

Lesson SSS: Diatonic Descending-Fifth Sequences

Introduction:

Very frequently in tonal music, you will encounter passages where a harmonic pattern coupled with a melodic one repeats at different pitch levels. An example of this appears in the following excerpt by Bach:

Example 1 (J.S. Bach, Organ Concerto in A minor, BWV 593, mm. 5-9):

The musical score for Example 1 is presented in two systems. The first system contains measures 5, 6, and 7. The second system contains measures 8 and 9. The music is in 3/4 time and A minor. The right hand features a descending fifth sequence starting in measure 6, while the left hand provides a harmonic accompaniment. The sequence concludes in measure 9 with a tonic chord.

Following an authentic cadence in m. 5, we find a series of chords descending by fifths. Comparing m. 6 with mm. 7-8, we find a repeated pattern in each measure, the only differences being the pitch level of each repetition. In the highest voice, the pattern begins on F in m. 6, and then repeats on E in m. 7 and D in m. 8 before landing on C in m. 9. In the bass, the repeated pattern begins on D in m. 6 and steps down through C (m. 7) and B (m. 8) before arriving on the tonic (A) in m. 9. Harmonically, the pattern ends right where it began: with a I chord. With that in mind, we can consider the entire passage from the second half of m. 5 to the downbeat of m. 9 to expand tonic harmony.

When successive repetitions occur at different but predictable pitch levels, as in Example 1, the patterning is called a sequence. Sequences appear with greatest frequency in music from the Baroque, but were used in every era of the common practice period. As we will discuss in this lesson, sequences function in a number of ways, but always derive from a handful of basic interval progressions. (See Lesson 1 for review of basic interval progressions.)

We will begin with a brief discussion of the general nature of sequences and will then proceed with an examination of some common variations on the basic principles. This lesson focuses on the most common type of sequence and is accompanied by a follow-up lesson (Lesson TTT) that considers several less common varieties.

The nature of sequences:

Composers generally employ sequences either to expand a single harmony—as we saw in Example 1—or as a transitional device from one framing harmony to another, sometimes from one key to another. In all cases, identifying the function of a sequence depends on a listener’s ability to recognize the repeated pattern in context. Generally, we first hear the repetition in the contour of the leading melodic voice. But these repeated lines or motives are always linked to strong harmonic progressions, which in turn derive from basic interval progressions.

Sequences are based on the same harmonic progressions that appear everywhere in tonal music. Progressions in which the chord roots descend by fifth are by far the strongest and most frequent, but ascending-fifth and descending- and ascending-third progressions are also quite common (see Lesson TTT). In this sense, sequences are an extension of basic tonal practices expressed in a unique way.

Let’s take another look at the Bach excerpt from above.

Activity SSS.01:

Identify each of the harmonies indicated by the blank lines in the following sequence in A minor (J.S. Bach, Organ Concerto in A minor, BWV 593):

— — — — —

— — — — —

[Answers: m. 5 = i; m. 6 = iv and VII; m. 7 = III and VI; m. 8 = ii° and V; m. 9 = i. (case indicates chord quality). Response for each correct answer: “Correct!” Response for each incorrect answer: “Incorrect. (Remember to use uppercase letters for major chords and lowercase for minor.)”]

The following example shows the harmonic progression of the excerpt from above:

Example 2 (J.S. Bach, Organ Concerto in A minor, BWV 593, mm. 5-9):

5

a: V i iv⁷ VII⁷ III⁷ VI⁷

8

ii^{o7} V⁷ i

The root of each successive triad, starting with the tonic chord on the third beat of m. 5, is a fifth lower than the previous one: i – iv – VII – III – VI – ii^o – V – i. (Some of these descending fifths are expressed as ascending fourths. This is done to avoid too low of a register.) Here, the sequence traverses an entire cycle of descending fifths, from tonic back to tonic. This is common—particularly with descending-fifth sequences—but most sequences consist of only three to five repetitions since completing an entire cycle can become tedious.

Note: This sequence and the others considered in this lesson are diatonic: all of the chords are native to a single key. Because the repetitions are not literal, you will find some variation in quality. In Example 2, the chords in m. 6 are minor and major, while those in m. 7 are both major. Regardless of the changes in quality, the similarity of the melodic contour is explicit enough for the listener to recognize the repeated pattern.

In addition to considering the repeated material—melodic and harmonic—it is essential that you be able to recognize the underlying interval patterns that form the basic structure of sequences. In multi-voiced settings, look to the outer voices for these governing progressions. The following example provides a reduction of the sequence in Example 1, showing the successive intervals formed by the highest and lowest voices:

6

i iv⁷ VII⁷ III⁷ VI⁷ ii⁷ V⁷ i

i iv⁷-----ii⁷ V⁷ i

The reduction given in Example 3 also shows a second level of Roman numerals. In this case, we can see that the sequence functions as a prolongation of the predominant area of a basic phrase: tonic – predominant – dominant – tonic.

Sequences in which the chord roots descend by fifth are common enough that they should be instantly recognizable by ear. Compare the following with the Bach example from above:

58



C F⁷ C F⁷

62



F⁷ C⁷ F⁷ C⁷ F⁷ C⁷

Despite some superficial differences, these two passages have a very similar sound. In this case, however, the sequence does not complete the cycle of descending fifths, but rather goes only as far as the dominant (m. 65). Following a C-minor chord in m. 60, the harmony moves down a fifth (in this case, up a fourth) to the iv⁷ chord in m. 61. The root progression continues to descend by fifth (or ascend by fourth) through a VII⁷ chord in m. 62 and a III⁷ chord in m. 63. Starting in m. 64, the sequence speeds

up. Each successive harmony lasts only two quarter notes instead of three: $VI^7 - ii^{o7} - V^7$ in mm. 64-65. Finally, the VI chord in m. 66 breaks the pattern and ends the sequence with a deceptive cadence.

Now consider the interval progression formed by the outer voices. Example 5 provides a reduction:

Example 5 (reduction of W.A. Mozart, Piano Sonata No. 12 in F major, K. 332, Mvt. I, mm. 58-67):

Interval progression: 5, 10, 7, 10, 7, 10, 7, 5

Chord sequence: i , iv^7 , VII^7 , III^7 , VI^7 , ii^{o7} , V^7 , VI

Interval progression (outer voices): i , iv^7 ----- ii^{o7} , V^7 , VI

On the downbeat of m. 61, the highest voice ($A\flat$) forms a tenth above the bass (F). That $A\flat$ is suspended into the next measure where it forms a seventh above the new bass note ($B\flat$). This pattern repeats twice more in mm. 63-65. The sequence, therefore, follows the same LIP that we saw in Example 3. The “10-7” pattern is the most common voiceleading structure for descending-fifth sequences. The final dissonant seventh (the G and F of the V^7 chord in m. 65) resolves inward to a perfect fifth with the deceptive cadence that ends the sequence. Like the one in Example 2, this sequence prolongs the subdominant section of the basic phrase (iv to ii^o).

Note: Another consequence of using only diatonic chords is the inevitable inclusion of diminished and augmented intervals. Composers negotiate these dissonant sonorities in several ways, as you’ll see from the various examples in this lesson. In this excerpt, for example, the tritone that arises between the roots of the VI and ii^o ($A\flat$ and D) chords is obscured by the weak (and unexpected) metric placement of the diminished chord.

The following excerpt from a Schubert impromptu includes a complete cycle of descending fifths, this time in a minor key:

Example 6 (F. Schubert, Impromptu in E-flat, D. 899, No. 2, mm. 23-35):

23

28

32

Eb: V⁷ I eb: i iv⁸ VII⁷

III⁸ VI⁷ ii⁸ V⁷

i⁸ iv⁸ V⁷ i

Following a cadence in m. 24, E \flat major becomes E \flat minor with the addition of G \flat (and, subsequently, D \flat and C \flat). The descending-fifth sequence that follows, beginning with iv in m. 26, completes the cycle from the initial i chord to the tonic in m. 32. Harmonically, the iv chord in m. 33 continues the descending-fifth series, but by then, the melodic pattern in the upper voice is broken.

Sequences in minor keys, in addition to the extra tritone between scale degrees $\hat{2}$ and $\hat{6}$, bear the added complication of the harmonic and melodic composites of the scale. (See Lesson 3 for more information on the harmonic and melodic minor composites.) Typically, in a minor-key sequence, scale degrees $\hat{6}$ and $\hat{7}$ are left in their diatonic form, appearing in their raised form only at sequence-ending cadences. Notice that in mm. 25-30, every instance of scale degrees $\hat{6}$ and $\hat{7}$ is diatonic (C \flat and D \flat , respectively). Using diatonic $\hat{7}$ avoids the diminished triad built on the leading tone. It is only with the V chord towards the end of the sequence (m. 31) that we find the raised leading tone, effectively signaling the end of the sequence.

Now, let's look at the outer-voice interval progression:

Example 7 (reduction of F. Schubert, Impromptu in E-flat, D. 899, No. 2, mm. 25-32):

25

Eb: i iv⁷ VII⁷ III⁷ VI⁷ ii⁷ V⁷ i
 i iv⁷ ----- ii⁷ V⁷ i

As Example 7 shows, this excerpt is based on the same interval progression already familiar from Examples 1 and 4: tenths becoming suspended sevenths. After the initial G \flat is heard in m. 25 as the third of the now minor tonic, the upper voice leaps up to C \flat in m. 26. That C \flat is heard again in m. 27, though there it appears as a seventh above the new bass (D \flat). (This suspension is indicated with a tie in the reduction.) The pattern is then repeated in mm. 28-29, and again 30-31, leading back to G \flat and the minor tonic in m. 32.

Other outer-voice interval progressions are possible as well. The progression that defines a sequence depends on whether or not the harmonies appear in inversion and, in large part, on which chord members appears in the treble. Below are the “10-7” LIP already discussed and the resultant “10-5” pattern that would arise by alternating between root position and first inversion chords.

Example 8:

a.

C: I IV vii[°] iii vi ii V I

b.

C: I IV⁶ vii[°] iii⁶ vi ii⁶ V I⁶

As you can see from Example 8, alternating between root position and first inversion chords creates a smoother bass line and alters the LIP. Such altered sequences are quite common., as the following excerpt from a Mozart piano sonata demonstrates (Example 10 provides a reduction):

Example 9 (W.A. Mozart, Piano Sonata no. 8 in A minor, K. 310, Mvt. I, mm. 70-73):

69

a: I iv VII⁶ III VI⁶

72

ii° V₅ i

Example 10 (reduction of W.A. Mozart, Piano Sonata no. 8 in A minor, K. 310, Mvt. I, mm. 70-73):

69

7 10 5 10 5 10 5 10

a: I iv VII⁶ III VI⁶ ii° V₅ i

I iv ----- ii° V₅ i

Following a borrowed major tonic in m. 69 (see Lesson LLL for more on borrowing and mixture), a descending-fifth sequence begins, starting on the diatonic subdominant chord. The root-motion descends by fifth for three full measures before the ending with the tonic chord on the downbeat of m. 73. The sequence is very similar to the Schubert impromptu discussed above—compare Examples 7 and 10—the only difference being the inversion of every other chord and the resultant “10-5” LIP.

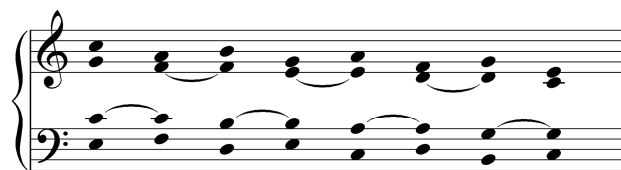
As you may have deduced, “10-7” and “10-5” are far from being the only possible LIPs in a descending-fifth sequence. The following example shows the harmonic framework of a descending-fifth sequence in four voices. Consider the interval progressions formed by each of the upper voices with the bass:

Example 11:

C: I⁶ IV vii⁵⁶ iii vi⁶ ii V⁶ I

Activity SSS.02:

Identify the LIPs between the outer voices of the following sequence. (Example: Enter “10-7” for a LIP that alternates between tenths and sevenths, beginning with a tenth.)



C: I⁶ IV vii⁶ iii vi⁶ ii V⁶ I

Exercise SSS.03a:

What is the LIP between the outer voices?

[Answer: 6-10 or 6-3. Response if correct: "Correct!" Response if incorrect: "Incorrect. Try again."]

[First follow-up questions:]

As written, the outer-voice LIP of this sequence alternates between sixths and tenths. But any of the upper voices could have been written on top. It is important that you be aware of LIPs between inner voices as well for this very reason.

Exercise SSS.03b:

What is the LIP between the alto and bass?

[Answer: 10-8 or 3-8 or 3-1. Response if correct: "Correct! The alto and bass alternate between tenths (compound thirds) and octaves via a series of suspensions." Response if incorrect: "Incorrect. Try again."]

Exercise SSS.03c:

What is the LIP between the tenor and bass?

[Answer: 6-5. Response if correct: "Correct! The tenor and bass alternate between sixths and fifths via a series of suspensions." Response if incorrect: "Incorrect. Try again."]

In Example 11, successive harmonies alternate between first inversion and root position. The soprano voice yields a "6 – 10" pattern with the bass, while the alto and tenor yield "10 – 8" and "6 – 5" patterns with the bass respectively. Again, the LIP will vary depending on which chord member the composer places in the soprano. The sequence could, of course, also begin with a root-position chord: I – IV⁶ – vii^o – iii⁶ – etc., which would likewise affect the outer-voice intervals of the LIP.

Other outer-voice progressions are made possible by adding sevenths to each chord or by arranging them all in root position. In all cases, however, the underlying harmonic foundation remains intact.

Descending-fifth sequences are particularly prevalent in music of the Baroque era. The following excerpt from a harpsichord suite by Handel makes great use of this device:

Example 12 (G.F. Handel, Harpsichord Suite no. 12, Gigue, mm. 13-16):

G: I vi ii⁶₅ V I⁶₅ IV vii⁶₅ iii vi⁶₅ ii

V⁶₅ I IV⁶₅ ii⁶₅ V I⁶₅

Beginning with the vi chord on the anacrusis to m. 14, a series of arpeggios in the left hand outline a descending fifth sequence through the remainder of that measure. In m. 15, the descending-fifth harmonic pattern set into motion by the sequence continues through V, I, and IV, despite the altered melodic pattern in the bass. At this point, the sequence is broken off, leading to an authentic cadence. Sequences such as this—which complete an entire lap around the circle of fifths and then some—are commonplace in Baroque music but were generally considered monotonous by later composers.

Activity SSS.03:

The out-voice interval progression is particularly clear in this sequence. Beginning with the vi chord in m. 13 and going through the IV⁶ in m. 15, what is the LIP between the outer voices?

G: I vi ii⁶₅ V I⁶₅ IV vii⁶₅ iii vi⁶₅ ii

V⁶₅ I IV⁶₅ ii⁶₅ V I⁶₅

[Answer: 3-5 or 5-3 or 10-5 or 5-10. Response if student enters “3-5” or “10-5”: “Correct!”
 Response if student enters “5-3” or “5-10”: “Good! The outer voices alternate between thirds and fifths. (Keep in mind that in this case, the sequence begins with a third between E and G.)”
 Response if incorrect: “Incorrect. (Hint: Look at the lowest note in each arpeggiation in the left hand.)”]

The outer-voice interval progression is particularly clear in this example. A series of suspensions in the upper voice create a pattern of alternating thirds and fifths with the bass:

Example 13 (reduction of G.F. Handel, Harpsichord Suite no. 12, Gigue, mm. 14-15):

G: I vi ii⁶ V I⁶ IV vii⁵ iii vi⁶ ii V⁵ I IV⁵
 I ----- I IV⁵

As the second level of Roman numeral analysis shows, this sequence prolongs the tonic for nearly one and a half measures before continuing on to the predominant chords and the ensuing cadence.

Activity SSS.04:

The following excerpt from a harpsichord suite by Handel (Suite No. 1 in A, HWV 426, mm. 39-41) has a descending-fifth sequence in mm. 39-40. In the key of A major, identify each of the harmonies indicated by the blank lines:

[Answers: m. 39 = ii – V – I – IV; m. 40 = vii^o – iii – vi – ii (case indicates chord quality). Response for each correct answer: “Correct!” Response for each incorrect answer: “Incorrect. (Hint: The chords on beats one and three of each measure are missing their fifths. Also, the second of each group of three eighth notes is a nonharmonic tone.)”]

[Followup-question:]

Now that you’ve identified the progression as a descending-fifth sequence with root position harmonies, identify the LIP between the outer voices.

[Answer: 10-7. Response if correct: “Correct!” Response if incorrect: “Incorrect. (Hint: In this case, the upper voice consists of dotted quarter notes suspended into the next beat.)”]

Conclusion:

Sequences consist of melodic and harmonic patterns repeated at different pitch levels, which, after a few repetitions, become predictable. Diatonic sequences rely on the listener’s ability to recognize the basic design of the patterns, since the qualities may change from step to step in conforming to the key. Composers use sequences in a number of ways, primarily to prolong a specific harmony or to move from one harmony to another. This lesson focused on non-modulatory sequences, but sequences can also be designed for modulating.

Each step of a sequence—that is, each cycle of the pattern—is successively transposed at a specific interval until the harmonic goal (or key) is reached. The root movement in a majority of sequences is by

descending fifths (or ascending fourths), which reflects the general prominence of descending-fifth root motion in tonal music.

Significantly, the voiceleading of sequences follows the same basic interval progressions that govern all tonal music. Being able to recognize these patterns in a sequence is an important part of understanding how they work. (It is not important to memorize all of the possible interval patterns that form the skeleton of the various sequence types.) These outer-voice intervallic patterns (LIPs) are determined partly by which chord member appears on top, and partly by whether all chords appear in root position or alternate between root-position and first-inversion.