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Principles of Counterpoint

This book is the second in a series of 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](#). All grow out of my own experience as a composer.

A pdf version of this book is available for download [here](#).

I am looking for a volunteer to translate this book into German. Please contact me at: alanbelkinmusic@gmail.com.

This series is dedicated to the memory of my teacher and friend [Marvin Duchow](#), one of the rare true scholars, a musician of great depth and sensitivity, and a man of unsurpassed kindness and generosity.

Note concerning the musical examples: Unless otherwise indicated, all the musical examples are my own, and are covered by copyright. To hear other examples of my music, please visit the [worklist](#) page.

Most of the examples, apart from those which are excerpts from longer compositions of mine, are intended for the voice. However, due to the unsatisfactory sound of current choral simulations, they have been rendered with organ sounds.

For those having problems with the plug-in required to hear the examples, Riccardo Distasi kindly wrote a script adding plain links for each example.

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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 talented 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 always in whole notes. While this sort of work may be appropriate for a beginner, it hardly constitutes real preparation for composing a musically convincing fugue, or for other, "real life" applications of counterpoint.

The main problem with scholastic approaches is that they often substitute rigid rules for flexible general principles, and thus fail to provide guidance in enough varied musical situations to be 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 hodgepodge of inconsistent rules, and wastes a great deal of time struggling to avoid situations that are musically unobjectionable. 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 are, by nature, provisional rules of thumb designed 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 principles 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 unto itself. We will try to define

some general principles of counterpoint, in flexible ways which are transferable to real musical situations, and not limited to the style of one period.

This is not a textbook: We will not repeat, in detail, information easily available elsewhere. Also, we will 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 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 mixture of style and method. Most approaches limit themselves more or less closely to one style, and make some attempt at graduated exercises, often derived from the species method of Fux.

Fux's 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 in favor of a constant, stable, harmonic rhythm, it frees the student to concentrate on matters of line and dissonance. (I say "explicit variety of rhythm" because, even in a line in steady quarter notes, leaps and changes of direction will inevitably 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 imitate the voice.
 - Instruments are much more varied in construction and idiom than 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 (neighbour 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, neighbour notes, and arpeggiation, and (depending on the teacher's preference) perhaps the cambiata and double neighbour figures as well. In fact, third species counterpoint corresponds almost exactly to the ancient tradition of "diferencias", 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 diferencias 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. Suspensions are the starting point for many of the richer 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 works primarily 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 multiplies the useful possibilities enormously. And so on...

Other approaches to learning counterpoint are usually style based, for the most part 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 and 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.

An important pedagogical tool in teaching all musical disciplines is the use of graduated, aural "scales". By this, we mean encouraging the student to **rate** the intensity of the effects of various musical situations. This encourages fine distinctions and refined hearing. For example, instead of just saying that a particular dissonance is "harsh", compare it to others and try to grade them all on a "scale of harshness". Then, try to pinpoint which elements determine the force of the effect. This also helps in making distinctions which are useful beyond one particular style.

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 from 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 as 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.

Although some of the notions presented here may also apply to functional music (e.g. music for religious services, ceremonial occasions, commercials, etc.) all of 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 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 the listener's attention migrates frequently between various parts, there is always a single focus at any given moment. 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 **one leading line** is central not only to the study of counterpoint, but also 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 strands 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 or find — and also because the ear tends to deduce continuity, in part, from common register.

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 a line. Changes of direction and, especially, extreme notes (top and bottom) are important events, memorable for the listener. In the case of lines which are vocal in inspiration, 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 registers, 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 in 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 exuberant examples of this technique are of course the solo violin and cello suites of Bach.

Accent

Accent is an important property of line, since not all the notes in a given line are of equal importance. Highlights and contrasts provide interest and richness, creating a more interesting profile.

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

- agogic accent (accent by duration). This is the normal accent in Renaissance music, wherein barlines were not used to define meters. Renaissance polyphony, for all its impressive euphony, is rich in accentual conflict when properly sung, since long notes arrive independently in each part.



Each note which starts a slur here would be lightly accented, creating an interesting independence of accents between the two parts.

- extreme pitch, especially high points



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 increasing the music's drive. Used well, this is a powerful cue that culmination is approaching. Used poorly, 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 and keep the music alive 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 of 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 notes
- neighbour notes
- indirect approaches, including changes of direction and 8ve displacements



Underlying the melody in this example is a simple rise from C to G. 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. This "detour" has the effect of making a second approach to the G, from above, delaying the primary one, from below.



This example features the very common technique of octave displacement. This manoeuvre 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 neighbour motions which precede it. The neighbour 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).



Suspensions are one of the oldest of dissonance formulas; they result from the fact that it is easier for a singer to vocally "find" a dissonant note if it is already sounding (in the previous harmony) as a consonance.

Some of these categories correspond to the species of traditional contrapuntal pedagogy: This is another argument for using the species approach, as long as it is 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 create connections that go 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 neighbour notes in neutral rhythm), in effect create motives requiring continuation.

The standard ways of using motives are listed in many texts and need not be detailed 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 easily noticed 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 than a simple continuation.

There is one special case which needs discussion here. Bach sometimes uses progressive ornamentation of a motive in the course of a section. (This is the basis for what Schoenberg calls the technique of "developing variation", and in fact he bases most of his theory of musical form on it.) As in the children's game, where each person whispers a message to his neighbour and where it eventually gets distorted beyond recognition, this kind of development can quickly lead the listener very far afield. There are three basic principles which govern coherence in this situation:

1. Each new version of the motive must be easily recognizable as an ornamentation / variation of the preceding version. In fact, often Bach will add extra associative elements to make the connection easier.
2. The variants must be close in time.
3. After several progressively more distant variants, Bach will return to a much closer variant in a very prominent place.

Here is an example, with analysis, of Bach's procedure.

inversion, 2nd beat is ornamented

associations: syncopation, ornamentation of the descending 2nd resolution

4

clear return of opening motive (LH)

associations: 16th notes scale (m.2), 16th notes neighbour note (m.3)

associations: repeats beats 2-3 of preceding bar on beats 1-2, and now extends the scale

7

new elements: 16th note appoggiaturas, etc. to make the climax of the phrase more intense

cadence: neutral arpeggiation

clear return of opening motive (LH)

tr

(etc. ...)

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 just 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 can be 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 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 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, in virtually any contrapuntal context, without drawing attention to themselves, whether or not they are present in the work's original thematic material. These simple resources often better highlight important ideas than would the competing presence of other, more distinctive motives.

One useful technique for reducing the density of contrapuntal textures without losing the independent interest of each line is to stagger rhythmic doubling: several parts can share rhythmic values, as long as they don't consistently begin and end their 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. Thus the texture remains transparent, but no two lines ever go for long in rhythmic unison.

Chapter 2: Harmony

It may seem odd to move 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 ensemble. No matter how independent the lines in question, we always hear a whole — although with some perception of foreground and

background — and not simply independent sounds. 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 is unable to distinguish independent lines, but that one cannot simultaneously pay **equal** attention to them at the same time. Nor can one hear them out of their harmonic context, at least as long as they are being played together. If the listener is to have the impression of related events occurring 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 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 work on harmony.

Richness

Random vertical encounters do not constitute harmony, in any serious sense: a harmonic language implies coherence. And there are many artistic advantages to be gained from fine control of harmonic tension and direction.

If the counterpoint is not to sound haphazard or rough, the harmony needs to be as rich as possible. "Rich", in a classical, triadic context, generally means full — containing the third of the chord, and often using sevenths — 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 whatever characteristic chordal sonorities are being implied, 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 emptiness or harshness of harmonic effect. The result **distracts** the listener from the flow of the music.

- Salient parallel 5ths and 8ves. The key word here is "salient".



The parallel octaves in the first example here are extremely prominent: Each of the first two bars begins and ends with the same note; the ear notices both the accented notes, and the progression from the last note of the bar to the first note of the next. The situation in the second example is only slightly better: now the last notes no longer return to the octaves. But the accented first beat octaves are still very salient.



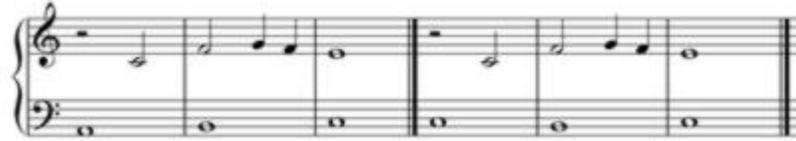
However, certain parallel 5ths and 8ves, although prohibited in conventional species counterpoint, are quite innocuous, even unnoticeable. In most species approaches, the octaves created between the C in the first bar of the above example and the D in the second measure would be prohibited as being rhythmically too close. However, they are not really very disturbing to the ear, because the notes in question are not accented, not on corresponding beats, and the motives in the two bars do not correspond. The ear is thus not encouraged in any way to associate these octaves. In effect, the "rule" in the species approach is poorly formulated. Pedagogically, it is more useful to discuss why certain cases are less disturbing than some others. Such discussions help the student refine his hearing and better predict how specific musical situations will be perceived; whereas blanket prohibitions do not encourage aural sensitivity.

- direct 5ths and 8ves (where the parts move in similar motion into an octave or a fifth, especially if by leap in the upper part) between outer parts, unless softened by a suspension or other prominent harmonic richness elsewhere.



Compare the direct octave (into the 1st beat, 2nd bar) in the first example, which is 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 distracts the ear 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 between soprano and bass creates a strong accent on the tritone in bar 2. In the second example, this accent is somewhat weakened by the contrary motion of the bass.

- parallel dissonances; overuse of bare intervals



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, its resolution makes a bare fourth with the bass). Then, the last beat of the bar has no 3rd. The 7ths sound rough, and what follows sounds empty.

Conversely, richness can 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, in another part.
- doubling dissonances at the third or the sixth. As will be seen later, 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 be heightened. In the first, the arrival on the major seventh in bar 3 (second beat) 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 as in a course of chromatic harmony, by the end of four part contrapuntal study. 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.



The beginning of 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 progresses 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 the appoggiatura (approached by leap); however in this case the leap to the dissonance is used as a motive. Otherwise, apart from very occasional special cases, like word painting, 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 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

Introduction

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, each member must 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 compelling results.)

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 example, the soprano presents a chorale melody in long notes, the alto develops a neighbour note motive, and the bass has a repeated note motive. (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. (Note: The "liberties" at the end - the change of chord on the last beat of bar 3, and the accented passing tone on the downbeat in bar 4 - are musically fluent and logical, and should not be prohibited.)

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. **N.B.: The number of planes and the number of real parts (or "voices") do not necessarily correspond.** For example, in *Ach wie nichtig, ach wie flüchtig*, from Bach's *Orgelbuchlein*, the top part contains the chorale melody in long values, the two middle parts imitate each other using a scale motive in 16th notes, and the bass is organized around another motive entirely. In this case, we have three rhythmic and timbral planes, but four parts. 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.

excerpt from Symphony #5 by Alan Belkin

Adagio ♩ = 40

Piccolo
Clarinet
Bassoon
Horn
Violin I
Cello
Double Bass

Picc.
Vin. I
D.B.

Picc.
Cls.
Vc.
D.B.

In this example, from my fifth symphony, the piccolo solo acts as one plane; the low string counterpoint constitutes another. The strings continue seamlessly as the piccolo finishes its phrase and the clarinet begins an answer to the piccolo. Note that such strongly contrasting, stratified counterpoint implies a fairly large form for elaboration.

A counterpoint of multiple polyphonic planes is also possible, for example, in polychoral writing, or in certain operatic ensembles. For example at the end of Act I, Scene 2, in Verdi's *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. This chattering is itself subdivided contrapuntally into two groups, male and female. Usually, the more in dependant planes there are, the simpler they are, so as not to clog the texture.

For an even more extreme example, see 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 more obscure the overall momentum of the music becomes. (Hence the inertia of Ligeti's "micro-polyphony".) Less coordinated lines suggest conflict, creating restlessness and tension. (There are perceptual limits: Overly dense textures tend towards inertia, particularly if there is uncertainty about which is the leading line at any given moment. The listener is reduced to trying to decipher the complexity.)

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 direction and a sense of increasingly powerful 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 comes to the foreground and an old one gradually recedes. One of the major differences between Baroque and classical orchestration is that in the former, the layout of the planes tends to be consistent over whole movements, or at least very long sections; 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 other parts or subgroups avoid, 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 continually. In studying counterpoint, there are advantages to beginning with stratified textures (there is no need to deal with the developmental implications of characteristic motives), and indeed the species approach is limited almost entirely to such layouts.

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 is also designed to act as a functional 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 distinct themes. Without contrast, there is no particular interest in switching the parts around.

There are two main constraints:

1. Avoiding intervals which create incoherent or unresolved dissonances when inverted.
2. Not exceeding the interval of inversion between the two parts. This is a direct outgrowth of the need for contrast: Exceeding the interval of inversion produces crossing when inverted, which weakens the distinctness of the inverted combination.

Inversion at intervals other 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 of its positions. The difficulty in constructing a complete fugue out of the various permutations of a given three or four part combination is mainly one of knitting the various inverted combinations into a convincing continuity. The challenge here lies in creating smooth melodic and

harmonic joints. 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 also be used to represent the changing 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. Bach simply avoids placing such lines in the bass.

Counterpoint and orchestration

The study of counterpoint normally begins with vocal writing. This is logical, for several reasons:

- Everyone has a voice; and at least minimal experience with singing.
- All the parts will have the same timbre, and will blend without special effort, 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 would be quite hard to persuade a listener that a line begun by the violin is continued by the horn! (In the example from my fifth symphony, above, difference of timbre is reinforced by contrast of register and of rhythm.)

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 pedals either play the bass of the secondary plane, or form a separate, third plane. 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 elsewhere momentarily, but melodically the main line does not migrate.

On the other hand, in an orchestral context where timbre is constantly changing, not only will the main line migrate frequently, but subsidiary lines will 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 a fixed number of parts, and the rest filled out as good orchestration, rather than as abstract counterpoint. This opens up a whole world of musically fascinating possibilities, which we explore further in our volume on orchestration.

Finally, let us mention here the way that counterpoint in more than four or five parts can be dramatized by subdividing the whole ensemble into smaller, spatially separated groups, to create stereophonic effects, e.g. in Gabrielli. Real counterpoint in more than five parts, undivided into subgroups, is exceedingly rare; When it does appear it is usually at a climactic moment in a polychoral context.

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 a composer writes for instruments, he has a choice: He can write as though for voices (e.g. Bach, *Well Tempered Keyboard*, 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. Registers must also be treated differently on a more subtle level. For example, voices are naturally more subdued in their lower range and get louder as they rise. Certain instruments (oboe, bassoon) do the opposite. Writing all the woodwind 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 appears in 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 in which instrumental and vocal counterpoint differ is the use of crossing. In vocal counterpoint sustained crossing is rare and is largely 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 using the instrument in an unfettered way, without constant recourse to extreme registers, will lead to frequent crossing. This is especially the case with strings. Indeed, string quartet writing **without** crossing tends to be rather anaemic.

III

Adagio ♩ = 80

The image displays three systems of musical notation for a quartet. Each system consists of four staves: Violin I (top), Violin II, Viola, and Cello/Double Bass (bottom). The music is in 8/8 time and marked 'Adagio' with a tempo of 80 beats per minute. The first system (measures 1-4) features a piano (*p*) dynamic. The second system (measures 5-8) includes a *pp* dynamic marking. The third system (measures 9-12) includes an *arco* marking. The notation includes various rhythmic values, slurs, and dynamic markings.

In this example, from the 3rd movement of my 4th Quartet, note how the viola and the second violin leapfrog over each other in m. 6, 8, 10, and 11. Similarly, the 1st and 2nd violins take turns on top in m. 16, 17, and 19.

- 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. Without going into exhaustive detail here about idiomatic instrumental writing for each family, we will mention here the effects of a few common instrumental idioms on contrapuntal writing.

N.B. Because idioms are consistent patterns, they should normally be treated as motives.

Strings

For the voice, conjunct movement is the norm. For strings, the notion of "position" replaces that of conjunct movement: From a single position a string player commands notes covering about 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 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. Multiple complex compound lines easily overload the texture.

Woodwinds

Woodwinds resemble the voice more than do strings: they need to breathe. (Another weakness in the strict species approach: The student never learns to use rests!) Certain woodwinds are less agile than others in leaping (although they still surpass the voice in this regard). Woodwinds, however, 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 does 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 terms of 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

Fugue

Fugue is usually considered the apotheosis of contrapuntal study.

In his article on fugue in *The Forms of Music*, the collection of his Encyclopaedia Britannica articles, Donald Francis Tovey suggests that fugue is not so much a form as a set of textural procedures: The decision to write a fugue implies almost nothing about large scale form, compared to, say, a sonata. Even the seemingly obvious 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 can be realized, does dictate some major tonal (and, in certain periods, thematic) points of reference.

As in our other online books, we will not supply a substitute here for a full-fledged textbook on fugue (readers are referred to Gedalge's excellent *Traité de la Fugue*). However, we will make some observations about the best approach to studying fugue, and also propose definitions of the components of a fugue which correspond to Bach's actual practice, as opposed to scholastic models. (For a thorough musicological study of Bach's fugal practice in the *Well Tempered Keyboard*, see Ludwig Czaczkes, *Analyse des wohltemperierten Klaviers*, unfortunately not available in English.) We will also make some comments about the artistic aspects of various fugal procedures. (Gedalge's chapter, "The Musical Composition of the Fugue" is excellent in this regard, although it stays within the context of the school fugue.)

Before beginning, more about the school fugue ("la fugue d'école"): This practice form, particularly common in French musical pedagogy, is an artificial construction, corresponding to nothing in the standard repertoire. Its justification for existence is the fact that it gives the beginner a road map in planning his first fugues, and systematic practice in all the major fugal techniques. Pedagogically, however, this road map is overly standardized. It is best used only for the beginner's first few fugues, and then gradually opened up to allow the student more individual choices. In the end, fugue should be approached as real

composition. This implies that the formal design will be an outgrowth of the material, rather than a mold into which the material is poured.

Whatever the pedagogical system used, 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. It stimulates invention, due to its requirement that the composer constantly recombine a small bank of motives into convincing new melodies.

Normally, composing a fugue requires one to build a substantial musical structure without major contrasting ideas. Put differently, the success of a simple fugue depends entirely on the ability to build intensity, by imaginatively developing one main idea, in an imitative texture.

Let us examine the elements of a fugue, one by one. In all but the final section of this discussion we will refer to Bach's practice as the norm.

The theme (subject)

A fugue should be a natural outgrowth of its theme(s). While it makes sense for a beginner to use subjects written by others, at some point it is important for the student to write his own themes. A good fugue theme has the following characteristics:

- It is concentrated, avoiding too many different motives; this helps it to have a strong and memorable character.
- It is melodically interesting enough to merit repeated, prominent presentation.
- It lends itself to fragmentation and to various sorts of imitation.

One of the goals in teaching fugue is to make the student (quickly) aware of the developmental potential of a given theme; this is another reason for requiring him to eventually compose his own.

Apart from the contrapuntal possibilities of a given fugue subject, its musical character will strongly influence the formal layout of the fugue. No fugal analysis is complete without considering the relationship between its theme and the way the composition is worked out. To take three striking examples:

- Bach, D major organ fugue, BWV 532: The virtuoso instrumental theme 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 of the repetition of two simple motives. The interest of this fugue depends entirely on its modulations and on the excitement of the imitative "conversations", combined with sheer speed.

- Bach, *Well Tempered Keyboard*, second book, fugue in E major: The 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. This fugue could be sung beautifully, as is, by a vocal ensemble.
- Bach, *Well Tempered Keyboard*, second book, fugue in G major: The subject is in a lively, instrumental style, with a range of an octave and a half. Not surprisingly, this fugue is in 3 parts (the theme needs room to move freely without clutter), and culminates in a toccata-like climax (m. 62), which grows naturally from the light character of the theme.

Tonal answer

Tonal answer exists for one reason only: to tonally unify the first 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 (in particular, a prominent 5th degree at the beginning of the subject will emphasize the 2nd scale degree in the answer), or, in the case of a modulating subject, lead away from the tonic/dominant axis. Tonal answer signifies a subtle modification of the theme - which must not call attention to itself - permitting the opening group of entries, as a section, to emphasize only the tonic and dominant. The important qualification "which should not call attention to itself" lies behind the rather abstruse manoeuvres often suggested for finding a tonal answer: A compromise must be reached between the harmonic and melodic changes required, and maintenance of the subject's clear identity. 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(s) required will be the least unsettling. In most cases, these places involve leaps and/or rhythmic stops. This technique is also relevant outside of fugue: 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 can never develop a subtle sense of formal balance.

Countersubject

The countersubject is a recurring counterpoint to the theme, often (but not always) adding its own motives. When present - it is **not** obligatory - it enhances and sharpens the profile of the theme through contrast, filling in rhythmic gaps, enriching the harmony through suspensions, etc. Normally it is in invertible counterpoint with the theme, allowing each to appear as a bass to the other. However there are examples in Bach of "pseudo-countersubjects", which are not invertible but nonetheless recur: Bach simply avoids the problematic positions! Incidentally, Bach also sometimes uses recurring motives to accompany the

theme without giving them the complete melodic contour of a genuine counter-theme. An example occurs in The G major fugue of the 1st book of the *Well Tempered Keyboard*, where what seems at first like a normal countersubject (m. 6 ff, top voice) in fact recurs only in part (.e.g. m. 12 ff, middle voice) in the following entry, and very sporadically thereafter.

In other words, Bach's actual fugal practice is a form of free composition, where musical invention and momentum count more than academic rigor. However, it does not suffice to simply assert that "Bach was a genius"; rather, the student should aim to understand **why** Bach diverges from normal practice in such cases. Invariably, his solution is musically superior.

Exposition

In the opening exposition of a fugue, normally each voice enters with the subject in turn, and then continues with the countersubject (if there is one) while the remaining voices come in. Once the countersubject is complete, the line continues melodically, normally without introducing significant new material. This plan creates a natural, textural crescendo. It is important that this cumulative effect be reinforced by the details linking the entries. In particular, fugal exposition is a good place to learn how to "keep the listener afloat" by avoiding dead spots which weaken the élan. The most common such error is to harmonize entries (after the first one, by definition not harmonized) with chords having no tonal momentum. The worst such chord is usually the tonic in root position. Bach's practice is rather to create tension leading up to an entry, say with a rising line, and/or to have the new entry itself arrive at the same time as a suspension in another voice, thus making the new entry seem inevitable. It is rare for a voice to drop out for more than a beat or two during the exposition, since this would weaken the buildup of intensity. In particular, it is inadvisable to have a voice drop out at the moment of a new entry. This creates a hole in the texture and threatens to confuse the continuity of the individual parts.

The harmonic plan of the exposition is simple: In a tonal fugue, the first two entries are always in the tonic and the dominant, respectively. However, Bach does not always limit himself to simply continuing the alternation: At times the third entry will be in the dominant, and the fourth entry will return to the tonic. Again, his overall plan is governed by artistic decisions and not by convention.

Finally, a word about interpolations between entries within the exposition: Such mini-episodes, sometimes called codettas, serve several goals:

- They break up the squareness of equidistant successive entries.
- They sometimes allow for smoother modulation (to the dominant or the tonic, as the case may be).
- They can be used to create more momentum for the coming entry.

Episode

An episode is a portion of the fugue where the subject does not appear as a melodic whole. Most episodes are constructed as harmonic sequences, and draw their motives from the theme and countersubject. Due to the predictable nature of any sequence, episodes frequently "lower the temperature" of the fugue, allowing the form to relax, to breathe. Often the next voice to present the complete subject is absent during the episode, making its return with the entry a special event. This type of episode is therefore also thinner in texture. As mentioned above, occasionally Bach writes fugues with no episodes whatsoever.

Internal Expositions

Fugue originated in the old vocal motet, where each line of text engenders a separate point of imitation. Most fugues reflect these origins, in an alteration between entries of the subject, possibly in groups of 2 or 3 voices, and episodes, where the subject is not present as a whole. While the first exposition in the fugue normally brings in all the voices one after the other, these "internal expositions" are much less predictable, both as to number of entries (sometimes only one), and as to tonal organization. It would be formally monotonous to restart each inner exposition with only one voice, so the voices which do not have the subject usually continue in free imitation, instead of stopping. The countersubject, if there is one, may or may not be present.

Finally, inner entries normally explore tonal areas away from the tonic, often reached through sequential modulation in the preceding episode. In this sense, the episodes and the inner entries form a sort of development section, although not in the sense of sonata form; in the latter, the pace and range of modulation would normally increase; this is not normally the case in fugue.

Stretto

As for stretto, there are two points to be made.

First, While the convention of a series of increasingly close stretti in the school fugue can indeed create suspense, such schemes are not at all the norm in Bach's fugues. There are many Bach fugues which use stretto here and there, in no particular order of closeness of imitation (e.g. the fugue in Eb minor from the 1st book of the *Well Tempered Keyboard*.) As well, Bach seems to have conceived of a special type of fugue, consisting entirely of stretto imitation. As examples, see the fugues mentioned above as having no episodes: the C major fugue in Vol. 1 and the D major fugue in Vol. 2 of the *Well Tempered Keyboard*.

Second, a 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 most audible part of any canonic imitation occurs at the beginning of the imitation, even if the canon breaks down after the opening, the effect can still be successful. This rule applies even if the sequence is camouflaged,



The second motive (a2) of the theme here is simply an ornamentation of the first (a1). The underlying sequence is clear.

Pedal point

The pedal point, an obligatory part of the school fugue, is, once again, not a norm in Bach. Tonic pedals do often end Bach fugues, simply because they are a good way to stabilize the fairly even harmonic and modulatory rhythm typical of all fugues.

Ending a fugue

The difficulty of ending a fugue lies in stopping its momentum. Here are several common ways to accomplish this (they may also be combined):

- Harmonic stasis: arrival on a dominant and/or a tonic pedal, as a means of braking the forward motion.
- Dissolving the imitative texture: The forward movement engendered by the continuous counterpoint gives way to a simpler texture, easier to bring to a stop.
- Climax and resolution: By definition, a climax is a high point, followed by a resolution. Once the fugue has reached its culmination, the cadence provides the final resolution.

Multiple Fugue

There are two types of multiple fugue:

1. A full fugue is presented on one subject; its final cadence is linked to another fully worked out fugue on a new subject, and so on, up to three, or occasionally four subjects. Once the separate subjects have been developed individually in their respective fugues, the last fugue ends with one or more presentations of the combined subjects, which of course have

been composed from the start in invertible counterpoint. This final, culminating combination may be set off by cadential punctuation, always a special event in the normally continuous fugal texture. If not, its arrival will be prepared by a buildup of intensity in register, texture, harmony, etc. This final synthesis neatly brings the normal, accumulative nature of the fugal form to a peak, and at the same time adds a powerful psychological boost, stimulating the listener's memory with the return of thematic material from a previous section. This by far the most common kind of multiple fugue.

2. All the subjects are presented simultaneously, from the first entry on. The effect is only slightly more dense than a fugue with a strong countersubject, since the only really noticeable difference occurs in the very first entry.

The most important issues: flow and momentum

As we have repeatedly remarked above, Bach is no slave to formulas. When he deviates from more schematic solutions, it is always interesting to consider why. The answer is usually to be found in the way the changes either make the line more interesting, enrich the harmony, or somehow increase the élan of the piece as a whole. Given that fugue functions mainly by accumulation, rather than through strong contrasts, in each Bach fugue it is fascinating to trace the waves of growing intensity, and then to remark how details of construction are refined to reinforce punctuation, to vary the melodic line, to drive more powerfully into an entry or a climax, etc. Real mastery of fugue shows itself, finally, in mastery of musical movement. Each Bach fugue has its own character, growing out of its material, and is a unique composition with its own form.

Fugue today: new possibilities

One might wonder whether anything can still be done with this venerable form. In the twentieth century, both Hindemith and Shostakovich composed imposing collections of fugues, for piano. As a personal answer to this question, I composed twelve preludes and fugues for piano, in 2008. Each fugue contains some technical novelty. Examples include, among other possibilities:

- a slow, serious fugue, ending with an exposition in reverse. (C#)
- a stretto fugue, in which each stretto increases the size of the leaps in the subject. (Eb)
- an energetic fugue with a very wide ranging subject: It is sometimes shared between the two outer voices. (E)
- a fugue with a non-monophonic subject. (G)
- a fugue on a subject in an odd, symmetrical mode, leading to an unconventional answer. It ends by fragmenting into silences. (G#)
- a large imposing fugue, with several entirely homophonic episodes. (B)

(Links are to performances of these preludes and fugues. Links to the entire set can be found [here](#).)

Dramatic Fugue: Beethoven, Mahler, etc.

Fugue is not inherently a dramatic form, built around sudden, major contrasts. Rather, its intensity results from accumulated rhythmic, harmonic and contrapuntal momentum. Since sonata forms develop through contrasts, and fugal forms develop by more or less linear accumulation of intensity, the combination of the two can engender intriguing large structures, with varying degrees of élan.

Composers have, in fact, experimented using fugue in hybrid forms. For example, the fugue in Bach's giant E minor Prelude and Fugue for organ (BWV 548) combines fugue and concerto principles. Following the powerful final cadence of the first fugal section, the monumental middle section alternates fugal passages and more brilliant, toccata-like writing. The work is rounded off by the literal return of the first section. Note the difference between this kind of movement, framed by one recurring fugue, and limited to one subject, and the typical toccata style in Buxtehude and other predecessors of Bach: The latter virtually never bring back fugal material previously heard: Their works therefore typically have a more improvisatory quality.

Beethoven introduces fugues into sonata style in many of his late works, exploring the possibilities of dramatic interruption. In these pieces, a climax in the fugue leads to an inconclusive stop, followed by a return or an elaboration of some previously presented (non-fugal) material, often from another movement. Eventually the fugue returns and leads to a more powerful culmination.

These possibilities are carried farther by Mahler, e.g. in the final fugal movement of his 5th Symphony. Beethoven's dramatic use of interruptions and contrasts within the fugue is here expanded in time scale, and with the full orchestra. The principle is the same, but the emotional range is wider.

The difference between such hybrid forms and, say, the insertion of a fugato section into a sonata movement, has to do with overall proportions (the fugue is not just a small episode in a non-fugal whole), the material used (the non-fugal sections may use contrasting material, whereas in a fugal episode in a sonata, usually the fugato theme is derived from the movement's main material), and the fact that the fugue **returns** as a major formal turning point.

Another critical aspect of such dramatic hybrid forms is the way the fugal sections are knitted into the whole: The fugal and non-fugal sections are connected with propulsive transitions, rather than squarely marked off with solid cadences.

75 $\text{♩} = 100$

Ww. *f*

Br. (*piano*) *f*

Str. *f*

Ww. *f*

Br. *p* *f*

Str. *f*

rit. poco a poco

Ww. *dim.* *p*

Br. *dim.*

Str. *dim.* *p*

In this example, from the my 5th symphony, a vigorous fugue arrives at a climax (the cymbal crash in m. 88), which serves as a turning point into a contrasting section, in a simpler, stratified texture. This section is not based in any obvious way on the fugal material; its goal is rather to increase the music's emotional range.

Finally, let us mention an intriguing possibility: using fugal textures in the orchestra simultaneously with non-fugal continuity, in two different planes. This area remains largely unexplored.

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 types of canon are equally musically interesting or useful. Some are so abstruse as to be nothing but 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.

The most common sort of canon, by far, 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, suggests the same harmonies yet again. 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 on B 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 - an accented neighbour 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, found with some frequency, include two part canons and canons by inversion, at various intervals, often with added basses.

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, always 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.

excerpt from Passacaglia and Fugue
from Symphony #3, by Alan Belkin

The musical score is presented in four systems, each with three staves (treble, alto, and bass clefs).
- **System 1 (Introduction):** The bass staff features a slow, fragmentary passacaglia theme starting with a *ppp* dynamic. The flute (top staff) plays a slow, sustained melody. The piano (middle staff) provides harmonic support.
- **System 2 (Var. 1):** The flute melody becomes more active and melodic. The piano texture becomes more complex, and the bass line continues the theme. Dynamics include *p* and *pp*.
- **System 3 (Var. 2):** The string texture (piano and bass) becomes more energetic and rhythmic. The flute continues its active melody. Dynamics include *p*.
- **System 4:** Continues the energetic string texture and active flute melody.

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In this example, from my 3rd Symphony, the passacaglia theme (here in the bass) is presented, first in a fragmentary way (in the introduction), under a slow oboe melody. In Var. 1 a more active flute melody appears above the theme. Var. 2 follows, with a more energetic string texture. Thus, the three presentations create a progression in musical momentum.

After a series of grouped variations, a major contrast of some sort usually follows.

Chapter 6: Real world uses of counterpoint

Apart from the contrapuntal forms mentioned in Ch.5, 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; more 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 camouflaged.

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 mitigates 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

One final point remains: Like all musical juxtapositions, 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 an entire piece.

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

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