

# *A Manual for Species Counterpoint*

Musica Practica 1

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# A Manual for Species Counterpoint

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## Chapter 1

### *First Species Counterpoint*

#### 1.1 Introduction

Ex. 1.1 presents a score for a complete musical composition. It is a remarkable piece, for a number of reasons, one of them being the score, a glance at which suggests that the piece is simpler than the music most of us are used to listening to, though — as will soon become clear — the piece is far more complicated than it would appear.

Ex. 1.1

1 2 3 4 5 6 7 8 9 10 11

Even without listening to the piece, it is clear that it is extremely brief: there is no indication of tempo in the score, but even at a slow pace a performance of the entire piece would last less than ten seconds. What's more, the score includes almost no information about instrumentation, though the mere fact that there are two staves suggests that there are two musical parts or — in this case — *voices*: within the musical tradition from which this piece stems it is understood that the composition is for two singers (or two groups of singers, each group singing the same part), one voice per staff.

We have enough information at this point to approximate a performance of the music, “approximate” because as we continue to perform, listen to, and discuss this piece, we will extend and refine our ideas about what an appropriate or effective performance of the music might mean. For now, *sing* both parts, first alone, then together with someone else; if possible, switch parts in order to get a better, more complete sense of how the piece goes. If no one is available to sing the other part, sing one part while playing the other on the piano, or perform both parts on the piano. It is always preferable, however, to *sing* this music.

When singing this music, use *solfege*, vocalizing each pitch with the syllable shown in Ex. 1.2:

Ex. 1.2

1 2 3 4 5 6 7 8 9 10 11

re la sol fa mi re do mi re si re

re fa mi re sol fa la sol fa mi re

Most college-age musicians are familiar with solfege, though few have much experience using it. While the claims made for (and about) solfege are sometimes exaggerated, it does have a number of practical uses. Solfege makes it easier for us to talk about what we hear and to communicate about it with other musicians. It also makes for a more musical performance of the piece: because each syllable begins with a consonant (*re, mi, fa*, etc.), using solfege allows for a cleaner, more precise attack of each note, which in turn makes it easier for us to synchronize the two parts in performance. Solfege is also more listenable than other alternatives. Singing each note on *la*, for instance, can be vocally tiring: when singing on *la*, we often begin to sing toward the base of the tongue, producing an ugly, glottal sound, as if we're swallowing the pitches. Solfege, in contrast, requires a change of vowel — most of which require a brighter, “more forward” vocal production — with each pitch.

Ex. 1.2 gives the appropriate solfege syllable below each note in both voices. In the upper part, the next-to-last note — a C $\sharp$  — is labeled *si*. Without for the moment going into detail, *si* is being used in this one instance as a *functional* designation to label the *leading tone*: that is, C $\sharp$  is to D as B is — within the *diatonic*, white-note collection — to C; just as B forms a *si* in relation to *do*, C $\sharp$  can be heard as a *si* (a leading tone) in relation to *re*. From now on, use solfege when singing the examples; the syllables, however, will no longer be provided.

A few more instructions. Even though both voices consist of whole notes, choose a flowing, moderate tempo, not too slow, about two whole notes per second, and sing at an even pace from beginning to end; if possible, sing the entire part in a single breath. Each part, moreover, should be sung *legato*, so that there is a smooth, seamless connection between each note and the next, and so that each note is articulated without a discernible accent. Choose a comfortable *register* to sing in: in this case, basses and tenors will want to sing the music on the upper staff two octaves below the notated pitches, while sopranos and altos will feel more comfortable singing the same music an octave lower than written. Performance will be addressed in greater detail in Section 1.2, but for now, experiment with the performance, following your own musical instincts about how best to realize the music.

Ex. 1.1 instantiates a kind of music known as *species counterpoint*. In its earliest historical forms, species counterpoint arose (in the late renaissance) as a pedagogical practice — as a means of instruction for musicians, whether performers or composers — a purpose for which it is still being used, over four centuries later. Its pedagogical aims account in large measure for its intentional simplification of musical texture, at least in comparison with other contemporaneous compositional practices. Ex. 1.1 consists, as noted above, of nothing but whole notes (or *semibreves*) in both voices — at least, that is, until the *breve* (double whole note) of the final measure — and there is a one-to-one, semibreve-to-semibreve correlation between the two voices; first species is often described, for this reason, as one-to-one, note-against-note counterpoint.

Another way in which this piece is uncomplicated is that it draws on a limited, finite collection of pitches. In this case, that collection consists of diatonic (or *natural*) pitches: except for the accidental in the next to last (or *penultimate*) measure, there is no *chromaticism* in this piece. Moreover, stepwise melodic motion is the norm in both voices: leaps are for the most part few and far between. And the melodic range (or *ambitus*) of each voice is rather narrow: the upper voice remains within the major 6th between a low C and a high A, while the lower voice has even narrower melodic compass, moving entirely within the perfect 5th between a low D and a high A.



Both voices, moreover, are about equal in melodic interest: neither voice predominates, takes precedence over, or distracts attention from the other — we hear both voices, in other words, as individual *melodies*. We are of course all familiar with melodies from other sorts of music, but one of the remarkable things about species counterpoint is that it allows us to discuss, in considerable detail, how we hear them, but also why some melodies seem better or more effective than others.

In thinking about melodies, musicians often draw on two intersecting families of metaphors, mental images, that is, of *lines* and *streams*. When we perform and listen to melodies, we hear them less as successions of individual notes, occurring one after the other, than as notes that connect together to form a melodic *line*. In this vein we imagine melodies as contours plotted on a mental graph where the vertical axis designates pitch (running from low to high) and the horizontal axis designates the lapse of musical time (measured out, in the case of Ex. 1.1, in whole notes). All melodies, in other words, emerge over time (melodies have length) but in changing direction also articulate and organize registral space along a vertical scale (melodies have height). When we imagine melodies as lines, we imagine their notes as series of points within this two-dimensional mental space and then connect the dots, as it were, allowing us to picture them as linear contours. Of course, these melodic lines are never straight: like the two melodies in Ex. 1.1, all melodies outline a series of curves, which meld together to form the larger melodic arc. These intuitions translate into a number of related metaphors: in addition to those of line and contour, we often imagine melodies as arcs and curves, ascents and descents, inclines, grades and slopes, profiles and silhouettes.

In species counterpoint, musicians tend to value pieces in which the two voices trace distinctive melodic contours and thus assume independent melodic identities. In Ex. 1.1, for instance, the upper voice begins with a large leap from D to A, then descends by step to a low C, leaping again to E before cadencing on D. The lower voice, in contrast, begins with a brief departure and return to D, continues with disjunct motion first to F and then to A, and concludes with a long descent from A down to D — it changes direction more often. Both melodies, in other words, follow different melodic routes to their destinations and outline different melodic contours: for the most part, the two melodies leap at different times, reach their melodic peaks at different times, *etc.*

Yet the two voices in Ex. 1.1 are also similar in a number of crucial respects: we often exaggerate the extent to which the two voices in a first-species composition are heard as independent melodies. The upper voice, for instance, begins with a long descent from A, which is the highest note, or *apex*, in its melodic curve. As the brackets in Ex. 1.3a suggest, this melodic descent recurs toward the *end* of the piece, only now an octave in the lower voice, where A once again occurs at the crest of the melodic contour.

### Ex. 1.3a

1    2    3    4    5    6    7    8    9    10    11

┌—melodic descent from A ...

└—melodic descent from A ...

There is, in other words, a subtle melodic echo in this piece, where the opening melodic *gesture* in the upper voice becomes the closing gesture in the lower voice: while both voices trace distinct melodic contours, their melodies are cut from the same bolt of musical cloth, and even share melodic material. As the brackets in Ex. 1.3*b* suggest, we can even hear the jagged ascent in the lower voice between D in ms. 4 to A in ms. 7 as a more extended and elaborate version of the leap from D to A that opens the piece the upper voice.

Ex. 1.3*b*

The image shows a musical score for two voices, numbered 1 through 11. The upper voice (treble clef) begins with a perfect fifth (P5) leap from D to A. The lower voice (bass clef) begins with a perfect fifth (P5) leap from D to A, but is more elaborate, including an upper neighbor G in measure 5. The score is annotated with brackets and 'P5' labels to highlight these intervals.

The lower voice takes the opening perfect 5th from D to A in the upper voice and *subdivides* it, inserting the F in ms. 6 between the D in ms. 4 and the A in ms. 7. It then elaborates the minor 3rd between D in ms. 4 and F in ms. 6 with an upper neighbor G in ms. 5: G, that is, lies “next door” — or rather, “right above” — F in the next measure.

In addition to linear metaphors, we often use *stream* metaphors to express other intuitions we have about melodies: in species counterpoint, melodies *flow* toward their destinations — the last note, or *final*. In contrast to linear metaphors, which encourage us to view melodies out of time as linear contours that exist all at once at a given moment, stream metaphors communicate a sense of fluid, ongoing motion toward a goal. In the course of this advance toward the final, however, melodic motion is never even or continuous, but rather ebbs and flows, like the tide: melodies swirl into eddies at some moments — pools in which melodies seems to lose momentum or even stagnate — or surge forward at others. What distinguishes stream metaphors from linear images is the element of motion: stream metaphors are active, dynamic, and temporal, while linear metaphors tend to be more static and *atemporal*. Stream metaphors, in other words, stress the sense of motion toward a goal, one of the main musical concerns — if not *the* main concern — of this manual. It is not a matter of preferring stream metaphors to linear ones, however, because the two image reservoirs overlap: in the sense we have that melodies define courses or paths, ascend and descend, or move to the right, stream metaphors subsume linear ones. While we can imagine lines without motion, one cannot factor out or subtract the linear element from stream metaphors, and for that reason we will want and need to use them both.

In general, melodies in species counterpoint are composed of smaller arcs, or *gestures*, each of which — in a successful piece — contributes to the overall flow of the tune toward the *cadence*. Though somewhat self-contained, melodic gestures are pliable and often appear not to have precise boundaries. Ex. 1.4 thus adds slurs to the score to indicate the approximate extensions of melodic gestures in both the upper and lower voices:

## Ex. 1.4

Ex. 1.4 is a somewhat crude parsing of these two melodies into gestures, but it gets one important idea across: gestures tend to conform to changes in melodic contour. Hence the first four notes in the lower voice meld together to form a gesture, for three basic reasons: (1) because the gesture begins and ends on the same note, (2) because the last three notes of the gesture, F–E–D, fill in the initial leap from D in ms. 1 to F in ms. 2, and (3) because a large leap — the perfect 4th from D in ms. 4 to G in ms. 5 — and change in direction combine to separate the melodic gesture in the opening four measures from the subsequent melodic continuation as a discrete melodic segment. Likewise, the upper-voice descent from A in ms. 2 to C in ms. 7 fills in (and then exceeds) the initial leap from D in ms. 1 to A in ms. 2. Here the leap from C in ms. 7 to E in ms. 8 separates the relatively long opening gesture from the final descent into the cadence. At the same time, however, the two gestures connect together: the first one flows into the second. In a sense the two gestures overlap: C in ms. 7 serves as the last note of the opening gesture as well as the first note of the closing gesture.

Note, too, that both voices unfurl in two more-or-less large gestures, which, however, do not coincide; in gestural terms, the two melodies are not altogether “in sync” with one another. A good deal of musical interest in these compositions arises from the subtle *interaction* between voices, whose component melodic gestures are sometimes in, sometimes out of phase. In this particular piece, the sharing of melodic material between the two voices — the fact that the final descent from A to D in the lower voice echoes the initial descent from A to D in the upper voice, as mentioned above — contributes to and complicates this sense of interaction. Melodic interaction, that is, involves more than the mere coordination of gestures. Here there are two independent melodies that nonetheless seem to influence one another.

In each voice in Ex. 1.4, the melodic gestures combine to delineate a more comprehensive melodic contour that *converges* on the final: the final represents a *confluence* of the component melodic gestures in each voice. In the upper voice, for instance, the leap from D in ms. 1 to A in ms. 2 opens up a *gap* that the subsequent melodic continuation *fills in*. In its melodic descent from A in ms. 2, the upper voice continues past D to C in ms. 7, extending the melodic ambitus a whole tone downward. At precisely this moment, however, the upper voice changes direction, leaping back up to E in ms. 8. As it then fills in the gap, it converges on the final, moving back down through D in ms. 9 to C# in ms. 10, which, because of the accidental, exerts an almost magnetic attraction (to draw on another set of metaphors ...) toward the final D in ms. 11. Because the second gap is smaller than the first one, the entire melodic voice seems to narrow in on the final: the final in this sense is *forehearable*; we can sense its imminent arrival well in advance of the actual event. It thus forms a goal, a *terminus* toward which the entire melody aims. D — the note that fills the gap between C and E — *is*, of course, the final, or rather, is identical to the final in pitch, but it comes “too soon,” two measures before the end. We know that its

arrival is premature because it occurs above an F — rather than a D — in the lower voice. Realizing that, the upper-voice D seems to *press down* on F in ms. 9, forcing the lower voice to descend through E in ms. 10 to the final D in ms. 11. D in ms. 9 forms the moment of greatest tension — the *climax* — in the upper voice, because it fills the gap between C and E, thus “resolving” the leap, but also because we realize that this resolution *isn’t* a resolution, that we’re very near the end but nevertheless still not *there*. As it guides the lower voice to the final, the upper voice moves along in parallel 6ths until it reaches C# in ms. 11, at which point it reverses direction and ascends, *via* semitone and in contrary motion with the lower voice, to D in ms. 11. The addition of *musica ficta* — a C# — in the penultimate measure lends the arrival of D an air of inevitability. And because in most cases the final will be identical in pitch to the note that forms the point of melodic departure in the first measure, it will have been in our ears as a potential melodic target from the very beginning of the piece. In a sense, the cadential arrival on D fulfills an earlier musical promise: the final forms a *conclusion* — a moment of *completion* — rather than a mere end, a note on which the upper voice just happens to stop.

Ex. 1.5 uses arrows to delineate the confluence of melodic gestures in the upper voice over the last few measures of the piece. It shows how C, abandoned at the end of the long opening gesture in ms. 7, curls upward (in the concluding gesture) through C# in ms. 10 to D in ms. 11; the two melodic gestures flow together into the cadence.

#### Ex. 1.5

Ex. 1.5 thus posits a *virtual* melodic connection between non-adjacent notes, in this case between C in ms. 7 and C# in ms. 10. Meanwhile, the concluding gesture splits off from the opening gesture at C in ms. 7, leaps to E in ms. 8, and then descends *via* stepwise motion through D to C# in ms. 10, where it once again converges with the main melodic current of the upper voice. We can imagine these different gestures as tributaries that follow their own melodic courses but nevertheless flow into the main melodic current of the counterpoint.

In both voices, the use of leaps contributes to this sense of forward motion toward the final. A leap — even a small one — introduces tension into a melody, which manages (or *resolves*) that tension *via* stepwise motion in the opposite direction. In other words, a leap encourages us to imagine a certain musical continuation, a more or less definite musical future into which the melody will then move. In language used in the last paragraph, a leap opens up a *gap* which the listener expects the counterpoint to then *fill*.<sup>1</sup> This dynamic (complementary) relationship between leaps and stepwise motion creates a fluctuation in the level of tension throughout the counterpoint. This is an important point: the

<sup>1</sup> We owe these terms (and their conceptual elaboration) to Leonard B. Meyer, who first introduced them in *Emotion and Meaning in Music* (Chicago, 1956). His most extended discussion of gap/fill occurs in *Explaining Music: Essays and Explorations* (Chicago, 1973).

level of tension in a species composition is never constant, but rather varies throughout the piece, the point of greatest tension being the *climax*. The terms *climax* and *apex* refer to two different melodic phenomena often confused for one another: *apex* designates the highest note in a counterpoint (or one of its component melodic gestures), while *climax* designates the moment of greatest tension. While the apex and climax can and sometimes do occur simultaneously, they more often occur at different points in a piece. The apex (highest note) of the upper voice in Ex. 1.5, for instance, is the A in ms. 2, while the climax (moment of greatest tension) comes about as the result of the leap from C to E in ms. 7 and 8. As described above, this leap articulates (gives voice) to two separate melodic streams (see the arrows between staves) that give the counterpoint the feeling of zeroing-in on the final and contributes to a clear sense of forward momentum (or tension) that does not ease up (or resolve) until C# in ms. 10 ascends to the final D in ms. 11. Note, moreover, that the apex of the lower voice occurs on A in ms. 7, at the same moment the upper voice — coincidentally — reaches its *lowest* note, C. The apex, in other words, occurs at different moments in the upper and lower voices, another factor that contributes to the complicated melodic interactions between them. In general, an apex can occur almost anywhere in the first two-thirds of a piece, whereas the climax normally occurs somewhere in the last third of a piece, at the moment when the final motion into the cadence begins to seem inevitable, a point that most often occurs within three or so measures of the end.

Another important (and for the moment concluding) intuition we have about the music in Ex. 1.1 is that the two melodic voices are *harmonious*: the two melodies are in *agreement*, forming *consonances* between them. Ex. 1.6 includes numerical labels for these consonances between staves:

### Ex. 1.6

	1	2	3	4	5	6	7	8	9	10	11
--	---	---	---	---	---	---	---	---	---	----	----

The musical score for Ex. 1.6 consists of two staves, treble and bass clef, with 11 measures. Numerical labels for consonances between staves are placed below the notes in each measure: 8, 10, 10, 10, 6, 6, 3, 6, 6, 6, 8.

It is clear from these numbers that the piece begins and ends on perfect consonances (the perfect 8ve), but that in between the two voices form *imperfect* consonances (major and minor 3rds [or 10ths] and 6ths). In the historical tradition from which this music derives, imperfect consonances were heard to be sweeter, more euphonious, than perfect consonances, which in comparison were thought to sound austere. In this particular piece, imperfect consonances far outnumber perfect consonances, which is one of the reasons the music sounds so rich and sonorous.

## 1.2 Performance

In the last section, we discussed some of the basic characteristics of species counterpoint and considered one particular piece in some detail. Up to now, our comments on the performance of this music have been somewhat informal, amounting to little more than

the common-sense advice to draw on one's own intuitions about how best to sing the music. We will now address issues of performance more directly and develop more specific ideas as to what a musical performance of this piece would entail. We want to stress that even though species counterpoint is primarily used for pedagogical purposes as a controlled musical environment within which to compose melodies and conceptualize melodic behavior, these pieces are real musical compositions, each with its own integrity, and as such deserve caring performances — *all* music deserves to be well-performed. More than that, however, the principles that inform the performance of species compositions can be applied to all sorts of other music and thus have a broader, more global relevance: we can draw on these same principles to put together a more musical performance of almost any piece of music.

### Vocal Production

Historically, species counterpoint was modeled on Renaissance vocal music, and therefore sounds best when sung; the performance aesthetic we are aiming at is a *vocal* one. In singing this music, use a light but focused tone, no vibrato. Men with lower voices will need to sing, comfortably, in a middle or higher register, with a range that extends from an octave or so below middle C up to F or G above middle C. Since species counterpoint involves a concern with both the contours of individual melodies as well as their harmonious coordination, our goal in performance will be to *blend* the sound of the two voices, something that becomes difficult when baritones and basses, in particular, sing in their lower registers, an octave below the tenors. As you sing your part, you need to be aware of the other part as well, so that you can hear the relation between voices: never sing so loudly that you can't hear the other singer (or singers). In order to get a good aural sense of the composition as a whole, it is important to rehearse the piece, and it is especially valuable to trade parts, which often helps us in learning to hear the piece as a blend of melodies as we continue to sing one of them.

If possible, sing the melodies in a single breath — easier to do in first species than in the others — and maintain a smooth, legato connection from one note to the next: there is a close aesthetic correlation between conjunct (stepwise) melodic motion and legato singing. Singing these melodies legato, moreover, assists us in both creating and conveying forward motion in this music: a sense of musical flow is easier to realize when we imagine legato singing as a transfer of momentum from note to note, rather than merely as the smooth connection between them. Some musicians associate legato with relaxation, with a serene tensionlessness, but nothing could be farther than the case: legato is one of the principal means a performer has of creating and sustaining musical tension, in even the softest and slowest of music.

### Gesture

Ex. 1.7 (on p. 9 below) translates the slurs in Ex. 1.4 above into crescendos and decrescendos; again, these markings represent a crude parsing of these melodies into gestures, for in actual musical practice, melodic gestures blend and meld into one another. A basic (or at least traditional) principle of performance is that one crescendos when ascending and decrescendos when descending. If we were to sing Ex. 1.7 like that, however, our performance would sound somewhat mechanical if not downright unnatural, the result of an overly-literal application of a crude and unnuanced generalization about performance — a simplistic, one-to-one correlation between volume and melodic direction. A

## Ex. 1.7

The image shows a musical score for two staves, treble and bass clef, over 11 measures. The notes are as follows:

Measure	Treble Clef	Bass Clef
1	G4	F3
2	A4	G3
3	B4	A3
4	C5	B3
5	B4	A3
6	A4	G3
7	G4	F3
8	F4	E3
9	E4	D3
10	D4	C3
11	C4	B2

Four hairpins are placed above the treble staff and four below the bass staff. The hairpins above the treble staff are: 1) a crescendo hairpin from measure 2 to 4; 2) a decrescendo hairpin from measure 4 to 6; 3) a crescendo hairpin from measure 7 to 9; 4) a decrescendo hairpin from measure 9 to 11. The hairpins below the bass staff are: 1) a decrescendo hairpin from measure 2 to 4; 2) a crescendo hairpin from measure 4 to 6; 3) a decrescendo hairpin from measure 7 to 9; 4) a crescendo hairpin from measure 9 to 11.

more sophisticated and musical approach would be to use vocal *intensity* — which involves much more than volume — to delineate and underline melodic gestures within the melodies: the idea, in other words, would be to use subtle, almost imperceptible changes of volume and intensity to perform *gestures*. In general, there will be a gradual increase in intensity toward the middle of a gesture, at which point intensity will decrease and subside until the next gesture begins. In a musical (interesting) performance, the gradual wax and wane in vocal intensity will correspond to subtle increases and decreases in volume: the hairpins in Ex. 1.7, then, are meant to bring out this general correspondence. Sing the two melodies again with this principle in mind: crescendo (as it were) into each gesture, then decrescendo out of it; you will find the results more satisfying. Of course, questions of where, precisely, to locate these hairpins and how best to realize them are open to discussion; it is these sorts of discussions that we are hoping to encourage.

The principle of increasing and decreasing intensities can also be applied to how we control the motion of these melodies through time, to how we *pace* the music. Once again, as we move into a gesture, there will be a gradual, almost imperceptible increase in tempo, and a similar broadening in pace when moving out of a gesture, all corresponding to the changing musical intensities of the music and done in a manner that enhances a sense of seamlessness. We need to emphasize that these changes in pacing need to be subtle in the extreme: when done well, the listener won't be consciously aware changes are taking place. The effect, rather, will be one of a gradual compression and decompression — contraction and expansion, inhalation and exhalation — of musical time within a single tempo. These subtle manipulations of musical time should be used with great care; however essential to realizing the ebb and flow of this music, these sorts of nuances can be easily overdone, resulting in exaggerated, unmusical (obvious and insensitive) performances.

In a musical performance, singers will intuit how melodies are composed of smaller gestures and communicate that awareness to one another, and to the listener: simply put, a musical performance is one in which the performer delineates the gestures that combine to form melodies. In this case, a sensitive performance of the music would allow the concluding gesture in the lower voice to emerge out from under the shadow of the upper voice as it nears the cadence, bringing out its melodic echo of the long descent from A in the opening measures of the upper voice (as discussed in connection with Ex. 1.2a). As the opening gesture in the upper voice subsides, following the decrescendo above the staff in Ex. 1.7, the lower voice grows in presence, following the crescendo below the staff in Ex. 1.7, emerging into our conscious awareness to the point that it seems to guide the upper voice into the cadence.

## Solfege

*Solfege* refers to the practice of using syllables to vocalize pitches, but also as mnemonic devices for singing melodic intervals. It is used to assist in the aural transmission of music and exists in one form or another in most musical cultures. The form that has come down to us is now a millennium old: it has been often attributed to Guido d'Arezzo, a renowned medieval musician who died sometime after 1033. Guido used solfege as a pedagogical device to teach arrangements of wholetones and semitones in the absence of musical notation; it has undergone modification and been used for different musical purposes ever since. We know it from *The Sound of Music*: “do, a deer, a female deer; re, a drop of golden sun ...”<sup>2</sup> One derivation of the word *solfege*, which embraces multiple meanings, traces it from an amalgam of *sol* (“a needle pulling thread”) and *fa* (“a long, long way to go”).

Over the last two centuries, the two most common methods of solfege have been *fixed do* on the one hand and *moveable do* on the other. In *fixed do* solfege, syllables are used to designate specific letter-named pitches: *do* = C, *re* = D, *mi* = E, and so on. In *moveable do* solfege, syllables designate the order position of each pitch in a scale: *do* = the first note of the scale, *re* = the second note of the scale, *mi* = the third note, and so on. Both methods have their uses, but for singing species counterpoint, *fixed do* is more appropriate; in *fixed do* solfege, the interval between *mi* and *sol*, for instance, will always be a minor 3rd, no matter what *mode* (see below) a piece is in; that would not be the case were we to use *moveable do*.

We will use a form of solfege, moreover, that can be described as *functional solfege*, in which *si* is used for “raised” pitches, or in the case of species counterpoint, leading tones. C# in the penultimate measure of Ex. 1.1, for instance, is a raised leading tone: Ex. 1.1, that is, uses an *accidental* to raise a C $\natural$  to a C#, which creates an artificial semitone — a semitone where a wholetone would otherwise have occurred — between C# and D; as discussed above, the semitone creates an almost gravitational attraction between C# and D and thus intensifies the sense of forward motion into the final. Because *si* forms a semitone in relation to *do* in the unaltered diatonic collection, we will label C# in Ex. 1.1 in functional terms as a *si* in relation to *re*.

### 1.3 Basic Concepts

#### Cantus firmus

In composing species counterpoint, the basic method is to add a melodic part, or *counterpoint*, to a *cantus firmus*, or “fixed voice” — *cantus* for short.<sup>3</sup> A *cantus firmus* is some pre-existent tune used as the basis for a multivoice piece: in species counterpoint, the same *cantus firmus* often forms the basis for numerous different compositions. It is a rem-

<sup>2</sup> The introduction of solfege into *The Sound of Music* in fact constitutes an (unintended) historical re-enactment of its invention. Guido found a hymn, *Ut queant laxis*, in which each phrase begins on the next note in the scale, which he named with the Latin syllable sung on that note: he thus named C *ut* (which later became *do*), D *re*, E *mi*, and so on. Which is precisely what Rodgers & Hammerstein do: the first line of the song begins on C, the second on D, *etc.* Rodgers & Hammerstein also introduce solfege for the same reason Guido did: Maria uses it in teaching the children to sing.

<sup>3</sup> Note the two different uses of *counterpoint* in this sentence, in which the term refers to a particular melodic voice on the one hand, but also to an entire genre of music on the other.



nant of an ancient historical practice in which plainchant melodies were used as the bases for liturgical music (sacred motets, mass movements, *etc.*), a compositional procedure that had all but died out by the time J.J. Fux codified counterpoint instruction in terms of five species (or metrical states) in *Gradus ad Parnassum* (1725). Most of the cantus firmi used in species counterpoint, however, have been composed for the express purpose of writing counterpoint above and below them, and do not derive from liturgical melodies.

Species counterpoint has come down to us with its own repertoire of cantus firmi, a few of which, in certain pedagogical contexts, have become almost famous: the cantus firmus on the C clef in Ex. 1.1 is the most famous of them all, one that Fux used in *Gradus ad Parnassum*, and which has circulated ever since in species-counterpoint manuals and in the context of composition instruction. In species counterpoint, a cantus is *firmus* in two senses: (1) it operates as a concrete melodic arch around which the entire composition is constructed, and with which the counterpoint agrees and conforms, and (2) it is carved in stone, as it were, and unalterable: when composing counterpoint, no changes are to be made to the cantus firmus. A traditional species-counterpoint cantus firmus, moreover, comprises nothing but whole notes, one per measure, and most often ranges between 9 and 13 notes in length. It begins and ends on the same pitch, the mode final, which it invariably approaches from above, descending from  $\hat{2}$  to  $\hat{1}$ , where the carets designate degrees of the modal scale (or *mode degrees*) and the final is numbered  $\hat{1}$ . Hence the cantus firmus in Ex. 1.1 concludes with stepwise motion from E in ms. 10 to the final D in ms. 11.

Mode

In a species composition, then, the final is the last note in the cantus firmus, but it is also the most important. It determines a locus position within the music in relation to which we hear other notes and calculate the distances between them. It allows the cantus firmus to define a particular melodic environment, a mental grid of wholetones and semitones against which we hear the music. In modal music, the crucial factor is how semitones are distributed within the octave above the final. Without going into detail, Ex. 1.8 gives the modal octaves for the six modes that begin on notes of the *natural hexachord* (C–D–E–F–G–A) and identifies the location of wholetones (Ts) and semitones (Ss):

Ex. 1.8

Ex. 1.8 displays six modal octaves, each starting on a different note of the natural hexachord (C, D, E, F, G, A). The modes are arranged in two columns. Above each staff, the degrees of the modal scale are indicated by carets:  $\hat{1}$  through  $\hat{8}$ . The intervals between notes are labeled as T (wholetone) or S (semitone).

- Mode C:**  $\hat{1}$  C,  $\hat{2}$  D (T),  $\hat{3}$  E (T),  $\hat{4}$  F (S),  $\hat{5}$  G (T),  $\hat{6}$  A (T),  $\hat{7}$  B (T),  $\hat{8}$  C (S).
- Mode D:**  $\hat{1}$  D,  $\hat{2}$  E (T),  $\hat{3}$  F (S),  $\hat{4}$  G (T),  $\hat{5}$  A (T),  $\hat{6}$  B (T),  $\hat{7}$  C (S),  $\hat{8}$  D (T).
- Mode E:**  $\hat{1}$  E,  $\hat{2}$  F (S),  $\hat{3}$  G (T),  $\hat{4}$  A (T),  $\hat{5}$  B (T),  $\hat{6}$  C (S),  $\hat{7}$  D (T),  $\hat{8}$  E (T).
- Mode F:**  $\hat{1}$  F,  $\hat{2}$  G (T),  $\hat{3}$  A (T),  $\hat{4}$  B (T),  $\hat{5}$  C (S),  $\hat{6}$  D (T),  $\hat{7}$  E (T),  $\hat{8}$  F (S).
- Mode G:**  $\hat{1}$  G,  $\hat{2}$  A (T),  $\hat{3}$  B (T),  $\hat{4}$  C (S),  $\hat{5}$  D (T),  $\hat{6}$  E (T),  $\hat{7}$  F (S),  $\hat{8}$  G (T).
- Mode A:**  $\hat{1}$  A,  $\hat{2}$  B (T),  $\hat{3}$  C (S),  $\hat{4}$  D (T),  $\hat{5}$  E (T),  $\hat{6}$  F (S),  $\hat{7}$  G (T),  $\hat{8}$  A (T).

Each mode thus articulates its own distinctive pattern of wholetones and semitones. In the D mode, for instance, the two semitones fall — *as in no other mode* — between  $\hat{2}$  and  $\hat{3}$  and  $\hat{6}$  and  $\hat{7}$ . In the C mode, in contrast, the semitones fall between  $\hat{3}$  and  $\hat{4}$  and  $\hat{7}$  and  $\hat{8}$ , also a unique pattern among the six modes.

This, then, is the reason for using fixed *do* solfege: to preserve the unique scalar identities of the six modes. Under fixed *do*, semitones will always occur between *mi* and *fa* and between *si* and *do*, regardless of the mode. That would not be the case were we to use moveable *do*.

### Musical Goals

A good species composition will meet three basic criteria: (1) the counterpoint and cantus firmus will agree with one another, allowing listeners to concentrate on the melodic profile of each voice, (2) both voices will flow into their cadential goals, and (3) each counterpoint will have its own identifiable melodic contour, distinct from — but still consistent with — that of the cantus firmus.

Over a number of centuries, musicians have devised a set of integrated rules and procedures designed to meet these objectives and ensure that their melodies will be musical. In a moment, we will turn to those rules and procedures, but in order for that material to be comprehensible, we will need to familiarize ourselves with some additional concepts and information: information about cadences on the one hand, and concepts about relations between voices on the other.

### Consonance and Dissonance

*Consonance* and *dissonance* are among the most difficult and problematic concepts in music: despite our continual reliance on them, we are unable, even after centuries of hard labor, to give them precise definitions. Ideas about consonance and dissonance, moreover have changed a great deal over historical time: medieval and renaissance musicians, for instance, believed that consonances (from the Latin *consonare*, to sound together) were euphonious, sweet sounding, and that dissonances were *non-euphonious* — consonances, that is, agree, while dissonances *disagree*. This is, of course, an assertion rather than an explanation — it does not tell us what it means for consonances to agree — but we will nevertheless use it as a provisional point of departure.

For now, we will define consonances as perfect unisons, 5ths, and 8ves, plus (imperfect) major and minor 3rds and 6ths. We will then define *dissonances* negatively, as *non-consonances*: all major and minor 2nds and 7ths, plus all diminished and augmented intervals; the perfect 4th has an in-between status, but for the purposes of species counterpoint will be listed among the dissonances. There are of course different degrees of consonance and dissonance, but now, before we've become familiar with the music, is not the time to consider them; we will return to the topic now and then, as it arises from other musical considerations.

## Melodic Range (Ambitus) and Distance between Voices

The *melodic range* (or *ambitus*) of a counterpoint should be relatively modest. It will rarely exceed an octave and should be roughly proportionate to that of the cantus firmus: in Ex. 1.1, for instance, the range of the counterpoint is a major 6th, while the range of the cantus firmus is a perfect 5th — the two ranges are proportionate to one another. Nor should the distance between voices be too great. While there's no reason to set a definite limit on the acceptable distance between voices, separations of between a 3rd and a 13th (an octave and a 6th) are common. When the voices wander too far apart, it becomes difficult for us to blend the voices together.

## Simple and Compound Intervals

For our purposes, *compound* intervals will be intervals of a 10th or larger, while simple intervals will be those of a 10th or smaller. (This is not the conventional definition of the term, which gives the octave as the cutoff point.) As a convenience, we will label compound intervals according to their simple equivalents. We will thus label the interval from C up to A in ms. 7 of Ex. 1.13*b* on p. 18 below as a (major) 6th, even though, in real terms, it forms a 13th: most of us would have to do a little arithmetic to figure out that an octave and a 6th add up to a 13th.

## Four Varieties of Relative Motion

There are four possible varieties of *relative motion* between the cantus firmus and the counterpoint: *parallel*, *similar*, *oblique*, and *contrary*. Relative motion refers to the direction of motion in the counterpoint *vis-à-vis* melodic direction in the cantus firmus.

*Parallel* motion occurs when both voices move in the same direction and maintain the same size intervals between them. As the first bracket in Ex. 1.9*a* indicates, the cantus firmus and counterpoint move together in parallel 10ths from ms. 2 through ms. 4: though some of these 10ths are major, and others minor, the two voices are still considered to be moving in parallel motion.

Ex. 1.9*a*: *parallel* motion (*p*)

The musical notation shows two staves: a treble clef staff (Cantus Firmus) and a bass clef staff (Counterpoint). The notes are as follows:

Measure	Cantus Firmus	Counterpoint	Interval
1	D4	D3	8
2	F4	F3	10
3	A4	A3	10
4	C5	C4	10
5	D5	D4	6
6	F5	F4	6
7	A5	D4	3
8	C6	F4	6
9	D6	A4	6
10	F6	C4	6
11	A6	D4	8

Brackets labeled 'p' are placed under measures 2-4, 5-6, and 8-10.

*Similar* motion occurs when both voices move in the same direction but the intervals between them change. In the first two measures of Ex. 1.9*b*, for instance, the cantus firmus ascends a minor 3rd from D to F while the counterpoint ascends a perfect 5th from D to A, forming first a perfect 8ve, then a major 10th: both voices ascend, but the interval between them changes from ms. 1 to ms. 2.

Ex. 1.9b: *similar* motion (s)

1 2 3 4 5 6 7 8 9 10 11

8 10 10 10 6 6 3 6 6 6 8

┌ s ─┘

*Oblique* motion occurs, in first species, whenever there's a tie in the counterpoint. Because of the tie in the first two measures of Ex. 1.9c, the cantus firmus ascends from D to F against a sustained D in the counterpoint, creating an oblique succession from a perfect 8ve to a major 6th.

Ex. 1.9c: *oblique* motion (o)

1 2 3 4 5 6 7 8 9 10 11

8 6 10 10 6 6 3 6 6 6 8

┌ o ─┘

*Contrary* motion occurs when both voices move in opposite directions. In the last two measures of Ex. 1.9d, the cantus firmus descends from E to D while the counterpoint moves in contrary motion from C# to D. Contrary motion allows for maximal contrast between voices in terms of melodic direction, and for that reason is used (as it is here) to form cadences.

Ex. 1.9d: *contrary* motion (c)

1 2 3 4 5 6 7 8 9 10 11

8 10 10 10 6 6 3 6 6 6 8

┌ c ─┘ ┌ c ─┘ ┌ c ─┘

All four varieties of relative motion are good and useful, and for each one there will be occasions when none of the other varieties will do. To some extent, this classification is more discursive than musical: it allows us to discuss relations between voices with greater ease. It is often noted that the four forms of relative motion create a continuum, in the order given above, ranging from least to most contrast in melodic direction between voices. It is not true, however, that independence of voices takes precedence over other musical considerations, or that contrary motion is for that reason preferable to the other three varieties of relative motion, which would be wrong. In composing first-species counter-

point, there will be times when contrary motion — required at cadences, and indispensable at other times — will be worse than useless. As a general rule, the most useful form of relative motion in first species is in fact *parallel* motion, which often accounts for half or more of the successions from one harmonic interval to the next in an average first-species composition, as it does in Ex. 1.9a, where 5 of 10 total successions are in parallel motion.

A brief digression: Ex. 1.9c is the same as Ex. 1.9a except for the tie in the first two measures. The presence of the tie, however, makes quite a difference. Instead of leaping a perfect 5th from D to A, the counterpoint in Ex. 1.9c begins with a more modest leap of a perfect 4th from D to G, which narrows the melodic ambitus. It also ruins the melodic echo between the opening melodic descent from A in the counterpoint of Ex. 1.9a and the final melodic descent from A in the cantus firmus. Another melodic echo, however, comes about as a result of the tie, as if in compensation: the initial D–G–F gesture in the counterpoint of Ex. 1.9c recurs moments later in the cantus firmus. But that gesture is not as self-contained as the melodic descent from A in Ex. 1.9a, nor is the gesture used — as the melodic descent from A is in Ex. 1.9a — to round off the cantus firmus: Ex. 1.9a, that is, transforms its opening gesture into a closing one. And because of the tie, it takes Ex. 1.9c longer to gain melodic momentum, to generate forward motion toward the cadence.

In some respects, then, the counterpoint in Ex. 1.9c is less compelling than the one in Ex. 1.9a. Yet the conclusion to be drawn here is not so much that the counterpoint in Ex. 1.9a is better than the one in Ex. 1.9c, but first, that even an innocuous change in melodic contour can have rather dramatic consequences, and second, that the concepts and principles of species counterpoint allow us to make these sorts of comparisons and to discuss them with real precision.

### Clausula formalis

All species counterpoints, without exception, end with a *clausula formalis*, or *formal close*, which serves as musical punctuation to bring the composition to a strong conclusion. Use of the *clausula formalis* is not confined to species counterpoint: it forms the primary gesture of musical closure in an enormous repertoire of music dating from the 14th through the 17th centuries; species counterpoint borrowed the *clausula formalis* from that repertoire.

In the *clausula formalis*, the counterpoint cadences on a perfect unison or a perfect 8ve above or below the cantus firmus; the approach to the cadential consonance, moreover, must be stepwise in both voices, *via* contrary motion, and one of the voices must move by semitone — these are absolute requirements. In Ex. 1.10, the counterpoint thus moves from C# to D in contrary motion to the cantus firmus, which moves from E to D — a semitone in the counterpoint against a wholetone in the cantus firmus.

#### Ex. 1.10

The musical score for Ex. 1.10 consists of two staves. The upper staff is the cantus firmus, written on a single line with a treble clef. The lower staff is the counterpoint, written on a single line with a bass clef. The music is in first species, with whole notes. The counterpoint moves from D to G, F, E, D, C, B, A, G, F, E, D. The cantus firmus moves from E to D. The final cadence is marked with 'S' and 'T'.

Measure	Cantus Firmus (Pitch)	Counterpoint (Pitch)
1	E	D
2	E	G
3	E	F
4	E	E
5	E	D
6	E	C
7	E	B
8	E	A
9	E	G
10	E	F
11	D	D

In addition to the contrast in melodic direction between voices, the rules for cadence formation also ensure maximal contrast between the penultimate imperfect consonance (the major 6th E–C♯) and the perfect consonance (the perfect 8ve D–D) in the last measure.

In three of the six modes — the D mode, G mode, and A mode — the rule requiring semitone motion in one voice also requires us to raise the next-to-last note in the counterpoint, converting the mode degree below the final into a *subsemitonum modi*, or *leading tone*. In these same three modes, this necessitates use of an accidental: as a consequence of the accidental in Ex. 1.10, C♯ in ms. 10 *leans* toward the cadential D in ms. 11; the chromaticism intensifies the melodic surge to the final.

In all but one mode — or rather, in all the modes that have one — the leading tone will occur in the counterpoint, the added voice. In the other mode, the E mode, there is no *subsemitonum modi*. As Ex. 1.11a demonstrates, raising D to D♯ in the E mode would create a dissonance (an augmented 6th) with the cantus firmus. Because harmonic intervals are restricted to consonances in first species, the lower leading tone in the E mode is left unaltered, as in Ex. 1.11b. Here the two voices form a *phrygian cadence*, so called because the cantus firmus (rather than the counterpoint) moves *via* semitone to the mode final: in renaissance music theory, the E mode was sometimes identified (using an arcane Greek name) as the *phrygian* mode.

Ex. 1.11a

Ex. 1.11b

In the A mode, raising G♯ to G♯ causes a melodic dissonance (an augmented 2nd) when the counterpoint approaches G♯ from F, as it does in Ex. 1.12a. In order to eliminate the augmented 2nd — but also to accelerate melodic motion into the final — F must be raised to F♯ when approaching G♯ from below, as in Ex. 1.12b.

## Ex. 1.12a

1 2 3 4 5 6 7 8 9

┌ A2! ┐

## Ex. 1.12b

1 2 3 4 5 6 7 8 9

┌ M2 ┐

Raising F to F $\sharp$ , incidentally, has consequences for our method of solfege. Just as the leading note G $\sharp$  in ms. 8 is no longer a simple *sol* in relation to *la* — the final A — in ms. 9, F $\sharp$  in ms. 7 is no longer a simple *fa*. And just as the leading note C $\sharp$  forms a *si* in relation to *re* in the D mode, F $\sharp$  and G $\sharp$  form a *la* and *si* in relation to the final *la* — A — in the A mode. Hence we would sing the counterpoint in Ex. 1.12b as *la-si-do-si-la-sol-la-si-la*, where the italics designate the altered  $\hat{6}$  and  $\hat{7}$ .

**N.B.** In species counterpoint, accidentals are used in the formation of cadences, but at no other times, and for no other reasons.

## 1.4 Rules

There are two basic categories of rules in species counterpoint: one that governs vertical relations (relations of consonance and dissonance) between voices, and another that governs the melodic behavior of individual horizontal voices. In species counterpoint, the horizontal/melodic dimension always takes precedence. The rules governing vertical/harmonic relations between voices, in contrast, are meant to ensure that the two horizontal voices don't interfere with one another, and that our attention won't be distracted from following the melodic progress of individual voices.

Rules governing relations between voices are more stringent than those governing melodic behavior. For that reason, we will describe the former as *well-formedness rules*, the latter as *preference rules*.<sup>4</sup> If our compositions are to be recognizable to other listeners as species counterpoint, we must follow these well-formedness rules — there's no choice in the matter. When we depart from these rules, other listeners will either regard those

<sup>4</sup>The distinction between well-formedness and preference rules derives from Fred Lehrdahl and Ray Jackendoff's *A Generative Theory of Tonal Music* (Cambridge, Mass., 1985), where it forms the basis of an ambitious, rule-driven model of musical cognition.

departures as mechanical errors, or (if the errors are numerous enough) will no longer hear the music as species counterpoint. Which doesn't necessarily mean, of course, that the music won't sound good — to us, if not to other listeners — but rather that we will not be able to use the basic principles of species counterpoint to describe, critique, or improve our melodies, or the melodies of others.

Most of the following rules represent more precise formulations of ideas familiar to us from our discussions of Ex. 1.1 above.

### *Rules Governing Relations between Voices*

1. In first-species counterpoint, only consonances occur, and those are: the perfect unison, 5th, and 8ve, plus (imperfect) major and minor 3rds and 6ths.
2. The counterpoint must begin on a perfect unison, perfect 5th, or perfect 8ve above the cantus firmus, or — when the counterpoint begins below the cantus firmus — a perfect unison or perfect 8ve below.

This means that there are fewer options for beginning a counterpoint below the cantus firmus than beginning above. Once again, the reason has to do with the modal nature of the music. In addition to the final, a mode attaches prime importance to where (in all but one case) the perfect 5th between  $\hat{1}$  and  $\hat{5}$  falls within its particular melodic environment of tones and semitones. When the cantus firmus begins on D and the counterpoint begins above on A, as it does in Ex. 1.13a, the perfect 5th between them conforms to the D mode and affirms the modal identity of the cantus firmus, which we will expect to close on D.

#### Ex. 1.13a

	1	2	3	4	5	6	7	8	9	10	11
--	---	---	---	---	---	---	---	---	---	----	----

If, however, the counterpoint were to begin on a G below, as it does in Ex. 1.13b, the perfect 5th between G and D would conform to the G mode. It would surprise us if both the cantus firmus and the counterpoint were then to close on D rather

#### Ex. 1.13b

	1	2	3	4	5	6	7	8	9	10	11
--	---	---	---	---	---	---	---	---	---	----	----



than G. In other words, beginning on the perfect 5th below causes confusion about the mode.

Now that the situation has arisen, note that the two voices in Ex. 1.13a *cross* in ms. 5, where the cantus firmus leaps over the counterpoint to G and remains above the counterpoint straight through to the cadence. A *voice crossing* occurs whenever one voice leaps over or under the other, and while voice crossings are more common and easier to manage in second species, they're perfectly acceptable in first species as well, though there's no particular virtue to them, either.

3. The counterpoint must close on either a perfect unison or a perfect 8ve above or below the cantus firmus, and must form with the cantus firmus a *clausula formalis*. For a complete description of the *clausula formalis*, see pp. 15-17 above.

4. In between the first and last measures, avoid perfect unisons and 8ves, which, amid the spare textures of first-species counterpoint, sound austere.

There is, however, an important exception to this rule, though few other manuals on species counterpoint make allowance for it, and that is the *voice-exchange octave*. In Ex. 1.14, a voice-exchange octave occurs above the E in the cantus firmus at ms. 3. It occurs within a three-measure gesture in which the outer voices move by step in contrary motion, forming the consonances 6-8-10 or — depending on the melodic direction of the cantus firmus — the consonances 10-8-6. In both cases, the cantus firmus and counterpoint *pass* through the octave: there is an *in-betweenness* to the voice-exchange octave that softens the perfect 8ve and causes it to sound less austere. In a sense, the cantus firmus and the counterpoint *trade* (or *exchange*) pitch classes: the large X in Ex. 1.14 points out that F in ms. 2 of the cantus firmus turns up again in ms. 4 of the counterpoint, while D ms. 2 in the counterpoint turns up again in ms. 4 of the cantus firmus.

#### Ex. 1.14

Another voice exchange occurs between ms. 3 and 5 in Ex. 1.12a and Ex. 1.12b on p. 17.

Voice-exchange octaves occur all over the place in music from the 17th through the 19th centuries and are sometimes used to control and organize music over long spans of time. First-species counterpoint presents us with the perfect musical conditions in which to become familiar with them.

5a. Parallel perfect consonances never occur in species counterpoint, for reasons to be discussed later.

**5b.** Within the aesthetic that governs species counterpoint, perfect consonances are thought to sound austere, and for that reason require special treatment. In addition to the prohibition on parallel perfect consonances (see **5a** above), avoid moving to perfect 5ths and 8ves in similar motion. Approaching perfect 5ths and 8ves in similar motion “exposes” them and makes them sound even more severe than usual; perfect consonances approached in similar motion are known as *direct* 5ths and 8ves.

In Ex. 1.15, motion in the same direction in both the cantus firmus and counterpoint result in a direct 5th above A in ms. 7: the cantus firmus leaps a major 3rd from F up to A, while the counterpoint moves up by step from D to E, moving, that is, in similar motion.

Ex. 1.15

1 2 3 4 5 6 7 8 9 10 11

8 5 10 10 6 6 5 3 6 6 8

↑  
direct 5th

There is another perfect 5th in Ex. 1.15, above F in ms. 2, but in this case the perfect 5th is *not* direct: it is approached, rather, in *contrary* motion, the cantus firmus leaping up a minor 3rd from D to F, the counterpoint moving down by step from D to C.

Perfects 5ths and 8ves, in other words, should be approached in either contrary or oblique motion.

Because of the limitations on the use perfect 8ves in first species, direct 8ves are rare in first species, occurring far more often in second and third.

### *Rules Governing Melodic Behavior*

It is not enough, however, for a counterpoint to follow the rules, because the rules governing relations between voices will never ensure that the tune will be a good one. In order to help ensure that a counterpoint will be musical, we will introduce a second set of rules governing melodic behavior. These are *preference* rules, rules that enter into decisions about what to do in a given context, but which do not in themselves determine a correct solution or prescribe a precise course of action. A preference rule is never a matter of right or wrong. It requires us, rather, to use our musical intuitions to decide whether a rule applies and how it applies in a given situation. In most cases, a preference rule will suggest a number of possible solutions from which to choose, or a more general course of action; unlike well-formedness rules, there's wiggle to them. Preference rules are *not*, however, optional, but rather isolate and express some of the core principles of good melodic construction, and are in force at all times.

We can summarize preference rules in very general terms: in species counterpoint, good melodies (1) have simple contours that flow to the cadence, (2) sound natural and are comfortable to sing, and (3) are relatively easy to remember.

6. Good melodies are *continuous*, integrating smaller gestures into larger, more comprehensive melodic contours. For that reason, avoid the repetition of small gestures — or doing anything else — that would contribute to breaking the counterpoint up into discrete melodic fragments. Good melodies are all of a piece, flowing seemingly in a single motion from beginning to end. In a sense, most of the other rules governing melodic behavior represent more specific formulations or refinements of this one basic principle.

Heinrich Schenker, an important writer on species counterpoint, understood the continuousness of good melodies in terms of a melodic “equilibrium” in which all notes receive the same amount of emphasis. “We must,” he writes, “aim for a complete equilibrium of the tones in relation to each other, in contrast to the predominance of individual, independent fragments.”<sup>5</sup>

7. Each melodic voice should have its own distinctive melodic contour. This means, to begin with, that each voice will have a melodic *apex* — a single note that articulates the high (or in some cases low) point of the entire melodic arc — but also that the melodic apex in the counterpoint should not occur at the same time as that in the cantus firmus.

A commonly proffered rule in first-species counterpoint is that one should avoid more than three consecutive consonances of the same size; that is, there should never be more than three 3rds, three 6ths, or three 10ths in a row, the idea being that if the cantus firmus and counterpoint proceed together in parallel motion for more than three measures, the two voices will lose their independence. Not a good rule. To begin with, the rule is arbitrary: why three measures and not four? Nor does it take the length of the cantus firmus into account: four consecutive parallel consonances will affect the independence of voices differently in a nine-note cantus firmus than it will in one of thirteen. One of the important lessons to be learned from species counterpoint is that the effect of a given compositional gesture has to be considered in context and therefore on a case-by-case basis.

It would be difficult, moreover, to imagine someone objecting to four consecutive parallel consonances on the basis of their sounding bad. In the enormous historical repertoire of tonal music, there are countless extended passages and even entire pieces in which two voices remain in parallel 6ths or 10ths for almost the entire time. Parallel motion is basic to tonal music.

If the point is to ensure the independence of voices, it is better to introduce a positive requirement to that effect, as 7 does, than to place mechanical restrictions on our compositional options. As a general rule, even a small contrast between the

<sup>5</sup> Heinrich Schenker (1868-1935), *Counterpoint*, Vol. 1 (1910), tr. John Rothgeb (New York, 1987), p. 18. Schenker’s massive, two-volume treatise is the most extensive consideration of species counterpoint ever to appear; in the German original, for instance, he devotes a full 126 pages to the cantus firmus alone!

two voices — a well-timed leap, for instance, or the use of contrary motion near the beginning of the piece — will be more than enough to establish the independence of voices for the duration. And the *clausula formalis* ensures that our last impression of a piece will involve the motion of both voices in opposite directions to the final: the one most crucial melodic gesture in the entire piece serves to re-emphasize the independence of voices.

**8.** Good melodies are primarily stepwise, with a only few leaps added in.

In Ex. 1.1 above, there are three leaps in the cantus firmus and two leaps in the counterpoint, which for a cantus eleven notes long is about average.

**9.** Leaps create tension, and tension requires resolution. For that reason, follow leaps larger than a major 3rd with motion — preferably stepwise — in the opposite direction. It is also a good idea to *precede* (or *prepare*) leaps larger than a major 3rd with motion — again, preferably stepwise — in the opposite direction.

Preferably, not *necessarily*, stepwise. **9** is a *preference* rule: do *not* interpret it as an iron rule of law; doing so will make composing *much* more difficult.

**9** is meant to ensure that leaps are integrated into melodies, that leaps, more to point, are used to join melodic gestures together rather than break the counterpoint into disconnected melodic segments. In the approach to the cadence in Ex. 1.1, **9** ensures that the two main melodic gestures in the counterpoint — the melodic descent that concludes on C in ms. 7 and the melodic figure that begins on E in ms. 8 and zeros in on the final — will overlap in register, allowing us the integrate them into the larger melodic contour of the counterpoint. In this case, the opening leap from D to A is both resolved *and* filled in, as is the leap from C to E near the end.

**9** does *not* stipulate that a leap has to be filled in immediately, though in most cases that's what happens, at least when the leap is a relatively small one, a 3rd or a 4th. In the cantus firmus of Ex. 1.1, for instance, the leap from D in ms. 4 is resolved (with stepwise motion down to F in ms. 6) but not immediately filled in. We have to wait until E in ms. 11 for to gap to be entirely filled.

**10.** Avoid dissonant leaps, which rules out major and minor 7ths, diminished 5ths, and augmented 4ths. And avoid melodic contours that outline dissonant intervals.

**11.** It is preferable to approach the leading note *via* stepwise motion. In first species, that means the leading note will almost invariably be approached from above.

**12.** It is acceptable to use ties in first-species counterpoint to allow for greater compositional ease and freedom (as in Ex. 1.9c or Ex. 1.14) or to evade problems that would otherwise arise without them. It is obvious, however, that a tie will inhibit melodic momentum, and for that reason never use more than one *per* composition. Without exception, ties work best at the very beginning of a piece, before the counterpoint has begun to generate real momentum. A tie toward the end, in contrast, can be disastrous, bringing melodic motion to a standstill at the precise moment when it most needs to move forward to the final.

**13.** No melodic chromaticism. Ex. 1.16 demonstrates how melodic chromaticism can arise in first-species counterpoint when no other rules appear to have been violated. In this case, C forms a perfect 5th above F in ms. 9 and then moves a chromatic semitone to C#, the leading note, which forms a major 6th (the penultimate imperfect consonance) above E in ms. 10. Melodic chromaticism arises, that is, near the cadence, in conjunction with the accidental raising the leading note, which is when to be on the listen for it. Unlike most of the other rules governing melodic behavior, this one is for all intents and purposes a well-formedness rule.

## Ex. 1.16

The musical score for Example 1.16 consists of two staves: a treble clef staff and a bass clef staff. The treble staff contains the following notes: C4 (measure 1), D4 (measure 2), E4 (measure 3), F4 (measure 4), G4 (measure 5), A4 (measure 6), B4 (measure 7), C5 (measure 8), C#5 (measure 9), D5 (measure 10). The bass staff contains the following notes: F3 (measure 1), G3 (measure 2), A3 (measure 3), B3 (measure 4), C4 (measure 5), D4 (measure 6), E4 (measure 7), F4 (measure 8), E4 (measure 9), D4 (measure 10). Below the bass staff are figured bass numbers: 8, 10, 10, 10, 6, 6, 3, 3, 5, 6, 8. A bracket above the treble staff spans measures 9 and 10.

**13** affects neither the semitone from B in ms. 8 to C in ms. 9 nor the semitone from C# in ms. 10 to D in ms. 11, both of which are proper to the mode.

## 1.5 How to Compose First Species Counterpoint above a Cantus firmus

In this section, we will walk through the process of composing counterpoint above a cantus firmus. First, some procedural suggestions. It is above all essential to *listen* to the counterpoint you're composing as you're composing it: if at all possible, compose at the piano so that you can hear the two voices together. You should also be singing the entire time to make sure the counterpoint conforms to the melodic principles discussed above. A good way to begin composing counterpoint — the best way, in fact — is to *memorize* the cantus firmus, singing it over and over until you are comfortable with its twists and turns and can give a good performance of it; sing the cantus firmus until you know it by heart. Generally, a good melody will be easy to sing: if you are having a hard time singing a counterpoint, more often than not it will be because it runs afoul of one or more well-formedness or preference rules. Composing species counterpoint should not be an abstract, intellectual exercise, but rather a matter of creating real music (which it is!) intended for actual performance.

Remember: a good counterpoint will comprise a series of gestures that meld together and flow into the cadence — listen and compose in larger motions rather than individual notes. If possible, put notes down on paper two, three, and even four at a time: compose in multinote segments, in gestures. The more one composes, the easier this becomes to do; although the rules will seem cumbersome and constraining at first, the melodic principles embodied in those rules will soon become second nature. You may eventually be able to improvise a counterpoint to a cantus firmus, spontaneously, all in a single breath.

In this tutorial, we will compose a first-species counterpoint above the G mode cantus firmus in Ex. 1.17a.

## Ex. 1.17a

1    2    3    4    5    6    7    8    9    10    11    12    13

We can hear this cantus firmus as an combination of three large gestures: (1) a stepwise melodic ascent from G up to E, (2) a series of three consecutive leaps connecting E with D, and (3) a stepwise melodic descent from D down to G, the final. Of these three gestures, the second one is the most complex. After the opening gesture rises to E in ms. 6 — a note we will come to remember as the apex of the entire tune — the second gesture takes over and descends to A in two stages, leaping a major 3rd from E to C and then a minor 3rd from C to A. In other words, it *subdivides* the perfect 5th between E and A into two smaller intervals, and major 3rd and a minor 3rd, and for that reason we will refer to the larger interval as a *subdivided leap*. Even though the perfect 5th (in this case) is a composite of two smaller intervals, it has the cumulative effect of a single large leap, and because a perfect 5th is larger than a major 3rd, it must continue with motion in the opposite direction. The cantus firmus thus ascends from A in ms. 8 to D in ms. 9, resolving the subdivided leap. It does *not*, however, resolve the subdivided leap with *stepwise* motion in the opposite direction, nor does it have to: the pertinent rule (9 on p. 22) states that a leap larger than a major 3rd must be followed with motion in the opposite direction, preferably — but not *necessarily* — by step. As a perfect 4th, the leap from A in ms. 8 to D in ms. 9 must also continue in the opposite direction: the stepwise melodic descent from D in ms. 9 to G in ms. 13 thus fills in two gaps, the perfect 4th that opens up between A in ms. 8 and D in ms. 9, but also the earlier subdivided perfect 5th between E in ms. 6 and A in ms. 8. Because the cantus firmus leaps from A in ms. 8 to D in ms. 9, it resolves the subdivided leap between E in ms. 6 and A in ms. 8 without filling it in, an obligation which then falls to the melodic descent from D in ms. 9: in the process of descending to the final G in ms. 13, that stepwise descent fills in the earlier gap. In a sense, the subdivided leap *energizes* the cantus firmus: most of the cantus firmus from ms. 8 on can be heard as a response to the subdivided perfect 5th, as an effort to resolve the tensions it introduces into the tune.

So much for the cantus firmus; now we need to compose a counterpoint to go above it. When composing species counterpoint, the best approach is to come up with an effective opening gesture, move from there to the closing gesture, and then connect them. There are a number of reasons for this, but in general terms there is more room to maneuver in the middle of a counterpoint than there is at either end. In comparison to the middle, the opening and closing gestures are more constrained and formulaic: there are a number of rules — ones that requires us to begin and end on a perfect consonance, for instance — that limit our choices in the opening and closing measures.

Yet even though we will refrain from composing straight through from the first measure to the last, it still makes sense to begin with the opening: as often as not, if one gets off to a good start, the rest of the piece will seem to fall into place on its own. Ex. 1.17b proposes that we begin with G, an octave above the cantus firmus:

## Ex. 1.17b

1 2 3 4 5 6 7 8 9 10 11 12 13

Remember, when composing counterpoint above a cantus firmus, we also have the option of beginning with a perfect 5th, in this case with D. While there is no reason to prefer the octave to the perfect 5th, neither is there a reason — in this particular instance — for *not* beginning on the octave. We have to begin somewhere.

At this point, the question becomes one of how best to continue from G. Since the well-formedness rules for first species require the exclusive use of consonances, there are a total of three choices for what note to place in the counterpoint in ms. 2 above A in the cantus firmus: (1) G can move to F, forming a minor 6th above A in the cantus firmus, (2) G can leap down to E, forming a perfect 5th with the cantus firmus, or (3) G can leap up to C, forming a minor 10th with the cantus firmus. Since we cannot use the octave here, there are no other choices. Without for the moment exploring all three possibilities, we will go with (1), F, and for this reason: we can continue the motion from G in ms. 1 to F in ms. 2 with motion back to G in ms. 3, forming — in Ex. 1.17c — another minor 6th, this time above B in the cantus firmus. As what we will learn to recognize in second species as a *neighbor-note* motion, G–F–G forms a simple, compelling stepwise melodic figure with which to begin the counterpoint. It follows the path of least melodic resistance.

## Ex. 1.17c

1 2 3 4 5 6 7 8 9 10 11 12 13

8–6–6 counterpoint, which is what we have in the first three measures, is one of the most common opening gambits in all music, and over the centuries has been used a countless number of times in a countless number of pieces. In this case, as in numerous others, it serves to “couple” the two voices together in parallel 6ths. Ex. 1.17d extends these parallel 6ths as far as B in ms. 5, once again going with the flow, following the path of least melodic resistance:

## Ex. 1.17d

1 2 3 4 5 6 7 8 9 10 11 12 13

That gives us a sweeping gesture with which to begin the counterpoint. At this point, it would thus make sense for us to turn our compositional attentions to the conclusion.

Ex. 1.17e suggests  $F\sharp$  and G for the last two measures. Because of the prescriptions of the *clausula formalis*, there are no other possibilities: the *clausula formalis* requires us to end on a perfect 8ve, the G in ms. 13, and requires us to approach the final *via* semitone from below, which necessitates the  $F\sharp$  — a chromaticism — in ms. 12.

## Ex. 1.17e

1 2 3 4 5 6 7 8 9 10 11 12 13

Here again, however, it would be better to embed a brief motion like this within a larger melodic gesture, and because stepwise motion into the leading note is the rule, we will precede it — as in Ex. 1.17f — with G in ms. 11:

## Ex. 1.17f

1 2 3 4 5 6 7 8 9 10 11 12 13

That gives us a  $G-F\sharp-G$  neighbor-note motion, a chromatic variant of the melodic figure with which the counterpoint begins. It also (and again) couples the counterpoint to the *cantus firmus* in parallel 6ths: because of the long stretch of descending stepwise melodic motion at the end of *cantus firmus*, we can extend these parallel 6ths — this time working backwards — at least as far as B in ms. 9:



Ex. 1.17g

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

The smooth, goal-directed conjunct motion, combined with the harmonious parallel 6ths make for a persuasive closing gesture: the opening and closing gestures in this piece are in fact similar in a number of respects, and even share musical material — we can hear the closing gesture as a *retrograde* (more or less) of the opening gesture, as the opening gesture “in reverse.”

Now that we’ve composed good opening and closing gestures, this would be a good time to stand back from the music and listen to what we have so far: from here on, the goal will be to connect these two gestures. As of Ex. 1.17g, there is no one note that acts as a melodic apex for the counterpoint: B forms the highest note in both the opening and closing gestures. In order to define a melodic apex, we can extend the closing gesture — again working backwards — up to C in ms. 8, as in Ex. 1.17h. C in ms. 8 forms a minor 10th against A in the cantus firmus:

Ex. 1.17h

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

Working from the other direction, we could of course extend the opening gesture up as far as C in ms. 6, as Ex. 1.17i does, forming a minor 6th above E in the cantus firmus:

Ex. 1.17i

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

As the question mark is meant to suggest, however, a C in ms. 6 would defeat the purpose of our putting a C in ms. 8, which was to form a unique melodic apex for the entire counterpoint. For that reason, we will remove the C in ms. 6 and descend — as in Ex. 1.17j — to G:

## Ex. 1.17j

1 2 3 4 5 6 7 8 9 10 11 12 13

At this point, all that remains for us to do is to fill in one measure: Ex. 1.17k completes the composition with an E in ms. 7. Now *sing* ...

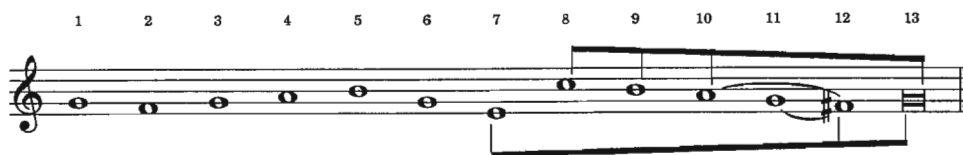
## Ex. 1.17k

1 2 3 4 5 6 7 8 9 10 11 12 13

This time (to linger over this one moment a bit longer) there were two possible choices for ms. 7: A or E. Because of the large leap it forms with C in ms. 8, E would appear to be the more ambitious choice — it leaves the counterpoint with a large gap to fill in — but it's without question the better one. To begin with, E opens up the counterpoint in terms of register, extending the melodic ambitus from C down a minor 6th to E. Without the E, the melodic range would have extended a mere perfect 5th from C down to F, a narrow range for a counterpoint this long. But more than that, the presence of E gives rise to certain melodic similarities between the counterpoint and cantus firmus and thus intensifies the sense of interconnectedness in this particular piece. It allows the counterpoint, like the cantus firmus, to subdivide a melodic perfect 5th, leaping in this case a major 3rd from B in ms. 5 down to G in ms. 6 and then a minor 3rd from G in ms. 6 down to E in ms. 7. And also like the cantus firmus, the counterpoint follows this subdivided leap with a large leap in the opposite direction, this time a minor 6th from E in ms. 7 to C — the melodic apex — in ms. 8. This is the most expansive moment in the entire composition: C in ms. 8 rounds off the most intricate melodic gesture in the piece, forms the melodic apex (highest note) of the entire counterpoint, but also receives the support of the widest harmonic interval, the minor 10th above the cantus firmus A.

As for the large leap between E in ms. 7 and C in ms. 8, the subsequent melodic continuation resolves and fills it in with motion in the opposite direction. In fact, the note that completes the process, the penultimate F#, is the leading note in the G mode, and moves to the final in the next (and last) measure: the entire final gesture can be heard as a response to the minor 6th leap from E in ms. 7 to C in ms. 8. And as usual in a good composition, the counterpoint seems to converge and flow into the final. As the annotations in Ex. 1.18 are meant to point out, the counterpoint connects E in ms. 7 with the leading note F# in ms. 12 and then moves to the final G in ms. 13:

## Ex. 1.18



Meanwhile, what seems like a separate melodic continuation descends from C in ms. 8 through B and A to the same destination — G — in ms. 13. It is as if there are two separate but concurrent melodic voices in the closing measures of the counterpoint, streams that flow together into the final, and whose confluence we hear as a single melodic contour. Such composite melodies are common in music of all sorts: musicians sometimes describe them as *polyphonic melodies*, melodies comprising more than one simultaneous melodic voice. As you can probably sense, the musical implications of such melodies are enormous, for it means that music as simple as two-part, first-species counterpoint can be (and often is) heard in terms of *more* than two voices. In the closing measures of this particular piece, for instance, there are — counting the cantus firmus — at least three active voices, which the music distributes between two parts. The multivoice nature of these melodies adds greatly to the complexity of this music.

An additional comment on Ex. 1.18: With regard to the two separate melodic continuations in the final measures of the counterpoint, G in ms. 11 assumes an “in between” melodic role: it fills in or *passes* between the “upper voice” A in ms. 10 and the “lower voice” F# in ms. 12. In the context of Ex. 1.18, G *transitions* between the two melodic continuations, as it were, and thus serves to connect them. More — a *lot* more — on this in the next chapter.

In this particular piece, the cantus firmus and the counterpoint share an unusual amount of melodic material: both voices use the same basic melodic figure (down a 3rd, down a 3rd, up a 4th or 6th) for their most expressive gestures — the two brackets in Ex. 1.17*k* call our attention to the near simultaneous appearance of this figure in both the cantus firmus and the counterpoint. That is, the figure is staggered between the two voices: it begins in the counterpoint one measure before it begins (at a different pitch level) in the cantus firmus. Too close together, moreover, for us to hear the one in the cantus firmus as an imitation (or echo) of the one in the counterpoint, or even to recognize that we’re hearing the same or similar figures in both voices — it all passes in an aural blur. In this sense, the cantus firmus and the counterpoint are out of phase, a factor that complicates their interaction: amid all the stepwise motion in both voices, the effect of these overlapping leaps is rather dazzling. But not disorienting. In both voices the melodic continuation integrates this series of three consecutive leaps into a calmer, more deliberate motion between two proximate pitches: a *virtual* melodic connection between E in ms. 6 and D in ms. 9 — virtual because the two pitches are nonadjacent — draws these leaps together in the cantus firmus, whereas these leaps are absorbed into the virtual melodic connection between B in ms. 5 and C in ms. 8 in the counterpoint. In the counterpoint, the fact that it takes so long (four measures) to complete this melodic connection serves to slow down the counterpoint and thus sustain the motion to the melodic apex.

What general conclusions can we draw from this tutorial? Well, one lesson *not* to be learned is that the average counterpoint and cantus firmus will have this much musical material in common. Wrong: the amount of musical material the two voices share in this piece is unusual. In most pieces, the counterpoint and cantus firmus will have little sub-

stantive material in common, and there are lots of good pieces in which the contrast between the two voices is — within limits, of course — maximal, whose constituent gestures are *dissimilar*, more unlike than alike. It would be wrong to give the impression that the sharing of musical material is even a musical ideal to strive after, which isn't the case. Rather, it just happens to be what goes on in this particular piece; one of the great virtues of species counterpoint is that it gives us concepts and principles with which to describe what this and other melodies do in precise detail.

One of the conclusions we *can* draw, on the other hand, is that even though this piece has a mere 26 notes, few listeners, after working through this tutorial, would describe species counterpoint as simple or (one hopes) artificial. Species counterpoint is given to considerable musical complication, for both composer and listener, but also embodies musical intuitions we all have, intuitions relevant, moreover, to a huge amount of other music. Perhaps its greatest value is that it allows us to become self-conscious about what those musical intuitions are and thus to make better use of them.

### 1.6 Invertible Counterpoint

With one exception — the ill-fated counterpoint in Ex. 1.13*b* on p. 18 — all the counterpoints we have examined so far were composed to go *above* a cantus firmus. It is no less possible, however, to compose a counterpoint to go *below*. As a matter of fact, most (but not all) well-formed first-species melodies will work well either above or below the cantus firmus. As the piece with which we began illustrates: Ex. 1.19*a* (which reproduces Ex. 1.1 on p.1) places the counterpoint above the cantus firmus, while Ex. 1.19*b* places it below.

Ex. 1.19*a*

	1	2	3	4	5	6	7	8	9	10	11
--	---	---	---	---	---	---	---	---	---	----	----

	8	10	10	10	6	6	3	6	6	6	8
--	---	----	----	----	---	---	---	---	---	---	---

Ex. 1.19*b*

	1	2	3	4	5	6	7	8	9	10	11
--	---	---	---	---	---	---	---	---	---	----	----

	8	6	6	6	10	10	6	10	10	10	8
--	---	---	---	---	----	----	---	----	----	----	---

Here a counterpoint that begins on the octave above a cantus firmus has been *inverted* to begin at the octave below: the term *invertible counterpoint* refers to a counterpoint that can be placed both above and below a cantus firmus. Compare the harmonic intervals between voices in both pieces: a few calculations will confirm that 10ths (and 3rds) in Ex. 1.19a become 6ths in Ex. 1.19b, 6ths in Ex. 1.19a become 10ths in Ex. 1.19b, and octaves in Ex. 1.19a remain octaves in Ex. 1.19b.

As a general rule, when a counterpoint inverts above or below the cantus firmus, 3rds (and 10ths) will become 6ths, 6ths will become 3rds (or 10ths), and octaves will either remain octaves or become unisons.

The tutorial counterpoint also inverts: Ex. 1.20a (from Ex. 1.17k on p. 28) places the counterpoint above the cantus firmus, while Ex. 1.20b places it below.

## Ex. 1.20a

	1	2	3	4	5	6	7	8	9	10	11	12	13
Cantus Firmus	C	D	E	F	G	A	B	C	D	E	F	G	A
Interval		8	6	6	6	6	3	3	10	6	6	6	6
Counterpoint	C	B	A	G	F	E	D	C	B	A	G	F	E

## Ex. 1.20b

	1	2	3	4	5	6	7	8	9	10	11	12	13
Cantus Firmus	C	D	E	F	G	A	B	C	D	E	F	G	A
Interval		1	3	3	3	3	3	6	6	3	3	3	3
Counterpoint	C	B	A	G	F	E	D	C	B	A	G	F	E

In this case, a counterpoint that begins on the octave above the cantus firmus has been inverted to begin on the *unison* (not the octave) below: this time 3rds become 6ths, 6ths become 3rds, and octaves become unisons. Note, however, that the one 10th in Ex. 1.20a, the 10th in ms. 8, becomes a *3rd* (rather than a 6th) in Ex. 1.20b. Unlike all the other harmonic intervals in this piece, this one does *not* invert: because of the registral disposition of this particular counterpoint, C occurs *above* the cantus firmus in both Ex. 1.20a and Ex. 1.20b. In Ex. 20b, the counterpoint crosses above the cantus firmus to reach C (the melodic apex) in ms. 8 and then crosses back under below the cantus firmus D in ms. 9.

We can also invert the counterpoint in Ex. 1.20a to begin at the octave (rather than the unison) below, as in Ex. 1.21a. In order to avoid too low a register for the counterpoint, however, both voices can be *transposed* up an octave, as in Ex. 1.21b (note the change from alto to treble clef for the cantus firmus).

Ex. 1.21a

1 2 3 4 5 6 7 8 9 10 11 12 13

8 10 10 10 10 6 6 6 10 10 10 10 8

Ex. 1.21b

1 2 3 4 5 6 7 8 9 10 11 12 13

8 10 10 10 10 6 6 6 10 10 10 10 8

When composing first-species counterpoint, feel free to transpose the cantus firmus up or down an octave in order to maintain the counterpoint within a comfortable range.

As a rule, a counterpoint will invert either above or below if it forms nothing but 3rds, 6ths, and octaves with the cantus firmus, for these intervals remain consonant (and therefore allowable) when turned upside down. A counterpoint that forms a perfect 5th with the cantus firmus, however, will *not* invert: when inverted, a consonant perfect 5th becomes a perfect 4th, a dissonance, and is therefore ruled out. Ex. 1.22 demonstrates: Ex. 1.22a includes a perfect 5th between F and C in ms. 2; when the counterpoint and cantus firmus are inverted, as in Ex. 1.22b, that perfect 5th becomes an unusable (non-well-formed) perfect 4th between C and F.

Ex. 1.22a

1 2 3 4 5 6 7 8 9 10 11

8 5 10 10 6 6 3 3 6 6 8

Ex. 1.22b

1 2 3 4 5 6 7 8 9 10 11

8 4 6 6 10 10 6 6 10 10 8

In principle, it is no harder to compose first-species counterpoint below a cantus firmus than above. Because of the well-formedness rule (2 on p. 18) stating that one can begin on the unison or octave (but not the perfect 5th) below, there are, however, fewer options for beginning a counterpoint below than one above. But other than that, the same rules apply, the same concepts and principles remain in force; one follows the same general procedures whether composing above or below.

### 1.7 Common Compositional Problems

While the counterpoint in Ex. 1.23 meets all of the well-formedness requirements for relations between voices — it begins on a perfect 8ve, all of the intervals between voices are consonant, and it concludes with a clausula formalis — few listeners would regard it as a very good melody.

Ex. 1.23

	1	2	3	4	5	6	7	8	9	10	11
--	---	---	---	---	---	---	---	---	---	----	----

There are a number of related reasons for this. To begin with, the counterpoint has a narrow range: a puny major 3rd between a low C and high E. Because of its constricted melodic ambitus, the counterpoint is constrained to repeat the same three notes — C, D, and E — over and over. That means the tune will be repetitive, and it is, but also that there will be more than a mere few changes of direction, which there are. The excessive about faces create the feel of a directionless “zig-zag” and inhibit the formation of larger, more expansive — more *singable* — melodic gestures. In addition, the counterpoint repeatedly returns to its upper and lower pitches, which creates the feeling that the counterpoint has artificial and rigid registral boundaries — E seems to form a “ceiling,” while C, at the other end of the melodic ambitus, forms a “floor.” Good melodies, in contrast, often intimate the existence of registral space both above and below into which the tune *could* move, even if it doesn’t — there is a sense of registral freedom which the artificial boundaries in Ex. 1.23, in contrast, negate. In this case, all of these problems combine to ruin what according to the well-formedness rules of first species otherwise qualifies as a perfectly “legal” counterpoint.

As a rule, the simpler, more singable, and easier to remember the counterpoint, the better.

Ex. 1.23 also contains a non-well-formed octave in ms. 4: to occur in the middle of a counterpoint, an octave must form the middle interval in a voice exchange, which the octave in ms. 4 doesn’t.

Another problem common compositional problem that learners often run into is the melodic presentation of an augmented 4th or a diminished 5th: besides being dissonant, this interval is difficult to sing. In Ex. 1.24, for instance, the counterpoint (below) leaps an augmented 4th from F in ms. 4 to B in ms. 5.

## Ex. 1.24

1 2 3 4 5 6 7 8 9 10 11

8 6 6 10 6 6 6 3 3 3 1

—A4—

In this case, there are problems in addition to the bad melodic interval: a number of notes — D in ms. 1, F in ms. 4, and A in ms. 6 — sound like melodic “loose ends,” notes abandoned as the counterpoint rises to the final. Indeed, it is *because* the overall melodic ascent is so precipitous that these notes are “left hanging” in the first place.

In Ex. 1.25, the counterpoint (now above) outlines a diminished 5th between B in ms. 4 and F in ms. 7. Even though it subdivides and thus attenuates the dissonance of the interval, the diminished 5th still dominates the counterpoint: its upper and lower notes coincide with changes in melodic direction.

## Ex. 1.25

1 2 3 4 5 6 7 8 9 10 11

5 6 6 6 3 6 6 6 6 6 8

Like the one in Ex. 1.25, the counterpoint in Ex. 1.26 also outlines a melodic diminished 5th, between F in ms. 4 and B in ms. 8. This time, however, the counterpoint fills in the interval with stepwise motion. Nevertheless, the prominence of F and B as the high and low notes of the entire counterpoint, and the fact that both notes coincide with changes of direction, serve to accentuate the melodic dissonance. When composing species counterpoint, avoid direct leaps of an augmented 4th or diminished 5th, but also melodic contours that outline and emphasize them.

## Ex. 1.26

1 2 3 4 5 6 7 8 9 10 11

8 6 8 10 6 6 3 3 6 6 8



At the same time, dissonant melodic contours like these are hard to avoid, in first species in particular, and lots of listeners don't find them objectionable. A good rule of thumb is to consider the relative merits (and demerits) of each case and make a decision on that basis.

## Chapter 2

### Second Species Counterpoint

#### 2.1 Introduction

On the basis of our discussion of first-species counterpoint, imagine a performance of Ex. 2.1, then sing the music. As before, use subtle increases and decreases in volume and vocal intensity to bring out the legato contour of each melodic gesture, but also to meld them into the larger melodic flow of the counterpoint.

Ex. 2.1

The musical score for Ex. 2.1 consists of two staves over 11 measures. The upper staff (treble clef) contains the cantus firmus, which is a sequence of notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The lower staff (bass clef) contains the counterpoint, which consists of whole notes: C3, D3, E3, F3, G3, A3, B3, C4, D4, E4, F4. The counterpoint is in second species, meaning it has two half notes for every whole note of the cantus firmus. The key signature has one sharp (F#), and the time signature is common time (C).

In Ex. 2.1, there are two half notes (*minims*) in the counterpoint for each whole note (*semibreve*) in the cantus firmus: this is *second-species* counterpoint.

A number of obvious differences contrast second with first-species counterpoint: more notes in the counterpoint, of course, but also the use of dissonances, which did not occur (and were not allowed) in first species. Ex. 2.2 identifies the dissonances in this counterpoint with arabic numerals. Listen again: none of these dissonances are obtrusive or attract attention to themselves, but rather blend into the melodic flow of the gestures, almost without our noticing them. If anything, these dissonances help to ease the melodic motion forward from one moment to the next, and that's because — as the brackets in Ex. 2.2 are meant to point out — each of these dissonances occurs within a larger, stepwise melodic motion.

Ex. 2.2

The musical score for Ex. 2.2 is identical to Ex. 2.1, but with dissonances marked with arabic numerals. The dissonances are marked with the number 4, indicating a fourth. Brackets are placed above the cantus firmus notes to show that each dissonance occurs within a larger, stepwise melodic motion. The dissonances are marked at measures 2, 4, 6, 7, and 9.

All of the dissonances in this composition, moreover, fall on the second beat of the measure. As in first species, the strong beats are, without exception, reserved for consonances.

Another difference between second and first-species counterpoint is that melodies in second species tend to be far more complicated: there are more changes of direction, more (and larger) leaps than in the average first-species counterpoint, factors that tend to add

complication to melodies. As a result, there are more gestures *per* counterpoint in second species, and as the slurs in Ex. 2.3 suggest, some of those gestures contain gestures of their own:

Ex. 2.3

The musical score for Ex. 2.3 consists of two staves: a treble clef staff and a bass clef staff. The treble staff contains a single melodic line with 11 measures. Above the staff, measures 1 through 11 are numbered. Slurs are placed over the first five measures (1-5) and the last six measures (6-11). Below the treble staff, fingerings are indicated by numbers 1-8. The bass staff contains a simple accompaniment of whole notes, with notes corresponding to the counterpoint's intervals: G (ms. 1-2), F (ms. 3-4), E (ms. 5-6), D (ms. 7-8), C (ms. 9-10), and B (ms. 11).

We can hear the first five measures of the counterpoint in Ex. 2.3, for instance, as a single melodic gesture, which, however, subsumes two smaller *subgestures*: the first subgesture extends from D in ms. 1 to C in ms. 3; the second subgesture extends from E in ms. 3 to E in ms. 5. In second species, we can begin to hear melodies in terms of gestures within gestures.

Yet despite the twists and turns of the counterpoint in Ex. 2.1, it still conforms to our general criteria for good melodies: the similarities between first and second species are more profound than their differences. In this particular piece, all the gestures sound natural and are comfortable to sing, there is a certain confluence of gestures within the overall contour, the contour has a clear melodic apex, and the entire counterpoint seems to flow into the final. It also climaxes on or near E in ms. 8, which, as pictured in Ex. 2.4, serves to connect the melodic apex on F in ms. 4 with the final D in ms. 11, thus guiding the counterpoint to the cadential goal:

Ex. 2.4

The musical score for Ex. 2.4 is identical to Ex. 2.3, showing the same two staves and notes. However, a single long slur is drawn over the entire counterpoint line from measure 4 to measure 11, illustrating the stepwise melodic continuation from F through E to D.

The stepwise melodic continuation from F through E to D, in other words, emerges from a more convoluted musical surface which, however, it also organizes and controls, one that moreover includes both conjunct and disjunct motion. Schenker describes the integration of leaps into prevailing stepwise motion in terms of “melodic fluency,” a “flowing songfulness” that gives rise, mixing metaphors, to “a wave-like melodic line,” which, “with its ascending and descending curves, maintains an equilibrium in all its individual component phases.”<sup>1</sup> In most melodies, that is—and not just in species counterpoint—a calmer, more deliberate, and above all stepwise motion underlies the sometimes extravagant circumlocutions of the music.

<sup>1</sup> Heinrich Schenker, *Counterpoint*, Vol. 1 (1910), tr. John Rothgeb (New York, 1987), p. 94 (translation modified).

In this particular piece, and in marked contrast to Ex. 1.1 in Chapter 1, most of the stepwise motion is ascending, while all but one of the leaps are descending: the descending leaps seem to infuse the counterpoint with energy, which is what powers all the ascending stepwise motion. In neither case, however, does the correlation of melodic direction with conjunct and disjunct motion represent a norm for its respective species, but rather just happens to be what these particular melodies do. As in first species, the effect of a leap in second species is to direct our attention to the immediate musical future, and to encourage us to imagine, in general terms, a musical continuation that fills in the leap with stepwise motion. After the leap from E down to G in ms. 8 of Ex. 2.1, that is, we expect the counterpoint to change direction and then, eventually, to fill in the gap. And that's more or less what happens: the counterpoint ascends from G in ms. 8 to D — the final — in ms. 11. And because D is the note that completes this process, the leap from E to G in ms. 8 helps to focus our attention on (and generate melodic momentum toward) the final.

There is an interesting pattern to the leaps in Ex. 2.1. As the brackets in Ex. 2.4 indicate, the piece begins with a leap of a 4th from D in ms. 1 to A in ms. 2. It then continues (near the beginning of the second large gesture) with a leap of a 5th from E in ms. 5 down to A in ms. 6, and (between the second gesture and the third) with a leap of a 6th from E down to G in ms. 8. Overall, there is a progression from a 4th to a 5th to a 6th, in which each leap is somewhat more “urgent” than the last, and all three gaps are filled in. The progression of leaps in Ex. 2.5 causes the tune to *lean* toward the cadence:

#### Ex. 2.5

Again, this graduated progression of leaps is not normal for a second-species counterpoint, but rather happens to be what this one does. Species counterpoint gives us language with which to discuss melodic processes in considerable detail and with real precision.

Moreover, a musical process like this one is something we begin to become aware of only toward the end of the piece: how conscious we are of the melodic process described in our discussion of Ex. 2.5 above is unclear. Few listeners cognize melodies in terms of the exact intervals between each note and the next. We barely notice the leap of a 3rd from C up to E in ms. 3, for instance, even though E is the highest note in the counterpoint up to this point: the ascending 3rd in ms. 3, that is, does not seem to participate in the progression of descending leaps in Ex. 2.5, even though it occurs between the first and second of those leaps. Nor do the three leaps that do participate in this progression make equal claims on our attention. As Ex. 2.6 below demonstrates, the first of these descending leaps moves from weak (*w*) to strong (*s*), from D on the weak second half-note beat of ms. 1 to A on the downbeat of ms. 2, as does the second, which moves from E on the weak beat of ms. 5 to A on the downbeat of ms. 6. It is because the second weak-to-strong leap is heard in relation to the first that we hear the second large gesture beginning on E in ms. 5; in both cases, we hear the leap as an upbeat (or *anacrusis*) to the subsequent ges-

ture. The third leap moves, in contrast, from strong to weak, from E on the downbeat of ms. 8 to G on the weak beat of the same measure.

## Ex. 2.6

Because it has a different metrical profile, the third leap is in some sense *unalogous* to the first two in melodic force. And while the first two leaps appear on paper to have about the same degree of melodic force, the first leap occurs after a half-note rest, which intensifies the motion from weak beat to strong, giving more of a “bump” to the downbeat of ms. 2 than the corresponding downbeat in ms. 5. In other words, the metrical definition of the music (its articulation into strong and weak beats) to some extent *obscures* the graduated progression of leaps outlined in Ex. 2.5; it emphasizes the *unalikeness* of the three leaps.

Most listeners, however, *are* aware to some degree of moderate to large leaps and expect melodies to compensate for those leaps with more or less stepwise motion in the opposite direction. We listen, that is, for how leaps contribute to the delineation of melodic gestures and generate tension to which the subsequent melodic continuation will (and often must) react. As the slurs in Ex. 2.3 suggest, the first two leaps in this series — the 4th from D down to A and the 5th from E down to A — initiate two large melodic gestures, whereas the third leap — from the 6th E down to G — serves to *separate* the third gesture from the second. We do not, that is, hear E on the downbeat of ms. 8 as an anacrusis to the ensuing melodic gesture, which begins, rather, with the low G. At the same time, we tend to hear the melodic continuation that follows each of these leaps as responses or reactions to those leaps, as stepwise fill for the melodic gap. In this sense, the subsequent stepwise melodic continuation belongs together with the leap that precedes it and lends it purpose: the leap of a 4th from D in ms. 1 to A in ms. 2, for instance, occurs *within* the extended melodic gesture that begins the piece. And it is in that sense that the slurs in Ex. 2.3 (or for that matter in Ex. 1.4) represent a crude parsing of the counterpoint into melodic gestures. In Ex. 2.3, and in most second-species melodies, the leaps both form boundaries that separate gestures and act as the melodic “glue” that binds them together, a connectedness expressed in performance with legato. Again, gestures do not have precise boundaries, but rather spill over into one another: gestures overlap. What enables them to integrate melodic gestures is the preference rule (9 on p. 22) that requires stepwise motion in the opposite direction following a leap. That rule, which bordering on being a well-formedness rule, ensures that the counterpoint will move back into the registral space hollowed out by the leap, and that there will be a noticeable overlap in register between the two musical gestures on either side of the leap.

On paper, and perhaps also in performance (depending, of course, on the performance in question), the last two leaps in the counterpoint would appear to divide the last five measures of Ex. 2.7 into two repetitive segments: the ascending stepwise 5th from A in ms. 6 to E in ms. 8 and the ascending stepwise 5th from G in ms. 8 to the cadential D in ms. 11:

## Ex. 2.7

1 2 3 4 5 6 7 8 9 10 11

8 3 4 6 8 10 9 5 6 3 4 3 4 6 1 3 4 6 8

s — w — s — w — s w — s — w — s — s

And to some extent this is true: both melodic motions circumscribe stepwise 5ths. It is less clear, however, whether the second of these melodic 5ths is heard as a sequential repetition of the first: while the first of these melodic motions begins on a strong beat (with A in ms. 6), the second begins on a weak beat (with G in ms. 8). Moreover, because the two melodic motions are staggered with respect to the measure, each has a different metrical profile: the first begins strong–weak–strong, while the second begins weak–strong–weak. And the whole note in the penultimate measure attenuates the comparison between the two melodic gestures: the first one covers two and a half measures, the second one three and a half measures — the second gesture is a full measure longer. It would be difficult, for these reasons, to hear the second five-note gesture as a straightforward repetition of the first.

Yet the point is not so much whether or not the third gesture in fact forms a sequential repetition of the first, but that we can, within certain limitations, *choose* how we hear the melody, a choice, moreover, that has certain implications for performance. Or rather, it suggests that how we hear the music and how we perform it are one and the same. There is a strong inclination in the cultural tradition from which species counterpoint derives to imagine a piece of music and its performance as separate objects, a reflex that we would do well to resist.

## 2.2 Basic Concepts

## Meter

In second species, the use of two half notes in the counterpoint for each whole note in the cantus firmus differentiates the music into a series of alternating strong and weak beats, what musicians refer to as *meter* — as opposed to the continuous stream of whole notes in both voices in first species, which, in comparison, is meterless. Ex. 2.8 contrasts a second-species counterpoint with the cantus firmus in terms of their constituent note values. It illustrates how the first half note in each measure of the counterpoint coincides with the onset — or “attack” — of the whole note in the cantus firmus:

## Ex. 2.8

s w s w s w s w s w

There are, in other words, two simultaneous “percussions” on the first beat of the measure, while on the second beat there is but one. Because of the contrast between two percussions and one, a metrical *accent* accrues to the first beat of the measure, in comparison to which the second beat is *unaccented*. We will refer to accented and unaccented beats (as we have all along) as *strong* and *weak* beats.

It will be worth our while, however, to take a moment and point out that these terms — *strong* and *weak* — are contingent, and far from neutral: the metaphors we use to conceptualize meter (and other musical phenomena) vary considerably across historical time and among different cultural traditions. When we imagine meter in terms of strong and weak beats, for instance, we conceptualize them as relative magnitudes, whether of physical force or even political power, to the extent, of course, that there’s a difference: strong beats can be understood to overpower and take precedence over weaker ones. In our own cultural tradition, and especially with regard to popular music and jazz, we often imagine accented and unaccented beats as *down* and *upbeats*. In this tradition, upbeats are often heard to relate more to the following downbeat than the previous one, a notion that, while not untrue, we would like to distance ourselves from, at least in connection with species counterpoint: not all upbeats act as *pickups* to the following downbeats. In German traditions, strong and weak beats are conceptualized in more gravitational terms as *heavy* and *light* beats: beats, in other words, have mass, and therefore weight. In earlier usage, however, accented and unaccented beats were sometimes imagined as *good* and *bad*, but also as *masculine* and *feminine*. It is of course no coincidence that these pairs of contrastive terms align with and reinforce one another in a certain predictable pattern: accented beats are *strong*, *heavy*, *masculine*, and therefore *good*, while unaccented beats are *weak*, *light*, *feminine*, and therefore *bad*.

For obvious reasons, it is no longer acceptable to discuss meter in terms of masculine and feminine beats. Yet we still need language to communicate the intuition that some beats are more salient (from the Latin *salire*, to “leap out”) than others, and for that reason we will continue to use strong and weak, even though the terms are implicated in a cultural logic about which we’re ambivalent: strong and weak give a more visceral, bodily sense of the phenomenological qualities of meter than the more neutral downbeat and upbeat.

More to the point, however — and this is, after all, a digression — these comments on meter go to show that some of our more intransigent cultural attitudes are ingrained in our responses to music, even music as simple as species counterpoint. Music matters.

### Weak Beats as Means of Transition

In second-species counterpoint, weak beats serve as a means of transition from one strong beat to the next. In Ex. 2.9, B on the weak beat of ms. 2 *passes* between A on the preceding strong beat and C on the strong beat of ms. 3.

#### Ex. 2.9

In this particular instance, B forms a dissonance — an augmented 4th — above F in the cantus firmus, while both A (above F) and C (above E) form consonances. Because it occurs on a weak beat, the dissonance is less noticeable than it would have been had it occurred on a strong beat. As a dissonance, moreover, B is *motile* (it moves), a condition appropriate to the transitional/connective nature of the weak beat in second species.

To generalize: weak-beat dissonances can be used in second species to connect strong-beat consonances; all dissonances, moreover, must occur in the context of stepwise motion in the counterpoint. In all cases, the dissonance will form the transitional note in either (a) a passing-note motion or (b) a neighbor-note motion.<sup>2</sup> A passing-note motion extends from downbeat to downbeat and consists of stepwise motion all in the same direction, whether up or down. Ex. 2.10a includes a number of dissonant passing-note motions ( $\alpha$ ) and one consonant passing-note motion ( $\beta$ ):

Ex. 2.10a

A neighbor-note motion also involves stepwise motion from downbeat to downbeat, but in contrast to passing-note motions, it involves a *change* in melodic direction, whether up or down — a change in direction that coincides, moreover, with the transitional note. Ex. 2.10b includes both a dissonant neighbor-note motion ( $\alpha$ ) and a consonant neighbor-note motion ( $\beta$ ):

Ex. 2.10b

In both passing-note and neighbor-note motions, to summarize, the transitional note can be either consonant or dissonant.

We should point out that most if not all treatises on species counterpoint forbid dissonant neighbor notes in second species, restricting the use of dissonances in second species to passing notes. We, however, *will* allow them, under the above circumstances, and for the following reasons: (1) since consonant neighbor notes are allowed in second species, there is nothing at all new or unusual about the concept of a neighbor note *per se*; (2)

<sup>2</sup> Christopher Bernhard (1628-1692), one of the first writers to describe the passing note (ca. 1660), in fact terms it a *nota transitus*, or *transition note*. See the *Tractatus compositionis augmentatis* (after 1657), tr. Walter Hilse, in *The Music Forum*, Vol. 3, ed. William J. Mitchell and Felix Salzer (New York, 1973), pp. 78-81.



since the rules allow dissonant passing notes on weak beats, weak-beat dissonances (such as neighbor notes) are common, even routine musical phenomena in second species; (3) neighbor notes require no additional rules, exemptions, or extra considerations, musical or otherwise — like passing notes, neighbor notes are both approached and left *via* stepwise motion; and most importantly, (4) dissonant neighbors sound just fine.

In our discussions of species counterpoint, we often refer to individual notes — rather than complete melodic motions — as passing notes or neighbor notes, but it is important, even crucial, to remember that passing-note and neighbor-note motions are “indivisible.” In second species, passing notes and neighbor notes are inseparable, that is, from the larger, three-note melodic motions that contain them, motions that are heard, moreover, as single units, whole and complete unto themselves.

There is of course a sense in which a transitional note cannot be heard as a passing note or neighbor note until the entire three-note motion that subsumes it has reached completion. In both cases, it is not until the last note in the three-note motion that we become aware of whether the melodic figure delineates stepwise motion all in the same direction (*passing*) or changes directions on the transitional note (*neighbor*). Yet this does not mean that we process these melodic motions one note at a time, or that we listen in each measure with bated breath to hear how each motion will continue. A melodic motion, that is, has the “potential” to pass from the moment of its departure, the moment we hear the note on the strong beat.<sup>3</sup> When it then passes, the motion thus realizes a melodic potential, one of many, embodied within it from the outset. Even when a potential goes unrealized, it remains a potential, part of what gives that motion its uniqueness: we hear a given melodic motion, that is, at least in part as a motion that could have continued in a certain way, but didn’t, much like a person who never develops one of his or her talents. What passes, moreover, is not an individual note or even a series of notes, but rather a motion, which has to be heard as a single object, even though it occurs over time. As we listen to melodies, we often sense, at least in general terms, how a certain melodic gesture will continue before — or rather, *as* — we hear it, and we do so on the basis of numerous complex and interacting contextual clues: where the motion occurs within a certain gestural contour, what sort of local melodic motion would best match or enhance the larger melodic contour, where the gesture occurs within the piece, how imminent the cadence would appear to be, *etc.* We cognize melodic gestures, in other words, all at once, and all of a piece, within a certain limited but open-ended aural radius of melodic possibilities.

Similarly, we often refer to individual notes as dissonances, even though dissonances are normally defined in terms of intervals — relations *between* pitches — rather than individual notes. In species counterpoint, we tend to attribute consonance and dissonance — properties of relations between pitches — to one but not the other of the notes that participate in that relation. In Ex. 2.11 (on p. 44 below), we thus refer to E on the weak beat of ms. 4 — rather than the major 9th it forms with D in the cantus firmus — as a dissonance. Dissonance, in other words, becomes an attribute of notes in the counterpoint, but never pertains, in contrast, to notes in the cantus firmus. We hear all notes in the cantus firmus, that is, as consonances, not only on the downbeat of the measure, where cantus firmus does in fact form consonances with the counterpoint, but throughout their entire durations: in a sense, the cantus firmus sustains the condition of consonance from the strong beat through the weak beat up to the strong beat of the next measure. For this reason, the rule that requires us never to leap to or from a dissonance applies to the counterpoint but not the cantus firmus. In ms. 4 of Ex. 2.11, the counterpoint is constrained to pass *via*

<sup>3</sup> The notion of “potential” has been adapted from Christopher Hasty, who hears it as an essential attribute of metrical experience in *Meter as Rhythm* (Oxford, 1997).

## Ex. 2.11

step from F through a dissonant E to D, while D in the cantus firmus — even though it forms a dissonance with E in the counterpoint — is free to leap to G in the next measure.

As the above comments are meant to suggest, consonance and dissonance, however crucial to the practice of species counterpoint, are troubled concepts. It is impossible, at any rate, to give them definitions that would allow us, in all musical environments and at all times, to discriminate between them. In our own time, consonances are most often imagined as “stable” intervals, while dissonances are “unstable,” thus requiring continuation. Ideological implications aside — the distinction evinces an unsaid, conservative preference for stable consonances over unstable dissonances, for the status quo over change — the distinction, while not without credence, sometimes leads to contradictions. In a second-species composition that cadences on the octave, for instance, the *least* stable interval will be the major 6th in the penultimate measure: because of the presence of the leading tone, the penultimate major 6th *requires* resolution — imagine singing Ex. 2.1 and stopping on the downbeat of the next-to-last measure! Yet few musicians would be comfortable with the notion that the major 6th, as an unstable interval, is a dissonance. At least not in the abstract: when sounded out of context, the major 6th, seems quite consonant and euphonious. We could, of course, remain with the definition and judge the major 6th to be dissonant, but that would cause us problems in connection with other major 6ths we are certain to encounter, some of which will sound altogether stable: compare the major 6th from F to D in ms. 9 of Ex. 1.1, for instance, with the major 6th from E to C# in ms. 10. A more useful position to adopt, however, would be that consonance and dissonance are not inherent properties of an interval but rather are conditions that arise from the context in which it occurs.

### On the Absence of Dissonance in *First Species*

We are now in a position to give a rationale for the definitional absence of dissonance in first-species counterpoint. Ex. 2.12 inserts a dissonance (an augmented 4th) between what would otherwise appear to be a succession of first-species consonances:

## Ex. 2.12

In the musical culture from which species counterpoint emerged, there tends to be a one-to-one association between dissonances and weak beats; second-species counterpoint, which

confines dissonances to weak beats, thus embodies an essential (if contingent) truth about that culture, but also about musical cognition. Because of that association, we are inclined to hear the augmented 4th above the second semibreve in Ex. 2.12 as a weak beat in relation to the consonances that occur (on *de facto* strong beats) before and after: the presence of dissonance, in other words, imposes meter on the music and thus converts first-species counterpoint into what is in essence *second-species* counterpoint, even though the two voices maintain a first-species, note-against-note correspondence.<sup>4</sup> Of course, other contextual factors reinforce this hearing: both voices leap to the augmented 4th, accentuating the strong-weak effect, and both voices change directions afterward, moving in contrary motion to the following minor 6th; as a result, the strong beats align with the two highest notes in the upper voice and the lowest notes in the lower voice. In other words, the metrical condition of the music is not a mere function of the augmented 4th: dissonance, that is, never works alone, but rather reinforces other contextual elements that also contribute to our perception of dissonance.

### 2.3 Possible Uses of the Second Half Note

#### Conjunct Motion

In second-species counterpoint, the purpose of the note occurring on the weak beat is to *connect* the notes on the adjacent strong beats.<sup>5</sup> These connective notes have a number of uses, the two most important of which involve conjunct motion:

**a.** A *passing note* connects notes a 3rd apart with stepwise motion and thus initiates motion (whether real or potential) into another register. A passing note, again, can be either consonant or dissonant, and is inseparable from the three-note melodic motion in which it is embedded.

**b.** A *neighbor note* lies a step above or below the note it neighbors and to which it returns on the following downbeat: a neighbor extends (or *prolongs*) the presence of the note it elaborates from the downbeat of one measure to the next. In this sense, a neighbor note remains in the same register in which it began, and thus tends to put the brakes on forward melodic motion. And like the passing note, a neighbor note forms the transitional note in a three-note melodic motion, and can be either consonant or dissonant.

Again, Fux does not allow for the dissonant neighbor note in second species. We can rationalize its inclusion here as follows: (a) second species admits the consonant neighbor note, so there is nothing *per se* remarkable about the neighbor note as a melodic figure, and (b) the dissonant neighbor note adheres to the same prin-

<sup>4</sup> Schenker undertakes a similar demonstration in *Counterpoint*, Vol. 1, pp. 110-112; Ex. 2.12 adapts part of his Ex. 151 for our purposes. Schenker, however, frames his argument in harmonic rather than metrical terms, nor does he make the point that the use of dissonance transforms first species into second.

<sup>5</sup> We owe this formulation of the idea to Felix Salzer and Carl Schachter, from whom we have also borrowed the following categorization. See their discussion of the "Various Functions of the Second Half Note" in the chapter on second species in *Counterpoint in Composition* (1969), rev. ed. (New York, 1989), pp. 43-46.

ciples that govern the dissonant passing note, which are that the dissonance occurs on a weak beat, and that it occurs in the context of stepwise motion. We can therefore regard the dissonant neighbor note as a conceptual blending of the neighbor-note as a melodic figure and the stepwise use of dissonance. The only conceptual stretch the dissonant neighbor note requires of us is the notion of a change in melodic direction, which doesn't seem so difficult.

By definition, a neighbor note lies either a semitone or wholetone above or below the note it neighbors. Ex. 2.10*b* on p. 42 demonstrates both possibilities: at  $\alpha$ , the neighbor note C lies a semitone above the B it elaborates, while at  $\beta$  the distance between D and its upper neighbor E is a wholetone. As a general rule, a neighbor note sounds best — and will be easiest to manage — when it lies a semitone from the note it elaborates. In a sense, the semitone eases the neighbor note back from whence it came: when a neighbor forms a semitone with the main note in the three-note melodic figure, the path of least melodic resistance is to return to the main note. Not so when the neighbor note forms a wholetone with the main note, in which case there is a bit more resistance to returning to the main note.

Because a neighbor-note motion returns to the pitch on which it began, it can, if not handled carefully, lead to “dead spots” in the counterpoint — zones in which the melodic flow stagnates or even grinds to halt. In Ex. 2.13*a*, repeated neighbor-note motions result in directionless “slow trills,” which move back and forth between the same two notes:

Ex. 2.13*a*

(As Ex. 2.13*a* suggests, slow trills tend to cause other problems: because of the slow trill between A and B, the large leap from B to G in ms. 5 is launched without preparation, and is awkward to sing, all the more so because G is the apex of the entire melody.) To avoid melodic stagnation, make sure that a neighbor note matches the general contour of the melodic gesture in which it occurs. In Ex. 2.13*b*, both neighbor-note motions mirror (and round off) the up-down melodic contour of the larger gesture.

## Ex. 2.13b

Before going on, now is an opportune moment to discuss the melodic figure that begins with C in ms. 7 (or thereabouts) and runs at least through the leap from D down to A in ms. 9, and which includes one of the neighbor motions outlined in Ex. 2.13b above. It is a common melodic figure in second species, often occurring near the end, before the final ascent into the cadence, as it does here. It features a descending leap of a perfect 4th approached from above and thus infringes the preference rule which states that leaps larger than a major 3rd should be preceded as well as followed by motion in the opposite direction: in this case, the leap from D to A is resolved, but not prepared: E in ms. 8, that is, approaches D on the downbeat of ms. 9 from above, in the same direction as the leap. We can nevertheless refer to other melodic principles to rationalize this breach of melodic decorum. To begin with, E in ms. 8 is required in order to fill in the leap from F down to C in ms. 7. And because E forms the transitional note in a three-note neighbor motion, there is a sense in which the leap from D down to A in ms. 9 is approached from below and therefore prepared: if the entire neighbor-note motion forms an expansion (or prolongation) of the D on the downbeat of ms. 8, we can hear that sustained D as having been approached *via* C from below, as in Ex. 2.14, thus preparing a leap that for all practical purposes descends from D on the downbeat of ms. 8 to A on the weak beat of ms. 9.

## Ex. 2.14

## Disjunct Motion

In addition to passing-note and neighbor-note motions, the second half note in the measure can have at least three other melodic functions, all of which involve disjunct motion:

c. The second half note in the measure can sometimes function as an *elided passing note*. In Ex. 2.15, E in ms. 3 connects C to F and in the process passes over — or *elides* — D, which would have formed a dissonance against the cantus firmus. It

nevertheless consists of melodic motion all in the same direction, and in that sense *simulates* passing motion; it gives the impression of a stepwise melodic connection between downbeats, even though, in this case, there is a leap between C and E. And because the counterpoint leaps to the elided passing note, that note *must* form a consonance with the cantus firmus. Remember, all dissonances must be approached *and* left by step.

## Ex. 2.15

Musical score for Example 2.15, showing a cantus firmus and a counterpoint line over 11 measures. The counterpoint line features a leap from C to E, with a passing note G. The counterpoint line is annotated with '6-8-10' and a bracket over measures 3-4.

**d.** A *substitute passing note* trades a passing note (whether consonant or dissonant) for a leap. Two such substitutions occur in Ex. 2.16a. In ms. 7, the transitional, weak beat C in the melodic motion F–C–D substitutes for E, a passing note, as shown in Ex. 2.16b. Substitute passing notes provide a little melodic variety but can also be used to avoid parallel perfect consonances. In Ex. 2.16b, the passing motion from E to D forms parallel 5ths with the cantus firmus. Use of the substitute passing note in Ex. 2.16a eliminates these parallel 5ths, which sound dreadful.

## Ex. 2.16a

Musical score for Example 2.16a, showing a cantus firmus and a counterpoint line over 10 measures. The counterpoint line features a leap from C to E, with a passing note G. The counterpoint line is annotated with '6-3-5' and brackets over measures 7-8 and 9-10.

## Ex. 2.16b

Musical score for Example 2.16b, showing a cantus firmus and a counterpoint line over 10 measures. The counterpoint line features a leap from C to E, with a passing note G. The counterpoint line is annotated with '6-5!-5!' and a bracket over measures 7-8.

**e.** A *subdivided leap* divides a larger leap into two smaller intervals. In Ex. 2.17, a subdivided leap occurs between E on the downbeat of ms. 8 and A on the downbeat of ms. 9. In this case, the second half note in the measure — C — subdivides a 5th into two 3rds.

Ex. 2.17

1 2 3 4 5 6 7 8 9 10 11

1 5 6 3 8 6 5 10 8 6 7 10 5 10 5 6 5 10 8

Here the subdivision extends the leap from downbeat to downbeat and thus slows it down: the leap takes longer to transpire than it otherwise would. And because the entire figure has the melodic force of the larger interval, a subdivided leap *must* continue with stepwise motion in the opposite direction, which in this case it does. It should also be “prepared” — approached, that is, from the opposite direction.

In a subdivided leap, two 3rds will combine to form a 5th, or a 3rd and a 4th will combine to form a 6th — there *are* no other possibilities if all three notes are to form consonances with the cantus firmus. Also, since the larger of the two intervals more strongly prescribes motion in the opposite direction, subdivided leaps in which the smaller interval comes first are easier to pull off. It is preferable, in other words, to subdivide a 6th into a 3rd and a 4th rather than a 4th and a 3rd. Ex. 2.18 compares the two possible subdivisions of a minor 6th from E to C:

Ex. 2.18a

Ex. 2.18b

— good —

6 5 3 5 10 9 etc.

— less good —

6 5 3 6 10 9 etc.

Ex. 2.18a, following the above reasoning, will be easier to hear (and sing) than Ex. 2.18b.

It is also possible to begin a subdivided leap on a weak beat:

Ex. 2.19

1 2 3 4 5 6 7 8 9 10 11

8 6 5 10 8 6 5 10 5 10 9 10 5 10 5 6 5 10 8

As you can hear, the effect is not quite the same: since we hear from strong beat to strong beat, we are more aware of the stepwise connection from F on the strong beat of ms. 4 through E on the strong beat of ms. 5 to D on the strong beat of ms. 6 than we are of the perfect 5th that extends from G on the second beat of ms. 4 to C on the second beat of ms. 5; the fact that the subdivided leap outlines a perfect 5th makes less of an impression on us. It nevertheless makes for an effective combination of leaps: in this case, the subdivided perfect 5th is both prepared and followed by stepwise motion in the opposite direction.

## 2.4 Rules

Almost all the rules governing relations between voices and melodic behavior in first species transfer without further qualification to second species: second species involves less a new or separate set of rules than the addition of rules to cover situations that never arise in first species. Those situations pertain, for the most part, to the use of dissonances, though the rules for second species also relax some of the restrictions that first species places on perfect consonances. Rules governing the use of dissonances in second species are for the most part implicit in our concepts of dissonant passing and neighbor-note motions, and will not require much additional discussion.

### *Rules Governing Relations between Voices*

1. In second-species counterpoint, there are two half notes (*minims*) in the counterpoint against each whole note (*semibreve*) in the cantus firmus. A second-species counterpoint can begin either together with the cantus firmus or after a half-note rest: Ex. 2.1 on p. 36, for instance, begins with a half note rest. Both the counterpoint and the cantus firmus, moreover, must conclude with a double whole note (*breve*), and one can use a whole note — rather than two half notes — in the penultimate measure.

In second-species counterpoint *above* the cantus firmus, half notes are rather rare in the next-to-last measure: the way in which the cantus firmus moves to the final makes it difficult to maintain half-note motion to the bitter end: more often than not, one will not be able to form a *clausula formalis* without using a whole note in the penultimate measure. Ex. 2.20a adds a counterpoint to the last four measures of a cantus firmus. If the counterpoint is to conclude with ascending stepwise motion into the leading note but also maintain half-note motion in the penultimate measure, one almost has to place a D above F on the downbeat of the antepenultimate measure (the measure prior to the penultimate measure):

Ex. 2.20a

Ex. 2.20a shows a cantus firmus (C-F-G-A) and a counterpoint (B-A-G-F) in four measures (8-11). The counterpoint is written in a higher voice than the cantus firmus. The notes are: Measure 8: B (half), A (half); Measure 9: G (half), F (half); Measure 10: G (half), F (half); Measure 11: G (half), F (half). The cantus firmus notes are: Measure 8: C (whole); Measure 9: F (whole); Measure 10: G (whole); Measure 11: A (whole).

Ex. 2.20b

Ex. 2.20b shows a cantus firmus (C-F-G-A) and a counterpoint (B-A-G-F) in four measures (8-11). The counterpoint is written in a lower voice than the cantus firmus. The notes are: Measure 8: B (half), A (half); Measure 9: G (half), F (half); Measure 10: G (half), F (half); Measure 11: G (half), F (half). The cantus firmus notes are: Measure 8: C (whole); Measure 9: F (whole); Measure 10: G (whole); Measure 11: A (whole).



A C (above F) on the downbeat of ms. 9 would form “beaten” parallel 5ths with B (above E) on the downbeat of ms. 10, nor for the same reason can one use a C (as a consonant passing note between D and B) on the weak beat of ms. 9. That means a D almost has to go on the downbeat of the antepenultimate measure. If the leap from D to A in ms. 9 is to be prepared, however, D must form the goal of ascending melodic motion in the preceding measure, which means that D serves as the goal of two separate ascending motions in these measures — B–C–D and B–C<sup>♯</sup>–D — rendering the second but more crucial of these motions (the one to the final in ms. 11) anticlimactic.

If, on the other hand, we use a whole note C<sup>♯</sup> in the penultimate measure, as in Ex. 2.20b, the counterpoint becomes much more supple. In this case, it allows us to use an A on the downbeat of ms. 9 and then pass through B to the whole note C<sup>♯</sup> in ms. 10. A on the downbeat of ms. 8 in Ex. 2.20b, that is, eliminates the premature D at that same moment in Ex. 2.20a, and because it doesn’t require preparation can be approached from either below or above — there are a lot more possibilities, a lot more freedom.

And if there is to be ascending stepwise motion to the leading note in second species *below* the cantus firmus, half-note motion in the penultimate measure will be impossible. If we were to attempt to maintain half-note motion in the penultimate measure, as in Ex. 2.21a, the result would be an unusable (non-well-formed) perfect 4th. Using a whole note in the penultimate measure, in contrast, allows for smooth, ascending stepwise motion into the leading note, as in Ex. 2.21b.

Ex. 2.21a

8            9            10          11

Ex. 2.21b

8            9            10          11

*Bear no ill will toward whole notes in the penultimate measure:* one can waste a lot of time and energy trying to maintain half-note motion all the way to the very end, for no real musical gain. It is far more important to compose a good melody than to have two half notes in the next to last measure.

2. In contrast to first-species counterpoint, both consonances and dissonances are used in second species, *but only consonances can occur on strong beats*. In second species, *dissonances only occur on weak beats*. 2 is a well-formedness rule, to which there are no exceptions.

3. While perfect 5ths and 8ves can occur on strong beats in second species, *never place parallel perfect consonances on the downbeats of consecutive measures*. In second-species counterpoint, we hear from downbeat to downbeat, and because intervals that fall on strong beats are more noticeable than those that fall on weak ones, the injunction against parallel perfect consonances extends to consecutive downbeats, even though those inter-

vals are, strictly speaking, non-adjacent. And because we tend to listen from downbeat to downbeat, parallel perfect consonances on *weak* beats are perfectly acceptable, provided that imperfect consonances fall on the intervening strong beats.

**N.B.** The rule against parallel perfect consonances still applies to adjacent intervals, both within and between measures.

Thus, in Ex. 2.22*a*, there are parallel 5ths between consecutive strong beats in ms. 9 and 10, but also parallel 5ths between adjacent intervals, between the weak beat of ms. 8, that is, and the downbeat of ms. 9. Bad counterpoint.

Ex. 2.22*a*

Musical score for Ex. 2.22*a* showing two staves (treble and bass clef) with measures 7-11. The treble staff has notes G4, A4, B4, C5, D5. The bass staff has notes G3, G3, G3, G3, G3. Fingerings are indicated as 5, 5, 5, 5, 5.

Ex. 2.22*b*

Musical score for Ex. 2.22*b* showing two staves (treble and bass clef) with measures 7-11. The treble staff has notes G4, A4, B4, C5, D5. The bass staff has notes G3, G3, G3, G3, G3. Fingerings are indicated as 3 5, 6 5, 3 4.

In Ex. 2.22*b*, on the other hand, there are parallel 5ths between consecutive weak beats, which, however, sound fine.

Parallel 5ths and 8ves cannot occur within the measure because the two-against-one half notes in the counterpoint guarantee that relative motion within the measure will be oblique.

4. All the rules about beginning and ending on perfect consonances in first species are observed in second species, but in second species one can also use perfect 8ves and unisons in the middle of a piece. In all cases, however, the constraints governing the use of perfect consonances in first species remain in effect: no parallel perfect consonances (either on consecutive beats or — as in 3 above — on the downbeats of consecutive measures), and no direct perfect consonances. Perfect consonances, that is, must be approached in either oblique or contrary motion.

Perfect 8ves can occur on either strong beats or weak beats. Unisons, however, can only be used on weak beats: in a two-voice texture, a unison on a strong beat can sound as if one of the voices has dropped out. For that reason, unisons are confined

Ex. 2.23

Musical score for Ex. 2.23 showing two staves (treble and bass clef) with measures 1-11. The treble staff has notes G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6. The bass staff has notes G3, G3, G3, G3, G3, G3, G3, G3, G3, G3, G3. A fingering of 1 is shown in measure 8.

to weak beats: because of the oblique motion to the unison, both voices “attack” the doubled pitch at different moments within the measure, allowing us to remain aware of two separate melodic voices. Ex. 2.23 (on p. 52 above) includes a unison G in ms. 8. As with all unisons in second species, it occurs on the weak beat of the measure, is approached by leap, and forms oblique motion against the *cantus firmus*. More often than not, a unison will be followed by stepwise motion in the opposite direction.

5. Since imperfect consonances are considered (in the context of species counterpoint) to be sweeter and more euphonious than perfect consonances, the more imperfect consonances on downbeats, the fuller and more sonorous the counterpoint.

This is, of course, more in the nature of a general preference — a maxim — than a rule, and it should never be allowed to take precedence over the concern to write good, interesting melodies: *counterpoint is all about melodies, and the better the melodies, the better the counterpoint*. In general, be on the guard against the adoption of rules or restrictions that would unnecessarily limit our ability to write good melodies. For that reason, there are no rules that require a certain ideal mix of imperfect and perfect consonances, or consonances and dissonances, or maxims that recommend varying the intervals on downbeats. While there are moments in each composition when one is sensitive to the qualities of intervals between voices, the crucial point about relations between voices is that those relations never distract our attention from following both voices as melodies: the counterpoint and *cantus firmus* must agree, allowing them to interact with one another as melodies, and that’s all.

You will also be interested to note that we no longer have need for the rule (7 on p. 22) that requires each voice to have a distinctive melodic contour: because the *cantus firmus* maintains semibreves against the minims in the counterpoint, there is no chance of our not hearing them as independent melodies — it is impossible for them to have the same melodic contours.

6. No ties, repeated notes, or (except for the penultimate and final measures) whole notes, all of which would disrupt the alternation of strong and weak beats that makes second-species counterpoint what it is. Moreover, ties and repeated notes would also tend to give rise to “dead spots” in the counterpoint, curtailing the forward flow to the final.

### *Rules Governing Melodic Behavior*

The use of dissonance in second-species counterpoint requires the addition of one rule to those governing melodic behavior in first species:

**7. NEVER leap to or from a dissonance!** A well-formedness rule, if ever one there was, though even here there are two exceptions, both of which, however, occur only in third species, four-against-one counterpoint.

Dissonances in species counterpoint are highly constrained: there are rules in each species that limit when and how dissonances can occur. In second species, disso-

nances can occur only on weak beats, and only in the context of stepwise motion in the counterpoint.

Consonances, in contrast, are relatively unconstrained. While there are rules that limit how one can approach perfect consonances, all consonances — whether perfect or imperfect — can be approached and left freely, by leap as well as by step.

### Musical Goals

In second-species counterpoint, the whole idea is to write long, flowing melodic motions *across barlines*: good melodies combine and integrate a relatively few gestures into more or less simple contours that sweep to their conclusions. More often than not, this requires a certain restraint with respect to changes of direction and the use of leaps, neither of which can be too frequent.

Hence the basic criteria for good melodies in first species remain in force: both the counterpoint and cantus firmus must harmonize with one another, have distinctive melodic contours, and flow into their cadential goals.

### A Case of Mistaken Musical Identities

Ex. 2.24a concludes with what appears to be a lower-neighbor motion: as the bracket points out, the melodic figure involves a change of direction, and the dissonance — the B in ms. 9 — occurs on a weak beat between two strong-beat consonances, both crucial characteristics of neighbor-note motions in second species. In this case, however, the two consonances are formed between two different pitches in the counterpoint: C on the downbeat of ms. 9 and C# on the downbeat of ms. 10. The melodic figure, in other words, fails to return to the pitch on which it began: C and C# are non-identical pitches, which means that B is *not* their neighbor, and that the melodic gesture as a whole does not form a neighbor-note motion.

Ex. 2.24a

Even if the melodic figure did form a neighbor-note motion, it would still run afoul of the rule (13 on p. 23) that prohibits melodic chromaticism in approach to cadence in first species. Ex. 2.24a uses a bracket to point out how the downbeats of the last three measures give rise to a chromatic motion from through C and C# to D. The rule against melodic chromaticism also rules out the approach to the cadence in Ex. 2.24b, which does not, however, involve neighbor-note motion in the antepenultimate measure.

## Ex. 2.24b

## Apex Repetition

In second species, we can also relax the preference rule (7 on p. 21) that recommends against repeating the apex note, but only under certain circumstances. An apex can be repeated, that is, when it occurs on a strong beat one time but on a weak beat the other:

## Ex. 2.25

F, the highest pitch in the counterpoint, occurs twice in Ex. 2.25, first on the strong beat of ms. 4, then on the weak beat of ms. 7. Because it occurs on a weak beat in ms. 7, we hear F as an incomplete upper neighbor to the following E, which occurs on the strong beat of ms. 8: for all intents and purposes, E forms the apex of the melodic arc in these measures. F, on the other hand, doesn't make as lasting an impression on us on the weak beat of ms. 7 as it does on the strong beat of ms. 4, and for that reason the earlier F is heard as the apex of the entire counterpoint. While repeating the apex is not something we recommend, this would be an acceptable way of doing it.

A few additional comments before going on. Because of a rather narrow melodic ambitus, the counterpoint in Ex. 2.25 ends up spending too much time in and around the major 3rd from C to E, its *tessitura*. It also changes direction on each note between F on the downbeat of ms. 4 and C on the downbeat of ms. 6, and does in a manner that alternates leaps with steps, creating a potential sing-song effect. None of these problems spell doom for the counterpoint, but one has to be on the listen not to exacerbate or call attention to them in performance. A good idea in this case would be perform the opening gesture so that it forms a seamless arc that extends to E on the downbeat of ms. 5, making sure the descent from F to E takes precedence over the final ascent from D to E, thus breaking up some of the step-leap motion.

2.5 A Second Species Counterpoint from *Gradus ad Parnassum*

We used Ex. 2.1 to raise a number of pressing musical issues, but it doesn't represent the best imaginable second-species counterpoint. In certain respects, the counterpoint is an odd one, unusual for second species. We have discussed most of the reasons for this above: the graduated progression of larger and larger leaps, the fact that all those leaps are descending, the prevalence of ascending stepwise motion in between, and the quasi-sequential repetition of ascending melodic perfect 5ths over the last six measures.

At the same time, the counterpoint in Ex. 2.1 has its virtues: it is singable, has a memorable melodic contour, resolves all its melodic tensions, and flows nicely into the cadence. It thus counts as something of a mixed musical success — a success to be sure, but not one without qualifications. To be honest, second-species counterpoint is much harder to compose — or rather, compose well — than first-species counterpoint. To make matters worse, the cantus firmus in this particular instance is somewhat resistant to good second-species solutions.

For comparison's sake, Ex. 2.26 downloads one of Fux's attempts to compose a second-species counterpoint above this cantus firmus from *Gradus ad Parnassum*.<sup>6</sup>

## Ex. 2.26

Like much of the counterpoint in this treatise, this one is awful: while we have tremendous respect for this treatise as a historical document, not all the lessons it has to teach are ones we would learn. In this instance, the counterpoint is less *wrong* — after all, it follows all the pertinent well-formedness rules — than unmusical. Our goal in this section will be to critique this counterpoint and in the process attempt to improve it.

While there are no “improper” dissonances or parallel perfect consonances in Ex. 2.26, the counterpoint is problematic nevertheless. In general terms, the counterpoint never gets going: it generates almost no forward momentum, nor does it flow into the final. It seems aimless, its movements almost random, wandering here and there without a sense of clear melodic purpose. This is to a large extent because of its narrow melodic range: for the most part, the counterpoint in Ex. 2.26 remains within the narrow confines of the perfect 4th between A and D, much too restricted an ambitus in second species: because of the narrow melodic range, the counterpoint is forced to pound on the same three or four notes over and over. To make matters worse, the counterpoint returns to A and D again and again, hammering on the lower and upper boundaries of its too-narrow melodic range. In a sense, the initial leap from A to D in ms. 1 serves to define the range within which the counterpoint will remain and sets the tone — or rather, tones — for all that follows. In fact, as soon as the counterpoint completes the initial leap of a perfect 4th

<sup>6</sup> J.J. Fux (1660-1741), *Gradus ad Parnassum* (1725), partial tr. Alfred Mann in *The Study of Counterpoint*, ed. Alfred Mann (New York, 1943), Fig. 33, p. 45.

from A to D, it leaps back a perfect 4th to A on the downbeat of ms. 2: the opening gesture is circular — it goes nowhere. It returns to this perfect 4th, moreover, in ms. 4, where A leaps up to D, in ms. 6, where D leaps down to A, and in ms. 9, where D again leaps to A — the repetition is tiresome. And there's more: the closing melodic ascent to the final, for instance, rises through the same perfect 4th, moving again from A in ms. 9 to D in ms. 11. And even on the rare occasions in which the counterpoint moves beyond the upper and lower boundaries of its melodic range, it does so in a manner that emphasizes either A or D: when the counterpoint descends to G in ms. 3, for instance, it immediately changes directions and goes back to A on the downbeat of ms. 4; and when the counterpoint ascends above D to E in ms. 8, it returns again to D on the downbeat of the next measure. A and D, D and A, A and D ....

Apart from the overemphasis of its melodic boundaries, the counterpoint seems to fixate on perfects 4th — seven of the ten leaps in this counterpoint are perfect 4ths! Besides the ones enumerated above, the counterpoint leaps a perfect 4th from C down to G in ms. 3 and from E down to B in ms. 8, the latter of which forms the basis for sequential repetition in the next measure. The two other leaps in this counterpoint, moreover, are both minor 3rds, and occur between the same two pitches: between D in ms. 4 and B in ms. 5, and again between B in ms. 8 and D in ms. 9.

Nor are we done at that. Ex. 2.27 outlines another series of melodic repetitions, beginning with the passing motion from A in ms. 2 to C in ms. 3:

Ex. 2.27

We then hear the same basic passing motion again up a step — see the brackets in Ex. 2.27 — between B in ms. 5 and D in ms. 6 and up another step once more between C in ms. 7 and E in ms. 8. And each time the counterpoint follows the passing motion with a descending leap of — guess what? — a perfect 4th.

Of course, the basic reason for the counterpoint's repetitiveness is its narrow melodic range: within the narrow limits of a perfect 4th, there's nowhere else to go but over the same five notes, again and again. The large number of leaps and the frequent changes of direction break the counterpoint up into short segments, which obliterate the sense of continuous forward motion to the cadence that arises from the large-scale sequence underlined in Ex. 2.27 — the endless succession of melodic snippets make the counterpoint sound as if it were pasted together from little bits and pieces of musical material. Whereas good counterpoint seems to converge on and flow into the final, there is little sense of confluence in the closing measures of this composition. If anything, the tune becomes rougher, more uneven, and disjunct as it moves toward the cadence. True, the piece does conclude with a stepwise melodic ascent from A in ms. 9 to D — the final — in ms. 11, but in terms of creating a forward flow to the cadence, that's too little too late. Not even the final D imparts a compelling sense of closure to this counterpoint: the tune departs from and returns to D so many times in this piece that when the final arrives in ms. 11, it no

longer seems like the goal of melodic motion in the preceding measures, but rather sounds like just another D.

While our criticisms of this counterpoint have been extensive, that does not mean that we need to discard it, or dismiss it as an example of what not to do. Rather, we can use this music to discuss the compositional process and explore certain decision-making and problem-solving skills. When composing species counterpoint, learn to fix problem areas rather than throwing out whole melodies and starting over from scratch. True, there are some melodies that can't be repaired, but most can. So, rather than discard this particular composition, we will listen to hear whether we might not be able to transform it into more musical counterpoint.

To begin with, the piece needs to get off to a better start. Ex. 2.28a changes D on the weak beat of ms. 1 to G, which replaces the leaps with a lower neighbor motion, resulting in a much simpler, and much smoother opening figure. In the following six examples, the brackets above the counterpoint indicate those areas we are making improvements to at the moment, leaving the rest of the counterpoint as it was in the previous example.

### Ex. 2.28a

By reducing the number of times the counterpoint changes direction in the first two and a half measures from three (up-down-up) to two (down-up), and by replacing disjunct with conjunct motion, we can create one long gesture, as opposed to a series of directionless subgestures put together at random. In this case, changing a single note makes an enormous difference.

Ex. 2.28b revises the next three measures. Here, we have removed all but one of the leaps in ms. 3 and 4, and filled in the one that remains — the minor 3rd from B to D — with stepwise motion in the opposite direction:

### Ex. 2.28b

At this point, the revised version retains the B-C-D passing motion in ms. 5 and 6 from the original. Again, fewer leaps, more stepwise motion, and fewer changes of direction help to create a sense of larger gestures and a more flowing melody.



Ex. 2.28c continues the ascending stepwise motion that began with B on the downbeat of ms. 5 in Ex. 2.28b all the way to F on the downbeat of ms. 7 before leaping down a perfect 4th to C in the same measure:

## Ex. 2.28c

While all the stepwise motion makes for a rather expansive melodic gesture, it also delineates a dissonant melodic contour: in this case, B and F form a diminished (and therefore dissonant) 5th. Dissonant contours are best avoided, but some of them are unobjectionable. In Ex. 2.28c, for instance, the melodic continuation ameliorates the dissonance of the diminished 5th. As the arrows in Ex. 2.28d point out, B on the downbeat of ms. 5 resolves to C on the weak beat of ms. 7, while F on the downbeat of ms. 7 resolves to E on the downbeat of ms. 8 (both resolutions are virtual). In other words, the dissonant diminished 5th B-F contracts to a consonant C-E major 3rd. Yet even with its dissonant melodic contour, the revised version is still preferable to the original because of its longer, more flowing gestures.

## Ex. 2.28d

Ex. 2.28c, however, leaves us with a series of three consecutive leaps of a descending 4ths beginning with the one in ms. 7. In order to break up this irksome pattern and create longer, more flowing gestures, Ex. 2.28e replaces the two half notes in the penultimate measure of Ex. 2.28c with a whole note, C#, so that instead of beginning on the weak beat of ms. 9, the closing melodic ascent from A to D now begins on the downbeat of ms. 9. That eliminates one of the three perfect 4ths and preserves the stepwise motion to the final.

## Ex. 2.28e

The musical score for Ex. 2.28e consists of 11 measures. The top staff is in treble clef and the bottom staff is in bass clef. Fingerings are indicated by numbers 1-5 below the notes. A bracket spans measures 8, 9, and 10. The notes in the treble staff are: M1: G4, A4; M2: F4, G4; M3: E4, F4; M4: D4, E4; M5: C4, D4; M6: B3, C4; M7: A3, B3; M8: G3, A3; M9: F3, G3; M10: E3, F3; M11: D3. The bass staff contains whole notes: M1: G2; M2: F2; M3: E2; M4: D2; M5: C2; M6: B1; M7: A1; M8: G1; M9: F1; M10: E1; M11: D1.

Ex. 2.28e further replaces A on the weak beat of ms. 8 with D, which eliminates another perfect 4th and completes the process of filling in the leap from F down a perfect 4th to C in ms. 7. That extends the long, flowing melodic gesture that begins with D on the downbeat of ms. 4 to D on the weak beat of ms. 8, a distance of five full measures. Ex. 2.28e also moves A on the weak beat of ms. 9 in Ex. 2.28c ahead to the downbeat. A then passes through B to C# — now a whole note — in ms. 10, forming a compelling motion to the final, D, in ms. 11. As opposed to the odd-sounding series of perfect 4ths near the end of Ex. 2.28c, the closing gesture in Ex. 2.28e complements the melodic continuation in the preceding measures. In fact, the three main gestures meld together so well that it becomes difficult to locate clear internal articulations in this piece, which is about ideal.

One other moment in Ex. 2.28e requires mention, which is the juncture between the last two gestures in this piece. As can be seen in Ex. 2.28f, the leap from D on the weak beat of ms. 8 down a perfect 4th to A on the downbeat of ms. 9 is unprepared: it is not *preceded* with motion in the opposite direction, but rather approached from the same direction, above from E. It nevertheless sounds fine, and in fact constitutes a common melodic figure in second-species counterpoint, one that often occurs near the climax, as this one does, toward the end of the piece. It is an even more elegant variant — because the leap occurs from weak to strong — of the melodic figure discussed in connection with Ex. 2.13b on p. 47 above.

## Ex. 2.28f

The musical score for Ex. 2.28f is identical to Ex. 2.28e, showing 11 measures of music in treble and bass clefs with fingerings. A bracket spans measures 8, 9, and 10, with an ellipsis (...) above measure 9.

In summary, the cumulative effect of these revisions has been to smooth out the original counterpoint, reducing the total number of changes in melodic direction, eliminating a lot of repetition, and evening out what was an excessive amount of disjunct motion. While not perfect (whatever that would be), the counterpoint in Ex. 2.28e is a good tune all around: it is singable, has an attractive melodic contour, and flows well into the cadence. It also retains a number of features and the overall contour of the original — it is an improved version of the original rather than a whole new counterpoint. In particular, the opening gesture remains in altered form, as does the general upward melodic drift of

the original. Our improved version also preserves a few descending leaps of a perfect 4th, though the leaps have been shifted and repositioned within the counterpoint, and sound altogether freer and more natural (to beg a question ... ) than in the original.

An historical postscript: Our efforts to improve Fux's original has an historical (and ironic) precedent. Fux himself introduces Ex. 2.26 (p. 56) as an improvement — what the Germans call a *Verbesserung* — of another counterpoint! His concern in Ex. 2.26 was, of course, to correct “rule violations” in the original, but as his own revision suggests, good counterpoint involves much more than the mere elimination of errors.

## Chapter 4

### *Fourth Species Counterpoint*

#### 4.1 Introduction

Perhaps the most remarkable feature of the score for the first-species counterpoint in Ex. 4.1 is the signature of one flat, which we have not encountered before:

Ex. 4.1

Here the signature indicates that the cantus firmus is a *transposition* of a D mode cantus firmus. In this case, a D mode cantus firmus has been transposed down a perfect 5th (or up a perfect 4th) to begin on G. Because of the one-flat signature, the semitones fall between E and F and between A and B $\flat$ : between  $\hat{2}$  and  $\hat{3}$ , that is, and  $\hat{6}$  and  $\hat{7}$  — same as in the D mode. For this reason, we will need to use “moveable re” solfege, of all things, when singing it:

Ex. 4.2

Under moveable re, the semitones remain between *mi* and *fa* and between *si* and *do*, which is what we’re used to, in all six modes.

In this particular cantus firmus, these modal semitones have a lot to do with how the separate melodic threads converge on the final. Ex. 4.3 below uses a beam to delineate the motion from E in ms. 3 (the lowest note in the opening melodic gesture) to F in ms. 8 (the lowest note in the concluding melodic gesture): isolated in register, the ascending motion from  $\hat{6}$  and  $\hat{7}$  guides the cantus firmus toward  $\hat{1}$  — the final G — in ms. 11. The cantus firmus intersperses the this long-range melodic motion from E to F with repeated motions from B $\flat$  to A: as the other beam in Ex. 4.3 suggests, the descending motion from  $\hat{3}$  to  $\hat{2}$  also guides the cantus firmus toward  $\hat{1}$  in the last measure. These two semitonal motions — E-

F below and B $\flat$ -A above — narrow in and converge on G from opposite directions, directing the melodic flow of the cantus firmus toward the final.

Ex. 4.3



Yet how this particular cantus firmus uses these modal semitones to its own melodic advantage is beside the immediate point: the main reason for the signature in Ex. 4.1 is pragmatic. In this case, the transposition down a perfect 5th allows us to accommodate the octave leap in the counterpoint within the normal treble range and renders the notation a bit more manageable, situating both the cantus firmus and counterpoint squarely in the middle of their respective staves; it maintains both melodies in a singable range.

In more substantive, musical terms, another remarkable aspect of this composition is the large leap with which the counterpoint begins. As one would expect, the counterpoint follows this leap with stepwise motion in the opposite direction, filling in — or nearly filling in — the octave. The low D “hangs,” but ever so slightly: because it occurred so long ago, we are only barely aware, once we have arrived on the final G in ms. 11, that the counterpoint has left opening D stranded in the lower register. There is also a strong sense in which the low D and the high D are “the same” D, that the lower D has been “transferred” into a higher register, and that because the high D doesn’t hang, the low D doesn’t either.

However one decides to hear the low D, the octave leap lends real melodic purpose to the counterpoint, which flows into and converges on the final in conformance with our criteria for good melodies: most of us would agree that this is a good, even exceptional, first-species composition. In addition to its strong sense of forward motion toward and into the final, it has a clear melodic apex (on the high D in ms. 2), and because of the smaller leap from F to A later in the counterpoint, there is also a clear sense of climax on or around G in ms. 9: G fills the gap between F and A and serves as a sort of musical premonition of the final — the leap from F to A allows us to imagine the final well in advance of its actual arrival in ms. 11. And while the cantus firmus and counterpoint “agree,” both melodies define distinctive melodic contours, each with its own separate melodic apex, which occurs, moreover, at different times in each voice.

Ex. 4.4 takes Ex. 4.1 and shifts the entire counterpoint over one half note to the right in relation to the cantus firmus, which remains the same as before:

Ex. 4.4



While the cantus firmus and counterpoint, as *melodies*, remain the same (or almost the same) in both compositions, the change is nevertheless radical: the metrical displacement in Ex. 4.4 changes the entire musical ethos of Ex. 4.1. In contrast to the euphonious consonances of the first-species counterpoint in Ex. 4.1, the *fourth* species counterpoint in Ex. 4.4 gives rise to dissonances above almost every note in the cantus firmus; the cantus firmus and counterpoint are no longer “unanimous” in their agreement. The dissension within their musical ranks is due, of course, to the fact that the counterpoint has been thrown out of metrical alignment with the cantus firmus: the counterpoint begins a half measure later than the cantus firmus and continues to lag behind until the last measure in the piece. As a result of this metrical displacement, the counterpoint forms dissonances with the cantus firmus on the strong beat of (in this case) all but a few measures. Whereas the counterpoint in Ex. 4.1 is consonant and harmonious throughout, the counterpoint in Ex. 4.4 interleaves consonances and dissonances, and places these dissonances at the most prominent positions within their respective measures. In contrast to second species, where dissonances occur on *weak* beats, dissonances in fourth species occur on *strong* beats; fourth species in this sense forms the “reverse” of second species.

<i>species</i>	<i>strong beats</i>	<i>weak beats</i>
second	consonance	dissonance or consonance
fourth	dissonance or consonance	consonance

At the same time, fourth species is also similar to *first* species in that there remains a basic one-to-one relation between the counterpoint and cantus firmus. With the exception of F# in the penultimate measure, each note in the counterpoint of Ex. 4.4 is equivalent in duration to a whole note, but since that whole note no longer fills (or remains within) the span of a single measure, it must be notated in the form of two half notes tied together across the barline. Fourth species constitutes a “fractal” species, as it were; it occupies a conceptual space somewhere “in between” first and second.

In each case, the dissonance that falls on a downbeat in Ex. 4.4 forms a *suspension*. In a sense, the notion of a suspension is mirrored in the arc of the tie that carries over — *suspends* — the note across the barline and into the next measure. It thus *bridges* the distance between a weak beat and the following strong beat, which forms an immeasurable conceptual gulf or barrier, represented in musical notation as a barline. At the same time, a dissonant suspension keeps us in *suspense*, awaiting its resolution to the following consonance: it *delays* the arrival of the note that, in first species, would otherwise have occurred on the downbeat of the measure. A common denominator in all these suspension metaphors is an element of *tension*, both physical and psychological: there is a strong sense of continual tension in fourth species, a musical tension that arises from the use of suspensions dissonances.

To be more specific, we can hear each suspension dissonance as a moment of tension, which the counterpoint then relaxes when it resolves the dissonance to a consonance on the following weak beat. Ex. 4.5 below uses interval numerals to isolate the first of these suspension formations within its immediate context. Here the motion of the cantus firmus to E on the downbeat of ms. 3 “destabilizes” the D tied over above from the previous measure and renders it mobile. As a suspension, D “presses down” against E in the cantus

## Ex. 4.5

1 2 3 4 5 6 7 8 9 10 11

firmus; downbeats in fourth species sound heavier, weightier, than downbeats in the other species. The counterpoint then relieves some (though not all) of this melodic pressure when it moves down to C on the following weak beat. Hear it? When compared to the unstable, dissonant D, C is consonant and stable.

A fair amount of melodic pressure remains on the counterpoint to descend, of course: while C resolves the octave leap with stepwise motion in the opposite direction, the leap has still to be filled in. And some of the downward pressure the suspended D exerted on the counterpoint transfers to C, even though C doesn't itself become dissonant until the subsequent strong beat. The recurrent suspensions in the counterpoint, moreover, seem to infuse the cantus firmus, too, with tension. A suspended dissonance generates a certain resistance to moving ahead to the next note in the cantus firmus: there is a sense of strain in its motion to the note below a dissonant suspension. Yet because each dissonance is obligated to resolve down to a consonance on the following weak beat, the net effect of these suspensions is to urge the music on: dissonant suspensions focus our attention on the immediate musical future.

Characteristic of fourth species is the manner in which these suspension figures connect together in *chains*. In ms. 2 of Ex. 4.6, D is tied across the barline, where in ms. 3 it forms a dissonance above E in the cantus firmus and then resolves to a consonant C. C in turn is then tied across the barline, where in ms. 4 it forms a dissonance above G in the cantus firmus and then resolves to a consonant B $\flat$ . And so on, from one measure to the next: between ms. 3 and ms. 7 there are no fewer than five suspensions in a row.

## Ex. 4.6

1 2 3 4 5 6 7 8 9 10 11

In each case, a consonant resolution doubles as a preparation for the next dissonant suspension. This conversion of consonances into dissonances (and *vice versa*) renews and intensifies the tension from moment to moment and impels both the counterpoint and cantus firmus on to their melodic destinations.

## 4.2 Dissonant Suspensions

As in second species, a dissonance in fourth species is not heard as an isolated note, but is embedded, rather, within a larger, more extensive melodic figure. A suspension is a melodic figure that coordinates (1) stepwise melodic motion downward with (2) a certain succession of consonances and dissonances, which aligns, moreover, with (3) a certain metrical succession of strong and weak beats. As a melodic figure, a suspension spans three half notes and has three component parts, each of which coincides with one of the half notes. Ex. 4.7 labels each of these three parts: (a) a consonant *preparation*, which occurs on a weak beat, (b) the dissonant *suspension* itself, which occurs on the ensuing strong beat, and (c) the consonant *resolution*, which inevitably follows on the successive weak beat.

Ex. 4.7

Here the suspension originates as (a) a consonance (a compound major 6th) on a weak beat in ms. 2, forms (b) a dissonance (a compound minor 7th) against the cantus firmus on the strong beat of ms. 3, and then resolves (c) to a consonance (a compound minor 6th) on the subsequent weak beat. We can summarize the three component parts of a suspension figure in the form of a table:

a.	<i>preparation</i>	consonant	<i>weak</i>
b.	<i>suspension</i>	dissonant	<i>strong</i>
c.	<i>resolution</i>	consonant	<i>weak</i>

In a suspension figure, the same note will, of course, form both the consonant preparation (a) and dissonant suspension (b), a ligature which the tie groups together. At the same time, however, the musical notation obscures — or at the very least fails to express — the even more salient melodic connection between the suspension dissonance (b) and its downward resolution (c) to a consonance. As a melodic figure, a suspension thus comprises two pitches, which break down, however, into three component parts (preparation, suspension, resolution). Ex. 4.8 below uses an imaginary slur (in quotation marks) to connect the suspension D to the resolution C, but rather than cluttering up the score with slurs (in addition to all the ties), we will follow the common convention of using a dash to connect the numbers that designate both the suspension dissonance and the consonant resolution. As the numbers between staves in Ex. 4.8 indicate, the suspension figure in



## Ex. 4.8

ms. 3 thus forms a 7-6 suspension, where the dash expresses the melodic connection between the dissonant suspension and its downward resolution to a consonance. In this form of theoretical notation, the preparation is not included: while the interval of preparation varies from one suspension figure to another, the intervals of suspension and resolution form but a few recurring patterns, of which the 7-6 configuration is one (more in a moment).

At the risk of becoming repetitive, it is worth re-emphasizing the fact that suspension dissonances are highly constrained in terms of their melodic resolutions. As with passing and neighbor notes in second species, one can never leap from a dissonance in fourth species: *all dissonant suspensions must resolve via stepwise motion downward*. In its most general form, the rule states that a suspension dissonance must resolve down by step to an *imperfect* consonance. This ensures maximal contrast between the coarseness of the dissonance and harmoniousness of the imperfect consonance. It also means that some dissonance-consonance configurations will form viable suspensions, but that others will not.

### Writing Suspensions above a Cantus Firmus

We will use pairs of numbers to designate suspensions: one to indicate the dissonant interval of suspension, the other to indicate the consonant interval of resolution. In writing fourth-species counterpoint above a cantus firmus, there are two possible suspension figures, the 7-6 suspension and the 4-3 suspension. Ex. 4.9 includes one 4-3 suspension (in ms. 4) and six 7-6 suspensions: as this piece would seem to suggest, 7-6 suspensions are far more numerous — and to be honest, more useful — than 4-3 suspensions.

## Ex. 4.9

As it turns out, 4 and 7 are the only suspension dissonances above a cantus firmus capable of resolving downward to *imperfect* consonances! — 7 to 6 and 4 to 3. 9-8 suspensions are also possible, and some counterpoint manuals permit them, but in a 9-8 suspension the suspension dissonance resolves downward to a *perfect* consonance, the effect of which

is rather flat: instead of contrasting a coarse dissonance with a euphonious, sweet sounding imperfect consonance, as the 7-6 suspension in Ex. 4.10*a* does, the 9-8 suspension in Ex. 4.10*b* juxtaposes the asperity of the dissonance with an austere perfect consonance. It sounds severe: the perfect consonance deprives the resolution of its bliss. Ditto for the 4-5 suspension (below the cantus firmus) in Ex. 4.10*c*, which Fux, for one, allows. Don't use them; there's no musical point.

Ex. 4.10*a*Ex. 4.10*b*Ex. 4.10*c*

### Writing Suspensions below a Cantus firmus

Ex. 4.11 is a model fourth species counterpoint *below* a cantus firmus. Note that the entire composition relies on a single suspension figure, the 2-3 suspension: the 2-3 suspension and 9-10 suspension, octave equivalents of one another, are the only possible suspension formations in counterpoint below a cantus firmus. 2 and 9 are the only suspension dissonances below a cantus firmus capable of resolving downward to *imperfect* consonances — 2 to 3 and 9 to 10.

Ex. 4.11

1            2            3            4            5            6            7            8            9            10          11

It can be useful to realize that in the case of suspensions below the cantus firmus downward resolution leads to an *increase* in interval size from suspension to resolution: in a 2-3 suspension, 2 resolves downward to a *larger* interval, a 3. In contrast, downward resolution of suspensions *above* a cantus firmus leads to a *decrease* in interval size from suspension to resolution: in a 7-6 suspension, 7 resolves downward to a 6, while 4—in a 4-3 suspension—resolves downward to a 3, where both consonances are smaller than the dissonances that precede them. This is because suspensions always resolve *down* by step, whether above or below the cantus firmus.

An awareness of the different limitations and possibilities in writing counterpoint above and below the cantus firmus can help to avoid common mistakes like the one in Ex. 4.12. At first glance — *glance* being the operative word here — the motion from 7 to 6 *appears* to form a mundane 7-6 suspension. In this instance, however, 7 *ascends* to 6, whereas all suspensions must *descend* to their resolutions: for this reason, 7-6 is not possible

as a suspension figure below the cantus firmus; it sounds bad. Remember, counterpoint *above* the cantus firmus allows for 7-6 and 4-3 suspensions, while counterpoint *below* the cantus firmus allows for 2-3 and 9-10 suspensions.

Ex. 4.12



Because there are fewer usable suspensions below the cantus firmus, and because there are more constraints on how the counterpoint can begin in the first place, it is generally more difficult to write fourth species counterpoint below the cantus firmus than above, more so, even, than in first or second species.

### 4.3 Consonant Syncopations

In the last section, we saw (and heard) what happens when a note tied across the bar-line forms a dissonance above the cantus firmus—it forms a dissonant suspension. If, however, the tied note forms a consonance above the cantus firmus, as it often does, it forms a *consonant syncopation*. Whereas dissonant suspensions are constrained to resolve down by step, there are almost no constraints on consonant syncopations, which are free to move by step or by leap in either direction. In ms. 8 in Ex. 4.13, for instance, F forms an 8ve in the counterpoint above F in the cantus firmus: because an 8ve is a consonance, F in the counterpoint is free to leap to A.

Ex. 4.13



In ms. 3 of Ex. 4.14 below, A in the counterpoint likewise forms a consonance—in this instance a perfect 5th—with E in the cantus firmus and is thus free to leap to C.

## Ex. 4.14

1      2      3      4      5      6      7      8      9      10      11

Ex. 4.14 in fact begins with a series of two consonant syncopations before C in ms. 3 is tied across the barline, where it forms a suspension dissonance below the cantus firmus D in ms. 4. Like dissonant suspensions, consonant syncopations can be connected together in chains, but we can also connect them to dissonant suspensions.

Ex. 4.15 begins with an even longer series of consonant syncopations. Here D in ms. 1 is tied across the barline, forming a 10th — a consonant syncopation — below F in ms. 2. D then leaps up to A, a 6th, which is tied across the barline, forming a 5th — another consonant syncopation — below E in ms. 3.

## Ex. 4.15

1      2      3      4      5      6      7      8      9      10      11

For the next two measures, 5ths and 6ths then alternate, each strong-beat 5th moving to a 6th on the subsequent weak beat. Like chains of dissonant suspensions, series of consonant syncopations allow for continuous stepwise motion in the counterpoint. In this case, a series of 5-6 syncopations flows into and merges with a series of 9-10 suspensions, allowing for continuous stepwise motion from A in ms. 2 to D in ms. 7.

It is also possible to reverse the order of succession so that the 6ths fall on the downbeats, in which case the results are series of 6-5 syncopations, as in Exs. 4.16*b* and 4.17*b* on p. 71 (which we will further discuss in a moment). In successions of 5ths and 6ths, in other words, either interval can be used to initiate a series of consonant syncopations. And even though both of these series alternate 5ths and 6ths, we do not hear them giving rise to parallel 5ths, though some more conservative counterpoint manuals do in fact disallow 5-6 syncopations on the grounds that the 5ths occurs on downbeats and thus violate the prohibition against parallel 5ths on the downbeats of consecutive measures. In fourth species, however, oblique motion between voices means that these 5ths are never sounded as simultaneities and therefore make less of an impression *qua* 5ths on the ear.

Because there are fewer possibilities for suspensions below, 5-6 and 6-5 consonant syncopations are particularly valuable resources when writing counterpoint below a cantus firmus.

Ex. 4.16 illustrates how series of 5-6 and 6-5 syncopations operate above a cantus firmus. In counterpoint above, a 5-6 series generates an ascending melodic line, while a 6-5 series causes the melodic line to descend.

Ex. 4.16a

Musical notation for Ex. 4.16a. The top staff is in treble clef and shows an ascending melodic line with notes G4, A4, B4, C5, D5. The bottom staff is in bass clef and shows a cantus firmus with notes G3, A3, B3, C4, D4. The interval between the counterpoint and cantus firmus is labeled as 5-6, 5-6, 5-6 etc.

Ex. 4.16b

Musical notation for Ex. 4.16b. The top staff is in treble clef and shows a descending melodic line with notes G4, F4, E4, D4, C4. The bottom staff is in bass clef and shows a cantus firmus with notes G3, A3, B3, C4, D4. The interval between the counterpoint and cantus firmus is labeled as 6-5, 6-5, 6-5 etc.

Ex. 4.17 illustrates how series of 5-6 and 6-5 syncopations operate *below* a cantus firmus. Here, the series of 5-6 suspensions generates a *descending* line, while the 6-5 series causes the line to *ascend*.

Ex. 4.17a

Musical notation for Ex. 4.17a. The top staff is in bass clef and shows a descending melodic line with notes G3, F3, E3, D3, C3. The bottom staff is in bass clef and shows a cantus firmus with notes G3, A3, B3, C4, D4. The interval between the counterpoint and cantus firmus is labeled as 5-6, 5-6, 5-6 etc.

Ex. 4.17b

Musical notation for Ex. 4.17b. The top staff is in bass clef and shows an ascending melodic line with notes G3, A3, B3, C4, D4. The bottom staff is in bass clef and shows a cantus firmus with notes G3, A3, B3, C4, D4. The interval between the counterpoint and cantus firmus is labeled as 6-5, 6-5, 6-5 etc.

5-6 and 6-5 series are “reciprocal” in their interactions with the cantus firmus: a 5-6 series will cause the melodic line to ascend in counterpoint above but to descend in counterpoint below; a 6-5 series will cause the melodic line to descend in counterpoint above but to ascend in counterpoint below. Each series, that is, causes melodic motion in the opposite direction when used on “the other side” of the cantus firmus.

It is simpler, though, and better, to be aware of the different uses to which these series can be put. Because both series create continuous descending stepwise motion, the 6-5 series above and the 5-6 series below can be used to simulate chain suspensions: Ex. 4.15 above uses the 5-6 series below to simulate chain suspensions in ms. 3 and 4. At the same time, the 5-6 series above and the 6-5 series below allow for continuous ascending stepwise motion, which would otherwise be unobtainable in fourth species. And both the 5-6 and 6-5 series represent a dramatic expansion of compositional resources in counterpoint below, where the possibilities for chain suspensions are more limited than in counterpoint above.

General advice: while dissonant suspensions predominate in fourth species, consonant syncopations are both useful and good, and should not be overlooked.

### Unisons

Unisons can also be used in fourth species, but must occur on the strong beat as the result of a note that has been tied across the barline. Ex. 4.18 demonstrates:

## Ex. 4.18

1 2 3 4

5 1 6 7 - 6 7 - 6 etc.

## 4.4 Breaking the Species

As in all species, both voices must end with a double whole note, or *breve*. In order for a fourth species counterpoint to end with a *breve*, the series of syncopations must be interrupted in order to allow the counterpoint to move to the final on the downbeat of the last measure. This interruption of the syncopations is called *breaking the species*. Ex. 4.19 demonstrates proper cadence formation for a fourth species counterpoint above a cantus firmus.

## Ex. 4.19

1 2 3 4 5 6 7 8 9 10 11

7 - 6 8

In the penultimate measure of the counterpoint, D has been tied over from the previous measure, forming a dissonance above E in the cantus firmus. As a suspension dissonance, D resolves down to C#, as the *clausula formalis* requires. C# is not tied across the barline, but moves directly to D on the subsequent downbeat, thus “breaking” the species.

All fourth species compositions must end with a suspension cadence. In counterpoint above the cantus firmus, the penultimate measure will form a 7-6 suspension, where the dissonance resolves to the leading note. In counterpoint below the cantus firmus, the penultimate measure will form a 2-3 (or 9-10) suspension, as in Ex. 4.20, where, again,

## Ex. 4.20

1 2 3 4 5 6 7 8 9 10 11

9 - 10 8

the dissonance resolves to the leading note. In both cases, the species *must* be broken in order to arrive at the final on the downbeat of the last measure.

When composing fourth species counterpoint, it will sometimes be necessary to break the species on occasions besides the final cadence. It is often necessary to break the species, for instance, a few measures in advance of the cadence in order to set up the cadence. Ex. 4.21a breaks the species with C on the downbeat of ms. 7. This interruption in the succession of tied half notes allows C (a consonance) to leap to F on the subsequent weak beat in order to initiate the series of 7-6 suspensions that flows to and concludes with the final in ms. 11.

## Ex. 4.21a

It would, of course, have been possible to continue with a 4-3 suspension above A in ms. 7, as in Ex. 4.21b, but in this case that would have “stranded” the counterpoint well below the final in ms. 10, unable to form the required suspension cadence.

## Ex. 4.21b

Even more common, however, are situations like the one in Ex. 4.22a, where the species must be broken to avoid an “unusable dissonance” — here a suspension dissonance that cannot be resolved to an imperfect consonance — on the downbeat of the next measure. In ms. 4 of Ex. 4.22a, a tied B resolves down to A and thus completes a 2-3 suspension. If A were then tied across the barline into ms. 5, however, it would form a perfect 4th below

## Ex. 4.22a

?

D in the cantus firmus, a dissonance that cannot be resolved to an imperfect consonance. In order to avoid the unusable dissonance, the counterpoint in Ex. 4.22*b* instead breaks the species and moves back to B on the downbeat of ms. 5.

Ex. 4.22*b*

1      2      3      4      5      6      7      8      9      10      11

You will have noticed that Ex. 4.22*b* repeats a note, an A, from strong beat to weak on the downbeat of ms. 9, breaking the species. While repeated notes were forbidden in first species (the occasional use of the tie being a possible exception), they can be used in fourth species in this one situation: when it is used after breaking the species on the downbeat of the antepenultimate measure to set up a 2-3 or 7-6 suspension cadence; in either case, the repeated note will be the final, as it is in Ex. 4.22*b*. The *repeated-note suspension cadence* (for want of a better term) is one of the most common and elegant cadential formulae in late renaissance vocal music, and though it works best in conjunction with longer cantus firmi, there is no reason for us not to use it in fourth species.<sup>1</sup>

Besides breaking the species out of necessity — *i.e.*, to form a suspension cadence or to avoid an unusable dissonance — it is also possible to break the species simply to improve the melodic contour of the counterpoint. In effect, breaking the species temporarily turns fourth species into second species counterpoint, and therefore the rules of second species will govern the segment in which the counterpoint moves in untied half notes. As a rule, however, break the species as seldom as possible, and return to the tied half notes of fourth species as soon as possible, on the very next beat.

### Musical Goals

The whole idea in fourth species is to write continuous series of dissonant suspensions and to continue the succession of tied half notes without interruption for as long as possible. In order to do this, one must often sacrifice other musical desiderata — such as independence of voices — and be more tolerant about what constitutes a good melody: the counterpoint and cantus firmus, that is, may have much the same musical contour, the occasional note may “hang,” some leaps may go unprepared, the melodic apex may be repeated, and so on.

<sup>1</sup> Pietro Aron (*ca.* 1480-1545) describes the repeated-note suspension cadence in the *Trattato della natura et cognitione di tutti gli tuoni di canto figurato* (Venice, 1523; facs. repr. New York, 1979), Chapter 36.



A common consequence of chain suspensions is to “couple” the counterpoint and cantus firmus together, both in terms of melodic contour and melodic direction. Ex. 4.21a (on p. 73 above) illustrates the point. In this particular piece, the counterpoint reproduces (or almost reproduces) the contour of the cantus firmus step for step and leap for leap. As a result, the two voices have almost the exact same melodic contour, and apart from the metrical displacement of the counterpoint against the cantus firmus and the brief measure in which the species is broken, the voices have almost no melodic independence. Yet it still qualifies as good fourth-species counterpoint.

Indeed, a good fourth-species counterpoint will often seem to “write itself.” Because we are to write suspensions, and because there are severe constraints on how suspension dissonances resolve, once a fourth-species counterpoint has been begun, it will sometimes seem as though there is little or no choice about how it will continue, at least not in the short term. And for all the same reasons, fourth-species melodies tend to consist of more or less extensive passages of downward stepwise motion, interspersed with the occasional upward leap: the upward leap returns the counterpoint to a higher register, allowing for downward stepwise motion — *via* suspension cadence — into the final.

#### 4.5 Rules

Most of the rules governing fourth species counterpoint are embedded in the principles that regulate the formation and resolution of dissonant suspensions. And because those principles coordinate “harmonic” relations with certain “melodic” figures, fourth species blurs the distinction between rules governing relations between voices and those that control melodic behavior. The following rules restate and summarize those rules without further illustration:

##### *Rules Governing Relations between Voices*

1. In fourth species, the counterpoint *must* begin on a perfect consonance after a half-note rest. It then continues in a series of half notes tied over the barline from weak beat to strong, forming *syncopations* above the cantus firmus. Because the cantus firmus consists entirely of whole notes, normal motion between voices in fourth species is oblique. Both the counterpoint and the cantus firmus, however, must conclude with a double whole note, or *breve*, and because the *breve* must occur on the downbeat of the last measure, the ties must be “broken” after the weak half note in the penultimate measure.

In fourth species counterpoint, the word *syncopation* has two different but related uses, which can be a cause for some mild terminological confusion. *Syncopation* sometimes describes the rhythmic condition that arises from the metrical displacement of one voice relative to the other; the counterpoint, in this sense, is *syncopated* against the cantus firmus. At other times, a *syncopation* refers to a consonance that occurs on a downbeat as a result of a note that has been tied over the barline from the previous weak beat. The term thus designates an abstract metrical state, on the one hand, and a certain configuration of consonant intervals on the other.

2. In the counterpoint, a strong beat can form either a consonance or a dissonance with the cantus firmus. A weak beat, in contrast, must always form a consonance.

3. When a strong beat forms a dissonance, the dissonance must occur within a *suspension* figure. A suspension dissonance must be prepared as and resolved to a consonance.
4. All the rules about beginning and ending on perfect consonances in first species are observed in fourth species, and, as in second species, octaves and unisons may occur in the middle of a piece. Unisons on strong beats, however, can only occur as the result of a note that has been tied across the barline.
5. Parallel perfect consonances on consecutive strong or weak beats are allowable as long as those consonances arise from oblique motion and are mediated by imperfect consonances.
6. It is possible to interrupt the succession of tied half notes in the counterpoint in order to avoid an unusable (unresolvable) dissonance on a downbeat, to prepare for a suspension cadence, or to improve the melodic contour. When it does this, the counterpoint behaves as if it were in second rather than fourth species and must adhere to second-species rules. One should "break" the species as few times as possible in a given counterpoint.

#### *Rules Governing Melodic Behavior*

In general, the rules governing melodic behavior in first and second species remain valid in fourth species. There are, however, a few important additions:

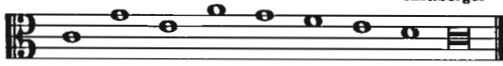
7. As a rule, suspension dissonances must resolve down by step to *imperfect* consonances. This rule narrows the viable suspensions down to the 7-6 and 4-3 above and the 2-3 and 9-10 below. **Always resolve dissonant suspensions down by step!**

As in first and second species, consonances in fourth species are relatively unconstrained: consonances can be approached and left freely, by step or by leap, and in either direction.

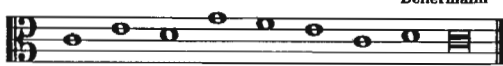
8. In order to meet both the specific requirements of fourth species and the more general requirements of the *clausula formalis*, the penultimate measure should include a 7-6 suspension when the counterpoint is above the cantus firmus, or a 2-3 (or 9-10) suspension when below. This allows the suspension dissonance to resolve to the leading note on the weak beat of the penultimate measure before cadencing to the final on the following downbeat.

Cantus firmi

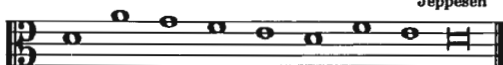
1. Kirnberger




2. Bellermann



3. Jeppesen



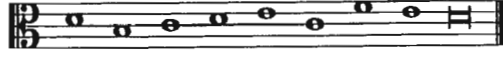
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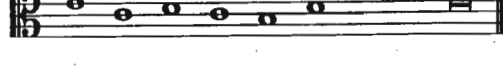
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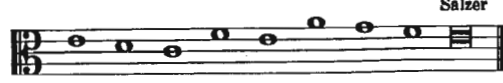
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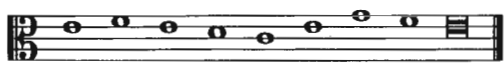
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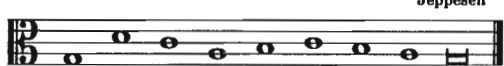
8. Salzer



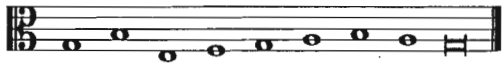
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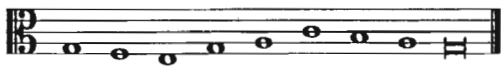
10. Jeppesen



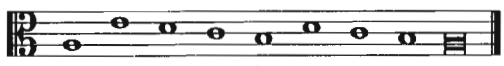
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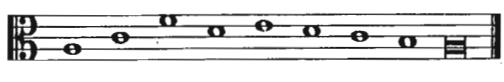
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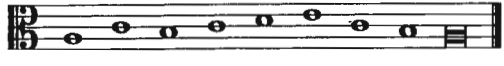
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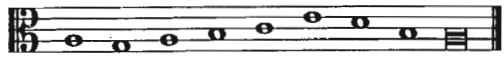
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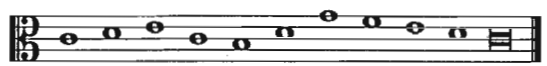
15. Salzer



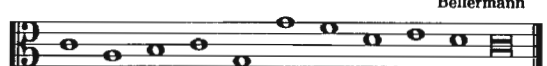
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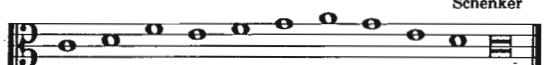
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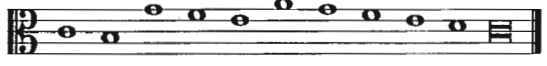
18. Bellermann



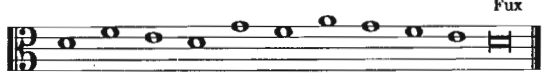
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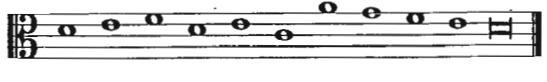
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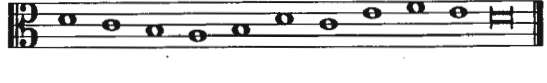
21. Fux



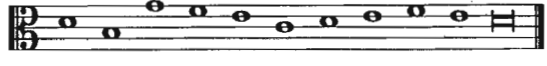
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