# Principles of Counterpoint

**by Alan Belkin**

This book is the second in a series of four short works on the teaching of musical composition. In the first volume, *A Practical Guide to Musical Composition*, we discussed principles of musical form independently of style and conventional "forms". Here we will take a similar approach to counterpoint, treating it as an aspect of composition training and not as an independent academic discipline. The other volumes are *Orchestration* and *Harmony* (forthcoming).

**This series is dedicated to the memory of my teacher and friend Marvin Duchow, one of the rare true scholars, a musician of immense depth and sensitivity, and a man of unsurpassed kindness and generosity.**

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# Preface

## Introduction

The teaching of counterpoint has a long and illustrious history, but its pedagogy is all too often abstracted from musical reality. Perhaps more than any other musical discipline, counterpoint has bred ingrown academic traditions whose relevance to musical practice often seems painfully limited. For example, I recently taught fugue to a good graduate of a major European conservatory, and discovered that his experience of counterpoint was limited to three years of exercises in 4/4 time with canti in whole notes. While this sort of work may be appropriate for a beginner, it hardly constitutes a complete preparation for most of the real life applications of counterpoint --- or even, for that matter, for composing a musically convincing fugue.

The main problem with scholastic approaches is that they generally substitute rigid rules for flexible general principles, and thus fail to provide guidance in enough varied musical situations to be really useful in practice. At best, of course, an inspiring teacher can fill in the gaps and make the subject seem relevant. But at worst, the student is constrained by a hodge-podge of inconsistent rules, and wastes a great deal of time struggling to avoid situations that are musically unimportant. A common fault is to confuse practical rules — say, about the range of a human voice — with pedagogical stages. The former are general principles, which cannot be avoided if the music is to be performable at all; the latter by contrast are by nature temporary, rules of thumb to avoid common elementary problems, or to force the student to concentrate on a particular problem and to avoid others that might be confusing. If such pedagogical constraints are presented as global rules, they lead quickly to nonsense.

Here our aim will be to explain contrapuntal issues so as to provide the most general applications possible. We will approach counterpoint as a form of training in musical composition instead of as a discipline in itself. We will try to define general principles of counterpoint not rigidly, but in ways that are transferable to real musical situations, and which are not limited to the style of one period.

This is not a textbook: We will not repeat in detail information easily available elsewhere. We will also not propose a detailed method, complete with exercises, although the specifics of such a method are easily derived from our approach, and indeed have been tested by me in the classroom for years.

In short, this book is more about the "why" of counterpoint than the "what".

## The pedagogy of counterpoint

The pedagogy of counterpoint is often a confused mix of style and method. Most approaches limit themselves more or less closely to one style, making some attempt at graduated exercises, often derived from the species method of Fux.

Fux' method does have pedagogical value, but its advantages are best understood independently of stylistic issues. The main advantages to the species approach, especially for beginners, are:

* By eliminating explicit variety of rhythm in the first four species, and by imposing stable harmonic rhythm, it frees the student to concentrate on line and dissonance. (I say "explicit variety of rhythm" because even in a line in steady quarter notes, changes of direction imply some rhythmic groupings)
* The use of a supplied cantus in whole notes provides a skeleton for the overall form, freeing the student from having to plan a complete harmonic structure from scratch.
* The limitation to the most elementary harmonies simplifies the understanding of dissonance.
* The emphasis on vocal writing provides an excellent starting point for contrapuntal study, for three main reasons:
    * Every student has a voice.
    * Most traditional instruments are designed to sing, that is to say to imitate the voice.
    * Instruments are much more varied in construction and idiom then voices.
* The avoidance of motives, at least in the earlier stages, frees the student from the formal consequences they engender.
* The progression from two part, to three part and four part (etc.) writing is logical, although creating harmonic fullness in two parts poses some unique problems.
* Each of the first four species focuses effectively on just one or two elements:
    * The first species, eschewing dissonance completely, forces concentration on relationships of contour.
    * The second species introduces the problem of balancing the three simplest forms of linear development between two harmonies: Static elaboration (neighbor notes), gradual development (passing tones), and more dramatic leaping movement (arpeggiation).

* The third species introduces other idioms for linear development between harmonies: The succession of two passing tones (including the relatively accented passing tone); combinations of passing tones, neighbor notes, and arpeggiation, and (depending on the teacher's preference) perhaps the cambiata and double neighbor figures as well. In fact, third species counterpoint corresponds almost exactly to the ancient tradition of "differencias", wherein the student systematically explores all possible ways of filling in the space between two chord tones with a given number of notes. (The technique of differencias was part of the training both of composers and performers; the latter frequently needed to be able to improvise ornamentation.) Schoenberg's "Preliminary Exercises in Counterpoint" uses a variant of this method.
* The fourth species focuses on suspensions. With suspensions, for the first time, the student encounters melody and harmony out of phase on the strong beat of the bar and the start of more elaborate patterns of elaboration.

* The fifth species, the culmination of all the previous ones, provides preliminary work in rhythmic flexibility. Apart from a few more elaborate idioms like the various ornamental resolutions for suspensions, the student mainly works on controlling rhythmic momentum (but without motives).
* Finally, the mixed species exercises, used in some pedagogical traditions, provide an introduction to stratified textures, and encourage exploration of simultaneous dissonances while maintaining a clear harmonic context.

Thus, "strict" counterpoint can be useful. However as the student advances, many of its pedagogical restrictions become stultifying constraints. For example, the student who never works without a cantus firmus never learns to plan a complete harmonic succession on his own. The monotony of harmonic rhythm - not to mention of meter (many texts never even go beyond 4/4 time!) is an enormous omission, leaving the student with no guidance whatsoever about how the mobile bass, which is so typical in contrapuntal textures, affects harmonic momentum and form. The limitation to simple harmony becomes a ludicrous handicap when applied to, say, invertible counterpoint, where the use of seventh chords multiples the useful possibilities enormously. And so on…

Other approaches to learning counterpoint are usually directly style based, for the most part either attempting to imitate either Palestrina or Bach. While they vary in efficacy, they share a serious limitation: In teaching a specific style, general principles are easily obscured. Also, as Roger Sessions points out, in the Foreword to his excellent *Harmonic Practice*, for a composer, a style is *never* a closed set of limitations, but a constantly

evolving language. For these reasons, this approach seems more appropriate for training musicologists than composers.

Whatever the pedagogical regime, there are two essentials for any successful study of counterpoint:

* Students must *sing* the individual lines aloud in turn while listening to the others. The other lines should be sung by other students or played on the keyboard. This is contrapuntal ear training: It directs attention to various lines in turn with the others as background. It leads to an intimate knowledge of the music's inner details, that is otherwise unattainable.
* Quantity counts: the more exercises the student does of each type, the more he becomes familiar with the ways in which notes can be combined. Since the basic movements between chord tones are relatively limited (see below), after a while, many patterns become familiar.

Finally, we would recommend that any counterpoint exercise, from the simplest to the most elaborate, be discussed as a real composition, with a beginning, a development, and an end. This is the only way to evaluate counterpoint that will be consistently relevant to the real problems faced by a composer.

## Stylistic Assumptions

If we are to see counterpoint in this way - as an aspect of composition and not as a self-contained discipline - we must define the limits of our approach. We repeat here some of our remarks in the first book of this series:

It is difficult to teach composition without making at least some assumptions about formal requirements. The crux of our argument here is that many basic notions enumerated here result from the nature of musical hearing. Let us make clear some of the assumptions behind the phrase "musical hearing".

We assume first that the composer is writing music meant to be listened to for its own sake, and not as accompaniment to something else. This requires, at a minimum, provoking and sustaining the listener's interest in embarking on a musical journey in time, as well bringing the experience to a satisfactory conclusion. Thus, "musical hearing" implies here a sympathetic and attentive listener, at least some of whose

psychological processes in listening to the work can be meaningfully discussed in general terms.

We will limit our discussion to western concert music. Non-western music, which often implies very different cultural expectations about the role of music in society or its effect on the individual, is thus excluded from our discussion.

Further, although some of the notions presented here may also apply to functional music (e.g. music for religious services, ceremonial occasions, commercials) all these situations impose significant external constraints on the form: The composer's formal decisions do not derive primarily from the needs of the musical material. In concert music, by contrast, the composer is exploring and elaborating the chosen material in such a way as to satisfy an attentive musical ear.

Despite my belief that counterpoint is best studied through tonal exercises (it is easier for a beginner to work within a familiar framework than to define a coherent language from scratch), the principles defined here will not be entirely limited to tonal music. The thoughtful reader will quickly see applications which do not depend on tonality.

# *Chapter 1: Line*

Human perception seems incapable of paying *equal* attention to more than one strand at a time (perhaps an evolutionary adaptation to avoid confusion and to allow organisms to prioritize action?). Although in some contrapuntal textures that the listener's attention migrates between various parts there is always a focus. In its broadest meaning, we will use the word "line" to refer to the main path followed by the listener's attention through a musical work over time. If the composer does his work well, this path will be intriguing, coherent, and convincing from start to finish. This notion of line is central not only to the study of counterpoint, but to music in general.

In its more traditional sense, the "line" refers to the continuity in time of an individual melodic strand (usually referred to as a "voice", or a "part", in contrapuntal study). Let us examine some of the elements of line.

## Voice leading

Contrapuntal melodic line can be seen as an outgrowth of basic harmonic voice leading. In the simplest block harmony, conjunct movement and tied common tones are the norm. This is because they are easy to sing — notes which remain in place or move by step are not hard to hear and find — and also because the ear ends to create continuity based on registral relationships.

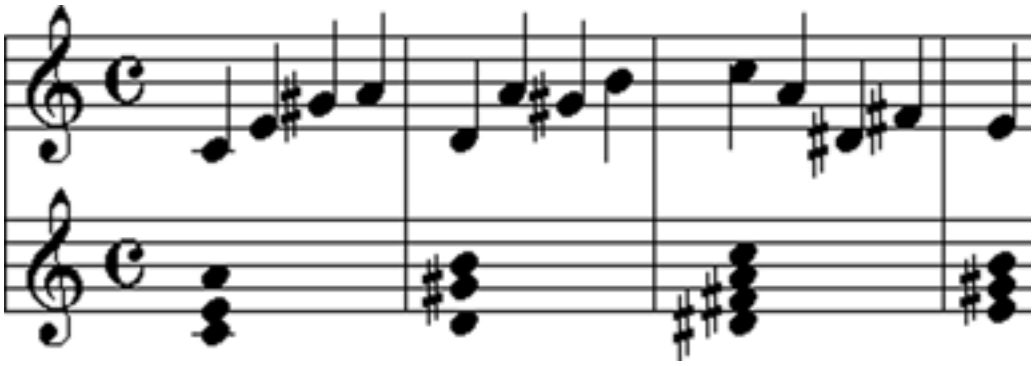
Leaps, by contrast, are special events, used to renew interest, to open new registers and to attract the listener's attention. In short, in a normal (conjunct) context, a leap acts as an accent.

## Contour

Contour refers to the shape formed by the successive pitches in any stretch of line. Changes of direction, and especially, extremes at the top and bottom, are important events in a line, memorable for the listener. In the case of lines for voice, and of lines that are vocal in inspiration even if written for instruments, rising contour is associated with increased intensity, and falling contour is associated with relaxation. Developing a feeling for the balanced rise and fall of tension in a melodic line is a good preliminary step towards a sense of form.

## Compound line

In "compound line", a melody is enriched by frequent leaping between two or three sub-strands, giving the illusion of two or three simultaneous levels, although there is actually never more than one note sounding at a time.



*Here the melody implies voice leading of 3-4 parts, as portrayed on the lower staff. Note that active notes are resolved normally in the next harmony. Unresolved active tones would create distraction.*

Compound line is based on the strong association between continuity and register, and can allow a single instrument to supply all or some of its own harmony. It creates implicit continuity between notes that are not adjacent in time. The most spectacular examples of this technique are of course the solo violin and cellos suites of Bach.

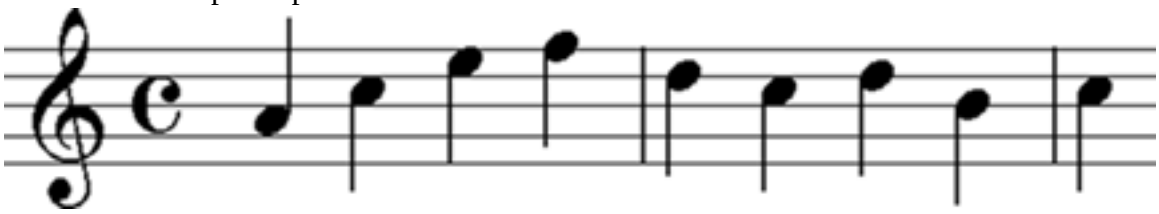
## Accent

Accent is an important property of line. All the notes in a given line are not of equal importance. Highlights and contrasts provide interest and richness. An accent is a moment which stands out.

Accent is not limited to normal metric stress. Accent can also result from:

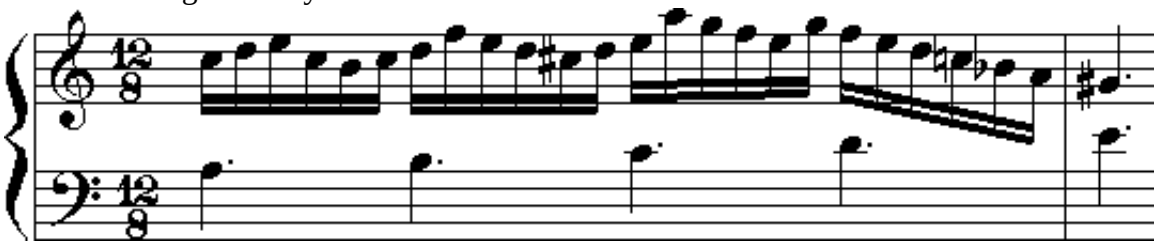
* rhythmic length: agogic accent. This is the normal accent in Renaissance music, when barlines were not used to define meters. Properly sung, Renaissance polyphony, for all its impressive euphony, is rich in accentual conflict since long notes arrive independently in each part.

* extreme pitch: peaks



*Here the high F, despite its weak metrical position, would be sung with a certain intensity, mitigating metrical squareness.*

* striking harmony.



*In this example, after a melodic peak on the high A after the third beat, the Neapolitan harmony on the last beat creates a harmonic accent.*

One of the most important aspects of linear independence is independence of accent. Even when all lines use the same note values, they will not normally have entirely coordinated accents. Coordinated accents are a strong sign to the listener that something special is happening, usually a climax. When previously independent strands begin to follow the same contour at the same time, the effect is one of simplification, clarifying momentum for the listener and increases the music's drive. Used well, this is a powerful cue that culmination is approaching; used badly, it destroys tension: If the expected climax does not materialize, the effect can be disappointing.

Accent is related to harmony: Notes which belong to the prevailing harmony are perceived differently from those which clash with it. Notes between chord tones create tension until the next harmonic arrival point.

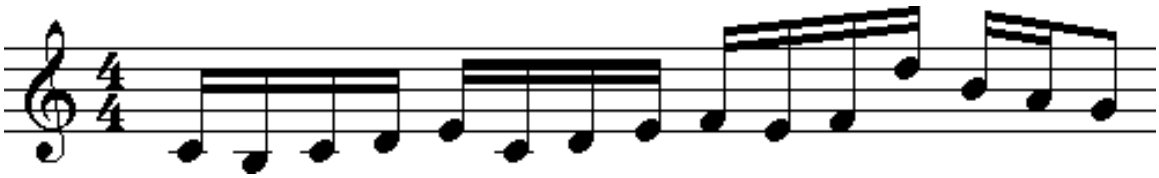
## Melodic Structure and Ornamentation

In most western music, contrapuntal lines meet fairly regularly to form recognizable chords, usually at metrical accents. These meetings act as harmonic pillars. The gaps between them, when the lines move more freely, create both a sense of freedom and

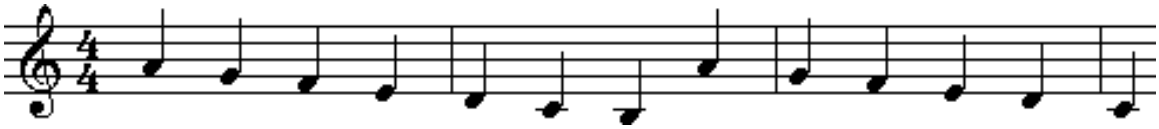
tension, since they normally include at least some notes outside of the prevailing harmony. (If they regularly include nothing but chord tones - as repeated notes or arpeggios - they are better understood as harmonic elaboration and not as linear development.)

While it would be impossible to list all possibilities exhaustively here, we can categorize idioms of melodic elaboration into a few main types:

* conjunct passing motions,
* neighbor notes,
- indirect approaches, including change of direction and 8ve displacements,

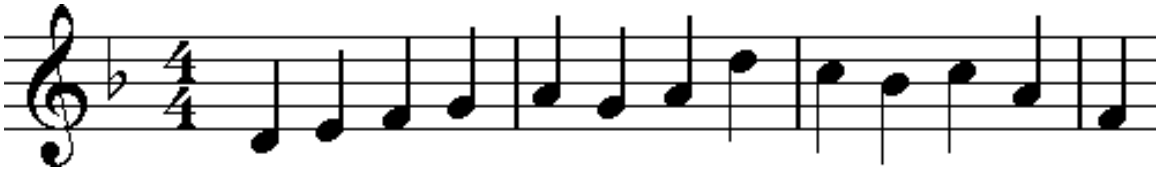


*Underlying the melody in this example is a simple rise from C to G. However the line gains interest from the varying ways in which this skeleton is fleshed out, and especially from the climactic "overshoot" between the F and the final G, which has the effect of making a second approach to the G, from above, in addition to the primary one, from below.*



*This example features the very common technique of octave displacement. This maneuver allows the line to stay within one singable register, and avoids the overly dramatic effect of a long scale rushing down.*

* combinations of steps, which create melodic flow, and leaps, to open up new registers and renew interest.



*Here the leap at the end of measure 2 adds interest after the simple scale and neighbor motions which precede it. The neighbor note on the high C softens the melodic fall after the peak on D.*

* moving a line out of phase with the prevailing harmony (suspensions).

Some of these categories correspond to the species of traditional contrapuntal pedagogy: This is another argument for the species approach, if applied with intelligence and flexibility.

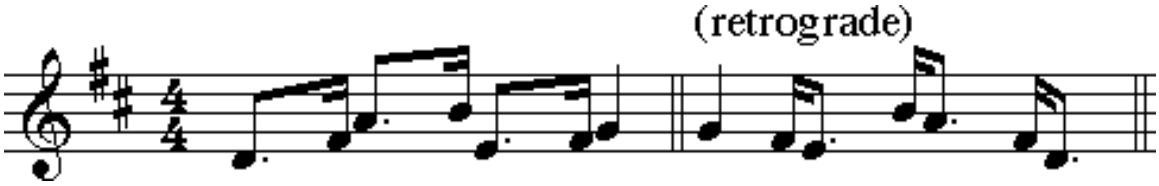
## Motives and coherence

Motives can add an extra dimension to linear coherence. A motive is a short, memorable pattern, which is repeated and varied. Usually motives are melodic/rhythmic patterns (although in Mahler's 6th Symphony, the change from a major to a minor triad accompanied by cross-fade orchestration is clearly an important "motive"). Such patterns create associative richness. Motives stimulate the memory, and thus can be used to create connections going beyond simple short term continuity. Conversely, introducing a characteristic motive and then ignoring it usually creates distraction and weakens the overall effect.

Dissonance formulas, apart from the most basic ones (passing and neighbor notes in neutral rhythm), in effect create motives requiring continuation.

The standard ways of using motives are listed in many texts and are not worth detailing again here. However one distinction we have found useful is between "close" and "distant" variants of a motive. The frequent repetition undergone by most motives requires more or less continual variation to maintain interest. The key point is whether an attentive listener is more struck by the novelty of a given motivic transformation or the association with the original. Certain motivic variants, for example retrograde, and

augmentation/diminution, especially in cases where these upset the rhythmic flow, may be easy to seize visually, but when heard are often quite dissimilar to the original form.



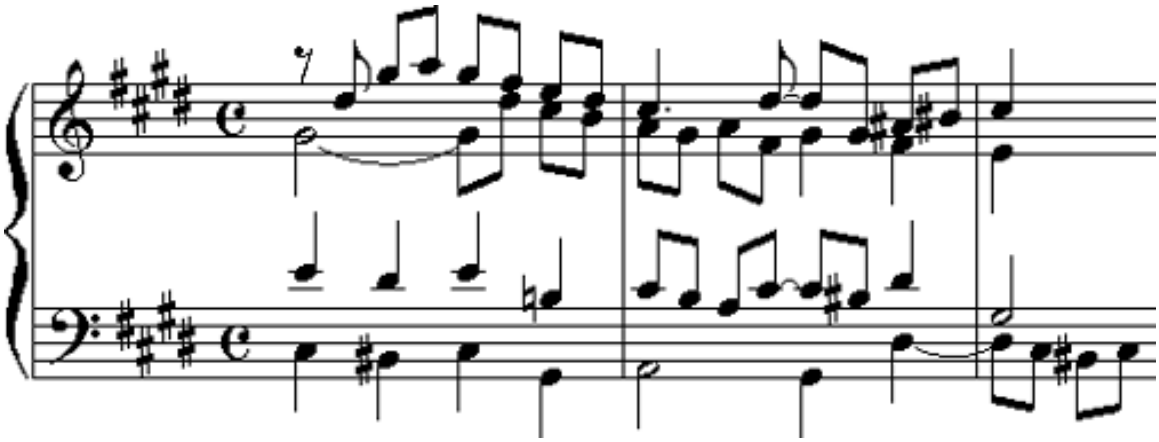

*Here the retrograde sounds nothing like the original motive due to the syncopated rhythm it creates. It sounds more like an intentional contrast then a simple continuation.*

The composer needs to carefully control whether the degree of association or novelty created is appropriate to the context. For example a short section of only a phrase or two is very unlikely to require the kind of far-flung contrast that retrograde usually engenders. On the other hand, if the composer wants to create a contrasting theme out of previous material, retrograde might be very useful.

## Neutral lines

A common misconception in writing motivic counterpoint is that "everything must be derived from the motives in the theme". Not only is this demonstrably untrue in much fine music, often it doesn't even make musical sense. While motivic "tightness" certainly can contribute to creating a coherent musical flow, it can be present in varying degrees (ranging from the tightest canonic imitation to the kind of much looser texture found in many fugal episodes, where one leading part is accompanied by much more neutral counterpoint). Indeed, there is sometimes a distinct advantage to using more neutral material of the sort found in elementary species work. Simple conjunct movement and suspensions are useable without drawing attention to themselves in virtually any contrapuntal context, whether or not they are present in the work's thematic material. These simple resources often better highlight important ideas than would the more competing presence of other highly distinctive motives.

One useful technique for reducing the density of contrapuntal textures without losing the independent interest of the each line is to stagger rhythmic doubling: several parts can share rhythmic values, as long as they don't consistently start and end these passages of rhythmic doubling together.



*Here the alto goes into eighth notes after the soprano has already started them and continues after the soprano has stopped. The bass and tenor start off together in quarter notes but change in measure 2 to different values. This the texture remains transparent, but no two lines ever go for long in rhythmic unison.*

# *Chapter 2: Harmony*

It may seem odd to move directly from a discussion of line directly to one of harmony, while postponing discussion of the ways in which lines interact. However, harmony is best understood as the integration of simultaneous musical lines into a coherent whole. No matter how independent the lines in question, we always hear a whole — although with some perception of foreground and background — and not simply a group of independent strands. Put another way, music — no matter how dense - is understood by one brain at a time. This point merits further discussion. We do not contend that the musical ear cannot distinguish independent lines, but rather that one cannot simultaneously pay them *equal* attention. If the listener is not to have the impression of several unrelated events going on at the same time, the strands must coalesce into a coherent whole. This largely results from harmonic and rhythmic coordination. If the harmonic language is coherent, it will also create expectations about the music's direction. If the various lines regularly meet at metrical points of reference, it is hard to impute to them complete independence. Human hearing, it seems, does not require much encouragement to seek out such connections.

We will only look at aspects of harmonic design that specifically relate to contrapuntal textures. For a more general discussion of harmonic questions, the reader is referred to our forthcoming work on harmony.

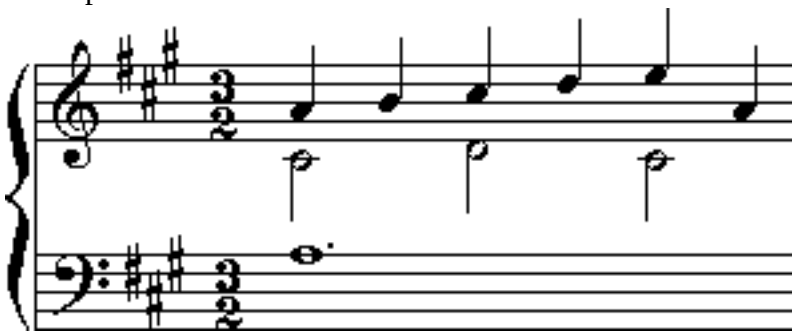
## Richness

Random vertical encounters do not constitute harmony, in any serious sense: Harmonic language needs coherence. Indeed, there are advantages to be gained from control of harmonic tension and direction. Without anticipating in detail the content of the final volume in this series, there is still a major point to be made here.

If the counterpoint is not to sound haphazard or rough, the harmony needs to be as rich as possible. "Rich", in a classical context, generally means full - containing the third of the chord, and often using sevenths as well - as well as participating in a lively progression, not limited to a few primary chords in root position. ( This is an area where the standard species approach fails pitifully.) In non-classical contexts, richness would imply prominent and frequent presentation of characteristic sonorities, and variety in the control of tension/relaxation.

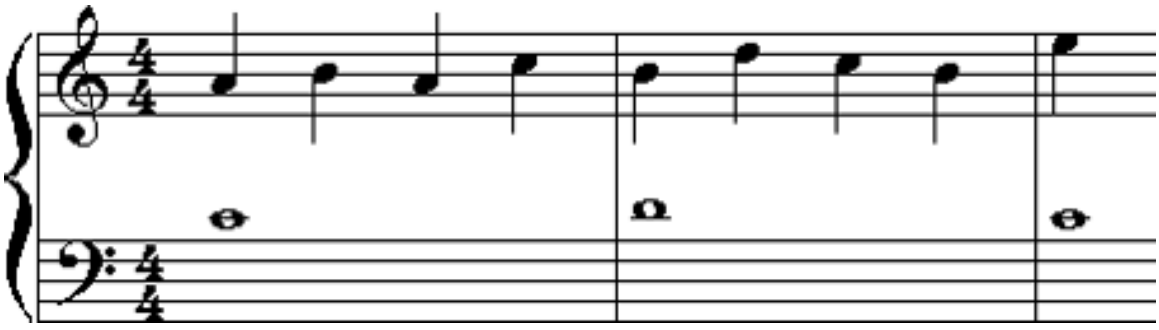
The weaknesses listed below - very common in student work - all attract the listener's attention, due to momentary harshness or bareness of harmonic effect:

* parallel dissonances.



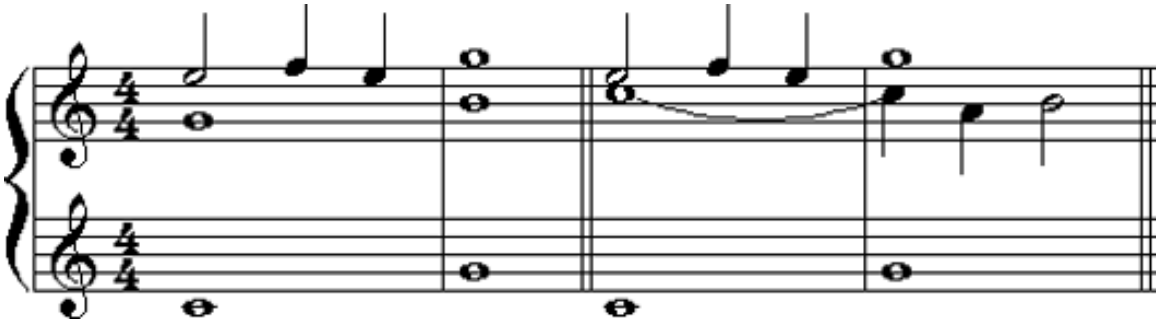
*The parallel 7ths between alto and soprano, from the 1st to the 2nd beat, sound particularly harsh, especially since the 7th on the 2nd beat is major and it resolves onto a bare octave (and further only makes a bare fourth with the bass).*

* most cases of parallel 5ths and 8ves (Incidentally, certain parallel 5ths and 8ves that are prohibited in conventional species counterpoint are quite innocuous, even unnoticeable. Once past the earliest stages, instead of blanket prohibitions, it is more useful to discuss *why* certain cases are disturbing and others not. Such discussions help the student refine his hearing.)



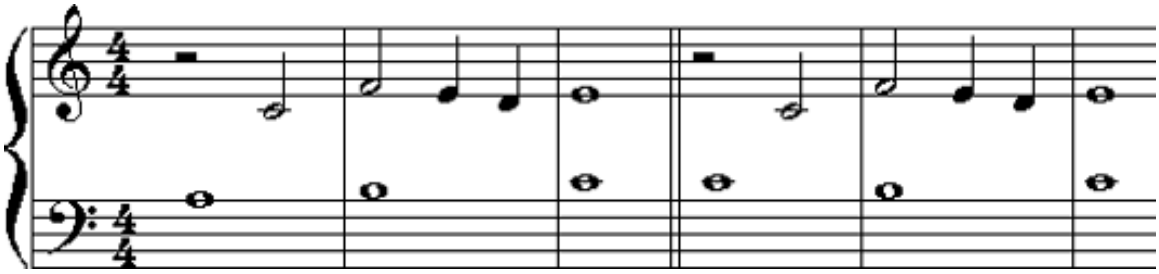
*In most species approaches, the octaves created between the C in the first bar and the D in the second would be prohibited as being too close. However they are not really disturbing, because the motives in the two bars do not correspond, mitigating any tendency for the ear to associate these notes.*

* direct 5ths and 8ves between outer parts, unless softened by a suspension or other prominent harmonic richness elsewhere



*Compare the direct octave in the first example, rather prominent, since all the parts move in the same direction, with that in the second, where the suspension in the middle part creates a counterbalancing richness, and attracts the ear away from the outer parts.*

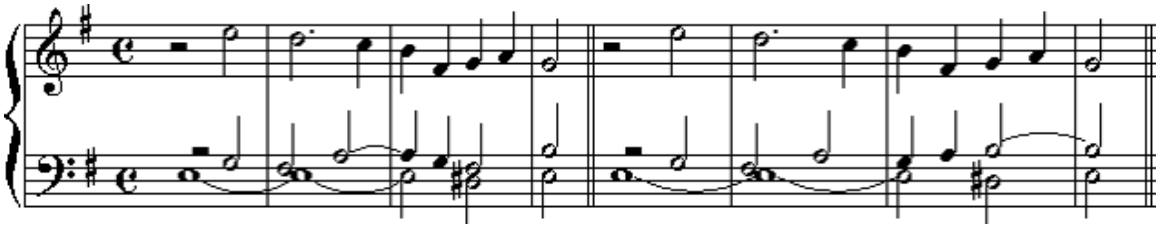
* approaching dissonances in similar motion, especially in outer parts. This is especially flagrant when they leap.



*In the first example, the similar motion of soprano and bass creates a very strong accent on the seventh in bar 2. In the second example, this accent is somewhat weakened by the contrary motion of the bass.*

Conversely, richness can often be enhanced by:

* paying particular care to semitone conflicts: They are almost always improved by addition of a third or sixth to one or both of the involved notes, inanother part.
* doubling dissonances at the third or the sixth,(as will be seen below, this is the main use for invertible counterpoint at the tenth: By rigorously avoiding parallel motion, such counterpoint guarantees that adding such doublings will not create parallel 8ves and 5ths.)



*These two versions of the same example display how a dissonant note can be either be softened or heightened. In the first, the arrival on the major seventh in bar 3 is very harsh since the upper parts move in similar motion. Further, the resolution (by exchange) does not diminish the level of interval tension. In the proposed variant, the dissonant F# and its resolution are doubled at the 6th in the middle part, creating a much richer effect, more in tune with the style of the opening bars.*

* aiming at the fullest chord possible at metrical stresses,
* frequent use of suspensions (softening squareness of harmony and rhythm).

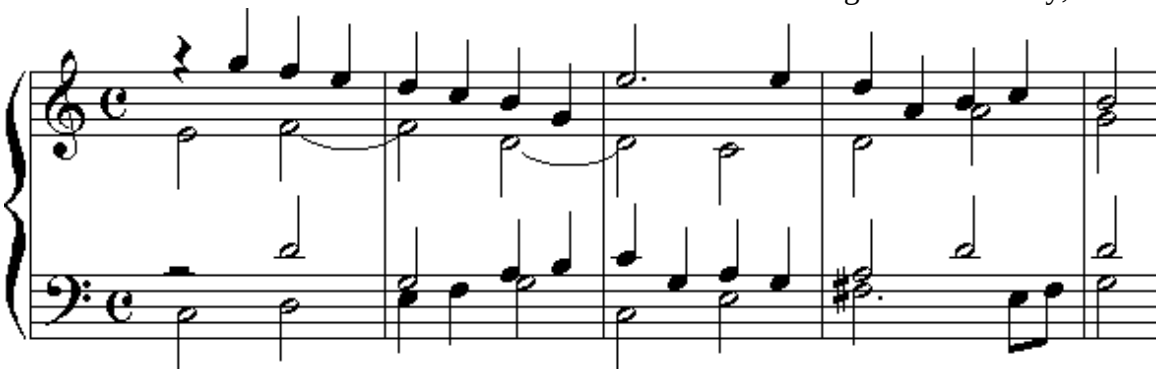
One other point: Rather than limiting the student to simple consonant harmony throughout study of the species, it is better to gradually enlarge the harmonic vocabulary to include seventh chords, modulation and chromaticism. My own goal is to arrive at the same harmonic resources at the end of four part contrapuntal study as in a course of chromatic harmony. This also helps bring together the two disciplines. In fact, the further one explores harmonic richness, the more it becomes a matter of refined voice leading, and the further one advances in counterpoint, the more sophisticated the harmonic resources required to solve problems.

## Harmonic Definition

One frequent problem for students in dense contrapuntal textures is harmonic definition: Particularly with accented dissonances, the underlying harmony can easily be obscured.

The listener must "deduce" the underlying harmony from the information presented. This information includes:

* the relative number of chord and non-chord tones sounding simultaneously,



*Measure 2 in this example illustrates a common problem in student work. Here the top parts arrive at a consonance suggesting a D minor chord, and the bottom parts, in their turn, suggest a first inversion C major chord. The fact that the tied F in the alto moves by leap suggests that it is a chord tone; the fact that the lower parts do not move to a clear consonance make it difficult to consider them as just passing tones. In short, the information presented is unclear, and leaves the listener trying to puzzle out the harmony from conflicting cues. The overall effect is distracting, creating an inappropriate accent.*

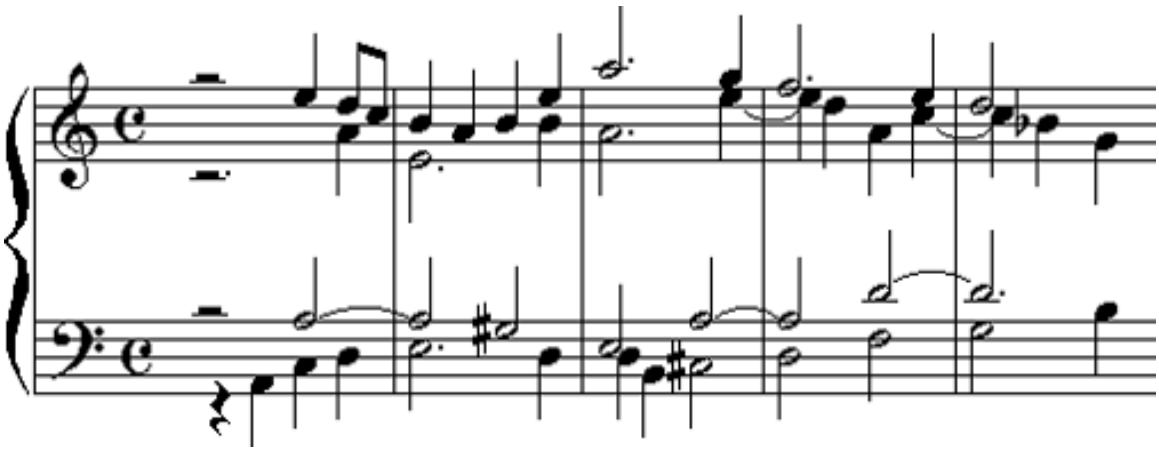
* the relative rhythmic importance accorded chord and non-chord tones,
* the placement of leaps: Leaps are normally made to and from chord tones; when there are several in a row, they are heard as outlining chords**.** The only major exception to this rule is appogiaturas (approached by leap). However in this case the leap to the dissonance is used as a motive, Otherwise, apart from the very occasional special case like text illustration, the dissonant note will sound like a mistake.
* (to a lesser extent) the harmonic direction of previous chords.

What seems to happen here is that the listener "weighs the evidence", and tries to parse the harmony in a meaningful way.

## Modulation

Although a full discussion of modulation is really the province of a book on harmony, contrapuntal texture does create some special problems in defining tonal direction within a modulation. Schoenberg's counterpoint book is the only text, to my knowledge, which includes exercises specifically requiring the student to modulate within contrapuntal textures. Such exercises are challenging, and should be part of every program of contrapuntal study.

Most explanations of modulation focus on pivot chords. However the way newly altered tones are approached melodically is at least as - if not more - important in making a modulation convincing to the ear. Alterations create novelty. There is always one line introducing each alteration. (Otherwise the altered note would be doubled, creating harshness as well as a weak resolution.) If the modulation is not to seem confused, this line must be in the foreground. This means avoiding distracting motivic or harmonic events elsewhere, and giving the new accidental at least some rhythmic weight. *The composer must draw the listener's ear to the active notes in the modulation.* One excellent way to do this is to make the new alteration the resolution of a suspension.



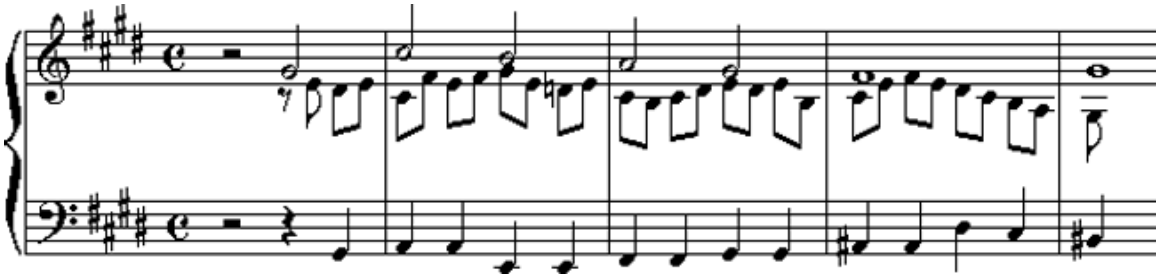
*Here the accidentals announcing D minor, C# and Bb, are both treated as suspension resolutions. The suspension attracts the listener's ear, and the fact that the newly altered note acts as a resolution makes its arrival particularly smooth.*

Of course, the degree of accent accorded these notes will depend on the modulation's importance in the form: Is it merely local color or does it articulate the arrival of a major new section?

# *Chapter 3: Relationships between lines*

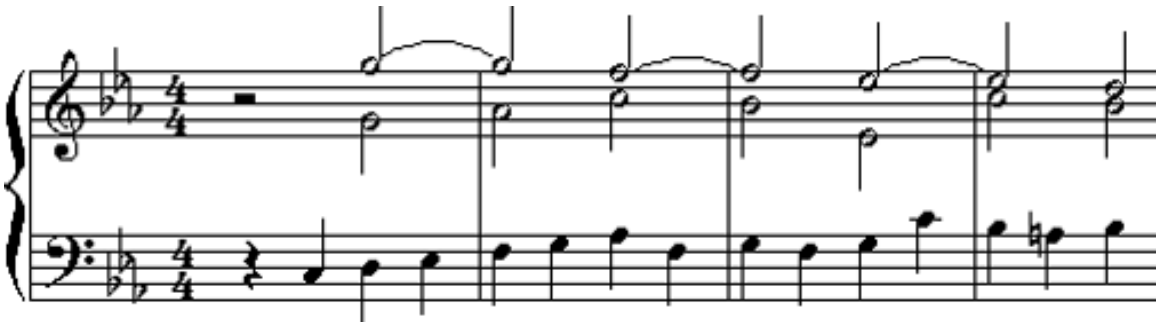
Counterpoint is often defined as the art of combining independent lines. We have already remarked that this is misleading: unless the musical texture makes sense as a whole the result will sound arbitrary or confused. To better make this point, one might use a social analogy: contrapuntal lines are like individual voices in a community, engaged in conversation. All the participants are welcome and active, but for the discussion to remain coherent requires that each member contribute without attempting to overpower the others. (Of course not all conversation is civilized, and one might attempt to musically represent such less "democratic" discourse for dramatic ends. This kind of counterpoint exists, and can even be found in classic operas, where two or more opposing points of view are represented simultaneously. But the challenge in such contexts is still to maintain overall coherence: Simply combining unrelated materials haphazardly does not require any special skill, and usually does not result in artistic interest.)

To return to the issue of linear independence, it may be measured in two (not entirely mutually exclusive) ways. First, independence may result from the motives used.



*In this (instrumental) example, the soprano presents the chorale melody in long notes, the alto uses a neighbor note motive, and the bass emphasizes repeated notes. (Incidentally, note how the alto and bass deviate slightly from their respective motives at the cadence. This is typical, and contributes to setting the cadence apart from the rest of the phrase. Schoenberg calls this process "liquidation", a rather oppressive term!)*

In the case of non-motivic counterpoint, the difference in the prevailing rhythmic values suffices to set the layers apart.



*In this example, typical of a mixed species exercise, each part has its own rhythm. The "liberties" at the end (the change of chord on the last beat of bar 3, and the accented passing tone on the beat f bar 4) are musically fluent and logical, and should not be prohibited. Rather they should be explained to the student.*

This issue of the degree of similarity between strands in a contrapuntal texture leads us to a new concept here: the notion of musical "planes". A plane is defined as a musical strand, *consisting of one or more parts,* which is highly unified in its material. *The number of planes and the number of real parts (or "voices") do not necessarily correspond.* For example, in *Ach wie nichtig, ach wie flûchtig*, from Bach's *Orgelbuchlein,* the top part contains the chorale melody in long values, while the two middle parts imitate each using a scale motif in 16th notes, and the bass in the pedals is organized around another motive entirely. In this case, we have three rhythmic and timbral planes made up from four parts. This kind of writing is very typical. To take our social analogy farther, planes can act like subsidiary groups within a community. In the case of a plane consisting of only one part, the relevant analogy would be the individual versus the group.

Finally, even a counterpoint of whole planes is possible, for example in polychoral writing, or certain operatic ensembles in Mozart and Verdi (for example at the end of Act, I Scene 2, in *Falstaff,* where the young Fenton lyrically sings the praises of his beloved, the other eight characters in the ensemble nervously chatter about what they will do to the wicked Falstaff.). For a more current example, the overlapping movements in some of Elliott Carter's music, for example the *Symphony of Three Orchestras*.

In general, the more the individual lines or planes go their own way, the less clear is the overall momentum of the music. For this reason, when Bach wishes to prepare a climax, he often *simplifies* the texture: Previously independent lines begin to move in a more synchronized fashion. These more coordinated lines create clearer momentum.

Less clearly coordinated lines suggest conflict, creating restlessness and tension. Overly dense textures tend towards inertia, particularly if there is uncertainty about which is the leading line at any given moment. The listener's effort is focussed on trying to decipher the complexity, instead of following the music's momentum.

There are many degrees and kinds of inter-relationships between simultaneous lines and planes. The sensitive use of fine gradations along a scale of linear/planar differentiation provides many important resources in composition, particularly at moments of transition, when a new idea may come to the foreground and an old one gradually recede. One of the major differences between Baroque and classical orchestration is the in the latter, the layout of the planes tends to be highly consistent over whole movements, or at least very long sections, while the classical composers employ more supple transitions between textures.

## Classifications of contrapuntal texture

The layout of rhythmic and motivic planes allows a basic classification for contrapuntal textures as a whole: They may be:

* stratified: Each part or subgroup of parts uses motives which the others parts or subgroups void, or
* imitative: Material is constantly exchanged between parts.

In the first type, the ear is led melodically mainly by one part. In the second type, the leading line migrates. In studying counterpoint there are advantages to beginning with stratified textures, and indeed the species approach is limited almost entirely to such layouts. (Hence the frequent pedagogical difficulty in passing from species writing to imitative work.)

## Invertible counterpoint: a special case

Invertible counterpoint is defined as a combination of lines where each is melodically interesting enough to serve as a leading line and also designed to act as a harmonic bass, in another permutation. Since the main use of invertible counterpoint is to create novelty out of an already used combination, it is important that the two lines be fairly contrasting; this is why the technique is normally used to combine different themes. Without contrast, there is no special interest in switching the parts around.

There are two main restrictions required to create invertible counterpoint. The first is avoiding intervals which create incoherent or unresolved dissonances when inverted. The other — not exceeding the interval of inversion between the two parts — is a direct outgrowth of the need for contrast: Exceeding the interval of inversion produces crossing when inverted, which weakens the novelty of the inverted combination.

Inversion at other intervals than the octave or the fifteenth creates new harmonic colors; such intervals should be used specifically to create these colors. For example invertible counterpoint at the twelfth engenders an interesting play between sixths and sevenths. Invertible counterpoint at the tenth, by avoiding parallel intervals entirely, allows doubling at the third and sixth for richness without fear of creating parallel octaves and fifths.

Invertible counterpoint is best taught allowing a fairly rich harmonic vocabulary. Seventh chords are especially useful, since they have more possible inversions than simple triads, and because the second inversion is not constrained in the same way as the plain 6/4 chord.

As Tovey points out, in his magisterial discussion of invertible counterpoint (in his analysis of Bach's *Art of the Fugue*), when properly designed, an invertible combination will work in all its positions. The difficulty then becomes one of smoothly knitting the inverted passages into the overall texture. In particular, the leading line must seem to lead into the inverted passage without a bump.

The most common applications of invertible counterpoint, in fugue, include countersubjects, multiple fugue subjects, and recurring episodes.

Apart from these, there are occasional examples in opera and other dramatic contexts, since the technique can be used to represent the dominance of one character over another.

We should also mention here a procedure very common in Bach, but seemingly never discussed in textbooks: we call this procedure semi-invertible counterpoint. By this we mean lines designed to be interchanged, but without being usable as bass lines.

## Counterpoint and orchestration

The study of counterpoint normally begins with vocal writing. This is logical: Everyone has a voice, and all the parts have the same timbre, allowing the student to ignore

questions of timbral balance and contrast. While we will consider the contrapuntal use of instrumental idioms in the next chapter, we must here examine how timbre and contrapuntal planes interact.

When there is more than one tone color present, all other things being equal, the ear separates the musical texture into strands based on color differences. It is normally quite hard to persuade a listener that a line begun by the violin is continued by the horn! Polytimbral writing is often associated with stratified texture, as in many Bach chorale preludes for organ, where the cantus appears on one keyboard, accompanied on another rhythmic plane by a second keyboard with a different sound. The pedal either is the bass of the secondary plane, or may form a third plane on its own. What is unusual about this situation is that the listener’s attention is directed in a much more stable way to one "leading" plane. Of course harmonic events may attract attention momentarily to another part, but melodically the main line does not migrate.

On the other hand, in an orchestral context where timbre is constantly changing, not only does the main line migrate frequently, but subsidiary lines move about as well. (In fact, in an orchestral fugue the number of "real" parts can be ambiguous at times.) Further, creating an auditory landscape that is orchestrally interesting and rich may even require adding filler material, lines that fade in and out of contrapuntal writing, and perhaps even some heterophonic doubling. In this situation the best way for the student to proceed is to make a sketch of the main line, changing tone color at musically logical phrase divisions. Other parts should be sketched in without too much attention to maintaining any given number of parts, and the rest should be filled out as good orchestration rather than as abstract counterpoint. This opens up a whole world of musically fascinating possibilities, but their discussion must await our forthcoming volume on orchestration.

Finally, let us mention here the way counterpoint in more than four or five parts can be dramatized by polychoral effects, either through spatial separation (e.g. Gabrielli) or by contrasting timbral choirs, or both. Whole planes can come and go, creating a counterpoint of masses, where each plane behaves like a line in simple counterpoint. (Incidentally, ignoring the importance of such independent phrasing between parts is another major lacuna is the species approach.) In fact, as the number of parts increases, the attention which can be paid to each part individually diminishes, creating a need for subgrouping — planes - within the overall texture to maintain aural coherence.

# *Chapter 4: Instrumental counterpoint*

Most traditional western instruments were originally designed to imitate the voice. In early writing for instruments there was little difference between vocal and instrumental styles: Indeed, in the Renaissance, many pieces were designated, indifferently, "for voices or viols". However with the increasing exploration of instrumental idioms in the Baroque, instruments acquired a specific repertoire of gestures which showed them off in a more individual way. The vocal heritage remained, but the new idioms enriched composers' vocabulary. When the composer writes for instruments, he has a choice: Either he can write as though for voices (e.g. Bach, Well Tempered Keyboard, the E major Fugue in Vol. 2), or he can create more typically instrumental figuration. In the event that he chooses the latter path, certain constraints, normal for vocal writing, must be rethought.

## Range

The most obvious difference, when writing for instruments, is range: When writing for violin, the range of alto or soprano voices is irrelevant. On a more subtle level, registers must be treated differently as well. For example, voices naturally are more subdued in their lower range and get louder as they rise. Certain instruments (oboe, bassoon) do the opposite. Writing all the woodwinds high and expecting a full, brilliant effect, like that which would result from placing voices in their top register, runs counter to the nature of the instruments; the effect is much thinner, even piercing. While a fuller discussion of register will have await the third volume in this series (Orchestration), suffice it to say here that without appropriate knowledge, the student is likely to be very surprised by the difference between vocal and instrumental registers and spacing.

## Crossing

Another area where instrumental counterpoint and vocal counterpoint differ is the use of crossing. In vocal counterpoint sustained crossing is rare and mostly reserved for special situations where one wishes to bring out one part by placing the lower voice in a stronger register, and the (normally) higher one in a quieter register.

With instruments, two elements mitigate these conventions:

* the much greater range of certain instruments, compared to voices, means that to use the instrument in an unfettered way, without constant recourse to extreme registers

will engender frequent crossing. This is especially the case with strings. Indeed, string quartet writing *without* crossing can even become rather anemic.

* Differences in tone color may make crossing less confusing to the ear than it would be for voices.

## Specific Instrumental idioms and motives

We will take for granted the use of all instruments (except percussion) to imitate the voice; this requires no special comment, except that wind instruments, which do not normally play single lines as choirs, need provision for breathing. (Another weakness in the strict species approach: Never does the student learn to use rests.) Without going into exhaustive detail here about idiomatic instrumental writing for each family, we will mention here the effect of a few common idioms in contrapuntal writing.

One general remark: Because idioms are patterns, they are normally treated as motives.

### Strings

For the voice, conjunct movement is the norm. For strings, the notion of "position" replaces conjunct movement: From a single position a string player commands notes covering around two octaves. Leaps between strings within the same position are completely idiomatic, and indeed may have given rise to the "compound line" mentioned above, so common in Bach. When used in a contrapuntal context, such constantly leaping lines need to be treated as follows:

* The notes within each registral layer should form coherent lines.
* No layer should simply disappear after an active tone (e.g. a dissonance or a leading tone); it should come to a point of rest or merge into another layer.
* The pattern of leaps should show motivic coherence.
* The more leaps there are in a given line, the less the others should be active: In effect, compound line is already inherently contrapuntal by itself. Multiple complex compound lines easily overload the texture.

### Woodwind

Woodwinds resemble the voice more than do strings: they need to breathe, and certain woodwinds are less agile in leaping (although they still surpass the voice in this regard). However, woodwinds change color very dramatically from one register to another, which can play havoc with the balance between contrapuntal lines. Also, winds (and strings,

too) make far more use of detached articulations than the voice. Indeed, a motive can be defined entirely by articulation, which is, after all an aspect of rhythm: duration.

**Brass**

Brass are even closer to the voice than woodwinds in their difficulties with leaps. Where they differ from the voice is in their agility in repeated notes and their immense dynamic range. Also, particularly for the deeper brass, the amount of breath required can be considerable: Phrases should not be too long.

**Percussion**

Percussion, by its nature, does not sustain. Therefore, although some instruments can play melodic lines, rhythmic and coloristic considerations are more important than for the voice.

# *Chapter 5: Contrapuntal forms*

In his article on Fugue in *The Forms of Music*, (the collection of his Encyclopedia Britannica articles) Tovey suggests that fugue is not so much a form as a textural procedures. This astute insight points to the fact that fugue, unlike say a sonata or a set of variations - does not in itself imply any particular formal organization on any level other than the most local. Whatever larger architecture is present is not inherent in the definition of fugue. (Even the proposition that a fugue consists of an alternation of entries and episodes is contradicted by several fugues in the *Well Tempered Keyboard* which have no episodes at all, e.g. the C major fugue in Vol. 1 and the D major fugue in Vol. 2.) A sonata, on the other hand, despite enormous flexibility in the way the details are realized, does dictate some major tonal (and, in certain periods, thematic) points of reference.

## Fugue

Fugue is considered the apotheosis of contrapuntal study. A large orchestral fugue is a demanding test not only of contrapuntal but also of orchestration and formal skills.

While there is no need for a new, full-fledged textbook in fugue (readers are referred to Gedalge's superb *Traité de la Fugue*), we would like to make a few observations here about the best way to approach the study of fugue.

The "school fugue" (fugue d'école) is an academic and rigid construction which corresponds to nothing in the standard repertoire. Its main redeeming feature is the fact that it gives the beginner a road map in planning his first fugues. However this advantage is quickly offset by the fact that this map is overly standardized. Thus it is best used for only one or two fugues, and then either modified for each new fugue or else gradually opened up in the direction of allowing the student more individual choices.

The study of fugue is best seen as an opportunity to explore the musical development of a given theme (and possibly a countersubject) in a concentrated way. In particular, it stimulates invention, in its requirement to constantly recombine a small bank of existing motives convincingly into new melodies.

Fugue also requires constructing a substantial musical structure without major sections made out of contrasting ideas. Put differently, the success of a simple fugue depends entirely on the ability to build intensity by imaginatively developing one main idea (and

perhaps its countersubject) in a way that is texturally rich. In short, writing a good fugue is a challenge in *composition.*

A fugue should be a natural outgrowth of its thematic material. While it makes sense for a beginner to use given subjects, at some point it is important to write fugues based on the student's own themes. Writing a fugue theme is not easy: A good fugue theme needs to be concentrated (i.e. not have too many different motives), have a strong and memorable character, be melodically interesting enough to stand repeated, prominent presentation, as well as lend itself to fragmentation and to various sorts of canonic imitation.

The character of the theme will give rise to the nature of the fugue. No analysis of any fugue is complete without considering the relationship between its theme and the way the composition is worked out. To take two striking examples:

* The virtuoso instrumental theme in Bach's D major organ fugue, BWV 532, gives rise to a fugue whose primary characteristics are speed and élan. The highly repetitive subject is never presented in close imitation, and it is punctuated by a huge gap. The countersubject consists entirely of the repetition of two simple motives. The interest of this fugue depends entirely on its modulatory movements and on the excitement of imitative "conversation" combined with sheer speed.
* This treatment is very different from that in the Eb minor fugue from the first volume of the *Well Tempered Keyboard*: This subject is vocal in character, and derives its interest from the singing curve of each phrase, the close imitations, and the richness of harmony created by the combined lines.

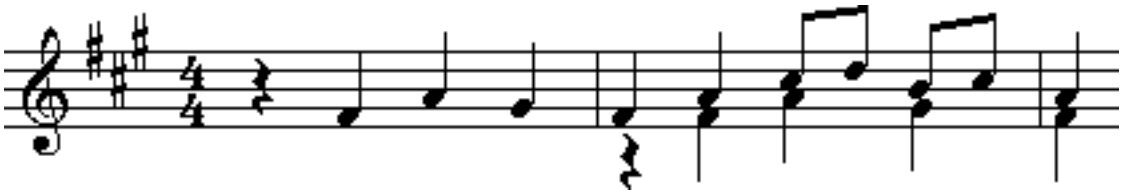
Before leaving the subject of fugue we should add some comment about tonal answer, and stretto.

Tonal answer exists for one reason: to tonally unify a group of entries of the subject. The desire for variety during repetition, as well as the ranges of the four basic human voices (high/low female/male) explain why composers normally alternate tonic and dominant in the first entries of a fugue subject. Certain subjects, when transposed literally to the dominant, lend undue melodic prominence to other degrees (the second scale degree in particular), or - in the case of a modulating subject - lead away from the tonic/dominant axis. Tonal answer is a modification of the answer, *which must not call attention to itself,* permitting the group of entries as a whole to emphasize only the tonic and dominant. The qualification "which should not call attention to itself" lies behind the abstruse technical maneuvers for finding a tonal answer: Somehow a compromise must be reached between

the harmonic and melodic changes required, and maintaining the clear identity of the subject. This is really just an elaboration of our notion, previously presented, of close and remote variants of motives: The composer searches for the place(s) where the change required will be the least unsettling. In most cases, these places involve leaps and/or rhythmic stops. (Is this technique ever relevant outside of fugue? Yes: Sensitivity to the degree to which motivic transformations call attention to themselves is important in building *any* form. The composer who misjudges where the listener's attention is likely to go will never develop a subtle sense of formal balance.)

As for stretto, there are two points to be made. First, the elaborate conventions regarding increasingly close stretti which apply to the school fugue have no basis in any common practice. In fact, Bach is refreshingly indifferent to any such standardized schemas.

Second, a useful tip: Part of the preparation for writing a fugue involves studying its subject for its motives and their potential for development, as well as looking for possible canons. In looking for canons, a useful starting point is the search for sequence within the subject: A subject which opens with a sequence automatically allows a few canons where the entries of the following part simply double the sequence unit at the third or sixth. Since the main point of reference in any canonic imitation is the beginning, even if the canon breaks down after the opening, the effect can still be successful. Even if the sequence is camouflaged, this rule still applies.



*The second motive of the theme here is simply an ornamentation of the first. The underlying sequence is clear.*

## Canon

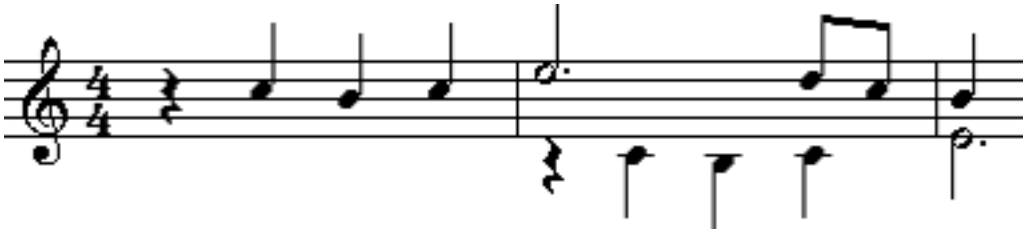
Canon is a venerable form, with roots in folk music, children's rounds, and art music going back many centuries.

Most textbooks on counterpoint enumerate the various sorts of canon — for each type of imitation there corresponds a type of canon; it is not necessary to repeat the list here. However not all these types of canon are equally musically interesting or useful. Some are so abstruse as to be just musical puzzles, of mainly recreational interest. The less

audible the imitation within a canon becomes, the less likely it is to find application outside of such musical games.

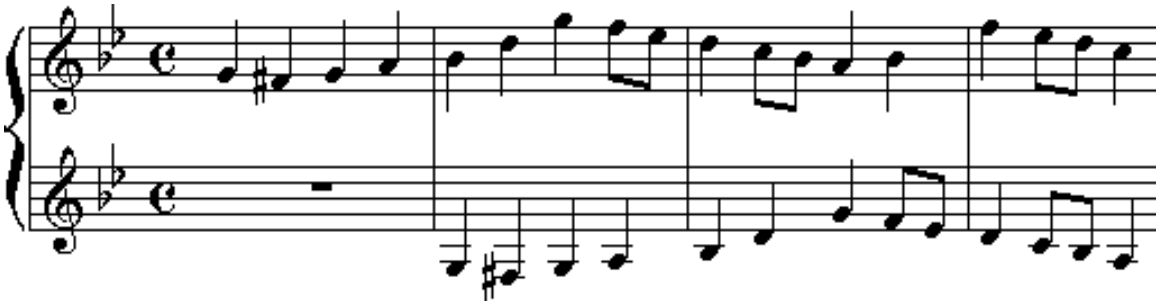
By far the most common sort of canon is that which is usually presented as the simplest: the two part canon at the unison or the octave. However its simplicity is deceptive. It is easy to *see* and to *hear,* but it poses a serious problem of harmonic monotony. The reason is obvious: the following voice is always repeating the same pitches as the leader, which in turn suggest the same harmonies. If this harmonic stasis is not overcome, the canon becomes an endless and aimless harmonic circle. There are three common ways around this problem:

* Using third related harmonies to avoid repeated chords.



*Notice how the arrival onB in measure 3 of the leading part, implies an E minor chord, instead of another C major chord.*

* Reinterpreting passing notes as chord tones and vice versa.



*Notice how the A — accented neighbor note — in m. 3, becomes a chord tone in measure 4.*

* Adding a free part, most often in the bass. In effect, this is a way of making the first two solutions more easily audible.

Other canons that are found with some frequency include two part canons at other diatonic intervals, often with added basses, and canons by inversion at various intervals.

An unusual form of canon, which seems to have been invented by Brahms, may be called the "variation canon": here the following part is an ornamented version of the leading part. A beautiful example can be seen in the Brahms-Paganini *Variations for Piano,* Book 1, Variation 12.

## Passacaglia and chaconne

The passacaglia and the chaconne are continuous variation forms. The variations tend to be largely contrapuntal; each variation develops its own motive(s) in imitative or stratified texture while repeating the basic melody (passacaglia) or harmonic progression (chaconne).

As in any set of variations, the difficulties with the overall form are caused by the potential monotony of multiple adjacent sections of the same length and in the same tonality. The best solution to this problem is to create irregular groups of variations through similar motives, textures, progressions of note values, etc. Such grouping allows the creation of higher, asymmetrical formal units, mitigating the obvious periodicity of the form. Also, after a series of grouped variations, a major contrast of some sort is more effective.

# *Chapter 6: Real world uses of counterpoint*

Apart from the contrapuntal forms mentioned above, no study of counterpoint is complete without a look at the everyday applications of counterpoint. Even for the musician who never intends to write a fugue, the following are direct applications of contrapuntal training:

* Increased attention to inner parts in general.
* The ability to write more lively and interesting secondary parts in orchestration and arrangement.
* The capacity to write better chamber music through sophisticated distribution of interest between the players.
* Greater fluency and variety in techniques of transition and development in all musical forms.
* A more intimate understanding and appreciation of major contrapuntal works from various periods.

## Counterpoint in non-polyphonic forms

### Transition

The importance of counterpoint for transitions comes from the fact that by its very nature, counterpoint encourages overlapping: Phrases do not always begin and end at the same time. Through overlapping, the joints between sections can be made less evident.

### Avoiding squareness

As mentioned above, contrapuntal thinking encourages overlap. The habit of always keeping interest alive in at least one part, even when another cadences, makes for more interesting phrasing and works against squareness of construction.

### Development

Development implies presenting previously exposed material in a new light, providing unity and variety simultaneously. Recombining familiar motives into new lines, as in fugue, is one of the best ways to do this. Also, sensitivity to motivic transformations and the degree of distance from their original forms is useful in spinning out material as richly as possible.

**Variation**

The application of counterpoint to variation is twofold.

* First, the techniques of interval elaboration learned in the third species correspond almost exactly with the classical technique of ornamental variation, wherein the skeletal notes of a theme are filled in and enriched
* Second, one of the best ways to present material in new contexts is to add counterpoint to it.

# Conclusion: Counterpoint and emotional richness

Apart from all these uses of counterpoint, one final point remains: Like all musical contrasts, contrast between lines depends for its effectiveness on the composer's sensitivity to musical character. Counterpoint can enrich music, from the level of individual motives to the level of the whole piece.

Well taught, counterpoint should encourage and enable depth of musical thought, and help increase the composer's emotional range.

# Acknowledgements

I would like to thank the following people for their comments and suggestions: Sylvain Caron, Guillaume Jodoin, Charles Lafleur, Philippe Lévesque, Martin Nadeau, Réjean Poirier, and Massimo Rossi .