

THE
LOST
CHORD

HARMONISATION
ON
KEYBOARD INSTRUMENTS

III

STEPHEN TAYLOR

The Lost Chord

*Seated one day at the organ,
I was weary and ill at ease,
And my fingers wander'd idly
Over the noisy keys.*

*I know not what I was playing,
Or what I was dreaming then,
But I struck one chord of music,
Like the sound of a great Amen.*

*It flooded the crimson twilight,
Like the close of an angel's psalm,
And it lay on my fever'd spirit
With a touch of infinite calm.*

*It quieted pain and sorrow,
Like love overcoming strife,
It seem'd the harmonious echo
From our discordant life.*

*It link'd all perplexed meanings
Into one perfect peace,
And trembled away into silence,
As if it were loth to cease.*

*I have sought, but I seek it vainly,
That one lost chord divine,
Which came from the soul of the organ,
And enter'd into mine.*

*It may be that death's bright angel
Will speak in that chord again;
It may be that only in heav'n
I shall hear that grand Amen.*

(Poem by Adelaide Proctor, set to music by Arthur Sullivan in 1877)

PREFACE TO PART III

The Lost Chord is intended for those wishing to learn how to harmonise on the organ or other keyboard instruments. Part I assumed that the reader had no previous experience of practical harmonisation. Part II dealt with the harmonisation of both melodies and basses, the chord of the sixth (or 1st inversion) and the improvisation of eight-bar phrases. In this third and final volume, the chord of the six-four (or 2nd inversion) and the chord of the seventh and its inversions are explored, as well as modulation, passing and auxiliary notes, and elementary improvisation. An important subject in the entire tutor is the figured bass.

As in the preceding volumes, I have attempted to explain each new topic not only from a theoretical but also from a musical point of view. It is for this reason that the sequence of topics is somewhat different to other harmonisation tutors. Inversions of chords, for example, are not simply discussed one after the other, but according to their practical usability. The many exercises will improve confidence in practical skills.

The material in this tutor is presented against the backdrop of music history. The more the reader learns about this history, and listens to relevant music, the easier it becomes to place the evolution of harmony and counterpoint in its historical context. Nevertheless, I have refrained from giving tips for listening, which often have a limiting effect. It is for the player to embark on a voyage of discovery, and for the teacher to offer guidance.

Stephen Taylor

Utrecht, the Netherlands, 2012

INTRODUCTION TO PART III

Many of the musical examples in *The Lost Chord* are taken from the Dutch Protestant hymn book *Liedboek voor de Kerken*, published in 1973. A distinctive feature of this publication is that most of the melodies are matched with settings from the same period, so that the volume is also a reference book of harmonic styles, and therefore a history of music in itself. Many other hymn books contain fine examples of 18th- and 19th-century harmonisations, in which the main topics of Part III (the 2nd inversion of the triad and the chord of the seventh and its inversions) are present in abundance.

As mentioned in the previous volumes, all hymns and chorales are named after the actual melody, rather than after the first line of the text, and dates of composition or publication are given as far as possible. At the end of this volume a register is included of hymns and chorales used as exercise material in the three parts of *The Lost Chord*.

Those who have worked their way through Parts I and II will have discovered that the study of practical harmonisation (and of improvisation) is no less challenging and time-consuming than learning to play pieces of music. Only through years of practice, preferably under the supervision of a teacher, can the player develop sufficient technique, experience and taste to harmonise melodies and (figured) basses proficiently and to lay the basis for improvisation.

I sincerely hope that this tutor will provide support along the long path - to use the words of the poet of *The Lost Chord* - from *all perplexed meanings* to *one perfect peace*.

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PART III

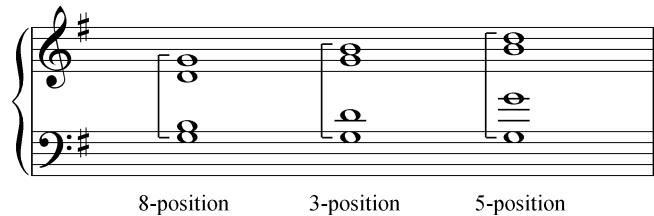
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Instructions for use

The degrees of the scale are indicated by the Roman numerals I, II, III, IV, V, VI, VII.

Triads with the root in the bass are played in three positions, named after the interval between the soprano and the bass:



The above chords are in closed spacing: the distance between the soprano and tenor is less than an octave; between the three upper parts there is no space to add a note belonging to the chord in question.

As explained in Parts I and II, all exercises in *The Lost Chord* are to be played in closed and mixed spacing, with the upper three parts in the right hand (r.h.) and the bass in the left hand (l.h.). The reason why open spacing is hardly employed is explained in ch.13 of the present volume.

The 1st inversion of the triad is referred to as the 6-chord in view of the interval of a 6th, distinguishing it from the triad in root position. Thus also 7-chord etc. A note belonging to a particular chord is a chord note; a note strange to a chord is a non-chordal note.

1

PERSPECTIVES

- The emergence of the tonal system
- Vertical and horizontal tensions

The emergence of the tonal system

Classical tonality, with its system of major and minor keys and of chord functions, is fundamental to Western music of the 18th and 19th centuries.⁺ Tonality replaced medieval modality, with its system of modes. The transition from modality to tonality was a gradual process through the 16th and 17th centuries. Many of our hymns and chorales date from this period. It is therefore not always easy to categorise such melodies and harmonisations as modal or tonal. One of the things that makes these hymns and chorales so rich, is the very tension they often exude by being 'caught' between the two systems.

The Genevan psalm tunes of the 16th century form a vivid example. They were published between 1539-1562 along with new metrical psalm translations by Johannes Calvijn and contemporaries. These 16th-century melodies were written in the medieval modes. However, the harmonisations, mainly by Louis Bourgeois (1547) and Claude Goudimel (1564), reveal distinctly tonal traits, particularly in the cadences.

Harmonisations from the 17th century, when the tonal system was clearly emerging, display a greater variety of harmonic means. In 1609, Michael Praetorius harmonised the 16th-century melody *Von Gott will ich nicht lassen* using the 6-chord, the 6-4-chord, and the 7-chord, subjects requiring our attention in the present volume:



⁺ The term 'tonality' was first used only in 1821, when François Henri Joseph Castil-Blaze (1784-1857) distinguished between *cordes tonales* (I, IV and V) and *cordes mélodiques*.

Forty years later, Johann Crüger, in his 1649 harmonisation of another 16th-century tune, *Nun lasst uns Gott dem Herren*, still limited himself to the triad in the root position, with only two 6-chords:

It is tempting to think that progressive and conservative forces were active in these two settings. But this is tricky material. For example, there is every reason to harmonise a simple tune in a simple manner. Moreover, an older melody, perhaps written in a medieval mode, may leave its mark on a later harmonisation. In other settings, Crüger, like Michael Praetorius, proves to be well aware of the expressive power of the 7-chord, as in *Jesus, meine Zuversicht* (1653):

and in *Wie soll ich dich empfangen*, dating from the same year:

In contrast to the 16th-century *Nun lasst uns Gott dem Herren* quoted above, Crüger almost certainly harmonised his own adaptation of an existing melody in *Jesus, meine Zuversicht*, and a melody of his own in *Wie soll ich dich empfangen*. New material, therefore, adapted or created according to the latest developments!

Vertical and horizontal tensions

The above examples make use of the chord of the 7th, or the 7-chord. The 7-chord in the 'root position' and '1st inversion' (6-5-chord, see ch.4) became widely common in the first half of the 17th century. In Georg Neumark's melody and harmonisation *Wer nur den lieben Gott lässt walten* (1657), the '1st inversion' of the 7-chord is a regular and expressive feature of the setting:

More than fifty years before (1604), Jakob Praetorius had harmonised the opening of Philipp Nicolai's *Wachet auf, ruft uns die Stimme* (1599) in a forceful manner by sharpening the bass of this 1st inversion of the 7-chord:

In ch.4 we will discuss this and other examples.

Not without reason are the terms 'root position' and 'inversion' written above in inverted commas. In discussing the 6-chord (Part II ch.7-8) we noted that use of the 6th above the bass bore the mark of horizontal thinking (the 6th as an appoggiatura, preceding the 5th) rather than that of a vertical approach (moving the root to an upper voice).

From a 'horizontal' point of view, many chords can be explained in terms of linear movement. Considered 'vertically', the emergence of the tonal system meant that the root of the triad became all-important, no matter in which voice it was placed.⁺

Viewed historically, the chords discussed in Part III of *The Lost Chord* take us forward into the 18th and 19th centuries (which is not to say that these chords were not used before). Our harmonic vocabulary is extended to include the 7-chord and its three inversions, and the 2nd inversion of the triad. Whether we think in terms of (horizontal) part writing or (vertical) chords will depend on the context and the examples of the masters. A language can be learnt in many ways. One way or another, our musical vocabulary will enable us to harmonise almost all melodies, and to realise the sometimes complex-looking figured basses of the 18th century.

⁺ Although Jean-Philippe Rameau (1683-1764) is usually seen as the founder of the theory by which the root becomes the point of reference (*centre harmonique*), the concept of chord inversion was already known from the writings of theorists such as Johannes Lippius (1612), his follower Henricus Baryphonius (1630), Thomas Campion (ca. 1613) and others.

2

THE CHORD OF THE SEVENTH (i)

- ▶ The interval of the 7th
- ▶ The 7th as an appoggiatura before the 6th

The interval of the 7th

On the very first page of Part I of *The Lost Chord*, the player was encouraged to listen carefully to the different degrees of tension caused when the ascending major scale is heard against the sustained tonic:



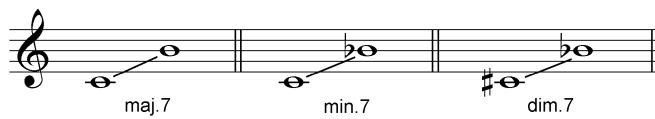
This tension is at its greatest at the seventh note, the B above the sustained C, forming together the interval of the **major 7th**. However, the ongoing, ascending stepwise movement, and particularly that from the leading note B up to the tonic, considerably weakens the clash. The full intensity of the dissonance is revealed if we remove the major 7th from any musical context:



If we omit the other notes of the scale and jump upwards from C to B, we hear how ‘angular’ the major 7th is (in great contrast to the complementary interval of the minor 2nd):



As a melodic interval, the major 7th is therefore something of an outsider. But it comes back strongly as a harmonic interval, and not only the major 7th, but also the **minor 7th** and the **diminished 7th**:



The 7th as an appoggiatura before the 6th

In Part II ch.7 the 6th was discussed as an appoggiatura before the 5th:



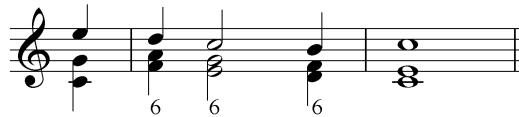
If the soprano were a given part, the alto could proceed in parallel 6ths:



But the effect is plainer, partly because the syncopated rhythm has been weakened. However, we now have an additional means at hand to revive the syncopation:



By having the lower voice move on quicker to D, the last 6th is preceded by the 7th as an appoggiatura. Here in a nutshell is the most common use of the 7th in the 17th century; instead of very neatly - but somewhat plainly - descending in parallel 6ths:



the parts slide past one another in a harmonic and rhythmic movement in which the 7th is no more - but no less - than an expressive ornament:



EXERCISES:

The first exercise is based on the following progression of 6-chords:

If, in the soprano, the 6th on the 3rd beat is tied over to the next bar, the chord of the 7th, or 7-chord, occurs on the strong beat. The 7th then falls stepwise to the 6th on the second beat, and the progression is repeated sequentially:

Thus the classical pattern of tension and relaxation is created (see Part II ch.2):

preparation → dissonance → resolution
=
consonance → dissonance → consonance

Note that the two lower parts are not affected by the appoggiaturas in the soprano.

1. Play the above two progressions one after the other in the key of C, and repeat this in all major keys.⁺

⁺ In transposing to other keys, follow the order of the circle of 5ths (see Part II p.9).

The next exercise is likewise based on a progression of 6-chords:

Here again, the soprano can be ornamented, while the other parts continue to move in parallel 3rds:

2. Play the above two phrases in the key of C, and repeat them in all major keys.

The three-part writing with which we commenced:

can now be expanded to include a fourth part:

Before the final chord on the tonic, the dominant is absent. Nonetheless, the cadence in C major is unambiguous. This is due to the stepwise descent from D to C in the bass, while the soprano rises from the leading note B to the tonic C. Viewed vertically, the chord on the fourth beat is the 1st inversion of the diminished triad on VII, with B as its root. In horizontal terms, the leading note B has more the effect of 'stretching' the triad on II, as the following example illustrates:

This progression was discussed and practised in Part II ch.12. Here are several examples from familiar chorales, all dating from around 1600:

Michael Praetorius (1609) in *Von Gott will ich nicht lassen*:

Jakob Praetorius (1604) in *Wachet auf, ruft uns die Stimme*:

Bartholomäus Gesius (1605) in *O Welt ich muss dich lassen*:

Seth Calvisius (1594) in *Allein zu dir, Herr Jesu Christ*:

From these and other examples we may draw the following conclusions on the use of the 7-chord in the early 17th century:

- The 7th is an embellishment of the 6th. The basis is therefore the 6-chord, which is why the 5th is omitted from the 7-chord:

- The root and 3rd support the 7th. In four-part writing, the root may be doubled (as in Michael Praetorius and Calvisius), or the 3rd (as in Jakob Praetorius and Gesius).

EXERCISES:

With only very few exceptions, the exercises in *The Lost Chord* are to be played with the three upper parts in the r.h. and the bass in the l.h. (see Part I ch.12).

3. Practise the following cadences in all major keys:

A musical score for piano in 4/4 time. The top staff uses a treble clef, and the bottom staff uses a bass clef. The score consists of three measures, each labeled with a Roman numeral: i, ii, and iii. Measure i starts with a forte dynamic (F) and includes a bass note. Measure ii starts with a forte dynamic (F) and includes a bass note. Measure iii starts with a forte dynamic (F) and includes a bass note.

N.B.: in (i) the leap in the tenor from F to C (the mixed position) is necessary: stepwise movement from F to E and then on to the D would cause two sets of parallel 8ves between the tenor and bass.

4. Practise the following phrases in all major keys:

i

ii

5.* Repeat ex.3 and 4 with a solo stop and pedals.⁺

Johann Crüger's *Zeuch ein zu deinen Toren* (1653) has the following final cadence:

A musical score for piano, showing two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature is one flat. Measures 7 through 10 are shown, with measure 7 starting with a forte dynamic. The piano part includes various note values such as eighth and sixteenth notes, and rests. Measure 7 ends with a fermata over the eighth note. Measure 8 begins with a sustained note. Measure 9 features a descending eighth-note scale. Measure 10 concludes with a half note.

+ The exercises with an asterisk offer extra practice for organists able to play the pedals - see Part I ch.5 ex.5.

In this case, the 7-6 progression forms the approach to the V-I cadence. The 6th is both the resolution of the dissonant 7th and the preparation of the dissonant 4th. The close of Crüger's *Nun danket all und bringet Ehr* (also published in 1653) is identical:



Is the dotted crotchet A in the bass the root of the 7-chord on III? Or do we hear the 1st inversion of the tonic triad of F major, in which the root in the alto is preceded by the appoggiatura G? Whatever the case may be, this ambivalence is fortunately of no consequence for the figured bass, in which we always count up from (and including) the bass, rather than from the root.

EXERCISES:

6. Practise the following cadences in all major keys:

7. Practice the following cadences in the minor keys of G, D, A, E, B, F sharp, F and C:

8.* Repeat ex.6 and 7 with a solo stop and pedals.

3

THE CHORD OF THE SEVENTH (ii)

- ▶ The three- and four-part 7-chord
 - ▶ The dominant-7-chord
 - ▶ Two-part inventions

The three- and four-part 7-chord

In the course of the 17th century, the 7-chord acquired a certain independence. In as far as the 7th occurred in early-17th-century chorales, it was mostly an appoggiatura preceding the 6th, above a bass moving by step.⁺ More than fifty years later, in 1660, Georg Ebeling wrote his *Du meine Seele, singe*, the final line of which is:



Ebeling harmonised the close of his own melody as follows:

A musical score for two voices. The top voice is in soprano C major (G clef) and the bottom voice is in bass F major (C clef). The score consists of four measures, numbered 7, 8, 9, and 10 at the bottom. Measure 7: Soprano has a dotted half note followed by an eighth note, bass has a quarter note. Measure 8: Soprano has a quarter note followed by a dotted half note, bass has a quarter note. Measure 9: Soprano has a quarter note followed by a dotted half note, bass has a quarter note. Measure 10: Soprano has a quarter note followed by a dotted half note, bass has a quarter note.

After the 7-chord on II, the bass leaps to V, causing a 4-3-suspension in the soprano; the resolution of the 7th (the quaver A) is no longer a 6th, but the 3rd of the triad on V. Perhaps we can view this cadence, in 1660, as the modern, tonal alternative for:

Whatever the case may be, Ebeling's II-V-I cadence, in which the bass jumps to the dominant (creating the 4th and 5th leaps so characteristic of tonal basses) leaves no doubt as to the key of B flat major. It is worthy of note that the last crotchet in Ebeling's alto is an F, thus avoiding the following:

A musical score for piano, featuring two staves. The top staff uses a treble clef, a key signature of one flat, and a common time signature. The bottom staff uses a bass clef, a key signature of one flat, and a common time signature. The music consists of eighth and sixteenth note patterns. A vertical bar line separates measures. An arrow points down to the bass staff, indicating a harmonic change or a specific performance instruction. Below the staffs, the numbers 7, 7, 4, and 3 are written under the notes.

Could it be that the 7th on V - the so-called **dominant 7th chord** (here dominant-7-chord) - went one step too far for the mid-17th-century aesthetic of Ebeling?

- + In the mid-16th-century metrical psalm settings of Claude Goudimel, the 7-chord occurs exclusively as an appoggiatura to the 6th, and that in only 12 of the 150 harmonisations.

Doubling and parallel motion

Viewed schematically in the key of C major, Ebeling's cadence is as follows:

A musical score in G clef (treble) and F clef (bass). The bass line is labeled with Roman numerals below each measure: I, I⁶, II⁷, V, I. The tenor and soprano voices are shown above the bass line.

The 7-chord on II consists of the doubled root, the 3rd and the 7th: without the 5th, therefore. Note also the mixed spacing of the 6-chord: the tenor falls to the root C, thus avoiding the following parallel 8ves between the tenor and bass:

A musical score in G clef (treble) and F clef (bass). The bass line is labeled with Roman numerals below each measure: I, I⁶, II⁷, V, I. The tenor and soprano voices are shown above the bass line.

The 7th is not doubled; a test at the keyboard soon reveals that doubling of the 7th would dominate unpleasantly. (Doubling of other dissonances must also be avoided, not in the least because we cannot simultaneously resolve the same dissonance in two voices.) As noted in ch.2, in certain circumstances we may double the 3rd of the 7-chord:

A musical score in G clef (treble) and F clef (bass). The bass line is labeled with Roman numerals below each measure: I, I⁶, II⁷, V, I. The tenor and soprano voices are shown above the bass line.

In this case, it is the minor 3rd which is doubled. Nevertheless, the preceding 6-chord does contain a doubled major 3rd.⁺

EXERCISES:

1. Practise the following cadences in all major keys:

A musical score in G clef (treble) and F clef (bass). The bass line is labeled with numbers 6 and 7 below each measure. The tenor and soprano voices are shown above the bass line.

⁺ The fact that the major 3rd was quite commonly doubled in the 17th century is largely, if not fully, explained by the then current meantone temperament, in which eight of the twelve major 3rds were tuned 'pure' (and sounded splendid!) at the expense of the other four, which were so badly out of tune that they could not be used. In later temperaments, this inequality was smoothed out in order to make all the major 3rds available; but some of them remained far from 'pure', and it became customary not to double them.

2. Play the same cadences in the minor keys of A, E, B, F sharp, D, G and C:

3.* Repeat the major and minor cadences with a solo stop and pedals.

If, in the second major cadence in ex.1, we wish to avoid doubling the major 3rd in the 6-chord, we have a new and interesting progression at our disposal. Until now we have carefully avoided parallel 3rds between the outer parts:

In harmonisation in closed spacing, this parallel 3rd automatically causes parallel 5ths and 8ves:

However, parallel 3rds between the outer parts are not forbidden; on the contrary, they can be used to create colourful progressions. In our example, use of the 7-chord on II enables us to employ parallel 3rds without causing parallel 5ths and 8ves (compare ch.2 ex.3.iii):

In all cases, the dissonant 7th is prepared and resolved. In terms of the above example: C on the third beat in the alto is the 7th above the bass. Because it is a dissonance, it is prepared on the second beat, where C is a consonance in the same part. After the dissonant 7th the alto falls to B, since the classical rules require a resolution in the form of a descending major or minor 2nd (see Part II ch.2.)

EXERCISES:

4. Practise the following cadences in all major keys:

A musical score for two measures in G major (4/4 time). It consists of four voices: soprano, alto, tenor, and bass. The bass line is annotated with Roman numerals: 7, 4, 3. The progression follows a typical V-I cadence.

5. Play the same cadences in the minor keys of A, E, B, F sharp, D, G and C:

A musical score for two measures in A minor (4/4 time). It consists of four voices: soprano, alto, tenor, and bass. The bass line is annotated with Roman numerals: 7, 4, #. The progression follows a typical V-I cadence.

6.* Repeat the major and minor cadences with a solo stop and pedals.

The dominant-7-chord

If the 7th is an appoggiatura before the 6th, the 5th is often omitted in the 7-chord. Hassler does include it in his setting of *Wenn mein Stündlein vorhanden ist* (1608):

A musical score for two measures in G major (4/4 time). It consists of two voices: soprano and bass. The bass line is annotated with Roman numerals: 6, 6, 7, 6. The progression shows a dominant-7 chord (V7) where the 5th is omitted, followed by a resolution to the tonic.

but he takes care to have his tenor move on quickly so as not to collide with the 6th in the alto. Similar situations are to be found in the settings by Crüger and Neumark on p.8-9. (By the way: would any of us have thought of the fourth chord in the quote from Hassler? How expressive is the 6th in the tenor!)

Ebeling's more independent use of the 7-chord on II in the approach to the V-I cadence (p.16) is rather common in 17th-century chorale harmonisations. The final cadence of Samuel Scheidt's *Von Gott will ich nicht lassen* (1650) is as follows:

A musical score for three voices: soprano, alto, and bass. The bass line is annotated with Roman numerals: II⁷, V⁷, #. The progression shows a dominant-7 chord on the secondary dominant (II7) followed by a dominant-7 chord on the tonic (V7).

The 7th on II is resolved in the 3rd of the 7-chord on V; the 7th on V, in turn, is resolved in the 3rd of the final triad on the tonic. The bass leaps (in 4ths and 5ths!) around a segment of the circle of 5ths. Since the 7-chords no longer resolve to the 6th, the 5th can now be accommodated, as in the second 7-chord.

This second 7-chord - on V, the dominant - is the dominant-7-chord. The triads that we have employed until now comprise only three different notes, as the name triad implies; 7-chords, however, have four. (In German, the triad is called a *Dreiklang* - literally a ‘three sound’ - and the dominant-7-chord a *Vierklang* or ‘four sound’.) The dominant-7-chord comprises the root (on V), the major 3rd (the leading note), the perfect 5th and minor 7th. The dominant-7-chord in the key of G major is therefore:



The dominant-7-chord is not widespread in 17th-century chorale harmonisations. Ebeling appears to avoid it in our example at the beginning of this chapter, but Scheidt used the above cadence (p.19) again in the third line of his setting of *Puer natus in Bethlehem*, likewise dating from 1650:

From our very first cadence exercises it became clear that the V-I progression is the anchor of the major and minor tonal system, which is the foundation of all classical music of the 18th and 19th centuries. If we add the 7th to the major triad on V, not only does the tension on the dominant increase, but the relaxation on the tonic as well, accentuating all the more the pivotal balance of power between the dominant and tonic in our tonal system:



In the major scale we discovered the ascending and descending ‘pulling power’ of the individual notes in relation to the tonic (Part I p.7, Part III p.10). The progression from the dominant-7-chord to the tonic combines the pulling power of no less than three of these notes: F pulls towards E, while D and the leading note B both pull towards C; the bass rises by a 4th or falls by a 5th. All that can hardly leave any doubt about the key!

As the use of the 7-chord - and particularly the dominant 7th - increased in the course of the 17th century, the tonal system of our Western culture became established once and for all - or let us say until about 1900! Ultimately, the 7-chord had not only the potential to reinforce the tonal system, but also to destroy it - but that’s another story...

EXERCISES:

7. Practise the following positions of the dominant 7th in all major keys. Despite the above remark about the pulling power of the leading note to the tonic, in four-part writing the leading note frequently falls to the 5th of the tonic triad.

8. Play a 7-chord on each degree of the scale of C major. Write down the chords and note under each the type of 3rd, 5th and 7th as indicated:

etc.

I II III IV V VI VII I

..... maj.7 min.7

..... perf.5 perf.5

..... maj.3 min.3

9. Answer the following questions:

a. On which degrees is the 7th between the outer parts major?

.....

b. On which degrees is the 3rd between the bass and tenor major?

.....

c. On which degrees is the 7th between the outer parts minor?

.....

d. On which degrees is the 3rd between the bass and tenor minor?

.....

e. On which degrees is the 5th between the bass and alto diminished?

.....

f. On which degrees is the 5th between the tenor and soprano diminished?

.....

10. Play the 7-chords again and listen to the effect of the different 3rd, 5th and 7th intervals.

The cadence in the first exercise of this chapter:

Musical score for a two-part cadence in G major (4/4 time). The top part consists of two measures of quarter notes followed by a half note. The bottom part consists of two measures of quarter notes followed by a half note. Measure numbers 6, 7, and 8 are indicated below the notes.

can now be played with the complete 7-chord on II, i.e. including the 5th; it is now followed by the dominant 7th (in which the 5th is omitted to facilitate smooth part writing):

Musical score for a two-part cadence in G major (4/4 time) using a complete 7-chord on II. The top part includes a 5th in the 6-chord. The bottom part includes a 5th in the 6-chord. Measure numbers 6, 7, and 8 are indicated below the notes.

The root of the 6-chord, rather than the 3rd, may be doubled:

Musical score for a two-part cadence in G major (4/4 time) where the root of the 6-chord is doubled. The top part includes a 5th in the 6-chord. The bottom part includes a 5th in the 6-chord. Measure numbers 6, 7, and 8 are indicated below the notes.

EXERCISES:

11. Practise the above cadences in all major keys.
12. Play the following cadences in the minor keys of G, D, A, E, B, F sharp, F and C:

Musical score for a two-part cadence in G minor (4/4 time) using a complete 7-chord on II. The top part includes a 5th in the 6-chord. The bottom part includes a 5th in the 6-chord. Measure numbers 6, 7, and 8 are indicated below the notes.

- 13.* Repeat ex.11 and 12 with a solo stop and pedals.
-

In the above cadences, it is not without reason that the 7-chord on II is preceded by I in the 1st inversion. On p.18 we allowed the bass to rise from the root position in parallel 3rds:

Adding the 5th to the 7-chord, however, would cause a parallel 5th with the tenor:

as it would with the alto or soprano in other positions:

In the minor key, however, this progression is possible, since the 5th in the 7-chord is diminished and the consecutive 5ths therefore permissible:

EXERCISES:

14. Practise the following cadences in the minor keys of G, D, A, E, B, F sharp, F and C:

15.* Repeat these cadences with a solo stop and pedals.

16. Practise the following sequences in all major keys:⁺

(i) three-part:

A musical staff in G major (treble clef) and common time (4/4). It consists of four measures. The bass line is in F major (Bass clef). The harmonic progression is indicated by the number '7' under each measure, suggesting a continuous dominant seventh chord (G7).

(ii) four-part without the 5th in the 7-chord:

A musical staff in G major (treble clef) and common time (4/4). It consists of four measures. The bass line is in F major (Bass clef). The harmonic progression is indicated by the number '7' under each measure, suggesting a continuous dominant seventh chord (G7) without its fifth.

(iii) four-part with the 5th in the 7-chord:

A musical staff in G major (treble clef) and common time (4/4). It consists of four measures. The bass line is in F major (Bass clef). The harmonic progression is indicated by the number '7' under each measure, suggesting a continuous dominant seventh chord (G7) with its fifth.

(iv) three-part:

A musical staff in G major (treble clef) and common time (4/4). It consists of six measures. The bass line is in F major (Bass clef). The harmonic progression is indicated by the number '7' under each measure, suggesting a continuous dominant seventh chord (G7).

(v) four-part:

A musical staff in G major (treble clef) and common time (4/4). It consists of six measures. The bass line is in F major (Bass clef). The harmonic progression is indicated by the number '7' under each measure, suggesting a continuous dominant seventh chord (G7).

⁺ Although the diminished triad in root position is hardly found in chorale harmonisations (see Part II ch.12), it does occur in sequences because of the consistent repetition of the chord progression (even if this results in doubling of the leading note).

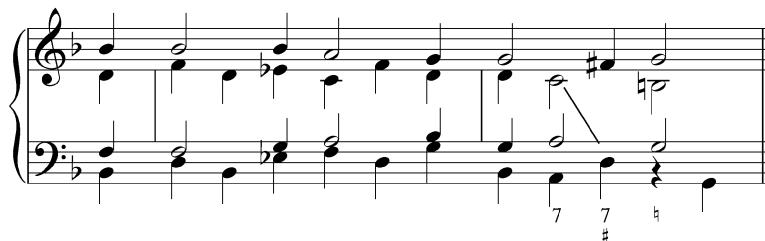
In this last sequence, the 7-chords on the uneven beats have no 5th, while those on the even beats do. In this manner, all 7ths resolve to the 3rd of the next chord.

17.* Repeat the sequences with a solo stop and pedals. For the more adventurous organist: play the three-part sequences as trios on two manuals and pedal.

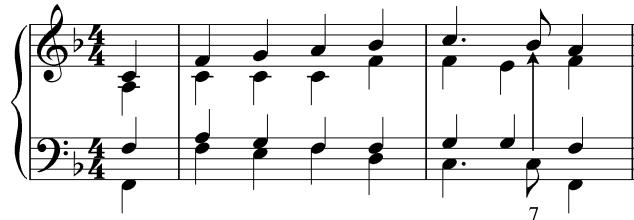
At the beginning of this chapter we observed how Ebeling, in 1660, seemed to take trouble to avoid the dominant 7th. Ten years before, Scheidt did exactly the same at the close of his setting of *Puer natus in Bethlehem*:



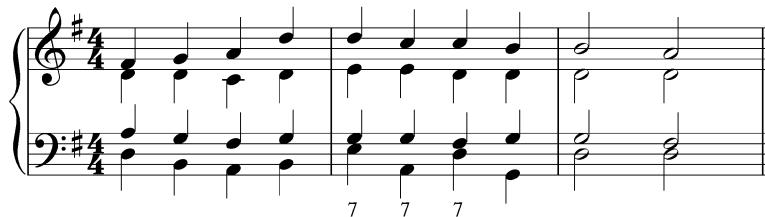
Nonetheless, the dominant 7th was already current, and we must exercise caution in drawing conclusions. Any choice of chords and chord progressions was, and is, a question not only of rules but also of taste. There is quite some difference, for example, between the 7th in an inner part, as Scheidt employed it in the previously quoted third line of *Puer natus in Bethlehem*:



and the 7th as a melodic element, as in the later chorale *Was Gott tut, das ist wohlgetan*, dating from 1690:



One hundred years further on, in 1784, Christian Gregor wrote the following in his setting of *Herr und Ältster deiner Kreuzgemeine*:



The manner in which the 7-chord was employed in hymns and chorales in the 17th and 18th centuries is quite diverse. Our own (organist's?) ear is strongly determined by 19th- and 20th-century harmonisations, in which the 7-chord often has a prominent place. A certain caution - and a degree of taste - is therefore required in order to avoid harmonising everything in the same way, like an artist always using the same colours. So let us not take exercises in sequential 7ths as our example...

EXERCISES:

18. Play the following chorales in four parts:

(a) *Herr Jesu, Licht der Heiden*

The musical score consists of three staves of four-part chorale notation. The top two staves represent the upper voices, and the bottom two staves represent the lower voices (bass and pedal). The music is divided into measures by vertical bar lines. Below each staff, there are basso continuo (pedal) markings. The first staff has markings: 6, 7, —, 4, 3, 2, 3. The second staff has markings: 6, 5, 7, 6, #. The third staff has markings: 6, 5, 7, 6, #. The sharps (#) and flats (b) indicate specific fingerings for the continuo player.

(b) *Gen Himmel aufgefahren ist*

The musical score consists of three staves of four-part chorale notation. The top two staves represent the upper voices, and the bottom two staves represent the lower voices (bass and pedal). The music is divided into measures by vertical bar lines. Below each staff, there are basso continuo (pedal) markings. The first staff has markings: 6, —, 8. The second staff has markings: 6, 7, 7, 8. The third staff has markings: 6, 7, 9, 8. The sharps (#) and flats (b) indicate specific fingerings for the continuo player.

19.* Repeat the chorales with a solo stop and pedals.

20. Practise the following transpositions: *Herr Jesu, Licht der Heiden* in G and E flat major, *Gen Himmel aufgefahren ist* in F and A major.

Two-part inventions

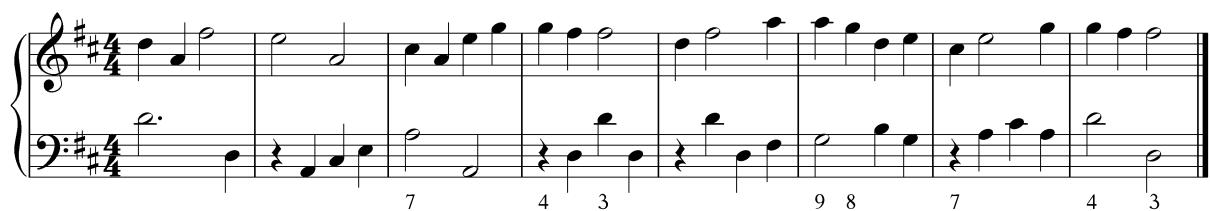
Let us return to our two-part *inventions*, which we commenced in ch.5 of Part II. In ch.11 (p.60), the following scheme:



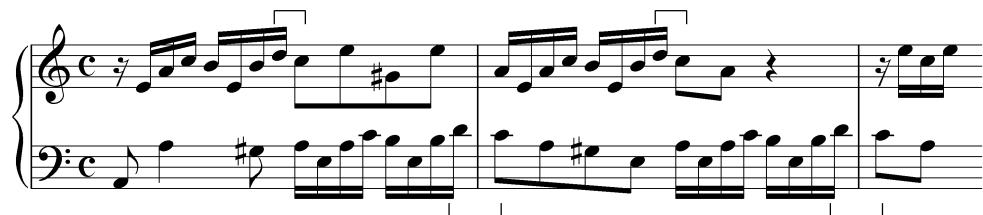
formed the basis for this little invention:



Using no more than the notes of the triad, we can create countless inventions with the aid of octave leaps, note repetitions, rhythmical figures and rests. To the triad in root position we can now add the dominant 7th. And the 4-3 and 9-8 suspensions allow us to throw in some herbal flavouring! The above example can therefore be elaborated as follows:



The 4-3 and 9-8 suspensions are still carefully prepared. The 7th, in this instrumental context, may be treated more freely - see the remarks on p.60-61 of Part II. J.S. Bach's 13th *Inventio* begins as follows:



The unprepared 7th fits quite naturally into Bach's arpeggio-like figuration. However, the tension of the 7th is still resolved in the normal manner: the dominant 7th falls to the 3rd of the tonic triad. When the 7th is in the bass, it is therefore followed by the first inversion of the tonic triad.

EXERCISES:

21. Improvise two-part inventions based on the following schemes. Do not deviate from the given chords, and try to create a dialogue between two parts of equal interest. The figures refer to the bar as a whole: a 7 therefore indicates that the 7th should sound somewhere in the bar (in one or both parts). On which beat a suspension is resolved, the player may decide for himself. Do avoid trying to remember one particular 'solution' to a scheme and then practising it as if it were a composition!

Commence each time with a new idea: by trial and error we can really begin to improvise!

i

ii

iii

iv

v

vi

vii

viii

The following inventions contain brief modulations:

ix

x

xi

xii

4

THE SIX-FIVE-CHORD

- The three- and four-part 6-5-chord
- Figured bass - a question of adding up
- Two-part inventions

The 6-5-chord in three-part writing

In polyphonic music of the Renaissance, the course of the individual voices is so important that there is mention of a refined balance between the part writing on the one hand and the harmonic progressions on the other. In ch.1 we spoke of these horizontal and vertical aspects of music.

In a late example of such polyphony, from the Credo of William Byrd's *Mass for Three Voices* (ca. 1593/4), the voices imitate one another as follows:

The indicated dissonance arises through a seemingly inevitable concurrence of horizontal movement, as it were. Vertical analysis, however, reveals the 1st inversion of the 7-chord:

The 3rd of the 7-chord is now in the bass; the root G is in one of the upper parts.

In the previous chapters, the 7-chord in root position was resolved as follows:

with the help of the 1st inversion, or **6-5-chord**, we can now approach the cadence with rising, stepwise movement in the bass:

This progression raises an interesting question: on which degree of the scale is the above 6-5-chord based? On the one hand, we may analyse this chord as the 1st inversion of the 7-chord on II:

I II⁷ V I

On the other hand, we could consider the 6-5-chord as the triad on IV, to which the note G has been added:

I⁶ IV V I

In our hesitation, we are in the distinguished company of theorists and composers who have struggled to answer the same question concerning what is known as ‘the added 6th’.⁺ Here again, the answer depends on whether one adopts a horizontal or a vertical approach. Whatever the case may be, it serves here as an example of the fact that chords and progressions can often be analysed in different ways.

EXERCISES:

1. Practise the following progression in all major keys. The second 6-5-chord is in open spacing (see Part I ch.12).

6 6
5 5

2. Repeat this progression in the minor keys of C, G, D, A, E, B, F sharp and F:

6 6
5 5

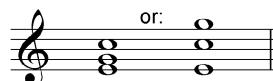
3. Practise the following sequence in three parts in all major keys:

⁺ The added 6th (*sixte ajouté*) was already discussed by Jean-Philippe Rameau, for example, in his *Génération harmonique* (1737).

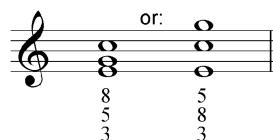
4. Repeat the sequence in the minor keys of C, G, D, A, E, B, F sharp and F:

Figured bass - a question of adding up

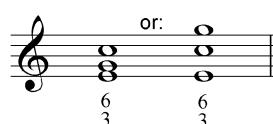
The terminology of figured bass sometimes causes confusion; before we proceed, this is a suitable moment to clarify one or two matters. When the 6-chord was discussed in Part II, an important distinction was made between the root and the bass. In the 6-chord, the root of the triad no longer sounds in the bass, but is replaced there by the 3rd of the triad. Above this bass, we hear the 5th and root of the triad:



The unsuspecting reader might think that the 6-chord can be figured in the following manner, taking the triad in its original root position as point of reference:



This would be a misunderstanding. The figured bass of the Baroque era was nothing more than a question of adding up from the written bass - not from the root of the triad. We are dealing with a figured bass, not a figured root. Generally speaking, the distribution of the parts above the bass is free. The complete figuring of the 6-chord is therefore as follows:⁺

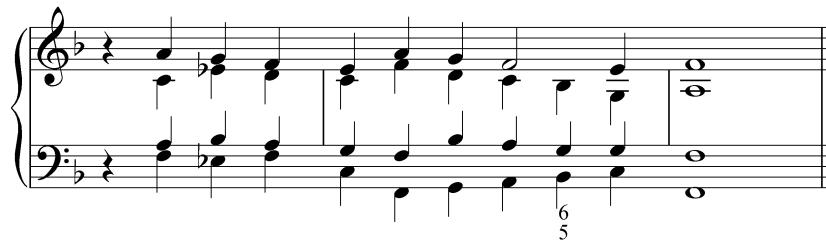


Here, adding up from the bass means that the 5th of the triad is described as "the 3rd above the bass" and the root as "the 6th above the bass" - which can sometimes be confusing.

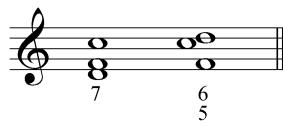
⁺ According to the rules of figured bass, however, the 3rd above the bass is taken for granted unless expressly stated - see Part I ch.14. The 6-chord, therefore, is normally indicated only by the number 6.

The 6-5-chord in four-part writing

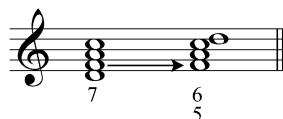
Let us return to the great William Byrd. In the example from his Mass (and in the above exercises), the 3rd above the bass is absent in the 6-5-chords. In *Ach bleib bei uns, Herr Jesu Christ*, a chorale harmonisation from the same period (1594) by Seth Calvisius, the same occurs:



The omission of the 3rd above the bass in the 6-5-chord corresponds to the absence of the 5th in early applications of the 7-chord:

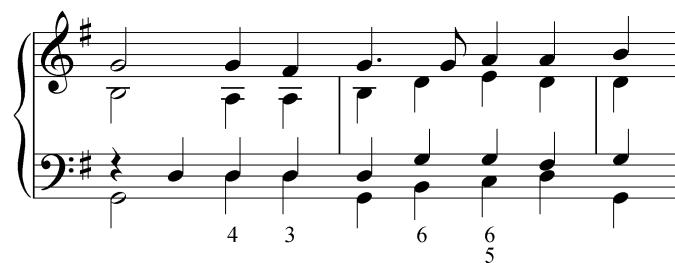


In most 17th-century harmonisations, however, the 6-5-chord is a *Vierklang*, as the Germans say, i.e. with four different notes:



The root of the original 7-chord is in one of the upper parts, depending on their distribution; in the bass we hear the 3rd of the 7-chord.

In this form - as 1st 'inversion' - the 7-chord was frequently employed in 17th-century chorale harmonisations, and indeed much more frequently than the 7-chord in root position. Here is a well-known example from the opening of Tallis's Canon, as harmonised in 1621:



It offers a good illustration of common characteristics of the 6-5-chord (here in open spacing):

- The 6-5-chord can be viewed as the 1st inversion of the 7-chord (in this case on II).
- The 6-5-chord is normally a *Vierklang* and therefore requires no doubling in four-part writing.
- The 6-5-chord on II is often preceded by the 1st inversion of the tonic and succeeded by the V-I cadence.

These are almost standard characteristics of the 6-5-chord in 17th-century chorales.

The second and third lines of *Gelobt sei Gott im höchsten Thron* by Melchior Vulpius, published in 1609, provide examples of the 6-5-chord in closed spacing:

In Michael Praetorius's setting of *Allein Gott in der Höh sei Ehr*, dating from 1607, the parts lie further apart in mixed spacing:

Jakob Praetorius, finally, puts us slightly on the wrong track in his earlier-quoted setting of *Wachet auf, ruft uns die Stimme*, dating from 1604:

Praetorius raises the bass of the 6-5-chord to C sharp as if to modulate to D major, only to proceed directly to a cadence in G. A hundred years later, in the first half of the 18th century, this colourful chromatic alteration was a common feature of the harmonic language.

In the second phrase of the example by Michael Praetorius (*Allein Gott*), the part writing deserves closer analysis:

In the 6-chord, the tenor doubles the bass (the 3rd of the major triad). Praetorius could have doubled the alto (the 5th of the triad), but the tenor would have flowed less smoothly and the texture would have been thinner:

It is easy to see why Praetorius at any rate avoided doubling the root of the 6-chord:

EXERCISES:

5. Practise the following four-part sequences in all major keys. The root of the 6-5-chord is in the soprano (i), alto (ii) or tenor (iii). The bass of the 6-5-chord is by definition the 3rd above the root.

i

ii

iii

6.* Repeat the sequences with a solo stop and pedals.

7. Practise the following cadences in all major keys:

8. Practise the following cadences in the minor keys of F, C, G, D, A, E, B and F sharp:

6 6 5

6 6 5

6 6 5

9.* Repeat ex.7 and 8 with a solo stop and pedals.

Georg Neumark's *Wer nur den lieben Gott lässt walten* (1657) employs the 7-chord in both root position and 1st inversion. The complete setting is given on p.9. The 6-5-chord is a feature of all the main cadences and is emphasised by the leaps in the bass. The tune and harmonisation, both composed by Neumark, are in perfect unity. Could he have written the melody without imagining the harmonisation at the same time?

EXERCISES:

10. Practise the following phrases in all major keys:

i

6 5

6

6 5

ii

6 5

6

6 5

iii

6

6

6 5

8 7

11.* Repeat ex.10 with a solo stop and pedals.

12. Play the following chorales in four parts. When in doubt about the part writing, it may help to write in some of the alto and tenor notes. But do not make a habit of this in practising the exercises in this tutor.

(a) *Nun danket all und bringet Ehr*

(b) *Aus meines Herzens Grunde*

N.B.: beware of parallel 5ths! See p.34.

(c) *Winchester old*

(d) *Ermunter dich, mein schwacher Geist*⁺

- + A horizontal dash indicates that the previous chord remains valid, although the distribution of the parts may change - see Part II p.19-20. The player is free to change the position of the chord in question, and indeed sometimes obliged to do so to avoid parallel 5ths or 8ves - see the first dash in *Ermuntre dich*. In *The Lost Chord* dashes are only applied where a misunderstanding could arise. In the second line of *Ermuntre dich* there is no dash under the quaver in the melody; it is clear from the bass that the quaver is not to be harmonised note-against-note.

(e) *Ach, was soll ich Sünder machen*⁺

The top staff shows a sequence of notes with figured bass below them: 6, 6, 6—, 6/5, 6, 6, 6/5 8 7. The bottom staff shows a sequence of notes with figured bass below them: —, 6/5 8 7, 6/5 8, 6/5 8, 6/5 8 7.

13.* Repeat the chorale settings with a solo stop and pedals.

14. Practise the following transpositions:

- *Nun danket all und bringet Ehr* in G and A major
 - *Aus meines Herzens Grunde* in B flat and D major
 - *Winchester old* in F and E flat major
 - *Ermuntre dich, mein schwacher Geist* in F and G major
 - *Ach, was soll ich Sünder machen* in D minor.
-

When we play from a figured bass, we may determine the distribution of the upper parts ourselves. In general, we should aim for contrary motion (though we cannot do without parallel motion!) between the three upper voices and the bass. The more we vary the position of the upper parts, the more we will discover the potential of a given bass. The following bass:

can be harmonised in the following positions:

The top staff shows a sequence of notes with figured bass below them: 6, 6, 6/5 4 3, 6, 6, 6/5 4 3. The bottom staff shows a sequence of notes with figured bass below them: 6, 6, 6/5 4 3, 6, 6, 6/5 4 3.

and in combinations of these positions.

⁺ A figured bass indicates (vertical) chord structure. In some cases, the figures also give the (horizontal) part writing - whether intentionally or by coincidence. In general, however, we may not assume that this is the case. In *Ach, was soll ich Sünder machen* the 5th moves - in the same part - no less than three times to the sharpened 3rd, but the 6th does not move in one and the same voice to the 8ve, despite the fact that the figures may suggest that it should. On the other hand, the 8ve does proceed to the 7th: the fact that these figures are next to one another may make it easier for the player, but strictly speaking the 8ve does not need to be figured. Even in a 4-3 suspension the 3rd is not always indicated precisely alongside the 4th.

EXERCISES:

15. Play the following figured basses in four parts in a variety of positions:

The image shows twelve numbered figured bass exercises (i-xii) for organ or keyboard. Each exercise consists of a single-line bass staff with a key signature and time signature above it. Below the staff, the figured bass notation is written, consisting of numbers (6, 5, 4, 3) connected by horizontal lines. The exercises are as follows:

- i: Bass staff, 4/4 time, C major. Figured bass: 7 6 6 6 5.
- ii: Bass staff, 3/4 time, G major. Figured bass: 6 7 7.
- iii: Bass staff, 8/8 time, F major. Figured bass: — 6 — 4 3.
- iv: Bass staff, 4/4 time, A minor. Figured bass: — 6 — 4 7.
- v: Bass staff, 4/4 time, D major. Figured bass: 6 7 #—.
- vi: Bass staff, 4/4 time, E major. Figured bass: 7 6 6 5.
- vii: Bass staff, 3/4 time, B major. Figured bass: 6 6 7 # #.
- viii: Bass staff, 6/8 time, G major. Figured bass: — 7 — 6 — 6 — 6 — 4 3.
- ix: Bass staff, 3/4 time, A minor. Figured bass: 7 8 6 5 4 7 #.
- x: Bass staff, 3/4 time, D major. Figured bass: 7 8 6 5 4 #.
- xi: Bass staff, 4/4 time, A minor. Figured bass: 7 6 6 5.
- xii: Bass staff, 2/4 time, D major. Figured bass: — 6 — 6 — 6 — 5 4 3.

[16.]⁺ Play the following figured basses in four parts in a variety of positions:

The image shows eight numbered figured bass exercises (i-viii) for organ or keyboard. Each exercise consists of a single-line bass staff with a key signature and time signature above it. Below the staff, the figured bass notation is written, consisting of numbers (6, 5, 4, 3) connected by horizontal lines. The exercises are as follows:

- i: Bass staff, 4/4 time, E major. Figured bass: 6 6 # 6 #.
- ii: Bass staff, 3/4 time, B major. Figured bass: 6 — 6 5.
- iii: Bass staff, 3/4 time, F# major. Figured bass: 7 6 6.
- iv: Bass staff, 4/4 time, G major. Figured bass: — — 6 6 7 6 6 6 4 3.
- v: Bass staff, 8/8 time, C major. Figured bass: — 7 — 6 6 — 6 — 5.
- vi: Bass staff, 4/4 time, A minor. Figured bass: 6 4 3.
- vii: Bass staff, 3/4 time, A minor. Figured bass: 6 6 7 6 6 5.
- viii: Bass staff, 4/4 time, G major. Figured bass: 6 6 6 6 5.

⁺ Exercises in brackets are in more remote keys. They may be skipped, or reserved for a 'second round'. Although some keys rarely occur in hymn tunes, figured basses and suchlike, they are of importance to develop our keyboard skills.

Inventions

Our two-part inventions teach us to improvise melodies while being aware of the harmonic implications of a given bass. We combine vertical and horizontal considerations, and as we progress we add new chords to our vocabulary. Let us once more take the example from ch.3 as our point of departure:

Without essentially changing the harmonic progression, we can introduce our new chords:

and give full scope to our imagination:

We can go a step further, perhaps in triple time:

These two inventions contain only one quaver that goes beyond the indicated chords and suspensions! The first priority is healthy harmonic progressions, to which our figuration must comply.

EXERCISES:

17. Improvise two-part inventions based on the following schemes:

i

ii

iii

iv

v

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viii

ix

x

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xii

18. Play the following 8-bar schemes in four parts, note against note, in a key and time of your own choice. Then improvise simple two-part inventions. In Part II p.91 you will find more schemes to practise with.

Major keys:

I	II	I ⁶	V	I ⁶	IV ⁶	V	I
I	VI	IV	V	I ⁶	II	V	I

Minor keys:

I	IV	I	V	I ⁶	IV ⁶	V	I
I	V ⁶	I	VII ⁶	I ⁶	II ⁶	V	I

5

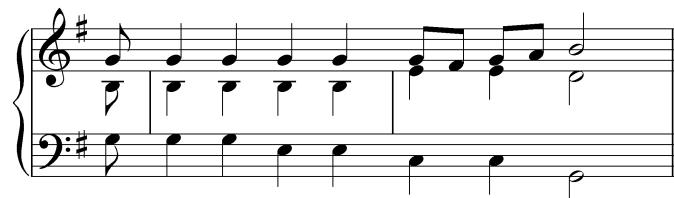
FIGURATION (i)

- Harmonisation and figuration
- Auxiliary notes and passing notes
- Two-part inventions

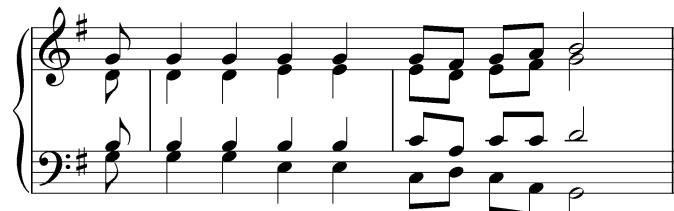
The Latin verb *figurare* means to form or shape. The *Grove Dictionary of Music and Musicians* includes among its definitions of figuration “small patterns of notes occupying a beat or two of time”, while the Shorter Oxford English Dictionary gives “a short succession of notes which produce a single impression”. Language may be enriched by figures of speech (Oxford: “a form of rhetorical expression which gives beauty, variety, force, etc., to a composition...”). In architecture, ornamentation often lends a structure its specific character. And so from language and architecture to harmonisation. Our harmonic progressions - the foundations of our edifice - may be safe and sound, but the appearance of our composition may well improve with some ornamentation, or ‘figuration’. Our next task, therefore, is to learn how to ornament our chords. In harmonising existing melodies, we must learn to distinguish between structural notes, requiring harmonic foundation, and figuration that has a purely decorative function and may not require harmonic support of its own.

Auxiliary notes

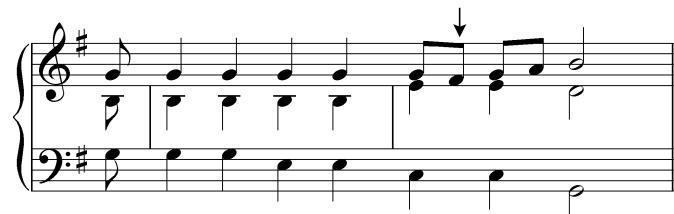
From the beginning of this tutor we have actually employed all sorts of figuration without paying specific attention to it. In a number of exercises and settings, horizontal dashes under such figuration indicate that a change of chord is not required. In 1557, Jacobus Clemens non Papa wrote a setting of the Flemish song *Wie was diegene die die loverkens brak* which begins as follows:



Theoretically, the phrase could also be harmonised in the following manner:



Musically speaking, however, the harmonised quavers slow down the pulse of this light-footed tune. Clemens simply repeats the triad of C major and thus provides sufficient support for the quaver figuration in the melody:



When we listen to Clemens's setting of this opening phrase, a remarkable phenomenon occurs. Our ear accepts the short but nonetheless strong dissonance between the quaver F sharp and the 3rd C-E which supports it, even though the resulting sound hardly seems harmonious:



This is not the first occasion on which we notice that the degree of dissonance is not simply determined by the intervals in question, but also by their context. In the above harmonisation, the **auxiliary note** F sharp nestles in stepwise movement between the 5th of the triad (a chord note) and its repetition:



If we fail to create stepwise movement, chord notes surrounding the dissonance cannot stop it sounding much stronger, demanding, as it were, much more attention than a simple ornament deserves:



From the above we may draw the following conclusions:

- An auxiliary note is a non-chordal note that decorates a chord note.
- An auxiliary note moves by step (up or down a tone or semitone) between a chord note and its repetition.
- An auxiliary note occurs on a weaker moment in the bar than the chord note it decorates.

In the *Chorus of Virgins* from Handel's *Judas Maccabeus* (announcing the tune of the well-known *See, the conqu'ring hero comes!*), figuration in the two soprano parts features rising and falling auxiliary notes in parallel 3rds (ornamentation of the triad of G major and that of E minor respectively). The figuration lends Handel's tune its specific character:

A musical score for two sopranos in common time. The top staff is in G major (indicated by a sharp sign) and the bottom staff is in E minor (indicated by a sharp sign). Both staves show a series of eighth-note chords. Above each pair of eighth notes in the soprano parts, there are small brackets indicating auxiliary notes: the first pair has an auxiliary note above the top note, and the second pair has an auxiliary note below the bottom note. This pattern repeats throughout the measure.

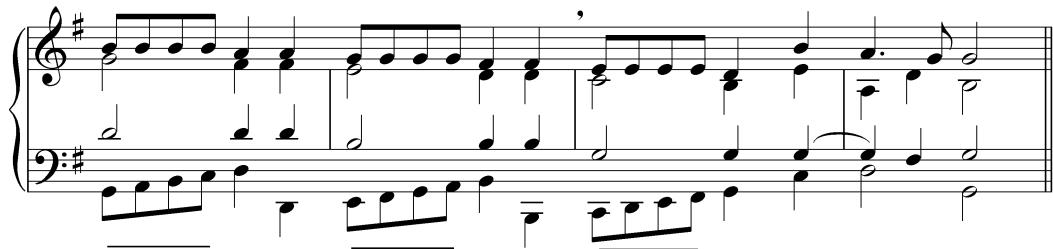
A change of chord on the even quavers would slow the pulse and change the character of the tune considerably:

The same musical score as the previous example, but with a different harmonic progression. The even-numbered eighth notes now represent a different chord, creating a change in the overall character of the melody. The auxiliary notes remain the same as in the original version.

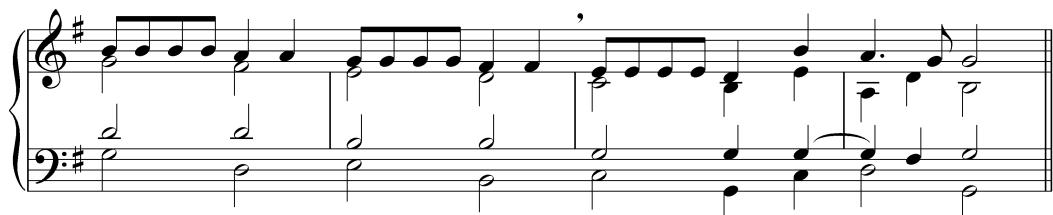
Some melodies have a rather uniform rhythmic movement, which can be a characteristic in itself, while others feature more diverse rhythms. Faster, figurative elements set their own mark on the character of a melody, as we will see again in the following chapter.

Passing notes

A setting of *Wunderbarer König* attributed to Joachim Neander and published in 1680 begins:

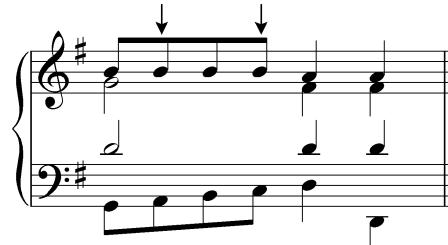


This simple melody, with many note repetitions, requires a simple harmonisation (and a brisk tempo!). The harmony changes twice per bar, creating a pulse in minims:



This scheme really over-simplifies the setting, and the agile soprano is no longer matched by the other parts. Thus the composer opted for rising 5ths instead of falling 4ths in the bass (in sequence, like the melody) and filled them up with scalic figuration in quavers.

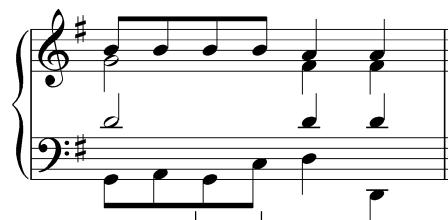
Here again, our ear proves to be tolerant towards certain dissonances. In the first bar of the 1680 setting:



the following dissonances occur at the points indicated:



The dissonant notes in the bass do not turn back like auxiliary notes, but pass on to the following chord note. Like the auxiliary note, the non-chordal **passing note** is embedded in stepwise movement between chord notes, thus softening the dissonance. If the quaver C were to be approached by a leap, our ear would be less tolerant:



The non-chordal quaver A now turns back to G, and has therefore become an auxiliary note. But the quaver C does not belong to the triad of G major, and is no longer part of a stepwise movement. Because the context has changed, the non-chordal C has become a stronger, more striking dissonance.

From the above we may draw the following conclusions:

- A passing note is a non-chordal note between two different chord notes.
- A passing note (or group of passing notes) moves stepwise in semitones or tones between two different chord notes.
- Passing notes occur on a weaker moment in the bar than the chord notes they ornament.

The Dutch tune *Gelukkig is het land* (1626) features many auxiliary and passing notes. They are matched in the other voices in the 20th-century harmonisation by the Dutch organist Adriaan Engels:

The image shows three staves of musical notation in G major (indicated by a G sharp in the key signature). The notation is divided into measures by vertical bar lines. Above each bar line, there is a Roman numeral indicating the harmonic function. Vertical lines connect notes of the same pitch across the staves, showing how chords change over time. The first staff starts with a I chord (G major), followed by a II chord (A major). The second staff begins with a V chord (D major). The third staff starts with a I chord (G major) again. The music consists of various voices, including soprano, alto, tenor, and bass, each with its own specific line of notes and rests.

N.B.: passing notes, unlike auxiliary notes, may occur as a stepwise movement between two different chords. See the first and third systems in the above example.

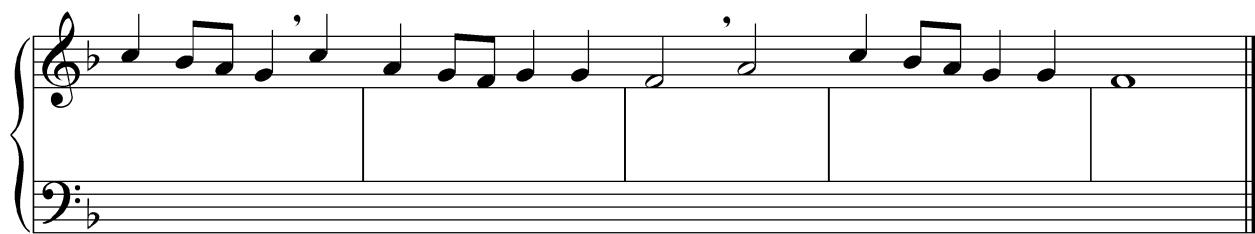
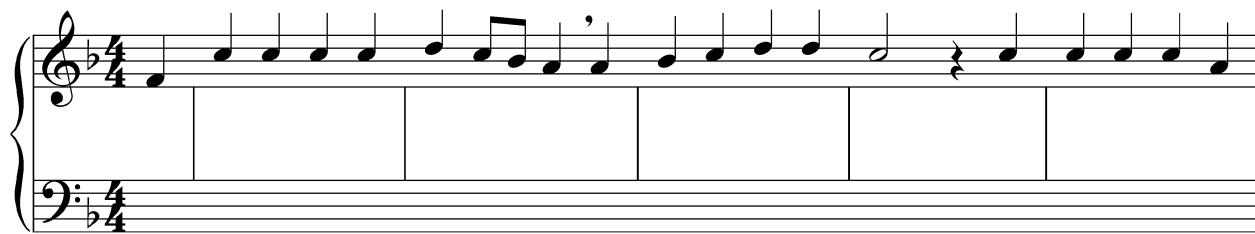
In the second system there are double auxiliary notes in the tenor and bass, now in crotchets. At the beginning of the final line the composer resists the temptation to treat the melody similarly:

This is a single staff of musical notation, likely the final line mentioned in the text. It shows a progression from a I chord (G major) to a II chord (A major). The staff includes vertical lines connecting notes of the same pitch across the measure, illustrating the harmonic movement between the two chords.

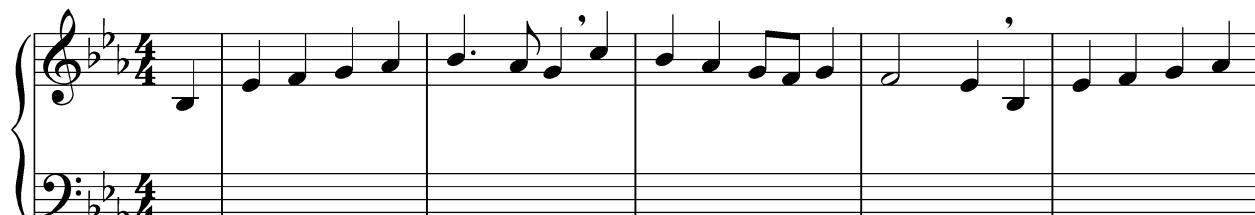
EXERCISES:

1. Write a bass to the following chorales, taking any auxiliary or passing notes in the melody into account. Play the settings in four parts.

(a) *Lobt Gott, ihr Christen alle gleich*



(b) *Was Gott tut, das ist wohlgetan*⁺



⁺ Repeated lines in Lutheran chorales were rarely supplied with alternative harmonisations. In *The Lost Chord*, however, repeat signs in the exercises are usually avoided, giving the reader the opportunity to work out two harmonisations of the same line.

(c) *O Durchbrecher aller Bande*

Musical score for 'O Durchbrecher aller Bande' in G major, 4/4 time. The score consists of four staves of music, each with a treble clef and a bass clef. The music features various note values including eighth and sixteenth notes, with some notes having dots or dashes indicating specific rhythms. The score is divided into measures by vertical bar lines.

(d) *Liebster Jesu, wir sind hier*

Musical score for 'Liebster Jesu, wir sind hier' in G major, 4/4 time. The score consists of four staves of music, each with a treble clef and a bass clef. The music features various note values including eighth and sixteenth notes, with some notes having dots or dashes indicating specific rhythms. The score is divided into measures by vertical bar lines.

(e) *O Jesu Christe, wahres Licht*

Musical notation for the hymn 'O Jesu Christe, wahres Licht' in G major (indicated by a treble clef and a sharp sign) and common time (indicated by a '4'). The notation consists of two staves. The top staff starts with a dotted half note followed by eighth notes. The bottom staff starts with a quarter note followed by eighth notes. Both staves continue with a series of eighth notes and quarter notes.

Musical notation for the hymn 'O Jesu Christe, wahres Licht' in G major (indicated by a treble clef and a sharp sign) and common time (indicated by a '4'). The notation consists of two staves. The top staff starts with a quarter note followed by eighth notes. The bottom staff starts with a quarter note followed by eighth notes. Both staves continue with a series of eighth notes and quarter notes.

(f) *Gelukkig is het land*

Musical notation for the hymn 'Gelukkig is het land' in E-flat major (indicated by a treble clef and a flat sign) and common time (indicated by a '4'). The notation consists of two staves. The top staff starts with a quarter note followed by eighth notes. The bottom staff starts with a quarter note followed by eighth notes. Both staves continue with a series of eighth notes and quarter notes.

Musical notation for the hymn 'Gelukkig is het land' in E-flat major (indicated by a treble clef and a flat sign) and common time (indicated by a '4'). The notation consists of two staves. The top staff starts with a quarter note followed by eighth notes. The bottom staff starts with a quarter note followed by eighth notes. Both staves continue with a series of eighth notes and quarter notes.

Musical notation for the hymn 'Gelukkig is het land' in E-flat major (indicated by a treble clef and a flat sign) and common time (indicated by a '4'). The notation consists of two staves. The top staff starts with a quarter note followed by eighth notes. The bottom staff starts with a quarter note followed by eighth notes. Both staves continue with a series of eighth notes and quarter notes.

Musical notation for the hymn 'Gelukkig is het land' in E-flat major (indicated by a treble clef and a flat sign) and common time (indicated by a '4'). The notation consists of two staves. The top staff starts with a quarter note followed by eighth notes. The bottom staff starts with a quarter note followed by eighth notes. Both staves continue with a series of eighth notes and quarter notes.

2. Practise the following transpositions: *Lobt Gott* in E flat and G, *Was Gott tut* in D and F, *O Durchbrecher* in C and E, *Liebster Jesu* in G and B flat, *O Jesu Christe* in A and F, *Gelukkig is het land* in A and G.

3.* Repeat the settings with a solo stop and pedals.

Inventions

Up until now, in our improvised two-part inventions we have employed only the chord notes dictated by the bass. If we use auxiliary and passing notes to add figuration to the two parts, our melodic vocabulary becomes considerably larger. The correct and tasteful application of non-chordal notes, however, requires as much attention to the harmony as it does to the figuration itself. Figurations are horizontal, melodic turns of phrase; they may not simply go their own way regardless, but must be embedded in the harmonic progressions.

An auxiliary note is a non-chordal note that moves stepwise between one and the same chordal note. When we play the triad of C major, the following auxiliary notes are available:



and many combinations of the same, for example:



A passing note is a non-chordal note that moves stepwise from one chord note to the next. When we play the triad of C major, the following figurations are available:



Larger gaps between chord notes require more successive passing notes, always in stepwise movement:



By combining auxiliary and passing notes, we can add countless figurations to our vocabulary:



The following scheme:

can produce the following invention:

N.B.: though the reader may think that bar 4 of the invention deviates from the scheme, this is not the case! As discussed in Part II p.62, in our inventions we are free to alternate root positions with 6-chords without any specific indication to that effect. In two-part music, in which the triad cannot be complete, our ear must often ‘imagine’ an absent chord note. Nevertheless, the harmonic implications of the above two-part invention are clear:

In bar 4 of the figured two-part version, the root D is not heard until the 2nd beat. Unless the tempo is very slow, our ear ‘understands’ that a 6-chord is implied on the 1st beat, not in the least because the alternative is hardly likely:

The fact that the basic scheme is free of parallel 5ths and 8ves does not go to say that the ornamented invention is also faultless in this respect. In the following version of the same scheme, incorrect parallel intervals occur at two points:

In the original scheme, in bars 2-3 the bass moves from F sharp to G. Because of the added figuration, bar 2 now ends with D in both parts, while the chosen 1st inversion at the beginning of bar 3 is thinned down to an unfortunate and meagre doubling of the 3rd of the triad. The basic progression from V (bar 2) to I (bar 3) is fine, but it is worked out such that parallel 8ves occur. They can be avoided by having the figuration in the bass in bar 2 end

where it began - on F sharp; the leading-note once more moves logically to G:



For safety's sake, it is always practical to have figurations end where they began, so that the original progression is not essentially altered - see bars 1, 5 and 7. If we depart from this principle, we must take extra care. The parallel 5ths in bar 6 can only be avoided by listening closely and paying extra attention to all parallel movement: as we know, not all parallel movement gets us into trouble!

EXERCISES:

4. Complete the following inventions with figuration to match the opening bars. Make use of the 6-chord, 7-chord and 6-5-chord. Final cadences may be enhanced with a 4-3 suspension!

i

I IV V I

ii

VI II V I

iii

I IV V I

iv

G: I II e: V I

5. Complete the following inventions with matching figuration.

i

Treble clef, 3/4 time, G major.
Bass clef, 3/4 time, C major.

ii

Treble clef, 3/8 time, A major.
Bass clef, 3/8 time, D major.

iii

Treble clef, 4/4 time, E major.
Bass clef, 4/4 time, A major.

iv

Treble clef, 2/2 time, F major.
Bass clef, 2/2 time, B-flat major.

v

Treble clef, 6/8 time, E major.
Bass clef, 6/8 time, A major.

vi

Treble clef, 4/4 time, C major.
Bass clef, 4/4 time, F major.

vii

Treble clef, 2/2 time, G major.
Bass clef, 2/2 time, D major.

viii

ix

x

xi

xii

6. Play the following 8-bar schemes in four parts in keys and time signatures of your own choice. Then improvise simple two-part inventions.

Major keys:

I II⁷ ⁶I I⁶ II⁶ V VI V I

I VI V⁶ V I⁶ IV IV I

Minor keys:

I V⁶ | IV⁶ IV II V⁷ I

I II⁷ ⁶I | IV⁶ IV V⁷ I

7. Practise the following exercises in four parts:

i

ii

iii

iv

v

vi

vii

viii

ix

6 4 3 4—3 9 8 4—3 — 6 5 — 7

x

4 # 6 5 9 8 6 ——————

xi

4 # 6 8 4 3 4 3

xii

6 5 6 5 7 6 —————— 6 5 —————— 6 ——————

xiii

6 —————— 5 6 —————— 7 6 —————— 6 5 —————— 4 3

6 —————— 5 6 —————— 7 6 —————— 6 5 —————— #

[8]. Practise the following exercises in four parts:

i

6 6—6
5

4 # — 6 6—
5

ii

6 5 6—6
5

6

iii

6 6—
5

6
6

6 —

iv

4 3 — 4 — 3
6

6 — # — 6 — 6 —
5

— # — — —
5 5 —

v

vi

vii

6
5
4
3

6 —————

6
5
6
5

6
5
6
5

viii

6
5
6
7
6
5
6
4
5

6
6
6
4
5

9.* Repeat ex.7 and 8 with a solo stop and pedals.

6

FIGURATION (ii)

- The character of the melody
- Chord changes and pulse

The character of the melody

As our skill in harmonisation develops, so does the vocabulary from which we can chose. After much practice, we will be able to harmonise a particular melody in many different ways, and this fascinating prospect brings with it considerable freedom in the choices we make. At the same time, it remains equally fascinating to study the settings that composers made of their own melodies. Here, melody and harmonisation form a stylistic unity, and much can be learnt from such examples. In the end, however, the player must develop his own approach. But there are many different sorts of melodies, and this colourful landscape would become rather grey if we were to harmonise them all in the same way.

Chord changes and pulse

In order to make wise and tasteful choices in our harmonisation, we must first give due consideration to the melody. It is always advisable to sing it, and in so doing to imagine a certain pulse. Tempo and pulse are of influence on the question of which notes of the melody require a change of chord, and which ones can be treated as figuration. After the previous chapter, we no longer need to assume that all our melodies must be harmonised note-against-note. We have examined examples in which the brisk rhythms of the melody were best supported by less frequent changes of chord. Let us look once more at Neander's(?) setting of *Wunderbarer König*:

The melody has quite a different character and pulse than if we were to harmonise it as follows:

The main drawback of the second setting is that the harmony changes on the crotchet, while the melody surely suggests a change on the minim, underlining the pulse.

In Part I ch.16 we considered the impressive simplicity of the opening of Gastoldi's 1591 setting of *In dir ist Freude*:

The score consists of two staves. The top staff is treble clef, and the bottom staff is bass clef. The music is in common time. Below the notes are Roman numerals indicating harmonic progressions: I, IV, I, IV, I, II, I, V, I. The basso continuo part is indicated by a bass clef and a bassoon-like symbol, with a bassoon-like line below it.

The pulse - in dotted minims - is reinforced by the setting. It is precisely the limited number of chord changes that gives this melody - a Renaissance dance tune or *balletto* - its enormous drive. A chord change on each quarter note would have consequences not only for the character of the melody, but also for the tempo. Compare Johann Schop's melody *Ermunter dich, mein schwacher Geist*, of which the first version dates from 1641; the setting written somewhat later by Gottfried Vopelius (who died in 1715) is as follows:

The score is divided into three systems. Each system has two staves: treble and bass. The music is in common time. Below the notes are Roman numerals indicating harmonic progressions: I, IV, I, IV, I, II, I, V, I. The basso continuo part is indicated by a bass clef and a bassoon-like symbol, with a bassoon-like line below it. The systems are labeled (a), (b), and (c). In system (a), there are markings '6' and '4 3'. In system (b), there are markings '6' and '4 3'. In system (c), there are markings '6' and '4 3'.

At (a) and (b) the root position is followed by the 1st inversion of the same chord (and then the root position again); in between, the soprano and bass have passing notes in parallel 3rds (with contrary motion in the tenor). This supple writing, without a change of chord, supports the pulse of the melody; the same goes for the limited number of chord changes in the second and third systems. Good composers, however, cannot be restrained by rules: the quaver at (c), between the root position and 1st inversion on IV, and the 'upbeat' beginnings of most lines, are harmonised note-against-note by Vopelius. The pulse is similar to that of Gastoldi's setting, but the character is somewhat different, perhaps requiring a slightly slower tempo.

These are just a few examples of relationships between structure and figuration, between harmonisation and pulse. In writing our own settings, the frequency of the chord changes should take account as far as possible of the pulse of the melody. Which notes should be 'structurally' harmonised note-against-note? Which notes require a less frequent change of chord, taking 'figurative' auxiliary and passing notes into account? Our task is to ensure that each melody is harmonised convincingly, taking a place of its own in the colourful musical landscape.

EXERCISES:

1. Write a bass to the following chorales, taking account of auxiliary and passing notes and the pulse of the melody. Play the settings in four parts.

(a) *Auf, auf, mein Herz, mit Freuden*

Musical staff for exercise (a). It consists of two staves: treble (G clef) and bass (F clef). The key signature is one sharp (G major). The melody begins with quarter notes and eighth notes. There are three empty boxes for bass entries.

Continuation of the musical staff for exercise (a). The melody continues with quarter notes and eighth notes. There are three empty boxes for bass entries.

Continuation of the musical staff for exercise (a). The melody continues with quarter notes and eighth notes. There are three empty boxes for bass entries.

(b) *Het daget in den oosten*

Musical staff for exercise (b). It consists of two staves: treble (G clef) and bass (F clef). The key signature is one flat (C minor). The melody begins with eighth notes and quarter notes. There are three empty boxes for bass entries.

Continuation of the musical staff for exercise (b). The melody continues with eighth notes and quarter notes. There are five empty boxes for bass entries.

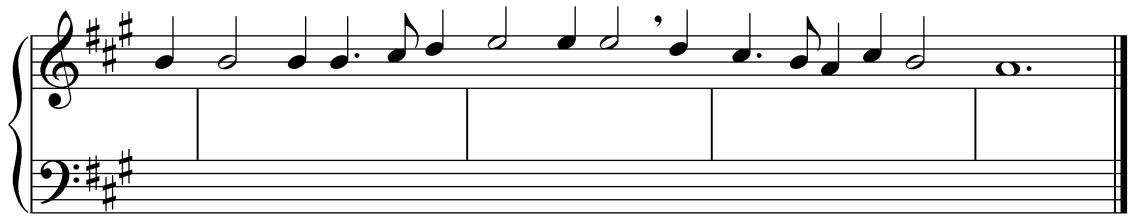
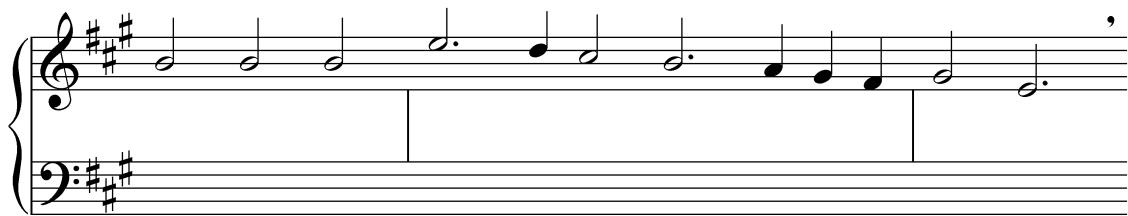
Continuation of the musical staff for exercise (b). The melody continues with eighth notes and quarter notes. There are four empty boxes for bass entries.

(c) *Aus meines Herzens Grunde*

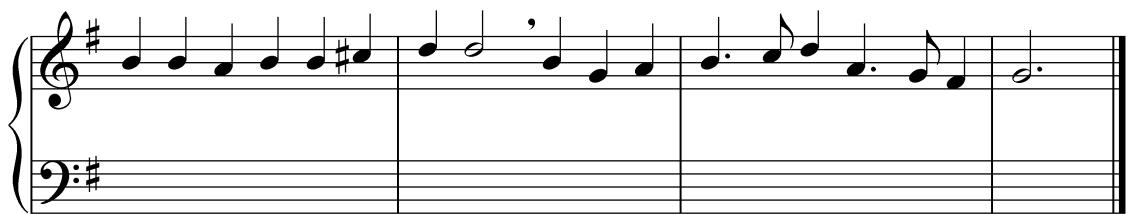
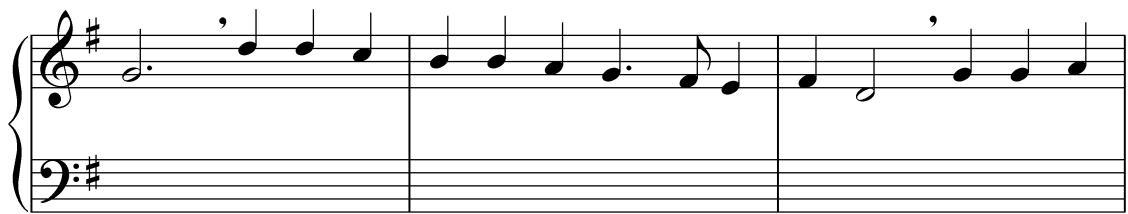
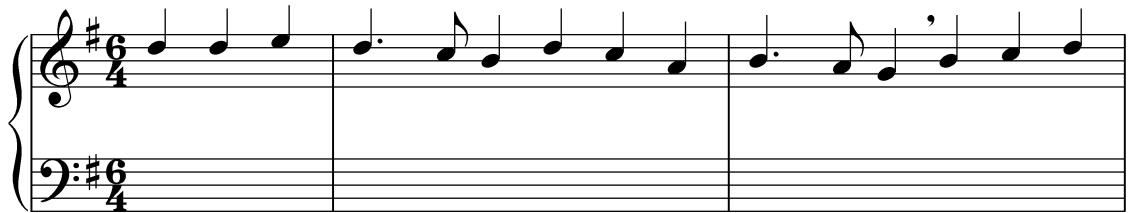
Three staves of musical notation for two voices in 6/4 time. The notation consists of two upper staves (treble clef) and one lower staff (bass clef). The music features eighth and sixteenth note patterns with various rests and a final fermata over the last note of each measure.

(d) *O Heer, die daar des hemels tente spreidt*

Three staves of musical notation for two voices in 6/4 time. The notation consists of two upper staves (treble clef) and one lower staff (bass clef). The music features eighth and sixteenth note patterns with various rests and a final fermata over the last note of each measure.



(e) *Die guldne Sonne voll Freud und Wonne*



(f) *In babilone*

The image shows four identical staves of musical notation, each consisting of two voices (top and bottom). The music is in 4/4 time, with a key signature of one flat (B-flat). The top voice uses a G clef, and the bottom voice uses a B-flat clef. The notation consists of eighth-note patterns, primarily quarter note followed by a sixteenth-note pair, repeated in a regular sequence across all four staves.

2. Practise the following transpositions: *Auf, auf, mein Herz* in C and E flat; *Het daget in den oosten* in F and D; *Aus meines Herzens Grunde* in E flat and G; *O Heer, die daar des hemels tente spreidt* in G and B flat; *Die güldne Sonne* in A and F; *In babilone* in A and G.

3. Play the following sequences in all major keys:

The image shows two staves of musical notation, each consisting of two voices (top and bottom). The music is in 6/8 time. The top voice uses a G clef, and the bottom voice uses a B-flat clef. The notation consists of eighth-note sequences, primarily groups of three eighth notes followed by a sixteenth note, repeated in a regular sequence across both staves. The first staff is labeled 'i' and the second staff is labeled 'ii'.

The image shows four staves of musical notation, each labeled with a Roman numeral: iii, iv, v, and vi. The notation is for two voices, with a treble clef and a bass clef on each staff, and a 2/4 time signature. The music consists of eighth and sixteenth notes. Measures are separated by vertical bar lines. Numerals '6' and '5' are placed below specific notes in measures 6 and 5 respectively.

4.* Repeat the sequences with a solo stop and pedals.

5. Improvise two-part inventions on the following 8-bar schemes:

(i) including the major keys of D, A, B flat and E flat:

I	VII ⁶	I ⁶	V	VI	II	V	I
I	V	VI	III	IV	V	V	I
I	VI	II	V ⁶	I	IV ⁶	V ⁷	I

(ii) including the minor keys of E and B:

I	I ⁶	IV	V	IV ⁶	IV	V	I
I	V ⁶	I	VII ⁶	I ⁶	IV	V	I
I	VII ⁶	I ⁶	I	IV ⁶	II ⁶	V	I

6. Write a bass to the following melodies and play in four parts:

i

A musical staff for a melody. It consists of two systems of five lines each. The key signature is one sharp (G major), and the time signature is 3/4. The melody starts with eighth-note pairs followed by quarter notes.

ii

A musical staff for a melody. It consists of two systems of five lines each. The key signature is one sharp (G major), and the time signature is 6/8. The melody features eighth-note pairs and sixteenth-note patterns.

iii

A musical staff for a melody. It consists of two systems of five lines each. The key signature is one flat (F major), and the time signature is 2/4. The melody includes eighth-note pairs and sixteenth-note patterns.

iv

A musical staff for a melody. It consists of two systems of five lines each. The key signature is one flat (F major), and the time signature is 3/4. The melody features eighth-note pairs and sixteenth-note patterns.

v

A musical staff for a melody. It consists of two systems of five lines each. The key signature is one sharp (G major), and the time signature is 6/8. The melody includes eighth-note pairs and sixteenth-note patterns.

A musical staff for a melody. It consists of two systems of five lines each. The key signature is three flats (B-flat major), and the time signature is 3/4. The melody features eighth-note pairs and sixteenth-note patterns.

vi

A musical score for two staves. The top staff uses a treble clef and has a key signature of one sharp. The bottom staff uses a bass clef and has a key signature of one sharp. Both staves are in 2/4 time. The music consists of eighth-note patterns.

vii

A musical score for two staves. The top staff uses a treble clef and has a key signature of one sharp. The bottom staff uses a bass clef and has a key signature of one sharp. Both staves are in 2/2 time. The music includes a measure change to 2/2 time.

A musical score for two staves. The top staff uses a treble clef and has a key signature of one sharp. The bottom staff uses a bass clef and has a key signature of one sharp. Both staves are in 4/4 time. The music consists of eighth-note patterns.

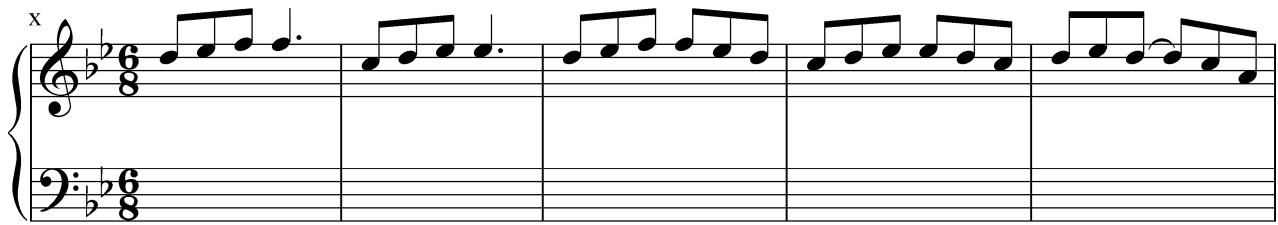
viii

A musical score for two staves. The top staff uses a treble clef and has a key signature of one sharp. The bottom staff uses a bass clef and has a key signature of one sharp. Both staves are in 4/4 time. The music consists of eighth-note patterns.

ix

A musical score for two staves. The top staff uses a treble clef and has a key signature of one sharp. The bottom staff uses a bass clef and has a key signature of one sharp. Both staves are in 3/4 time. The music includes a measure change to 3/4 time.

A musical score for two staves. The top staff uses a treble clef and has a key signature of one sharp. The bottom staff uses a bass clef and has a key signature of one sharp. Both staves are in 3/4 time. The music consists of eighth-note patterns.



7. Harmonise the following figured basses in different positions:

(a) *Vom Himmel hoch da komm ich her*

6 6 6 \natural 6 6 6 6 6 6 6 6 \sharp

\sharp δ 6 6 δ 6 5 δ 6 7 6

(b) *Was Gott tut, das ist wohlgetan*

6 6 — 6 5 6 6 — 7 6

7 — 7 — 7 — — 6 6 — 7 6 6 6 6 7 6

(c) *Valet will ich dir geben*

(d) *Aus meines Herzens Grunde*

Measures 1-3:

1 2 3 4 5 6 7 8 9 10

Measures 4-6:

1 2 3 4 5 6 7 8 9 10

Measures 7-9:

1 2 3 4 5 6 7 8 9 10

(e) *Sollt ich meinem Gott nicht singen*

A musical score for bassoon, featuring four staves of music. The key signature is B-flat major (two flats). Measure 1 starts with a half note followed by a quarter note. Measures 2-4 show a pattern of eighth notes. Measures 5-8 continue the eighth-note pattern. Measures 9-12 show a mix of eighth and sixteenth notes. Measures 13-16 conclude the section with a return to the eighth-note pattern.

7

THE SIX-FOUR-CHORD (i)

- The 6-4-chord
- The ‘appoggiatura’ or ‘cadential’ 6-4-chord

The 6-4-chord

Chorale harmonisations are traditionally homophonic. Sometimes, however, traces of Renaissance polyphony linger, when the horizontal movement of the four parts almost seems to determine the chords. Here is an example from Michael Praetorius’s setting of *Aus tiefer Not* (1609):

A musical score for four voices (Soprano, Alto, Tenor, Bass) in G clef. The score consists of two staves. The top staff has a soprano note followed by three bass notes. The bottom staff has a bass note followed by three bass notes. Below the bass notes are Roman numerals: 7, 6, 6, 5, 6, 4. The score is enclosed in a large brace.

The final cadence progression is basically as follows:

A simplified musical score showing the final cadence progression. It consists of two staves. The top staff has a soprano note followed by three bass notes. The bottom staff has a bass note followed by three bass notes. Below the bass notes are Roman numerals: 7, 6, 6, 5, 6, 4. The score is enclosed in a large brace.

But as so often in music, the most exciting moments occur when the composer does the unexpected. In Praetorius’s setting, the C in the tenor is delayed, beginning later (as an expressive syncopation), going on to become the 7th in the 7-6 suspension to the B; at the end of the penultimate bar we briefly hear the diminished triad. In the last bar, the alto does not move directly to the final note B but first to the 6th C, causing a wonderful, linear 6-5 dissonance between the alto and tenor.

(This 6-5 dissonance could be ‘vertically’ analysed as the 1st inversion of the 7-chord on C:

A vertical analysis diagram showing the 1st inversion of the 7-chord on C. It consists of two staves. The top staff has a soprano note followed by three bass notes. The bottom staff has a bass note followed by three bass notes. Below the bass notes are Roman numerals: 7, 6, 6, 5, 6, 4. The score is enclosed in a large brace.

but this somewhat theoretical approach is hardly convincing, for there can be no doubt that Praetorius viewed E as the root of the entire final bar.)

As the 6-5 dissonance is resolved, the tenor moves from the 5th to the 4th. It is at this point that we hear the **6-4 chord**. The tension of the 6-5 dissonance is released, but not entirely removed, for we sense that the 6-4 chord too requires a descending movement: the 6th moves to the 5th and the 4th to the 3rd:

A vertical analysis diagram showing the resolution of the 6-5 dissonance and the appearance of the 6-4 chord. It consists of two staves. The top staff has a soprano note followed by three bass notes. The bottom staff has a bass note followed by three bass notes. Below the bass notes are Roman numerals: 6, 4, #. The score is enclosed in a large brace.

In the 150 metrical psalm settings by Claude Goudimel, dating from 1565 (more than 40 years before Praetorius's setting), the 6-4 chord is even less common than the 6-chord. It is therefore remarkable that it occurs no less than twice in the second phrase of Psalm 128:⁺

Goudimel's first 6-4-chord underlines the tension of the movement from C to B in the cantus firmus, lending it almost the character of a suspension and resolution. This brings us back to the beginning of Part II of *The Lost Chord*, where in the descending scale we noted the release of tension when the 6th falls to the 5th, and the 4th to the 3rd. It also recalls the origins of the 6-chord discussed in ch.7 of the same volume. The 6-4-chord combines the 'downward pull' of both the 6th and the 4th, and requires a 'resolution' to a 5-3-chord above the same bass note. For this reason the 6-4-chord in the example by Goudimel is sometimes called the appoggiatura 6-4-chord. The second of Goudimel's 6-4-chords is more in line with later usage, when the 6-4-chord became used primarily in the approach to the cadence. It is therefore more commonly referred to as the cadential 6-4-chord, reflecting this standardised use, which will be illustrated later in the chapter.

In view of its intervals, the 6-4-chord is in itself rather unstable, and considerably more so than the 6-chord. Unlike the 6-chord, the 6-4-chord may therefore only be used in specific situations, which will be discussed below and in ch.11.

In the classical theory of harmony from the 18th to the 20th centuries, the 6-4-chord is considered primarily as a vertical phenomenon, the **2nd inversion** of the triad:

The root of the triad and its inversions is C. In the inversions, the root C is in an upper part, depending on the part distribution. The bass of the 1st inversion is E, and of the 2nd inversion G. The figures are arrived at by adding up from the bass.

It is of the utmost importance to learn to play new chords more or less automatically. Our vocabulary must be at the ready, so speed in finding the right notes is essential. In the case of triads, it helps to clarify matters if we commence by practising in three parts, without having to double a note to obtain four. In three-part writing, the 6-4-chord is available in two positions, the second of which is in open spacing:

⁺ The **cantus firmus** (c.f.), or 'fixed melody', is in the tenor.

EXERCISES:

1. Practise these positions of the 3-part 6-4-chord in all major keys:

A musical staff in G major (one sharp) with a treble clef and a bass clef. It shows three vertical stacks of notes. The first stack has a C note in the treble clef and an E note in the bass clef. The second stack has a D note in the treble clef and an F# note in the bass clef. The third stack has an E note in the treble clef and a G note in the bass clef. A brace groups the first two stacks, and the word "etc." is written at the end of the third stack.

2. Repeat the exercise in all minor keys:

A musical staff in A minor (no sharps or flats) with a treble clef and a bass clef. It shows three vertical stacks of notes. The first stack has a C note in the treble clef and an E note in the bass clef. The second stack has a D note in the treble clef and an F# note in the bass clef. The third stack has an E note in the treble clef and a G note in the bass clef. A brace groups the first two stacks, and the word "etc." is written at the end of the third stack.

The ‘appoggiatura’ or ‘cadential’ 6-4-chord

By doubling the bass (the 5th of the triad) we can play the 6-4-chord in four parts and three positions:

A musical staff with a treble clef and a bass clef. It shows three vertical stacks of notes. The first stack has a C note in the treble clef and an E note in the bass clef. The second stack has a D note in the treble clef and an F# note in the bass clef. The third stack has an E note in the treble clef and a G note in the bass clef. A brace groups the first two stacks, and the word "etc." is written at the end of the third stack.

As we have learnt, when a triad is in the root position or 1st inversion, it is preferable to double the root in four-part harmonisation. Doubling of the 5th is therefore a distinguishing feature of the 6-4-chord. If we return to the ‘appoggiatura’ function of the 6-4-chord, the reason why the bass is now doubled becomes clear:

A musical staff with a treble clef and a bass clef. It shows three vertical stacks of notes. The first stack has a C note in the treble clef and an E note in the bass clef. The second stack has a D note in the treble clef and an F# note in the bass clef. The third stack has an E note in the treble clef and a G note in the bass clef. Below each stack are numbers indicating note heads: 6, 4, 5, 3. The bass note (E) is doubled in each stack, which allows the root (C) and 3rd (E) to move freely without colliding with other parts.

The root C and the 3rd E - forming a double appoggiatura - are given space to manoeuvre, as it were, without colliding with the same note in another part.

EXERCISES:

3. Practise the following positions of the 6-4-chord in all major keys:

4. Repeat these positions of the 6-4-chord in all minor keys:

5.* Repeat ex.3 and 4 with a solo stop and pedals.

At the end of John Dowlands *Now, O now, I needs must part* both the 6-chord and the 6-4-chord are used as appoggiaturas:

Above the bass note B flat we hear the 6th 'resolving' to the 5th (with a characteristic rhythmic accent formed by the quaver G). Above the bass note C (doubled in the alto) we hear the 6th in the soprano and the 4th in the tenor (in other words, the 2nd inversion of the tonic triad). The tension of the 6-4-chord makes way for the relaxation of the dominant triad in root position, followed by the greatest release of all - the tonic triad in root position.

Dowland's contemporary Bartholomäus Gesius employed the same progression at the close of *O Welt ich muss dich lassen* (1605). As in the Praetorius quotation at the beginning of the chapter, the tenor part is richly ornamented:

In the examples by Dowland and Gesius we may note that:

- the 2nd inversion of the tonic triad (the 6-4-chord) functions as an appoggiatura preceding the dominant triad in root position, and sharing the same bass (V);
- the 6th descends to the 5th, the 4th to the 3rd;
- the 6-4-chord falls on a relatively strong beat, the succeeding dominant triad on a relatively weak beat.

In the settings by Dowland and Gesius the following I-IV-V-I cadence:

is extended to become:

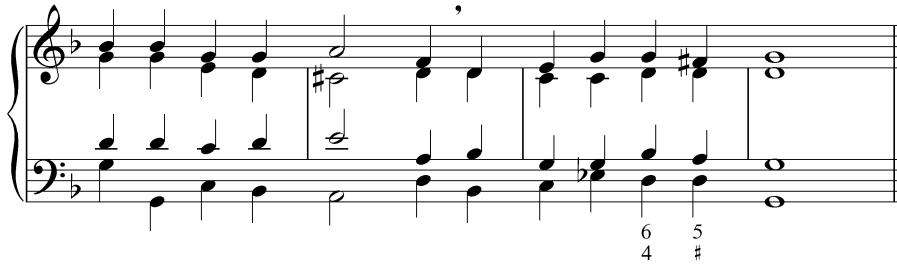
EXERCISES:

6. Play the following phrases in all major keys:

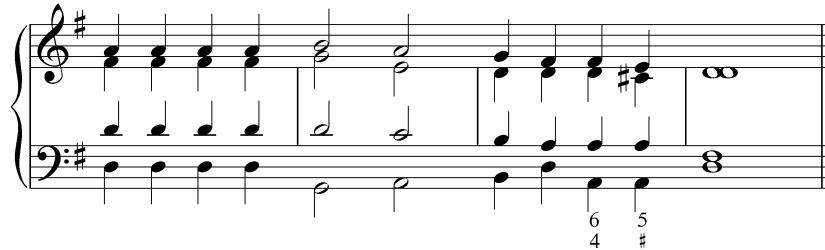
7. Play the following phrases in the minor keys of A, E, B, F sharp, D, G, E and F:

8.* Repeat ex.6 and 7 with a solo stop and pedals.

In chorale harmonisations, the 6-4-chord was uncommon until the early decades of the 17th century, when Michael Praetorius was among its advocates. The second half of his setting of *Von Gott will ich nicht lassen* (1609) is as follows:



As in Dowland and Gesius, the 6-4-chord is employed in the approach to the V-I cadence. Praetorius's setting of *O wir armen Sünder*, dating from the same year, begins as follows:



while his setting of *Was mein Gott will, das g'scheh allzeit* begins:



These melodies appear to require the cadential 6-4-chord, as it came to be known, almost as a necessity (this is particularly true of *O wir armen Sünder*, where the second F sharp in the melody strongly suggests movement from the 6th to the 5th). In the second half of the 18th century, in the music of Carl Philipp Emanuel Bach, Haydn and Mozart, the cadential 6-4-chord became a standard feature of the style. We will shortly harmonise melodies whose shape is influenced to such an extent by the popularity of this chord, that we simply cannot harmonise without it. More about this in ch.11.

EXERCISES:

9. Practise the following cadences in all major keys; the 6-4-chord is preceded by degree I in root position, thus 'preparing' the following appoggiatura:

10. Practise the following cadences in all minor keys:

A musical staff in 2/2 time. It consists of six measures. The first measure is I. The second measure is I⁴. The third measure is V. The fourth measure is I. The fifth measure is I. The sixth measure is I⁴. The seventh measure is V. The eighth measure is I. The ninth measure is I. The tenth measure is I⁴. The eleventh measure is V. The twelfth measure is I.

11. Practise the following cadences in all major keys; the 6-4-chord is preceded by IV in root position:

A musical staff in 2/2 time. It consists of twelve measures. The first measure is I. The second measure is IV. The third measure is I⁴. The fourth measure is V. The fifth measure is I. The sixth measure is I. The seventh measure is IV. The eighth measure is I⁴. The ninth measure is V. The tenth measure is I. The eleventh measure is I. The twelfth measure is I.

12. Practise the following cadences in all minor keys:

A musical staff in 2/2 time. It consists of twelve measures. The first measure is I. The second measure is IV. The third measure is I⁴. The fourth measure is V. The fifth measure is I. The sixth measure is I. The seventh measure is IV. The eighth measure is I⁴. The ninth measure is V. The tenth measure is I. The eleventh measure is I. The twelfth measure is I.

13.* Repeat ex.9-12 with a solo stop and pedals.

14. Play the following cadential phrases in four parts:

The harmonic progression is as follows:

- i: I - IV - I⁴ - V - I
- ii: I - IV - I⁴ - V - I
- iii: I - IV - I⁴ - V - I
- iv: I - IV - I⁴ - V - I
- v: I - IV - I⁴ - V - I
- vi: I - IV - I⁴ - V - I

Harmonic analysis below the staff:

- i: 6 5 / 4 3
- ii: 6 5 / 4 3
- iii: 6 6 5 / 4 #
- iv: 6 5 / 4
- v: 6 6 5 / 5 4 3
- vi: 6 / 4 5 #

15.* Repeat ex.14 with a solo stop and pedals.

[16.] Play the following cadential phrases in four parts:

[17.*] Repeat ex.16 with a solo stop and pedals.

18. Play the following chorales and hymns in four parts.

(a) *Ohne Rast und unverweilt*

Musical score for 'Ohne Rast und unverweilt' in two staves. The top staff is in G clef, B-flat key signature, and 4/4 time. The bottom staff is in F clef, B-flat key signature, and 4/4 time. The music consists of eighth-note patterns. Pedal points are marked with numbers below the bass staff: 6, 6, 7, —, 6, 6, 6, 4, 3, 6, 6, 5, 6, 6, 5, 3, 4, 3.

(b) *Christus der ist mein Leben*

Musical score for 'Christus der ist mein Leben' in two staves. The top staff is in G clef, D major key signature, and 4/4 time. The bottom staff is in F clef, D major key signature, and 4/4 time. The music consists of eighth-note patterns. Pedal points are marked with numbers below the bass staff: 6, 6, 6—, 6, 6, 5, 4, 3, 6, 6, #, 6, 6, 5, 4, 3.

(c) *Melcombe*

Musical score for 'Melcombe' in two staves. The top staff is in G clef, E-flat major key signature, and 4/4 time. The bottom staff is in F clef, E-flat major key signature, and 4/4 time. The music consists of eighth-note patterns. Pedal points are marked with numbers below the bass staff: 6, 6, 5, 6—, 6, 6, 5, 4, 6, 6, 5, 6, 6, 5, 4, 3.

(d) *Ich will dich lieben, meine Stärke*; the setting is after Johann Balthasar König(?), 1738.

A musical score for piano, featuring three staves. The top staff uses treble clef and 4/4 time, with a key signature of one sharp. The middle staff uses bass clef and 4/4 time, with a key signature of one sharp. The bottom staff uses treble clef and 4/4 time, with a key signature of one sharp. The score consists of four measures. Measure 1: Treble staff has eighth-note pairs (A, C#), (D, F#), (E, G), (B, D). Bass staff has eighth-note pairs (C, E), (G, B), (D, F#), (A, C#). Bottom staff has eighth-note pairs (F, A), (C, E), (G, B), (D, F#). Measure 2: Treble staff has eighth-note pairs (D, F#), (G, B), (A, C#), (E, G). Bass staff has eighth-note pairs (G, B), (D, F#), (A, C#), (E, G). Bottom staff has eighth-note pairs (C, E), (F, A), (B, D), (G, B). Measure 3: Treble staff has eighth-note pairs (E, G), (B, D), (G, B), (E, G). Bass staff has eighth-note pairs (A, C#), (E, G), (B, D), (G, B). Bottom staff has eighth-note pairs (F, A), (C, E), (G, B), (D, F#). Measure 4: Treble staff has eighth-note pairs (B, D), (G, B), (E, G), (B, D). Bass staff has eighth-note pairs (G, B), (D, F#), (A, C#), (E, G). Bottom staff has eighth-note pairs (D, F#), (A, C#), (G, B), (D, F#).

(e) *Kommt Kinder, lasst uns gehen*

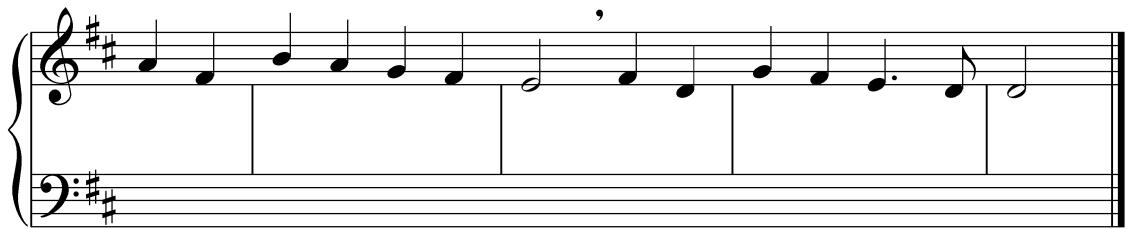
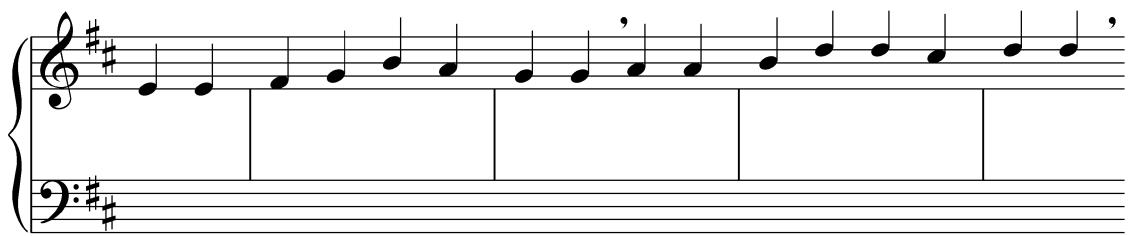
(f) *Leicester*

19.* Repeat the chorales and hymns with a solo stop and pedals.

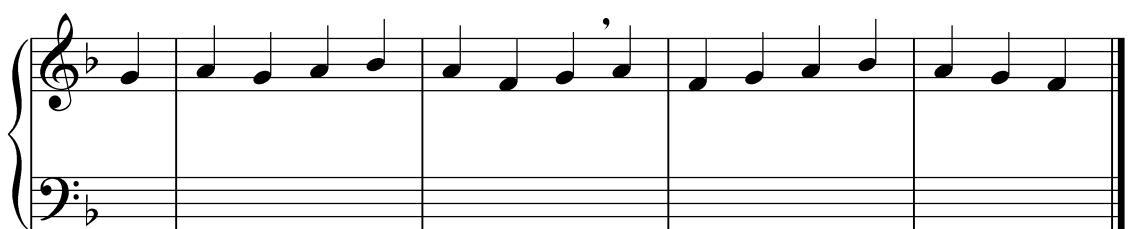
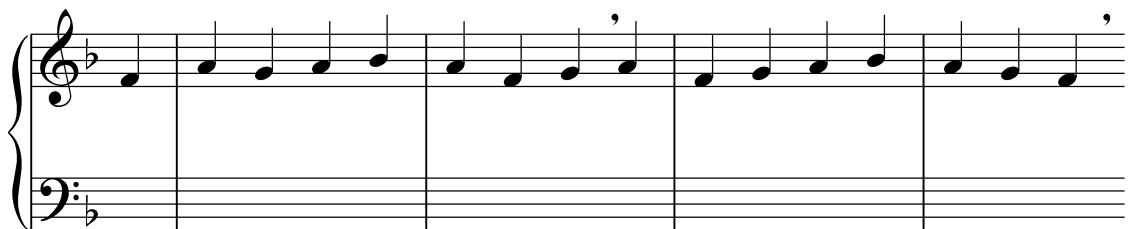
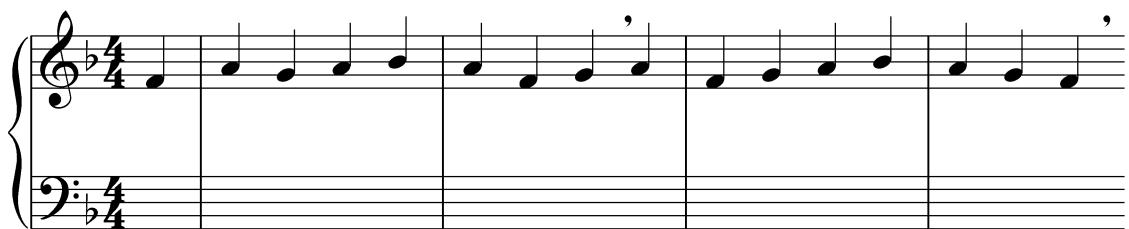
20. Practise the following transpositions: *Ohne Rast* in G and A; *Christus der ist mein Leben* in C and E flat; *Melcombe* in D and F; *Ich will dich lieben* in D and B flat; *Kommt Kinder* in F and A; *Leicester* in G and B minor.

21. Write a bass to the following melodies; the 6-4-chord can be used at many cadences. Play the settings in four parts.

(a) *Jesu, meines Lebens Leben*



(b) *Die Wanderschaft in dieser Zeit*



(c) *Herr Jesu Christ, dich zu uns wend*

A musical score for two voices. The top voice is in soprano C major (G clef) and the bottom voice is in bass F major (F clef). Both voices are in common time. The music consists of two staves of four measures each, separated by a repeat sign with a brace. The notes are mostly quarter notes, with some eighth and sixteenth note patterns.

(d) *Easter hymn*

A musical score for two voices. The top voice is in soprano C major (G clef) and the bottom voice is in bass F major (F clef). Both voices are in common time. The music consists of four staves of four measures each, separated by repeat signs with braces. The notes are mostly eighth and sixteenth notes, with some quarter notes.

22. Practise the following figured basses in four parts in different positions:

Two examples of figured bass notation. Bass clef, common time, key signature of A major (no sharps or flats).
Part i: Measures 1-7. Figuring: 6, 5, 6, 3, 6, 4, 7.
Part ii: Measures 8-14. Figuring: 6, 6, 5, 6, 4, 5, 4, 3.

iii

iv

v

vi

vii

viii

ix

x

xi

xii

[23.] Practise the following figured basses in four parts in different positions:

i

ii

iii

iv

v

vi

vii

viii