

**Applied Counterpoint**  
**an online course**  
**by**  
**Alan Belkin**

Here you will find the text, musical examples, and the exercises from my online course on applied counterpoint, created in 2018. This course can be seen on YouTube, here:

[https://www.youtube.com/watch?v=yPHC9Zf9s04&list=PLSntcNF64SVW2hG6S7j78\\_cXg\\_13Z](https://www.youtube.com/watch?v=yPHC9Zf9s04&list=PLSntcNF64SVW2hG6S7j78_cXg_13ZWN0q)

WN0q For questions, please contact me via my website, at [alanbelkinmusic.com](http://alanbelkinmusic.com)

Thanks for Shawn Uplaznik for editing the pdf.



## Applied Counterpoint

### 1) Goals and Approach

In my video On Counterpoint, I talked about what counterpoint is and why a composer needs it. ( <https://www.youtube.com/watch?v=yPHC9Zf9s04&t> ) Here I am going to follow up on the third point I discussed in that video: how to learn it.

Here are the goals of this new course. I'll explain how we will proceed. Our objectives here are:

- 1) to provide a clear path to learning counterpoint, from beginner to advanced, in a way that applies to real-life composition
- 2) to explore the general musical principles governing counterpoint in ways that are not limited to any one style, or even to tonal music in general
- 3) to show the student how to approach every step along the way so as to get the most out of the work
- 4) No Rules without Reasons. The most common problem in teaching and learning counterpoint is not understanding the WHY for the constraints. As mentioned in the previous video, there are two kinds of constraints:
  - a) practical, like the ranges of untrained human voices in a choir: these apply all the time, regardless of the kind of music you write.
  - b) pedagogical: in the same way that a physical trainer works on specific muscles with focussed exercises, species counterpoint allows us to concentrate on one thing at a time. The first 4 species all have severe limits on rhythm and dissonance treatment, not because that is the way "real-life" composition works, but to allow us to focus on specific problems. To ask a beginner to write beautiful, easily singable lines, which combine well with other lines, and which exhibit excellent control of harmonic tension (dissonance) and of rhythmic momentum is just not realistic. So species counterpoint allows us to work on each of these things individually. Then, in fifth species, they start to come together. For the same reason, we start with 2 voice counterpoint and then move on to 3 and 4 voices.



### Vocal vs. instrumental

It's important to understand why we start with vocal counterpoint, specifically for untrained, choral voices. Why?

- 1) Everybody has a voice; singing is a cultural universal.
- 2) Instruments are very often called on to imitate voices (Conductor: SING!)
- 3) Untrained voices show us the difference between what is easy to sing and what is harder - important for a composer.

Now let's talk specifically about how to work on your counterpoint:

One thing these lessons can't give you is PRACTICE! If you want to become friends with the notes you have to spend lots of time with them. If you do 2 examples of each species you won't get fluent. You need to do at least 10 examples of each. More is better!

It's really useful sometimes to do more than one version of the same exercise. the first one may come easily, but when you are struggling to do the third version, it will force you to explore things you didn't think of up to then.

Active learning is better than passive learning. Doing exercises on your computer is fine and good, but you will learn much more if you sing and play them yourself. The best way to do this is to play one line on the piano while you sing the other one, then flip. If you can't play the piano, at least have the computer play one line while you sing the other. You will discover things as you sing the lines yourself that no amount of passive listening will ever reveal. This method takes more time, but you also get much more out of it.

Now we are ready to get started. The next segment will discuss writing vocal melodies.



## 2) On Vocal Melody

### Writing for the voice

As mentioned in the introduction, we are going to start with writing for untrained choral voices, since they are the most common, and a composer needs to know how to write for many different levels of performers.

Here are the ranges of the four basic choral voices.



Note that these ranges are not absolute, in the sense that one person's voice may go a bit higher or lower than another's. But these are safe ranges for untrained choral singers, and that is an excellent place to start. In any case, extremely high notes and extremely low notes are generally harder to sing in a controlled way, so they need to be prepared. Don't suddenly leap to the highest or lowest notes after spending a lot of time in another register. A choral soprano can usually manage a high G if it's approached stepwise, but with a large leap before it, the note becomes much harder to attack with confidence.

All voices are normally most comfortable in their middle range, and that is where they should spend most of their time. The challenge becomes finding ways to write interesting lines that don't become monotonous, given the relatively few notes available to each voice. We will come back to this problem frequently in our coming discussions.

### Principles of (vocal) melody

#### 1) Steps and leaps

Vocal melody is most comfortable when it is mainly stepwise, and when the underlying harmonies are fairly straightforward. Major, minor and perfect intervals - specifically seconds, thirds, fourths, fifths and sixths - are easier to sing than augmented and diminished intervals. An octave leap is much easier to sing than a seventh. Some of these harder intervals can appear in certain specific harmonic contexts, but for now we will avoid them. Later, when we expand our harmonic resources, we will also begin to use these intervals in our melodic lines.



A line made up entirely of stepwise motion will sooner or later get boring. Leaps help to refresh interest. But the effective placement of leaps is not as simple as it might appear.

## 2) Progression and evolution in melodic lines

Stepwise motion can take us to any vocal register gradually. Leaps are trickier, since, if badly used, they can suddenly place a melodic line in a whole different register with no preparation.

What do we mean by "preparation"? After a period of stepwise motion a leap can provide welcome novelty. But unprepared novelty can easily sound arbitrary. Listen to the following example:



Here the first few bars move by small intervals, and they all stay within the fifth C-G. But then when the melody suddenly shifts up an octave, it just sounds like a mistake: the last two notes sound like they have nothing to do with the previous part of the phrase.

Now compare this version:



Here the first six notes of the melody are the same, just transposed up an octave. The leap is now downward. So instead of opening up an octave in a previously unheard register, the leap here only opens up a fourth (from the opening C down to G) and then the line climbs back up to where it started. So, the same size leap - an octave - sounds a lot less dramatic. This is what we mean when we say that the new register is better "prepared": it does not sound disconnected from the preceding music. It opens up a much smaller new register, and then moves back towards the previous register. This is the key to using leaps well in writing a melodic line for voice. While you may occasionally come across a sudden unprepared leap in a dramatic context - say, at a very intense moment in an opera - it must be justified by the situation if it is not to sound arbitrary. Now let's look at another kind of problem.





Here there are no big surprises, but the melody gets stuck around the notes E and F. Out of twelve notes, seven of them are E or F. And the highest note, F, is repeated twice. The problem here is that the melody does not evolve in any meaningful way, there is no sense of development or progression. In short, it's boring!

How can we fix this? Here is a revised version.



Now there is a progression in the melodic peaks: we reach F in bar 2, G in bar 3, and finally A in bar 5. Although this phrase still has six E's and F's, the progression in the highest notes gives the listener a sense of evolution through the phrase, instead of just going around in circles.

This kind of stepwise movement between peaks is a good example of an important principle in melodic construction: melody is not a democracy. Not all notes are equally important. Beginning notes, ending notes, leaps and peaks always stand out, so it is important for the composer to pay special attention to their organisation. We will often have occasion to come back to this point.

Now we are ready to move on to first species counterpoint, the subject of our next segment.



### 3) First Species

Now let's begin first species counterpoint. We will start with the simplest situation, with only two lines at a time to consider, both in whole notes: there is no rhythmic independence at all between them. Furthermore, there will be no dissonances at all. The only thing which can distinguish the two lines is their respective contours and ranges.

We will start with a given melody - a cantus firmus - and attempt to add another line, in a different voice, which enriches the cantus but has a different contour. We use a given cantus because it is not always easy to write a line which allows for many different solutions. An idiosyncratic line tends to allow for very few possible counterpoints, whereas these given canti are neutral, more flexible. (Later on the student will write both voices, no longer using a cantus firmus.)

Here is an example of first species counterpoint. I've listed the intervals between the voices. (I've named the intervals all as if they were within one octave.) Incidentally, first species does not allow repeated notes. The cantus here is the lower voice: (Ex.1)

Alto

Tenor 3 5 3 3 6 3 6 3 3

You will notice that we have only 3<sup>rds</sup>, 6<sup>ths</sup>, and 5<sup>ths</sup> between the parts. While respecting the (choral) vocal ranges, this is a good counter melody to the cantus. The peaks of the two lines don't arrive at the same time: the cantus peaks in the third bar, while the added melody peaks near the end, on the G. The harmonic result is rich, and the cadence is convincing. Note that, although you must have the root of the tonic triad in the bass at the end, the top part can end on any note of the tonic chord.

This is the way a good first species exercise should sound.



Now a second example, using the same cantus, but now in the top voice: (Ex.2)

Alto

Bass 8 6 6 3 3 3 6 5 8

This one starts and ends with an octave, but otherwise uses the same intervals as our first example. Again, the peaks are independent, the cadence is clear and the result is harmonically convincing.

Seems easy, doesn't it? Well, now let's look at what can go wrong. First an example with the same cantus (below).

Ex.3

Alto parallel 5ths parallel 8ves

Tenor

The parallel, empty 5<sup>ths</sup> and 8<sup>ves</sup> create holes, in the context of harmony which should be rich, filled with 3<sup>rds</sup> and 6<sup>ths</sup>.

Here is an example with somewhat more subtle problems: (Ex.4)

Alto direct 5th direct 8ve

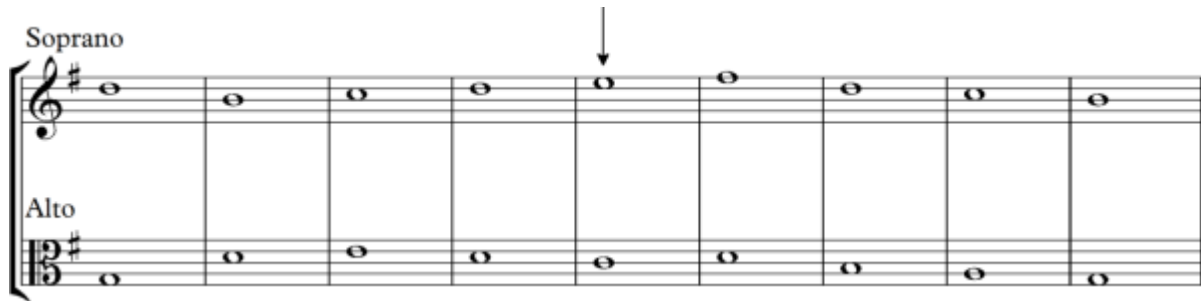
Tenor

Note that in the third bar both voices move up into a 5<sup>th</sup>, and the top voice has a leap. This has the effect of accenting the 5<sup>th</sup>. The problem is that a fifth is not very rich, and here it is bare



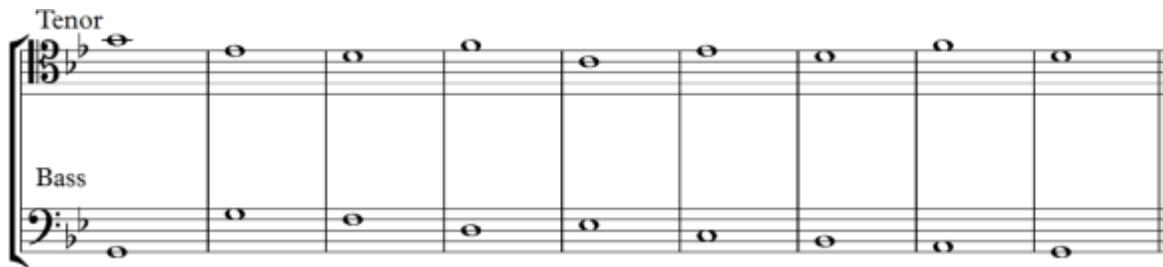
moment in the otherwise rich texture. The same thing happens in the bar before the end, with both voices moving in the same direction (down) into an octave, again with the top voice leaping. As before, the result is disappointing, bare instead of rich. These are called, respectively, direct 5<sup>th</sup>s and direct 8<sup>ves</sup>, and they are to be avoided in two parts.

Here is another example, showing a common problem: (Ex.5)



The problem here is that starting at the arrow, the two voices are moving in parallel 10<sup>ths</sup>; they are no longer really independent. Also, it is not a good idea to have a line peak on the leading tone, since it leaves the listener with a feeling that it is somehow incomplete.

Now a last example, with a new cantus: (Ex.6)

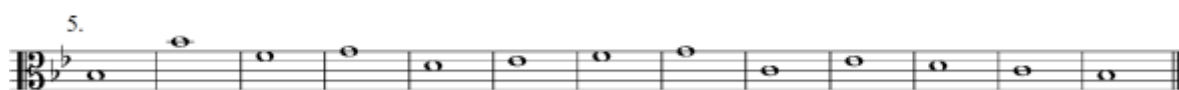
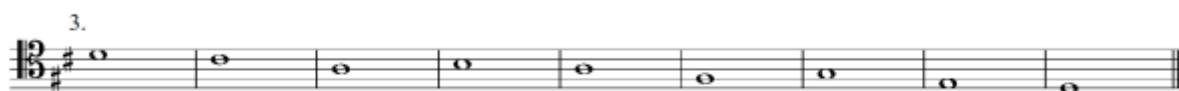


The problem here is that the cadence is not convincing. A cadence needs to create clear punctuation. Here the F natural before the end contradicts the G minor tonality. Even in G melodic minor, The F should descend stepwise. And the direct 5<sup>th</sup> into the last chord does not help either.

Now it's time for students to do some exercises. Here are several different canti for students to practice. The canti should often be transposed, since different keys place the voices in different parts of their comfortable ranges.



## Canti for species counterpoint





Remember:

- 1) Respect the vocal ranges.
- 2) Only 8<sup>ves</sup>, 5<sup>ths</sup>, 3<sup>rd</sup> and 6<sup>ths</sup> between the voices for now. Aim for harmonic richness overall.
- 3) Not more than 3 bars of parallel movement at a time.
- 4) Melodic peaks should not coincide.
- 5) Sing and play!



#### 4) Second Species

Now let's move on to second species. Each species introduces a few new elements in a focused way, so the student can concentrate on one thing at a time. First species was about combining melodic lines, without rhythmic independence and with no dissonance. Second species introduces dissonance.

Dissonance creates tension: in a context where the normal sounds are 3<sup>rds</sup>, 6<sup>ths</sup>, and 5<sup>ths</sup>, adding 2<sup>nds</sup>, tritones and 7<sup>ths</sup> can make the music much richer. But if the result is not to sound random, these dissonant intervals need to be used in a coherent way. This means that, at least in this style, dissonances always depend on the surrounding consonances. They need to be prepared and resolved. You can think of a dissonance as being dependant: it adds interest, but it can't stand on its own. When we speak of preparation and resolution, we are really talking about using the dissonances in ways which make them fit in to the overall context.

Of course, there are styles of music where dissonance is much more common, but the basic idea of having a range of interval tension, where some combinations create stronger colors than others, is a valuable resource in any style; only the details change. We will talk more about this later in the course, when we discuss counterpoint in other harmonic styles.

Let's look at 2<sup>nd</sup> species more closely. While still using the same, whole-note canti, the added part will now be in half notes: this means there will be 2 notes in the added part to 1 note in the cantus. The only bar where we will use a whole note in the added part is at the end, since cadencing on a weak beat is less conclusive, all other things being equal, than stopping on the strong beat.

The first note in every bar here should be a consonance, as in first species. But the second note can be consonant or dissonant. If it's consonant, the melody can leap. If however the second note is dissonant, it must be approached and left by step, so the dissonances don't sound like they have nothing to do with the surrounding consonances. This is what we mean by dissonances being prepared and resolved.



There are two kinds of dissonances in 2<sup>nd</sup> species:

In the first, the dissonant note returns to the same note it started from; this is called a neighbour note. As you can see from example 1, it can be above or below (upper or lower neighbour).

Ex. 1



In the second situation, the dissonant note moves on stepwise to a new note. This is called a passing tone. As with neighbour notes, passing notes can go up or down.

Ex. 2



Neighbour notes are essentially static, whereas passing notes are dynamic: they create novelty. A melody which consists mainly of neighbour notes is going to be very static; one which uses mainly passing notes is going to be always climbing up and down, with never a moment's rest. So, we need to find a balance between the two.

Here is our first example of second species counterpoint: Ex. 3





This melody uses one neighbour note, in the 4<sup>th</sup> bar, and passing notes in the 2<sup>nd</sup> bar and the 3<sup>rd</sup> bar from the end. The other half notes in mid-bar are all leaps to and from consonances. As in first species, leaps allow the melody to open up new registers, avoiding getting stuck.

As in first species, the goal is to create a line with an independent contour, and with a good balance of stepwise motion and leaps. However, since there are twice as many notes in the added part, keeping the line interesting without becoming incoherent is a bit more challenging. Here is another example:

Ex. 4



Here again we see one neighbour note, in bar 6, and two examples of passing notes, in bars 2 and 3. This allows the line to fill in the interval of a fifth while moving stepwise, creating a nice sense of momentum. After the scale, the leap in bar 4 pushes towards a new register. The line then stays in an intermediate register, before rising again to the final G, which is also the highest note in the phrase. Once again, the peaks of the 2 lines do not coincide. Notice also the succession of the highest notes: Eb and F in bars 4-5, and then the high G at the end. When successive peaks rise step by step like this it gives the phrase a nice, overall sense of direction.

Now an example with some problems. Ex. 5





The most obvious weakness here is between the 4<sup>th</sup> and 5<sup>th</sup> bars: the parallel 5<sup>ths</sup> create a very noticeable hole in the texture. But the parallel 5<sup>ths</sup> between the first beats of the first and 2<sup>nd</sup> bars, although not quite as prominent, also stand out on attentive listening; they would be better avoided.

Other problems occur in m. 3 and in the bar before the end: dissonances are approached and/or left by leap. This creates a kind of distraction for the listener: we are irritated by the unresolved dissonance.

If you don't hear these things right away, give it time. Part of the reason for doing these exercises is to refine your ear for such details. Once again, that requires a lot of practice.

**Remember:**

- 1) Dissonances only on the second note of the bar.
- 2) They must be approached and left by step.
- 3) Parallel fifths or octaves should normally be more than 4 beats apart.
- 4) Sing and Play!



### 5) Third Species

Third species does not introduce any new kinds of dissonance, but it does make possible richer and more elaborate melodies. The added part will now be in quarter notes. Only the last note of the piece will be a whole note, to provide a convincing cadence.

A 3<sup>rd</sup> species counterpoint has twice as many notes as a 2<sup>nd</sup> species example. Given the limited range of the untrained human voice, this means that the same pitches will often recur several times. How can we bring them back without monotony?

Since there are now going to be three quarter notes between the chord tones on the first beat of each bar, there are many possible routes between them. We can divide these routes into direct routes and indirect ones.

A direct route simply means filling in the interval between the downbeats without going outside of its range.

Here are a few examples of direct routes: (Ex. 1)



All of these examples start and end with the same notes (D-A), but they cover different paths between the first beat chord tones. (These are just a few possibilities out of many.)

Now, three examples of indirect routes: they go outside of the framing note's register: (Ex. 2)



Again, all these examples start and end with the same notes, but instead of staying within the range defined by D-A, they leap outside and then return to the final note from the other direction. Again, there are many alternative solutions.



As in 2<sup>nd</sup> species, there are no leaps to or from dissonances, but the fact that we have 4 notes per bar means that passing notes and neighbour notes can both appear in the same bar. Occasionally 3 of the four chord tones will appear within one bar, but at least one note in each bar should be a non-chord tone. Pure arpeggio figuration is more typical of instrumental writing.

Third species requires thinking ahead: you must at the very least decide the note on the next downbeat, in order to choose a route to get there. A good line requires planning further ahead. We will return to this point shortly.

The question of how many chord tones appear within each bar has implications for the following bars. If all three notes of a chord appear within one bar, it is very easy to end up with parallel octaves and fifths in the coming bar.

Here is an example: (Ex. 3)



There are quite noticeable parallel 5<sup>ths</sup> and/or octaves between all the successive bars here.

Here is a revised version solves the problem, centering each bar around one or two chord tones: (Ex. 4)



Apart from the fact that this version has no parallels, it is also a better line: the balance of steps and leaps is more idiomatically vocal.

On the subject of parallels, we now need to qualify the rule we set out in second species, to the effect that parallels should be more than 4 beats apart.



Let's look at a few examples: (Ex. 5)



The parallel octaves on the strong beats of the first two bars of a) here are very audible, and should be avoided. The second pair, in b), are a bit less obvious, since they don't arrive on the strong beat, but the fact that both bars have the exact same melodic pattern points our ears to the fact that the 2<sup>nd</sup> beat of each bar is an octave. But in c), although the octaves on F and E are both on the third beat, the melodic patterns are quite different. In the first bar the F is a kind of ornament to the A, which appears on the strong beat and the last beat of the bar. But in the following bar, the E is simply one note on the way down to the chord tone C in the next bar. So, we will allow these parallels, since they are more visual than audible.

More and more, we have to pay attention to the context when parallels occur. When they really don't stand out, even with careful listening, they are acceptable - provided the student can explain WHY they are not very salient.

Now let's get back to the question of planning the overall melodic design. We saw in second species how a progression towards higher and higher peak notes in the line can create a sense of direction. This principle is even more important in 3<sup>rd</sup> species, to avoid aimless wandering. Here is an example: (Ex. 6)



Notice how the C in m. 1 goes up to E in m. 2. Then it climbs further to F in m. 3, and then up to G in m. 4. The line then leaps back down to middle C, to recover the previous upward leap (D-G) and so as not to leave the lower register completely behind. Then the melody climbs up a scale and goes even higher: G-A-B, and finally, in m. 6, it arrives at the high C. This is followed by a descent back into the lower register for the cadence. This line has a nice sense of direction.



In general, it is a good idea to survey the whole cantus before actually starting to write the added part. This survey should set a goal for the peak of the added line. That makes it easier to gradually wend one's way to and from that goal, combining direct and indirect routes for variety.

Here is another example, now with the cantus on top: (Ex. 7)



Here the successive high notes arrive in descending order. This is partly because the cantus starts with its highest note and then descends. Since alto and soprano voices are adjacent, it would be impractical to create a peak for the alto near the end, when the soprano has already fallen into the upper range of the alto voice. So here the alto rises quickly to G in m. 3, then further to a high C in m. 4. Such a quick rise needs to be "recovered": the line must now descend to unify the registers overall. The descent starts in m. 4 with the Bb then goes to A in m. 5. The line then dips and rises again, first to F# in m. 6 and then to G in m. 7. Then it goes back down through F and Eb to D and C in m. 8, before finally descending to the cadence in m. 9.

Another thing to notice in this example is the variety in the neighbour note figures (m. 2, 4, 6, and 8). Some are upper neighbours, some are lower neighbours, and they do not always arrive on the same beat of the bar. This is important to keep the line from becoming mechanical. Also, if the neighbour note starts to sound like an intermittent, literally repeated motive, this can be distracting. We will discuss motives in detail later in the course, but for now they are better avoided.

One last comment about 3<sup>rd</sup> species. Although textbook species counterpoint is normally in 4/4 or 2/2 time, it is worth doing a few exercises in 3/4 time as well.

Here is an example: (Ex. 8)



1 Soprano 2 3 4 5 6 7 8 9

Tenor

The image shows a musical score for two voices, Soprano and Tenor, across nine measures. The Soprano part is written on a treble clef staff with a key signature of one sharp (F#) and a 3/4 time signature. The Tenor part is written on a bass clef staff with the same key signature and time signature. The Soprano line consists of eighth and quarter notes, while the Tenor line consists of half notes. The measures are numbered 1 through 9 at the top. The Soprano part ends with a double bar line at the end of measure 9.



As before, the first beat is always a consonance, and dissonances are approached and left by step. Both passing and neighbour notes are possible, and the melodic structure again allows for direct and indirect routes. Occasionally a bar may occur with no non-harmonic tones (for example m. 2 and m. 7 here).

Remember:

- 1) Aim for a supple, singing line.
- 2) Vary the dissonances, and explore both direct and indirect routes between chord tones on the strong beats.
- 3) Plan the overall melodic shape in advance.
- 4) Becoming at ease with counterpoint requires doing a LOT of it. Quantity counts!
- 5) Sing and play!

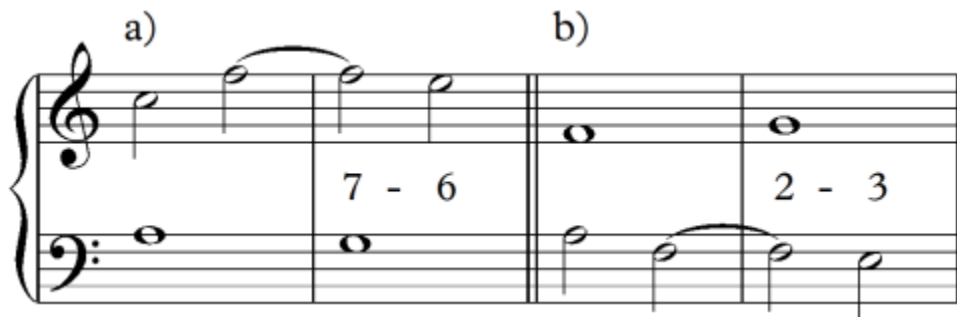


## 6) Fourth Species

4<sup>th</sup> species introduces a new kind of dissonance, the suspension. Up until now, dissonances have always occurred on the weak beats of the bar, and have been approached and left by step. Suspensions place dissonances on the strong beat for the first time. Their preparation is also handled in a new way.

The original idea for the suspension probably comes from vocal writing, where leaping to a dissonance note is difficult. But what if the note starts off as a consonance in the previous bar, and then, sustained, becomes dissonant as the harmony changes around it? This is how a suspension works.

Here are two examples: (Ex. 1)



In example a), the F arrives as a consonance in the first bar, holds over to become a dissonance (a 7<sup>th</sup>) in the second bar, and then resolves down into another consonance on the next beat. The suspension is in the upper part.

In example b), the F in the lower part starts off as a consonance in the first bar, and then becomes dissonant when it's held over into the second bar, then resolves downwards to the consonant E. This suspension is in the lower part.

The numbers between the parts are the suspensions' names: first the dissonant interval, and then the consonant resolution. So, the first example is a 7-6 suspension, and the second is a 2-3 suspension.

In classical suspensions, the resolutions are always downward. It is also possible to write upward resolving suspensions, but they are rare in the classical repertoire, so for now all our suspensions will resolve by step, downward.



Here is a list of all the possible upper and lower suspensions: (Ex. 2)

upper suspensions

lower suspensions

The image shows two musical staves. The top staff, labeled 'upper suspensions', contains three measures. The first measure shows a 9-8 suspension (treble clef, G4 tied to F#4, bass clef, C3). The second measure shows a 7-6 suspension (treble clef, E4 tied to D4, bass clef, C3). The third measure shows a 4-3 suspension (treble clef, G4 tied to F4, bass clef, C3). The bottom staff, labeled 'lower suspensions', contains three measures. The first measure shows a 2-3 suspension (treble clef, C4 tied to B3, bass clef, C3). The second measure shows a 4-5 suspension (treble clef, D4 tied to C4, bass clef, C3). The third measure shows a 7-8 suspension (treble clef, G4 tied to F#4, bass clef, C3).

Although the 2-1 suspension is also theoretically possible, in two parts it sounds odd, since the resolution is an empty unison; therefore, we will avoid it for now.

The 9-8 suspension, and even more the 7-8 suspension, can sound strange in two parts, due to the bare sound of their octave resolutions. In 3 and 4 part we can add richness with the third voice, but in 2 parts such bare holes in the texture can be unconvincing. In particular, the 7-8 suspension can sound odd, since the resolution is already sounding above; the effect is even cruder if the 7<sup>th</sup> is a major 7<sup>th</sup>, instead of a minor 7<sup>th</sup> as above.

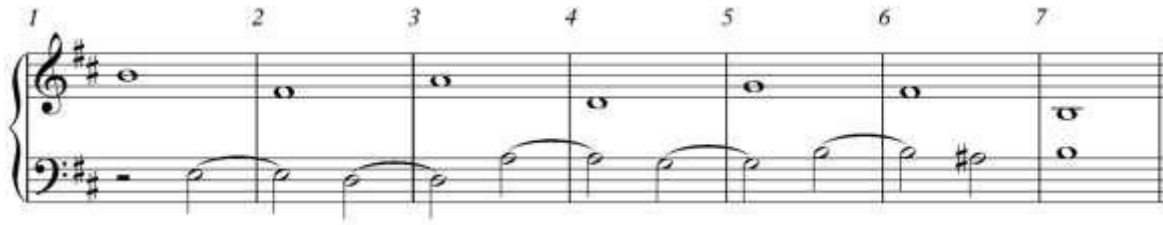
Now let's look at an example of 4<sup>th</sup> species counterpoint: (Ex. 3)

The image shows a musical score for 4th species counterpoint. It consists of two staves: 'alto' (treble clef) and 'bass' (bass clef). The alto staff has a series of notes: C4, D4, E4, F4, G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6. The bass staff has a series of notes: C3, D3, E3, F3, G3, A3, B3, C4, D4, E4, F4, G4, A4, B4, C5. The notes are connected by a chain of suspensions, with the chain broken in measures 3 and 4. The exercise is numbered 1 through 9 above the notes.

Notice how in m. 3 and 4 the chain of suspensions is broken. Why? If we had tied the F over the barline, its resolution would have been E, in m. 4. But that would mean that the added part was just making delayed octaves with the cantus (F-E). The sound would be very bare, and the parallels are easily audible. So, we break the chain and move to another consonance, and then resume the suspension line. Such breaks should be rare, not more than one per exercise.

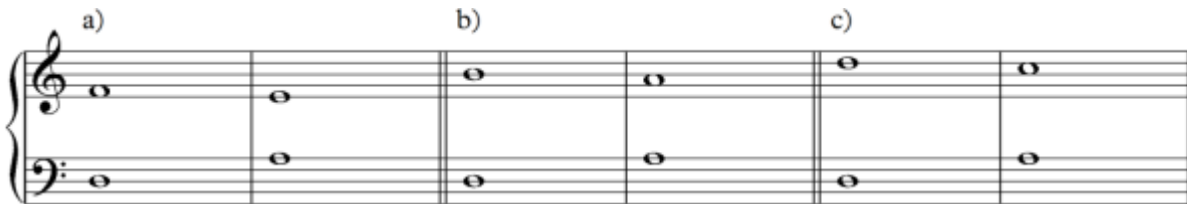


Notice also that when the tied note does not create a dissonance in the new bar, for example in m.6, we can leap to another chord tone, since there is nothing to resolve. Now an example with the added part underneath: (Ex. 5)



Because all our suspensions resolve down, it can be difficult to arrive at a convincing melodic line in 4<sup>th</sup> species. For that reason, 4<sup>th</sup> species is the most artificial of all the species. The best way to think of it is as practice in finding opportunities for suspensions. Suspensions add harmonic richness; composers should seek them out.

Since a suspension is essentially a delayed, descending second, what we are looking for is two notes in the cantus that can be harmonized with a descending second in the added part. Let's see how this works: (Ex. 6)



The cantus is in the lower part here, and we are looking for possible suspensions above it. Examples a), b), and c) are the three possible ways to harmonize the given notes D-A with descending seconds. A) does not create a dissonance (F held over would be a 6<sup>th</sup>, resolving to a 5<sup>th</sup>).

b) would create a 9-8 suspension, and c) would create a 4-3 suspension. Therefore c) is the richest solution here. Again, 4<sup>th</sup> species is really about exploring possibilities for suspensions. When we move on to more complex textures, this guarantees you don't overlook them.



It is possible to do this exercise for every interval within an octave, both up and down, thus creating a comprehensive catalog of all possible suspensions. Interested students are encouraged to try this; it is worth the effort.

Remember:

- 1) Before starting a 4<sup>th</sup> species exercise, mentally catalog all the possible suspensions between each pair of successive notes in the cantus. Choose the richest ones.
- 2) Try not to break the syncopated rhythm more than once per exercise.
- 3) Sing and play!



## 7) Fifth Species

Fifth species is the goal, the reason all the others exist. We will finally combine what we learned in 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> species, to write lines that begin to resemble real-life musical situations. We can now vary the rhythm, so that, in addition to the shape of the line and the way the dissonances are used, it can also contribute to musical character.

We will be moving between the rhythms of the previous species - half notes, quarter notes, and syncopated half notes - to create variety. The goal is a fluid, smooth result. Of course, in real life there are many dramatic musical situations, where fluid and smooth are not what we would want! But such situations cannot be worked out convincingly within our short exercises. So for now, think of this as music that remains quiet, reflective, calm. Later in the course we will examine some more dramatic possibilities of counterpoint.

The most important thing to remember about rhythm in 5<sup>th</sup> species is what Schoenberg calls the rule of the little notes, and what I call the cockroach rule: there is never only one! Once we start introducing the quicker values (1/4 notes, for now) it is impossible to completely stop them without feeling that the music has lost its momentum.

Here is an example: (Ex. 1)



The first thing which strikes us about the rhythm here is how bumpy it is. After three bars of non-stop quarter notes, they suddenly disappear for good in m. 4. Then the half notes are uninterrupted until the suspension at the end.

Apart from that abrupt stop in m. 4, there is also something rather disappointing about the overall loss of energy.



Let's compare an improved version: (Ex. 2)



Here the change from quarter notes to half notes is smoother, and not done all at once. The line overall still slows down, but the melody's gradual rise to the high E and the little ornament at the end do maintain some tension.

Now an even better version: (Ex. 3).



By starting with the slower values, the gradual acceleration now compliments the rising line to create even more momentum towards the end.

While it is not necessary for every 5<sup>th</sup> species exercise to speed up like this, be careful of bumpy rhythms and the sudden, complete absence of quick notes.

You may have noticed two things we have not seen up to now in the two improved versions: the dotted note rhythm in m. 3 and m. 5, and the unusual resolution of the suspension in m. 8. The dotted half note rhythm allows the quarter notes that follow to begin on a weak beat instead of a strong beat; that helps to keep the rhythm flowing.

The suspension's resolution in m. 8 (really just another dotted rhythm, just going across the bar line) has the same goal: rhythmic fluidity. But it introduces an important principle which we will see extended in more advanced counterpoint: delayed resolution. The idea here is that resolving a dissonance can be delayed a bit without incoherence, provided there is no distraction before the resolution actually arrives.



Let's look at this in detail, since it adds some important new resources to our toolkit: (Ex. 4)



a) we have a standard 4<sup>th</sup> species suspension. All the other examples are ornamented versions of the same suspension.

b) simply repeats the suspended A, before resolving as expected on the 3<sup>rd</sup> beat. In terms of harmony and dissonance, nothing is changed. Only the rhythm is affected.

c) works the same way, except here the repeated note is the resolution. Both of these situations are common and pose no problem.

d) a new situation: a new note intervenes before the resolution arrives. Since the added B is consonant with the B in the cantus, it does not create a distraction.

e) is more interesting. Here the intervening F# is dissonant with the E in the cantus. But it works here because both the suspended A and the F# resolve to the same note: G#.

f) poses a problem. Can you see why?

As in e), intervening C is dissonant with the cantus. But the G# does not resolve the high C. It is just left hanging; it distracts from the suspension, rather than enhancing it.

g) the intervening F is consonant with the cantus, but it creates an augmented 2<sup>nd</sup> when moving to the following G#, which is awkward to sing.



h) might seem OK at first, but careful listening points out a problem: the e creates a dissonance with the cantus (a 4<sup>th</sup>), which needs to resolve to D, rather than the G# we need to complete the suspension.

i) creates a different sort of problem. Here the dissonance resolves to G# as expected, but on the 2<sup>nd</sup> beat, while the third beat moves on to another note. The issue here is rhythmic. Normal species counterpoint is in 2/2 time, which means that the 2<sup>nd</sup> quarter note is an offbeat. If we really feel the beat like this, in 2, the resolution arrives between beats, creating a mild syncopation. Most counterpoint texts therefore prohibit this. Here we will allow it only if ALL the suspensions in the given exercise behave in the same way. This means in effect considering the music to be in 4/4 time, not in 2/2. If we feel the beat in 4 there is no sense of rhythmic conflict.

Note that suspensions in 5<sup>th</sup> species are normally prepared by a half note. Again, a quarter note preparation would feel syncopated.

As in 3<sup>rd</sup> species, we will avoid prominent, repeated motives, and for the same reason: they create "obligations", which the student is not yet ready to deal with. Note that the dotted note rhythm, and suspensions in general, could be considered motives, but they are so common that they don't attract much attention.

Now a little exercise. Here are 2 versions of a 5<sup>th</sup> species counterpoint; Listen to the first one carefully.

Can you identify the problems?

Here is a corrected version. Try to understand the reason for every change.





When doing a 5<sup>th</sup> species exercise, remember:

- 1) First, survey the possibilities for suspensions, taking note of the richest ones.
- 2) Before starting to write the added line, plan its overall shape, taking into account the ranges of the voices involved.
- 3) Keep the rhythm flowing. Avoid bumps: don't change species too often on the first beat of the bar. Maintain at least some rhythmic momentum until the end. Use ornamental resolutions to prevent the suspensions from "slamming on the brakes".

Sing and Play!



## **8) Three Part Counterpoint**

Now that we have covered all the species in 2 parts, it's time to move on to three parts. We will discuss 3 part counterpoint in 2 lessons. In this one we will extend the same 5 species already covered in two parts, but now with an added third part in whole notes. In the next lesson, we will cover some less known variations of species counterpoint, which however prove very useful in real- life situations.

In classical species counterpoint, the student does three and four part exercises, where one of the parts is in species 1,2,3,4, or 5, another part has the cantus, and there is also a 3<sup>rd</sup> (and eventually a 4<sup>th</sup>) part, composed by the student, also in whole notes.

This brings up the question of auditory priorities. It is impossible to pay equal attention to many things going on at the same time, so the composer needs to know where the focus will be at any given moment. In the case of first species, since all the three parts will now be in whole notes, the lines which are easiest to hear are, in order of priority, the top part, the bottom part, and the middle part.

In the case of the other species, the part which is moving will normally attract more attention than the others. As for the whole note parts, those in the outer parts are always easiest to hear.

This is a very important point. Evolution has designed us so that perception has priorities; we don't want to get caught singing in the woods and not notice the hungry lion coming down the path! Since these priorities are a fact of human hearing, music has to take them into consideration. While it is desirable to ensure that each singer (or instrumentalist) in a contrapuntal texture has a reasonably interesting line, there is always one or another which is most prominent at any given moment. In species counterpoint this is not a problem, since, as we said, the most active line will jump out at the listener, but when we get into more complex textures (starting in the next lesson) the composer's intentions have to stay realistic, if the result is to be audibly successful. We will come back to this point more than once.

There will be one change to the harmonic limitations of species counterpoint: in addition to simple triads the student can now use dominant 7<sup>th</sup> chords, provided the lines remain easy to sing, and providing the 7<sup>th</sup> is correctly resolved. This is a little different from classical species pedagogy, but behind this decision lies a fundamental fact, not always sufficiently appreciated. Harmony and counterpoint are not separate disciplines. You don't have one brain for harmony and another for counterpoint. The more you go on with counterpoint, the more you need rich harmony, and the



more you go on with harmony, the more you need interesting voice leading. So, at the end of your studies of harmony and counterpoint, the two must come together. Using dominant 7<sup>th</sup> chords is our first step in this direction.

Now for an example of each species, in 3 parts.

Here is a first species example, for bass, alto and soprano: (Ex.1 The cantus is in the alto.)



Notice that all three lines are well placed in their respective vocal ranges, and they all have different peaks and curves. The dominant seventh in m. 7 is resolved correctly in m. 8. Notice that just because there are three parts does not mean that all the chords must be complete: measures 1, 3, 4, 5, 7, and 8 have incomplete chords. As long as there is a 3<sup>rd</sup> or a 6<sup>th</sup> present, the sound remains rich.

Here is a second species example for the same three voices:

(Ex.2 The cantus is again in the alto part.)



Again, not all the chords are complete, but the overall sonority remains rich. As before, the lines peak in different places. Note the modal ending (the G natural before the final tonic); modes often provide interesting alternatives for the lines.



Now a 3<sup>rd</sup> species example; here the cantus is in the soprano: (Ex.3)



Here again, some chords are incomplete (m. 1, 3, 5), but the sound is rich nonetheless. Each line has an independent curve. Although the 3<sup>rd</sup> species voice is in the middle, it stands out since it is so much more active than the others.

Notice that the direct 8<sup>ve</sup> between m. 2 and 3 (bass and tenor) is not really audible at all: when direct 8<sup>ves</sup> and 5<sup>ths</sup> are not in the outer parts, they don't pose a problem. In fact, even the direct 5<sup>th</sup> in the outer parts between m. 7-8 is much less disturbing here than it would be in 2 parts, since the middle part adds the third of the chord, making the overall sound sufficiently rich. As we saw in our discussion of parallels when we looked at third species, these situations require careful listening and thoughtful judgment rather than blind adherence to rigid rules.

Fourth species in 3 parts poses no special problems. In fact, the 9-8 suspension, which is bare in two parts can now be used, since the 3<sup>rd</sup> part can supply the missing third of the chord. Ex.4





Notice that the first bar in the 4<sup>th</sup> species line starts on Ab, which is not part of the tonic chord. Since the beginning of a piece should create a bit of suspense, this is not a problem. Of course, the final cadence must be a root position tonic triad, to create convincing punctuation. Finally, a 5<sup>th</sup> species example: (Ex.5)

Notice how the V 4/2 chord in m. 2: the 7<sup>th</sup> (A, in the bass) is resolved correctly to G# in the next bar. The melody at first seems almost like 2 separate phrases, one low (m. 1) and one high (starting on the 2<sup>nd</sup> beat of m. 5), but the leap back down in m. 7 ties the whole line together.

It is worth comparing these counterpoint exercises to typical tonal harmony exercises. The most important difference is that there are more incomplete chords: rather than including all three notes of the triad, one of them can be doubled instead. This allows for greater flexibility in organising the melodic lines. Also, the harmonic progression is not always as strongly directed as in basic tonal harmony. This also allows more freedom in the choice of melodic notes. Of course, there are moments where the composer may want to affirm the tonality very strongly, and in those cases strong harmonic direction is needed. But otherwise, the fact that some of these counterpoints have a slightly modal feel is an advantage, not a problem. (It is interesting to note that Bach's late counterpoint becomes a lot more modal overall.) Later on, we will also explore chromatic counterpoint, which opens up other harmonic and tonal possibilities.

So, what is the best way to proceed with a three-part species counterpoint? Once you have decided which voices you will use, and where to place the cantus, the best method is to write three or four bars of the species line, then try to fill in the remaining line in whole notes. Continue like this, a few bars at a time, until the end. This is because if you write the rhythmically active line from start to finish by itself, you risk having to redo the whole thing if you run into problems with the 3<sup>rd</sup> part. Working a few bars at a time leaves more room for changes as you go along.



Note that I said to write 3-4 bars of the species line. Do **NOT** proceed one bar at a time: that makes it very difficult to get a feel for the lines as a whole.

A note about first species in 2 parts: since all the parts are in whole notes, write 3-4 bars of the outer parts first, since they are the most salient lines. Your priority should always be what is easiest to hear!

Remember:

- 1) Work on 3-4 bars at a time.
- 2) Ensure that dominant sevenths are easy to sing and properly resolved.
- 3) You need a lot of practice to get comfortable with each species. Since you are trying to "make friends with the notes", you need to spend a lot of time with them! 15 exercises per species is a reasonable amount.
- 4) Sing and play. I repeat this at the end of every lesson because it is so essential to really interiorizing these skills. You can passively listen to your computer play back any number of lines at once, but you will not really get a feel for writing singing lines unless you sing each part yourself. This way you combine ear training with counterpoint, which is the most sensible way to learn both!



## 9) Three Part Counterpoint, part 2

In our last lesson, we discussed standard 3 part counterpoint using the species approach. Apart from adding dominant seventh chords to our harmonic vocabulary, there is nothing unusual here. In this lesson, we will add some rarer varieties of species counterpoint that are nonetheless very useful. In fact they bring the student much closer to "real-life" counterpoint.

There are various traditions of species counterpoint, depending on the country and the teacher. Since species counterpoint is by definition not a style-based way of learning, these varieties are neither good nor bad in themselves. What makes the difference is how much effort the teacher puts into explaining issues of musical judgement, and also whether the teacher connects the whole approach to actual musical composition.

One extension of the species approach is the idea of combined species. By this we mean having each line in a different species. For example, apart from the cantus in whole notes, one part could be in 3<sup>rd</sup> species and another in 4<sup>th</sup> species. Of the three possible combinations in three parts, the least interesting is that of 2<sup>nd</sup> and 4<sup>th</sup> species together. Although it can be a useful challenge, it does not resemble many real-life situations. However, when one part is moving steadily in 1/4 notes and the other added part is slower (2<sup>nd</sup> or 4<sup>th</sup> species) we see for the first time what I call stratified counterpoint: each layer has its own rhythmic character. This is often seen in the standard repertoire. For example, many pieces by Bach, based on Lutheran chorales, have the chorale in long notes, while one or two other parts move steadily in a different rhythm, and a 4<sup>th</sup> part makes another rhythmic plane.

Here is an example where 3<sup>rd</sup> species are combined with 2<sup>nd</sup> species: (Ex.1)

The musical score for Ex.1 consists of three staves: soprano, tenor, and bass. The soprano staff is in treble clef and contains a sequence of quarter notes, labeled as 3<sup>rd</sup> species. The tenor and bass staves are in treble and bass clefs respectively, and contain a sequence of half notes, labeled as 2<sup>nd</sup> species. The score is divided into measures, with measure numbers 2 through 9 indicated above the soprano staff. The key signature has one sharp (F#), and the time signature is 4/4.

What is particular in this kind of counterpoint is the way accented passing notes or neighbour tones on the third beat can now enrich the texture. There are examples here in m. 3, 7 and 8. There are also cases where the 2<sup>nd</sup> half note and the third quarter note combine to gently



suggest another chord, for example in m. 2 and m. 4. In m. 2 the harmony seems to be E- at the start of the bar, but the 2<sup>nd</sup> half note, C, is consonant with both the bass and the upper part, so there is a momentary suggestion of a C+ 6<sup>th</sup> chord. Is the C in the tenor a chord tone or a passing tone? It's both, and the result is quite rich. In m. 4 the D in the soprano makes a 3<sup>rd</sup> with the B in the tenor, sounding momentarily like a 7<sup>th</sup> chord. Since it is part of a rising scale and in a weak rhythmic position, it does not really need a resolution, but the overall effect is definitely richer. When there are two dissonances at the same time in the two moving voices, if possible make them consonant with each other. For example, in m. 6 the D and the B are both passing tones, but the sixth they form together adds richness.

Now another example, this time combining 3<sup>rd</sup> species with 4<sup>th</sup> species: (Ex.2)

The 7-8 suspension in relation to the cantus, which we mostly avoided in 2 parts, here is used in m. 3; the presence of the C in the 3<sup>rd</sup> part makes the overall result rich enough. Again, it is a good idea to try to arrange things when possible so that the 3<sup>rd</sup> species part sounds rich with the suspension's resolution. Apart from m. 3, notice m. 2, the F implies a momentary V7, m. 5, the F is rich with the D, m. 7, the D on the third beat in the alto part reinstates the C just left in the bass, and m. 8, once again a passing V7. Since the 3<sup>rd</sup> species line is the one with the most flexibility, the composer can usually find a way to aim for the richest possible note.

As we mentioned above, the combination of 2<sup>nd</sup> and 4<sup>th</sup> species is somewhat less interesting, but there remains one more possibility in three parts, even more like real-life composition: both of the added parts can be written in fifth species at the same time.



Here is an example: (Ex.3)

The musical score consists of three staves labeled 'soprano', 'alto', and 'bass'. The key signature is three sharps (F#, C#, G#). The soprano staff begins with a whole note on G4 and descends stepwise through measures 2-9. The alto and bass staves begin with rests in measure 1. In measure 2, the alto has a half note and the bass has a quarter note. From measure 3 onwards, both parts feature more active rhythmic patterns, including quarter and eighth notes, with some measures containing rests or suspensions. The piece concludes in measure 9 with a final whole note on G3 for the soprano and a half note for the alto and bass.

This example brings up a problem we have not yet discussed, but which occurs all the time in composition: balancing the rhythmic activity of several independent parts.

As we have already mentioned in previous lessons, the listener can't pay equal attention to multiple planes at the same time. When the music is a simple accompanied melody, there is no question about which line is primary. But when the texture is contrapuntal, interest can move between parts, instead of always staying in the same place. Properly managed, this can add great richness to the texture, even in situations that are not explicitly contrapuntal.

In this example, notice that the only time both 5<sup>th</sup> species parts move together in quarter notes for more than one beat at a time is the end. Since the end is an appropriate place for increasing momentum, this makes sense.

On the other hand, once the quarter notes start, they are pretty much constant until the end, but not always in the same part: this creates rhythmic differentiation between the parts. In other words, the cockroach rule - once we build up momentum, it's hard to stop it within a phrase without feeling disappointed - applies here as well, but overall, not in any one part.

Notice also how the suspensions in m. 4, 5 and 8, smooth out the rhythm and create harmonic richness.

All the lines here peak relatively close to the beginning. In the case of the alto this is pretty much unavoidable, since the soprano moves steadily down. However, the bass, up to and including the first note of m. 3, could just as easily be transposed down an octave to postpone its peak. Melodically, either version makes sense.



In m. 5, we introduce something not yet seen: two harmonies in one bar. When there are two parts in 5<sup>th</sup> species and one of them is in the bass, this can happen, as long as both chords are coherent in relation to the cantus. Of course, both moving parts must "agree" on the harmony, in this case V 4/2 going to I 6.

This combination - two 5<sup>th</sup> species lines at the same time - also allows for accented passing tones, for example m. 1 in the bass, on the 3<sup>rd</sup> beat of the bar.

All these things will become more and more frequent as we go on.  
Here is another example of two 5<sup>th</sup> species lines at the same time: (Ex.4)

The peaks are not simultaneous. Notice the accented passing note in the middle of m. 4, the ornamental resolution of the suspension in m. 5, the two lines in quarter notes in m. 6 and m. 8. When both parts are in quarter notes like this, it's important that they don't start and stop at the same time. Here the bass is non-stop quarter notes from m. 5 to the end, whereas the soprano is rhythmically more varied.

In our next lesson, we will move on to four parts, and then we will be leaving the whole note canti behind!



Remember:

- 1) aim for rich intervals between the two moving parts on the third beat
- 2) in 5<sup>th</sup> species, balance the quarter note activity between the parts
- 3) work 4-5 bars at a time
- 4) Sing and Play!



### 10) Four part counterpoint

This will be our last lesson centering on species counterpoint, now in four parts. Why stop with 4? With just two parts, achieving harmonic fullness can be difficult. As the number of parts increases, the harmony gets richer, but each part's room to manoeuvre is reduced. While some schools take the species approach up to 5 parts, our time will be better spent by moving away from the species into other kinds of counterpoint, always with the goal of applying these skills in musical composition.

Again, we will enrich the harmonic vocabulary: now the student can use **all** the seventh chords in a given key, as long the seventh is melodically easy to sing and properly resolved.

A note to the student: just because we are not spending an entire lesson on each species, as we did in two parts, does not mean the student needs to do less of them. A reasonable goal would be 15-20 examples of each species. This is the only way to attain real fluency in 3 and 4 part writing.

Now our first example, in 1st species; the cantus is in the soprano: (Ex.1)



Even more than in three parts, we will often resort to spacings and doublings that we would not use in an elementary harmony exercise in 4 parts. In the latter, the goal is the simplest, smoothest possible part writing, whereas here we are focussing on creating interesting lines that fit well together. So, for example in m. 2 here, there is (momentarily) more than an 8<sup>ve</sup> between A and

T. In m. 5, we have 3 F#'s and one A. The only restrictions on these unusual spacings concern certain notes that should never be doubled. These are the "active tones", notes which actively need to resolve - for example the leading tone, or the seventh in a seventh chord. Later, in chromatic situations, altered notes also fall into this category.



Notice the III 6/5 in m. 6: the 7<sup>th</sup> is in the alto part, and it is approached by step and resolved correctly in m. 7.

As usual, the peaks of the various lines do not coincide. The peak in the bass arrives twice, but this is not a big problem. Since the texture is homogeneous: no one part stands out, apart from the soprano, on top of the texture. If the bass line were, say, in 5<sup>th</sup> species, the repeated peak would be better avoided.

Here is a second species example; the cantus is in the tenor: (Ex.2)



As usual in second species, we aim for a good balance between stepwise motion and leaps: there should be more of the former!

Apart from m. 8, this example is in natural minor. As we have already mentioned, modal harmony allows for more flexibility in the lines.

As usual, the peaks of the lines here are independent. Notice the arrival of the lowest note in the bass at the end. It is quite prominent and makes the cadence more final. Try singing the bass line with the higher E instead, the result is less strongly conclusive.

Here is a third species example; the cantus is in the alto: (Ex.3)





As usual, the peaks of the lines do not coincide. Notice the 7<sup>th</sup> chords in m. 2, m. 4 and m. 8.

M. 4 is a VI 7, which arrives first in the 4/3 position and then presents the root at the end of the bar. The 7<sup>th</sup> is in the alto, the cantus, and is approached and left by step; the G in m. 5 is the resolution.

The momentary voice crossing between bass and tenor on the last beat of m. 8 is no great problem, since both the seventh, G, and the dominant harmony, A, are immediately resolved correctly. If this happened on the first beat it would be too prominent however.

And now a 4<sup>th</sup> species example; the cantus is in the bass: (Ex.4)



Notice that the 7-8 suspension in m. 5 is not harsh or bare, both because it is a minor 7<sup>th</sup>, and also because the other parts provide richness. The direct 8<sup>ve</sup> between outer parts in m. 6 is not a problem, since the suspension is the listener's focus. Also, m. 5-6 are the same harmony. The basic problem with direct 5<sup>ths</sup> and octaves is that the leap draws attention to a new harmony, but it sounds bare. This does not really apply here. M. 8 has a V 4/3 for the cadence.

Finally, a 5<sup>th</sup> species example; the cantus is in the alto: (Ex.5)





5<sup>th</sup> species in 4 parts is not especially difficult. Notice how the potential parallel 5<sup>ths</sup> in m. 3- 4, between the tenor and the bass, are avoided by placing the neighbour notes in different rhythmic positions. The descending scale in m 5-6 draws attention to the line's lowest note (Eb), creating a sort of inverted climax to the 5<sup>th</sup> species melody. The octave leap in m. 8 helps to avoid parallels with the other parts at the cadence by keeping the whole bass only around one note: F. The 7<sup>th</sup> in the soprano also resolves smoothly.

We looked at combined species in our previous lesson. While it is possible and useful to do them in four parts as well, the things which we learned in 3 parts stay pretty much the same. However, the simultaneous combination of all the first 4 species is a bit of a tour de force. Here is an example; if you want a real challenge, try it: (Ex.6)



This is a case where using seventh chords really makes things easier, since there are more notes to choose from in each line. Notice for example the V 6/5 of VI in m. 3, which resolves correctly in the next bar. Notice also the harmonic ambiguity of m. 7, which starts off as a IV 7 chord, but then turns into a II 6 in the 2<sup>nd</sup> half of the bar. Something similar happens in m. 8, which begins as a diminished seventh, and then turns into a V 4/3.

As in the 3 part combined species, the main goal here, apart from good singing lines, is harmonic richness. The fact that 3 of the voices are moving is a challenge, but it also makes possible many more solutions in the 2<sup>nd</sup> half of the bar.

Once again, the main goal of these exercises in species counterpoint has been to achieve **fluency**. By doing many of these exercises in 2, then 3, and now in 4 parts, the student becomes at ease with the basic ways in which voices interact. Our next lesson will look at 5<sup>th</sup> species in more than one part, to make the transition out of the species approach, into situations where all the voices are moving at the same time.



Remember:

- 1) Quantity counts. You will not become fluent in counterpoint unless you do at least 15-20 exercises of each type.
- 2) All the diatonic seventh chords are now available for use, as long as the seventh is easy to sing and properly resolved.
- 3) Any note in a chord can be doubled, except for active tones.
- 4) Sing and Play.



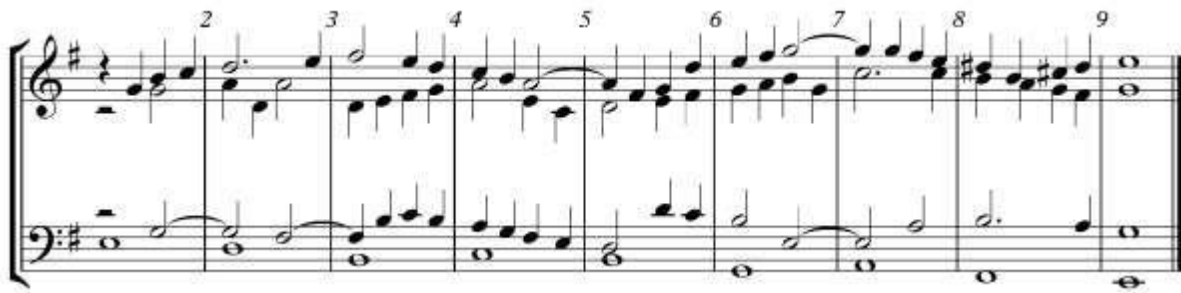
### 11) Four part counterpoint, pt. 2

Now that we have gone through species counterpoint from 2 - 4 parts, it is time to move on. Species counterpoint is really a kind of preparation for "real-life" counterpoint, building up fluency in a way that is pedagogically well structured. But it is not the final goal, just a step along the way. Among the things that species counterpoint does not address are essentials like modulation, motives, the use of rests, and instrumental counterpoint, not to mention counterpoint in other harmonic styles, and how counterpoint is used in composition outside of the contrapuntal forms like fugue, canon, etc.

In this lesson, we will realise our last species counterpoint exercises and then discard whole note canti. Counterpoint where all the parts are moving is much more common than counterpoint based on long note canti, and it will serve to begin our voyage into the areas mentioned above.

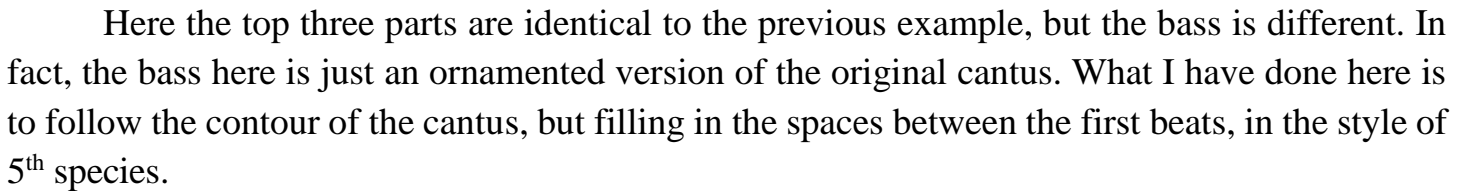
The student should finish species work with exercises where 2 and then 3 of the added parts are in 5<sup>th</sup> species.

Here is an example of the latter: (Ex.1)



This is a standard 4 part species exercise, with the cantus in the bass. There is nothing very surprising here. As usual, the peaks are independent, the rhythmic momentum in quarter notes is maintained to the end, and the harmony is rich when several parts are moving in quarter notes at the same time.





One detail we would not usually find in species counterpoint is the triton leap in m. 4 in the bass. In harmony, this leap is quite common, and here it also works well, since it is "resolved" by the B in the next bar. Also, the F# in the bass makes a momentary 7<sup>th</sup> chord with the other parts, also correctly resolved, adding richness to the harmony over all. If the bass went somewhere other than the following B, the line would be less convincing.

Once all the parts are moving at the same time, there is no special reason to keep the harmonic rhythm at one chord per bar. And indeed, m. 2, 4, 5, 6 and 7 all imply other chords momentarily in mid-bar. Often, they are just passing or neighbouring 7<sup>th</sup> chords, for example in

m. 5 on the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> beats. Again, they enrich the texture. Once again, if all the parts are moving, aim for this kind of richness, instead of just letting the dissonances bump into each in random fashion.

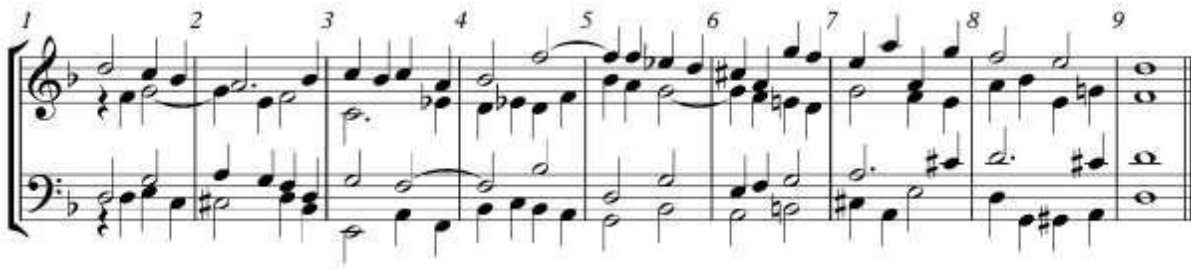
Now, a different approach to the same situation.

Here is a cantus, but in florid 5<sup>th</sup> species style; notice that this new cantus also includes a bit of chromaticism, the Eb-D-C# in m. 5-6: (Ex.3)





Here is a possible solution; of course, there are many others:



Apart from the fact that all 4 parts are moving, there are some other differences between this realisation and the species counterpoint exercises we have done up till now.

Specifically:

- 1) the harmonic rhythm is much more fluid, given such an active bass line;
- 2) the harmony is even richer, for example m. 3-4, which tonicize Bb major, and the Neapolitan chord in m. 5, as well as the V6/5 of V in m. 8. These things are possible because we are no longer constrained by a completely diatonic cantus firmus;
- 3) the suspension in m. 6, the 7<sup>th</sup>, resolves on the second beat. Since the harmonic rhythmic is much more active here - no longer limited to one chord per bar - it does not sound syncopated or out of place;
- 4) Some kinds of harmonic richness arise from ambiguity, for example in m. 6, on the 3<sup>rd</sup> beat, we have what looks like a 6/4 chord. But that arises from the E passing tone in the alto voice, and by the time we have reached the fourth beat it is clear that the harmony is really a IV 6/5. This brings up an important point: when all the parts are moving and include various kinds of dissonance, it is important that the overall result sound harmonically clear and well directed. In other words, if we put together all the cues being sent to the listener, the result makes harmonic sense, even though one or more local details might seem unusual. In this case, the listener puts together the B natural in the bass, the leap to G in the soprano, which implies that it is a chord tone, and the sonority on the 4<sup>th</sup> beat, which adds up to a IV 6/5, correctly resolved. All these things militate against interpreting the chord on the 3<sup>rd</sup> beat as an E minor 6/4.

On the other hand, we also see many things here that we have already learned from species counterpoint, for example the idea that when several parts are moving together it is a good idea to have the intervals between them include a lot of 3<sup>rds</sup> and 6<sup>ths</sup>, and the idea that the lines do not all



peak at exactly the same time. And the general ease in combining lines could only be a result of lots of practice in simpler situations, exactly what species counterpoint is designed to provide. Now, a modulating example; here is the given part, in the alto: (Ex.4)





Here is a full solution, based on the above sketch; notice that a few details have been changed to make the lines more fluid: (Ex.6)



The voice crossing in m. 6, between alto and tenor is not a problem. The 7<sup>th</sup> in the alto resolves as expected. In fact, the tenor in m. 6 could just have a half note G on the 3<sup>rd</sup> beat, but the leap to the C improves the line.



Here are few given florid lines, to compose 4 part textures like this one:

## Florid given parts

*These are given parts in florid (5th species) style. The student should add three parts to each one, also in florid style, as described in the video. All are given here in C major or A minor, but they should be transposed to various other keys. Some include modulations.*

*As usual, do more than one solution for each one.*





**Remember:**

- 1) Aim for clear harmony and a well-directed bass line. This is where previous, solid harmony training is essential. And it will become more and more necessary from now on!
- 2) Use suspensions to enrich the texture.
- 3) When 2 lines are moving together, try to make them rich with each other.
- 4) **SING AND PLAY!**



## 12) Tonal Counterpoint

The next step after species counterpoint is what is usually called tonal counterpoint, or counterpoint in Bach style. There are two main differences between this kind of counterpoint and the species approach:

- 1) the harmony is richer, and
- 2) it uses motives to create more memorable musical ideas.

In this lesson, we will mainly look at the new harmonic resources at our disposal. By now the student will have attained a certain ease in combining lines in 2, 3, and 4 parts. However, the harmony (in part because of the simple, diatonic canti) has always remained quite simple. Now we will enlarge our harmonic vocabulary with all the resources of tonal harmony: fluent use of all the 7<sup>th</sup> chords and their inversions, 6/4 chords, passing and neighbour chords, richer forms of dissonance, and modulation.

We will explore these changes by looking at a few examples in detail: (Ex.1)



Here is our first example, in 3 parts. The given part is the bass. Following are the differences from species counterpoint. Some of them we saw for the first time in the last lesson; others are new here.

- 1) The harmonic rhythm varies, between 2-4 chords per bar.
- 2) We are now using 1/8 notes for the first time. Sometimes the 1/8 notes create simple passing tones, e.g. on the last beat of m.4. At other times, they create accented passing tones, as on the second beat of m. 2, where the two outer parts move in parallel 3<sup>rds</sup>, or in m. 3, on the last beat, in the bass. Accented passing tones are an important new resource, since they allow even the note on the strong beat to be a dissonance. Take note: from now on, with these stepwise eighth notes, the chord tone can be either of the two notes. Of course, if the second is a dissonance, it must resolve stepwise, as usual.
- 3) For the moment, there will never be more than two 1/8 notes at a time; the overall momentum is still in 1/4 notes. The 8th notes must also always be conjunct, for now.



4) Note the suspensions which create 7<sup>th</sup> chords, in m. 3 and m. 4. We have seen this occasionally before, but now they are a normal part of our harmonic vocabulary. Note how, in

m. 4, the bass keeps moving, as the suspension resolves. In fact, the resolution itself becomes an accented passing tone!

5) In m. 5 we have a I 6/4 chord, where the 4<sup>th</sup> is prepared, arriving first as a syncopation. For now, this little syncopated motive will only occur at the cadence. (In our next lesson, we will discuss motives in general, including syncopation.)

Now, the same given part, but this time realised in 4 parts: (Ex.2)

1 2 3 4 5 6

given part (bass)

Nc

1) the II 4/2 in m. 1, on the 3<sup>rd</sup> beat.

2) the accented passing tones in the soprano on the last beats of m. 1 and m.2; the accented passing tone in the bass on the last beat of m. 3, and what at first looks like a II 6/4 pm the 2<sup>nd</sup> beat of m. 5. Actually, the B in the alto acts more like another chord tone, where all the notes are parts of a II 4/3, and the 7<sup>th</sup> (the following A in the alto) resolves normally to G#.

3) the 7<sup>th</sup> on the 3<sup>rd</sup> beat of m. 4, in the alto part: it arrives and leaves by step.

4) the III6 on the 3<sup>rd</sup> beat of m. 5, which can substitute for a I 6/4.

5) the combination of 2 eighth note figures at the same time, usually in parallel 3<sup>rds</sup> or 6<sup>th</sup>, e.g. in m. 1, m. 2 and m.4.

Now another example, with a different given part, and in 3/4 time; this one is in 3 parts; the given voice is on top: (Ex.3)

1 2 3 4 5 6 7

given part (bass)

Nc



Things to notice in this one:

- 1) the V7 as the main chord in the bar in m. 2
- 2) The V 4/2 on the first beat of m. 4, and its slightly unusual resolution onto a III harmony on the last beat.
- 3) the suspension resolution with change of bass in m. 7. This means that the suspension resolves as expected, but the harmony changes.

Here is one last example; the given line is the chromatic bass; the harmony here is roughly equivalent to an exercise in the second semester of a harmony course: (Ex.4)



Pay special attention to:

- 1) The generally chromatic harmony, which includes several secondary dominants: VII 7/V in m. 4, V/IV (with a double neighbour in the soprano and tenor parts) in m. 6. Without the leap to the F in the alto, one might interpret this chord as an Eb chord, but the leap and also the subsequent resolution militate in favor of the V/IV.
- 2) The V 4/3 in m. 2 has the seventh (in the soprano) migrating to the tenor on the last beat, from where it resolves normally. Note the 9<sup>th</sup> on the last beat of the bar; it resolves downward, as expected, in the next bar.
- 3) The augmented sixth chord in the second half of m. 7. This works here because it prepares the ending. If it occurred too early in the phrase, it would require the rest to be harmonically even richer. Otherwise it would stand out too much.
- 4) The accented passing tone in the alto on the first beat of m. 5. the other parts make the overall dominant harmony clear here, and the result is rich and consistent with the sound in the rest of the phrase.
- 5) The momentary VII 4/2 before the augmented sixth in m. 7. This is an unusual chord here, but the 7<sup>th</sup> resolves down as expected. It heightens the sense that this bar is the climax of the whole, when then relaxes into the more straightforward harmony at the cadence.
- 6) The cadential 6/4 in m. 8, on the first beat of the bar.



All these examples show the degree to which a richer harmonic vocabulary is absolutely essential to Bach style counterpoint. This is the point, mentioned early on in the course, where harmony and counterpoint come together. The richer harmony allows for more choice of notes in the lines, and the rich lines make the harmony more alive than the simple part-writing in elementary harmony exercises. Secondary dominants, occasional altered chords and more elaborate dissonance formulas are all normal events in this kind of counterpoint. We will see their application again and again as we move on to motives, imitation, stratified counterpoint, canon, instrumental style, and then invertible counterpoint, all of which are necessary to reach our ultimate goal: fugue.

Students should use these and the other given parts to realise 3 and 4 part counterpoints like the above models; see the canti below. It is a good idea to do more than one example with each given line.

Remember:

- 1) aim for the richest possible harmony, looking for seventh chords and secondary dominants where possible.
- 2) Apart from the fact that we are aiming for rich, singable lines, the "rules" for counterpoint have now become the same as for advanced tonal harmony.
- 3) Eighth notes must be conjunct.
- 4) Sing and play.



## Canti for florid counterpoint in 3 or 4 voces

These given lines are in florid style, but with simple motives. Do not introduce any other motives. They can be done in three or four parts. Transpose as desired.







### 13) Motives and Imitation (pt. 1)

Motives are avoided in the species approach simply because they create specific points of interest and tend to require continuation. This is an example of an important general principle: avoid attracting the listener's attention to a salient detail and then doing nothing to follow up. This is why, once we start using them, usually the whole passage will focus on one or two motives, repeated with variation. Little bits of scale and suspensions are of course common everywhere, I call these "neutral lines", whereas real motives stand out more and call for further development. In fact, learning to use motives intelligently is a first step towards learning to develop a musical idea.

I cover motivic development in great detail in my composition textbook *Musical Composition, Craft and Art*, published by YUP, so here we will limit our discussion to what is essential for contrapuntal situations.

A motive is a short, memorable pattern. However, it cannot simply be literally repeated very often, but we can vary it, to add interest. Let's look at a few of ways to do that.



In this example, 1) is the given motive. It has a characteristic rhythm - 4 1/8th notes followed by a quarter note - as well as a pitch pattern - up a 5<sup>th</sup>, twice down a 2<sup>nd</sup>, then up a 4<sup>th</sup>.

In 2) the motive undergoes the simplest transformation: transposition. The scale position changes, but the pattern remains very easily recognizable.

3) simply extends the last part of the motive.

4) comes back to the first part of the motive (the leap). #5 inverts the motive: whatever went up, now goes down, and vice versa.



6) plays the motive backwards; this is called retrograde. This is the first variant we have seen where the connection to the original is **not** immediately obvious.

7) keeps the rhythm but now the pitch pattern is expanded to contain huge leaps. Again, we are more struck by the difference than the similarity to the original.

8) changes the rhythm drastically: this is even less obviously related to the original, even though the pitches are exactly the same.

Finally, 9) keeps the rhythm but changes the pitch pattern completely; once again the resemblance is unclear.

The important point here is the distinction between close variants, where the listener immediately recognizes the connection with the original, and more remote variants, where the first reaction is: "huh ...???". The point here is not whether there is some connection with the original, but whether the listener instinctively recognizes it at first hearing. Note that I said **hearing**; what is visually salient can be very different from what we notice while listening.

Certain kinds of changes are much more likely to puzzle the listener than others. For example, changing stepwise motion into leaps tends to obscure the association with the original. The opposite, however, is less of a problem. Adding strong rhythmic contrasts (as in variant #8 above) also changes the character a lot.

For our purposes here, we are only interested in close motivic variants. These will allow us to use motives in ways which add focus and character to our counterpoint, in order to give the feeling that we are actively developing a musical idea.

When the same motive appears right away in another part of the texture, it creates imitation. Let's do an example of imitation, in 3 parts. This will be the first time we do a counterpoint with no given part. How to proceed?



Here is a first sketch, using the motive we examined above: (Ex.5)



Notice that most bars contain at least one voice doing the motive: the overall feel like a conversation around one subject. The result is much more focused than in species counterpoint. Only m. 8 is just a scale, instead of the basic motive. Occasional neutral lines like this, bits of scale, standard suspensions, are part of most motivic counterpoints. They let the music breathe a bit, and allow the lines a more flexibility. If every moment of every line is motivic the result can become obsessive, even suffocating. Neutral lines are also useful as counterpoints accompanying motives, since they don't distract the listener from the main focus.

Notice the suspensions in m. 3-4 and the bass line from m. 6 to the end. In harmonically organised counterpoint like this, the bass line creates direction, and, along with the imitations of the main motive, it is a priority when sketching.

The striking leap of a 7<sup>th</sup> in m. 10, from A down to B in the top part, stands out, but since it announces the cadence that is not a bad thing.



Now let's look at the finished version: (Ex.6)



The added parts here always clarify and enrich the harmony. Sometimes they also make passing reference to the main motive, or parts of it, e.g. in m. 2, where the last two beats of the bass start the motive but don't finish it.

Other things to notice here:

- 1) the many accented passing tones, e.g. m. 1, 3, 4, 6, 7 and 9;
- 2) the only time the motive leaps to a dissonance is in m. 10, in the middle part. This, and the anticipation in the top line only work because the cadence is a special moment.

The starting motive is the core of this little piece, and when it is absent (never for very long) the lines are rather neutral, so as not to distract from the overall character. Again, the general impression is that of a conversation around a given subject.

When an imitation starts before the first presentation of the motive is over (as in m. 1 above) it is called stretto imitation. Whole passages of stretto imitation are possible but difficult to realise well. We will have more to say about stretti later in the course, when we talk about fugue.



The student should invent several motives and do short imitative examples like the one above, for now only in 3 parts. N.B.: avoid motives with super-strong contrasts, e.g. containing extremely short and extremely long notes, since they can be very hard to manage in such short little pieces. Here is an example showing various common errors: (Ex.7)



There are many problems here, especially in the harmony:

- 1) in the second half of m. 2 the combined parts can't seem to agree on the harmony. The same thing happens in the first two beats of m. 5;
- 2) in m. 3 the bass C#, a 4<sup>th</sup>, is unresolved;
- 3) the 7<sup>th</sup> in m. 4 on the 2<sup>nd</sup> half of the 2<sup>nd</sup> beat is unresolved, and the rest of the bar is harmonically crude;
- 4) the harmony on the third beat of m. 4 is ambiguous;
- 5) what is that B in the middle part doing in m. 6?
- 6) the movement from the perfect 5<sup>th</sup> at the end of m. 8 into the diminished 5<sup>th</sup> at the start of m. 9 in the outer parts is not rich.

These kinds of harmonic weaknesses are typical in tonal counterpoint by students who have not mastered tonal harmony. **Unless you are at ease with at least intermediate level tonal harmony it is impossible to write good tonal counterpoint.**



Now, the contrapuntal problems in the counterpoint:

- 1) the imitation in m. 2 has moved the motive over by one eighth note, exchanging accented notes with unaccented notes: the effect is clumsy and disconcerting;
- 2) the tenor stops abruptly at the end of m. 2
- 3) the rhythms in m. 2 (top part), m. 4-5 (all parts) and m. 8-9 in the middle part are all square and uninteresting;
- 4) there are no suspensions, which also makes the overall feeling rather square;
- 5) there is a complete loss of momentum in m. 9, made even more prominent by the introduction of sixteenth notes in m. 8;
- 6) the middle part in m. 7-8 is simplistic and boring line.

Here is an improved version; the student should compare the two versions in detail: (Ex.8)



Remember:

- 1) Keep your motives fairly simple.
- 2) Use the bass line to clarify the harmony and to create direction. Aim for the richest harmony possible.
- 3) Distribute the rhythmic interest fairly equally between all the parts.
- 4) Sing and play.



#### 14) motives and Imitation (pt.2); stratified counterpoint

We will start this lesson with an example of imitative counterpoint, this time in 4 parts. The voices come in one at a time with the theme. This gives the listener a chance to "learn" the thematic material, which subsequently will arrive in various other harmonic and linear contexts. Ex.1

Notice that the tenor has a long rest in m. 7-8, and the alto has a short rest in m. 9. Up to now we have generally avoided rests, but they are a very important part of applied counterpoint. Occasional rests in single parts create variety of texture and let the music (and the singers!) breathe, and they also make the return of the resting voice more prominent, for example in m. 8 here when the tenor returns with the main motive.

The most important thing about using rests is that they should not seem arbitrary. The voice which stops should always finish with a feeling of melodic repose. Don't finish a line on a dissonance or a melodic peak! Being counterpoint, the parts won't normally all arrive at punctuation at the same time, but the line which will be resting should not sound like it stops by accident.

Usually at the end of the piece all the voices will be present. But over a whole piece, there are often places where one voice another is resting, so that, for example, a 4 part piece may actually spend most of the time in 3 parts.



Another important feature of the example above, which we have already seen elsewhere, is the pervasive use of accented passing tones, e.g. in mm. 3,5,6,8 and 10. Accented passing tones greatly enlarge the harmonic possibilities of a given line. As usual the harmony here is quite rich, with many suspensions and 7<sup>th</sup> chords.

How would we work towards this result? Here are the priorities:

- 1) place the entries of the main motive(s);
- 2) search for possible suspensions (e.g. m. 4,5,8 and 9);
- 3) fill in as much of the bass as possible, always aiming at harmonic richness and a fluid, mobile bass line.

Here is what such a first sketch would look like: (Ex.2)

The musical score for Ex.2 is in 4/4 time, key of D major (two sharps). It is marked 'Moderato'. The score is divided into two systems. The first system contains measures 1 through 6, and the second system contains measures 7 through 12. The music is a sketch for a fugue, featuring a main motive in the treble staff and a fluid, mobile bass line in the bass staff. The score includes various musical notations such as notes, rests, and accidentals, with a focus on accented passing tones and suspensions.

When all this is done it is time to add the other, more neutral, filler parts. Then listen to the whole several times and refine it.

Here is another, longer example of imitation in 4 parts, this time with a real theme, 4 bars long, including three different motives, marked as a, b and c in the example. Note that the contrast between them is not too extreme, since they need to make up a coherent phrase together. This is a theme in the sense that this little phrase can be remembered as a whole. Most fugue subjects are themes like this.



This example could be the beginning of a larger piece: (Ex.3)

Notice how the entries of the theme alternate between G- and D-: this is also typical of a fugue. Of course, in a freer piece the imitations could be at other intervals, depending on the harmonic design.

Apart from these particularities, this counterpoint is similar to the preceding ones, with lots of suspensions, accented passing tones, and generally rich harmony.

First using single motives, to be invented by the student, and then, later, using the themes given below, the student should try to realise a few examples like those in the models above.



This kind of counterpoint is commonly referred to as imitative counterpoint, since all the parts are conversing with the same material, "imitating" each other.

But there are other possibilities for contrapuntal textures. A common arrangement is what I call stratified counterpoint, where not all the parts use the same motives. We already saw something like this in the mixed species exercises, where each part has its own rhythmic character. But even in imitative counterpoint, the parts do not necessarily always have to develop the same motive(s). Four different motives at the same time tends to be very dense and hard to follow, and it is therefore very rare. But often 2 or 3 parts will form a subgroup and imitate each other, while the other parts each have their own motive(s). We can speak of motivic planes, where a plane is one or more parts consistently limited to the same motive(s). So, for example we could have 4 parts with 2 imitative planes, e.g. 2 + 2, or even 3 + 1, or we could have 4 parts with 3 planes, e.g. 1+1+2. Note that normal imitative counterpoint of the kind we saw at the start of this lesson counts as one single plane, since there is no variety of motives between the parts.

Here are some examples of stratified counterpoint; both examples are just beginnings; they could be developed quite a lot longer: (Ex.4)



In this 3 part example, the top two parts develop the same motives, but the bottom part focuses on a different motive.



Now a 4 part example: (Ex.5)

The musical score for 'Andante' (Ex.5) is a 4-part setting. It is written in G major (one sharp) and 4/4 time. The tempo is marked 'Andante'. The score consists of two systems of staves. The first system has three measures labeled 1, 2, and 3. The second system has three measures labeled 4, 5, and 6. The music is written for four voices: Soprano, Tenor, Bass, and Alto. The Soprano and Tenor parts are in the upper staves, and the Bass and Alto parts are in the lower staves. The music is characterized by imitative counterpoint, with the Soprano and Tenor parts often working out one idea while the Bass and Alto develop another.

Here the soprano and the tenor work out one idea and the bass and alto develop another. We will continue our discussion of stratified counterpoint in the next lesson, when we introduce instrumental style, since variety of timbre makes the layers even easier to hear.

### Remember:

- 1) In imitative counterpoint sketch the entries first, then look for suspensions. Then search out the richest possible harmony, and finally fill in the missing, more neutral parts. Make a point of having some of the voices rest occasionally, stopping the line in a convincing way.
- 2) Look for possibilities for accented passing tones: they are a VERY useful resource.
- 3) Sing and play!



Here are some themes for students to practice:





### 15) Instrumental Counterpoint

Up until now, we have only discussed counterpoint for voices. But starting in the Baroque period, composers began to write counterpoint for instruments in ways not clearly derived from vocal writing. Although most instruments can play vocal lines fairly easily, the opposite is not true.

Here is the subject from Bach's B- fugue in WTC I: (Ex.1)



While it is not impossible to sing this line, the constant leaps are certainly awkward for voices. But there is another aspect of this theme which makes it even harder to sing. Starting in the second half of the first bar, the first eighth note of each pair is dissonant; the fact that the line leaps after every second note strongly suggests that it is the real chord tone. For voices to attack a dissonance coming from another note by leap is much harder than just leaping between chord tones. However, on a keyboard instrument, playing these dissonances is not difficult.

Notice that the leaps are not arbitrarily arranged. In fact, we could split the line into two layers, lower and higher. Here is how this looks: (Ex.2)



Here I have written the theme as though it were divided between two parts. This kind of consistent leaping between two or more levels in a melodic line is called compound line. Notice that, within its own "level", each line is actually mainly conjunct. Compound line is often found in instrumental writing, since leaps are much easier for most instruments than they are for voices. In fact, by the time Bach was mature, compound lines had even gone in the other direction and had even become fairly common in vocal writing! But that still does not mean they were easy to sing.

Because compound lines are constantly leaping, they often cover a fairly wide range. Here too instrumental writing offers advantages: instrumental ranges are usually much larger than vocal ranges. Although the general principles of organising a good line still hold - e.g. the line overall often progresses gradually towards a climax, large leaps need to be "recovered" etc. - the



sheer size



and frequency of the leaps are often much greater than in vocal music. Note that the leaps generally use coherent motives for coherence.

It is unusual to have multiple compound lines at the same time in different voices. Usually there will be one or two compound lines, and the others will be simpler, more vocal in style. There are two other things that are common in instrumental counterpoint that are vocally impractical and or even impossible: greater speed and greater variety of articulation.

Here is the theme from Bach's D major fugue, WTC 1: (Ex.3)



The quick thirty-second note figure would be ridiculous for voices, but on the keyboard, it is not especially hard.

Here is another example, that we first heard a couple of lessons ago, for voices. Now it is for strings, and with the motives more clearly set apart by different articulations. Despite the overall homogeneous sound of the strings, the individual parts are more easily distinguishable. (Ex.4)



Of course, instrumental counterpoint must respect the registers and idiomatic technique of each instrument.

How to proceed when writing instrumental counterpoint that is not simply vocal in style?

- 1) Always clearly establish the harmonic framework before working out melodic details. This is especially important when dealing with leaping dissonances, like appoggiaturas.
- 2) Aim for motivic coherence, especially in the way accented dissonances are used. Motives also are often characterised by specific patterns of articulation, as we saw above.
- 3) Have a general idea of where the line(s) will peak, and roughly how to reach the peak(s).

Here is a sample exercise, for piano; we want to complete the given opening; this is in two part counterpoint; compound line is particularly suitable for two part writing since it makes the texture much richer, in effect implying a third line: (Ex.5)

The musical score for Ex.5 is written for piano in two-part counterpoint. It is in 6/8 time and the key signature has two flats (B-flat major). The score is divided into three systems of staves. The first system contains measures 1 through 3, the second system contains measures 4 through 6, and the third system contains measures 7 through 10. The notation includes a treble staff and a bass staff for each system. The first system shows a melodic line in the treble and a harmonic line in the bass. The exercise is designed to be completed by the student.



This is particularly difficult, since it uses motives with various accented dissonances. The fact that it is in only two parts means that the compound line to be completed will cover a fairly wide range.

Here is a harmonic sketch, to see what are the possible harmonies, and to find the chord tones available for the melody: (Ex.6)

Once this is done, the melodic line can be worked out, bearing in mind the overall shape (gradually rising towards what is clearly the climax, in m. 9). It is important to look for opportunities for suspensions, appoggiaturas etc., in connection with the given motives. This is not a melodic outline, just a preparatory harmonization. Once again, unless the student is completely at ease with tonal harmony, there is absolutely no hope of getting even this far, let alone of arriving at a good final version.



And now, the completed exercise; I have composed a compound line around the harmony sketched above, using the motives from the original two bars; Note that no matter how dissonances arrive, they are always resolved by step: (Ex.7)

Pay special attention to the following aspects of the solution:

- 1) The motives include appoggiaturas, accented passing tones and accented neighbour notes, which considerably enrich the possibilities for the line, since the note on the beat does not always have to be a chord tone. There is also an implied suspension: the Ab in the first half of m. 1 becomes a suspension in the 2<sup>nd</sup> half of the bar. Look at the first half of m. 2, where the Db appoggiatura, followed by two accented passing tones, makes possible a conjunct line. All of these dissonances can be used in the solution, within appropriate motives. Of course, all of them resolve by step.
- 2) The upper line first stays in the same register as the opening (m. 3-5), then dips down (m. 5-6). Then it gradually rises to the climax, the high Db in m. 9.
- 3) The only time both parts have sixteenth notes at the same time is at the climax in m. 9; this helps make it a more potent moment in the piece.



4) The large leaps in m. 3, 6 and 9, would of course be out of the question in vocal style, but in compound line for keyboard, they pose no special problems, provided that overall the registers are well organised and don't leave active notes unresolved.

There is another, somewhat easier exercise like this in the exercise section of that *resume*.

We already mentioned that in stratified counterpoint contrasting instrumental timbres can make the layers clearer.

Here is an example, from Bach's organ chorale, *Wachet auf, Ruft uns die Stimme*: (Ex.8)



Notice how each layer here has its own distinctive sound. The top line is motivically and rhythmically the most active; the bass is calmer but still quite mobile. The middle part is a Lutheran chorale, originally a vocal melody. With the differences in registration, the stratified texture is very clearly audible. There are numerous examples of stratified texture everywhere in Bach's instrumental music.

The student should continue the stratified beginnings in the exercise below, approaching them in the same way as the 2 part counterpoint above: first sketch the harmony, then decide where the lines should go, then finally complete the remaining details. Since they are in more than two parts, they will be somewhat easier than the keyboard example above. Note that not every part is a separate layer; in fact, one often sees four parts arranged as just two layers, as in the organ exercise below.

**Remember:**

- 1) Compound lines need to be logically organised with motives and careful control of register
- 2) Start with the harmony, before working on the melody
- 3) Sing and play!



## Instrumental Counterpoint

Continue the given beginnings for 6-8 measures, in the same style. Include tempo, slurs, dynamics, etc. Do not add new motives.

keyboard



## Stratified Counterpoint

string quartet



string quartet



vc. pizz.

organ



2 clarinets and 2 bassoons





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## **Segment 16 - Introduction to Fugue**

Now that we have covered the basics of vocal and instrumental counterpoint, the student should have achieved a certain fluency. It's time to move on to fugue. Fugue is the culmination of counterpoint study, and it is the best way to learn several things that are essential to a professional composer. Why?

First, fugue is the home of the most advanced contrapuntal techniques. If you can write fugues with ease, you can handle pretty much any contrapuntal situations you will encounter.

Second, fugue is the place where counterpoint and form meet. A fugue is a contrapuntal composition that focuses on one or two ideas in a continuous way, developing them in a kind of discussion between the participants. This kind of intensive development is useful even in non-contrapuntal pieces. The controlled building towards a climax that is typical of a fugue is also a critical skill in building musical forms, as is the ability to satisfactorily conclude after such a climax.

Finally, since a fugue normally has no major formal contrasts, it requires creating interest entirely through details of line, harmony and texture. Once again, this skill is useful in all musical forms. It also helps the composer to see potential combinations of material which might otherwise escape notice.

Our study of fugue will cover the following subjects:

- 1) invertible counterpoint and countersubjects,
- 2) tonal answer and the fugal exposition,
- 3) the construction of episodes,
- 4) internal entries and the overall structure of the fugue (including possible stretti), and
- 5) climax and cadence.

Now let's look at the basic concepts in fugue. The coming lessons will discuss how to do these things, in detail.

A fugue starts with an exposition, where each voice in turn presents the subject - the theme. The subject is followed by an answer, in the second voice: the same theme, but now transposed to the dominant. The exposition is an excellent way for the listener to become familiar with the



musical material that will be developed later. The exposition also results in a natural crescendo of intensity, since the number of voices gradually increases.

The subject sometimes has a countersubject: another theme, regularly combined with the first one, highlighting it through contrast. The two themes are in invertible counterpoint, which means that they can appear in any combination of voices, with either one in the bass, and still make harmonic sense.

Once all the voices have entered, the exposition is over, and we move into the body of the fugue, which normally alternates between entries (or groups of entries) of the subject and countersubject in various keys, and episodes. An episode is a section where the theme does not appear complete. Episodes are based on fragments of the subject and counterpoint, usually in sequence. Very often the episodes will have one voice resting: the next entry of the subject will appear in the voice that has been silent for a while. Thus, episodes are usually less intense: they allow the texture to breathe.

After showing off the musical material in various harmonic and contrapuntal contexts with entries and episodes in various keys, the fugue will reach a climax of intensity, and then conclude with a sense of resolution.

Some fugues also contain stretti. A stretto is simply an impatient imitation of the subject or countersubject. Instead of politely waiting for the first voice to complete the subject and then restate it, the new voice jumps in early, interrupting the first one. This can happen several times, and it creates a kind of musical impatience and intensity.

Now let's look at a Bach fugue, to see all these things in action. The fugue we will look at here is the G minor fugue from the first book of Bach's Well Tempered Clavier.



## EXPOSITION

2

Answer

3

4

Subject

Countersubject

5

6

7

8 EXPOSITION ends

9 EPISODE

10

11

12 ENTRIES (a group)



2

Musical score for measures 13-16. The score is written for four staves (two treble and two bass clefs). Measure 13 shows a rest in the top staff and a melodic line in the bottom staff. Measures 14-16 continue the melodic development in the bottom staff, with the top staff providing harmonic support.

Musical score for measures 17-20. The score is written for four staves. Measure 17 is the start of the 'EPISODE' section. Measure 18 is the start of the 'ENTRIES (another group)' section. Measures 19-20 continue the melodic development in the bottom staff, with the top staff providing harmonic support.

Musical score for measures 21-23. The score is written for four staves. Measure 21 is the start of a new section. Measures 22-23 continue the melodic development in the bottom staff, with the top staff providing harmonic support.



EPISODE Full Score 3

24 25 26

27 28 STRETTO X 29 30

31 32 CLIMAX AND CADENCE 33 34

The image displays a musical score for a piece titled 'EPISODE' and 'CLIMAX AND CADENCE'. The score is written for four staves: two treble clefs (soprano and alto) and two bass clefs (tenor and bass). The key signature is one flat (B-flat). The score is divided into three systems. The first system (measures 24-26) is labeled 'EPISODE'. The second system (measures 27-30) is labeled 'STRETTO' and includes a 'X' mark above measure 28. The third system (measures 31-34) is labeled 'CLIMAX AND CADENCE' and includes a 'X' mark above measure 31. The score concludes with a double bar line at measure 34.







In the next lesson, we will look at invertible counterpoint and countersubjects in detail.

Here are some exercises, to be done with various fugues from Bach's Well Tempered Clavier:

- 1) Sing/play the subject, and follow its entries through the fugue.
- 2) Is there a countersubject? If so, sing/play it and follow it through the fugue.
- 3) Where are the episodes? In what key do they start? In what key is the next entry?
- 4) Are there any stretti?
- 5) Where is the climax of the fugue?

You may find occasional anomalies in some of these fugues. We will have more to say about unusual fugal forms later in the course.



### **Segment 17 - Invertible Counterpoint: the Countersubject**

As we mentioned in the last lesson, not all fugues have countersubjects. But if they do, the countersubject and the subject will at some point each appear in all the different voices of the fugue. This means that they must each be a good bass line. Combinations of themes that can migrate freely in this way are said to be in invertible counterpoint. Most of the time invertible counterpoint is done in two voices, but it is also possible in 3 and even 4 voices. In 2 voices, it is sometimes called double counterpoint, 3 voices can be referred to as triple counterpoint, and so on.

A countersubject normally enhances the subject through contrast. And in fact, invertible counterpoint really only makes sense when the musical ideas are not too similar. Since the whole point is to present the listener with a new musical surface that is nonetheless based on previous material, if the lines are too similar in motives and contour there is not much reason to exchange them. Invertible counterpoint in more than 3 or 4 voices is exceedingly rare; the human mind simply can't easily process large numbers of contrasting ideas at the same time. The result, at a certain level of complexity, turns into a texture, rather than a group of themes. In fugue however, clear melodic lines are a central preoccupation.

The positions of the subject and countersubject that make the most difference are those involving outer parts. Exchanging just the middle parts in a rich contrapuntal texture does not affect the overall sound nearly as much.

The mechanics of invertible counterpoint are fairly simple. Here is a typical chart, for invertible counterpoint at the octave:

1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1

The upper numbers represent intervals between the voices; the lower ones are their inversions. So, an octave becomes a unison, a second becomes a seventh and so on. In this table, with only one exception, consonances stay consonant, and dissonances stay dissonant. This means that if the dissonance treatment is logical with voice A on top and voice B on the bottom, it should also be correct with the voices exchanged. The only interval here that changes categories is the fifth, which becomes a fourth when inverted. So, to write invertible counterpoint like this we just have to treat the fifth like the fourth it will become when inverted (i.e. as a dissonance), being careful about how it is prepared and left.



Here is an example: (Ex.1)



And here is the inversion; I have transposed the upper voice an octave lower, so that it is now on the bottom: (Ex.2)



All the intervals apart from the 5<sup>th</sup>/4<sup>th</sup> stay dissonant or consonant, as they were in the original version. There are two 5<sup>ths</sup> in the original: the C# over the F# in m. 2 and the F# over the B in m. 3. Since they behave as a neighbour note and a passing tone respectively, when inverted they pose no problems. Again: the idea is not to avoid using 5<sup>ths</sup>, but rather to treat them like the 4<sup>th</sup>s they will become.

Our example also includes an appoggiatura at m. 1, a suspension at m. 2, an accented neighbour note at m. 3 and a V 4/2 right before the end. This brings up a very important point: the richer the dissonance treatment and the harmony, the more possibilities for successful invertible counterpoint. When the counterpoint is based only on triads, the root and the third of the chord are easy to use, but the 5<sup>th</sup> of a triad in the upper part will become a 4<sup>th</sup> when it moves to the lower part, usually sounding like an unresolved 6/4 chord. With 7<sup>th</sup> chords, all the inversions of a chord can be used, providing the active notes are properly resolved. Accented passing tones also add much more flexibility to invertible counterpoint.

We could also transpose the inverted version, for example up a third, to A major. This still counts as an inversion of the original combination.



## Ex.3



This particular variety of invertible counterpoint is said to be at the octave, since we exchange the voices by moving one of them by an octave. Note that if the original combination had intervals more than an octave apart - e.g. a 9<sup>th</sup> or a 10<sup>th</sup> - the interval would not invert. A 10<sup>th</sup> would become a 3<sup>rd</sup>, not a sixth; in other words, the same voice would remain on top.

Here is an example of triple counterpoint, also at the octave, from Bach's G minor organ fugue, BWV 542: (Ex.4)



The subject is on the bottom; the two countersubjects are on top. Note how each has its own motives and distinctive rhythmic character, enhancing the subject by contrast. The long note suspensions in the middle voice are particularly rich. Also note the numerous 7<sup>th</sup> chords. Once again: this kind of counterpoint requires a rich harmonic vocabulary, since it provides more choice for any given moment.

Note that the three themes do not start at the same time; their separate entries make them more independent.

The student should go through the score of the whole fugue, noticing the various permutations of the themes are presented, and the effect of each theme in the bass.



To write double counterpoint (or, eventually, triple counterpoint):

- 1) look for rhythmic motives that contrast with those in the subject;
- 2) harmonize the subject in several different ways, as richly as possible, looking especially for possible suspensions and 7<sup>th</sup> chords; and, finally,
- 3) create a line with the new motive(s), that complements the shape of the subject.

In the exercises below, the student will find several subjects for practice.

It is also possible to write invertible counterpoint at the 10<sup>th</sup> or the 12<sup>th</sup>, where instead of transposing one of the lines by an octave, it is transposed by a 10<sup>th</sup> or a 12<sup>th</sup>. The procedure is the same as for invertible counterpoint at the octave: first make an interval table, noting which intervals change character when inverted. Here are the tables for double counterpoint at the 12<sup>th</sup> and the 10<sup>th</sup> respectively:

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

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

When inverting at the 12<sup>th</sup>, the only important change is that the sixth becomes a 7<sup>th</sup> and vice versa

· In inversion at the 10<sup>th</sup> perfect consonances become imperfect and vice versa. This means that we can't have parallel 3<sup>rds</sup> or 6<sup>ths</sup> between the two themes, since they will turn into parallel octaves and fifths respectively. This in turn means that the two voices must use only contrary motion and oblique motion.

Here is another example, again from Bach, again from the WTC, the fugue in G minor from Book 2. This combination is simultaneously invertible at the 15<sup>th</sup> (i.e. 2 octaves), the tenth and the twelfth, quite a tour de force!



Here is the original combination; the subject is on top: (Ex.5)



Here is the inversion at the octave, the 15<sup>th</sup> to be more precise, and transposed to another key: (Ex.6)



The little change at the start of the subject, the first two notes are a second apart instead of a third, is reflected in the countersubject. We will discuss this kind of subtle modification, called "tonal answer", in the next lesson.

Now, the inversion at the 12<sup>th</sup>; I have only quoted the voices with the theme and countersubject here: (Ex.7)



Since the 6<sup>th</sup> turns into a 7<sup>th</sup>, it now requires resolution. Bach has cleverly arranged the line so that, for example, the 7<sup>th</sup> A at the start of the second bar resolves onto G a bit later in the bar, and the same thing happens in the next bar.

Here is the inversion at the 10<sup>th</sup> transposed to another key. Since, by definition, the inversion at



the 10<sup>th</sup> has no parallel movement anywhere between the voices, it becomes possible to double one or both lines at the 3<sup>rd</sup> or the 6<sup>th</sup> with no fear of parallels.

Hence the following passage: (Ex.8)



In both the inversion at the 10<sup>th</sup> and the 12<sup>th</sup> Bach makes changes later on the line. This reflects an important fact about counterpoint: entries stand out more than the rest of the phrase.

Invertible counterpoint at other intervals is seen even more rarely, but in principle it is possible at any interval. Making a little chart of what the intervals become when inverted will tell us how to treat the new intervals they will become. Practically speaking however, by far the majority of examples of invertible counterpoint are double counterpoint, at the octave or the fifteenth.

On the next page, the student will find some themes for practice.



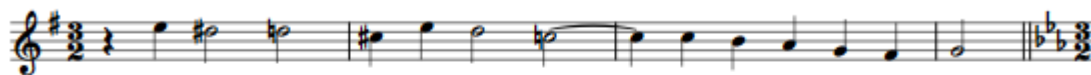
## 1. Themes for invertible counterpoint

1)



2)

2. at the 8ve



3)

4. at the 8ve



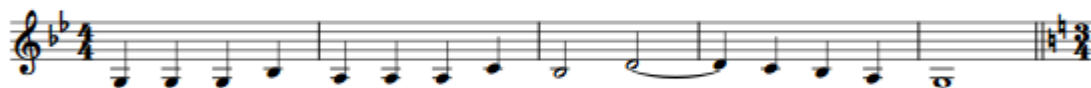
4)

5. at the 1 5th



5)

6. at the 1 0th



6)

7. at the 1 2th



7)

B) in 3 parts (at the 8ve)

8.



8)

9.





### **18) the Fugal Exposition**

The first section of a fugue is the exposition, where each voice enters in turn with the subject. Then the second entry, called the answer, replies in the dominant key. Succeeding entries follow, alternating tonic and dominant.

With many subjects this alternation of subject and answer in the exposition is smooth and causes no difficulties. However, the answers to some subjects produce odd results.

Here is an example, from Bach's organ Prelude and Fugue in C minor, BWV 537; listen to the effect of literally transposing this subject to the dominant: (Ex.1)



The fifth at the start of the subject C-G, produces an odd effect in the answer, since the leap of a fifth highlights D, the supertonic.

What Bach actually does is this: (Ex.2)





The subtle change at the start of the answer, leaping from G to C, instead of to D, makes the exposition as a whole flow more smoothly: it is tonally more coherent. Note that the rest of the answer is transposed literally to the dominant, as usual. This kind of adjustment to the head of the subject is called a tonal answer.

What is essential here is that, if a change is needed, it be made in a way that does not attract attention. Distorting the subject in any obvious way would simply substitute one problem for another.

There are four kinds of subject; let's look at each of them:

- 1) Here the head of the subject does not feature a prominent melodic 5<sup>th</sup> between tonic and dominant, so no change is needed at all. This is called a real answer.

Ex.3



- 2) The second case is the one we saw at the start of this lesson: a leap at the start of the subject from tonic to dominant (or vice versa), is changed so that a fifth becomes a fourth (or vice versa). Since exchanging one leap for another stays within the category of close motivic variations, it goes virtually unnoticed by the listener. This is the simplest kind of tonal answer.

- 3) The third kind of subject also has a clear movement between tonic and dominant at the start of the subject, but filled in with passing notes, etc.



The Bach G minor organ fugue, BWV 524, that we looked at in the last lesson is a good example: (Ex.4)



Here the answer is transposed a 4<sup>th</sup> down, from G minor to D minor. Only the first note of the answer is modified, becoming a G instead of A, making a smoother passage from subject to answer.

Once again, the point is to make the change pass unnoticed. The best places to make these adjustments imperceptibly are usually either when rhythmic values change or when the subject has a leap. If there is absolutely no way to make the change without attracting the listener's attention, it is better to have a real answer – i.e. no changes at all – than a clumsy tonal answer.

- 4) The final case involves a modulating subject. If the subject - we are no longer talking about the head of the subject, but rather the main body of the melody - modulates internally to the dominant, the answer must modulate back to the tonic. Since the two modulations are not identical – up a 5<sup>th</sup> vs. up a 4<sup>th</sup> – it becomes necessary to make a change at the point ~~where~~ the subject modulates. The head of the subject may or may not already have been altered, as discussed in the first three situations above. Again, make the change as subtle as possible.

Here is an example, from Bach's B minor fugue in the first volume of the WTC; the subject modulates from B minor to finish in F# minor: (Ex.5)







This example has a simple change at the start of the answer, like the one in the G minor fugue above. But since the subject also modulates to the dominant, if we just transposed the subject literally, the answer would modulate from F# minor to C# minor, leading the rest of the exposition astray. So, Bach substitutes a leap of a 3<sup>rd</sup> for the descending 2<sup>nd</sup> between the fourth and fifth notes in the subject, allowing the answer to modulate smoothly back to the tonic.

Although tonal answer is a technique mainly used in fugue, the ability to subtly change a theme so as to fit it comfortably into a new context is useful in many other situations, including many that are not contrapuntal at all. A composer needs to become a good judge of what kinds of changes attract various degrees of attention. In other words, what will be salient to a listener in a given musical situation?

When a given subject requires a tonal answer, the countersubject (if there is one) may need similar treatment.

As a whole, a fugal exposition will present the subject as many times as there are voices. If there is a countersubject it will be present with all the entries but the first one. Here is the overall tonal plan of a normal exposition:

- 1) subject alone in voice #1, in the tonic;
- 2) answer in voice #2, in the dominant, accompanied by the countersubject in voice #1;
- 3) subject in voice #3, in the tonic, accompanied by the countersubject in voice #2. Voice 3 is now "free"

And so on ...

Occasionally Bach will reverse the tonal plan of the entries after the first two voices for harmonic and/or melodic reasons. For a four-voice fugue, that would give, as an overall plan: I-V-V-I, instead of the more common I-V-I-V.

One last point about the exposition: there is sometimes a little bridge between the second and third entries and/or the third and fourth entries. This is done to make the overall proportions less regular and to allow for more gradual modulation between entries. This is called a codetta.



Here is an example of a whole exposition, in 3 parts, including a codetta: (Ex.6)

The musical score illustrates a three-part fugue exposition. The first system shows the 'subject, in the tonic' in the first part, followed by the 'tonal answer, in the dominant' in the second part, and the 'countersubject' in the third part. The second system shows the 'codetta' in the first part, followed by the 'countersubject' in the second part, and the 'subject, in the tonic' in the third part. The key signature is one flat (B-flat), and the time signature is common time (C).

The codetta simply continues the last part of the subject in a sequence, accompanied by the motive first heard at the end of m. 1. Note that when the third entry arrives, the first part becomes "free", but given the busyness of the subject and the countersubject in the other two parts, it is limited to a fairly simple, neutral line.

The student should examine other expositions in the WTC fugues, noting their harmonic organisation, whether or not they include a codetta, what material is used in the codetta (if there is one), as well as what motives appear in the free parts later in the exposition. There are many possible variations in the details of how to organise an exposition. For Bach, each fugue is a real musical composition, to be worked out in ways that fit the character of the subject and the countersubject, if there is one.

Once having examined several Bach fugues in this way, the student should return to the countersubjects written for lesson 17 and develop some of those combinations into full-fledged expositions.

- 1) Pay special attention to the details of the "joints" between the entries, so as to make the overall effect as smooth as possible.
- 2) Transpose the answer literally to the dominant, and then make any necessary changes.
- 3) Write for real instruments or voices; the goal is to compose something that really sounds good.



### 19) the Fugal Episode

After the exposition, a fugue normally alternates entries of the subject, appearing in various related keys, with episodes. An episode is just a passage where the subject does not appear complete. However, the episode's material is usually based on motives from the subject and/or countersubject, combined into new melodic lines. This is one aspect of fugal development: generating new melodies from familiar motives.

The vast majority of fugal episodes are just harmonic sequences, contrapuntally elaborated. They may or may not modulate. The student should be familiar with the various kinds of sequences, from harmony. The fact that sequences are relatively predictable helps make episodes less intense than the entries of the subject, allowing the form to breathe.

There are two kinds of contrapuntal sequences used in episodes. In the last lesson, we looked at the codetta of the Eb fugue in WTC I; this is an example of the first type. The sequence here starts on the third beat of m. 4, and it includes the last two beats of the subject. It goes on through m. 5. The harmony of the sequence is shown, reduced, after the double bar.

Ex.1

The image displays musical notation for a fugal episode in two systems. The first system shows measures 1, 2, 3, 4, and 5. The second system shows the end of the subject and the start of the episode, followed by a reduced harmonic sequence. The notation includes a treble and bass staff with various musical symbols such as notes, rests, and bar lines. A bracket labeled 'end of S, start of episode' is placed over the beginning of the second system. A bracket labeled '5' is placed over the end of the first system.

The lower part here is based on motive #4 of the theme; the upper part is a variant of motive #3. In this kind of episode, each part simply repeats its own motive, moving up or down step by step in the sequence.

Note how on the last beat of m. 5 the pattern of the sequence changes slightly. Usually



sequences do not repeat the basic unit more than three times without at least a bit of variation.



Now, an example of the second kind of sequence; again, the underlying harmony is summarized after the double bar: (Ex.2)



This kind of imitative episode is somewhat more common. Here motive #4 from the theme alternates between the outer parts. Notice how airy the free parts are: just of a few 8th notes and lots of rests. This kind of transparency helps direct the listener's ear towards the important element here: the imitation. The lighter texture also provides a contrast to the denser, fugal entries. In fact, in fugues with four or more voices, often one part will completely drop out during an episode, and then the next entry will arrive in the resting voice.

Sometimes an episode can be reused, later in the fugue. Here are m. 30-34 of the same fugue: (Ex.3)



This is clearly a variation of the episode we examined above, from m. 6-7. The bass and the harmonic structure of the two episodes are identical, as are the basic motives.



Sometimes an episode will be made up of two successive sequences; this is called a double episode. Here is an example, from the same fugue: (Ex.4)



M. 22-23 here are based on the first part of the subject. In m. 24-25 the texture and the motives change, starting another sequence. This second sequence is also lighter in texture: although the right-hand part it is written as two voices, it almost sounds like one voice in compound line. Once again, this kind of lighter texture is very common in episodes.

The above episodes all include little modulations. Such modulations, normally to closely related keys, add harmonic interest to the sequence. A modulating episode can also be used to move to the new key for the next entry of the subject.

Using the expositions written for lesson 18 as a departure, the student should add an episode to each, modulating to a closely related key. Then have the subject and countersubject enter in the new key, accompanied by free parts also based on motives heard in the exposition. Another episode should follow.

It is important that the episodes begin and end without bumps in the texture. If a voice drops out, it should stop after a melodic cadence. Voice leading must be smooth as well. Often the main motive in the episode will be derived from something heard in the preceding bar, as in the codetta above; this makes the joint into the episode subtler.



Here is the procedure for writing an episode:

- 1) Choose the motive(s) to be highlighted in the episode;
- 2) Write out the leading line in sequence, in one voice, with block chords underneath, outlining the harmony;
- 3) If the episode is the imitative type, distribute the main motive(s) between the parts,
- 4) Add the secondary parts, making sure to keep the overall texture fairly transparent;
- 5) Check the "joints" before and after the episode, to ensure that they flow smoothly.

This lesson and the preceding one have explored the mechanics of writing a fugue: the answer, the exposition, the episodes. The next lesson will discuss the fugue as a whole, as musical composition.



## **20a: Fugue as Composition**

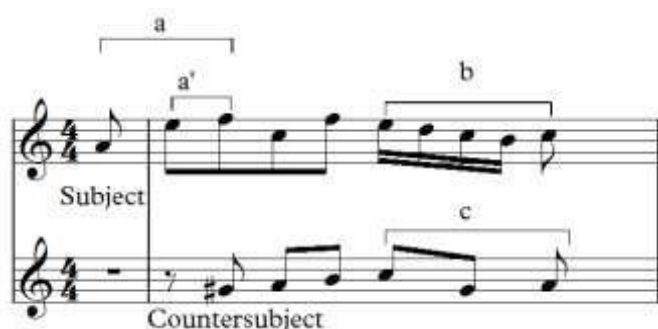
The past few lessons have introduced the basic components of a fugue: the exposition and the episode. Most fugues as a whole simply alternate entries and episodes. They may also contain strettos, but stretto is not essential in a fugue. In fact, most fugues by Bach do not include strettos.

Fugues are musical compositions, and the difference between a good fugue and a bad one is ultimately a musical question. The general principles of composition we will refer to here in relation to fugue, are discussed in greater detail, along with many others, in my book, *Musical Composition, Craft and Art*.

The composer Elliott Carter used to say that an essential characteristic of good music is convincing continuity. In a good fugue, the joints between entries and episodes should never create bumps in the form. The material used in an episode should always grow naturally out of something prominent that is very recent, and still fresh in the listener's memory. An episode must also lead convincingly into the next entry. Often the composer will prepare the entry with a rising line or a suspension, creating a sense of expectation that will be fulfilled by the coming entry.

Since a fugue has no major formal contrasts, it is by nature a highly continuous form. The fact that all the contrapuntal material is derived from the subject and countersubject, laid out early in the exposition, means that fugue is a very concentrated form. This results in a certain characteristic intensity. Although there are occasional humorous fugues, like the one at the end of Verdi's *Falstaff*, for the most part, fugues tend to take advantage of this concentrated intensity: it is normally a rather serious form.

Now let's look at how a whole fugue is put together, going through the procedure in detail; our practice fugue here will have the following subject and countersubject: (Ex.1)



This subject is short, made up of a couple of motives, marked here with letters; the countersubject adds a bit more material. The reason I have marked the first motive both as a and



a',



is that a' is just a part of a; but it sometimes appears separately. The whole fugue will grow out of these motives, plus occasional neutral lines, like bits of scale and suspensions.

Once we have analysed the motivic material like this, the next step is to draw up a stretto table. Here is an example: (Ex.2)

The subject is on top staff. Below it, I have copied and pasted the subject at various time and pitch intervals, testing all of the possible stretti with this subject. For the time intervals, since the subject starts with an upbeat, I have systematically tried every upbeat from the end of the subject back towards the beginning. For the pitch intervals, I have included every diatonic interval.

I could have done the same table above the subject instead of below, but the only interval that would change character is the fifth/fourth. The beginner should completely write out both versions, above and below.

Some of the stretti are marked OK, some are marked with three periods, and others are marked X. OK and X need no particular explanation. However, the ones marked ... are examples that are weak in just two parts, but that could become usable with the addition of a third part.

Let's see how that works. Here, as an example, I will take the closest stretto on D below the subject and add possible notes underneath that would make the harmony viable. This is not necessarily the final bass line for this combination, just a reminder of what could make it work as



three-part counterpoint.



## Ex.3



Since this subject takes a tonal answer, I have also worked out a stretto table with the answer form, this time above the subject. Since the tonal answer has a modified beginning, it works in different combinations. Again, the student should do tables above and below the subject. As before, the possible strettos are marked OK, X, or ... Ex.4

The image shows a musical score for Ex.4, which is a stretto table. It consists of seven staves. The top staff is labeled 'tonal answer form'. The subsequent staves show various combinations of the subject and answer forms. The combinations are marked with 'OK', 'X', or '...' to indicate their suitability for use in a fugue. The bottom staff shows the original subject form.

The point of these tables is not that the fugue must use all or even some of these strettos. Rather, this is a systematic way to explore the subject's potential for imitation. One could do the same thing for the countersubject as well.

One other experiment is in order, before actually writing the fugue. Since the subject is short, it is worth trying it inverted. A long subject is usually too difficult to recognize when inverted.



## Ex.5



If the inverted subject is pleasing and memorable, the composer should experiment with its stretto tables as well. An additional stretto table combining the normal and inverted subjects may also be worthwhile. This could either start with the original subject, imitating it using the inverted form in stretto at various pitch and time intervals, or vice versa.

These tables take a fair amount of work, but doing them results in a level of fluency with the material and its contrapuntal possibilities that makes the actual composition of the fugue much easier.

Now we can begin to compose the actual fugue, first in sketch form. We have already seen this process in previous lessons. Usually the composer will sketch one section at a time, then work it out, then proceed to the next section. To save time here, I am presenting the sketch of the whole fugue at once. I have indicated all the entries, the episodes, and the modulations, as well as the climax and ending. I have also added the bass at times, either to clarify the harmony or else to enrich various suspensions.



## Ex.6

Exposition

1 2 3 4 Episode #1

5 6 Entry in F + (bass) 7 Episode #2 8 Entry in D - (varied)

9 Entry in Bb + (varied) 10 11 Episode #3 modulates to C + 12

13 14 touches A - 15 16 17 Group of entries:  
a) in C + (bass) b) in C + (middle part)

18 c) in C+/A- (top) 19 d) in A - (top) 20 Final episode 21 Climax, ending 22



The student should pay special attention to the joints between the entries and the episodes, noting how episodes draw on recently heard motives, and how entries are prepared. For example, the episode in m. 4 clearly echoes the entry in the middle part on m. 3. The suspension on the third beat of m. 5 creates momentum into the entry that starts on the last beat, in the bass.

A careful examination of this sketch shows not only the basic alternation of subject and episode, but also, at times, groups of multiple entries and episodes. Such groups can be useful to create more intensity or relaxation than would be possible with one at a time.

Another point to notice is that the subject and the countersubject can occasionally be varied. If we look at the entry that starts at the end of m. 8, we can see that the last motive has been altered, to allow for a suspension with the Bb in the top voice. Often the rhythmic values of the first few notes are changed, to flow better with what comes before.

Also, the subject need not always appear with the countersubject. Note the episode starting in m. 11; it contains three separate sequences. It is important that not all the sequences be constructed in exactly the same way. For example, one might be imitative, and another would just have each part repeating its own material.

The climax, at the ending, is in 4 parts instead of three, which poses no problems since this is a keyboard fugue.

The important thing here is that we are composing a piece of music. We must develop the given material as a coherent contrapuntal conversation between all the parts. While maintaining a general sense of smooth continuity, we must gradually build intensity overall, while also allowing moments of breathing or relaxation. Finally, we will need to reach some kind of climax. The climax may arrive at the end, as here, or it may be followed by a kind of resolution, winding down the tension to a quieter conclusion.

In the academic "school fugue", the student is provided with an exact sequence of modulations, episodes, and even of stretti, which is meant to be the same for every single fugue. While this may be pedagogically useful for beginners, it is the exact opposite of real composition, where the flow of the piece grows out of its distinctive material. Not even one single fugue by Bach follows the form of the school fugue. Furthermore, there are no two fugues by Bach where the details of construction are the same.



For now, the main limitations the student should respect are:

- 1) Begin with a relatively short subject.
- 2) Stay within closely related keys. If you touch on the tonic in the middle of the piece, make sure that something else in the music lets the listener know that it is not the end.
- 3) Vary the construction of the episodes. Work to create smooth continuity into the episodes and momentum into the entries.
- 4) Make sure you are aware at every moment which is the leading part in the texture; do not obscure it with too much activity in other parts.
- 5) The climax should reach some kind of extreme, for example the highest and or lowest notes, the most intense harmony, the fullest texture, etc.



Here is the completed fugue: (Ex.7)

The musical score is presented in six systems, each containing two staves (treble and bass clef). The tempo is marked as  $\text{♩} = 80$ . The measures are numbered 1 through 22. The score shows a complex polyphonic texture with multiple voices entering and interacting throughout the piece. The key signature has one flat (B-flat), and the time signature is 4/4. The piece concludes with a final cadence in measure 22.



We have now reached the stage where mastering fugue requires lots of practice, including advice and correction from a good teacher. This online course cannot substitute for a teacher, but it at least provides the necessary explanations, as well as the reasons behind them.

The student should now complete the expositions and episodes worked out in the previous lessons, aiming at creating waves of gradually mounting intensity and release to arrive at a successful culmination, while maintaining smooth continuity overall.

As in all counterpoint study, quantity counts. A serious student will need to complete at least 5 or 6 fugues, with detailed critiques and revisions from a good teacher, to begin to approach mastery.

In our next lesson, we will look at a large fugue by Bach, to see these same principles applied on a much larger scale, creating a masterpiece of musical architecture.



## **20b: Fugue as Composition**

Like any artistic musical form, a convincing fugue ultimately grows out of its material. This is why no two Bach fugues are alike; each one explores its own unique themes.

This lesson gives a foretaste of the coming series of videos I will be doing next year, Analysis for Composers. Here our goal is no longer to simply recognize the constituent parts of the fugue, but to see how Bach makes a fugue into an architectural and expressive masterpiece. Here are the subject and countersubject of the Bach fugue, BWV 547, for organ: (Ex.1)



The subject is short and it modulates. In the course of this fugue, Bach will explore many different modulations, inspired by the harmonic mobility of the subject. At times, even the modulation within the subject itself will be modified, to allow the harmony to wander more widely.

The subject has a simple, easily recognizable contour. This makes it suitable for inversion, and indeed, later in the fugue Bach will focus on the inverted subject: look at the top voice of m. 27.

Ex.2



A stretto table would show that this subject lends itself to various stretti, some of which Bach will use to create a sense of intensification later in the fugue.



Here is one example: (Ex.3)



The lower voice in the right hand presents the inverted subject starting on the 3<sup>rd</sup> beat of m. 34; the top voice arrives in stretto with the original form of the subject in the next bar.

In any musical form, important events need to be highlighted and prepared. In a fugue, the entries of the subject are significant moments requiring this kind of underlining.

Although a fugue has no major formal contrasts, it does need to develop and to breathe to avoid monotony. As we mentioned in the last lesson, the developmental aspect of this fugue, and most others, takes the form of a series of gradually intensifying waves, in the harmony and the counterpoint. The receding moments in the waves allow the fugue to breathe. They arrive during several cadences, as well as in the episodes. Eventually the whole fugue culminates in a powerful climax, to be resolved at the end.

Let's see how these things work, in detail:

First, how does Bach highlight the entries of the subject? Often an entry will occur after a rest in the voice in question, adding something new in the texture. We mentioned in the last lesson that often entries coincide with a suspension in another voice. This is an excellent way to keep the listener focussed on a particular moment.

Here are two examples: (Ex.4)



Having the entry on the tonic in m. 3 occur in a new voice, while the top part is holding a suspension, creates a buildup of tension.



## Ex.5



In this example, although the top voice is not silent before the entry, the suspension in the alto ensures that the entry takes place in a more intense way. The rising line of the top part in the previous bar also creates increased momentum towards the entry.

These are ways to ensure that the "discussion" around the fugue's material remains coherent and interesting. Remember: in good counterpoint, all the voices need to be interesting ... but not at the same time. Focus is critical. We are aiming at an intense discussion, not at everyone yelling at once!

Now let's see how the larger formal waves in this fugue are structured. The two main elements we will focus on here are the harmony and the texture.



Exposition  
S 100

2CS

3

4

5

6

Episode

7

8

2nd group of entries

9

10

11

episode

12

more intense harmony for this entry

13

14

15

16

17

18

entry

cadence, overlapped into another entry

theme in the lower voice, slightly varied

another group of 4 entries

19

20

21

22

23

episode: lowest part recalls m. 6



24 25 26 27 28

another group of entries

group of three entries, now inverted

29 30 31 32 33

episode

rising, modulating sequence

34 35 36 37 38

1/2 cad. A-, overlapping into a stretto combining normal and inverted entries.

39 40 41 42 43

subject is repeated, in a modulating sequence

more entries of both normal and inverted subject

more distant modulations

Detailed description: This is a musical score for piano, spanning measures 24 to 43. The notation is in treble and bass staves. The key signature has one flat (B-flat). The score is divided into four systems. The first system (measures 24-28) features a 'group of three entries, now inverted'. The second system (measures 29-33) is labeled 'episode' and contains a 'rising, modulating sequence'. The third system (measures 34-38) includes a '1/2 cad. A-, overlapping into a stretto combining normal and inverted entries.' The fourth system (measures 39-43) shows the 'subject is repeated, in a modulating sequence' and 'more entries of both normal and inverted subject', followed by 'more distant modulations'.



44 45 46 47 48 3

texture breaks up over a V pedal

stretto overlaps into the entry of the pedals

49 50 51 52 53

subject in augmentation

subject in sequence

episode, again referring to m. 6

54 55 56 57 58 2

continuously modulating sequence

entries in the 2 LH parts

stepwise chromatic bass underlies the most intense modulations so far

Detailed description: This is a musical score for piano, spanning measures 44 to 58. The score is written for two staves (treble and bass clef). The key signature has one flat (B-flat). The tempo/mood is marked 'Andante'. The score includes several annotations: 'texture breaks up over a V pedal' at measure 47, 'stretto overlaps into the entry of the pedals' at measure 48, 'subject in augmentation' at measure 49, 'subject in sequence' at measure 51, 'episode, again referring to m. 6' at measure 53, 'continuously modulating sequence' at measure 54, 'entries in the 2 LH parts' at measure 56, and 'stepwise chromatic bass underlies the most intense modulations so far' at measure 57. The score ends with a double bar line and a page number '3' in the top right corner.



4

59 arrival on V pedal of C-

60 inverted, augmented subject, in sequence

63 increasingly chromatic

64 dramatic stop: climax

65 resolution

66 final cadence

67 tonic pedal, underlying another stretto, combining the subject and its inversion

68 V/IV

69

70

71

72



continuously modulating sequence

54 55 56

entries in the 2<sup>5</sup>  
LH parts

stepwise chromatic bass underlies  
the most intense modulations so far

57 58 59

arrival on V pedal of C-

inverted, augmented  
subject, in sequence

60 61



6

62 63 increasingly chromatic 64 dramatic stop: climax 65 resolution

66 final cadence (bass line) 67 tonic pedal, underlying another stretto, combining the subject and its inversion 68 V/IV

69 70 71 72

Within the exposition, m. 6 and m. 7 and the first half of m. 8 make up a codetta. This



codetta reaches a fairly strong cadence in C major, in m. 8. What prevents this cadence from



sounding overly final is the alto voice, which begins a new entry of the subject simultaneously with the C major chord. The top voice also keeps moving. This provides what I call a "yes, but ..." punctuation; it allows the music to breathe but not to lose all momentum.

The second section in this fugue starts with two entries of the subject, descending in register. The third entry, starting in m. 10, begins in G minor, and modulates to D minor. The ensuing episode modulates back to G major, and then a final entry in the bass leads back to C major, with another cadence in m. 15. As in m. 8, the punctuation is weakened by an overlapping entry, this time in the top voice. The alto voice also keeps moving in eighth notes.

The next section is again made up of a series of descending entries. At first, we have only the higher register, providing a refreshing contrast from the full texture just before. The entries reach the lowest voice in m. 19. Note the slightly ornamented entry that starts on the last beat of m.

16, in the lower part. Entries in the top two parts, in m. 20-22 touch on E minor and A minor. The ensuing episode, from m. 22-25, recalls the episode in m. 6-8: the top part in the earlier episode becomes the bottom part here. An entry in the tenor part in m. 25 touches on F major and modulates to C major. Note that the first note of the subject here is syncopated, to make it stand out more. Changing the rhythmic value of the first note is not unusual; usually it is done to make the overall line flow better, or, like here, to draw attention to an entry. A couple of beats later we have another cadence, this time in G major. This cadence is not only overlapped with an entry in the top part, but once again weakened by a suspension, in the alto part.

The new section renews interest by exploring the inverted form of the subject in three successive entries, each in a different key. The following episode, from m. 31-34, is a chromatic, modulating sequence, ending on a half cadence in A minor, in m. 34. This episode is imitative, and is also texturally rather dense. This modulatory activity and the textural intensity of this episode combine to raise the overall level of intensity.

The new section, starting in the alto voice of m. 35, once again overlaps with the cadence. For the first time the subject is heard here in a stretto, now between the inverted and the original forms of the subject. Entries continue, in pairs like this, into m. 38. The inverted entry in the top voice of m. 38 leads directly to another, higher, in the same voice. Modulations now are fairly continuous, becoming even more intense with entries in F minor (m. 42-43), and then in C minor (m. 44-45).

The texture is now continuously in four parts. It seems about to arrive at a half cadence in m. 47, but this ends up being a pedal point on the dominant of C minor. And now comes the most



dramatic moment so far. Over the pedal point, the texture breaks up into cascades of



appoggiaturas, before landing on G major, now treated as the dominant of C major. The reason for this change of texture becomes clear in m. 49: it serves to announce the arrival of the pedals, playing the subject in augmentation.

This pedal entry is itself a very powerful moment. In terms of orchestration, it is like adding the double bass or the tuba to an ensemble that, up until now, had no deep lower register. This effect is of course not specific to fugue, but Bach's fugues are powerful examples of musical architecture, and moments like this are very memorable.

The episode that starts in m. 53 once again recalls that from m. 6-7, but with richer inner parts, since lightening up at this point would weaken the overall momentum, now clearly in its final phases. Once the pedal sequence in eighth notes finishes, the bass continues to descend, and the harmony becomes astonishingly chromatic at times, for example on the 2<sup>nd</sup> beat of m. 57, and then with the remote modulation at the start of m. 58.

Once the bass arrives on the dominant, in m. 59, it presents the inverted subject, twice, in a descending sequence. The harmony continuously oscillates between C major and C minor. Notice also the way the pedal line peaks on the leading tone in m. 61. This would be a mistake in most other situations, but here Bach wants to continue building up to maximum intensity, preparing for the coming climax.

Finally, in m. 64 and 65 the music comes to a complete stop, pausing dramatically no less than four times, on diminished seventh chords. After the continuous sixteenth note rhythmic movement up to this point, the effect is almost apocalyptic. Then, in an exuberant acceleration of the harmonic rhythm, the final cadence arrives in C major, in m. 66.

Since ending at this point would be too abrupt after the accumulated tension of the entire fugue, Bach adds a wave-like post-cadential extension, over a tonic pedal, touching several times on V of IV, before ending with a final entry of the subject, in the left hand of m. 71. Once again, the head of the subject is varied.

This fugue, like so many by Bach, is notable for its sheer intensity and its dramatic momentum. We could look at five other great fugues by Bach, and although all of them would show this same wave-like structure, the details would be different, always growing out of the nature of the thematic material.

This last point is central to understanding any great composer's music. Beethoven and Mozart wrote many pieces in sonata form, but the details are always different, determined by



the



material. An insightful analysis must begin to explain how they emerge from the musical potential of the material, as well as why things happen WHEN they happen.

As we mentioned in the last lesson, this is the opposite of the "school fugue", where each fugue has the same modulations, the same form, and the same stretti, in the same places. While the school fugue may be pedagogically useful at a certain stage, at some point it must give way to the real, artistic problems of writing a fugue as a unique, convincing piece of music.

There is one textbook, called a Treatise on Fugue, by the French pedagogue André Gedalge, that, despite being centered on the school fugue, delves into the deeper musical issues. It is unique in containing a chapter called "The Musical Construction of the Fugue", well worth reading.

In our next lesson will look at canons, and then the course will end with a discussion of counterpoint in other contexts and styles.



## 21) Canon

We have spent a lot of time working on imitative counterpoint and fugue. During the lessons on fugue we saw how to construct a stretto table in order to explore possible imitations of the subject. This kind of exploration can lead us on to more elaborate forms of imitation, like canon.

The word canon means law, and that is exactly what a canon is: a piece of imitation where a leading part is strictly imitated by one or more following parts. Unlike imitation in fugue, where the following part may deviate occasionally from the leader in order to make better overall harmony, or to fit better in context, imitation in a canon is rigid, allowing for no deviations except for the very end, in order to make a more convincing cadence.

Strictly speaking it is possible to simply bring the leading part to a melodic cadence that will then be imitated by the follower: here the ending simply consists of the two parts falling silent, one after the other. But more often the composer wants a cadence that is harmonically conclusive, and that means stopping the canon in the last bar or two to allow the lower part to become a free bass line.

Although every kind of imitation has a corresponding canon, some are virtually inaudible. For example, imagine a fifty-bar retrograde canon, where the following part would start with the end of the leading part. Obviously, no listener could possibly hear this relationship until the whole canon was complete. But how many listeners would remember the start of the subsidiary part, fifty bars later? Perhaps a careful listener might notice the canon at the midpoint, where the parts exchange material around the axis of symmetry, but again, this is not of much use in real world composition.

The more exotic canons, like the one just described, are like difficult crossword puzzles; they may be fun for a composer as a challenge, but they have no special audible interest.

In this lesson, we will only discuss the clearly audible forms of canon. Not surprisingly, the vast majority of canons in real-world composition fall into this category. We will start with the most common case, canon at the unison or the octave.

From a melodic point of view, the lines in a canon are like those in any other counterpoint: they need to focus on limited material and to evolve and develop in interesting ways. The big problem in this kind of canon is harmonic; since the following part, by definition, has exactly the same notes as the leading part, how can we prevent the harmony from going around in circles?



Here is an example: (Ex.1)



As we can see, this canon can't seem to escape the F# tonic chord.

Now the same beginning, but with the problem solved. As we can see, the solution to this dilemma is richer harmony, including seventh chords, and variety of dissonance treatment, in particular the use of accented passing tones. A note that was consonant in the leading part can now become dissonant in the following part, allowing the music to move into different harmonies.

Ex.2



Notice here how in m. 2, the two dissonant passing tones take the top part smoothly up to D, which in turn creates a new harmony over the low voice's F#. In m. 3 the accented passing tone B keeps the line conjunct while it goes down to the low E#, which is harmonised as an appoggiatura. The high G# over D in m. 5 implies a seventh chord, leading to the dominant in the next bar.

Another way to deal with the problem of static harmony is to add a free third part. Bach does this very often.



Here is an example from the Goldberg Variations, Var. #24: a canon at the octave; first, here is beginning of the canon, without the added bass: (Ex.3)



This is nice, but a bit lacking in harmonic variety and quite bare in m. 7. Now, listen to the effect of Bach's added bass line: (Ex.4)



The free part greatly enriches the harmony. When the canon begins in m. 3 the bass moves to a VI chord for variety. The strong bass progression over the barline between m. 3-4 reinforces the suspension in the upper part. The 4/2 chord at the end of m. 4 enriches the simple dominant to tonic progression. When the held G (the suspension in m. 4) recurs in the following voice in m. 6 the bass gives it a different harmonic meaning: now the G is the third of a VI chord, and the following F# is a passing tone. Similarly, the held D in the middle part of m. 7 now becomes part of a V 4/2 chord. The added free bass also allows the canonic voices to come together at times in empty 4<sup>th</sup>, 5<sup>th</sup> and octaves, since the bass will fill out the harmony. Notice also in this example the many accented passing tones, so typical of Bach's harmonic richness.



Incidentally, harmonic third relations in pieces based on triads are also very common in canons at the unison or octave, since any two chord tones in the leading part can always be harmonised with two different chords a third apart. This sometimes gives these canons a slightly modal flavor.

Apart from canon at the unison or the octave, it is also possible to write canons on every other degree of the scale. Here the following part will differ in interval quality, according to the mode or scale being used. Imitation with the intervals maintained exactly, semitone for semitone, would force the canon to modulate all the time, moving very quickly into remote tonal regions.

Here again, the challenge is usually harmonic: how to make the imitation on another scale degree make harmonic sense. This is why so many of these canons have added free parts. For example, in Bach's Goldberg Variations, every third variation is a canon, with one on each degree of the scale. All these canons have a free bass line.

The student should examine these canons, first playing just the imitative parts, then adding the free part to see how it clarifies and enriches the harmony.

Here is an interesting example, variation #15, a canon at the upper fifth, by inversion: (Ex.5)



Since this canon is not at the unison or at the octave, and in addition it is by inversion, there is no problem here with harmonic monotony. However, the bass contributes enormously to enriching the numerous empty octaves and fifths between the canonic voices, as well as creating rich chromatic harmony.

As with strettos, just as canons can be done at different pitch intervals, they can also be realised at various time intervals, from one beat to several bars. Generally speaking, the longer the time interval, the easier the canon will be to write, since the leading part has more time for harmonic variety.

The student should compose several canons, for voices or instruments at various pitch and



time intervals. Some of them should include and added bass part.



This little lesson on canon completes our applied counterpoint course. The final lesson will explore applications of counterpoint outside of the explicitly contrapuntal forms, as well as how counterpoint can be adapted to other harmonic styles.



## **22) Applications of counterpoint; Counterpoint in other harmonic styles**

This is the conclusion of the Applied Counterpoint online course.

Today we will discuss 2 things:

- 1) counterpoint outside of contrapuntal forms
- 2) counterpoint in other harmonic styles.

### 1) Uses of counterpoint outside of the common contrapuntal forms

Once the student has mastered fugue, there are many situations calling for contrapuntal skill even outside of the standard contrapuntal forms.

The single most important application of counterpoint lies in orchestration and in chamber music. Often music requires secondary lines that are interesting for the player, but not so much as to distract from the main lines. In these cases, composers often resort to certain standard types of accompaniment figuration, like arpeggios, repeated notes, etc. However, if these accompanying parts are not to turn into monotonous formulas, it is best to add a bit of contrapuntal interest.

Here is an example; the first three bars present a simple arpeggio formula, not particularly interesting; the second system presents the same harmony, but now with some added appoggiaturas and passing notes, what was previously an anonymous accompaniment now has a more distinctive character; the third example carries the idea even further: (Ex.1)





As we can see here, there is a continuum, ranging from totally predictable figuration to highly personalised counterpoint. This is one of the places where great composers stand out, due to the effort they take with secondary details. When writing orchestral or chamber music, a good composer will take the trouble to make the secondary parts musically interesting, but always without distracting from the main line.

This is just the tip of a VERY big iceberg. The student should examine examples of secondary lines in music from the standard repertoire for chamber ensemble or for orchestra, to see how the composer individualizes them.

Another area where a composer's ease in counterpoint is immediately apparent is in transitions and development passages.

A touch of overlapping counterpoint can make the punctuation between phrases more subtle. Similarly, since contrapuntal lines often overlap, they can be useful in tying two sections together during a transition.

Also, when sketching a large work, a systematic exploration of variants of the material along the lines of a stretto table can lead to unexpected discoveries that can then enrich the form. Even when the texture is not explicitly contrapuntal, such variants can add details to enrich the music.

These points explain why this course is called APPLIED COUNTERPOINT.

## 2) Counterpoint in other harmonic styles

In my online Modern Harmony course on YouTube, I explore various kinds of modern harmony in detail. I will not repeat them here, except to note that there is one condition that applies to all of the techniques I discussed there: the harmony must be **audibly** coherent. Generally speaking, if harmony is not to sound random, it requires:

- 1) enough audible consistency - which really means limitations to the harmonic resources being used - to form expectations and to distinguish non-chord tones and "wrong notes";
- 2) variation of harmonic density/tension, permitting various degrees of punctuation;
- 3) voice leading, i.e. the notes in the harmony must arrive and depart with some kind of audible linear logic.

Of course, if the harmonic language is not audibly incoherent, no amount of counterpoint will make it better! Once the composer settles on a coherent harmonic style, most kinds of counterpoint we have seen in this course are easily generalised.



The principles behind coherent melodic lines - gradation of peaks, avoiding dead spots, motives, etc. - remain the same no matter what the harmonic idiom being used.

Since having multiple melodic lines at the same time inevitably creates chords, if the core sound is clear as described above, the counterpoint can be organised around these focal points in the same way it is organised around triads in tonal harmony. Of course, each kind of harmony has its own characteristics, which the composer must understand, but that is not the subject of this course. For that, see my series of 33 YouTube videos on Modern Harmony.

Here are a few short examples of counterpoint in other harmonic idioms.

First, harmony by fourths: (Ex.2)



Notice that most of the sonorities arriving on the beat in this example create chords in 4<sup>th</sup> or 5<sup>th</sup>. Where they don't, the result is clearly because of non-harmonic tones. For example, what looks like the F# 6/4 chord on the last beat of m. 1 is really an accented neighbour note, going to the real chord tone, the G#. The same is true of the E/G# on the second 1/4 note of m. 2. Many of the leaps in the lines are 4<sup>th</sup> or 5<sup>th</sup>. Note that in this open, rather austere sound world, parallel 5<sup>th</sup> like those on the 2<sup>nd</sup> and 3<sup>rd</sup> beats of m. 2 do not sound out of place.

Second, polymodal harmony: (Ex.3)



Here the bottom parts, for strings, are in F mixolydian, and the top parts, for women's choir,



are in D major: different registers and tone colors are essential for clear polymodal writing.  
Note



the way the bottom parts start alone, so the listener can form a better idea of their sound world before the choral parts enter. Also, although there appear to be lots of six note chords here, the upper string parts are really just doubling the bass line. In polymodal harmony, one of the challenges is avoid having the harmony become too thick; this is one way to lighten the texture a bit. The cadence is marked here by the fact that all the parts finally come into rhythmic unison in

m. 7 and then stop together in m. 8.

Third, mirror harmony: (Ex.4)



Here the two voices are in a strict mirror relationship around G, the axis of symmetry. To provide some rhythmic variety, they include some "non-harmonic tones", when one parts is moving and the other is not. They two parts finally come together in m. 5 with the same rhythm in order to lead into the cadence, on the unison G.

To conclude, one final point. We have already seen here to what extent sophisticated counterpoint requires rich harmony. In the same way, much advanced harmony grows naturally out of the melodic activity of the individual lines. We study harmony and counterpoint separately for pedagogical simplicity, but we don't have one brain for listening to harmony and another for counterpoint. One cannot exist without the other. In the long run, both disciplines come together, allowing the composer to create the richest music possible.