

## Interlude: One-to-One Counterpoint

### Introduction

Suppose that we are attending a choral performance. What kinds of things are we hearing as we take in this performance? On the one hand, we're hearing groups of sopranos, altos, tenors, and basses, each singing melodic lines of their own. Sometimes, these groups combine to sing the same melody at the same time, but more often than not, they're each singing their own distinct melodies. These melodies might be related to one another, but they contain contrasting rhythms and contours, and perhaps begin and end at different times. On the other hand, we're also hearing the combined effect of all these melodies being sung together. At any point in time, the various parts join to form different harmonies, different combinations of sounds, connected in progressions that seem to push forward; hold back; approach or turn aside from goals; create hesitations or interruptions or setbacks.

We might say, then, that music has both a *vertical* and a *horizontal* component. The vertical component—or **harmony**—is concerned with the combination of simultaneous pitches into chords (or other meaningful units) and with the logic of their succession and connection. The horizontal component—or **counterpoint**—is concerned with the combination and interaction of relatively independent musical lines into a musical whole. Of course, these two components are two sides of a single coin. In tonal music, the contrapuntal lines must also combine in such a way as to make a convincing **harmonic progression**, which means they cannot be completely independent.

Some musical styles—like **fugues**—are overtly contrapuntal: they contain strongly individualized melodic lines that are clearly set apart in the musical texture. But even in music that is not strongly contrapuntal—like a chorale, or a song with piano accompaniment—there is usually an important contrapuntal relationship between the outer voices, the highest- and lowest-sounding parts. This is sometimes called the **outer-voice** (or soprano/bass) **framework**.

Despite their interdependence, harmony and counterpoint have often been taught as separate subjects, each with their own methods and traditions. In this volume, we hope to show how the study of harmony can be enriched by the study of counterpoint, and vice-versa. This interlude is the first of several devoted to the subject of counterpoint—in particular, to the practice of writing a melodic line (called the **contrapuntal voice**) above or below a given melody (called the **cantus firmus**).

This practice derives from an early eighteenth-century approach to teaching counterpoint developed by Johann Joseph Fux. In his 1725 treatise *Gradus ad Parnassum*, Fux outlined a five-step method for teaching counterpoint. These five steps, called **species**, represent increasingly complex levels of rhythmic motion and dissonance treatment on the part of the contrapuntal voice. **First-species counterpoint** features a contrapuntal voice that moves at the same speed as the cantus firmus; hence, it is also called **one-to-one** (or 1:1) **counterpoint**. The intervals formed by these two voices employ only

consonances. Second-species counterpoint increases the relative speed of the contrapuntal voice to 2:1, with passing dissonances being allowed on the offbeats. Subsequent species add more complex phenomena until the fifth species, which is a mixture of the four earlier species. After working through all five species using two-voice examples, the same procedure is applied to three and then to four voices.

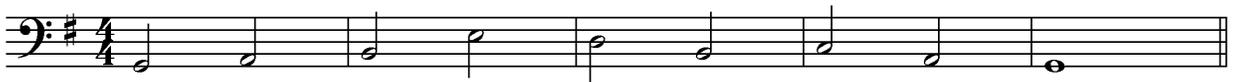
Fux's innovative pedagogy has been in continuous use since its publication: composers from Haydn, Mozart, and Beethoven to Brahms and Ravel have benefited from its principles both as students and as teachers. As a tool for understanding tonal harmony and counterpoint, however, it has one weakness: it was designed to emulate a musical style (that of Palestrina, a late sixteenth-century composer) that partly predates the tonal period. In order to render species counterpoint more applicable to tonal music, we will need to substitute certain tonal elements—major and minor scales, the use of modern meters, and an emphasis on triadic harmony—for those derived from the church modes (Lydian, Dorian, etc.). Recast in this light, species counterpoint can teach us a great deal about both the behavior of outer-voice frameworks in tonal music and the principles of artfully combining melodic lines. Let us first focus our attention on one-to-one (first species) counterpoint in two voices.

## The Cantus Firmus

The cantus firmus is a pre-existing melody, written in notes of equal duration, against which we will compose our contrapuntal voice. We will learn how to write an effective cantus firmus in a later chapter and discuss its harmonic implications. For now, be aware that

- 1) The cantus firmus is short, generally containing between 8-14 pitches
- 2) It moves in notes of equal value (say, quarter notes in a 2/4 meter or half notes in a 4/4 meter); the final pitch is twice the length of the other pitches and occurs on a downbeat
- 3) It uses a single major or minor key, and
- 4) It begins on the tonic pitch (or on a *member of the tonic triad* if in the *upper* voice) and ends on the tonic pitch, and the final pitch is preceded by either  $\hat{7}$  or  $\hat{2}$  (these stepwise ending formulas are called **melodic cadences**)

Here is a typical example of a cantus firmus:



In one-to-one counterpoint, we add another voice above or below the cantus firmus. Since our example lies in a relatively low register, let's add our contrapuntal voice above it. Here's an example of effective one-to-one counterpoint above a cantus firmus:

contrapuntal voice

cantus firmus

**The Melodic Line** (see also *Tonal Harmony*, Ch. 5: “The Melodic Line”)

Our beginning exercises will make use of short and simple melodies in vocal style in order to avoid, for now, the complications involved with more ornate vocal and instrumental melodies. When composing a contrapuntal voice above or below the cantus firmus, we will need to consider four categories of issues:

1. *Features of the melodic line*—this category applies equally to the cantus firmus and to the contrapuntal voice
2. *Beginnings and endings*
3. *Harmonic intervals*—intervals *between* the cantus firmus and the contrapuntal voice
4. *Movement between harmonic intervals, voices*

Categories 1 and 2 will remain essentially the same for all species; however, each species will require new principles governing categories 3 and 4. Let us consider each of these categories in turn, beginning with features of the melodic line. Each suggestion in the list below is followed by an example showing what is to be *avoided* by following the suggestions.

The melody should be more **conjunct** (stepwise) than **disjunct** (leapwise).

Variety is preferred over redundancy. Avoid reusing the same pitches again and again.

Use *no more than two* consecutive occurrences of the same pitch. Also, don't repeat the same pitch *across a barline*.

Don't let the melody pull too much in one direction.



The shape of the melody should be interesting but clear and simple, with a single **focal point** (the *highest* note in the *upper* voice, or the *lowest* note in the *lower* voice). Move toward and away from it gradually.



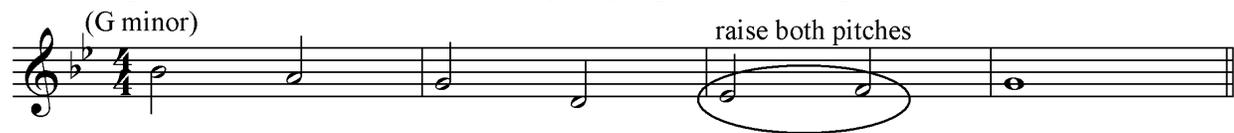
The range of the added voice should be no less than a fifth and no more than a tenth.



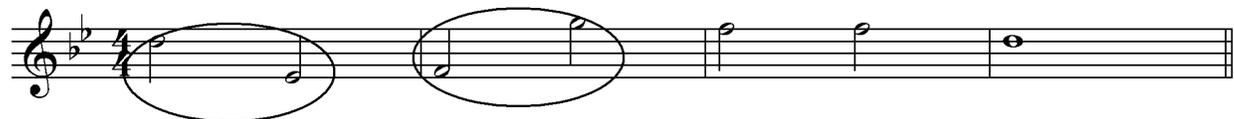
The melody should not contain notes outside of the prevailing key. Resolve the **leading tone** ( $\hat{7}$ ) up to  $\hat{1}$ , except in the stepwise descent  $\hat{1}-\hat{7}-\hat{6}$ . This principle does not apply to the *subtonic*—the lowered seventh scale degree—in the minor mode.



In minor-mode examples, use the *melodic minor* scale. For example, use the *leading tone* when leading to the final  $\hat{1}$  (a melodic cadence) or as part of a  $\hat{5}-\hat{6}-\hat{7}-\hat{1}$  motion. If  $\hat{6}$  precedes  $\hat{7}$ , raise  $\hat{6}$  as well. On the other hand, use lowered  $\hat{6}$  and  $\hat{7}$  in descending stepwise lines such as  $\hat{1}-\hat{7}-\hat{6}-\hat{5}$ . Use your judgment in ambiguous situations.



Avoid augmented or diminished intervals, sevenths, or leaps larger than an octave. The *descending* intervals  $\hat{3}-\uparrow\hat{7}$  ( $^{\circ}4$ ) in minor and  $\hat{4}-\uparrow\hat{7}$  ( $^{\circ}5$ ) in either mode are acceptable.



If an isolated large leap occurs in the line (fourth, fifth, sixth, or octave), precede and follow it with motion in the opposite direction. Exception: fourths can be *preceded* by motion in the same direction.

Use *no more than two* consecutive leaps in the same direction. When using two consecutive leaps, you should precede and follow the entire *pair of leaps* by motion in the opposite direction (compare to the previous guideline).

Two consecutive leaps *in the same direction* should together span a fifth, a sixth, or an octave. Precede and follow the pair by motion in the opposite direction.

### Beginnings and Endings

As mentioned above, the cantus firmus begins on  $\hat{1}$  (or on  $\hat{1}$ ,  $\hat{3}$ , or  $\hat{5}$  if in the upper voice) and ends on  $\hat{1}$ , and the final note is preceded by either  $\hat{7}$  or  $\hat{2}$ , to form a melodic cadence. If the contrapuntal voice is *below* the cantus firmus, begin the contrapuntal voice on  $\hat{1}$ , forming a unison, third, fifth, or octave with the cantus firmus.

**(In the following example, the circles indicate correct usages, not errors.)**

If the contrapuntal voice is *above* the cantus firmus, begin the contrapuntal voice on any note of the tonic triad ( $\hat{1}$ ,  $\hat{3}$ , or  $\hat{5}$ ), forming an octave, third, fifth, or unison with the cantus firmus.

**(In the following example, the circles indicate correct usages, not errors.)**

If the cantus firmus ends with the scale-degree pair  $\hat{2}-\hat{1}$ , end the contrapuntal voice with  $\hat{7}-\hat{1}$ . Likewise, if the cantus firmus ends with  $\hat{7}-\hat{1}$ , end the contrapuntal voice with  $\hat{2}-\hat{1}$ . (See the previous two examples for instances of this.)

## Harmonic Intervals

These guidelines refer to the intervals between the two voices that occur as the counterpoint proceeds. Each species has its own conventions related to harmonic intervals; the following list refers only to one-to-one counterpoint.

**(The following examples show what is to be avoided, not correct usages.)**

Only consonant intervals—unisons, thirds, fifths, sixths, and octaves—should be used as harmonic intervals. Avoid all dissonant harmonic intervals, including seconds, fourths, sevenths, and all augmented and diminished intervals. Remember that *the perfect fourth is a dissonance in two-voice counterpoint* and should be avoided.

contrapuntal voice

cantus firmus

Detailed description: This musical example shows a two-voice setting in G major, 4/4 time. The cantus firmus (bass clef) has a fixed melody. The contrapuntal voice (treble clef) is written above it. The intervals between the two voices are indicated by numbers below the notes. The intervals are: 3 (third), 4 (fourth, circled), 4 (fourth, circled), 6 (sixth), 8 (octave), 6 (sixth), 6 (sixth), 6 (sixth), and 8 (octave). The circled 4s represent dissonant intervals that should be avoided.

Avoid unisons except at the beginning and end of the counterpoint.

contrapuntal voice

cantus firmus

Detailed description: This musical example shows a two-voice setting in G major, 4/4 time. The cantus firmus (bass clef) has a fixed melody. The contrapuntal voice (treble clef) is written above it. The intervals between the two voices are indicated by numbers below the notes. The intervals are: 3 (third), 8 (octave), 6 (sixth), 1 (unison, circled), 3 (third), 6 (sixth), 6 (sixth), 6 (sixth), and 8 (octave). The circled 1 represents a dissonant unison interval that should be avoided.

Imperfect consonances (thirds and sixths) have a more pleasing sound in the tonal style and should predominate over perfect consonances (unisons, fifths, and octaves), *especially in the middle of the phrase*. Avoid using more than one or two perfect consonances in the middle of the phrase.

contrapuntal voice

cantus firmus

Detailed description: This musical example shows a two-voice setting in G major, 4/4 time. The cantus firmus (bass clef) has a fixed melody. The contrapuntal voice (treble clef) is written above it. The intervals between the two voices are indicated by numbers below the notes. The intervals are: 8 (octave), 3 (third), 8 (octave, circled), 3 (third), 5 (fifth, circled), 6 (sixth), 5 (fifth, circled), 6 (sixth), and 8 (octave). The circled 8s and 5s represent dissonant intervals that should be avoided.

**Types of Motion** (see also *Tonal Harmony* Ch. 5: “Parallel Motion”)

It is important to consider the relationship between any voice in the texture and every other voice in the texture. When multiple melodic voices occur simultaneously, there are five possible relationships between any two voices (or parts), all but the first of which appear in one-to-one counterpoint.

*Static motion*: Neither part moves (This type does not appear in one-to-one counterpoint.)

*Oblique motion*: Only one part moves

*Contrary motion*: Both parts move but in the opposition direction

*Similar motion*: Both parts move in the same direction but by different intervals

*Parallel motion*: Both parts move in the same direction by the same interval

If one voice repeats a pitch, the other voice should move (*oblique motion*). In other words, static motion should not be used in one-to-one counterpoint.

One of the basic goals of counterpoint (and voice leading in tonal music) is to maintain the relative independence of the individual parts. Because of this, voices moving together in parallel motion (and—to a lesser extent—similar motion) must be given special attention.

**Parallel Unisons, Fifths, and Octaves:** Do not employ the following interval successions: P5-P5, P8-P8, or P1-P1. Most frequently, this situation will arise when the two parts move in parallel motion, but it can also happen when the parts move in contrary motion. (These **contrary fifths** or **contrary octaves** are also not to be used.)

Avoid the following:

**Other Parallels:** Parallel imperfect consonances (thirds, sixths) are fine, but avoid using more than three thirds or three sixths in a row.

Musical score in G major, 4/4 time. The bass line contains figured bass notation: 8, 6, 6, 6, 6, 3, 3, 6, 8. A circle highlights the sequence of sixths (6, 6, 6, 6) in the bass line.

**Direct Fifths and Octaves:** A sound similar to parallel fifths and octaves, direct fifths and octaves results when the two parts move by *similar motion* into a P5 or P8 with a *leap* in the *upper voice*. In other words, if there is similar motion between voices, *the upper voice must move by step*. A special case is that in which both voices move upward into a P8: here the top voice must move by *half step* to be acceptable.

Musical score in B-flat major, 4/4 time. Labels 'poor' and 'fine' are placed above the notes to indicate the quality of the voice leading.

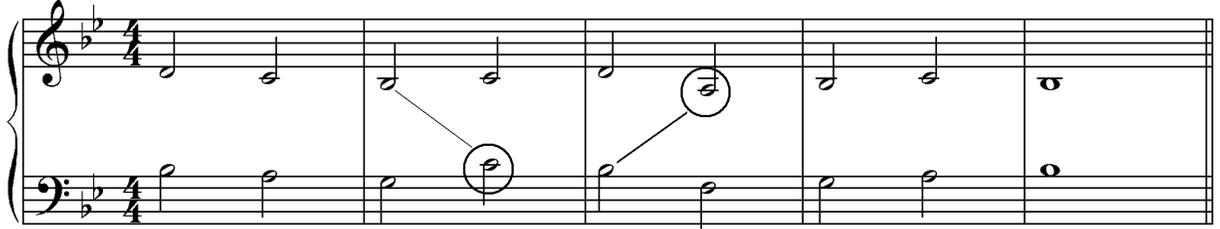
Employ a variety of motion types—contrary motion, parallel motion of imperfect consonances, similar motion, and oblique motion—but give preference to *contrary motion*.

Here are three final considerations related to the motion of the two voices. These principles help to keep the two voices as independent as possible.

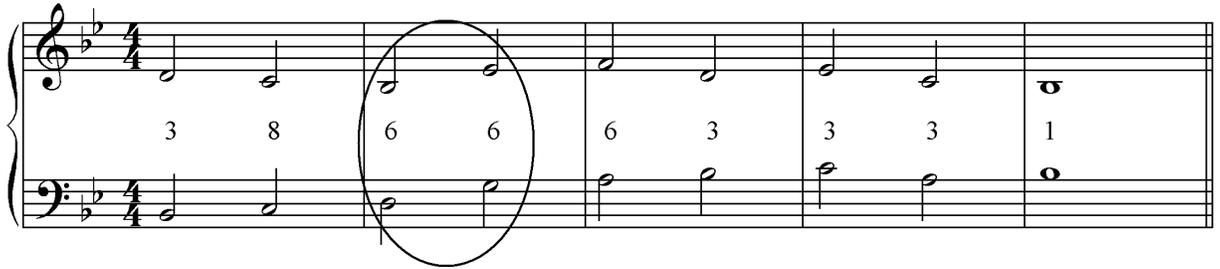
Do not allow your voices to cross. **Voice crossing** occurs when the upper part momentarily appears *below* the lower part, or when the lower part momentarily appears *above* the upper part.

Musical score in B-flat major, 4/4 time. A circle highlights a moment where the upper voice moves below the lower voice, labeled as voice crossing.

Also to be avoided is **overlapping**, which is similar to voice crossing. It occurs when  
 a) the lower voice rises up above *the previous location of the upper voice*, or when  
 b) the upper voice dips below *the previous location of the lower voice*. (Most examples of voice crossing involve overlapping—label such instances as voice crossing.)



Avoid having both parts *use large leaps* (4ths or larger) simultaneously in the *same direction*.



### Composing the Contrapuntal Voice

Keeping these guidelines in mind, you should practice writing a contrapuntal voice above or below different cantus firmus examples. In addition to writing the contrapuntal voice, you should *write the harmonic interval numbers* between each note and the corresponding note in the cantus firmus. Reduce compound intervals to their simple equivalents. You do not need to include the interval type, only the number, *unless it is an augmented or diminished interval* (be especially careful of o5 intervals). This will help you to find and correct objectionable parallel intervals. Refer to the guidelines as you work, and don't be afraid to revise. In general, a relatively conjunct line moving mostly by contrary motion (and parallel imperfect intervals) against—and forming consonances with—the cantus firmus will lead to a good solution.



Self-Test A-2

A. In the blanks between the two staves, indicate the harmonic intervals (by number only) formed by the voices. Then analyze the motion between each of the pairs of voices and fill in the blanks above the staff using this system:

st = static      o = oblique      c = contrary      s = similar      p = parallel

Motion:    \_ \_ \_ \_ \_

Intervals: \_ \_ \_ \_ \_

One of these motion types is not used in counterpoint. Which one? \_\_\_\_\_  
From your answers above the staff, circle any examples of this motion type.

(See next page for Part B)

B. In the blanks between the two staves, indicate the harmonic intervals formed by the voices. Then, criticize the following contrapuntal examples in terms of the guidelines discussed under “Harmonic Intervals” and “Types of Motion.” To avoid cluttering up the score, *place numbers in the score from the list below next to the corresponding errors*. If the errors are general, place the number to the left of the score. If the error occurs over a range of notes, show this with an additional bracket or circle.

*Harmonic Intervals*

1. Dissonant harmonic intervals (including P4ths)
2. Harmonic unisons in the middle of the excerpt
3. Too many perfect intervals
4. Too many successive imperfect intervals

*Types of Motion*

5. Parallel octaves, fifths, or unisons
6. Direct fifths or octaves
7. Static motion

*Miscellaneous*

8. Voice crossing
9. Overlapping (without voice crossing)
10. Simultaneous, same- direction leaps in both voices

1.

contrapuntal voice

Intervals: \_\_\_\_\_

cantus firmus

Try out different forms of  $\hat{6}$  (C or C#) and  $\hat{7}$  (D or D#) in the cantus firmus in measures 2 to 4. Add accidentals as necessary to indicate the version that sounds best to you.

2.

contrapuntal voice

Intervals: \_\_\_\_\_

cantus firmus

Self-Test A-3

A. Write a contrapuntal voice above or below the following cantus firmus examples, using the guidelines in this chapter. Also, indicate the harmonic intervals formed by the two voices, using the blanks between the staves.

1. D major

contrapuntal voice

cantus firmus

2. G minor

cantus firmus

contrapuntal voice

3. A major

cantus firmus

contrapuntal voice