

6

Some Common Secondary Structural Features

The purpose of this section is to introduce the student to certain common secondary but important musical features that need to be taken into account when carrying out a Schenkerian analysis. Here, as in the case of the linear intervallic patterns introduced in Chapter 4, it is not possible to say in a general way how these features are to be interpreted with respect to other aspects of the musical work which are both more elemental and of longer range, for such analytic interpretation depends upon a number of variables and must be made with regard for the characteristics of the individual composition. Suggestions regarding the interpretation of these features will be made, however, as the examples are discussed.

Specifically, this section deals with three features of tonal composition: the voice exchange, melodic substitution and implied notes, and octave displacement (register transfer), in the order just given. In addition, subsidiary melodic lines are discussed briefly.

Voice Exchanges

The voice exchange, in one form or another, is frequently found in the music of a wide variety of composers. Indeed, instances have already appeared in previous examples (14, on p. 22, 15, on p. 23, 30, on p. 35, and 72, on p. 75), but with minimal comment. In this section the voice exchange will be examined with greater thoroughness and in greater depth.

The voice exchange is a pattern that involves two and only two voices, a pattern in which the voices literally exchange their pitches. The simplest type of voice exchange is shown in Example 114, from the beginning of the adagio introduction to Beethoven's *Second Symphony*. There the descant and bass

effect an exchange. The descant descends from F# to D while the bass ascends from D to F# over the same time-span. Thus, when the pattern is completed, the bass carries the initial note of the soprano, F# (two octaves lower, of course), and the soprano carries the initial note of the bass, D. Each voice has traversed the same interval, the major third between D and F#. This type of exchange creates the outer-voice interval succession 10–8–6, indicated within brackets in Example 114 since it will rarely be necessary to represent the exchange numerically this way in an analysis, and the numbers are used only for explanatory purposes here. The notation for the exchange is the intersecting double-headed arrow configuration shown in Example 114. In the 10–8–6 exchange, the middle note is always of the same type, here E, the only case in which the same note can simultaneously be an ascending and a descending passing note! As to what the functions of the exchange are in this particular context (Example 114), one is apparent: the exchange highlights the interval of the major third from D to F# and it emphasizes the melodic note F#.

EXAMPLE 114. Beethoven, *Second Symphony*, I

Adagio molto

Although it was stated above that no general observations can be made about the function of the voice exchange over the broad range of individual works that comprise the corpus of tonal music, two fundamental aspects of the 10–8–6 voice exchange are of considerable significance to the analysis of musical structures via the Schenker approach. First, the exchange projects a single interval, the third, over a short time span, and in an unambiguous voice-leading setting. If this interval is taken to represent a harmony—the D-major (tonic) triad in Example 114, for instance—then we see, in miniature, a model of the Schenkerian concept of *prolongation*: the preservation of a single harmony over a time span. The concept of prolongation is introduced in Chapter 8 as it pertains to the construction of Schenkerian analyses. The foregoing brief discussion should be regarded only as an elementary preparation for that concept.

The second fundamental aspect of the 10–8–6 voice exchange of interest is this: the exchange is a replacement process involving two voices. Each voice takes over the voice-leading function of the other. This is evident in Example

114, where descant $F\sharp$ at the onset of the pattern becomes bass $F\sharp$ at the end of the pattern and bass D at the onset of the pattern becomes descant D at the end. The bass then leads to G on the downbeat of m. 2 while the upper voice pursues its voice-leading destination, $C\sharp$, creating, on its way, the suspension indicated by the figures below the lower staff. This aspect of the voice exchange is especially significant when a dissonant interval is involved, as in the common tritone exchange, discussed below in connection with Example 121.

Voice exchanges, like other patterns, may be enriched by diminutions, and those diminutions may conceal, to some extent, the underlying exchange. Example 115 provides an instance. At *a* the lower voices move in eighth notes against the sixteenth-note triplets in the descant. The analysis at *b* reveals, however, that when the diminutions in the upper voice are taken into account there is a slightly concealed voice exchange of the 10–8–6 type underlying the melodic motive at the beginning of the theme of this movement.

EXAMPLE 115. Haydn, *Piano Sonata in E major*, Hob. XVI/22, II

Example 116 shows a similarly elaborate 10–8–6 exchange at the beginning of a thematic statement. Not only do intricate diminutions ornament the basic voice-leading pattern here, as is evident in the complete music at *a*, but within that basic pattern, the 10–8–6 exchange $C\sharp-A \leftrightarrow A-C\sharp$, there is another exchange, $D-B \leftrightarrow B-D$. The elements of this internal exchange consist of a neighbor note and a passing note, which interchange, as shown in Example 116*b*. Here the prolonged harmony is the tonic (A major) triad, and it seems clear that the melodic note brought to the fore by the exchange is the first note of the descant and the last note of the bass, $C\sharp$, the third of the tonic triad. The subsequent arpeggiation out to E in m. 2 of the excerpt cannot be interpreted without study of more of the music of this composition.

EXAMPLE 116. Mozart, *Piano Sonata in D major*, K. 576, II

A second common type of voice exchange is the 10–10–6–6 (or 6–6–10–10) exchange. Example 117 provides an instance in the music of Handel. At *a* is the complete music, including Handel's figures. The upper part (flute) is a bilinear melodic structure, while the bass is a single line doubled at the octave below. At *b* the exchange is shown, the typical 10–10–6–6 pattern, which involves an interchange of note pairs. Thus, the note pair $C-B$ in the upper voice becomes the note pair $C-B$ in the bass, while the note pair $A-G$ in the bass becomes the note pair $A-G$ in the upper voice, producing the outer voice intervallic succession 10–10–6–6. On the second beat of m. 5 the pattern begins again, with $C-B$ in the upper voice against $A-G$ in the bass. However, the complete exchange does not occur, because the bass changes to $F\sharp-B$ on the last beat of the measure, breaking the pattern.

EXAMPLE 117. Handel, *Sonata for Flute and Continuo in E minor*, II

Example 117c offers an analytical interpretation of the Handel passage. Because of the harmonic organization of the passage, the components of the 10–10–6–6 exchange are not all of equal structural significance. The notes C and A are expanded diminutions, neighbor and passing notes, while B and G are members of the tonic triad. Thus, the upper voice is not a true fourth, but a third expanded to a fourth by a prefix neighbor note.¹

A voice exchange may be associated with a linear intervallic pattern, as in Example 118, from Schubert. The basic voice leading of the passage, which is distributed among the instruments at *a*, is brought together in simplified form at *b*, revealing the 10–10–6–6 exchange. If this exchange is compared with the one shown in Example 117, it will be seen that it is the inversion. Here the note pairs in the bass form an ascending fourth, while the corresponding pattern in the upper voice of Example 117 was a descending fourth. And each note pair in the upper voice of Example 118 is an ascending second, whereas the corresponding note pairs in the bass of Example 117 were descending seconds.

EXAMPLE 118. Schubert, String Quartet in B \flat major, Op. 168, III

(Allegro)

1. In fact, in some cases the upper voice of an exchange of this type is best regarded as a succession of two note pairs (seconds) which do *not* combine to form a larger interval (fourth or third).

Example 118c shows, analytically, the harmonic location of this passage in the movement as a whole: the progression from VI to V with intervening secondary dominants. However, the linear intervallic pattern 6–5 is also essential here. As shown by the analysis, each 5 in the 6–5 pattern is extended by an ascending third in the bass and the neighbor-note formation in the upper parts. Thus, the passage combines a harmonic progression with a voice exchange and a linear intervallic pattern.

Example 119 shows a passage that features the 6–6–10–10 voice exchange, reversing the pattern of the previous examples. The note pairs are designated by brackets labeled *a* and *b* in the example. Here the bass has the characteristic fourth (descending this time), while the descant has the note pairs forming seconds. The exchange is in the service of a progression from I to V, as shown by the roman numerals at *b*. Interestingly, the passage ends with a 6–8–10 exchange.

EXAMPLE 119. Haydn, *Piano Sonata in C major*, Hob. XVI/21, III

a. (Presto)

EXAMPLE 120. Mozart, *Piano Sonata in D major*, K. 311, II

a. Andante

A second and final instance of the 6-6-10-10 exchange is provided in Example 120, from the theme of a movement of a Mozart piano sonata. Here the exchange, in mm. 3 and 4, centers around notes of the tonic triad. The characteristic fourth is in the bass, and proves to be a structural third from D to B, while the upper voice has the note pairs forming seconds, here with the meaning of neighbor-note patterns. To take the analysis just one step further, it is not difficult to understand the bass from the end of m. 2 through the first beat of m. 4 as an arpeggiation of the tonic (G major) triad.

We have seen examples of the 10-8-6 exchange, which always involves the consonant interval of a third. An exchange may also operate within a dissonant interval, as shown in the next two examples, both from Beethoven's *Eighth Symphony*.

In Example 121 there is an exchange in m. 3 between the upper voice and the voice above the bass. Each of the two voices spans the diminished fifth, creating the exchange $E-B\flat \leftrightarrow B\flat-E$. The effect of the exchange is to emphasize the melodic note $B\flat$ in the upper voice on the downbeat of m. 4. As the rhythmic reduction in Example 121*b* makes clear, this $B\flat$ is an indirect passing note that relates back to the first note of the theme, C. Secondary motions that interrupt the direct connection from C to $B\flat$ are the two arpeggiations (C-A-F and E-G- $B\flat$) shown at *b*. The ultimate resolution of $B\flat$, which is the dissonant seventh of V^7 here, is, of course, to A, and that occurs on the downbeat of m. 7, not included in Example 121.

EXAMPLE 121. Beethoven, *Eighth Symphony*, I

In the recapitulation of this movement the composer introduces another exchange following the diminished-fifth exchange shown in Example 121. At m. 200 of Example 122 is the passage that corresponds to m. 3 of Example 121, the diminished-fifth voice exchange. As soon as $B\flat$ is attained in the upper voice on the downbeat of m. 201 two inner voices exchange over another dissonant interval, the seventh: $C-B\flat \leftrightarrow B\flat-C$. This new exchange

EXAMPLE 122. Beethoven, *Eighth Symphony*, I

intensifies the restatement of the important $B\flat$ in the upper voice and serves as an example of the special importance that the voice exchange may have in a composition, in this instance by dramatizing the expanded passing note, $B\flat$, which relates back to C in m. 1.

To conclude this introduction to voice exchanges, we present four examples of particularly interesting occurrences of that structural feature, drawn from three different periods.

In Example 118*c* (p. 114) it was seen that a linear intervallic pattern may combine with a voice exchange in structuring a passage. Another instance is displayed in Example 123*a* from a famous keyboard work by Bach. At *b* we see the ascending linear intervallic pattern 10-6, which connects the upper-voice C on the upbeat to m. 43 to the G on the downbeat of m. 46, while the bass follows in stepwise ascending motion. The voice exchange occurs as each 6 is reached in the linear intervallic pattern. However, the pattern of voice exchanges is broken on the second beat of m. 45: $F\sharp-A$ in the upper voice is answered by A-A, not $A-F\sharp$, in the lower voice. Since $F\sharp$ is bound to stepwise resolution to G, the occurrence of $F\sharp$ in two voices almost simultaneously would strongly suggest parallel octaves.

EXAMPLE 123. Bach, *Italian Concerto*, I

One other aspect of Example 123 should be mentioned. The lower component of the voice exchange does not occur entirely within a single octave register because the second note is always displaced by an octave. This

is because the bass on the downbeat of each measure is then replicated an octave higher on the second beat of the measure, just as the exchange begins. On the last eighth note in the measure, the bass returns to its original register, creating in m. 43 the tenth F–D in place of the third F–D and in m. 44 the tenth G–E in place of the third G–E. The subject of octave displacements will be addressed below.

An extraordinary instance of a 6–8–10 exchange is shown in Example 124, from a late Brahms piano composition. Here the exchange involves a consonant third, as usual, but in this context a dissonant harmony, a diminished seventh chord, is extended by the exchange. This, in turn, causes a curious reversal of relations. The diminished seventh chord stands at each end of the exchange pattern, while the passing chord in the middle is a consonant harmony; the first is equivalent to a $\frac{6}{3}$ over bass E, the second to a $\frac{5}{3}$ over bass B \sharp (= C).

EXAMPLE 124. Brahms, *Intermezzo in E major*, Op. 116, No. 6

(Andantino)

In Example 125, from Brahms's *Requiem*, a passage is shown that incorporates a chain of voice exchanges. In the first of these, bass and soprano interchange in the 6–8–10 pattern operating within a half-diminished seventh chord. At m. 26, this pattern is reversed, producing the 10–8–6 pattern. In both exchanges the passing chord is a $\frac{6}{4}$. Then, at the end of the passage, in m. 27, bass and alto interchange, again forming the 6–8–10 pattern. As shown by the roman numerals below the lower staff, the exchanges are in the service of the harmonic progression II $\frac{7}{b}$ V.

EXAMPLE 125. Brahms, *Requiem*, III (chorus only)

(Andante)

Example 126 presents an exchange that resembles the 10–10–6–6 exchange, in that it involves note pairs. Here however, the note pairs, although linear seconds, as in the 10–10–6–6, form vertical intervals that combine

EXAMPLE 126. Mozart, *Symphony in E \flat major*, K. 543, I

dissonances with consonances. The first, an augmented fourth, resolves outward to a sixth, while the second, a diminished fifth, contracts to a third (tenth), following normative voice leading.

Implied Notes

In the free composition, a note may be implied although not actually present in the music. This is possible because of the completion of a voice-leading connection, the continuation of a linear intervallic pattern, the completion of a voice exchange, or by the completion of a component of a compound melodic structure (as a special case of a voice-leading connection).

The implied note may be regarded as effective in the melodic structure. Whether it is consequential is another matter, one that can only be determined in a particular musical setting. Two questions are important in this regard. First, does the implied note complete a significant structural motion? Second, does the implied note initiate a significant structural motion? We will refer to these questions in connection with the examples to be presented below.

An implied note was shown earlier in Example 28 (p. 34), where the seventh, A \flat , in m. 1 was resolved to an implied G at the beginning of m. 2. In this case, as in many others, the voice-leading resolution of dissonance strongly articulates the implied note. In that example and elsewhere in the present volume, the implied note is enclosed (appropriately) in parentheses.

Example 127 presents a situation in which the harmonic progression determines an implied note: the progression from V to I in mm. 9–10 at the beginning of the second section of the piece. This causes an A to be implied on the downbeat of m. 10, which is significant since it is this A and the concomitant 5–6 voice-leading motion that initiates a long ascending line in the subsequent music (not shown). Here the assumption of an implied note is

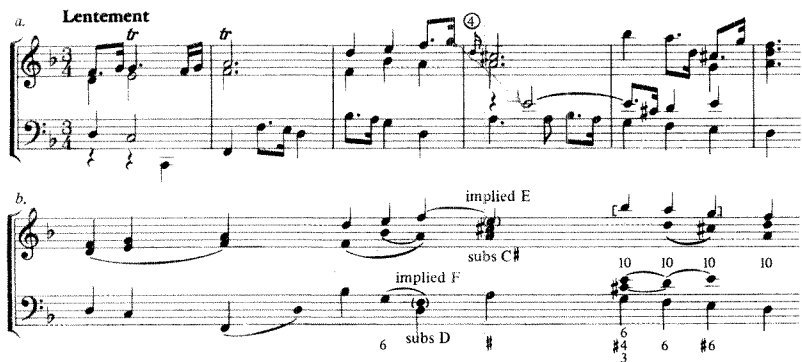
EXAMPLE 127. Bach, *English Suite in F major*, Menuet II



definitely consequential; the ascending melodic structure does not begin abruptly and unexpectedly on B \flat in m. 10, but on the A firmly anchored within the tonic triad.

A somewhat different situation is given in Example 128, where two notes are implied. In the bass of m. 3 there is a descent from B \flat to G, which supports a sixth chord. The normal resolution of this sixth chord, in which the bass would continue stepwise to F, does not take place, however. Instead, the bass skips to D. Thus, in the voice-leading scheme, F is implied and D is substituted for it. In general, *substitution* and *implication* are often associated in free compositions. In m. 4 of Example 128 are another implied note and substitution. There in the upper voice, F at the end of m. 3 should have proceeded by step to E; instead, it skips away to C \sharp , the leading note, at the cadence. The C \sharp is therefore a substitution for E.

EXAMPLE 128. Handel, Air from *Keyboard Suite in D minor*



Example 128 also provides a lucid illustration of local melodic motion. Beginning in m. 5 the bass descends by step from dominant (A, preceding measure) to tonic (D, m. 6). This essential structural motion in the bass is accompanied by tenths in the descant, beginning on B \flat . At the conclusion of the motion the upper voice arrives on F over bass D, and this note is the continuation of the melodic structure that was in effect at the cadence in m.

4. The subsidiary function of the upper voice in m. 5 is shown by the brackets surrounding B \flat -A-G in Example 128*b*.

As indicated above, compound melodic structures may bring into play implied notes. Example 129 illustrates. At *b* is a rhythmic reduction that verticalizes the components of the compound melody, showing that the upper-voice D at the end of m. 1 would have progressed naturally to C on the downbeat of m. 2. However, only the lower component of the bilinear structure fulfills its voice-leading commitment, moving to E \flat on the first beat of m. 2. The melody then ascends to pick up C on the last eighth note of the measure, and this is the actual statement of the note that was implied on the downbeat of the measure, as shown by the tie in Example 129*b*.

EXAMPLE 129. Bach, *Little Prelude in C minor* from *Six Preludes for Beginners*, BWV 934



Furthermore, the seventh, G, that enters in the inner voice in m. 2 (Example 129*b*) is prepared by an implied A \flat at the beginning of the measure. The implied G in the upper voice of m. 4 corresponds to the implied A \flat in m. 2. In m. 4, however, the G is even more strongly implied by the preceding A \flat , which moves in parallel sixths with the voice below it. This implied G is especially important, since it effects stepwise melodic continuity, preparing the seventh, F, which follows.

Example 130 shows two implied notes, with accompanying substitutions. First, in mm. 3-4 the upper voice ascends from F \sharp to C, a diminished fifth, while the bass moves in contrary motion to the upper voice, beginning on C. Clearly this is a diminished-fifth voice exchange, which would be completed if the bass ended on F \sharp . However, the bass skips away to D on the downbeat of m. 4. This D is to be understood as a substitution for the expected F \sharp in the voice exchange, as shown in Example 130*b*.

The second implied note in Example 130 occurs in m. 7, where B \flat in the descant, instead of descending by step to A, skips down to join the inner voice on D, the substitution. The implied A is consequential, for it is the first melodic note of the B section which follows, as indicated in Example 130*b*.

EXAMPLE 130. Haydn, *Symphony in D major, No. 104* ("London"), II

Thus, of the two implied notes in Example 130, the first is less consequential than the second.

As a final illustration of implication and substitution, Example 131 offers a passage from a work by Chopin. The upper voice, which begins on G, proceeds slowly downward, with diminutions (neighbor notes, passing notes, and consonant skips). On the downbeat of m. 7 an $\sharp 4$ is reached, and this is followed by $\frac{7}{5}$. However, the upper voice, which should fulfill its voice-leading commitment by moving from D to C, skips to F \sharp , a substitution. At that point in Example 131b the expected C appears within parentheses as an implied note. This is the C that continues the slow stepwise descent, and it resolves on the B \flat that comes in as part of the final flourish in thirty-second notes in m. 8. Here, the implied note plays an important role in the melodic structure, since it provides the essential link that completes the stepwise progression begun in m. 5 on G.

EXAMPLE 131. Chopin, *Nocturne in C minor, Op. 48, No. 1*

Although implied notes and substitutions are not features of every work, it is important to understand them as an aspect of voice leading in the free composition and to be able to interpret them analytically in a significant way when they arise. In general, however, when no structural consequence ensues as a result of an implied note, there is no particular reason to give it special attention.

Register Transfer

In Chapter 18 the notion of register transfer is presented within the context of full-scale Schenkerian analysis. We introduce the topic here in an elementary way, since registral changes are so common in almost all music. The occurrence of an important structural element in a new register and the return to the register of origin are both events of great significance.

Register transfer denotes change of octave, or the placement of a note in a different octave (including a return to its original register from some other register).² In the simplest case there is a direct shift, as in the two instances shown in Example 132. In the first of these, indicated by the dotted slur and the abbreviation RT in Example 132b, the register transfer explains the origin of the descant note B on the second quarter note of m. 1: it comes from the inner voice. Similarly, in m. 2 the high D, is a transferred inner-voice note. As a result of these successive register transfers, the upper voice at the end of the phrase is one octave higher than at the beginning. Example 132 is used here only to demonstrate registral relations. It is not always necessary to indicate direct shifts of register, as here, since the registral relations can easily be read from the score and do not require analytic interpretation.

EXAMPLE 132. Haydn, *Symphony in G major, No. 92* ("Oxford"), III

2. In Chapter 12 the Schenkerian term *coupling* is introduced in relation to register transfer.

In Example 133 a register transfer occurs from the inner-voice A in m. 4 to the upper-voice A in m. 5. From this A an arpeggiation then descends to the C of m. 6, a restatement of the upper-voice C of m. 4. As indicated by the stems in the graph, this C resolves to B, which, in turn, descends to A. At this juncture (m. 7) the final gesture of the phrase connects A to G an octave higher, a register transfer effected by stepwise motion. In this case, the interval involved is a seventh (A–G), representing the descending second which would have resulted had A remained in register in m. 7. In retrospect, the high A in m. 5 is a preparation for the cadential G in the same register in m. 8.

EXAMPLE 133. Haydn, *Symphony in G major, No. 100* ("Military"), III

Example 134 contains register transfers involving both the octave and the

EXAMPLE 134. Schubert, *Moments musicaux, Op. 94, No. 6*

seventh. The first transfer occurs in m. 2 and is shown by the dotted slur at *b*. Measure 6 contains the transfer involving the interval of a seventh. There neighbor note D \sharp is presented an octave higher as well as in its original register. In this example, as in many others, changes of register are intimately connected with compound melody. Here the register transfers create a melodic structure that is partially compound (Chapter 3).

The previous examples illustrated register transfers of a note of an inner voice to a note of the upper voice. The final example in this chapter, Example 135, shows a transfer of longer range involving the upper voice alone. As shown at *b*, at the end of the first four-measure phrase the upper voice has arrived on B. In the three measures that follow (mm. 5–7), the upper voice ascends stage by stage until it arrives at B an octave higher on the downbeat of m. 8, concluding the register transfer.³ Two details within the ascending passage (mm. 5–7) are worth mentioning. First, there is a small register transfer from F \sharp in the inner voice to E in the upper voice in mm. 5–6, indicated by the dotted slur. This reading reveals the voice exchange 6–6–10–8 shown by the crossed arrows in Example 135*b* and serves as a reminder that the various features discussed in the foregoing section often occur in combination, requiring careful study of the ways in which they interact.

EXAMPLE 135. Haydn, *String Quartet in G major, Op. 76, No. 1, III*

3. The means by which this transfer is effected is disregarded here; the general procedure is called *overlapping*.

Exercises

Of the three features presented in the text of this chapter, exercises are given only for voice exchanges and register transfers. Additional instances of implied notes will be provided in subsequent examples and exercises.

1. Beethoven, *Sonata for Piano and Cello*, Op. 5, No. 1, I



Reduce to quarter notes and verticalize upper parts. Identify the voice exchange by the customary numerals.

2. Beethoven, *Thirty-two Variations in C minor*, Theme



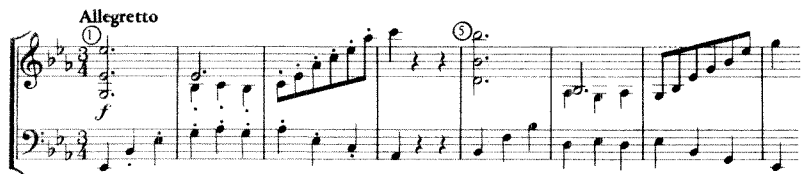
Using stem and slur notation construct an analysis that shows the basic progression of the upper voice clearly and the register transfer of its goal note. Indicate the voice leading by figured bass symbols.

3. Mozart, *Symphony in C major*, K. 551 ("Jupiter"), II



The excerpt is the beginning of the second theme of the slow movement of the symphony. Identify the exchanges and the diminutions (expanded) which they incorporate.

4. Mozart, *Symphony in E_b major*, K. 543, III



Register transfer is a prominent feature of the melodic theme here. Identify the elements that are transferred and label all diminutions in the upper voice.

5. Mozart, *Symphony in G minor*, K. 550, IV



As in Exercise 4, the thematic excerpt here features register transfer in the upper voice. Label diminutions in the outer voices only.