CHAPTER 29

The Rise of Symmetrical Harmony in Tonal Music

The use of compositional techniques such as modal mixture and semitonal voice leading to evoke a sense of ambiguity precipitated a rise in the use of **symmetrically constructed harmonies** and **symmetrical tonal motions**. We have already explored one of these structures—the diminished seventh chord—and the way its potential for harmonic ambiguity could be realized through enharmonic reinterpretation. In this chapter, we learn how the interaction of symmetrical structures with traditional asymmetrical structures influenced other nineteenth-century compositional techniques.

A Paradox: "Balanced" Music Based on Asymmetry

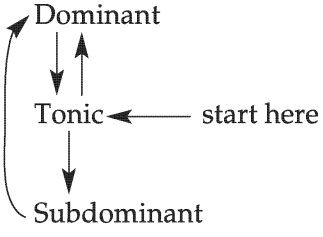
Balance characterizes tonal music—especially Classical music, where the idea of symmetry pervades most aspects of composition. Melodically, the music moves in predictably proportioned patterns. Formally, we usually think of Classical musical units at all levels as structures featuring regularly recurring measure lengths, such as four-measure phrases and eight-measure periods. Metrical and formal symmetries allow a deeper level of periodicity to arise, in a phenomenon called *hypermeter.* At the level of whole works, the idea of perfect symmetry is replaced by tonal balance, as can be seen in both binary and sonata forms, which can be heard as harmonic arches progressing from tonic to dominant and back again.

It is consequently curious that the "well-balanced" tonal system itself is predicated on asymmetrical structures that contain unequal and asymmetrical intervallic divisions. Major and minor triads and dominant seventh chords are asymmetrical structures that consist of a mix of major and minor thirds. Even harmonic progressions in tonal music are asymmetrical. Root motions divide the octave unequally—V to I (ascending perfect fourth) answers I to V (ascending perfect fifth)—and common descending and ascending arpeggiations move in a mix of major and minor thirds. Most significantly, diatonic sequences are also highly asymmetrical. For example, the common D2 (–5/+4) sequence does not move exclusively by perfect fifths; a tritone occurs within the sequence in order to maintain the scale degrees of the key. Indeed, it is precisely the breaking of the perfect-fifth pattern by the diminished fifth that makes the progression so goal oriented, for without the

tritone, the symmetrical sequence would wander over the entire 12 chromatic steps before returning to its beginning point.

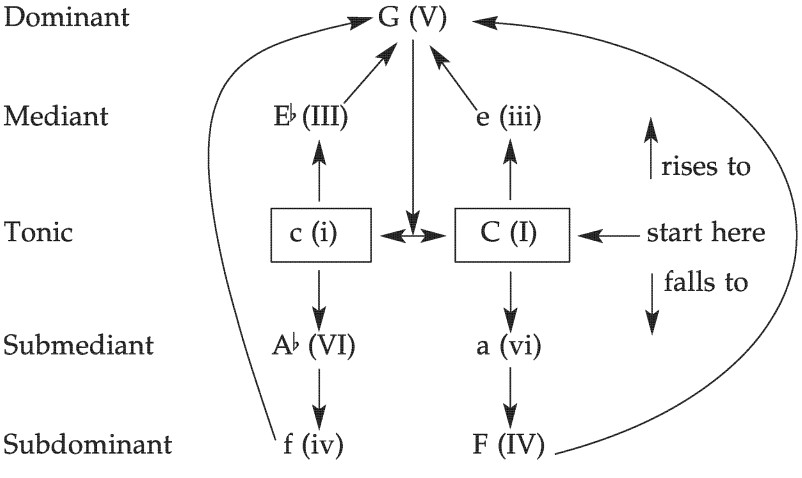
Just as asymmetrical structures such as major and minor triads help to create tonality, the use of symmetrically constructed harmonies and harmonic progressions results in tonal ambiguity, an important feature of nineteenth-century music. But how does symmetry fit into our asymmetrical harmonic models? Actually, the tonal system contains the seeds for symmetry: Harmonic motions up to the dominant and down to the subdominant symmetrically flank the tonic by perfect fifths. However, common-practice music will not usually permit the subdominant to lead directly back to the tonic, but rather to the dominant (Example 29.1).

EXAMPLE 29.1 Dominant and Subdominant Flank Tonic



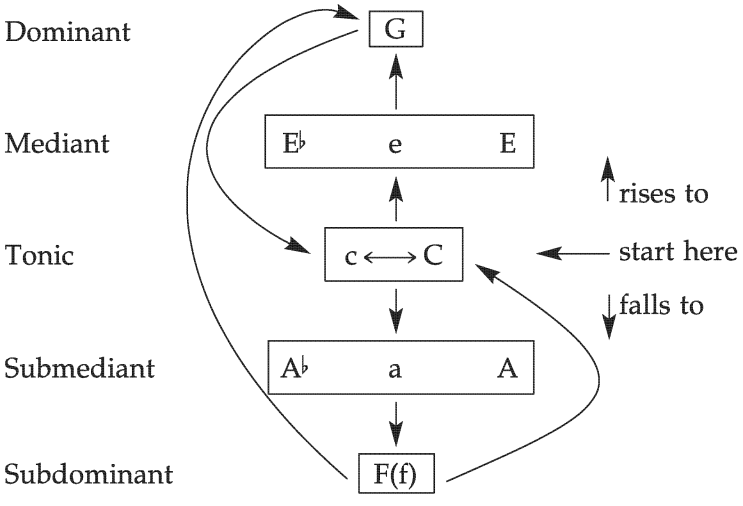
The model in Example 29.2 represents eighteenth-century diatonic motion, with the symmetrical perfect fifths asymmetrically divided by major and minor thirds.

EXAMPLE 29.2 Eighteenth-Century Tonal Paths



We have learned that chromatic third relations can emerge from the combination of parallel modes through mixture. The model in Example 29.3 represents the rise of chromatic third relations from the end of the eighteenth century to the first half of the nineteenth century. Notice that the combinations of major and minor thirds continue to form asymmetrical tonal progressions. Notice also that the subdominant need not progress to the dominant; rather, it may move directly to the tonic (through the plagal relation).

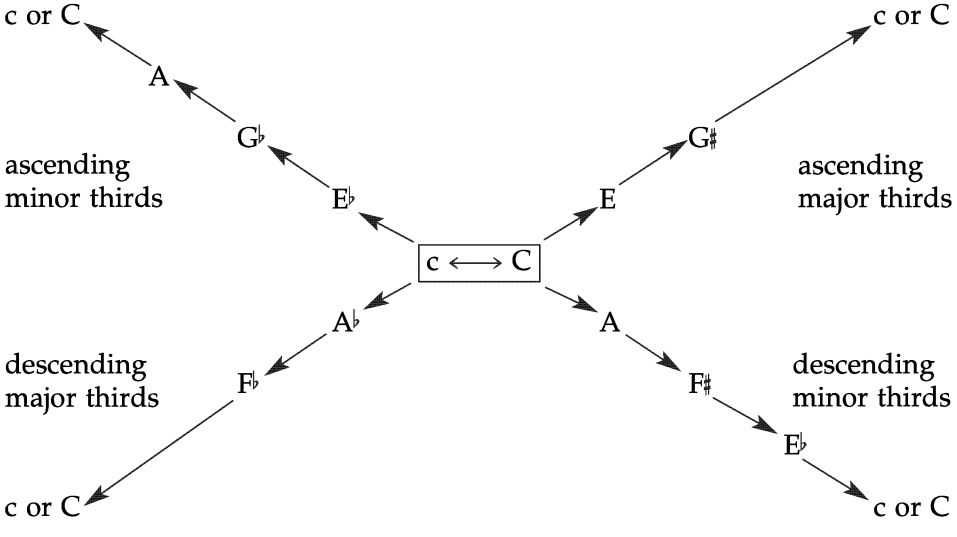
EXAMPLE 29.3 Late-Eighteenth- and Nineteenth-Century Tonal Paths: Mixture Incorporated



Symmetry and Tonal Ambiguity

The model in Example 29.4 is fundamentally different from the preceding models. The long diagonal lines represent symmetrical paths that circumvent both the dominant and the subdominant. Notice that root progressions move by a single repeating interval of either a major third or a minor third (or their enharmonic equivalents) until these intervallic cycles reach a perfect octave.

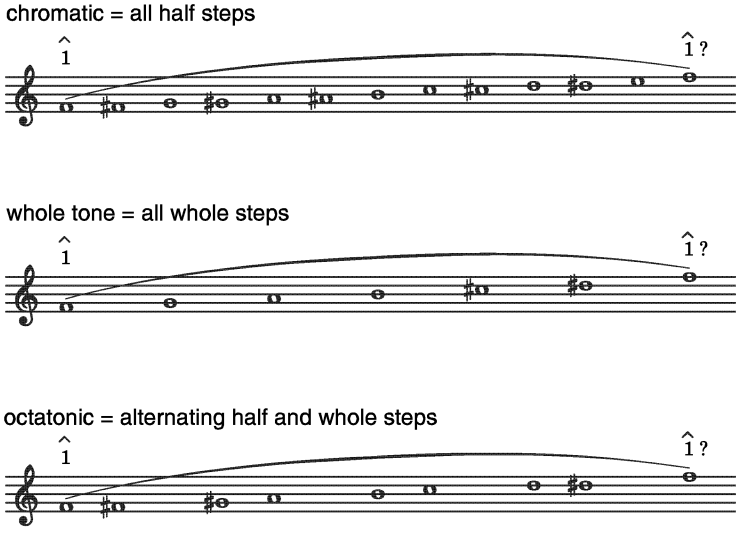
EXAMPLE 29.4 Late-Nineteenth-Century Tonal Paths: Symmetrical Third Relations Replace Asymmetrical Fifth Relations



We can understand that the basis of tonality's gravitational field, which pulls scale degrees and harmonies toward tonic, is predicated on asymmetry—specifically the asymmetry associated with major and minor

scales. Imagine what would happen to tonality if scales were composed solely of whole steps or half steps or of consistently alternating half and whole steps. If you try singing the scales in Example 29.5, you will soon discover that a sense of goal-directed motion and tonal grounding disappears because every scale step is as stable (or as unstable) as every other step.

EXAMPLE 29.5 Symmetrical Scales



Just as asymmetrical structures (major and minor triads) help to create tonality, the use of symmetrically constructed harmonies and harmonic progressions results in tonal ambiguity, an important feature of nineteenth-century music. Symmetrical harmonies and symmetrical tonal progressions develop from two late-eighteenth-century precedents: chromatically altered dominant harmonies and chromatic sequences. We devote the rest of this chapter to the exploration of chromatically altered harmonies.

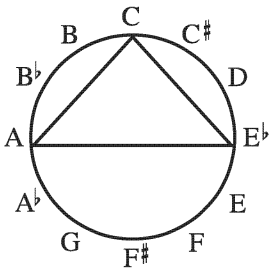
The Augmented Triad

So far, we have considered only one symmetrical triad—the diminished triad. It has a symmetrical construction because its two component intervals are both minor thirds (Example 29.6A). It does not, however, equally partition the octave (since it spans a tritone, it only partitions half of the octave evenly). By contrast, the diminished seventh chord partitions the octave symmetrically (Example 29.6B).

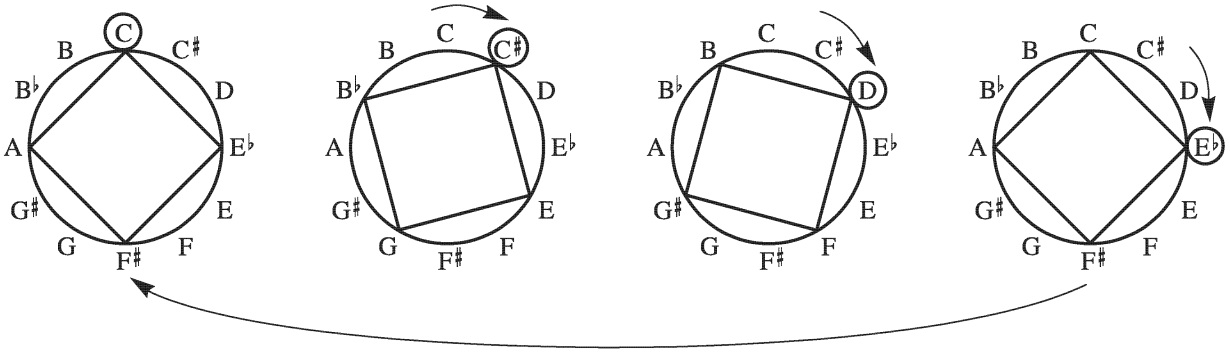
Notice how the lines connecting the pitch classes that make up a diminished seventh chord symmetrically partition the octave. Moving the diminished seventh chord up by one half step (i.e., starting the next "square" on C♯) does not, of course, alter its symmetrical structure. Transposition by three semitones (i.e., starting the chord on E♭) results in a restatement of the same pitch classes, therefore revealing how there are only three distinct diminished seventh chords.

EXAMPLE 29.6 Properties of vii°7: Only Three Distinct Transpositions

A. Diminished Triad Clock



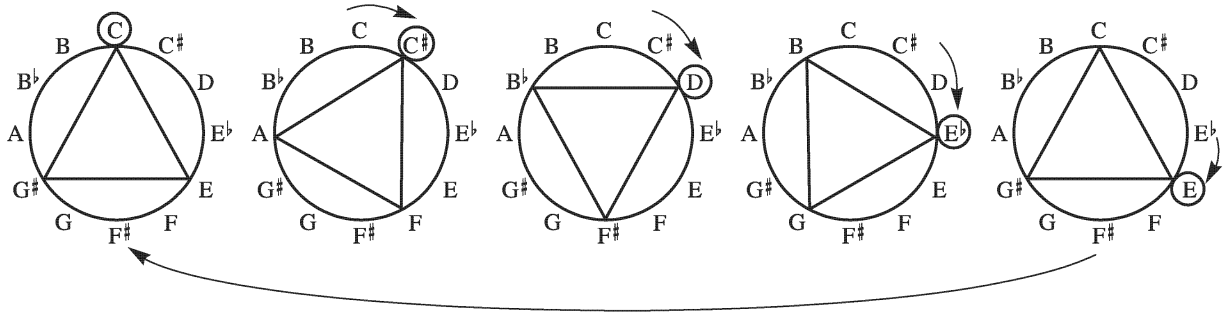
B. Diminished Seventh Chord Clocks



Like the diminished triad, the highly dissonant **augmented triad** (shown in Example 29.7) is symmetrical, consisting of two major thirds and spanning an augmented fifth. Moreover, like the diminished seventh chord, the augmented triad also partitions the octave equally. Unlike every other triadic structure, the augmented triad retains its major third and augmented fifth intervals (or their enharmonic equivalents) under inversion.

Compare the inversions of the minor triad to the inversions of the augmented triad. A minor triad in root position contains a minor third (e.g., C–E♭) and a major third (E♭–G), which together span a perfect fifth (C–G). Its first inversion yields a major third (E♭–G) and a perfect fourth (G–C), which together span a major sixth. Its second inversion yields a perfect fourth (G–C) and a minor third (C–E♭), which together span a minor sixth. But when we invert an augmented triad (such as C–E–G♯), no matter how many times we cycle the three pitches, only major thirds (or diminished fourths) and minor sixths (or augmented fifths) result. Consequently, there is no way aurally to distinguish inversions of the augmented triad. Its symmetrical construction is harmonically ambiguous and well suited to the experimental works of the late nineteenth century.

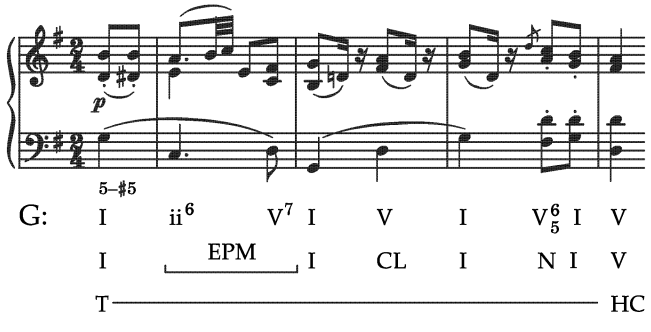
EXAMPLE 29.7 Augmented Triad Clock: Only Four Distinct Transpositions



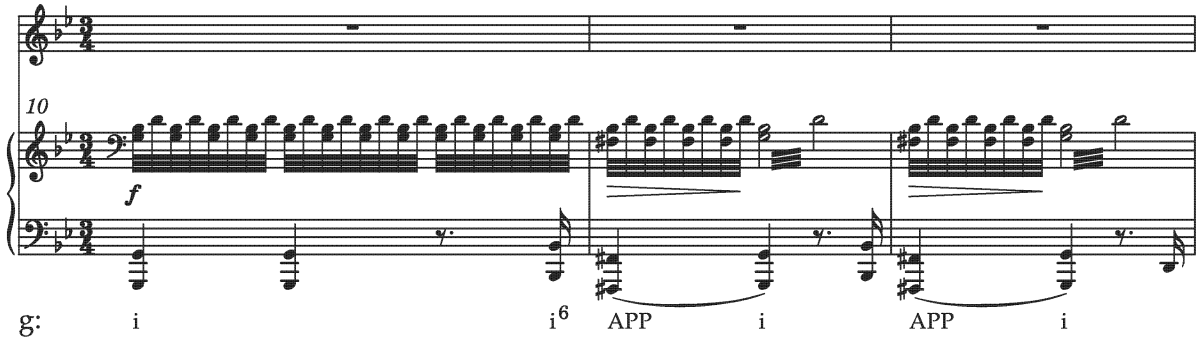
The augmented triad originally was a by-product of melodic motion before becoming an independent sonority. Listen to Example 29.8. It is likely that you heard an augmented triad (G–B–D♯) on the upbeat to m. 1. It is metrically weak, with the D♯s arising from passing motion; therefore, it is not an independent harmonic entity.

Now listen to Example 29.9, and note the function of the augmented triads. Again, the augmented triad in m. 2 is not an independent triad, because F♯ is functioning simply as an appoggiatura to the chord tone G.

EXAMPLE 29.8 Beethoven, Theme and Variations in G major, WoO 77, Thema: *Andante, quasi Allegretto*

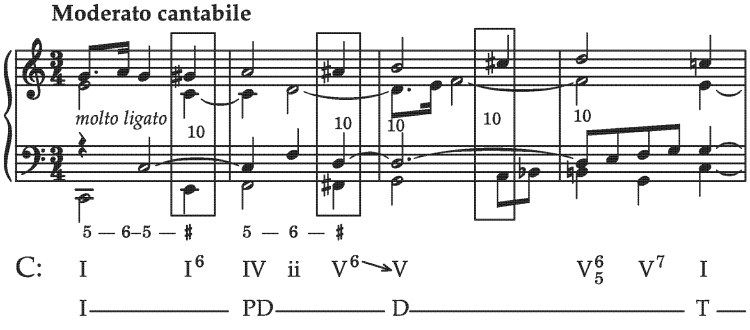


EXAMPLE 29.9 Schubert, "Der Atlas," from *Schwanengesang*, D. 957, no. 8



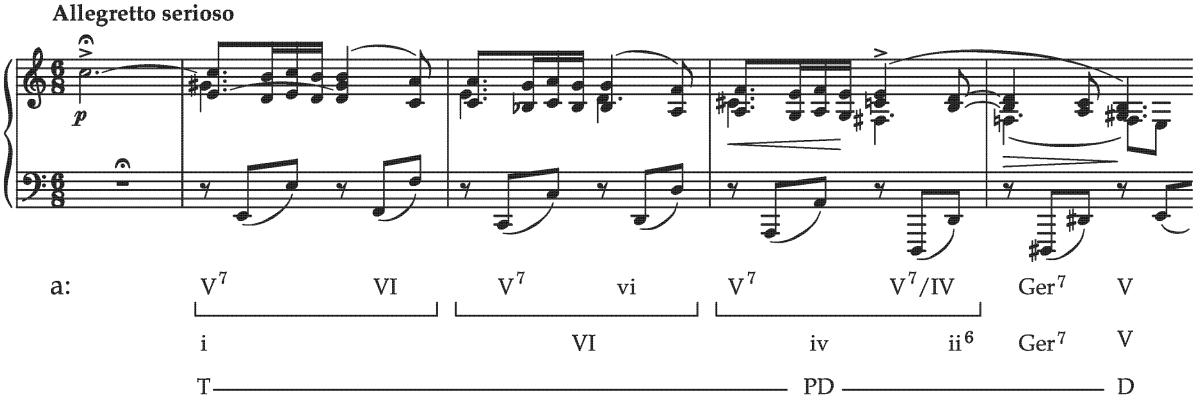
Often, augmented triads participate in sequential progressions, filling in the whole steps with chromatic semitones. Listen to Example 29.10 and identify all the augmented triads. Here is an example that plays on the augmented triad's harmonic ambiguity: The chromatic passing tone G♯ creates an augmented triad. At the same time, the tonic is extended to its first inversion on beat 3. An interesting effect results from the parallel-tenth motion between the bass and the soprano voices, where the $G♯^4$ begins to sound a bit like a leading tone to A. This "applied dominant" to A minor is intensified by the fact that E is in the bass. Although it is customary to label this sonority as a C–E–G♯ chord (C-major triad with a raised fifth), there is no reason it cannot be called an E-major chord with raised fifth (E–G♯–B♯, with B♯ as an enharmonic respelling of C).

EXAMPLE 29.10 Beethoven, Bagatelle in C major, op. 119



Some late-nineteenth-century composers exploited the harmonic ambiguity of the augmented triad. Listen to the opening of "Illusion" in Example 29.11 and determine the key, the location where the key is explicitly stated, and how Grieg earlier implies the key. What musical devices make the opening tonally ambiguous?

EXAMPLE 29.11 Grieg, "Illusion," *Lyric Pieces VI*, op. 57

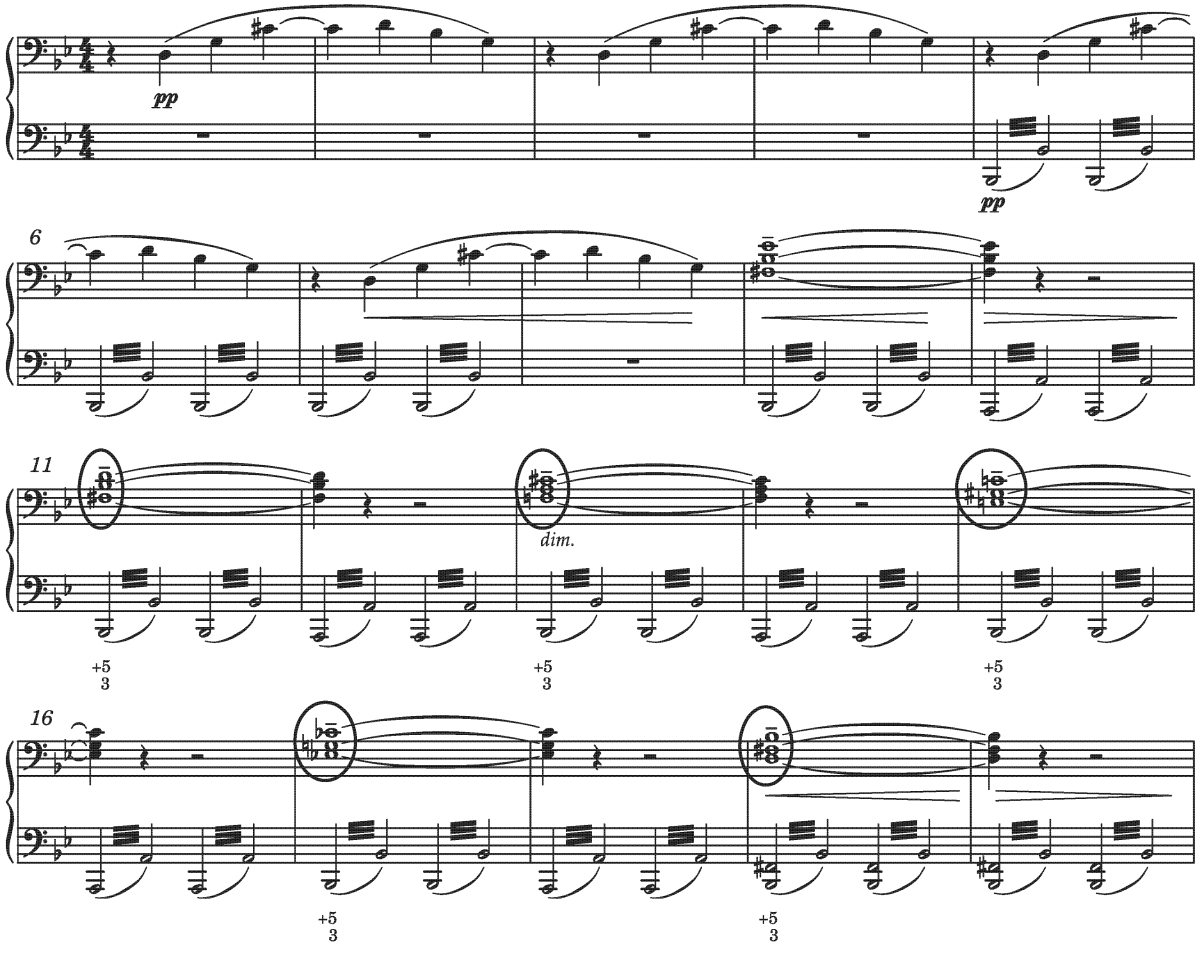


The excerpt closes on V of A minor, the tonic of the piece. The opening's unharmonized and ambiguous C^5 could imply the key of C major or the

dominant of F or any number of other keys. However, C^5 turns out to be a dissonance that is first heard as the minor sixth above the dominant of A minor. (Note that the first sonority, E–G♯–C, is identical to the chord in the previous example, which we hypothesized could work just as well in A minor.) The V^7 resolves deceptively to VI; this pattern begins again in m. 2, transposed down a third. Only in m. 3 does a goal-directed progression begin, leading to a half cadence in A minor. It is difficult to miss the explicit connection between the meaning of the song's title and Grieg's musical setting.

Finally, the augmented triad can become an independent sonority. Listen to the opening of Liszt's "Nuages gris" (Example 29.12), in which all of the chords but the first take the form of augmented triads. As Liszt obscures all sense of tonality with chromatically descending augmented chords (m. 11), he brings to life the image of visible yet amorphous gray clouds.

EXAMPLE 29.12 Liszt, "Nuages gris" ("Gray Clouds"), S199, LW 305

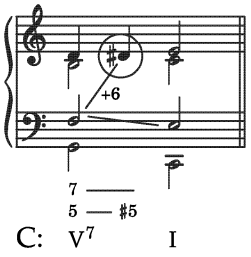


Altered Dominant Seventh Chords

The fifth of the V^7 chord, $\hat{2}$, is a weak tendency tone when compared to the leading tone ($\hat{7}$) and the chordal seventh ($\hat{4}$). But when $\hat{2}$ is raised—creating an **altered dominant seventh chord**—it forms an augmented sixth interval

with $\hat{4}$, and, as a strong tendency tone, it must rise to $\hat{3}$ (Example 29.13). Because of the proper resolution of the chordal seventh, the following tonic chord has a doubled third.

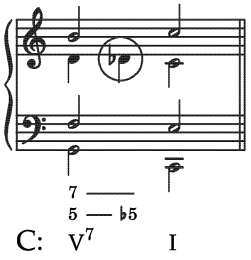
EXAMPLE 29.13 $V^7_{\sharp 5}$



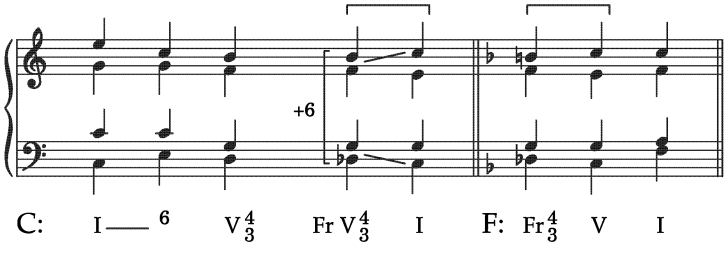
It is also possible to alter V^7 by lowering $\hat{2}$ a half step; this chord often plays a crucial role in late-nineteenth-century music (Example 29.14A). When $\hat{2}$ is lowered it forms an augmented sixth with the leading tone; composers place the chord in second inversion so that $\flat\hat{2}$ is in the bass. This inversion, shown in Example 29.14B, produces a chord that is identical to a French augmented sixth chord. Therefore, the altered dominant seventh chord functions in a reciprocal process (Chapter 28): The chord sounds like it participates in a half cadence ($Fr^4_3 \rightarrow V$), but it actually functions as part of an authentic cadence (altered $V^4_3 \rightarrow I$). For now, we will label this type of altered dominant as Fr V^4_3, which shows its function as a dominant and its intervallic properties that are similar to the regular Fr^4_3.

EXAMPLE 29.14 $V^7_{\flat 5}$ **and Fr** V^4_3

A.



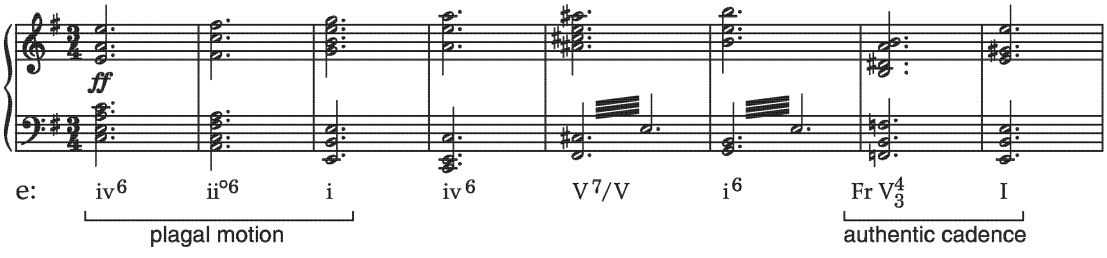
B.



Listen to the opening of the last movement of Brahms's Symphony no. 4 (Example 29.15). What is ambiguous about the cadence? Perhaps you were

once again struck by a disparity between what you saw and what you heard at the cadence in m. 8. There are two reasons why what looks like a weak authentic cadence—in which V^4_3 (F replaces F♯) resolves to I—actually sounds like a half cadence. First, the altered V^4_3 chord (m. 7), with F♮ prominently placed in the bass (F♮–A–B–D♯) is identical to a Fr^4_3 chord in the key of A minor. Second, the Picardy third (G♯) in the final chord sounds like it participates in a half cadence (Fr^4_3–V) rather than an authentic cadence (V^4_3–I). This altered dominant seventh therefore functions in a reciprocal process. We will learn more about the wide-ranging enharmonic potential and other special properties inherent in this sonority when we look at the music of Alexander Scriabin and Alban Berg in Chapter 31.

EXAMPLE 29.15 Brahms, Symphony no. 4 in E minor, op. 98, *Allegro energico e passionato*

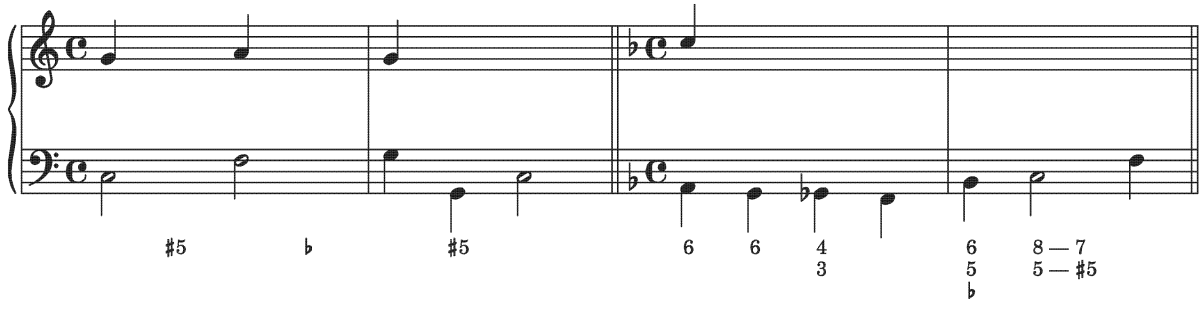


EXERCISE INTERLUDE

WORKBOOK 1
29.1–29.2

29.1

Realize the figured basses in chorale style. Analyze using two levels.

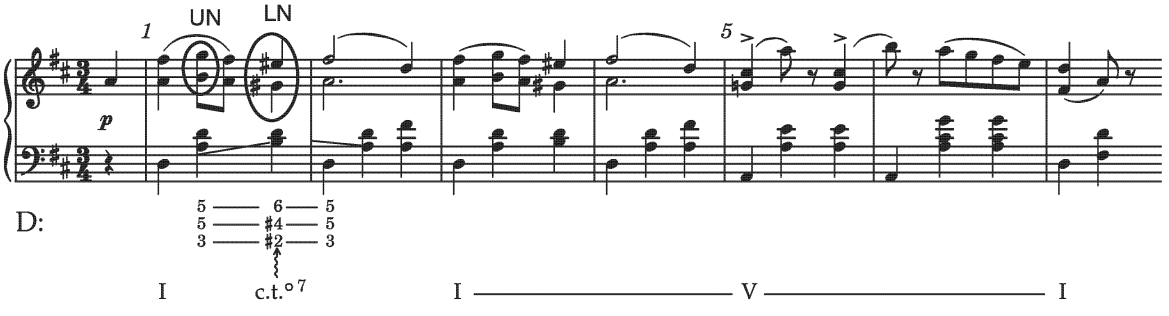


The Common-Tone Diminished Seventh Chord

We have encountered a number of ways to extend an underlying harmony contrapuntally. In addition to embedded phrase models (EPMs), we have learned about passing and neighboring chords, such as vii^{o6}, P^6_4, Ped^6_4, vii^{o6}_5, and IV^6, which usually occur in first or second inversion so as to allow them smoothly to connect structural harmonies in root position.

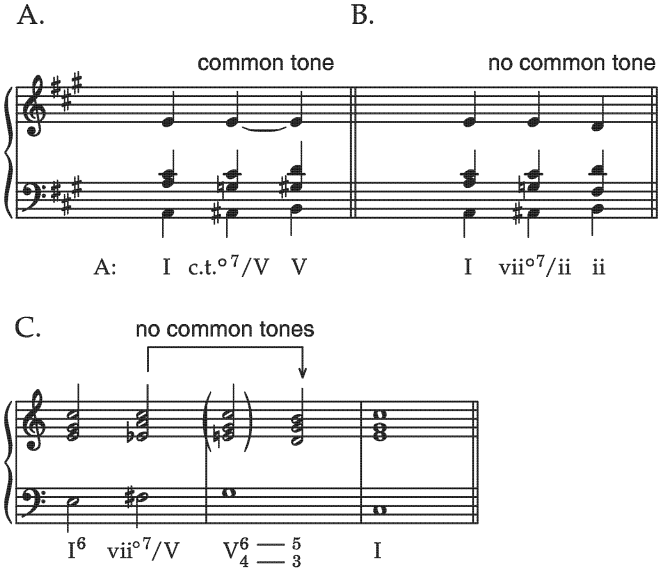
Two additional harmonies can prolong I and V through neighboring and passing motions. These new chords contain chromaticism and *maintain the root of the harmony they extend.* Example 29.16 shows the first type of harmony: The lower neighbors on beat 3 of m. 1—together with the 5–6 motion (A–B) in the left hand—create a diminished seventh chord. Notice that the root of the tonic chord (D) is sustained as a common tone. Contrapuntal diminished seventh chords such as this one are called **common-tone diminished seventh chords**, labeled "c.t.$^{\circ 7}$."

EXAMPLE 29.16 Schubert, Waltz in D major, *34 Valses Sentimentales*, op. 50, no. 12, D. 779



We now have two functions for diminished seventh chords: They can be tonicizing (as a vii$^{\circ 7}$ or an applied vii$^{\circ 7}$) or contrapuntal (as a c.t.$^{\circ 7}$ or an applied c.t.$^{\circ 7}$) (Example 29.17). The following guiding principles may be useful when attempting to determine the function of a fully diminished sonority.

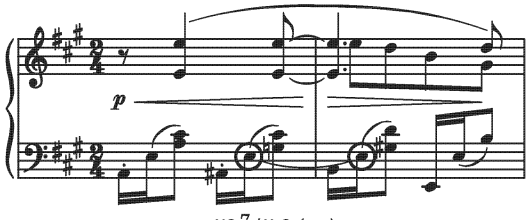
EXAMPLE 29.17 vii$^{\circ 7}$: Common Tone Versus Applied Forms



- Common-tone diminished seventh chords share a common tone with the following chord of resolution (Example 29.17A).
- vii^{o7} and applied vii^{o7} chords have no common tones with the following chord of resolution (Example 29.17B).
- Beware of the progression vii^{o7}/V to cadential $\frac{6\text{-}5}{4\text{-}3}$. The vii^{o7}/V chord shares common tones with the cadential $\frac{6}{4}$ chord. The common tones, however, are misleading, for they are not chord tones but suspensions that fall to the $\frac{5}{3}$ chord, which shares no pitches with the applied vii^{o7} chord (Example 29.17C).

It can be difficult to distinguish between the different types of diminished seventh chords. The chromatic bass line in Example 29.18 suggests that the diminished seventh chord will function as a vii^{o7}/ii. However, B is not the root of the chord on the downbeat of m. 2; it is a V^4_3 chord. Further evidence against viewing the diminished seventh chord as vii^{o7}/ii may be seen in the octave E, which is a common tone of both the diminished seventh chord and the following V^4_3 chord. As you know, there are no common tones between an applied vii^{o7} chord and its resolution, so this diminished seventh cannot be applied. Rather, it is a contrapuntal chord (c.t.^{o7} of V) that connects I and V^4_3 by means of a chromatic passing tone in the bass.

EXAMPLE 29.18 Brahms, "Heimweh III" ("Homesickness III"), op. 64, no. 9

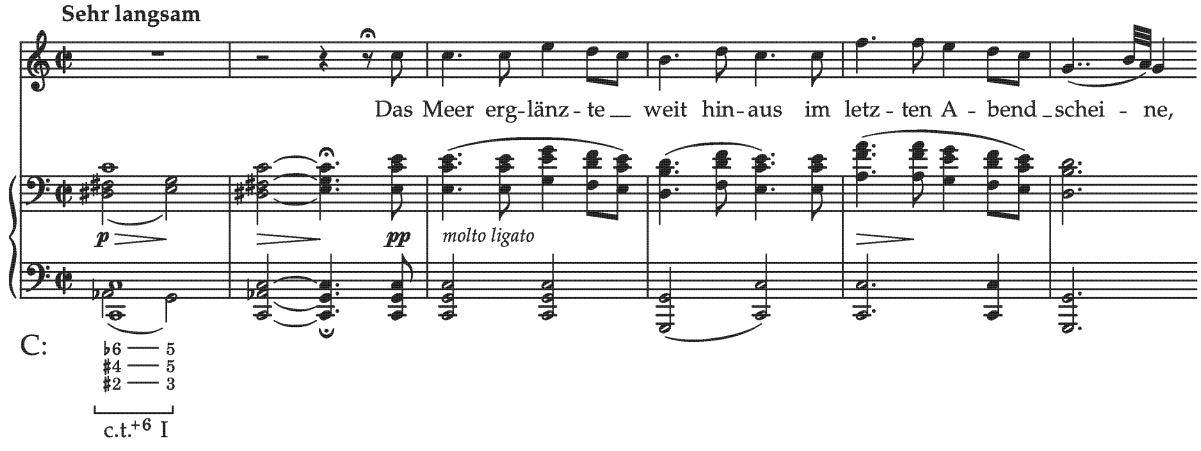


vii$^{o\,7}$/ii ? (no)
c.t.$^{o\,7}$/V ? (yes)

Common-Tone Augmented Sixth Chords

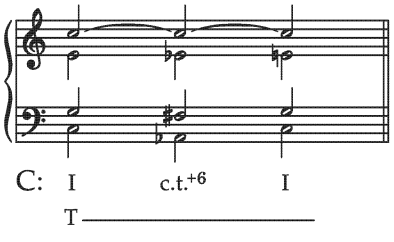
Example 29.19 contains another chromatic common-tone harmony over a tonic pedal that arises from contrapuntal motion, but it is not a diminished seventh chord. Look at the figure for the first chord. Does the presence of both flat and sharp accidentals remind you of any other chords we have learned? The sonority sounds and looks like a Ger^6_5 chord, since it contains an augmented sixth (A♭–F♯). It is a bit peculiar, however, not to have the ♭6–5 motion in the bass, for we expect an augmented sixth chord moving to its resolution. Instead, the bass voice sustains a common-tone C. The result of this voice leading is a chord that extends the tonic rather than leading strongly to the dominant. Such a chord is referred to as a **common-tone augmented sixth chord** (c.t.$^{+6}$).

EXAMPLE 29.19 Schubert, "Am Meer" ("By the Sea"), *Schwanengesang*, D. 957, no. 12



The bass in c.t.$^{+6}$ chords may skip down a major third to what would be the usual bass of an augmented sixth chord (Example 29.20). The fact that the augmented sixth chord returns to the tonic, however, demonstrates its common-tone function. Nineteenth-century music contains a variety of chromatic third–related vacillations.

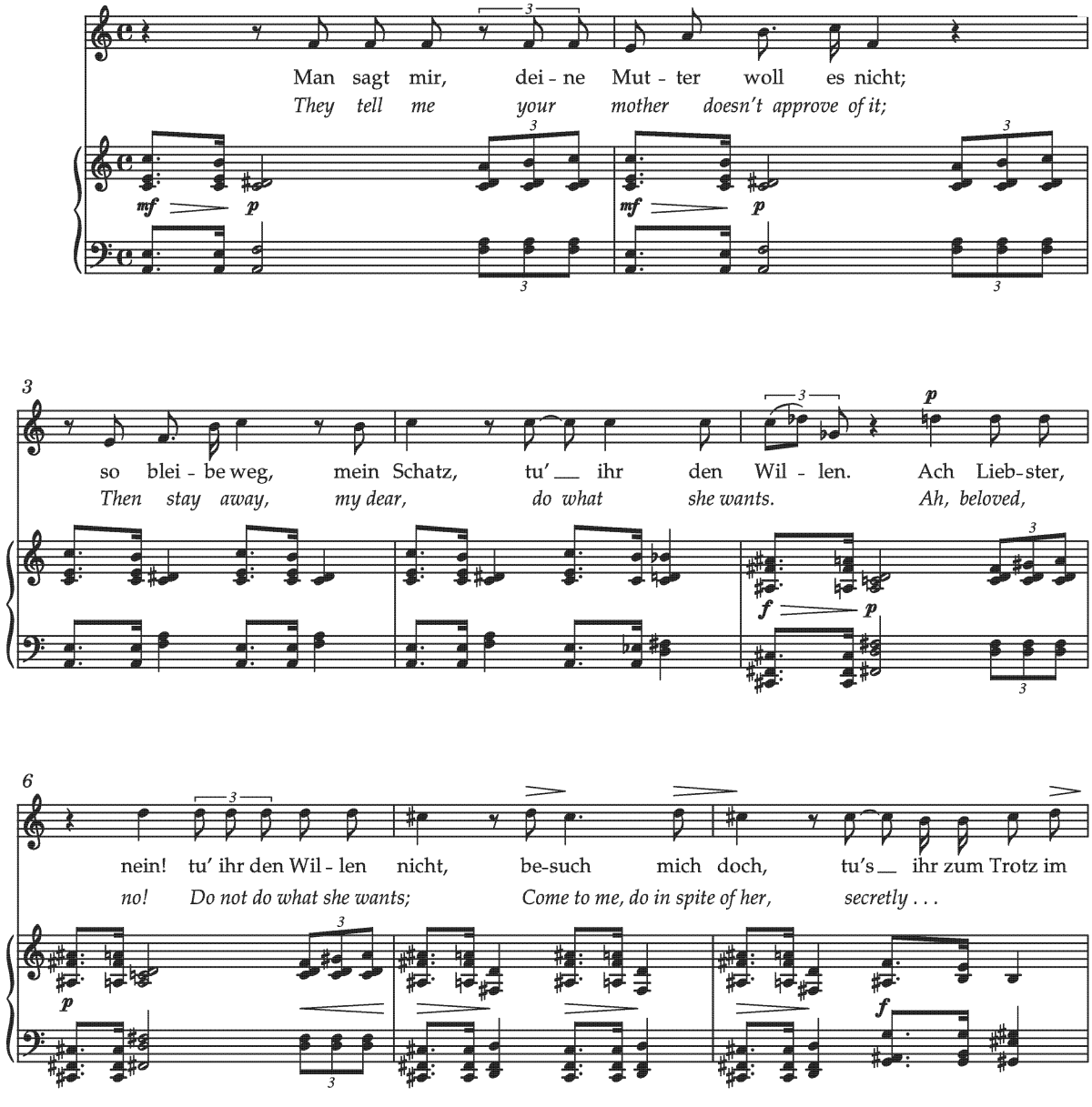
EXAMPLE 29.20 Common-Tone Augmented Sixth



Analytical Interlude

We have learned that composers do not choose harmonies in a capricious manner. Chords both progressive and prolongational play important roles in the harmonic and melodic domains, where they project motives at deep structural levels. We also have seen how harmonic and melodic choices in *Lieder* are often made to project images from the texts. Let's see what new effects are created in late-nineteenth-century songs by the incorporation of these common-tone chromatic harmonies (Example 29.21).

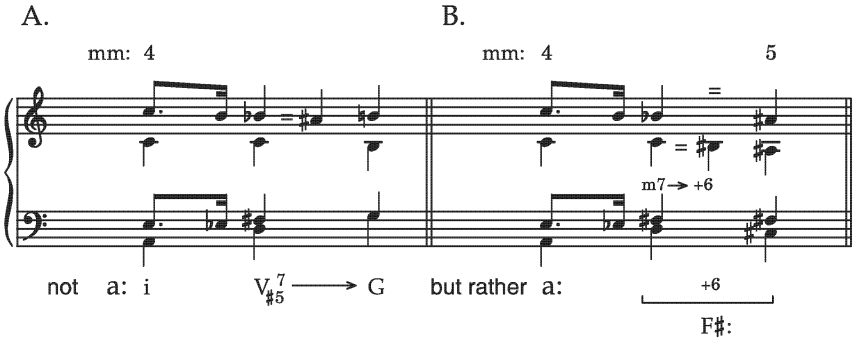
EXAMPLE 29.21 **Wolf, "Man sagt mir, deine Mutter woll' es nicht" ("They tell me your mother doesn't approve of it"), *Italienisches Liederbuch*, no. 21**



The story is simple: A girl teases her lover, saying that because his mother disapproves of their relationship, he should simply stay away. But in the next phrase, the girl contradicts herself and says that her lover should ignore his mother's wishes so that he may secretly visit her even more often. The following analysis reveals how Wolf's musical setting reflects the text.

The key of the song is clearly A minor, in spite of the c.t.$^{+6}$ on beat 2 of the first measure, which creates a neighbor figure above and below the fifth of the tonic harmony. When the first harmonic change occurs in m. 4, an apparent altered V^7 of G major (Example 29.22A) actually functions as an altered augmented sixth chord when it leads to F♯ major (Example 29.22B).

EXAMPLE 29.22 Wolf, "Man sagt . . ." Augmented Sixth Chord Resolution in m. 4, beat 4



The key of F♯ major, with its six sharps, vividly contrasts with A minor's zero sharps. In fact, F♯ major and A minor are nearly as tonally distant as two keys can be. This unusual and very sudden shift occurs at the very point where the girl says, "den Willen" ("do what she wants"). In the very next phrase the girl reverses her proclamation, saying that the boy should ignore his mother's desires and visit her daily. The unexpected tonal shift from A minor to F♯ major could be Wolf's imaginative way of creating a musical analogue that reflects the girl's sudden change of mind.

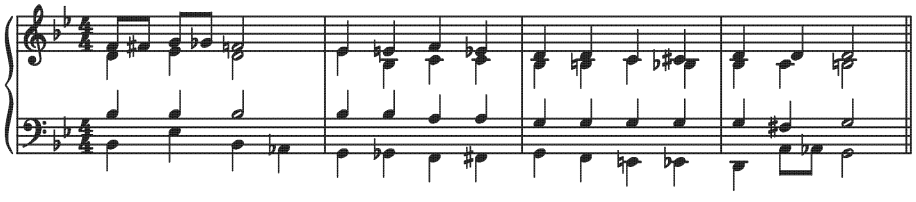
EXERCISE INTERLUDE

ANALYSIS

29.2

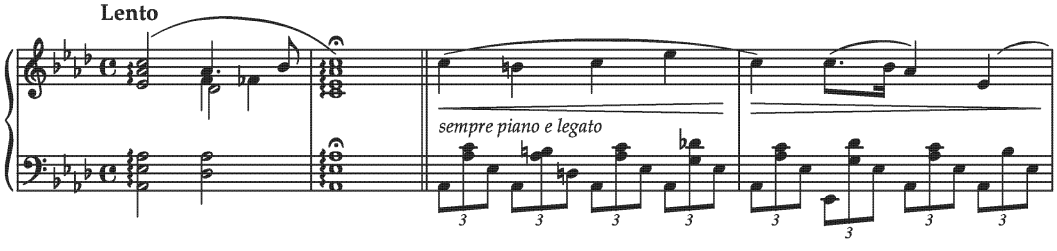
Analyze the following excerpts, which contain augmented triads, altered dominant seventh chords, common-tone diminished seventh chords, and common-tone augmented sixth chords.

A. The ending of this exercise is tonally ambiguous. Discuss.

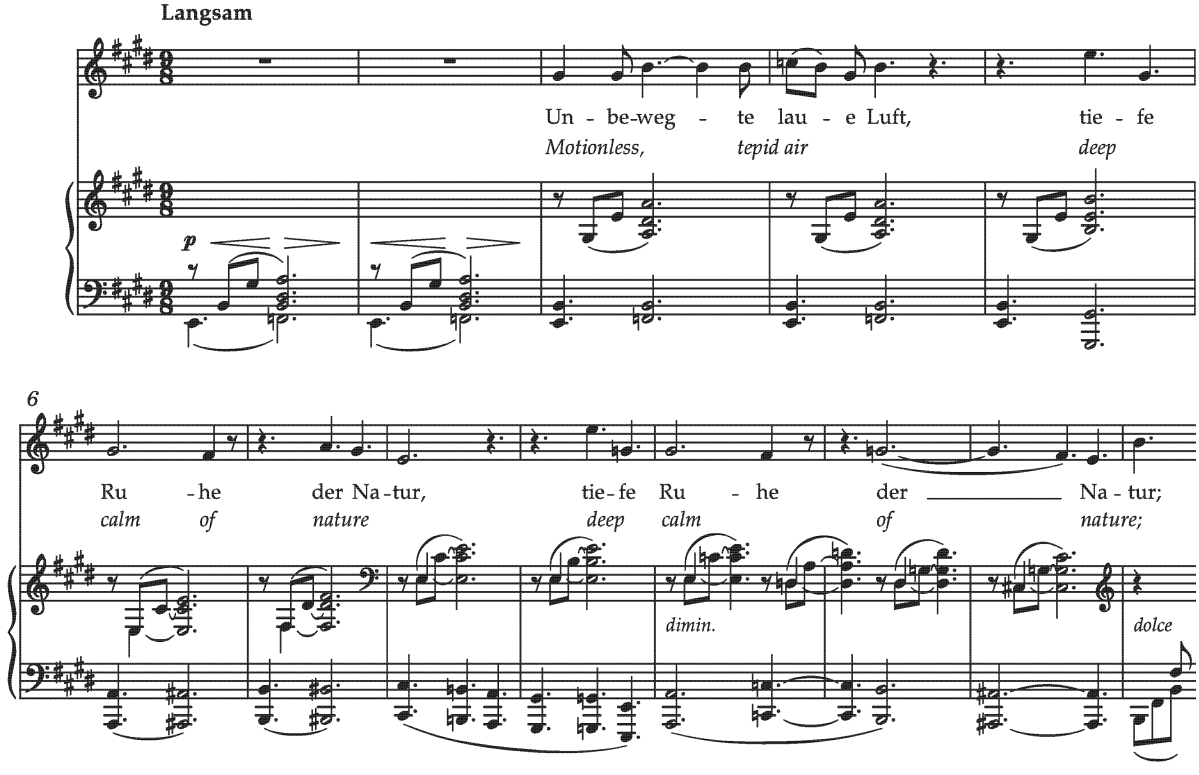


WORKBOOK 1
29.3–29.5

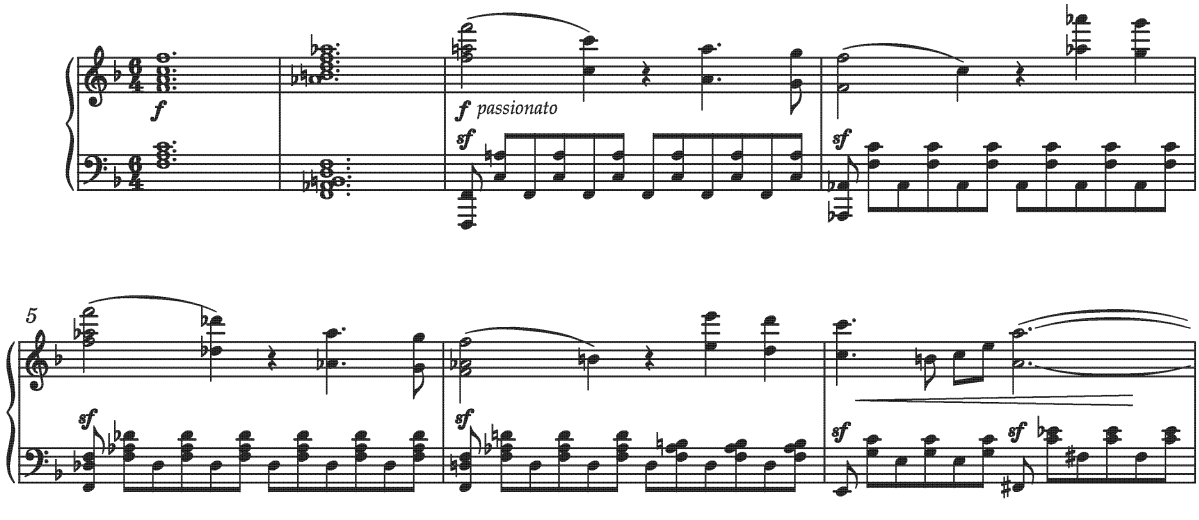
B. Chopin, Nocturne in A♭ major, op. 32, no. 2



C. Brahms, "Unbewegte laue Luft" ("Motionless, Tepid Air"), op. 57, no. 8



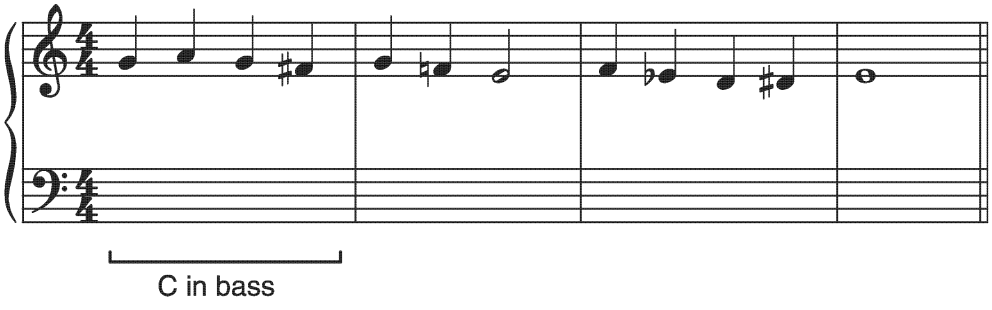
D. Brahms, Symphony no. 3 in F major, op. 90, *Allegro con brio*



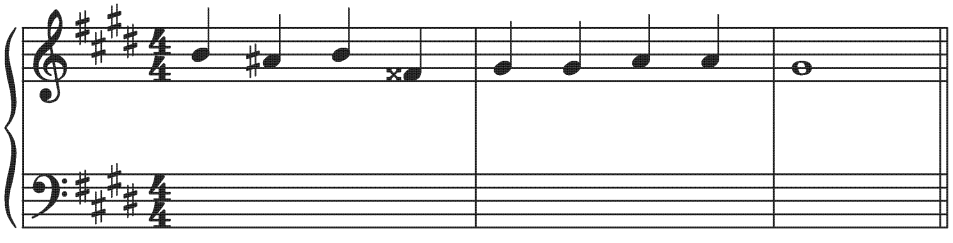
29.3 Melody Harmonization

Set each soprano fragment in four voices, including at least three chromatic chords in Exercise A. You may use modal mixture, applied chords, common-tone harmonies, altered dominant and dominant seventh chords, ♭II chords, and augmented sixth chords. Analyze. For Exercise B, include one of each of the following (but not necessarily in this order): altered dominant, applied dominant, Fr V_3^4, and common-tone diminished seventh chords. Analyze.

A.

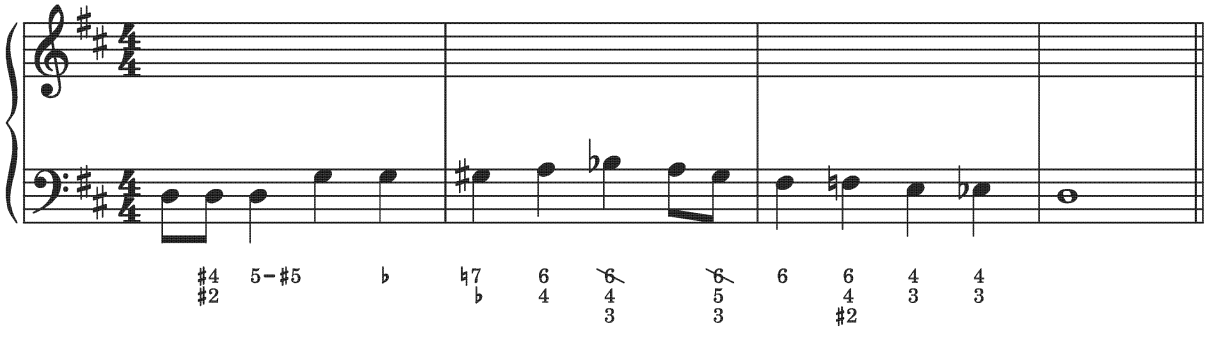


B.



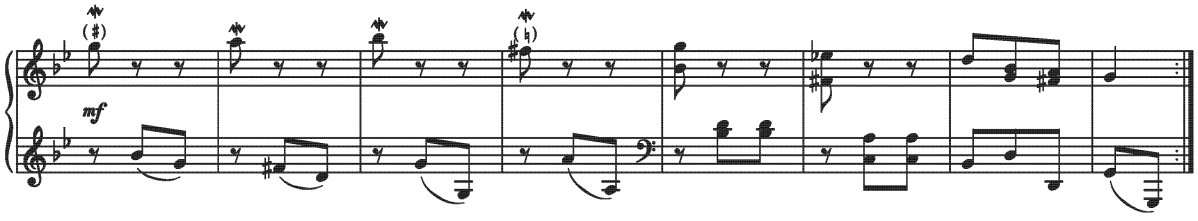
29.4 Figured Bass

Realize the figured bass in chorale style. Provide a two-level analysis.



29.5 Composition

Based on the given antecedent phrase, compose a consequent phrase to create a parallel progressive period. Use the diminished seventh in m. 6 enharmonically to modulate to a minor-third-related key of your choice. This example is taken from Haydn's Divertimento in G major, Hob XVI.11, mm. 33–40.



TERMS AND CONCEPTS

- altered dominant seventh chords
- augmented triad
- chromatic common-tone harmonies
  - common-tone augmented sixth chords
  - common-tone diminished seventh chords
- symmetrical versus asymmetrical relationships