CHAPTER 30

# Melodic and Harmonic Symmetry Combine: Chromatic Sequences

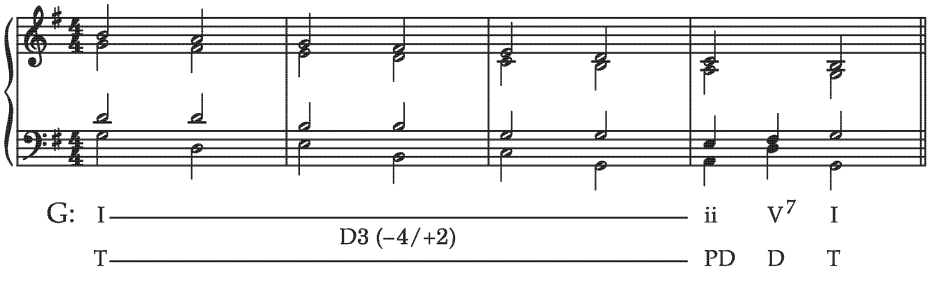
## Distinctions Between Diatonic and Chromatic Sequences

Sequences are paradoxical musical processes. At the surface level they provide rapid harmonic rhythm, yet at a deeper level they function to suspend tonal motion and prolong an underlying harmony. Tonal sequences move up and down the diatonic scale using scale degrees as stepping-stones. In this chapter, we will explore the consequences of transferring the sequential motions you learned in Chapter 17 from the asymmetry of the diatonic scale to the symmetrical tonal patterns of the nineteenth century.

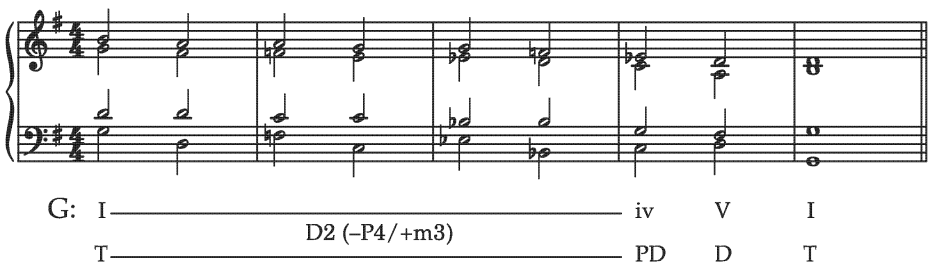
You will likely notice many similarities of behavior between these new chromatic sequences and the old diatonic ones, but there are differences as well. For instance, the stepping-stones for chromatic sequences are no longer the major and minor scales. Furthermore, the chord qualities of each individual harmony inside a chromatic sequence tend to exhibit more homogeneity. Whereas in the past you may have expected major, minor, and diminished chords to alternate inside a diatonic sequence, in the chromatic realm it is not uncommon for all the chords in a sequence to manifest the same quality.

**EXAMPLE 30.1 Comparison of Diatonic and Chromatic Forms of the D3 ("Pachelbel") Sequence**

A.



B.




Consider Example 30.1A, which contains the D3 (−4/+2)—or "descending 5–6"—sequence. The sequence is strongly goal directed (progressing to ii) and diatonic (its harmonies are diatonic to G major). Chord qualities and distances are not consistent, since they conform to the asymmetry of G major. For example, see how the first chord of the model, G major, repeats down a minor third on E minor, while the next repetition begins down a major third on C major.

Example 30.1B illustrates a new chromatic sequence, and its sense of harmonic ambiguity and lack of direction might unsettle you as you hear it. The sequence is ambiguous (its harmonies do not fit into one key), and it is not goal directed (it ends on B♭ major, whose function as ♭III becomes clear only after the final strong cadence in G major). The two-chord model is identical to that of Example 30.1A, but the copies contain numerous chromatic alterations that result in harmonies foreign to G major. The model and its repetitions contain all *major* triads and each repetition occurs down a *major* second. It is as if the copying mechanism has been perfected so that every repetition reproduces exactly the harmonic pattern of the model.

The sequence in Example 30.1B is a type of **chromatic sequence**. Chromatic sequences are distinguished from diatonic sequences by the fact that their main chords—those chords we use to reckon the first portion of a sequence label such as D2 or D3—contain altered scale degrees. (*Note*: The designation *chromatic* has nothing to do with the mere presence of accidentals; many of the applied-chord sequences seen in Chapter 18 contain accidentals, yet they are still diatonic sequences because their main chords are diatonic.)

Furthermore, chromatic sequences maintain strictly both chord quality and intervallic distance between repetitions, whereas diatonic sequences conform to the whole-step and half-step characteristics of the diatonic key. Because these chromatic sequences divide the octave into the same-sized intervals (such as the major seconds in Example 30.1B), they avoid the shifting whole steps and half steps that precipitate the goal-directed motion of traditional, diatonic sequences.

In studying the chromatic forms of the three common sequences we learned in Chapter 17, we shall see that the basic contrapuntal motion remains the same but that the overall root movements are often altered. For example, the diatonic sequence in Example 30.1A is labeled D3 (−4/+2) since the root movements change to conform to the diatonic key. The chromatic sequence in Example 30.1B differs in that the root motion always contains a

P4 and a m3 in a repetition; this creates a M2 descent between repetitions, which is reflected in the label D2 (−P4/+m3). *We distinguish chromatic sequences from diatonic sequences by including the specific interval motions within the parenthetical portion of the label.*

## Chromatic Sequence Types

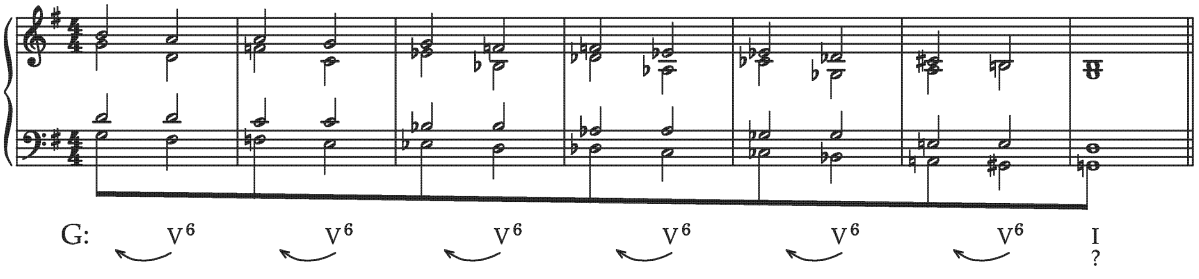
### *The D2 (–P4/+m3) Sequence*

Both the diatonic D3 (−4/+2) sequences and the chromatic D2 (−P4/+m3) sequences are related by the underlying 5–6 motion that holds each sequence together. In Chapter 17 we learned that the diatonic form most often occurs with alternating six-three chords that clearly reveal the underlying 5–6 motion.

Example 30.2 contains the D2 (−P4/+m3) sequence in its alternating $\frac{6}{3}$ form. The "?" that appears under the tonic indicates that it does not sound like an arrival because of the remarkable ambiguity of the sequence.

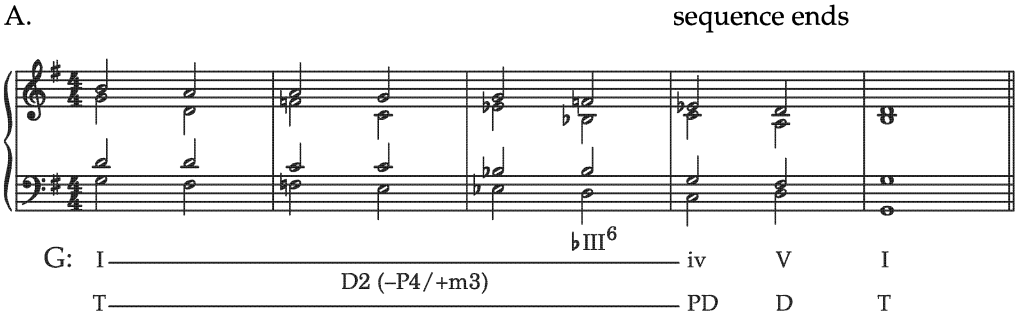
This sequence carves out an intervallic path consisting exclusively of whole tones (or their enharmonic equivalent) and divides the octave symmetrically into six major seconds (G–F–E♭–D♭–C♭–A–G). Note especially how the whole-tone path of this sequence skips over the dominant D as the line moves from the E♭ to D♭ in mm. 3–4. As it stands, the sequence is barely tonal. To reintroduce tonal focus, one must break off the sequence after the repetition of the pattern on ♭VI. From here it will lead to the pre-dominant function. (Example 30.3 shows two ways of doing this.)

**EXAMPLE 30.2 Chromatic D2 (−P4/+m3) Sequence**

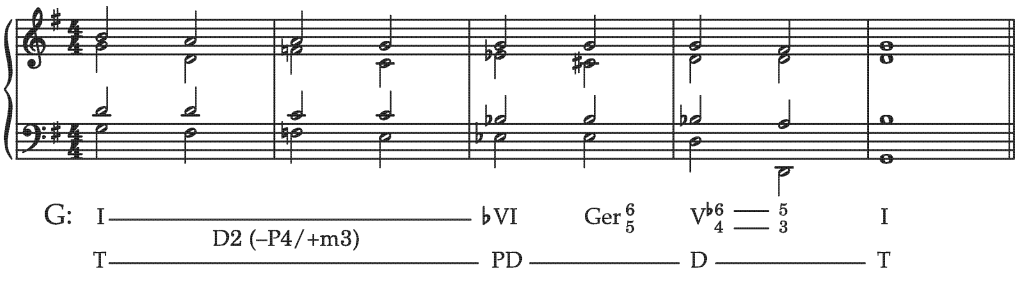



**EXAMPLE 30.3 Chromatic D2 Sequence in Context**

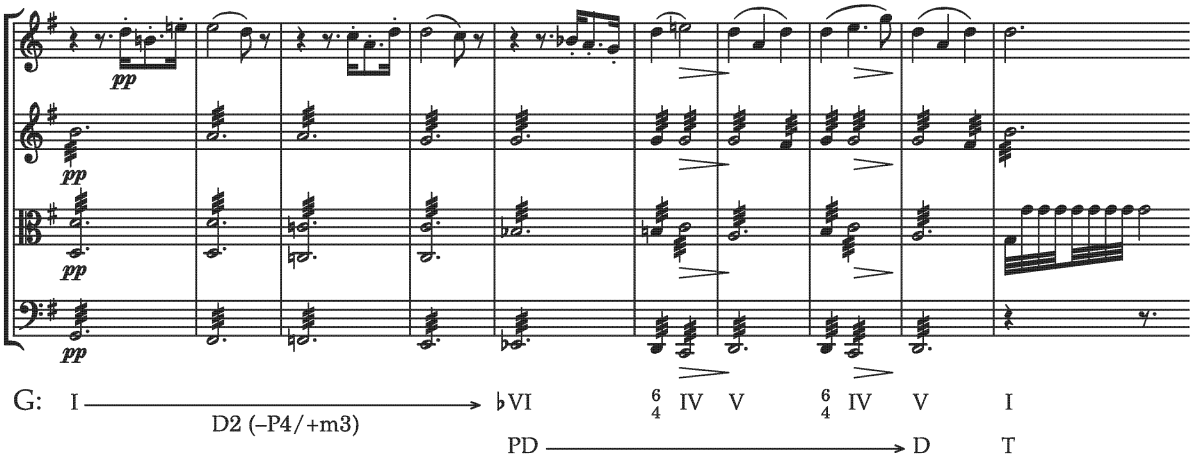
A.



B. sequence ends



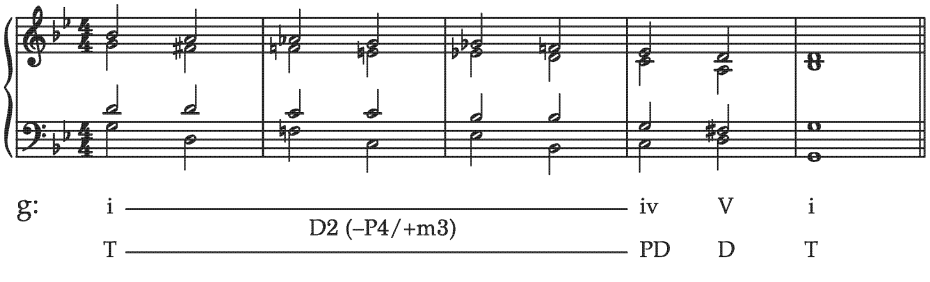

C. Schubert, String Quartet in G major, D. 887, *Allegro molto moderato*



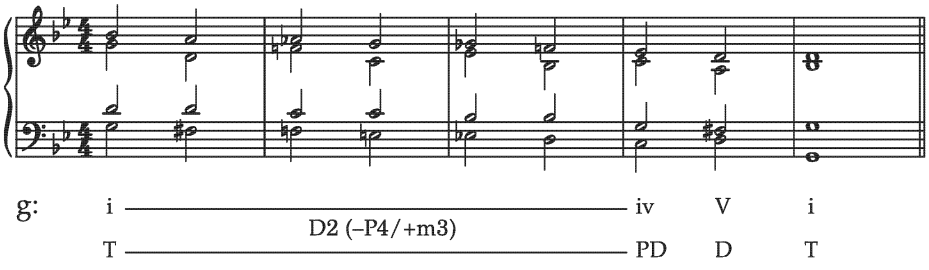

In general, chromatic sequences occur more often in the major mode than in the minor. Example 30.4 demonstrates the minor-mode form of the chromatic D2 (−P4/+m3) sequence. Example 30.4C, from a particularly evocative passage from a Franz Liszt piano piece, contains a phrase and its repetition down one octave using the chromatic D2 sequence. Each phrase begins and ends on $I^6$ (with B♮ in the bass), but between these stable points, the chromatic falling pattern etches out a whole-tone pattern filled in by passing tones (**B**–B♭–A♭–F♯–E–D–C–**B**). Notice that the second half of each phrase is diatonic, but Liszt is able to maintain the whole-tone motion in spite of the prevailing harmonic asymmetry.

## EXAMPLE 30.4 Chromatic D2 in Minor

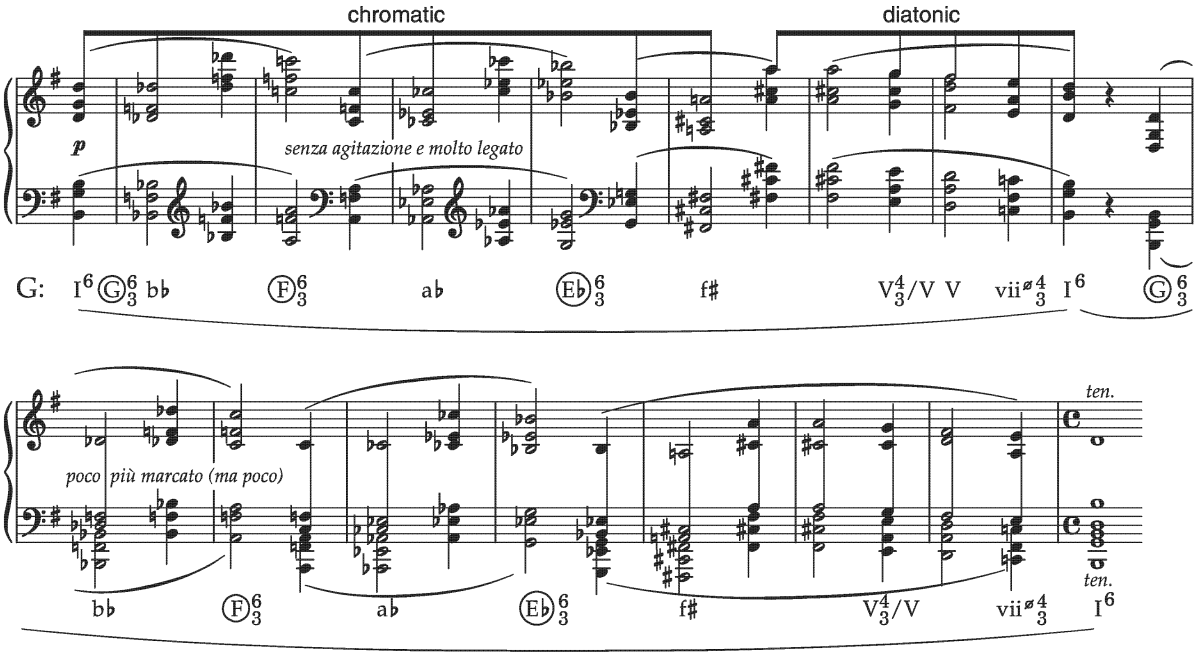
A. Root Position



B. Alternating Six-Three Chords




C. Liszt, "Aux cypres de la Villa d'Este I: Threnodie" ("To the cypresses of the Villa d'Este"), from *Anneés de Pèlerinage* (*Years of Pilgrimage*); Third Year



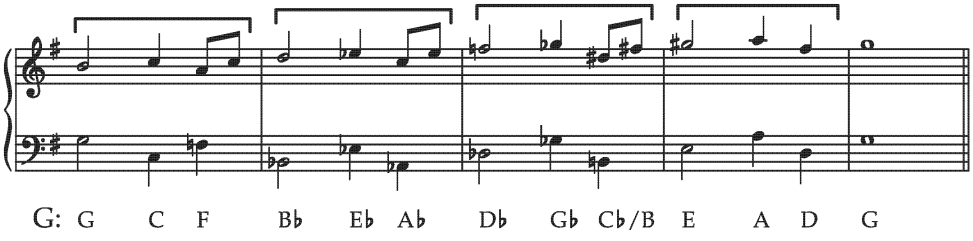

### *The Chromatic Forms of the D2 (–5/+4) Sequence*

Recall that the D2 (−5/+4) (falling-fifth) sequence is asymmetrical because it contains perfect fifths and a single tritone. To become symmetrical, the chromatic D2 (−P5/+P4) sequence contains exclusively perfect fifths. A secondary difference between the two forms of the sequence concerns length of time required to cycle back to tonic: A complete statement of the *diatonic* D2 (−5/+4) sequence requires seven diatonic steps, while a complete statement of the *chromatic* form requires 12 chromatic steps. This provides a compositional problem of sorts for the D2 (−P5/+P4) sequences, given that a complete statement of the sequence requires so many repetitions.

Composers use two techniques to avoid sequential stasis: (1) partial statements of the series (only one or two repetitions) and (2) three or more fifth-related chords within the model, (rather than two) in order to reduce

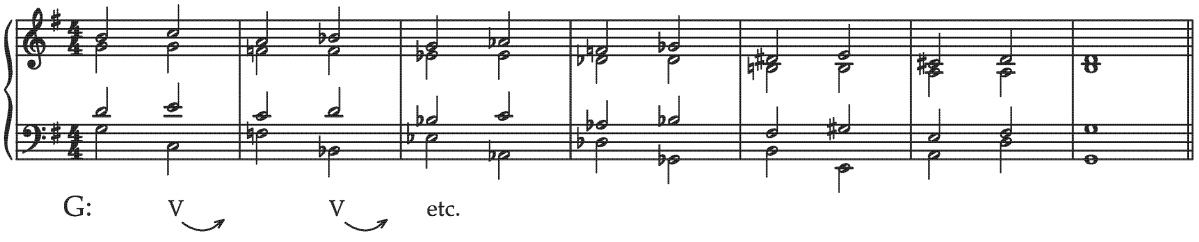
the number of repetitions. For example, a three-chord model would require only three repetitions to make it all the way through this chromatic sequence's 12 chordal members (Example 30.5).

**EXAMPLE 30.5 Chromatic D2 (Falling-Fifth) Sequence (three-chord model)**




Now, let's compare this falling-fifth sequence to the other chromatic D2 sequence we have just studied. Both the D2 (−P4/+m3) and the D2 (−P5/+P4) fall by major second, but the latter is more goal directed, because it moves more naturally by descending perfect fifths. The D2 (−P4/+m3) sequence contains back-relating dominants, and the sequence itself never lands on the dominant V chord. To feel this distinction, try playing Examples 30.2 and 30.6 while noting the direction of the arrows.

**EXAMPLE 30.6 Chromatic D2 (Falling-Fifth) Sequence (two-chord model)**




It is also possible to have a chromatic sequence descending by *minor seconds*, D2 (−P5/+A4). This is accomplished by following the perfect-fifth descent by a tritone ascent. For example, the perfect-fifth bass pattern of a whole-tone D2 (−P5/+P4):

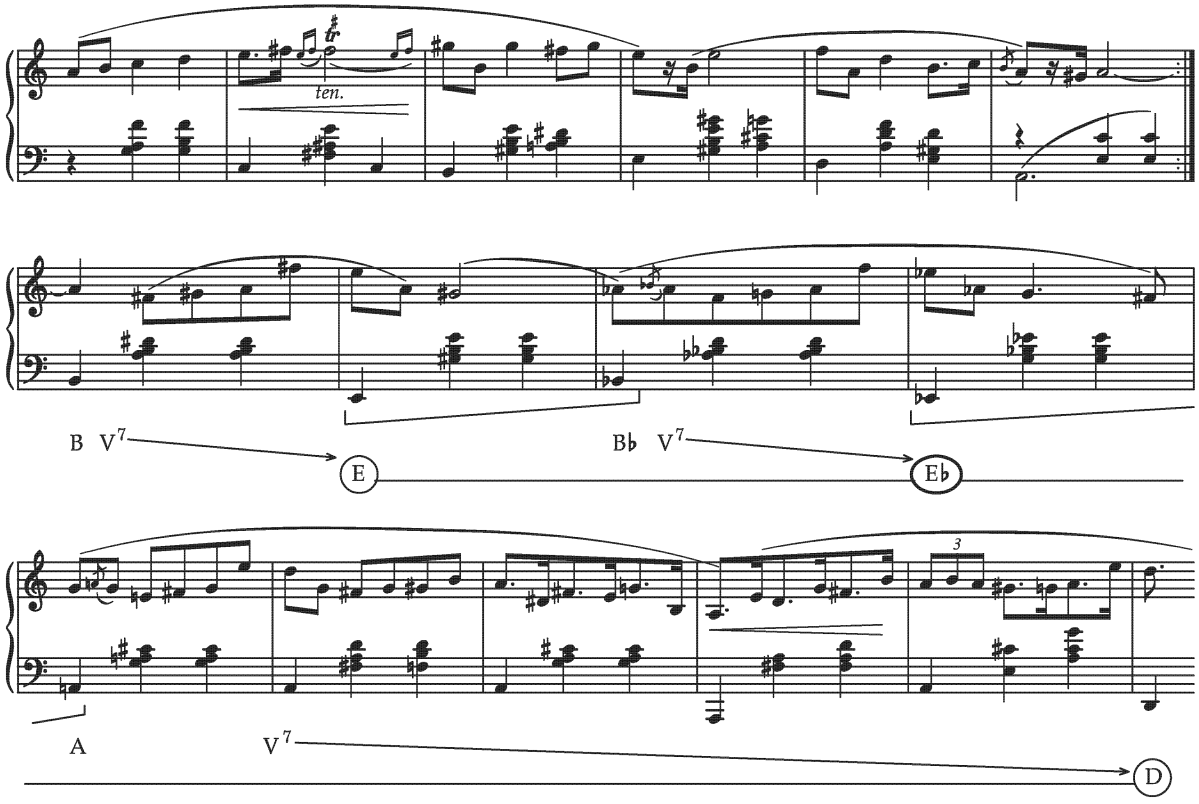
**C** F **B♭** E♭ **A♭** D♭ **G♭** C♭/B **E** A **D** G C

would become:

**C** F **B** E **B♭** E♭ **A** D **A♭** D♭ **G** C

Example 30.7 contains such a pattern, beginning on B. Members of the stepwise chromatic descent are circled; the tritone leaps between them are bracketed.

**EXAMPLE 30.7 Chopin, Mazurka in A minor, op. 59, no. 1, BI 157**

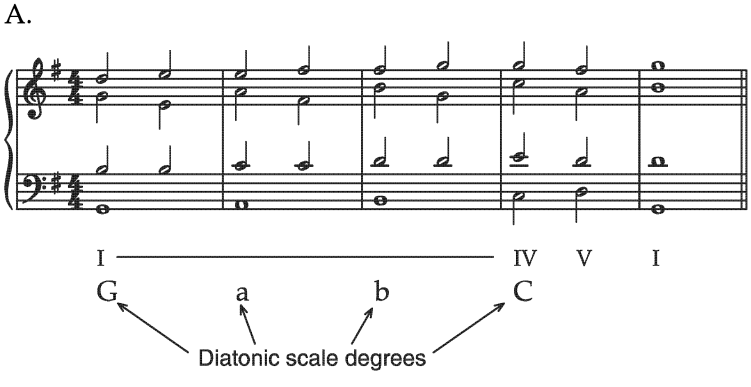



### *The Chromatic Forms of the A2 (–3/+4) Sequence*

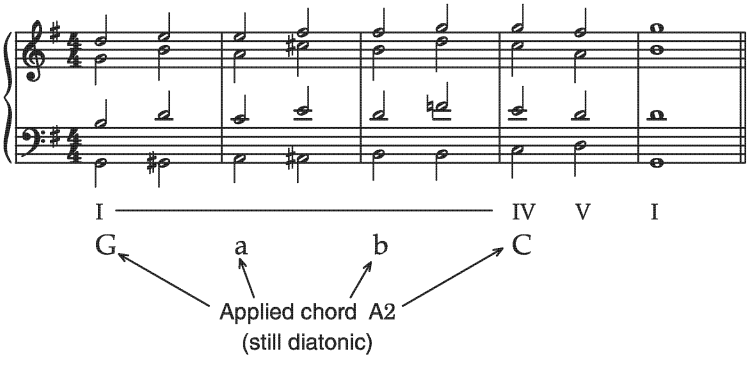
Like the diatonic A2 (−3/+4) sequence, the chromatic forms derive from the contrapuntal 5–6 motion. Let's examine how the diatonic form evolved into the chromatic, symmetrical form. Example 30.8 reviews two forms of the diatonic A2 sequence: the simple diatonic form and a variation that uses alternating applied chords to tonicize briefly each diatonic scale degree. These sequences are diatonic because the structural chord of each two-chord repetition falls on a diatonic scale degree that is diatonically harmonized.

**EXAMPLE 30.8 Diatonic and Applied A2 Sequences**

A.



B.



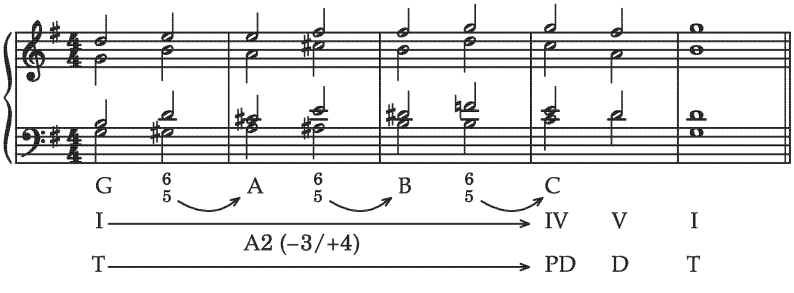

Two chromatic variants of this sequence are shown in Example 30.9.

Variant 1: The first sequence lies somewhere between standard diatonic sequences and chromatic sequences: The root of every chord is diatonic (asymmetrical), but the structural chord of each repetition is chromatically altered (symmetrical).

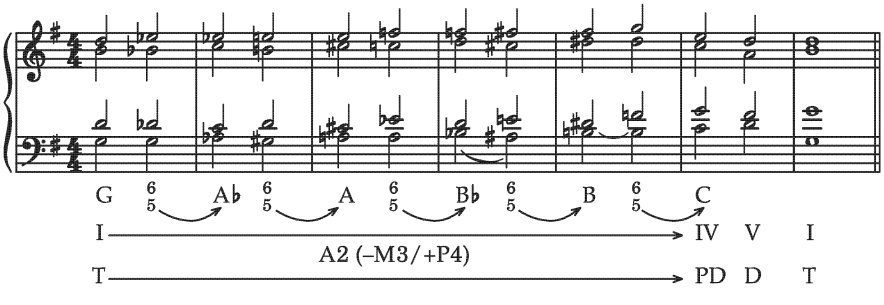
Variant 2: The second sequence is fully chromatic, A2 (−M3/+P4): The structural first chord of every repetition is major, and the sequence ascends by half step. Although the bass is sustained through the two-chord repetition, every second chord is transformed into an applied $\frac{6}{5}$ chord. This is reflected in the enharmonic respelling of the bass in mm. 2 and 4, showing the leading-tone function of the bass.

## EXAMPLE 30.9 Chromatic A2 Sequences

Variant 1:

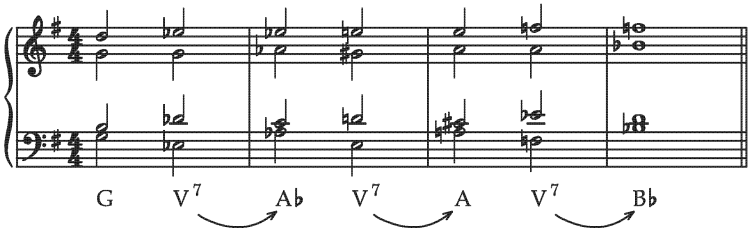



Variant 2:



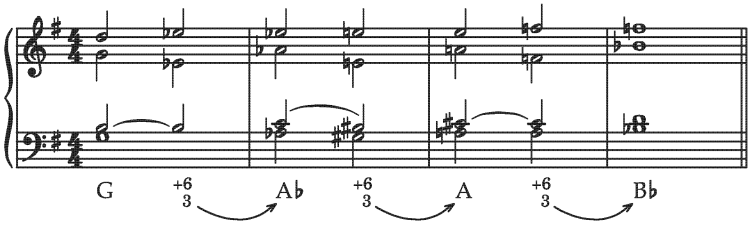

Example 30.10 demonstrates how the applied chords may appear in root position, a technique often used in popular music and at baseball games.

**EXAMPLE 30.10 Chromatic A2 in Root Position**




Finally, a second sustained common tone between the first chord and its transformation into a dominant results in an augmented triad on the second chord (Example 30.11).

**EXAMPLE 30.11 Chromatic A2 with Augmented Triads**




## Other Chromatic Step-Descent Basses

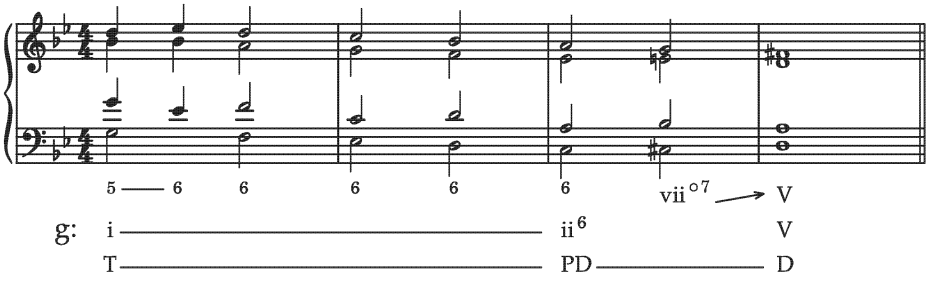
In addition to the usual two-chord sequential models that become chromatically descending sequences, it is possible to descend chromatically using a one-chord pattern, although such descents are not true sequences (as we learned in Chapter 17). Three common sonorities are used in such chromatic descents: six-three chords, diminished seventh chords, and augmented sixth chords.

### *Six-Three Chords*

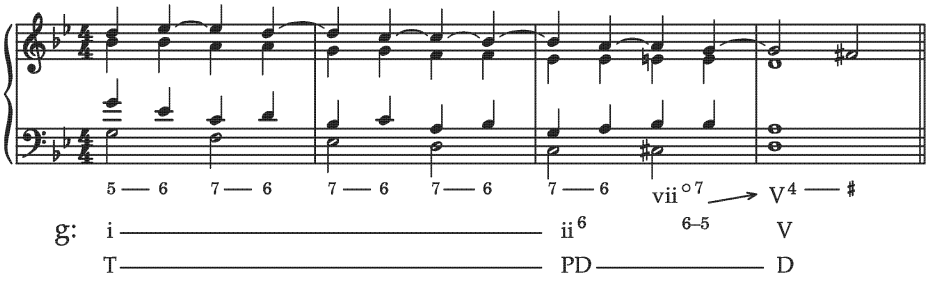
The diatonic descending six-three chord pattern (Example 30.12A), with 7–6 suspensions (Example 30.12B), can be transformed into a chromatic motion (Example 30.12C). The dissonant seventh usually occurs over a chromatic bass note and resolves over a diatonic bass note. This alignment of dissonance with chromaticism (and consonance with diatonicism) is common. Furthermore, the metrically emphasized beats on which the suspensions occur are harmonized by various types of seventh chords, making this pattern particularly expressive and useful in slower tempo pieces with emotional texts. In Chopin's *Impromptu*, a chromatic six-three motion extends tonic before leading to the pre-dominant (Example 30.12D).

## EXAMPLE 30.12 Chromatic Step-Descent Bass Sequences

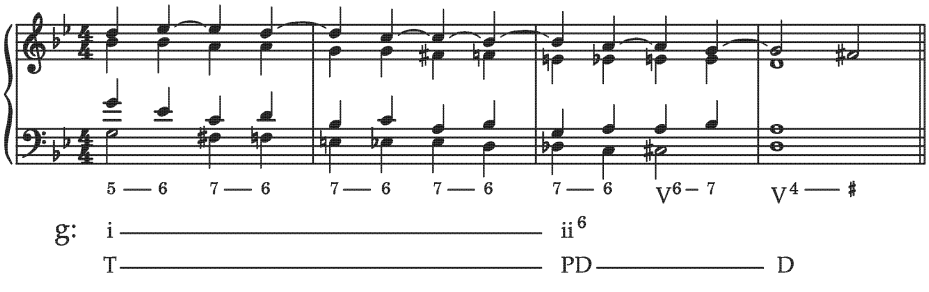
A.



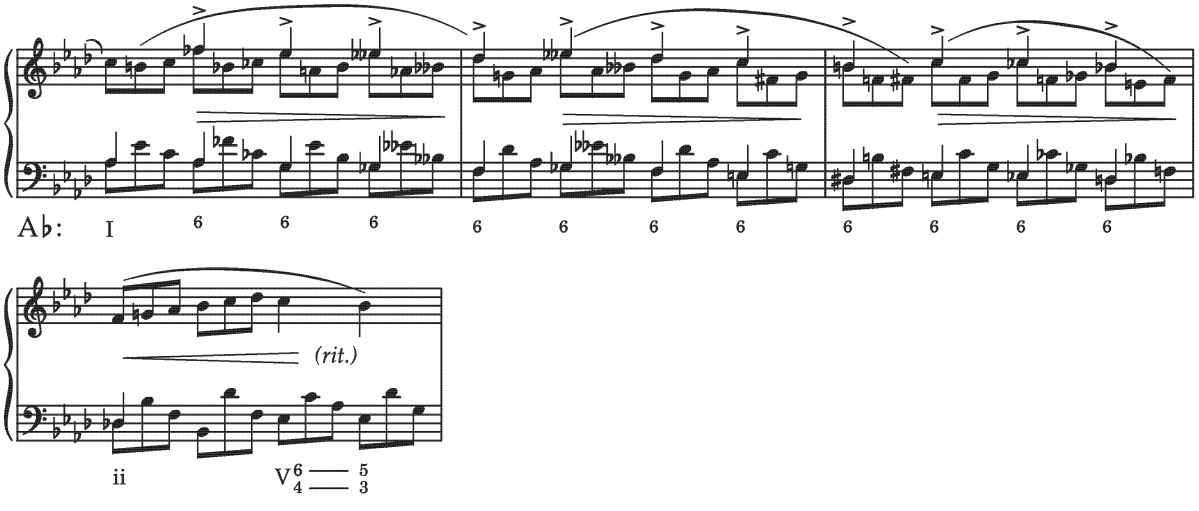

B.



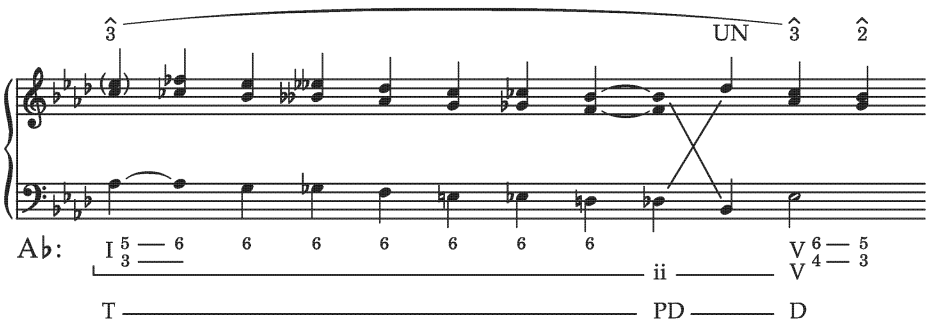

C.




D1. Chopin, Impromptu in A♭



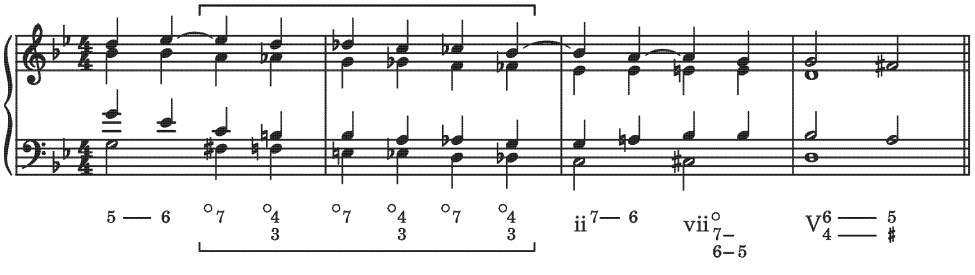
D2. Reduction of Chopin




### *Diminished Seventh Chords*

The diminished seventh chord may be used in descending chromatic sequences, such as the DM2 (+P4/−P5) sequence in Example 30.13. The notation in this example reflects careful voice-leading practice, but it is not possible aurally to differentiate root-position and inverted diminished seventh chords (due to the symmetry of the chord). Rather, the sequence sounds like a stream of root-position diminished seventh chords.

**EXAMPLE 30.13 Parallel Diminished Seventh Chords**

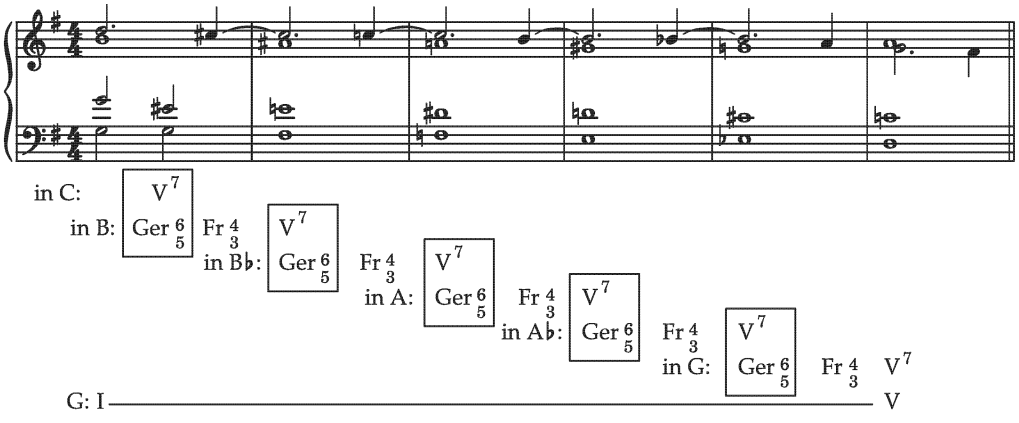


### *Augmented Sixth Chords*

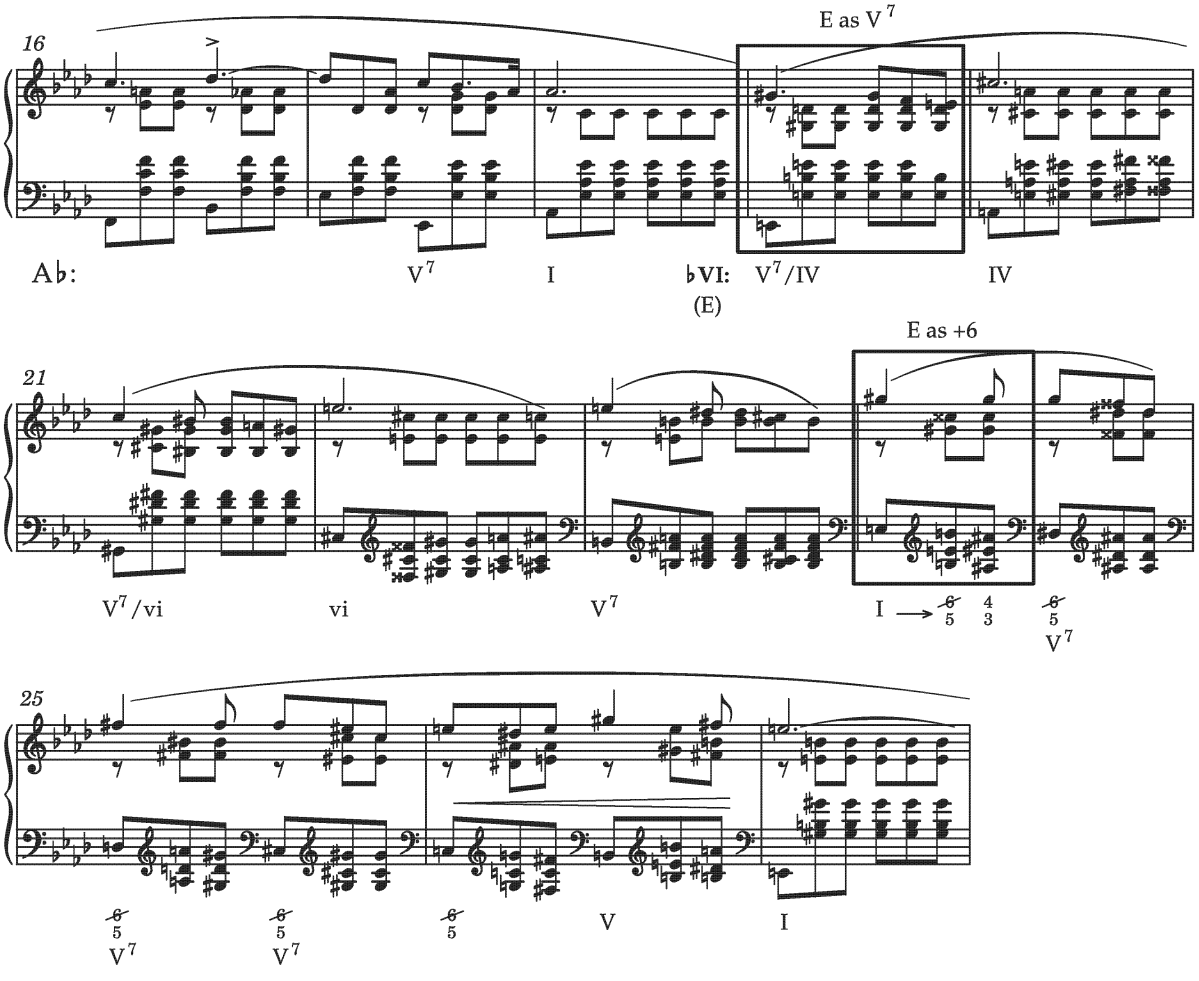
Example 30.14A illustrates the potential ambiguity between the German sixth and the dominant seventh chords. Without seeing the score, the listener will probably assume that these are streams of dominant seventh chords with an anticipation in the soprano voice. Yet one might also hear a descending PD–D progression, resulting in a descending series of keys related by half step. The analysis below Example 30.14A shows how $V^7/IV$ (C) becomes a German sixth, a technique that we already know effectively lowers the temporary tonal center a half step. Notice that this PD–D progression is clarified at the end of each measure by the transformation of the ambiguous German sixth to the harmonically clearer French sixth. The French sixth's lowered fifth also avoids parallel fifths, in that it anticipates the perfect fifth of the following dominant seventh. Through all of this sequencing, the real underlying motion is from tonic to dominant in G major. Chopin uses this pattern in Example 30.14B.

## EXAMPLE 30.14 Descending Augmented Sixth and Dominant Seventh Chords

A.




B. Chopin, Prelude in A♭ major, op. 28



## Writing Chromatic Sequences

WORKBOOK 1
30.1–30.3

Although there are no new guidelines for writing chromatic sequences, the following issues arise.

1. Use enharmonic notation instead of writing double flats or double sharps.
2. Like diatonic sequences, chromatic sequences usually break off at the pre-dominant, whether the sequences rise or fall.
3. Chromatic sequences require that copies maintain the model exactly—both the chord quality and voicing.

## EXERCISE INTERLUDE

### ANALYSIS

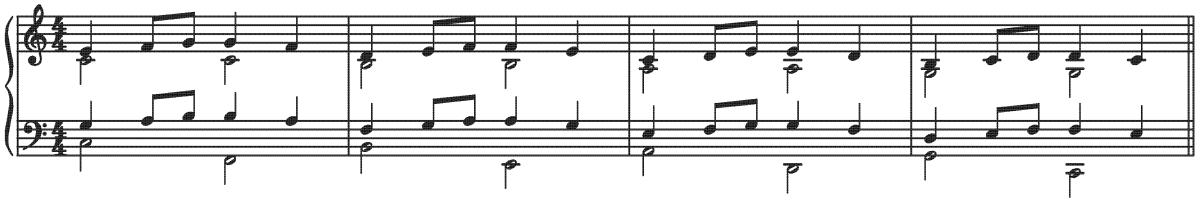
**30.1**

Analyze the following sequences. Your choices are:

1. descents by seconds, thirds, and streams of six-threes, diminished sevenths, and augmented sixths
2. ascents by seconds

You may also encounter examples of diatonic asymmetrical sequences. Bracket each sequence and label it. Then circle the notes of the outer-voice model and each repetition, ignoring any embellishing tones.

A.



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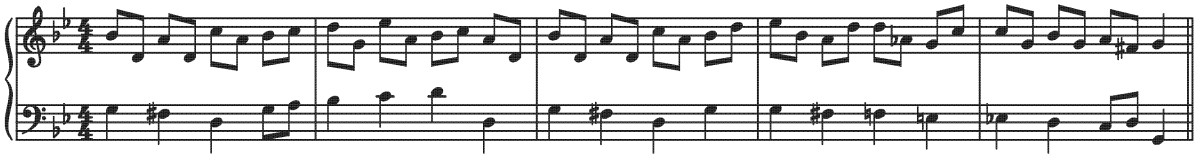
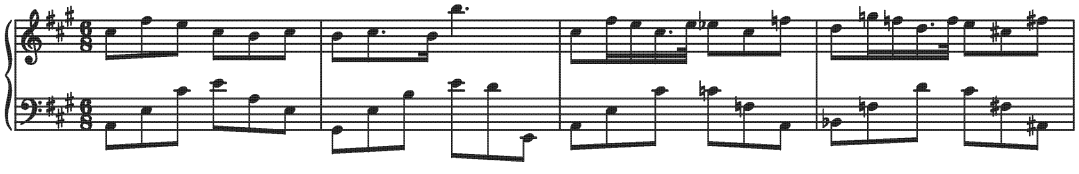
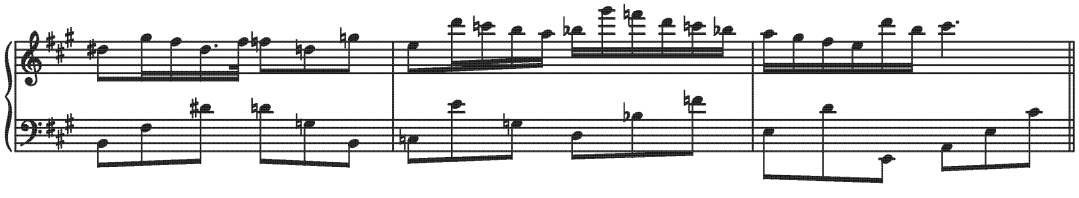
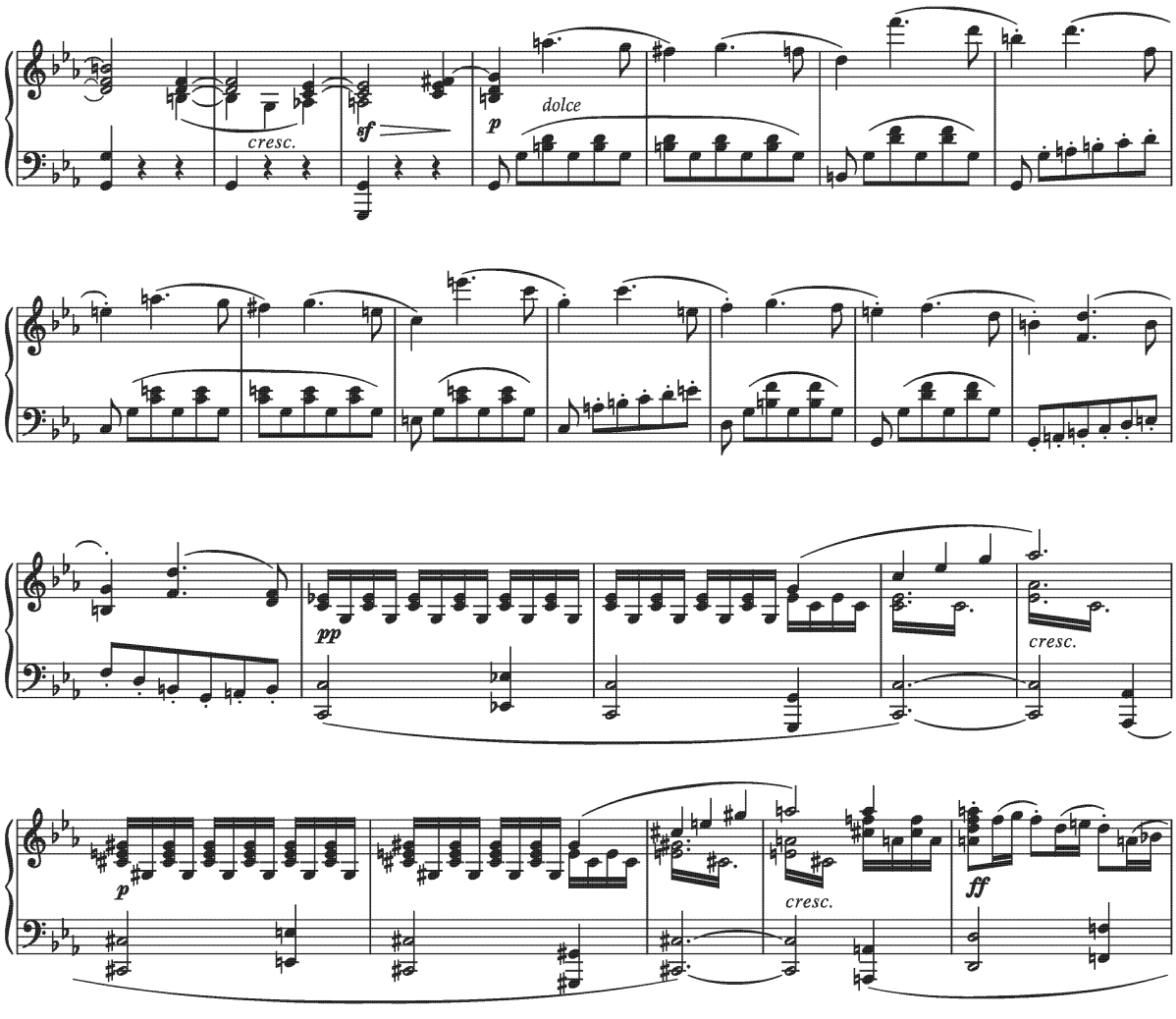


C.

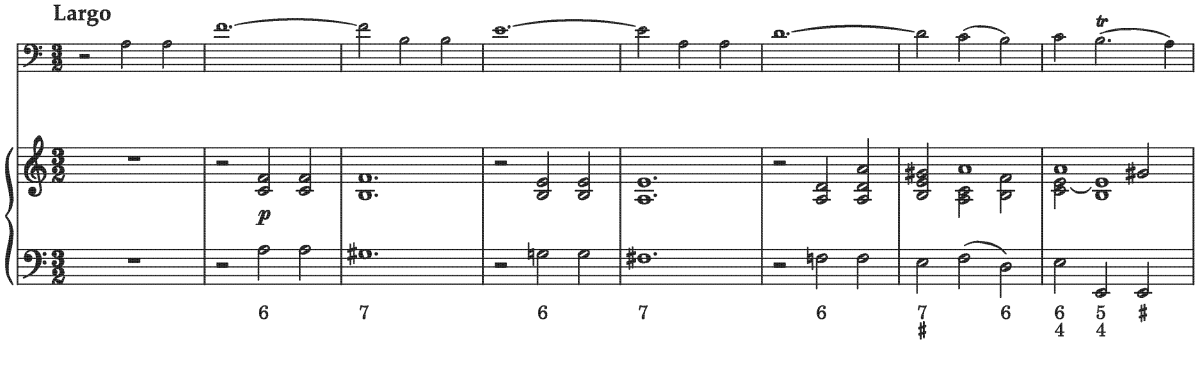




D. Beethoven, Symphony no. 3 in E♭ major, "Eroica," op. 55, *Allegro con brio*




E. Marcello, Lament in G minor for Cello and Continuo



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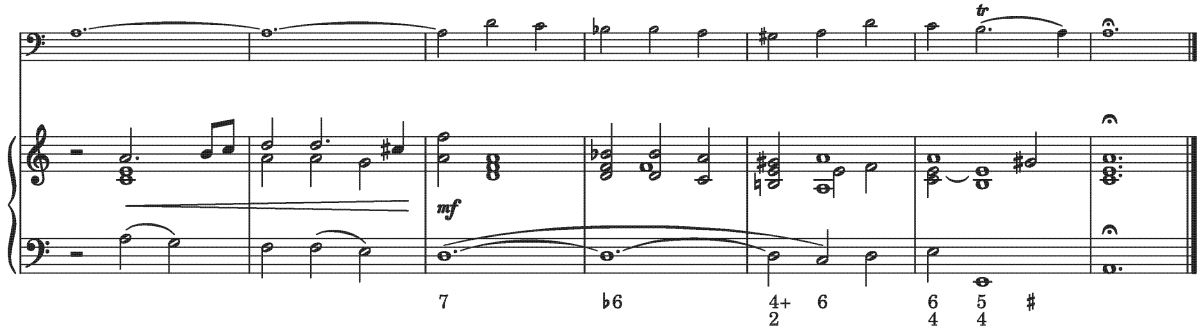
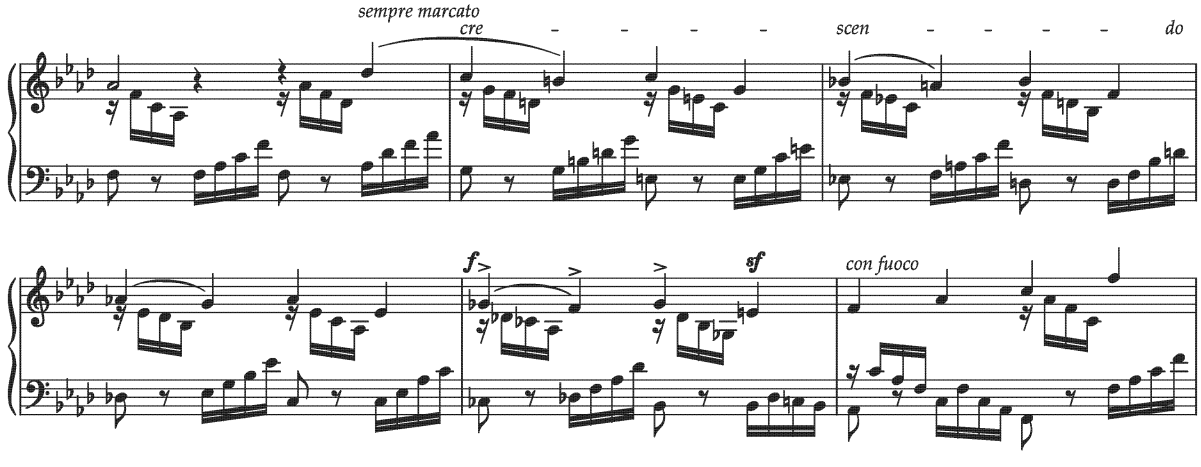


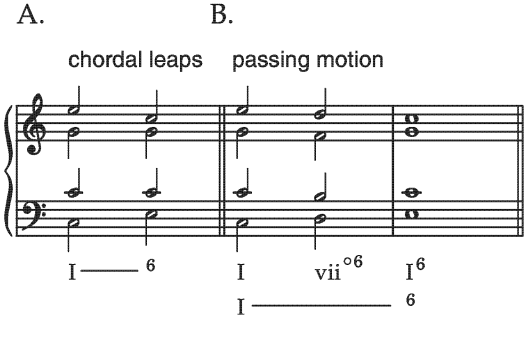

F. Mendelssohn, Etude in F minor, WoO1




## Chromatic Contrary Motion

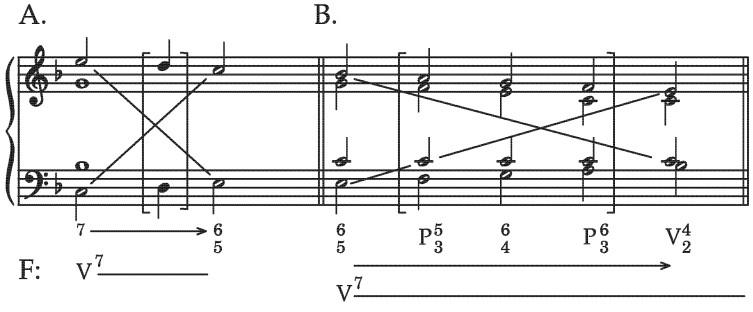
We have learned many ways to extend an underlying harmony using contrary motion. We began with the chordal leap, which results in a voice exchange with no intervening chords (Example 30.15A). Next we added passing chords, such as vii°$^{6}$, V$^{4}_{3}$, and vii°$^{6}_{5}$ (Example 30.15B).

**EXAMPLE 30.15 Diatonic Voice Exchange**



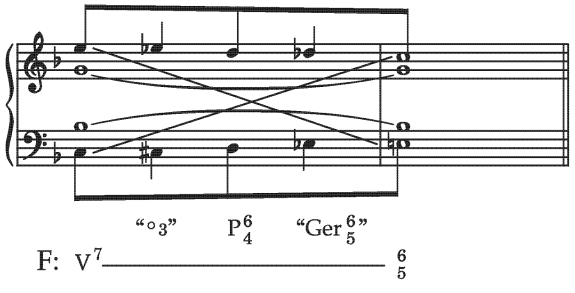
We can extend not only consonant triads but also dissonant harmonies—most often a dominant seventh chord—by contrary motion. The **dissonant prolongation** spans a third in Example 30.16A and a tritone in Example 30.16B. Notice how little the inner voices move.

## EXAMPLE 30.16 Voice Exchange Using Diatonic Passing Chords




In these preliminary examples, it is easy to see what harmony is prolonged because the outer-voice counterpoint is diatonic. Contrary-motion expansions containing chromaticism, in contrast, manifest a larger degree of tonal ambiguity. Example 30.17, demonstrates the prolongation of a dominant seventh chord with outer voices moving by half step. The beams show the underlying diatonic stepwise motion; the nonfunctional $\text{Ger}^7$ and $\text{Ger}^6_5$ act as passing chords filling the space between the diatonic chords. This densely chromatic progression works well because the inner voices are able to remain stationary.

## EXAMPLE 30.17 Voice Exchange Using Chromatic Passing Chords

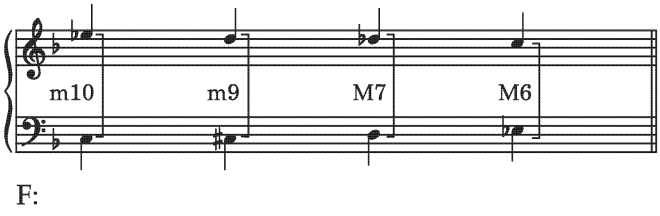



It is not a matter of luck that these particular soprano and bass lines work well together in contrary motion. For comparison, let's consider two lines that move in contrary motion starting from a minor tenth rather than a major tenth (Example 30.18). Almost from the beginning, the counterpoint is flawed. There is no suitable way to harmonize the minor ninth or the major seventh. In contrary-motion chromatic lines, the intervals with an even number of half steps are best harmonized: unison, M2, M3, tritone, m6, m7, and their compound-interval counterparts.

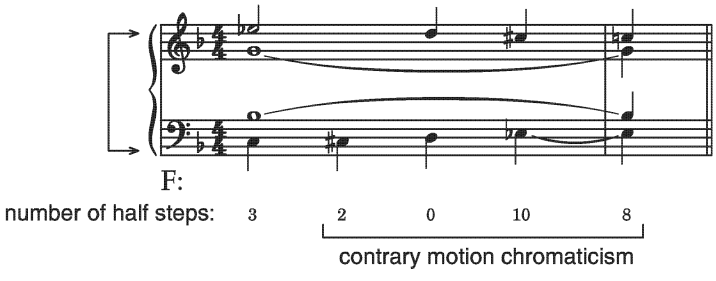
Of course, it is still possible to use contrary-motion chromaticism even if the initial interval does not comprise an even number of half steps. All it

requires is a bit of compositional adjustment: Sustain one of the voices while the other ascends or descends by half step, which will form an even interval that can continue in contrary motion (Example 30.19).

**EXAMPLE 30.18 Problematic Contrary Motion Resulting from "Odd" Intervals**

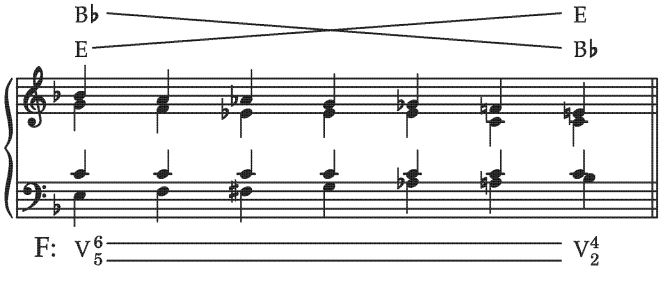



**EXAMPLE 30.19 Transforming Odd Intervals into Usable Even Intervals**



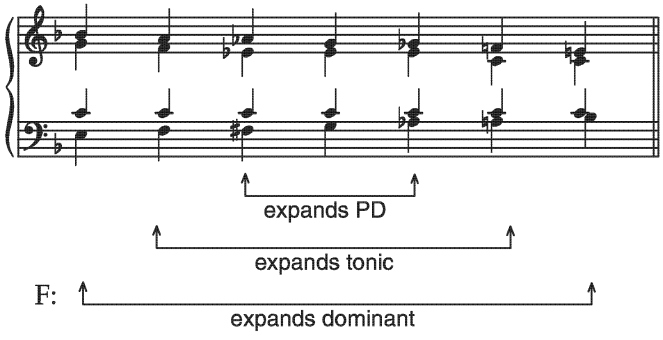

Examples 30.16 and 30.17 showed expansions of a dominant seventh chord—from $\frac{6}{5}$ to $\frac{4}{2}$ and from 7 to $\frac{6}{5}$ respectively. Example 30.20 expands the previous models by demonstrating how a $\frac{6}{5}$ to $\frac{4}{2}$ tritone can be expanded chromatically in a seven-chord progression.

**EXAMPLE 30.20 Tritone Voice Exchange Using Chromatic Passing Chords**




Notice that when we use these sequences, it is possible to begin and end the contrary motion at any point in order to prolong different diatonic entities. Example 30.21 shows how we can prolong tonic or a °3/+6 complex by using different spans of the sequence; depending on which portion is used, the chromatic contrary motion can prolong tonic, pre-dominant, or dominant.

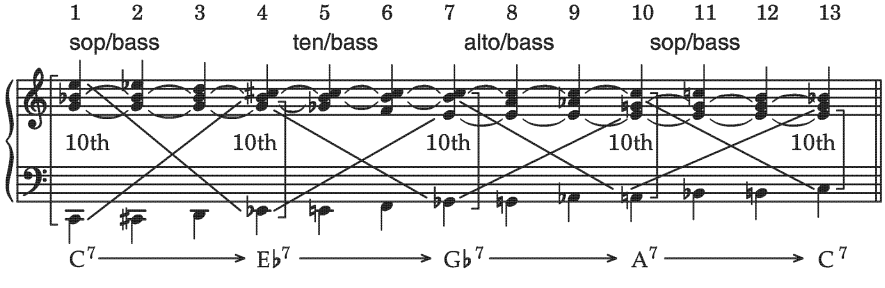
**EXAMPLE 30.21 Expanding Tonic, Pre-Dominant, and Dominant Functions**




### *The Omnibus*

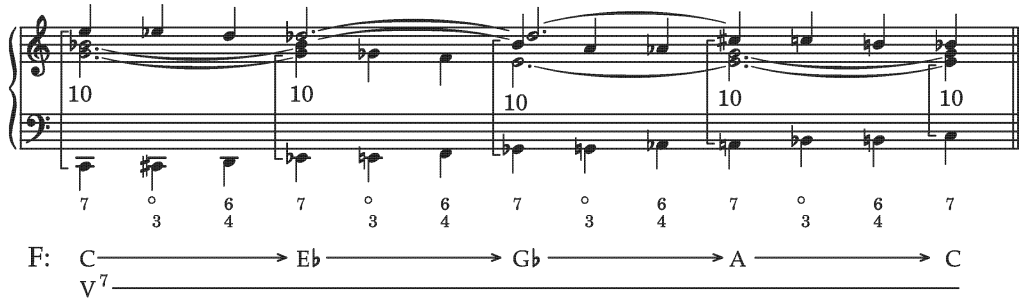
In a final expansion, the same chromatic contrary motion that prolongs dominant ($V^7$ to $V^6_5$) can be stretched so that it traverses an entire octave (ascending or descending). In Example 30.22, the bass ascent partitions the octave into minor thirds: Different root-position dominant seventh chords appear on every third sonority (the dominant seventh chords are sometimes spelled enharmonically as $Ger^6_5$ chords). At each dominant seventh chord, a remarkable enharmonicism is invoked, allowing the contrary chromatic motion to begin anew. The soprano and bass start a major tenth apart and work in contrary motion. At the next dominant seventh chord, the tenor and bass start with the M10 and work in contrary motion. At chord 7, the alto and bass are on a M10 and start a voice exchange; the bass and soprano return to a M10 at chord 10. The bass arrives on $C^3$ at chord 13 to complete its one-octave ascent.

**EXAMPLE 30.22 Chromatic Contrary Motion Parses the Octave into Minor Thirds**




Example 30.23 reproduces the motions of Example 30.22 and demonstrates how the entire passage acts as a prolongation of a single harmony. In total, this prolongation is called the **omnibus**. The omnibus, first described by Viennese music theorists around 1800, was used by composers throughout the nineteenth century (such as Beethoven, Schubert, Chopin, and Liszt). In practice, composers generally used only part of the omnibus.

**EXAMPLE 30.23 The Omnibus Expands $V^7$**



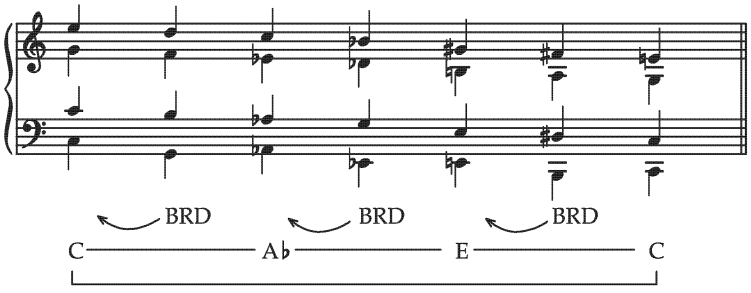

## A Final Equal Division of the Octave

We have seen that chromatic parallel-motion sequences and contrary-motion progressions partition the octave into equal-sized intervals.

| | |
|---|---|
| Descending minor seconds: | D2 (−P5/+A4) |
| Descending major seconds: | D2 (−P4/+M3) and DM2 (−P5/+P4) |
| Ascending minor seconds: | A2 (−M3/+P4) |
| Ascending and descending minor thirds: | Omnibus |

We consider one more interval that can symmetrically divide the octave: the major third. Example 30.24 presents a slight variation of the diatonic D3 (−4/+2) sequence that partitions the octave into major thirds, D3 (−P4/+m2). The voice-leading irregularities result from maintaining the sequential progression exactly. The overall progression, which prolongs C major, contains descending major thirds (C–A♭–E–C) in the bass and a whole-step descent in the soprano.

**EXAMPLE 30.24 Major-Third Division of the Octave**




Chromatic sequences all create the temporary effect of tonal ambiguity. It was but a short and natural step for composers to begin to use autonomous symmetrical progressions independent of sequential motion. Such progressions, which we take up in the next chapter, extend ambiguity to deep structural levels of the music.

# EXERCISE INTERLUDE

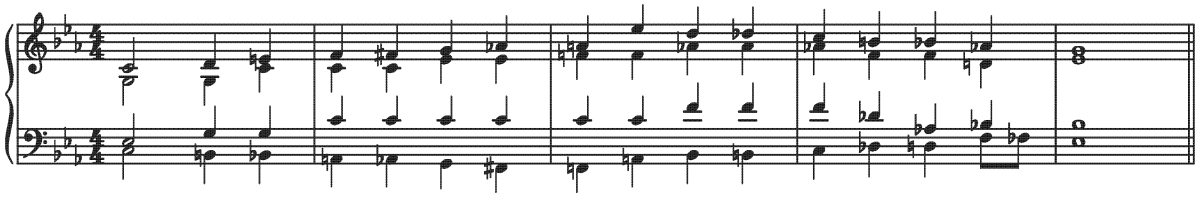
WORKBOOK 1
30.4–30.5

## ANALYSIS

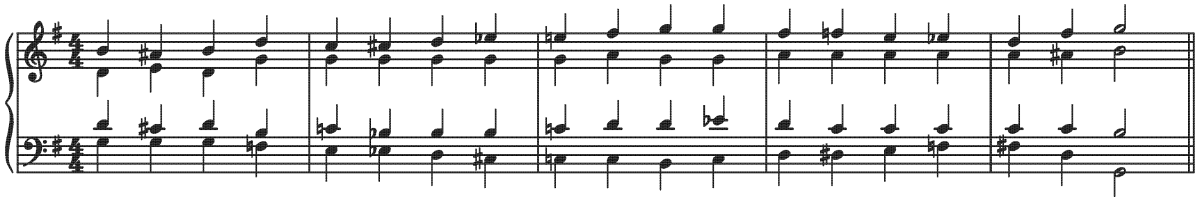
### 30.4 Contrary-Motion Progressions

Given are progressions that employ contrary-motion chromaticism. Determine the harmonic function that the chromaticism extends; then bracket and label that function (tonic, dominant, or pre-dominant). Circle the pairs of pitches involved in the contrary-motion chromaticism; for more extended examples, the pairs will change between voices. Is there a deeper harmonic pattern that emerges?

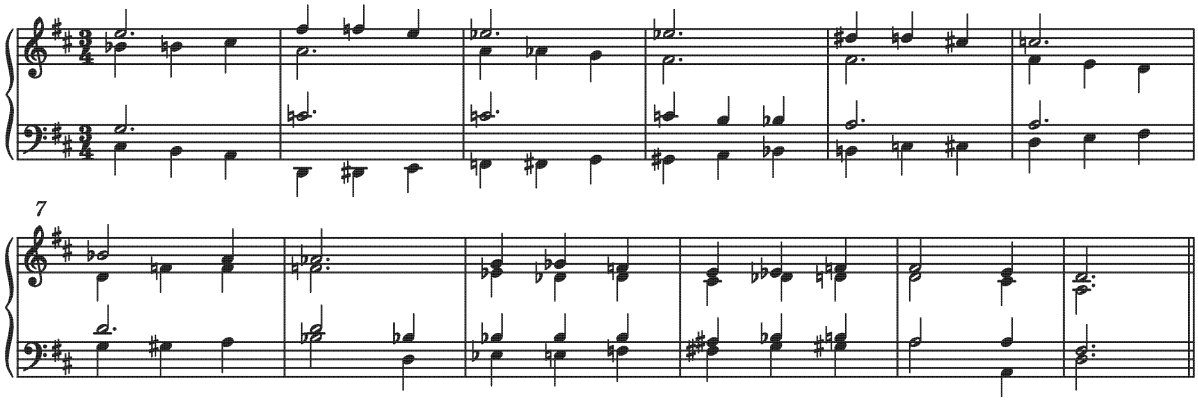
A.



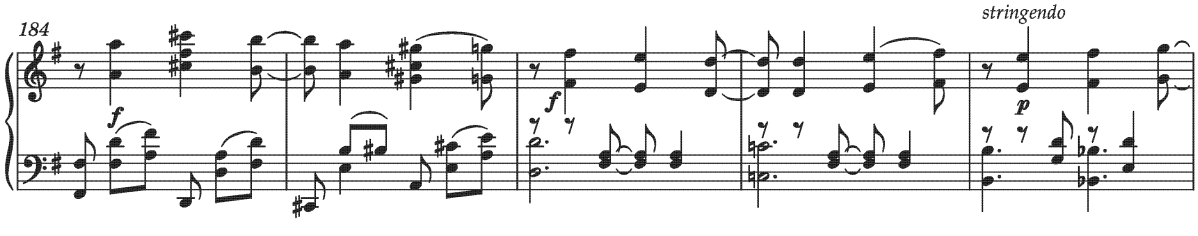
B.



C.




D. Tchaikovsky, Symphony no. 5 in E minor, op. 64, *Allegro con anima*



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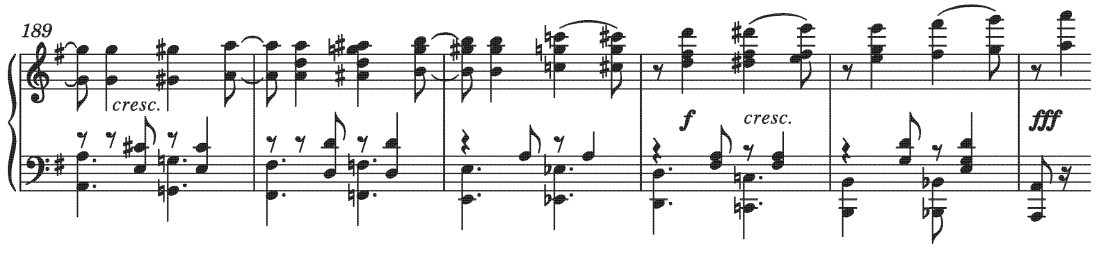
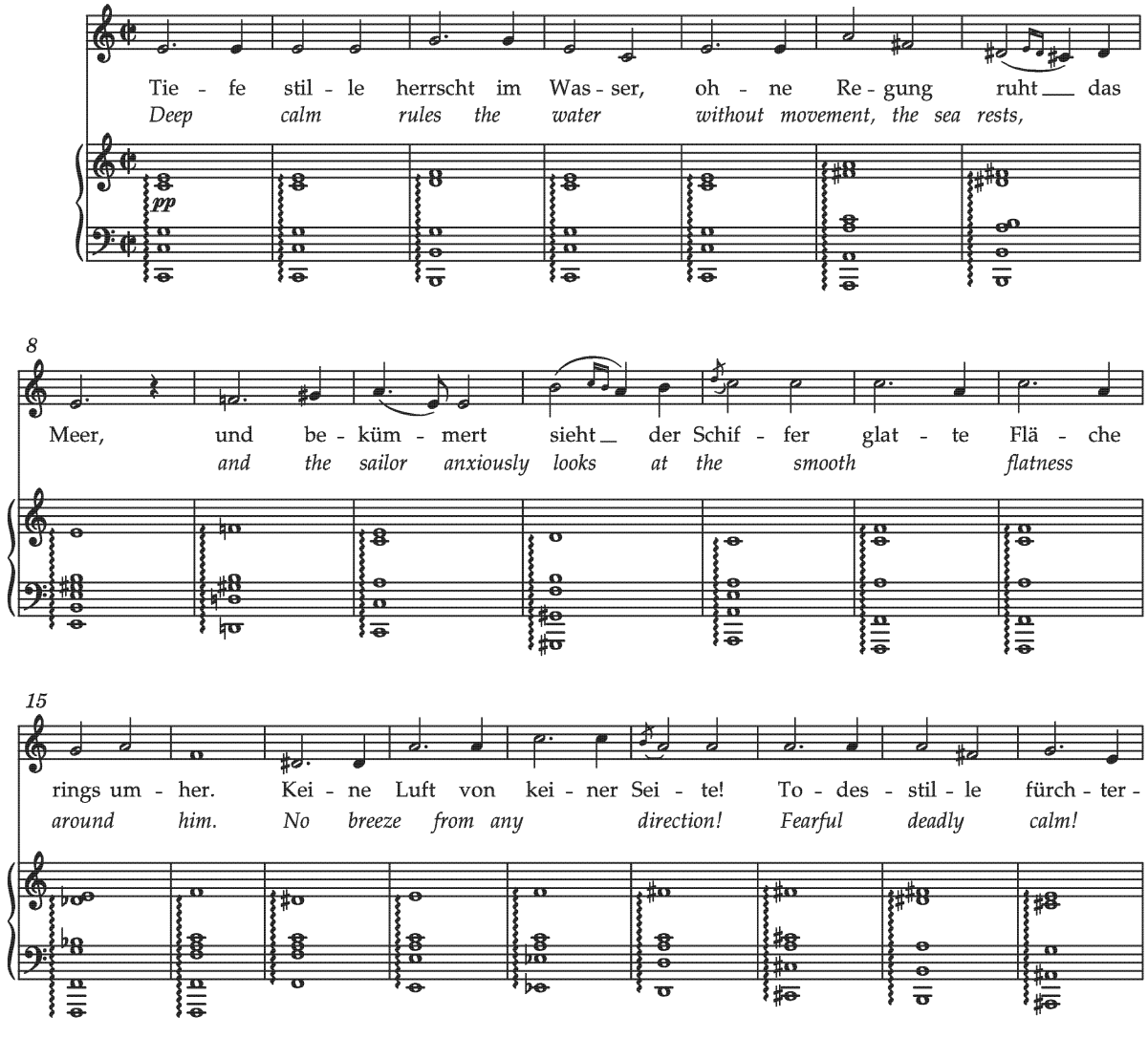
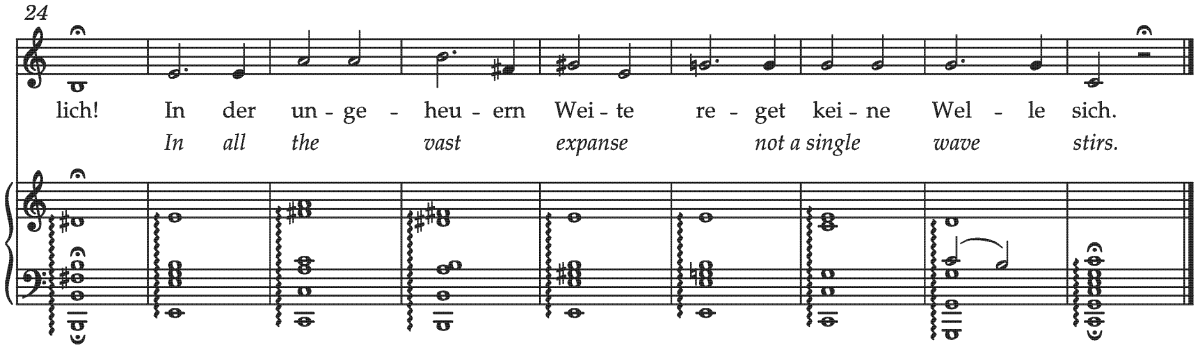



## 30.5 Analysis Project

Schubert's song "Meeres stille" ("Still Sea," op. 3, no. 2, D. 216) contains part of an omnibus that expands (that is, moves outward in contrary motion) and a chromatic third relation that usurps a structural dominant. Both of these harmonic techniques project the poetry. Listen to the song and study the translation.



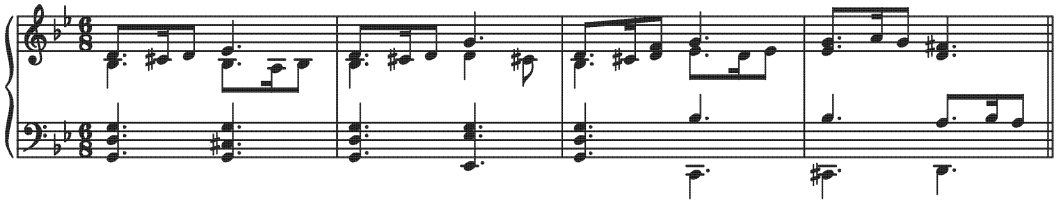



1. The subject of the poem is a sailor on a placid sea. The "deep calm" that "rules the water," however, carries with it the sailor's anxiety. Why? What is the sailor ultimately afraid of?
2. How does Schubert's accompaniment support the text? Do you think the sailor lands safely, or not?
3. Determine the key areas in the song. You will need to consider how E major functions. Is it an applied chord or a mixture chord? (Remember, an applied chord is subordinate to the following harmony, but a mixture chord participates in the underlying tonal motion.)
4. Is there an underlying harmonic progression in these key areas?
5. In spite of the clear cadences, how might the tonal structure reflect the uncertainty of the sailor becalmed at sea?
6. One might expect the dominant to appear somewhere after m. 16. Why? Instead, a chromatic passage follows. How does this chromaticism reflect the text? The text in this chromatic passage divides into two parts. What key is implied at the end of the first part (on the word *Seite*)? Based on what immediately follows (*Todesstille*, meaning "deadly calm"), what different key does Schubert imply? What is the relationship between this key and the song's primary key? Could the placement of this particular sonority influence your interpretation of the sailor's fate?

## COMPOSITION

### 30.6

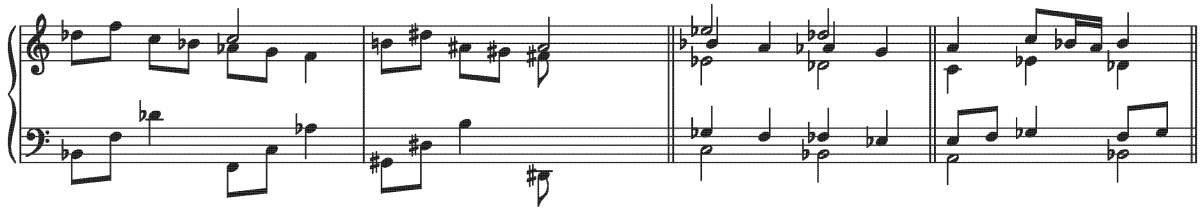
Write two consequents to the given antecedent to create a parallel interrupted period and a contrasting progressive period. Label your periods and analyze the harmonies.



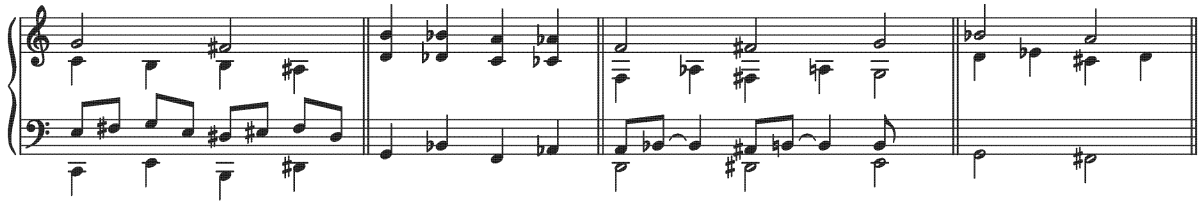
### 30.7

1. Continue the given patterns until you return to the tonic. By what interval does each sequence partition the octave? Be able to perform your solutions with one or more of your colleagues.
2. Write a 16–20 measure piece that uses two or three of the patterns. Choose a single, underlying key, and employ primarily diatonic harmonies in the opening of phrases and in cadences.

A. B. C.

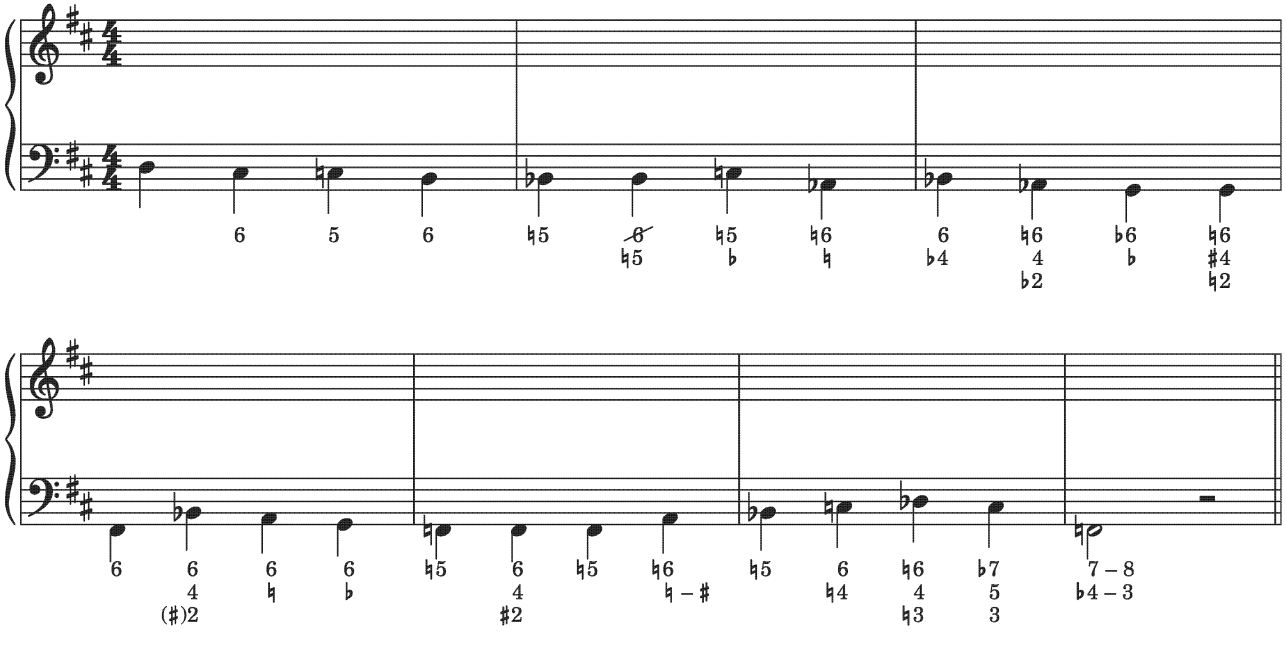


D. E. F. G.



### 30.8

Realize the following figured bass in four voices. Analyze.



## TERMS AND CONCEPTS

- chromatic versus diatonic sequences
- chromatic A2 (−M3/+P4) sequence
- chromatic D2 (−P4/+m3) sequence
- chromatic D2 (−P5/+P4) sequence
- contrary-motion chromaticism
- dissonant prolongation
- omnibus