p 131.

Schubert: 'Gute Nacht', Winterreise



b In this example, it is necessary to identify the two chords above a common bass note using numbers to describe the voice leading above the bass note; see p 131, eg 1 (b 30).

Brahms: Clarinet quintet, II

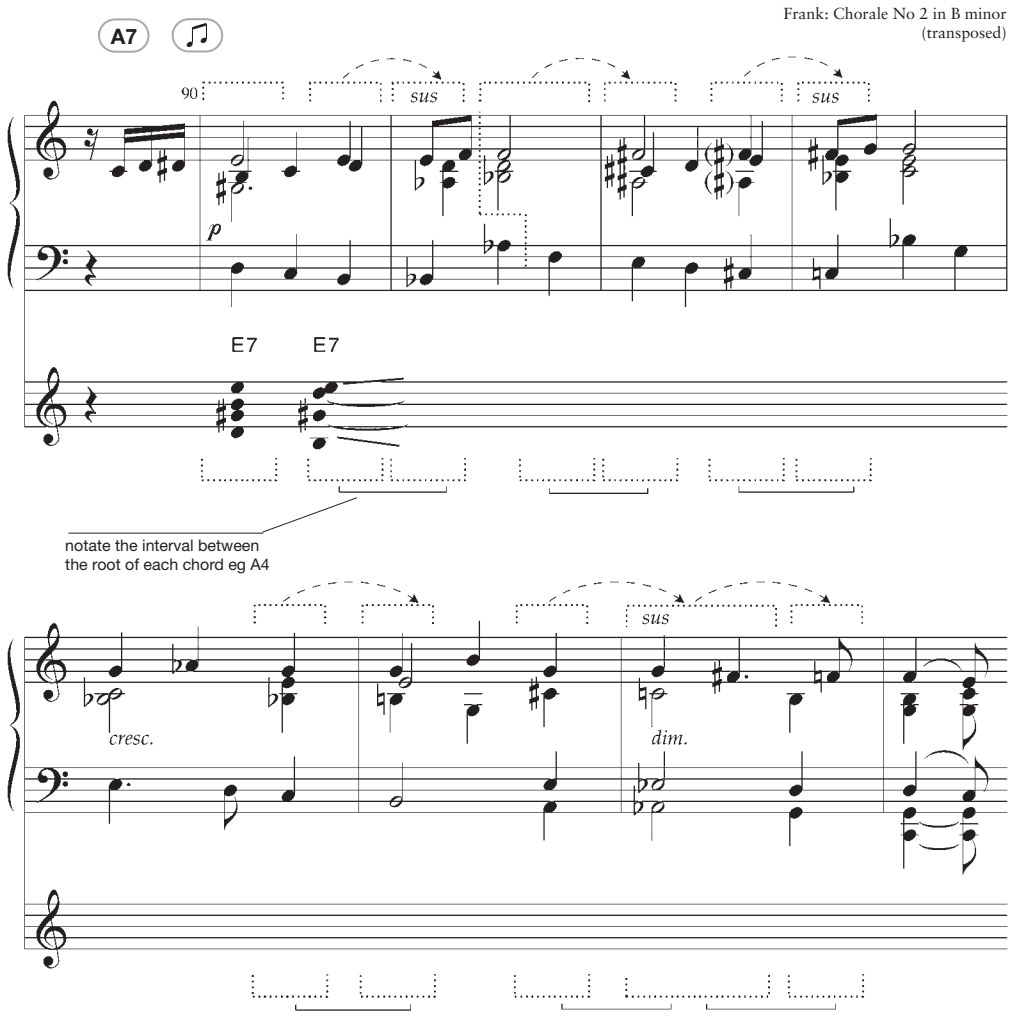


b: I

Text book: pages 130–131

27 Notate the chord constructions (well separated from each other) that arise due to voice leading as described below:

- Notate the chords as marked (without suspensions) in the lower staff – an octave higher than in the original; see the 1st bar (b 90).
- With reference to the pairs of chords marked with dotted arrows (refer to the template in b 90), write:
  a) a tie for the stationary note. Note that this also applies to a note that has been enharmonically changed.
  b) a hyphen to show a semitone – use another colour if possible.
  c) the interval between the root of each chord



28 Notate – as shown below – the chords, which provide the basis of how Brahms uses chords above a common bass note and leading note chords:

a) Notate the chords marked by an arrow in close position on the lower staff, using three notes for triads and four notes for seventh chords.

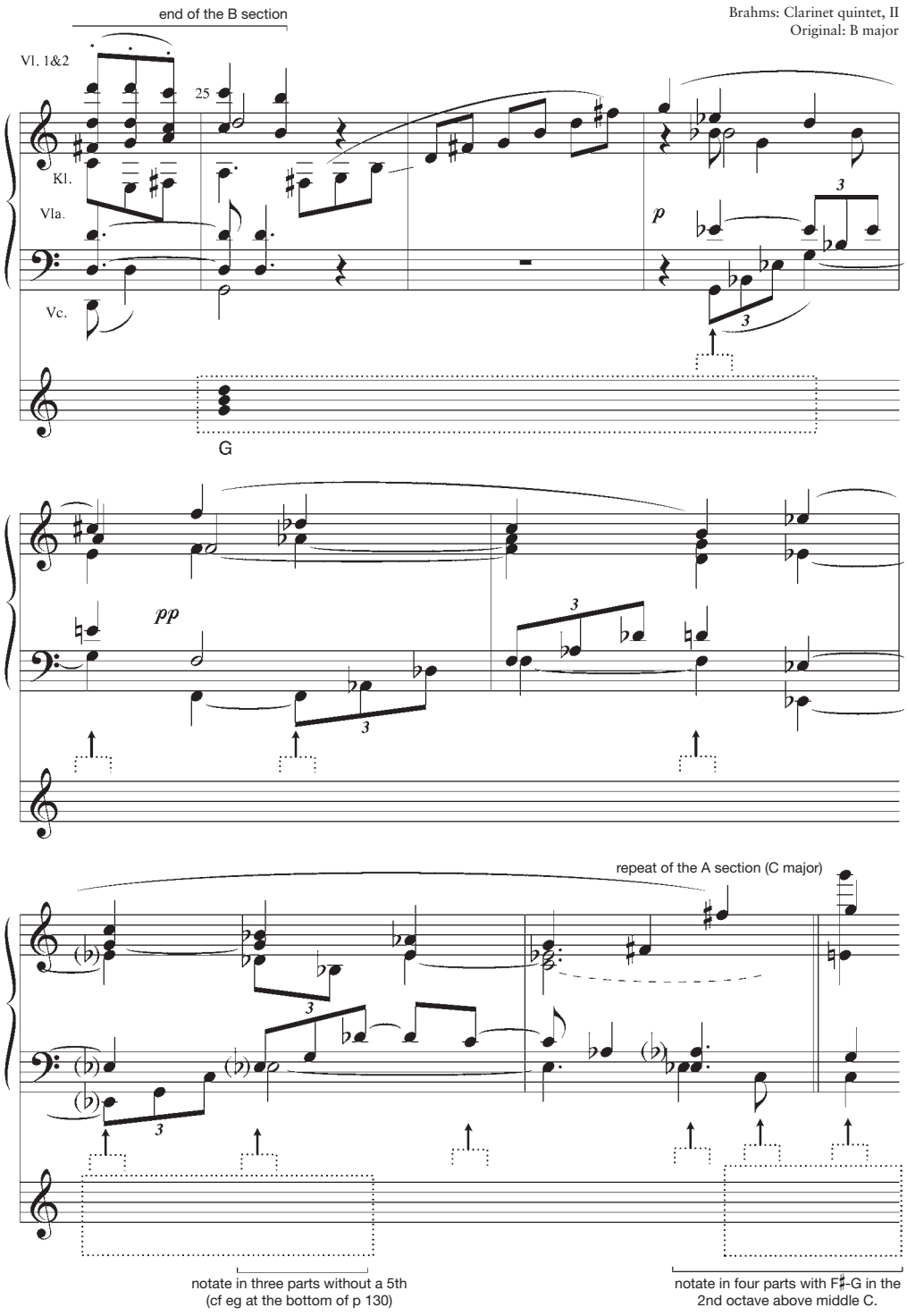
b) Shape the voice leading using the least possible movement starting from the G chord that is given in b 25. Write each bass note chosen by Brahms as the lowest note in the chord.

Text book: pages 130–133

c) Join the notes in common with a tie.

d) Describe how Brahms connects harmonies in the pairs of chords marked by the boxes. Also notate the last two chords using Roman numerals as described in the example at the top of the left column on p 132.

A7



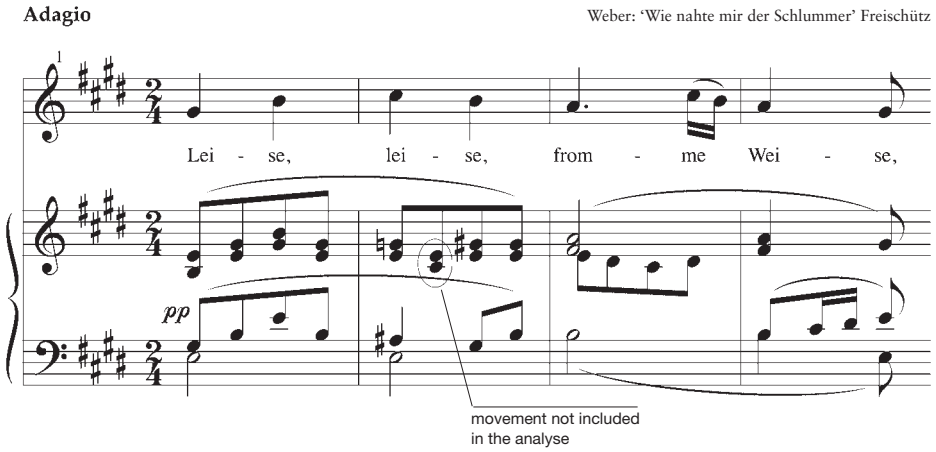
29

Use Roman numerals to analyse the following music extract. Include the diminished 7th chord resulting from voice leading, using the references in exercises a-c below as a guide:

IV ♫

a

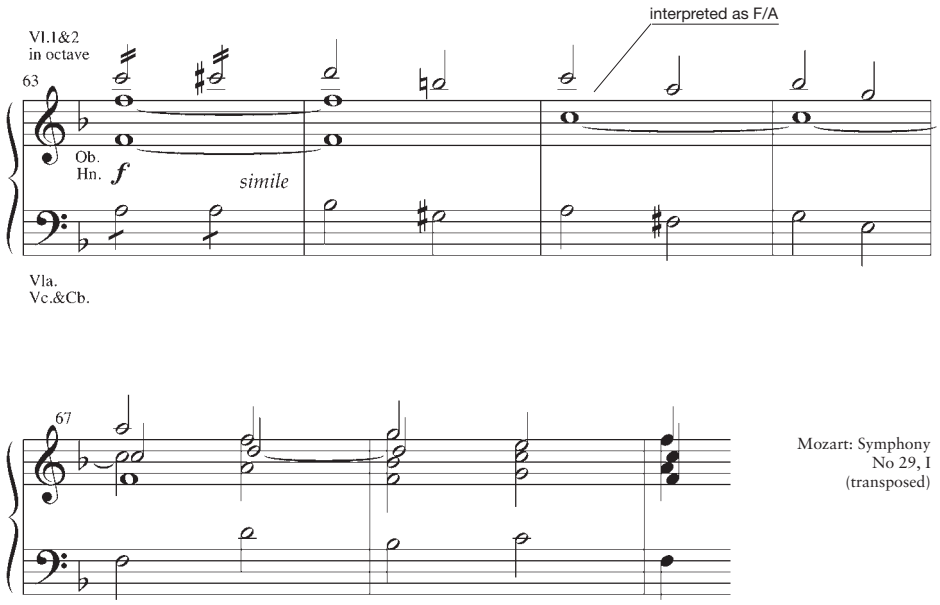
Take particular note of eg 1 (b 4) and eg 3 on p 135.



b

See also 'The leading note chord in inversion' on p 134. The leading note chord functions as an appoggiatura in eg 4 on p 135, while in the Mozart example below it creates the upbeat to the target chord.

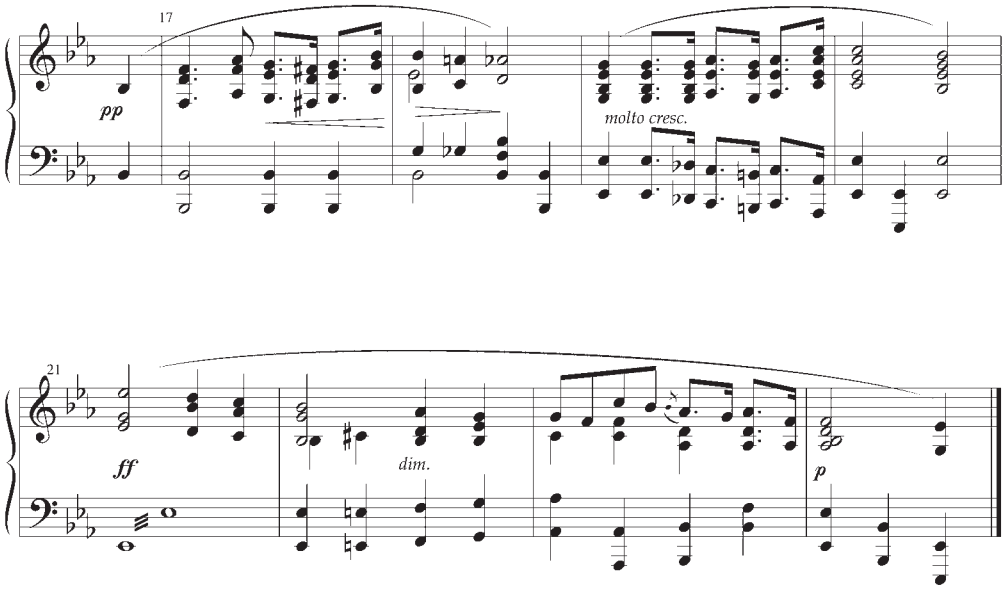
- Work from the target chord when you do the analysis.



Text book: pages 134–135

C Take particular note of the example at the bottom of the right column under the heading 'The leading note chord in inversion' on 134.

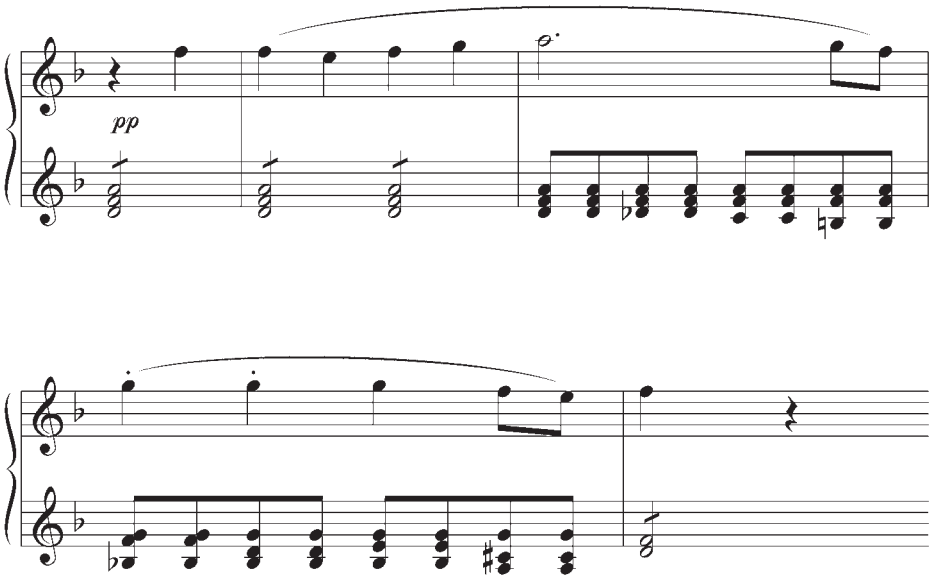
Chopin: Largo, 'Minor works'



30 Analyse the following extract (containing chromatic motion in triads) using Roman numerals. Describe the motion with numbers as shown on p 137, eg 3.

IV

Schubert: Piano sonata, D. 960, I



Text book: pages 134–137

31 Analyse the harmony of the following music examples:

Beethoven: Piano Sonata in C minor, III, b 44-51 (Op 13, 'Pathétique')
Schumann: 'Ich kann's nicht fassen, nicht glauben', Frauenliebe und Leben (Op 42)
Schumann: 'Kleine Studie', b 33-49, Album für die Jügend (Op 68)

Text book: pages 134–137

32

Shape diatonic modulations to more remote keys in the way that is shown in the first example of a and b.

- The primary key is represented by I in this case. It is possible to start with an authentic cadence in order to clarify the tonality.

a

MODULATION IN THE DOMINANT DIRECTION IN A MAJOR KEY

- *via a relative chord in the original key which pivots to IV♭ in the target key:*

	C:	**I**	**IV**	**II**		**A:**	**IV♭**	**V4 - 3**		**I**
C–A major:	C		*F*	*Dm*	=		*Dm*	*E sus*	*E*	A
F–D major:	F				=					D
A♭–F major:	A♭				=					F

I–VI or I–V–III can be utilised instead of I–IV–II in the original key, where VI or III pivot to IV♭ in the target key when modulating from C major to E and B major respectively.

b

MODULATION IN THE SUBDOMINANT DIRECTION IN A MAJOR KEY

- *via IV♭ in the original key which pivots to a relative chord in the target key:*

	E:	**I**	**IV♭**		**C:**	**VI**	**IV**	**cadential I_4^6**	**V7**	**I**
E–C major:	E		*Am*	=		*Am*	*F*	*C/G*	*G7*	C
A–F major:	A			=						F
G–E♭ major:	G			=						E♭

If IV♭ pivots instead to II or III in the target key, the key change is from E major to G or F major respectively.

Diatonic modulation from a minor key can occur in a similar way as described above – although with the 'normal' subdominant in the subdominant direction, while IV♯ or V(♯) (sometimes followed by their relative chords) are used in the dominant direction.

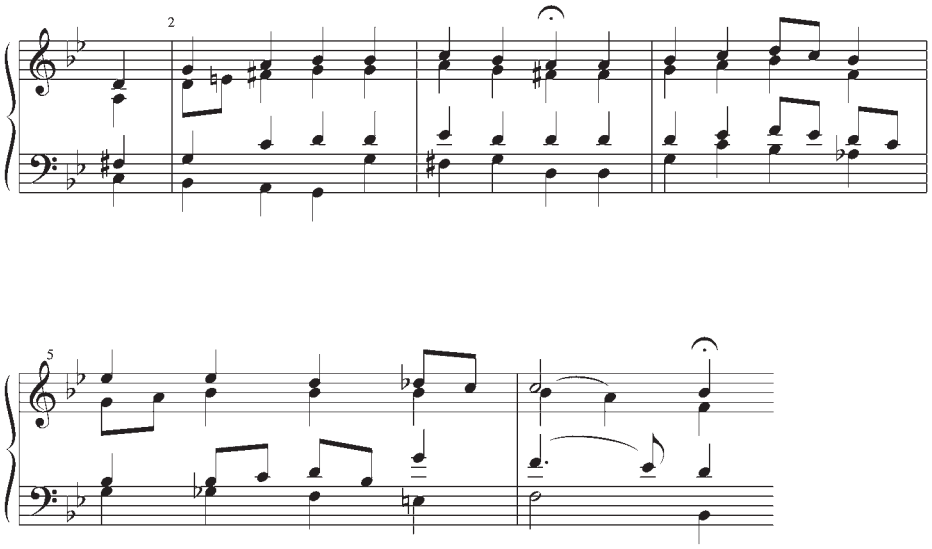
Text book: pages 138–141

33 Analyse the harmony and find the pivot chord in the music examples; see ‘Reinterpretation of the root’ on p 138.

IV ♫

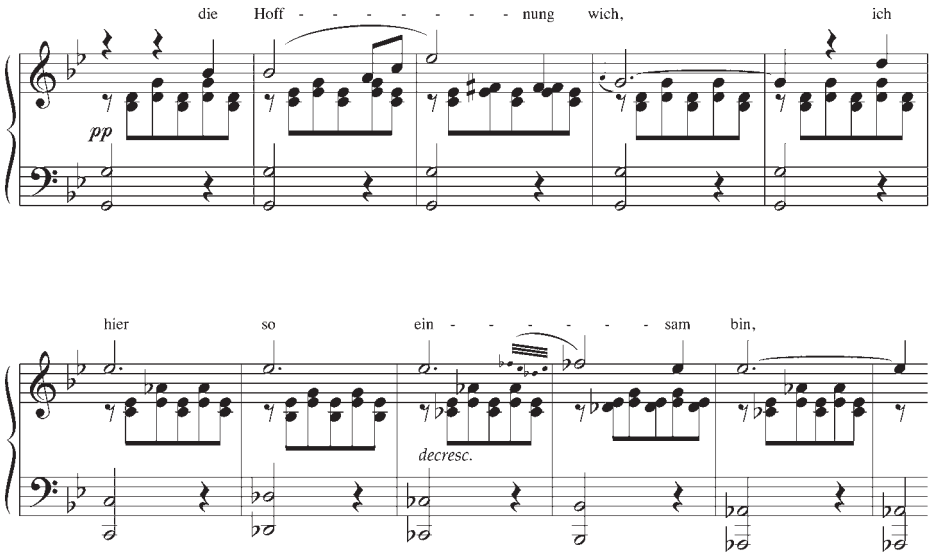
a

J. S. Bach: ‘O große Lieb´’, St. John’s Passion



b

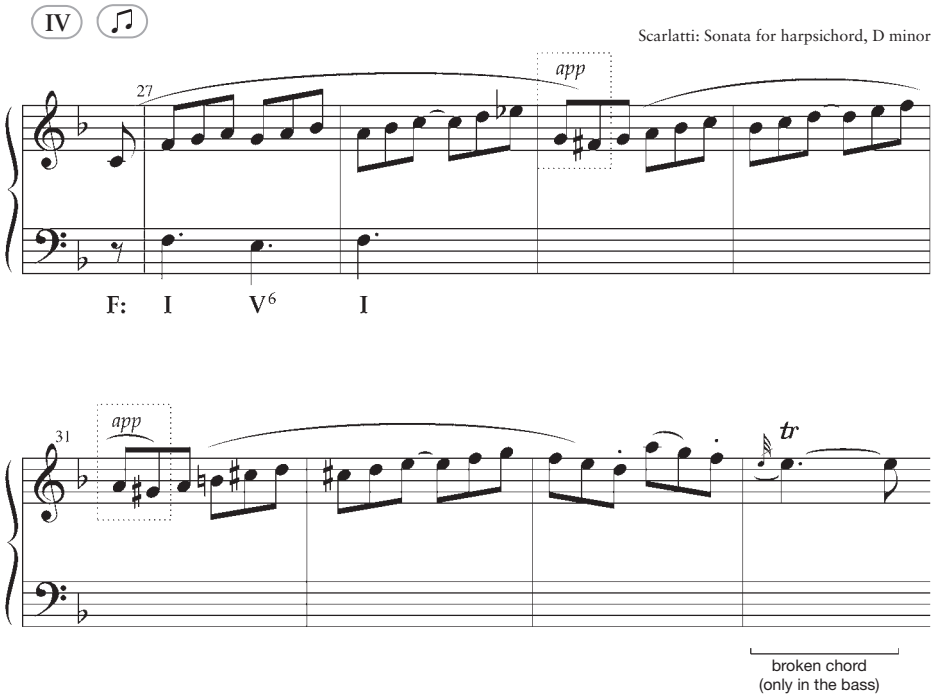
Schubert: ‘Der Hirt auf dem Felsen’



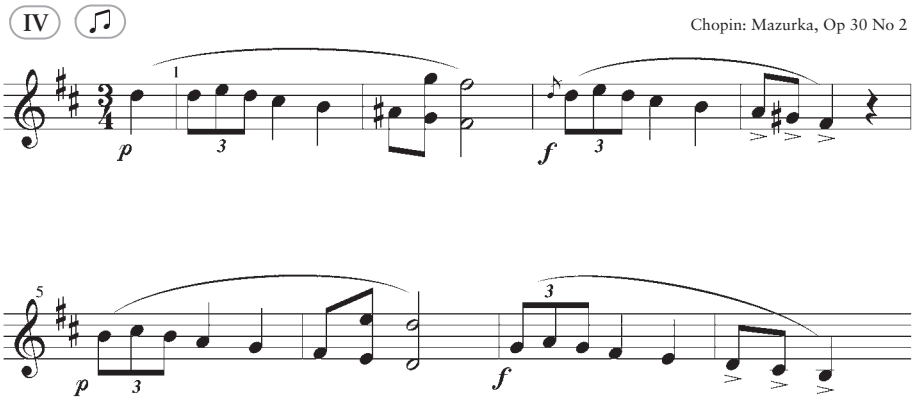
Text book: pages 138–139

34 Harmonize the extract below from Scarlatti's sonata for harpsichord in D minor, and then shape the bass using two dotted quarter notes per bar (𝅗𝅥. 𝅗𝅥.).*

- Scarlatti utilises V♭ in 1st inversion for the tonicisation which occurs directly after the chord progression given below. This will function as the pivot chord as described under the heading 'Pivot chord using mixture' on p 140 and in eg 3 on p 141. The pattern established in bars 28-29 is repeated as a sequence in the two bars that follow.
- There is a chord change once or twice a bar. It is possible for the bass to move from the root to the 3rd in bars containing only one chord.



35 Harmonize the following melody and utilise 'V♭ in a minor key as a pivot chord' (p 140) at the tonicisation of the relative chord (III) – in order to return later.



Text book: pages 140–141

* Add two inner parts directly above the bass as an accompaniment in the left hand in order to complete the harmony (omit the 3rd at the appoggiatura).

36

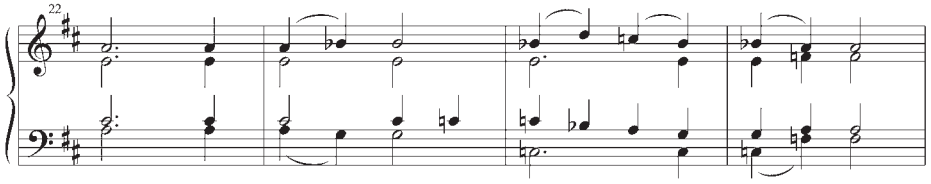
Analyse and find the pivot chord in the extracts a-d. Also indicate which type of modulation has been used ie diatonic or enharmonic modulation. Note that the pivot chord in an enharmonic modulation is often written in the target key.

IV

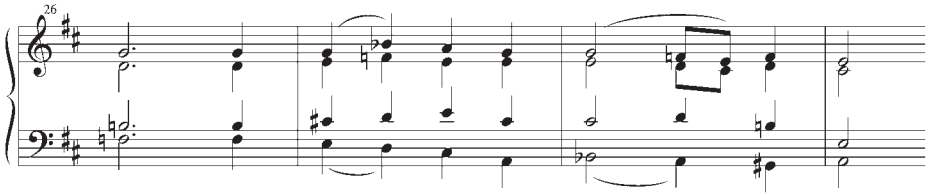
a

- Take particular note of $IV\frac{7}{\sharp}$ as a pivot chord on p 140.

Mozart: 'Ave verum corpus'



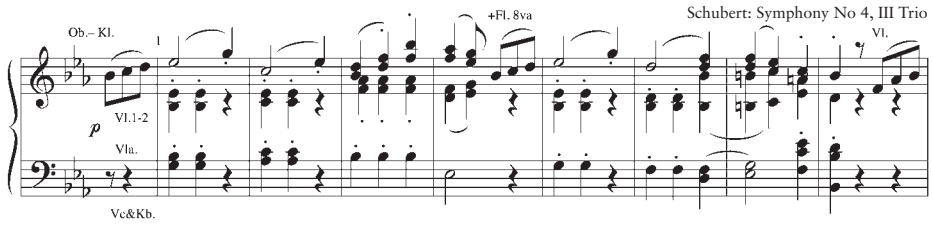
D:*

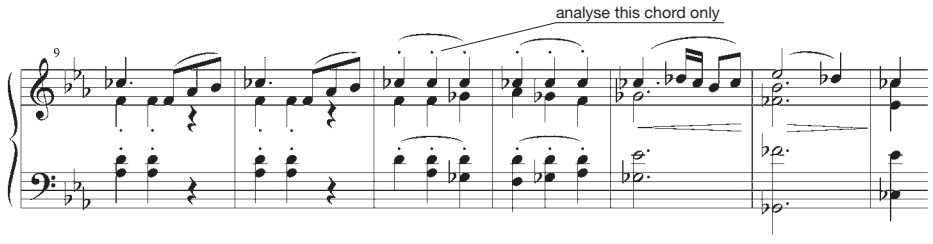


b

Schubert elaborates the harmony using neighbour chords in bars 11-12. In this case it may be sufficient to use one symbol for the whole sequence of events.

Schubert: Symposium No 4, III Trio





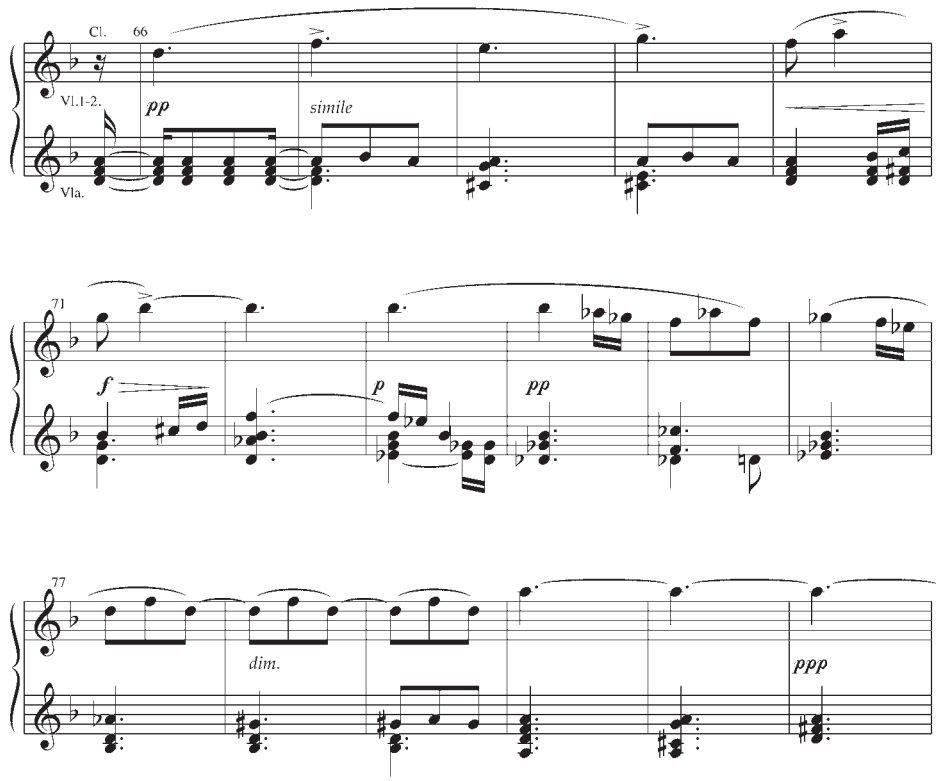
* the section is preceded by a tonicisation of the dominant chord, which means that the A major chord can sound like I in A major.

Text book: pages 140-143

Enharmonic modulation

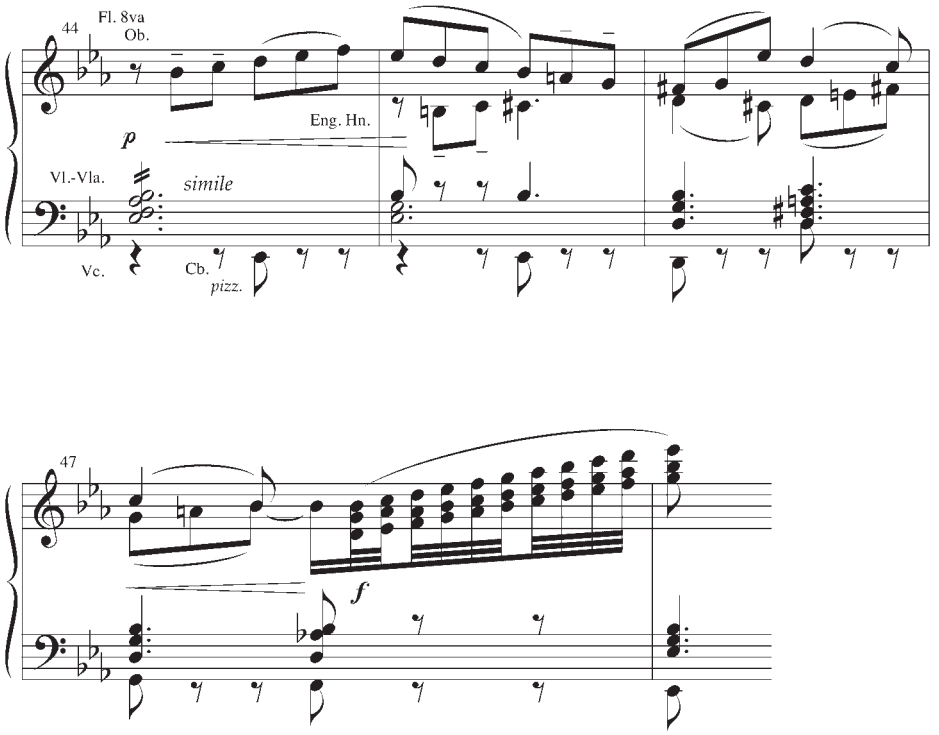
c

Schubert: Unfinished Symphony, II (original in C♯ minor)



d

Tchaikovsky: Sleeping Beauty, suite (original in E major)



Text book: pages 142-143

37

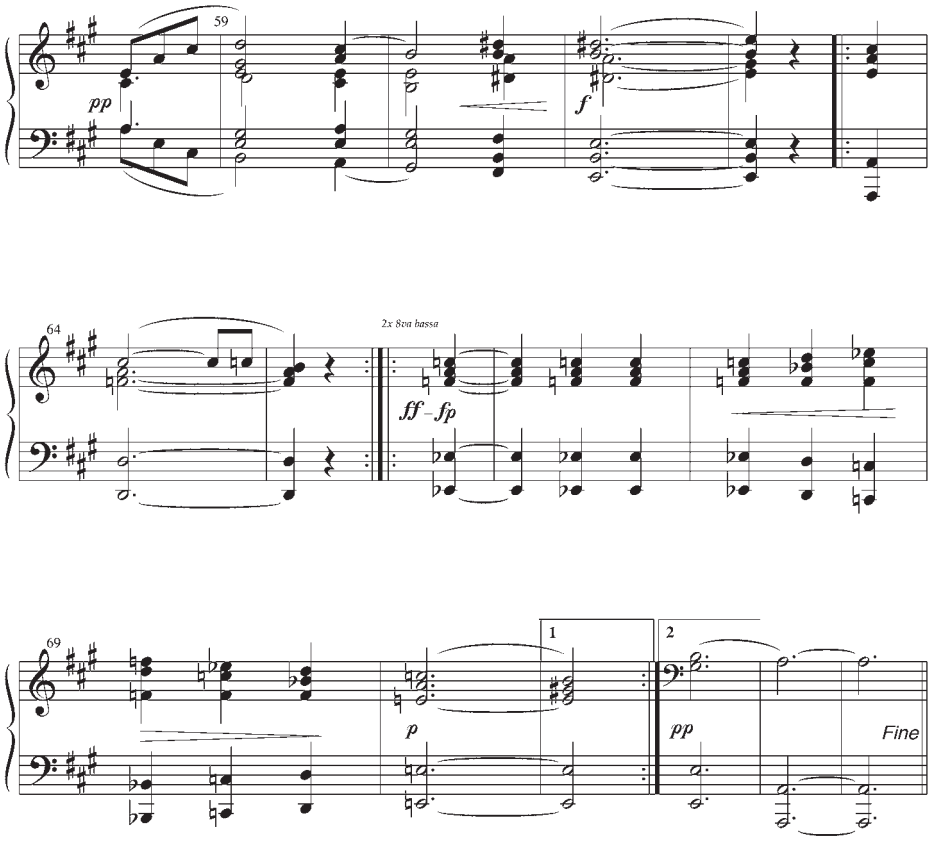
Analyse the music extract a-c and indicate which type of modulation is used ie diatonic, chromatic or enharmonic. In some cases you can also indicate if it is a abrupt or unison modulation.

- Some of the modulations/tonicisations in examples a-c have no pivot chord (chromatic or abrupt modulation). In each case, try to see if the chord preceding the new key can be interpreted as a pivot chord ie a more complex relationship such as ♭II^{6}, ^{sub}V^{7}/V (Ger, Fr or It).

a

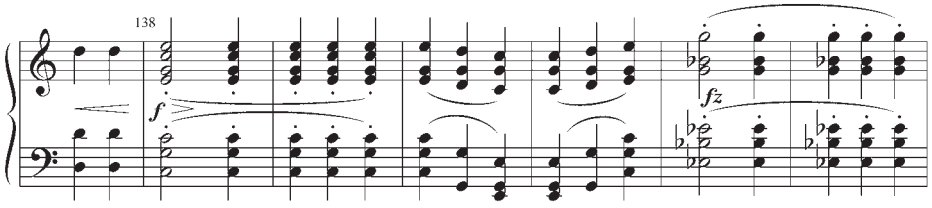
IV

Schubert: 'Moments musicals' op 94, No 6
Original: A♭ major



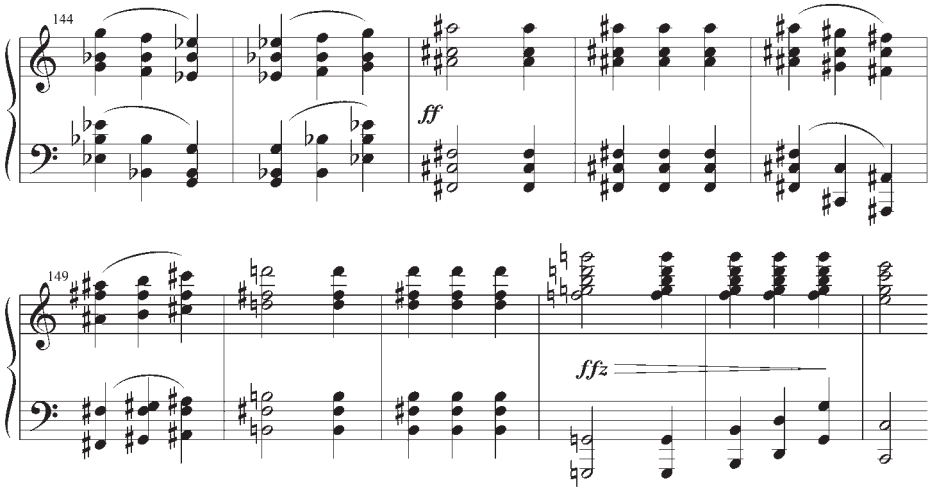
b

Schubert: Piano sonata No 7 Op 53, Scherzo, Trio



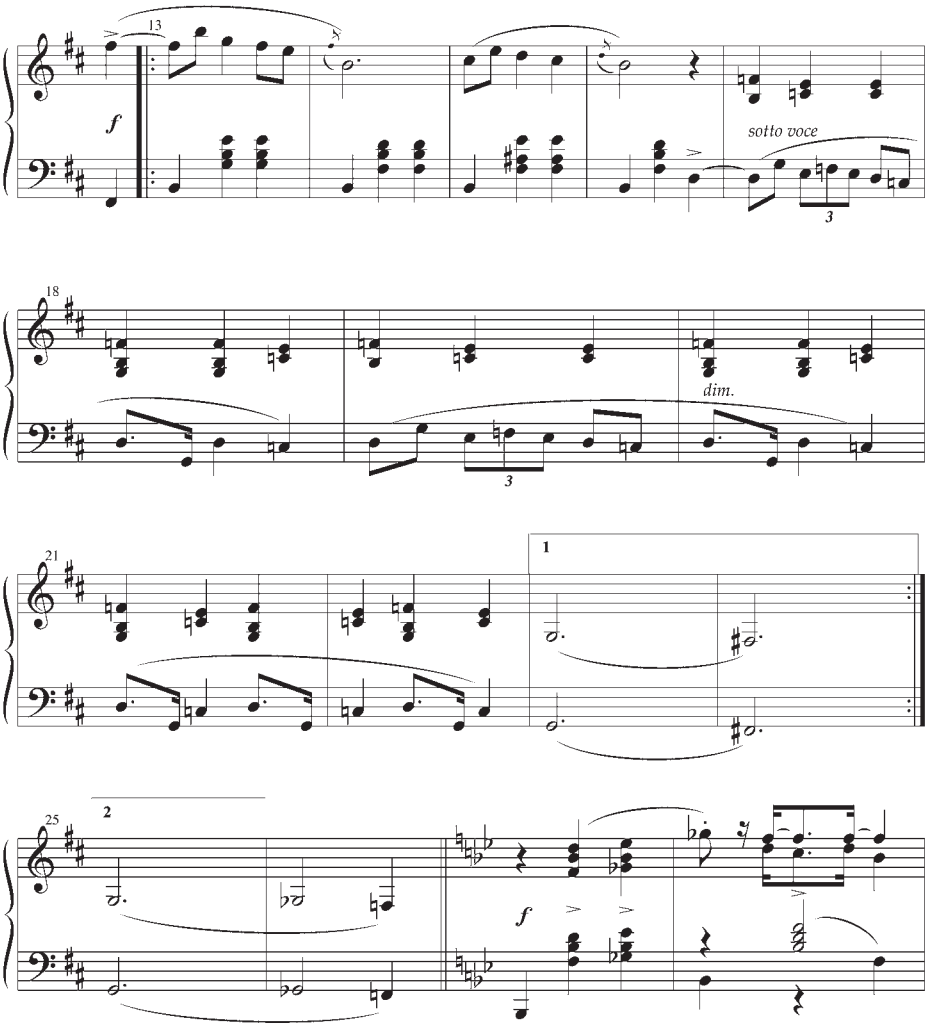
cont. on next page

Text book: pages 144–145



c How does the explanation under the heading 'Expansion of a chord' (p 146) apply to the tonicisation that is introduced in b 17? What importance does the melody note D (in the bass in this case) have for the connection between the two keys? Indicate possible chords for the first and second endings.

Chopin: Mazurka, Op 33 No 4

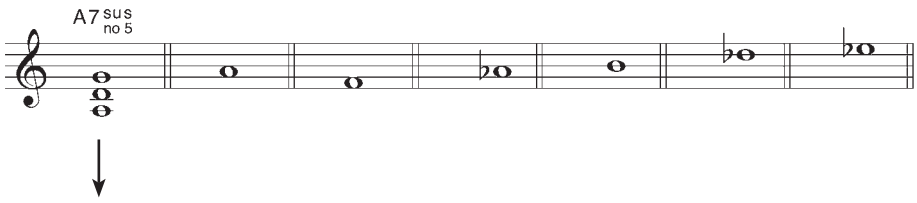


Text book: pages 144–149

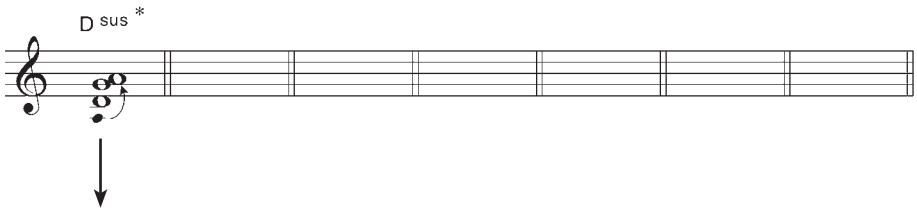
1 Construct three and four part fourth chord in root position and inversions below the given notes:

a *Three part harmony*

FOURTH CHORD:



1st INVERSION:

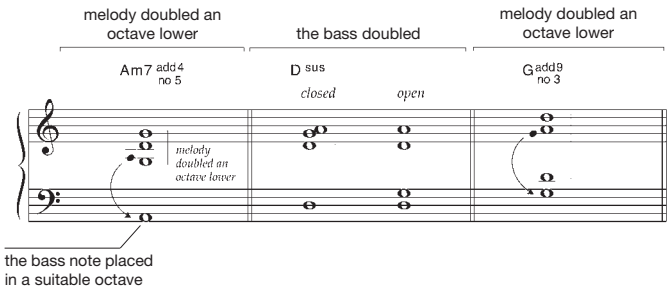


2nd INVERSION:

b *Four part harmony by doubling one of the notes in the chord:*

Use the chords in exercise 1a above for mixed choir. Write four part harmony by doubling one of the notes in the chord (if necessary transpose the chord an octave lower). Choose two chords from each of the three staves.

- You may choose to double either the melody *or* the bass:

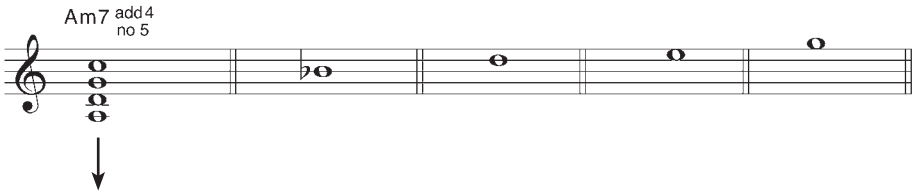


* The symbols used for the inversions are the simplest description.
As an inversion, A7$^{sus\ no5}$/D is otherwise more correct.

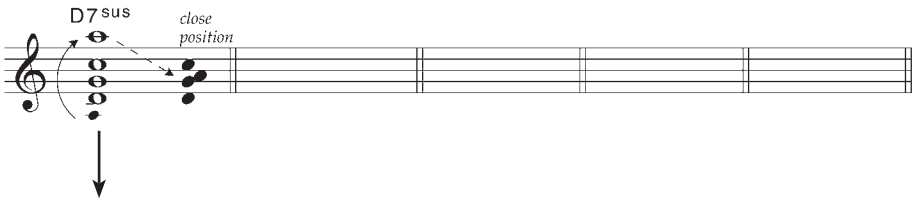
Text Book: Pages 156–157

C *Four part harmony*

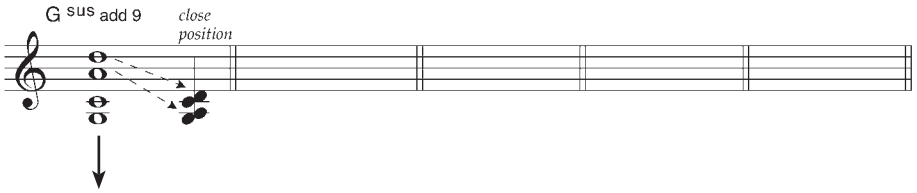
FOURTH CHORD:



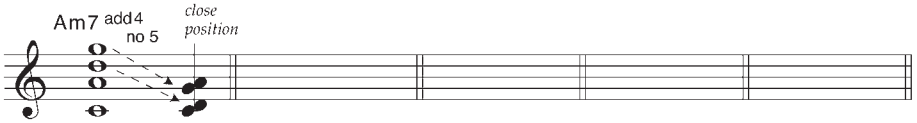
1st INVERSION (also in close position):



2nd INVERSION (notated an octave lower):

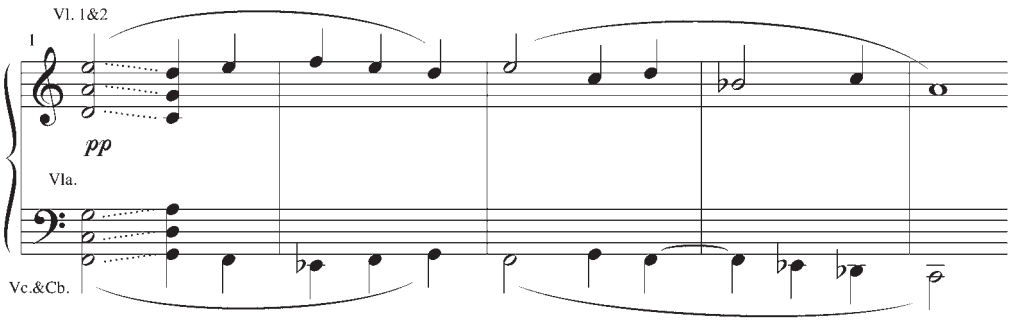


3rd INVERSION:



2 Complete the harmony using superimposed perfect 5ths with real (strict) parallel voice leading* in the following way:

- *Upper staff:* With the notated melody line as the highest part.
- *Lower staff:* With the notated bass line as the lowest part.



Bartok: Piano Concerto No. 2, II

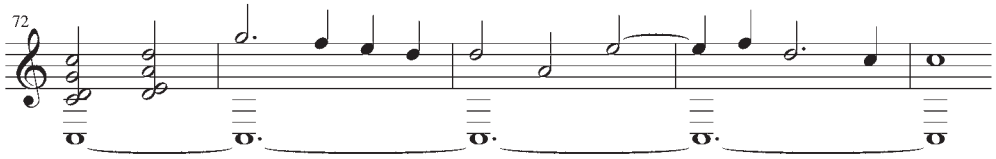
Text Book: Pages 156–157

* Real (strict) and tonal (diatonic) voice leading; see p 154.

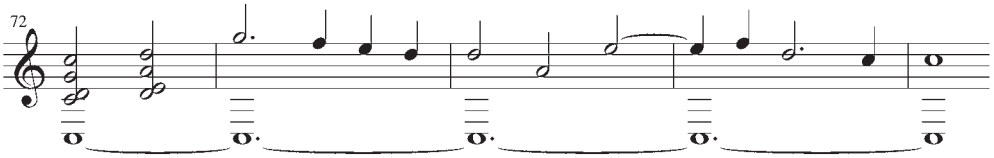
3 Use fourth chord in parallel motion and doubling of the melody in octaves in the way it is shown in the first bar of the example. Write two versions:

a) *Tonal parallel voice leading:* Organise the parts so that they occur on the appropriate scale degree, which will require the necessity of an A4th in a few spots (cf p 163, eg 2).

Debussy: 'La cathédrale engloutie', Préludes, I
The original was written with parallel triads, see p 463.



b) *Real (strict) parallel voice leading:* The voices move in parallel fourth chords consisting of only perfect 4ths. This will require the necessity of temporary accidentals in a few spots.



Hints preceding the exercises on the following pages

Here are a few tips preceding the exercises to write four part harmony based on superimposed 4ths and 5ths. It is important to also study the examples on p 157, especially Hindemith's 'Grablegung' (eg 3).

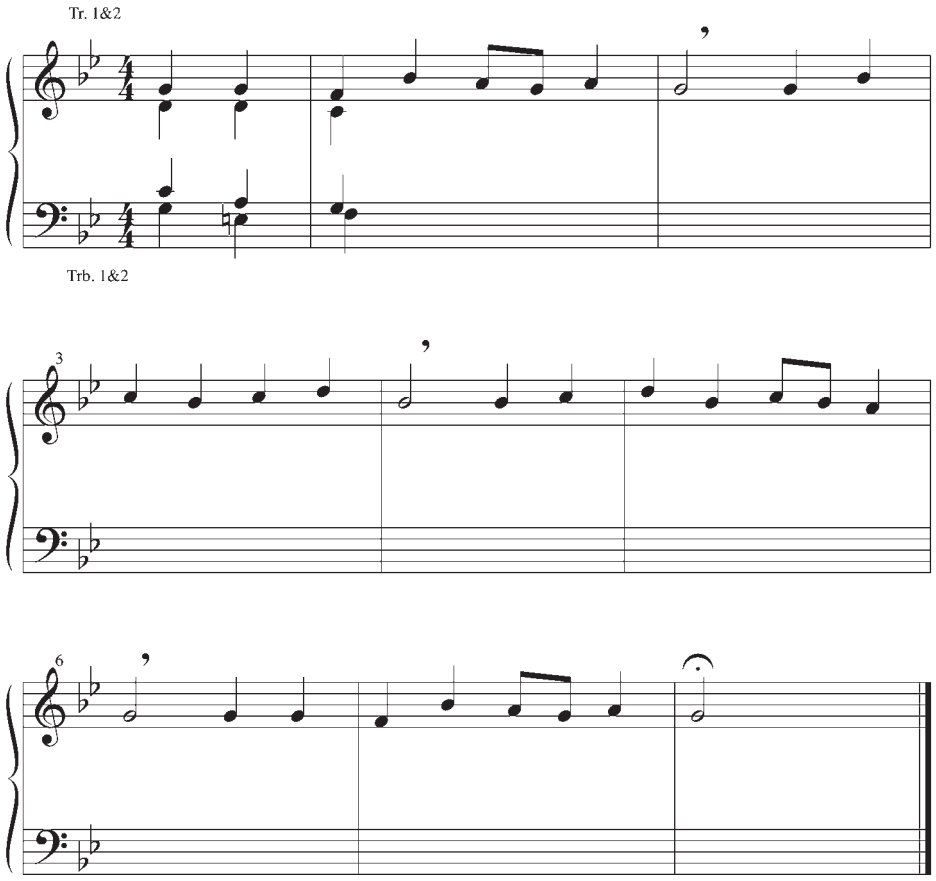
- *Superimposed 4ths and 5ths make up the primary tonal material, but don't be afraid to mix in other sounds. For example, 'traditional' 7th chords can work well in spacings that emphasize the interval of a P4th (see p 157, eg 3, b 3).*
- *Fourth chords with three different notes and one doubled note is common in four part harmony.*
- *The first and last chord in each phrase can be less intense, for example open 5th, a sus or a add 9 chord. Even a triad can function as a final chord.*
- *Let the bass part lead when you work out the harmony.*
- *Stepwise motion with the occasional leap, or a sustained note is a good method to keep the chords together. Because there are no leading notes, all the notes are able to carry the harmony forwards using leaps.*
- *One or two inner parts can momentarily continue parallel in 4ths or 5ths with another voice.*
- *A strong/convincing melody can compensate for leaps in other voices.*
- *A pedal point in the bass or inner parts can be used, but is not necessary.*

Text Book: Pages 156–157

Quartal – quintal harmony

4 Write an arrangement for brass quartet (2 tp + 2 tbn) using the chorale melody given below.

- Use quartal/quintal harmony in the way that has been described in 'Hints' in the previous page.



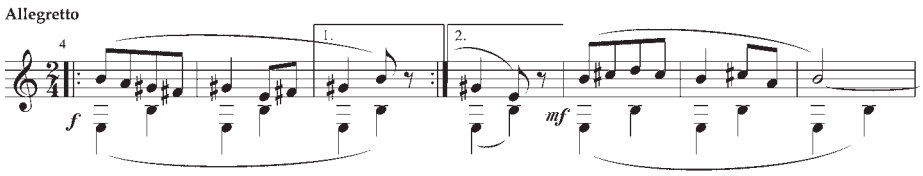
'The Saviour of the World came here'

5 Write a shorter composition which is built on quartal/quintal harmony.

Text Book: Pages 156–157

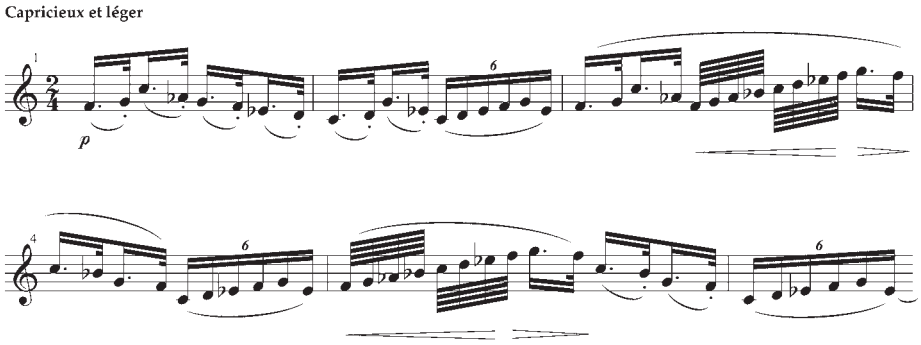
6 Identify the mode on which each music example is based (a-d). The examples, unlike the originals, are written without key signatures.

a



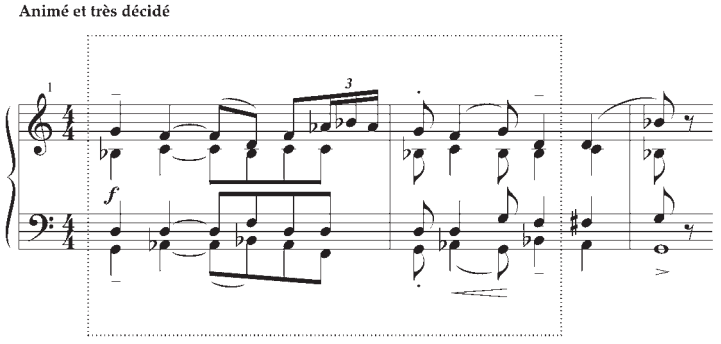
Bartok: 'In Yugoslav Mode' Mikrokosmos, II

b



Debussy: 'La danse de Puck', Préludes, I

c



Debussy: String quartet Op. 10, I

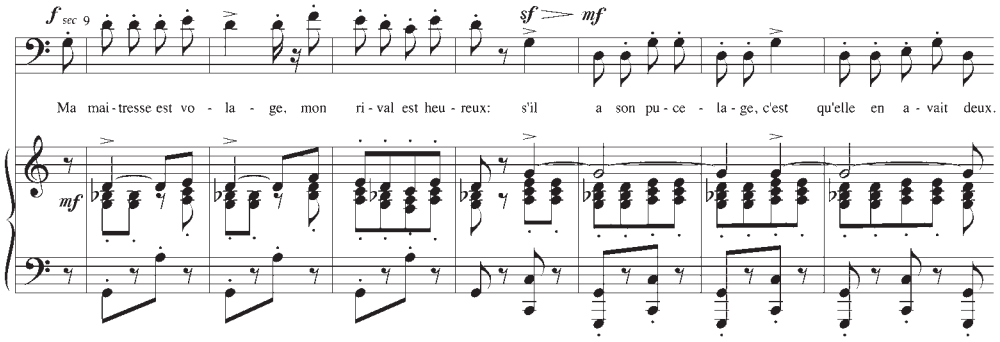
Text Book: Pages 158–159

Modal harmony and scales (the church modes)

d

Rondement

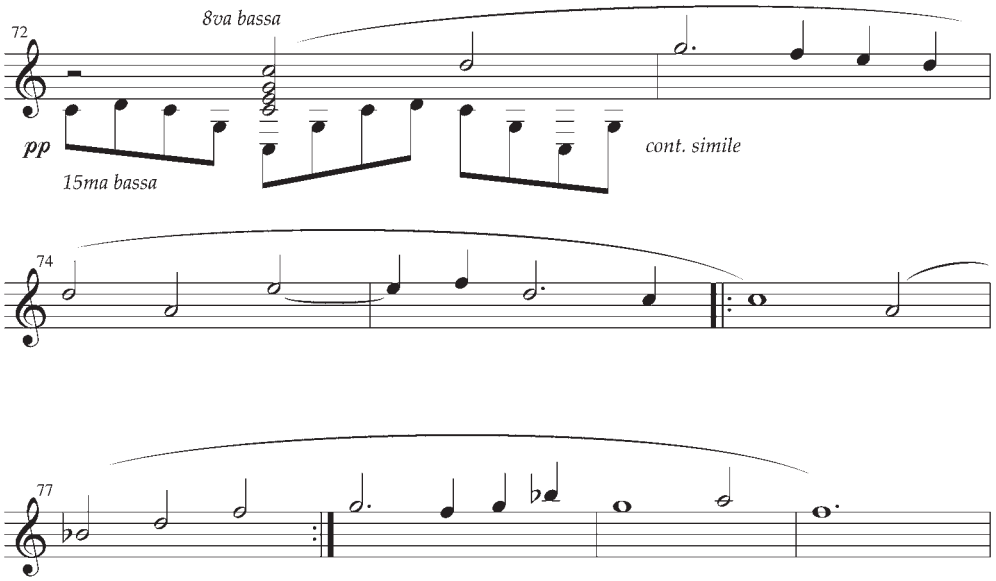
Poulenc: 'La maîtresse volage', Chansons gaillardes



7 Complete the descant part originating from the given chord, with the melody doubled in octaves using tonal parallel voice leading in the current scale.

- Start by identifying the mode of the *first* phrase (bars 72-76).
- Bar 77 reveals a clear change to a new mode. This mode will provide the basis for the continuation of the parallel voice leading.

Note that the bass figure continues on, which means that C will be regarded as the bass note throughout the example.



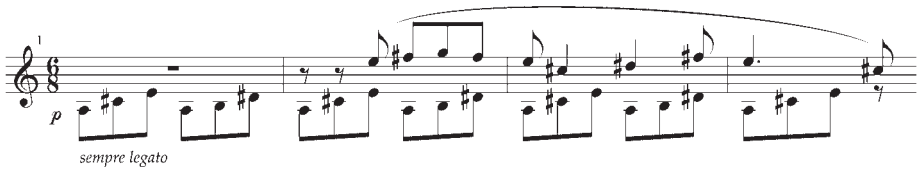
Debussy: 'La cathédrale engloutie', Préludes, I

Text Book: Pages 158–159

8 Identify the mode of each music example below.

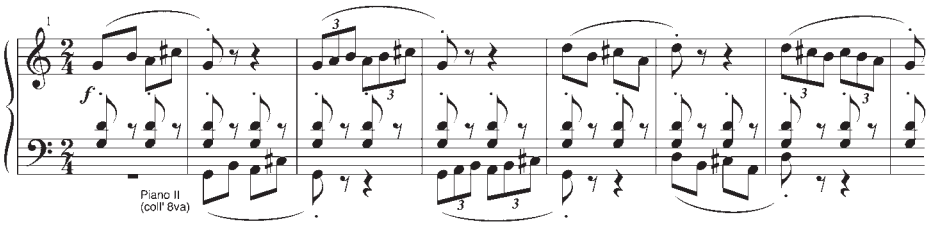
a

Bartok: 'Melody with Accompaniment' Mikrokosmos, II
Transposed



b

Bartok: Mikrokosmos, No. 55, IV
Transposed



Hints preceding the modal writing exercises

As shown by the examples in the information section and exercises 6 and 7 on the preceding pages, a modal composition can be built using different constructions of chords based on a predetermined mode. Here are some basic suggestions:

(1) *Chord constructions which are built on triadic harmony, for example triads, 7th and 9th chords based on major and minor chords, see p 163, eg 1 and exercise 6c-d.*

- *also parallel motion of these chords, for example triads in root position or inversion, see p 163, eg 1 and exercise 7.*

(2) *Chord constructions which are built on superimposed 4ths or their inversions, see p 163, eg 2 and p 157, eg 3, b 1-2 (the first beat).*

- *also real (strict) and tonal parallel motion of these chords, see p 163, eg 2; p 460, exercise 3.*

(3) *There are also chord constructions which are a result of the movement of the parts in the same mode. You decide which chords are possible keeping in mind the increase/decrease of tension and release. Possible textures are:*

a) homophonic (p 162 eg in the left column)
b) contrapuntal (p 161, eg 2)
c) melody with accompaniment/ostinato, see p 153, eg 1; p 159, eg 2; p 163, eg 1-3 and exercise 6a.

Continue on the next page

continue

Other things that can be good to think about:

- *To present a certain mode in an unambiguous way, it is necessary that the characteristic notes are found in the melody or in the underlying parts. It is however important to bear in mind that certain characteristic notes are more important than others where it concerns presenting the character of a mode eg the first five notes of the Phrygian mode are necessary to clearly present this mode, which does not apply to the Dorian mode.*
- *As in major and minor keys, a mode can be transposed into another key or shift to another mode, cf exercise 7. You may draw up a plan of the development of the mode in your piece.*
- *Chord constructions 1-3 above can occur in the same piece.*
- *Chromaticism in the form of passing notes and neighbour notes can also be used (p 167, eg 2).*
- *A pedal point can sometimes create a much needed unifying function (p 163, eg 2).*

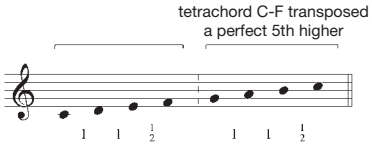
9 Write shorter modal compositions using firstly the Dorian, Phrygian, Lydian, Mixolydian or Aeolian mode. The examples in parentheses below can serve as inspiration, but differ in number of parts and instrumental choice.

Here are several suggestions:

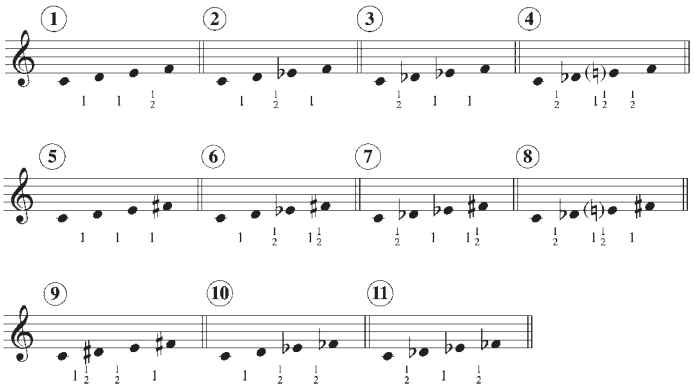
- A meditative sonorous piece for piano (possibly with ostinato, see p 153, eg 1; 159, eg 2; 163, eg 1).
- Scherzo for woodwind quintet (see p 155, eg 2; 163, eg 3; exercise 6a or 8a-b).
- Theme and variations with short movements for 2-5 woodwind instruments. One or more of the variations could possibly be solistic (exercise 6b).
- A duet for two stringed/woodwind instruments inspired by folk music (exercises 6a and 8a as well as p 159, eg 5)

Hints

Natural scales are built of two tetrachords (the Greek word tetras = 4), consisting of four stepwise notes arranged within the interval of a 4th. For example the major scale is said to consist of two tetrachords in which the scale degrees 5-8 are a transposition of the scale degrees 1-4, and the 1st note together with the 8th note comprise an octave:



Each tetrachord consists of a half, a whole or one and a half tones, which have the following possibilities:*



By combining two tetrachords, where the second is transposed a P5 or d5 higher, natural and synthetic scales can be constructed**. The range for the tetrachords in examples 5-9 constitutes a tritone, which means that they cannot combine with each other, resulting in a combination of more than an octave.***

Here are two ways of constructing diatonic scales:

(a) one of the tetrachords 1-11 above can be combined with a transposition of a tetrachord 1-4 or 10-11, beginning on a note a fifth higher (the note G in this case). A scale of seven notes is built in this way (eight notes when 10-11 are used).

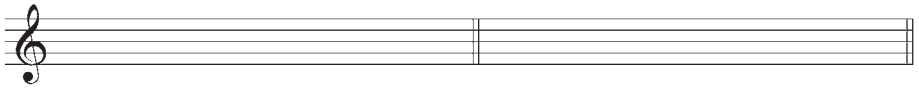
(b) one of the tetrachords 1-4 or 10-11 above can be combined with a transposition of a tetrachord 1-11, starting on a note that is a d5th higher (in this case G♭). By combining with 1-4 or 10-11 there will be eight *different* degrees of the scale, while combinations with 5-9 will have seven degrees of the scale.

* the tetrachord 5, 8 and 9 can also be varied by raising the note E in different combinations.
** chromaticism is not used here, which occurs for example in Messiaen's modes.
*** two-octave scale is treated on p 155, eg 1.

Text Book: Pages 164–165

10 Construct two scales for each of the alternatives a and b on the preceding page. Name the scales that you recognise.

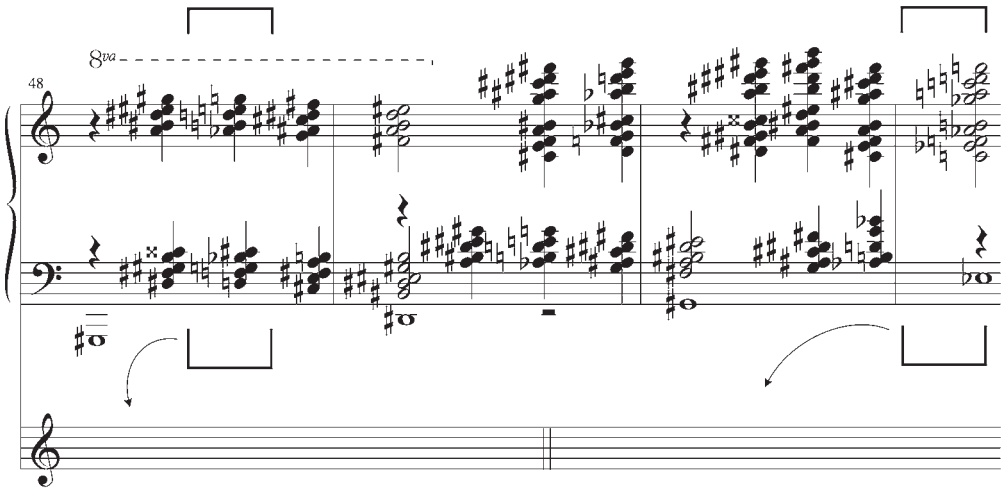
a



b

11 Notate the tonal content of the two marked chords in the lower staff, arranging the notes as scales. Name these scales as well.*

- Make use of enharmonic equivalents to facilitate the best notation.

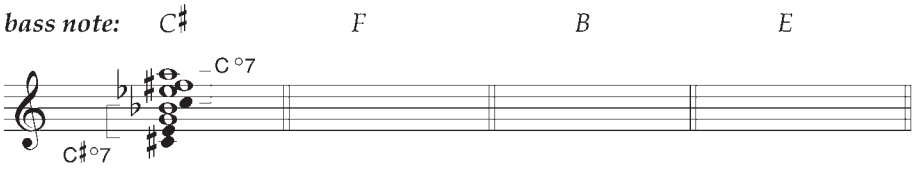


Bartok: Sonata for two pianos and percussion, II
(The last chord has been enharmonically altered).

* The Bartok example builds largely on parallel motion of the two chords you are analysing.

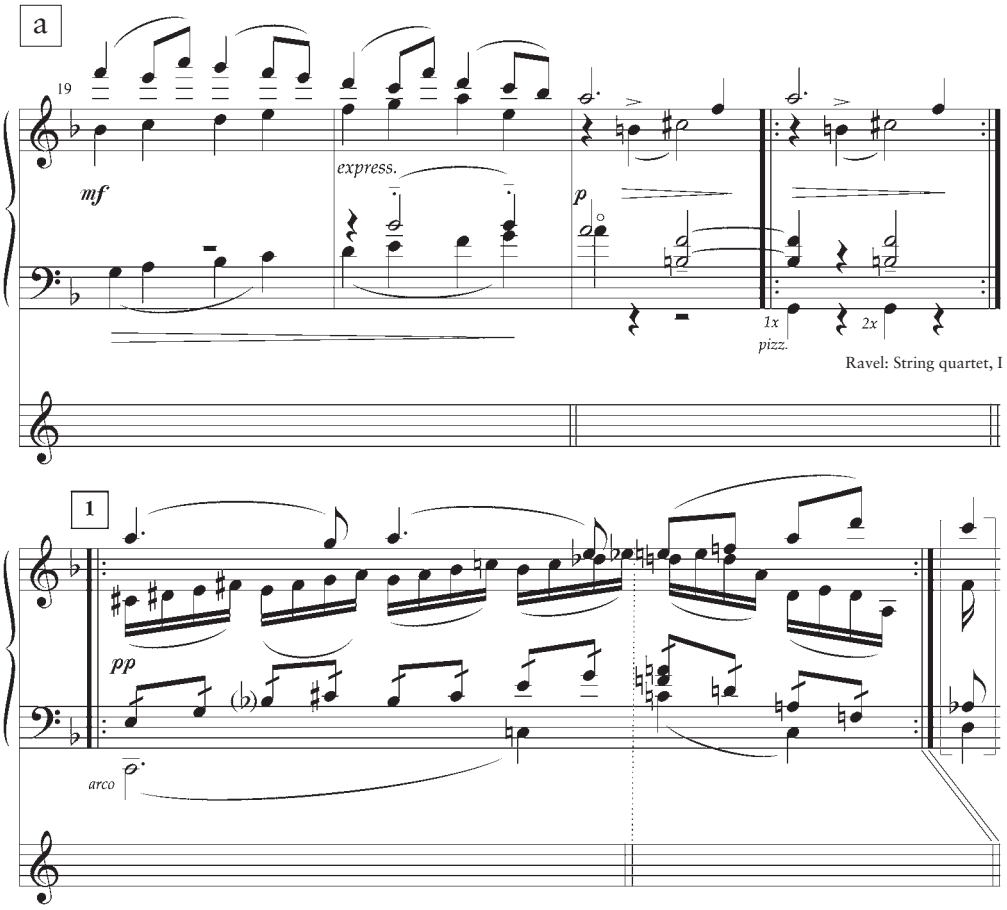
Text Book: Pages 164–165

12 Construct your own chords containing five or six notes by using excerpt from a chord consisting of two diminished chords (the alpha chord) in the way shown below (also described in the section 'Symmetrical eight-note scale' on p 164). Notate *both* the alpha chord and your 'excerpt' as unfilled notes. Start with the given bass notes:



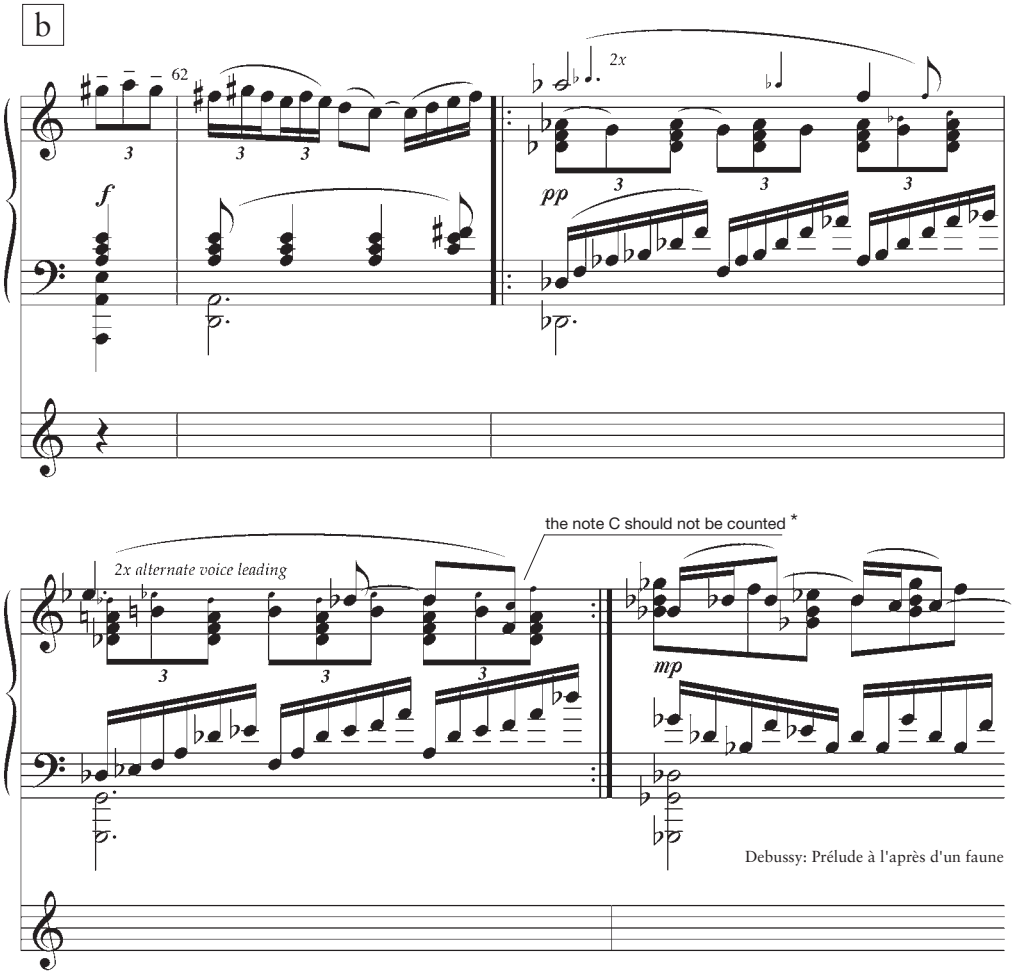
13 Notate in the lower staff the natural or synthetic scales that provide the basis for the melody and harmony, ie *all* the included notes. Name the scales. Enharmonic alteration may be necessary, so be careful to choose an appropriate spelling.

- In those cases where the selection of notes does not build a complete scale, you can complete it with notes you think are appropriate.



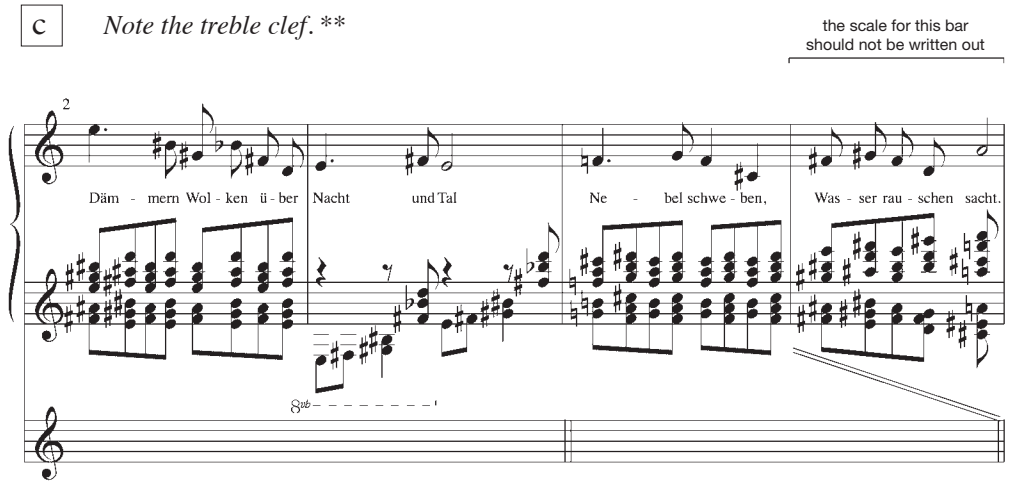
Text Book: Pages 164–165

b



Debussy: Prélude à l'après d'un faune

c *Note the treble clef.* **



Berg: 'Nacht'

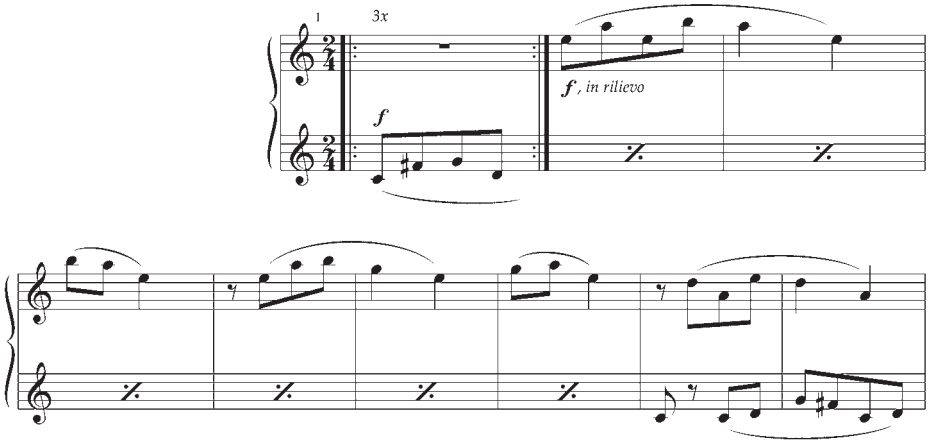
* acts as a passing note in the motion towards the note B♭ in the next bar.
** the accompaniment in the 3rd bar functioning as an introduction.

Text Book: Pages 164–165

14 Decide which group of notes (collection) provides the basis for each of the music examples a-e. Describe the analysis of the collection as, for example, tri-, tetra-, penta-, hexatonic or as a scale. Decide also which note you think is the tonic (in certain cases there may be several possible solutions).
Notate the collection for:

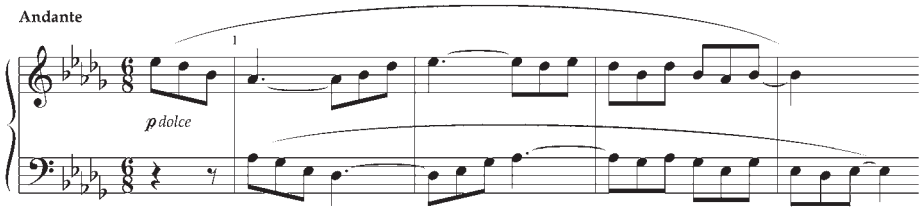
1) the upper staff ('for the right hand')
2) the lower staff ('for the left hand')
3) the mode for both staves

a



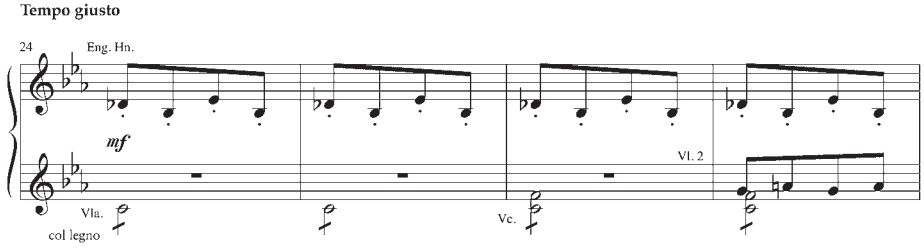
Bartok: Mikrokosmos, II, No. 61

b



Bartok: 'Waves', Mikrokosmos, II

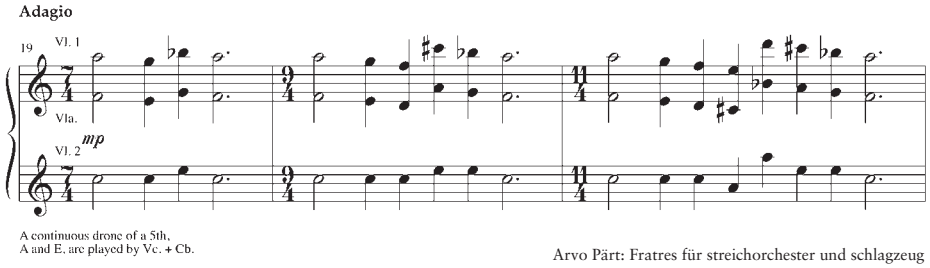
c Analyse the last bar of this example, where the structure is complete. *Note the treble clef.*



Stravinsky: 'Danses des adolescetes' The Rite of Spring

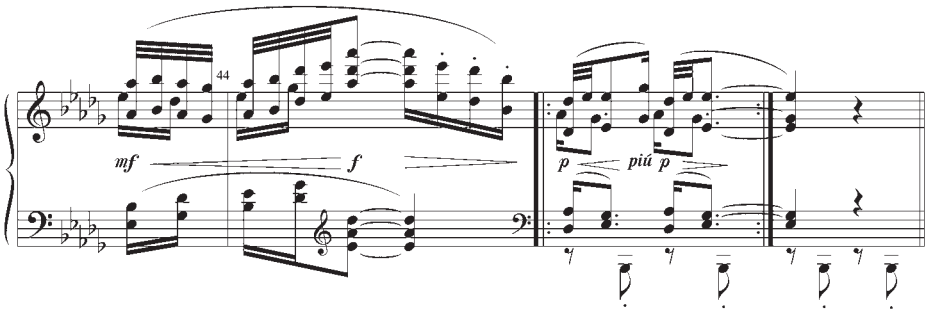
Text Book: Pages 166–167

d *Note the treble clef.*



Arvo Pärt: Fratres für streichorchester und schlagzeug

e Decide on the collection for the whole excerpt:



Debussy: 'Voiles', Préludes I

f Identify the prime form for one of the tetrachords in eg b as well as the tetrachord in the left hand in eg a; see 'Identifying the prime form of a tone collection' on p 198.

15

Write shorter compositions using modal techniques which have been treated in the section. The examples in parentheses below can serve as inspiration, but differ in number of parts and instrumental choice.

Here are several suggestions:

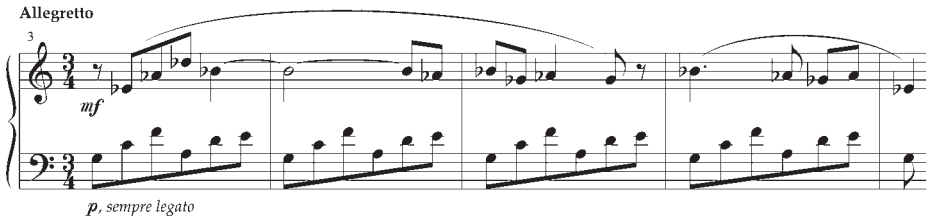
- A solo piece for clarinet or flute, for example in an uneven time signature (5/8, 7/8) or like Messiaen with additive rhythms based on two 16th alternating with three 16th, see p 165, eg 2. Use Messiaen's modes or other synthetic scales.
- A piano piece partly based on the whole-tone scale. Introduce some variation by transposing this scale together with other chords/scales (exercise 13c; p 163, eg 4).
- A duet, for example trumpet and horn (exercise 14a-b; p 167, eg 3).
- A piece for string quartet or woodwind quintet (exercise 14c; p 167, eg 1-2).

16

Decide the tonality/tonic for both collections in each of the examples a-b, for example E Phrygian or pentatonic (major) based on the tonic D. Note that in certain cases there may be several possible solutions.

a

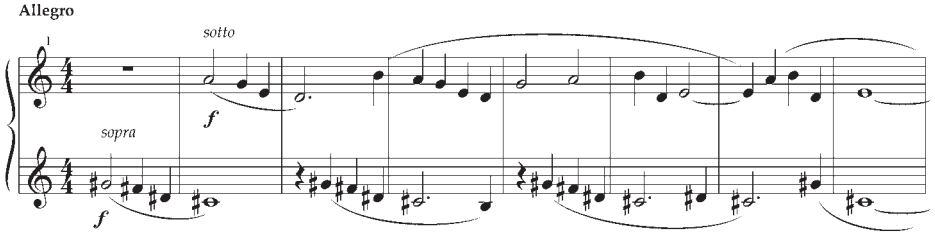
In the original piece, the excerpt is introduced by the left hand ostinato in bars 3-4.



Bartok: 'Boating' Mikrokosmos, Vol. V

b

Note the treble clef.



Bartok: 'Playsong' Mikrokosmos, Vol. IV

Text Book: Pages 166–169

Polytonality

Hints

Preceding the exercises below, it could be good to think about the following:

- *For a general understanding, it is good to know that the more the keys differ according to distance, timbre, dynamic and rhythm, the clearer the polytonality. As is evident in several of the examples, it is not a necessary goal that the* ***biggest possible differences*** *are made evident.*
- *Even if closely related keys can be described as polytonality, the few notes that separate the keys can rather be thought of as a temporary modulation. Often more distant keys function better.*
- *For the polytonality to function, it is necessary for the included keys to consist of a clear diatonic tonal centre and to have a certain durability.*
- *If the lowest key is chordal, it is perceived as the main key and the key above as a colouring of the one below. If, for example, the parts build instead two-part writing in the descant position, the highest voice (the melody) is perceived as the main key (see p 169, eg 1). The key that dominates, for example, through dynamics or movement, can also be perceived as the main key (see p 169, eg 2).*
- *There is greater clarity if one of the tonalities is presented first (see exercise 16b).*

17 Write shorter polytonal compositions based on the natural or the synthetic scales. You can also use the tri-, tetra-, penta-, and hexatonic scales. The examples in parenthesis below can serve as an inspiration, but differ in the number of parts and instrumental choice.

Here are several suggestions:

- Duet for two violins (see p 169 eg 1, possibly with ostinato, see exercise 16a).
- Duet for two woodwind instruments, contrapuntal texture (see exercise 16b).
- Piece for piano built on polytonal chords, for example melody with accompaniment, possibly with broken chords (p 169, eg 2).

Text Book: Pages 168–169

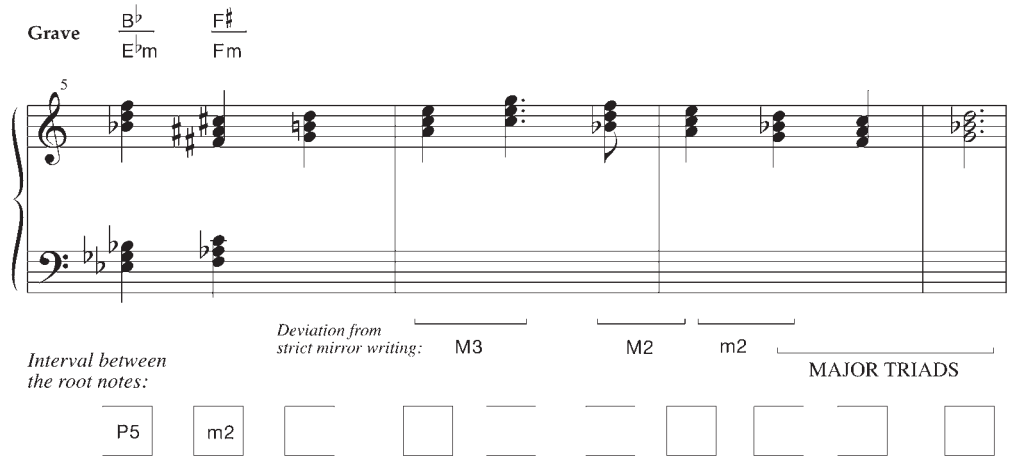
18 Analyse the polychords that occur in examples a-c in the way described in conjunction with eg 3 on p 169.

A7

a

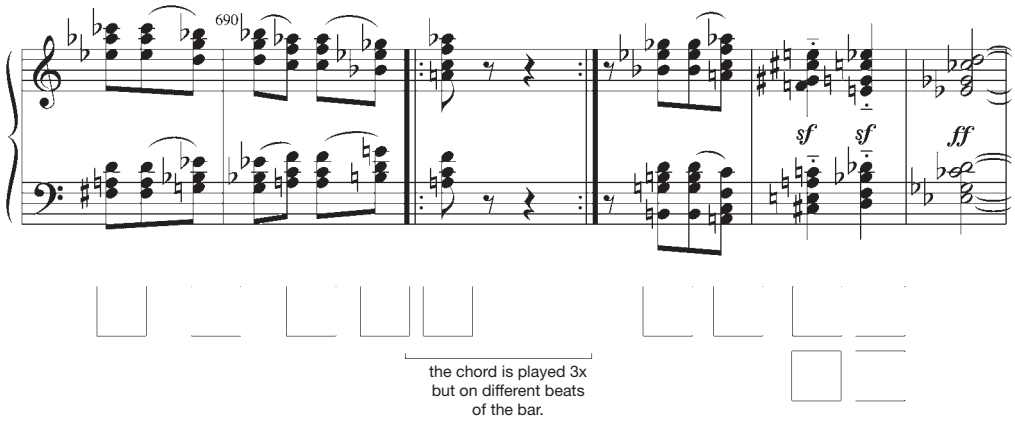
- In this exercise, complete the missing triads in the bass clef. From the F minor chord given, construct three voices that move in parallel minor triads (finishing on major triads). Use real (strict) mirror writing to determine at the root notes of the triads, ie if the melody moves a M2 up, the 'bass part' will move in the opposite direction a M2 down etc. (see p 169, eg 3).

Honegger: Symphony No. 5, I



b

- Use enharmonic alteration as necessary. The second last bar has three units, see p 169, eg 4.



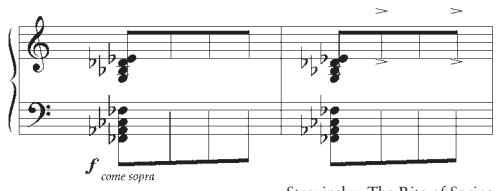
Bartok: String quartet, No. 5, Finale

Text Book: Pages 168–169

Polychord

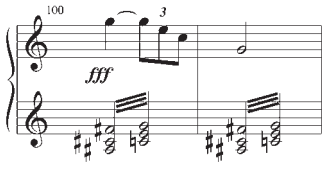
Note the treble clef.

C



Interval between the root notes:

Stravinsky: The Rite of Spring, 'Danses des adolescentes'



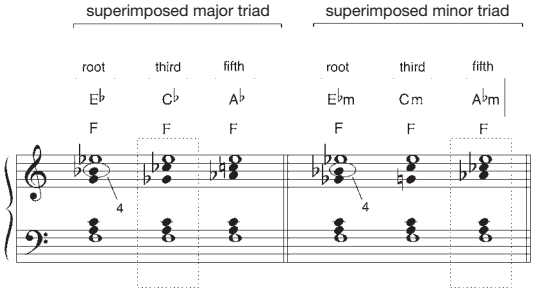
Stravinsky: Petrushka Second part

Hints

In order to construct polychords from a given melody note and a given fundamental chord, bear in mind that the melody note can either be the root, third or fifth of upper triad. Of the three possibilities, choose the one that best suits the circumstances. This method sometimes gives rise to combinations of sounds that cannot be identified as polychords, or do not function as well in another way, eg:

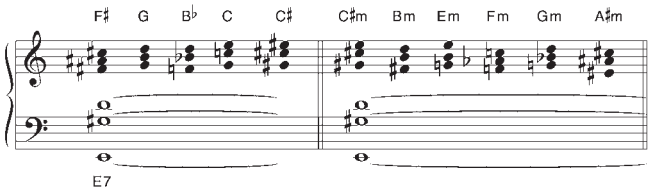
- *superimposing can create a normal chord eg Am above C = C6*
- *chords that do not fit into the remaining categories of utilised chords, for example it could apply to an upper triad containing the fourth of the fundamental chord if the fundamental chord is a major triad.*

In most cases, upper triads which are more distantly related to the fundamental chord are more resonant – see the circled chords.



The fundamental chord can also be a minor triad.

The example below is based on the dominant seventh chord. If you do not choose upper triads containing the fourth or the major seventh of the dominant seventh chord, the following upper triads are possible:



The fourth and the major seventh create a m9 with the third and the minor seventh respectively. This results in a clear-cut but somewhat thinner overall sound, compared with the resonance given by the superimposed chords in the examples quoted above. You can interpret the comparison as a distinct difference rather than a valuation, for example m9 is used in the superimposed B♭/F major chord in eg 3 on p 169.

Apart from the chords shown above, augmented and diminished triads as well as fourth chords and their inversions can be used. The two units can also be written in open position, which is usually the case for the lower chord.

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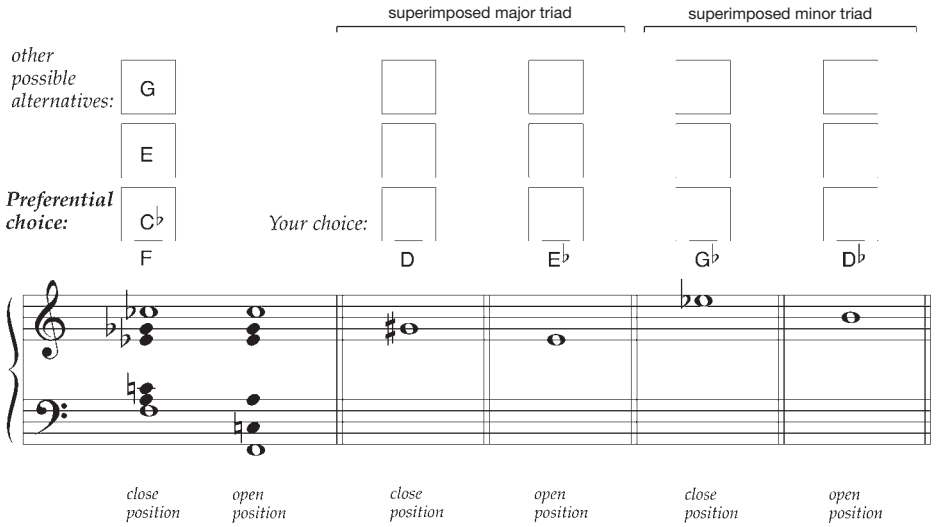
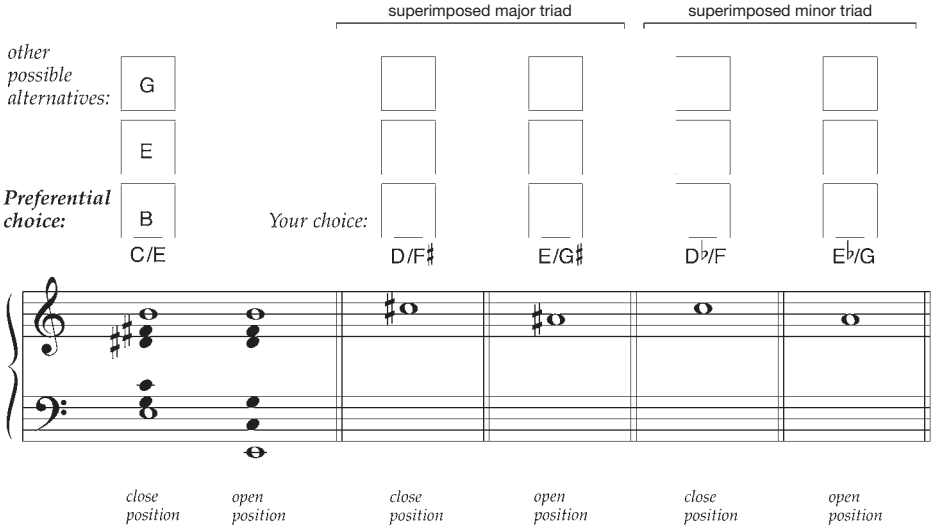
19 In the exercises below you will be able to practise constructing polychords with different types of upper triads and fundamental chords in the way described under the heading 'Hints' on the preceding page.

- Both the fundamental chord and the melody note of the polytonal chord has been given.
- Write out the alternative of the three possibilities that you find most resonant.
- Avoid well known chord constructions such as maj7, ninth chords and polychords where one of the notes in the chord form 11th in a fundamental major chord.
- To unify the overall sound, the interval between two units should not be too large – not more than a sixth/octave depending on the positioning of the fundamental chord.
- The given melody note can be enharmonically altered.

a *Superimposed major and minor triads with the fundamental chord in root position:*



b *Superimposed major and minor triads with the fundamental chord in first inversion:*



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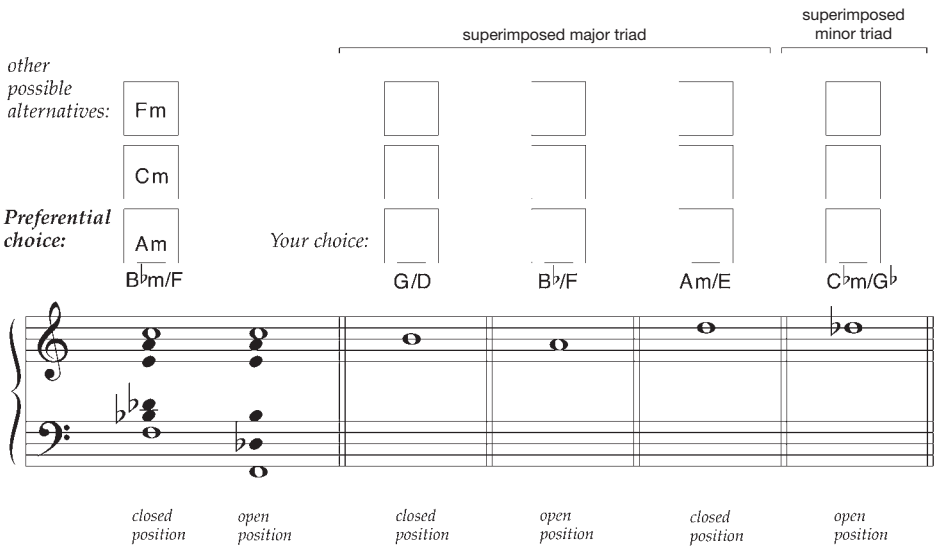
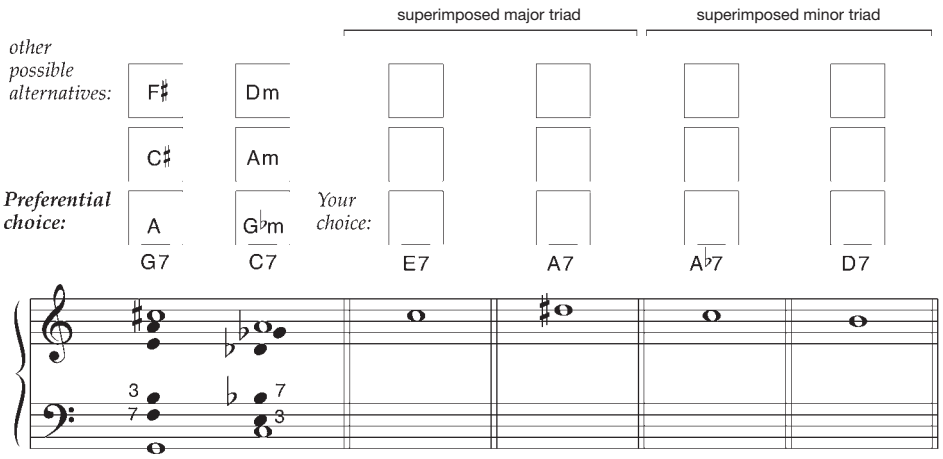
c *Superimposed major and minor triads with the fundamental chord in second inversion:*

- In this example also minor triads as a fundamental chord is used.



d *Superimposed major and minor triads above dominant seventh chords:*

- The fundamental chord consists here of the root, third and seventh. The first two examples show that the third *or* the seventh is placed nearest to the upper triad, which guaranty that the interval between the two units not to be too large. This will unify the overall sound.



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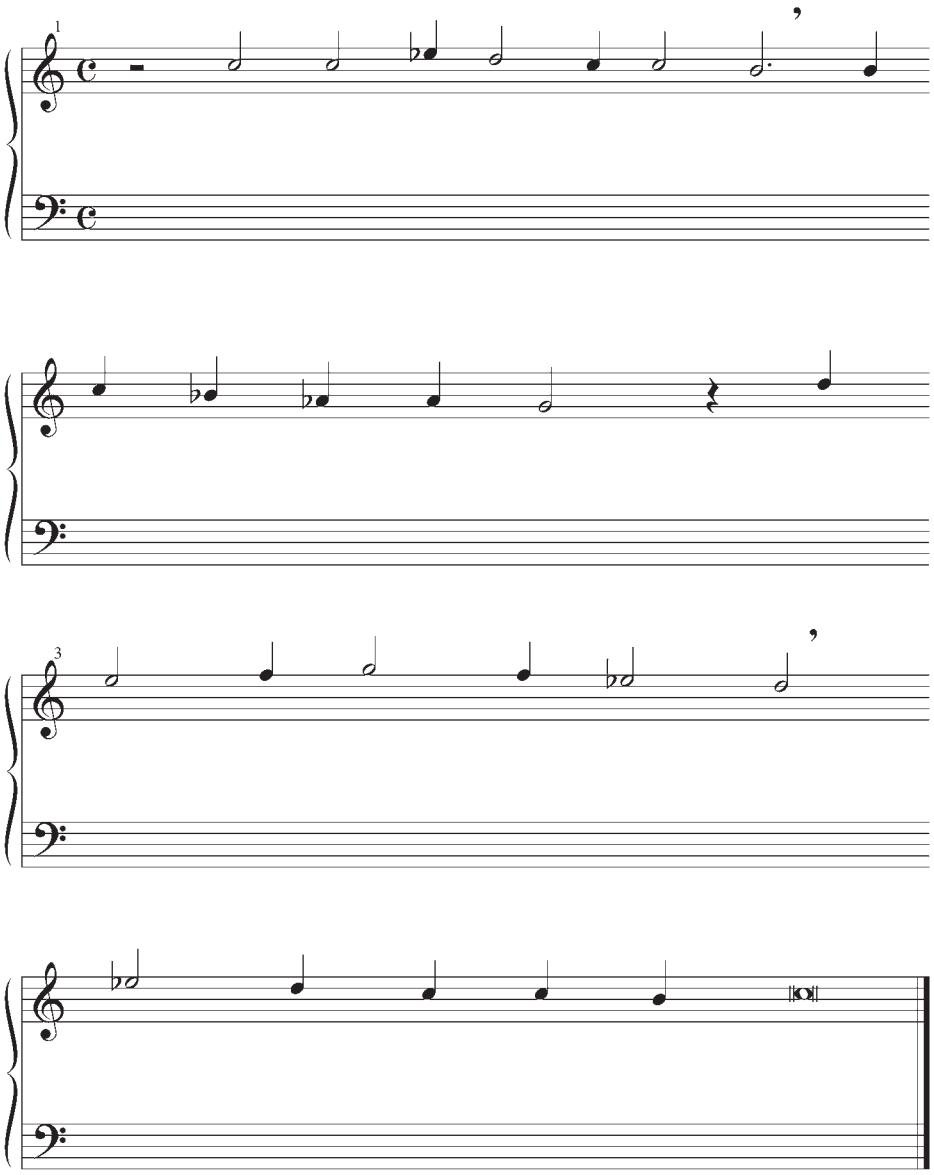
20

Harmonize and arrange the chorale melody below for three trumpets, two trombones and tuba.

- Use polychords in the way you have been practising in the preceding exercises.
- To unify the harmony it can be a good idea to occasionally use parallel motion – especially in one of the units – or stepwise contrary motion between the units (mirror writing), see p 169, eg 3.
- Let the bass part lead the way when it comes to shaping the phrase. Also keep in mind your choice of close or open position. A $\frac{6}{4}$ as a fundamental chord in close position (exercise 19c) is very user-friendly and sounds good if a lighter texture is desired.
- On the odd occasion, you could let the units partly overlap each other and thereby relinquish a strict polychordal approach, for example when there is a shortage of space for the parts to move.



B. Gesius: Chorale melody

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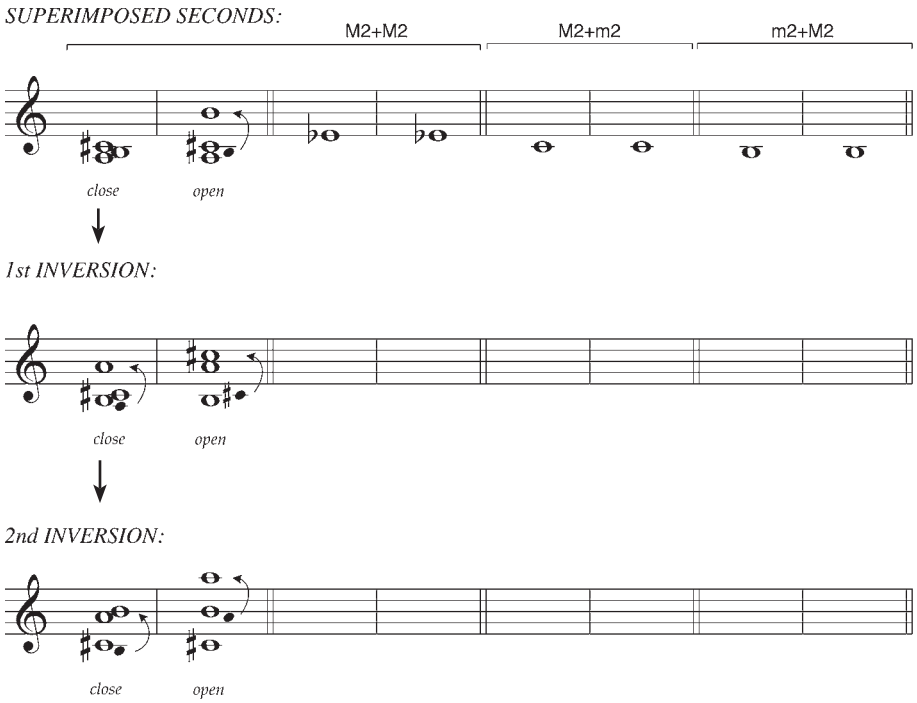
21

Construct three-part chords consisting of 2nds in root position and inversions using the given note as the lowest note (root). The type of construction is shown above the given notes: M2+M2 or M2+m2 or m2+M2.

- Each chord is notated partly in close position, and partly in open position. Contrary to traditional harmony, the 2nd top note is placed an octave above in open position, so that the bass note will be the same; see bars 1-2 in each example.

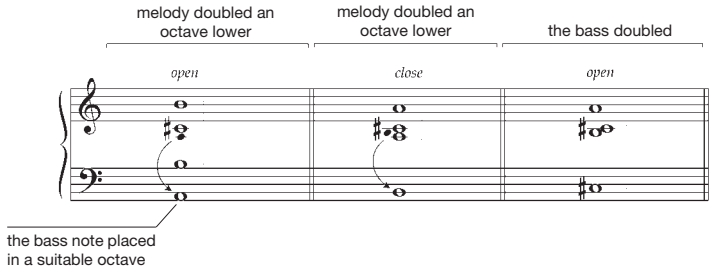
a *Three-part harmony*



b *Four-part harmony by doubling one note of the chord*

Choose two chords from each of the three staves in the exercise above for string quartet. Write four part harmony by doubling one of the notes in the chord (if necessary transpose the chord an octave).

- You may choose to double either the melody *or* the bass:



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Hints

When using a cluster, consider the following ideas:

- *first shape the outer parts like an outer framework to give better control over the musical sequence of events, then add the inner parts at the distance of a 2nd.*
- *a diatonic or synthetic scale can provide a common ground for several chords in succession (modal technique) or it can change with each chord.*
- *a chromatic cluster is often less useful because all the notes are a semitone apart. This is different from a diatonic cluster which has a greater possibility for varying the sound due to the constituent whole tones and semitones.*
- *several cluster units can be played simultaneously (polyclusters) or in succession.*
- *the music can be varied by taking advantage of the sonorous/percussive qualities of clusters in succession.*
- *increasing/decreasing the number of voices (the breadth of the cluster) shapes a more dynamic progression.*
- *a cluster can be introduced successively, starting with a consonant or dissonant chord eg superimposed 3rds or 4ths, a smaller cluster or a polychord.*
- *a decrease in the tension of a cluster can be achieved if, for example, each note is given an individual timbre, such as layers of wind and string instruments.*

22 Write short pieces based on clusters, polyclusters or other chords built on the interval of a 2nd, as seen in the previous exercise (see also the first chord in eg 3 on p 173). You can intersperse these with other chords in order to create harmonic variety eg superimposed 4ths. The examples in parenthesis below can serve as an inspiration, but differ in the number of parts and instrumental choice.

Here are several suggestions:

- A soundscape for organ or strings (with divided parts) based on increasing and decreasing the breadth of the cluster (see p 171, eg 1), with contrasting percussive clusters as an optional extra.
- A piece for piano with a strong rhythmic character, possibly in asymmetrical (irregular) or changing meter (see p 171, eg 3).

Chords with added notes

23 Analyse the chords provided with boxes in examples a-b in the following way (two of the ways shown in the 1st bar in exercise b on the next page):

The blank stave:

- Notate the whole chord in close position (within an octave) as a triad or seventh chord with an added note

The boxes above the music example:

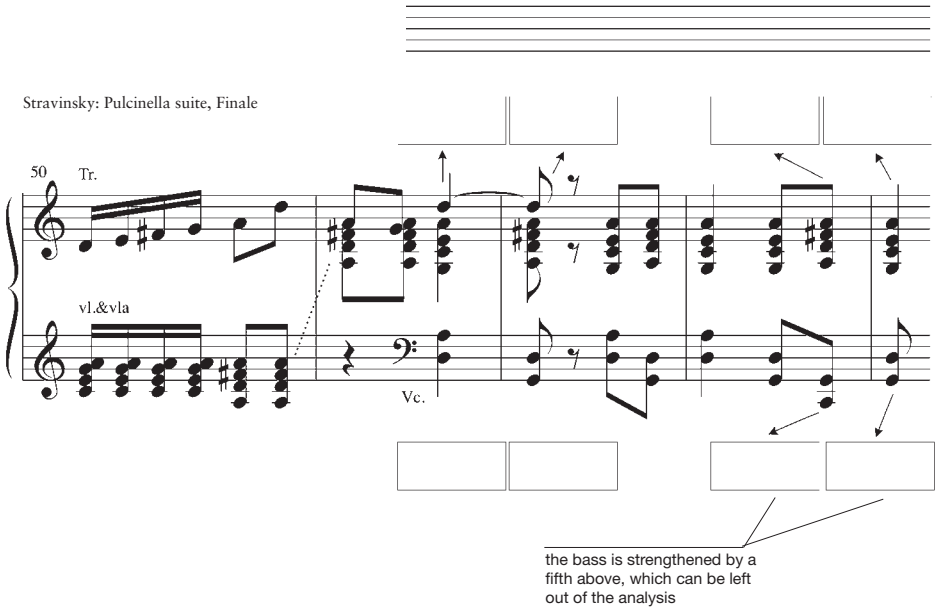
- Name the chord you wrote in the blank stave using chord symbols, eg Gm^{add4} (see also the example on p 172).

The boxes below the music example (not applicable to all chords):

- Notate the actual sound of the chord, using chord symbols including slash notation eg C/D (see also the example on p 172).

First of all find the major or minor triad which forms part of the chord.

a



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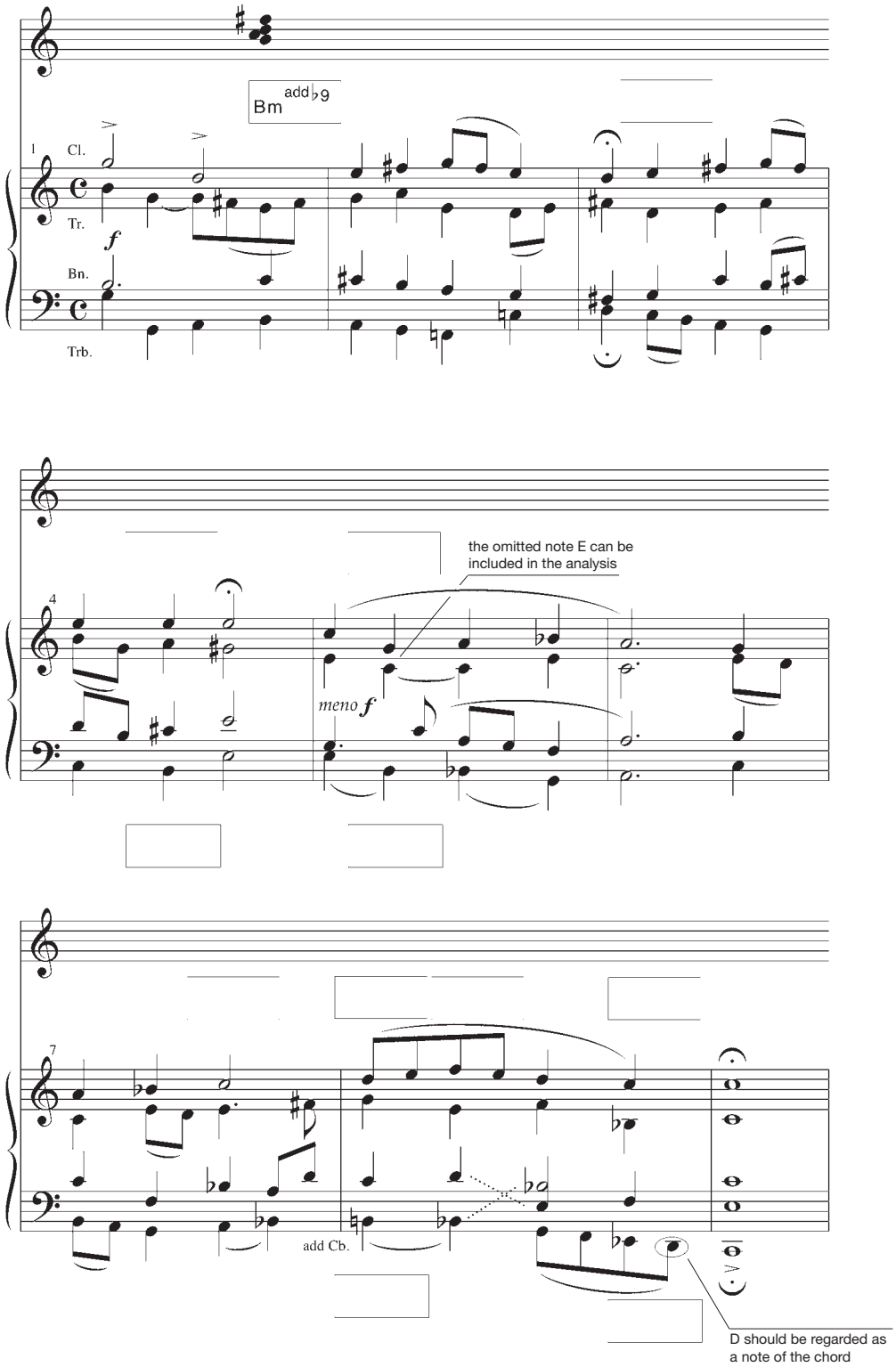
b

Stravinsky: Histoire du soldat, Grand choral



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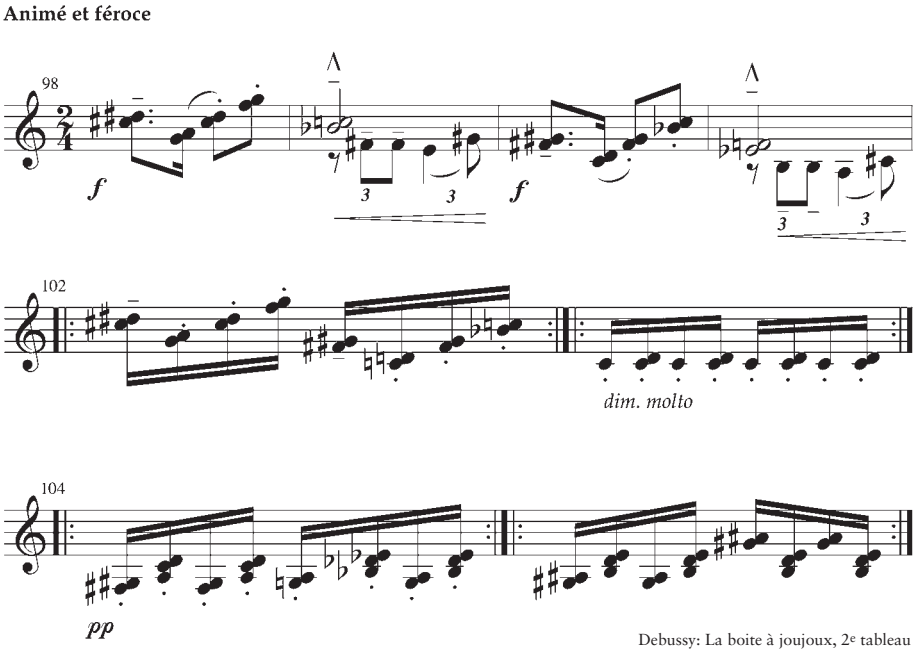
Chords with added notes

24 Analyse the chords and techniques which form the basis for the music examples a-b:

a

- Which interval is central to the music example? Is the choice of interval free, or is it related to a scale? Describe the chord which comprises of the notes in b 99.
- If you regard each group of four sixteenth notes as a broken chord, how will you analyse the chords in b 104-105?

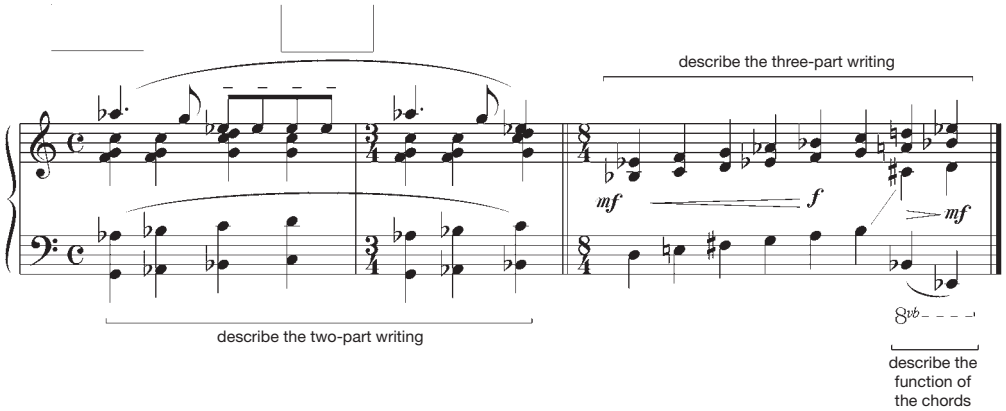


Debussy: La boite à joujoux, 2e tableau

b

- Describe the three-part technique in the last bar of the example as well as the two-part bass in the first two bars (cf eg 3-4 on p 173).
- Analyse the chords below each box as chords with an added note (compare with the previous exercise).
- Play the last two chords and describe their functions.

Poulenc: 'En avion', Promenades, last bars



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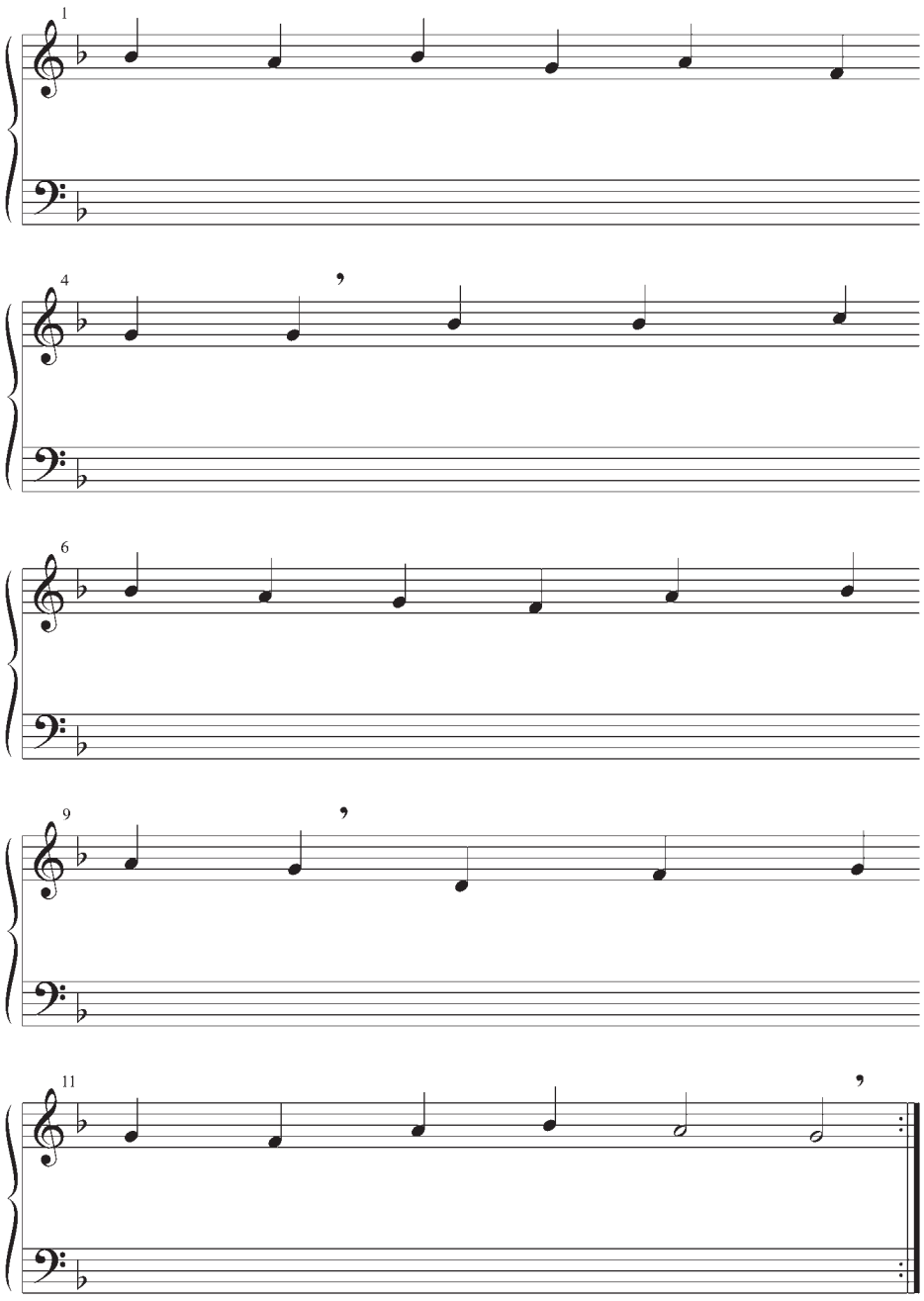
25 Harmonize and arrange the introductory section of the ancient 'Dies irae' melody (written below) for trumpet, horn and two trombones.

- Use chords with added notes, as well as other techniques. The Dorian tonality of the melody will enable you to utilise a modal compositional technique (in this case without being bound to the key of G Dorian) with elements of chromatic harmony similar to the Stravinsky chorale in exercise 23b (and also exercise a).
- In order to create a stronger harmonic progression, it is a good idea to occasionally utilise parallel motion, as well as allowing the melodic line of the inner parts and especially the bass to play a prominent role in shaping the piece.



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Chords with added notes

26 Write shorter compositions using chords with added notes. Use other techniques that you have learnt in earlier chapters as well, eg clusters or other chords consisting of superimposed 2nds. The examples in parenthesis below can serve as an inspiration, but differ in the number of parts and instrumental choice.

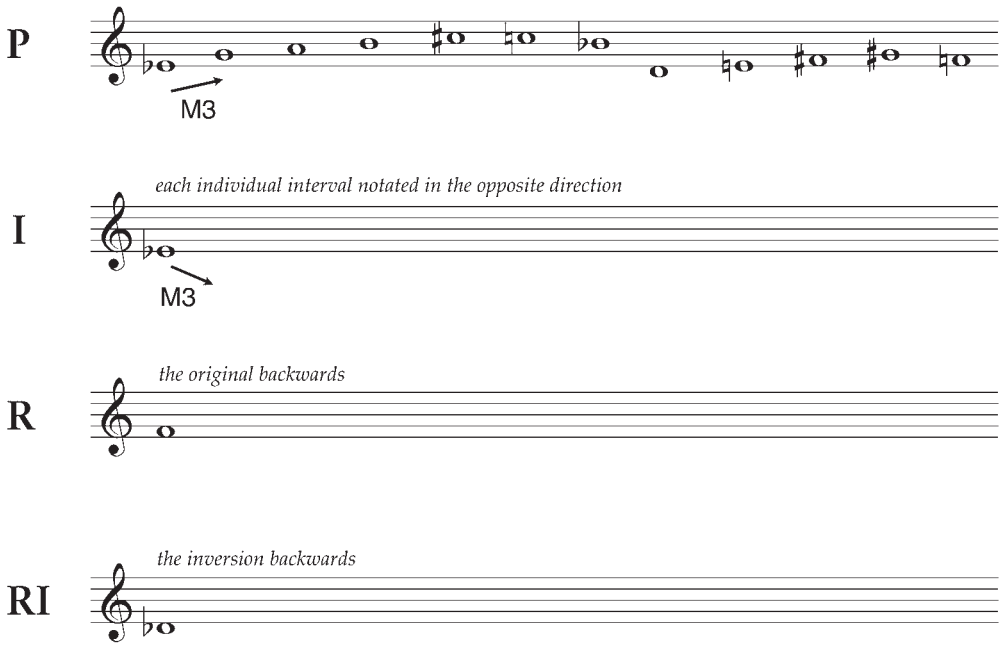
Here are several suggestions:

- A piece for woodwind quintet – possibly of contrasting character (see exercise 24a and b, as well as eg 3 on p 173.
- A piece for mixed choir. In order to make it easier to sing, it may be an idea to use modality, which will not oppose the strident element created by the addition of chromatic harmony (exercise 23a and b).
- A scherzo for flute and oboe, possibly in an asymmetrical (irregular) time signature or changing meter (p 173, eg 4).

Text Book: Pages 172–173

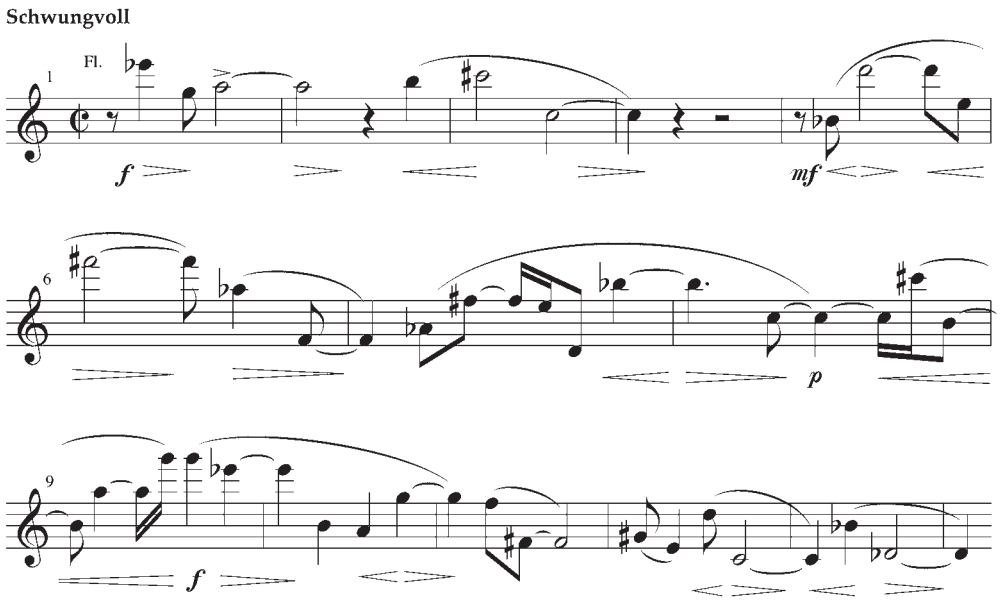
27 Notate the three forms of the series (inversion, retrograde and retrograde inversion) from the original given below.

Schoenberg: Woodwind quintet Op 26



28 The series forms from the previous exercise has been used in the following extract. Identify which form of the series has been used and number each note (1-12). Note that the first and last note of each series here is identical.*

Schoenberg: Woodwind quintet Op 26, I



* See ‘row elision (or row linkage)’ on p 197.

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Twelve-tone technique

Hints

Notation regarding the construction of the twelve-tone series:

- *the twelve notes (ie the series) which will form the basis for a composition are notated using whole notes within an octave (approx) without barlines (see the preceding page).*
- *twelve-tone technique is notated without a key signature because it is usually atonal.*
- *the lack of key as well as the fact that the music is primarily built on the tempered scale means that one note can be notated in different ways (enharmonically) ie notating F♯ or G♭ sound the same. The choice of notation is made in order to make the music easier to read in terms of graphic clarity, or if it relates to the construction of the music. Alternatively, the series can be described without notes using pitch class 0-11, where 0 represents C in every octave; see 'Pitch class and interval class' on p 198.*

  Schonberg and those who followed him used accidentals for all the notes ie natural signs for the notes which did not have temporary sharps or flats (p 175, eg 3).

When constructing a twelve-tone series, consider the following:

- *in order to write atonally, it is important that the series does not contain strong tonal implications such as broken triads or several notes in succession belonging to a diatonic scale.*
- *several repetitions of the same interval can block the process of composition.*

29 Construct a twelve-tone series and notate the transformations, which you can use later in a composition. As well as this, write the four forms of the series using integer notation (pitch class 0-11; see p 198) below the stave.

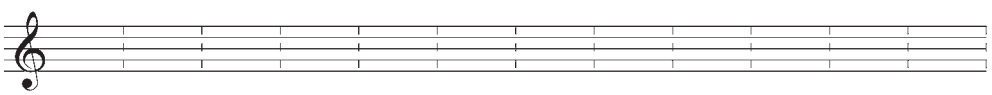
P

Pitch class:

I

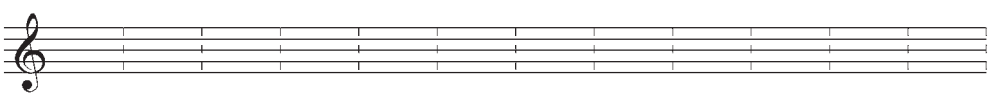
Pitch class:

R



Pitch class:

RI



Pitch class:

Text Book: Pages 174–175

Hints

When using a series as a basis for a composition:

- *the series can be considered as a pattern that is repeated throughout the whole piece, in one form or another, including the original or transformations. Shape each motive, phrase and section using this progression of notes.*
- *as 'the series functions in the manner of a motive' and therefore shapes unity, it can be used to 'produce different themes and characters' (Schoenberg).*
- *starting/finishing the phrase simultaneously with the start/finish of the series is usually avoided.*
- *the first presentation of the series is considered to be the original (not transposed*).*
- *notes from the series can be placed in different octaves.*
- *this contains more leaps (with usually larger intervals) than traditional melody writing.*

Repeated notes:

- *repeated notes can be used. When repeating a note in a composition containing two or more voices, the series can continue in another voice.*
- *repeating a note using an octave leap is not used.*

Intervals/chords

- *the interval of an octave is not used, which is also applicable to doubling voices in octaves (this is particularly applicable to Schoenberg).*
- *as twelve-tone technique is based on counterpoint, the intervals/chords occur as a result of the individual melodies. Harmony that implies tonality is avoided eg triads.*
- *other principles regarding intervals can be used eg 1) the constant use of the greatest tension 2) the greatest tension occurs at the climax as opposed to the beginning or the end of the phrase 3) 'consonanses' occur on passing notes and weak beats.*

Rhythm and harmony:

- *the rhythm that Schoenberg uses in his compositions can be strongly metrical (see p 175, eg 3) or more varied (exercise 28, as well as p 175, eg 1). As the structure is usually contrapuntal, complementary rhythm is normally used ie when one voice moves, the other is less active and vice versa (see p 175, eg 4). Shaping the piece as melody and accompaniment is quite a common technique; see 'Schoenberg: Violin concerto Op 36, I' on p 195.*

For 'setting out' a twelve-tone series, see the points under the heading 'Application of the series' on p 174. If you would like to use another method, see 'Other ways to use series forms' on p 196 in the appendix.

It may be useful to draw up a matrix in order to get an overview of all the 48 possible forms; see p 199. This can be notated using the name of each note (C, A etc) instead of pitch class.

* see 'Movable or fixed do' on p 199.

30 Compose a piece where you use the series including some of the forms and transpositions you wrote in an earlier exercise. The examples in parenthesis below can serve as an inspiration, but differ in the number of parts and instrumental choice.

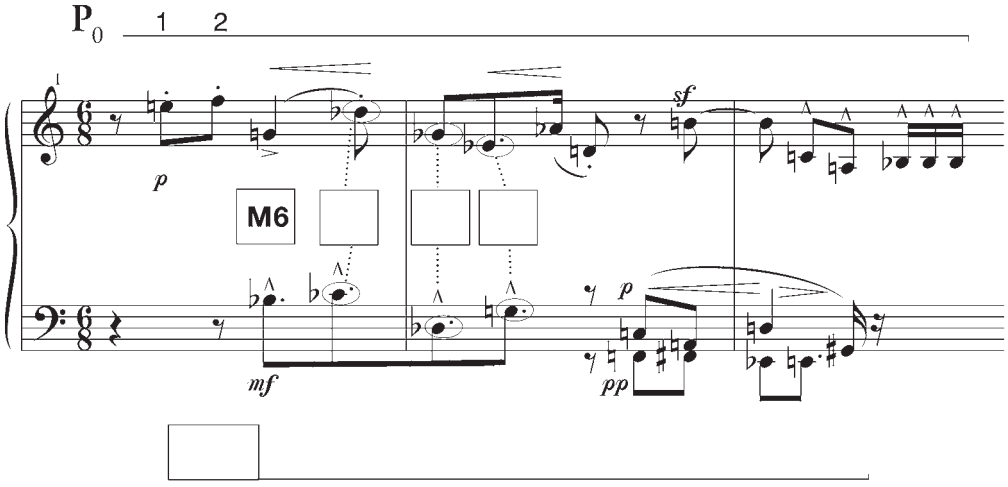
Here are several suggestions:

- Duet for violin and cello (p 175, eg 4).
- Trio for flute, clarinet and cello (Schoenberg: Violin concerto, p 195).

31 Analyse the following extract which has a strongly contrapuntal texture:

- Complete the numbering for the treble voice (notes 1-12), which also presents the series in its original form.
- Indicate which series has been used in the bass, and notate in the box under the score, including the number of notes.
- How does the bass relate to the treble, with regard to a basic contrapuntal principle that Schoenberg uses here?
- Notate the intervals between the two voices in the boxes between the treble and bass, as shown in b 1.

Schoenberg: Suite für Klavier Op 25, Präludium



lowest part: _____

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32 Complete a canon in inversion for mixed choir using the given soprano part, with the help of the model below. The distance between the entries is two bars:

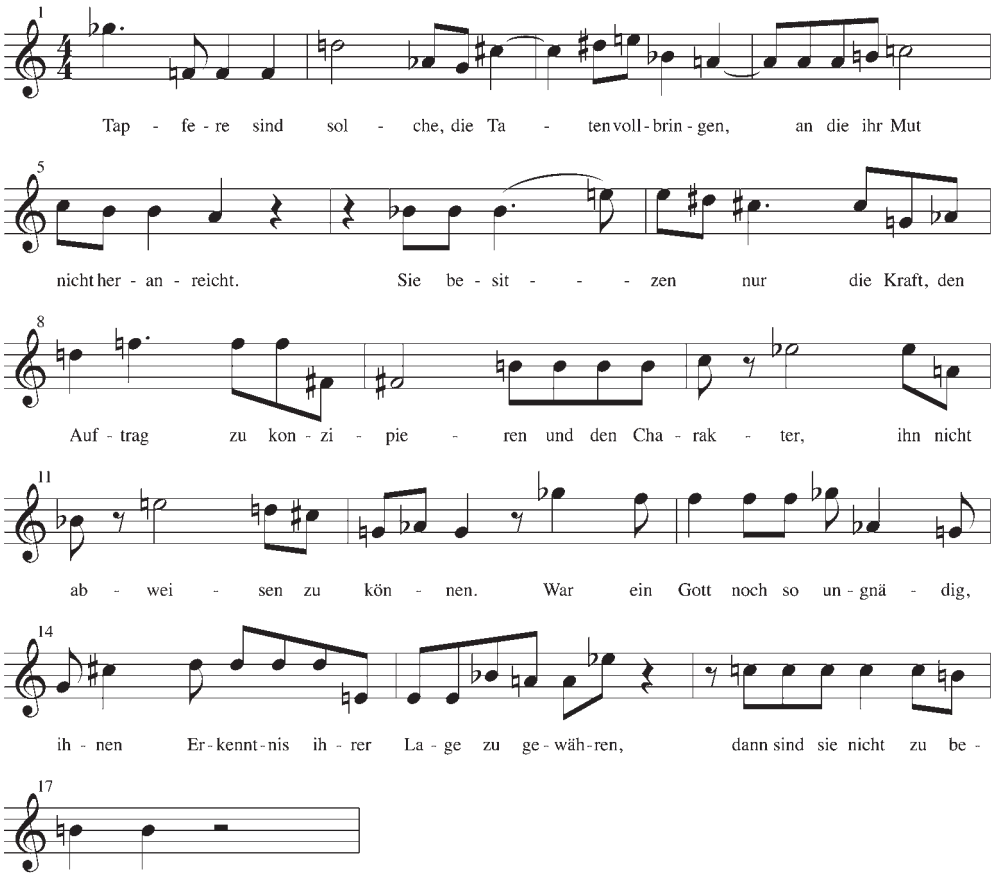
Soprano part (begins with P_0)

Alto part begins with I_5 (the note B below middle C)

Tenor part = soprano part 8va bassa

Bass part = alto part 8va bassa

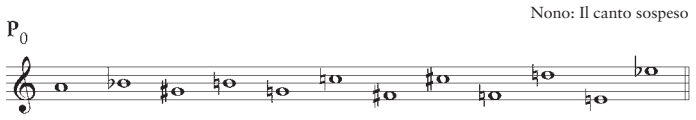
Schoenberg: 'Unentrinnbar' Op 27, No 1



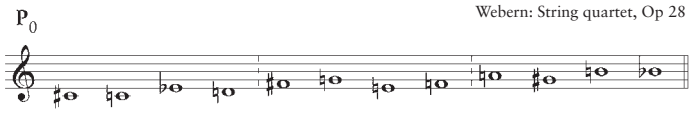
Text Book: Pages 174–175

33 Write a shorter twelve-tone piece for organ using the contrapuntal techniques shown in the two preceding exercises (see also p 175 eg 3).

34 A series can be constructed using different principles eg it can contain every interval, which is called the **all-interval series**:



Another type of series involves limiting the size of the intervals to 2nds and 3rds; see below. (The series is constructed using three cells that are identical either in inversion or transposition. The first cell uses the B-A-C-H motive transposed up a m3).



Construct a twelve-tone series using principles that are similar to, or the same as described above.

35 Choose one of the following compositional tasks:

- Use combinatoriality together with other techniques in a twelve-tone composition for piano, see p 196–197 in the appendix.

- Write a shorter composition for two pianos using **total serialism**, where other parameters such as duration, dynamics and touch (articulation) are controlled, apart from pitch eg in pointillistic music; see 'Serialism' on p 176 and 'Matrix' on p 199.