TONAL COUNTERPOINT

Musical examples played by a woodwind quartet and harpsichord

SCHOLASTIC RECORDS ST 3610 A/B/C/D

In the style of the 18th Century

Prepared by Vaclav Nelhybel

TONAL COUNTERPOINT

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SCHOLASTIC ST 3610 A/B/C/D

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Tonal Counterpoint In The Style of The XVIIIth Century

INTRODUCTION

Counterpoint is the art of combining two or more melodic lines according to certain rules. In tonal counterpoint, intervals are formed by the simultaneity of several melodic lines, and the progression of these intervals is expected to result in chord progressions according to the rules of tonal harmony. We shall play a short passage consisting of three simultaneous melodic lines:

Music 1

And here is the latent chord progression:

Music 2

This progression is correct according to the rules of tonal harmony. Now we shall combine examples one and two. This results in playing the three melodic lines with their latent harmony:

Music 3

Contrapuntal music written in the style of the 18th century is mostly instrumental and even the vocal music of that era is strongly influenced by the peculiarities of the instrumental style of the time. All our demonstrations are instrumental. We are using one flute, one oboe, one bassoon and a harpsichord, all instruments typical of the 18th century. In order to demonstrate music examples in four parts, we added a fourth wind instrument, not typical of that period, the clarinet. By using the clarinet in the woodwind quartet, we can achieve more contrast in sonority than we would have by adding a second flute or second oboe to the existing trio.

GENERAL INFORMATION:

Keys: Music is written in either a major

Music 4

or a minor key

Music 5

Rhythm: All rhythmical values are used: whole -- half -- quarter -- eighth -- sixteenth and thirty-second notes.

Meter: Measures with regular accent patterns are used:

Duple time: 2/2 -- 2/4 -- 6/4 -- 6/8
Triple time: 3/2 -- 3/4 -- 3/8 -- 9/4 -- 9/8
Quadruple time: 4/4 -- 4/8 -- 12/8

The foregoing measures all consist of either two (duple), three (triple) or four (quadruple) beats or their multiples (6/8 -- 9/8 -- 12/8). These are measures with regular accent patterns.

Measures with irregular accent patterns have two or more accents, each followed by a varying number of unaccented beats. Thus a 5/4 measure consists of two and three or of three and two beats, or a 7/4 measure of three and four, or three and two and two, or four and three, or two and two and three beats.

Measures with irregular accent patterns are not used in music written in tonal counterpoint.

SYNCOPATION

We shall play a short example of music written in 2/4 time:

Music 6

In measures 6, 7, 8 and 11, the accented part of the beat (first eighth note) is tied to the unaccented part of the preceding beat (second eighth note). This results in a shifting of accents called syncopation. Here is an example of syncopation, from Fugue #1 in C major of the Well Tempered Clavier, Part I, by Bach:

Music 7

Band 1: MELODY

A melodic line in homophonic music is the principal element, supported by chordal accompaniment. A contrapuntal melody is not accompanied by the other melodic lines.

In contrapuntal music every melodic line is a free, non-periodic melody representing a flow of energy, whose fluctuation is the moving force of the polyphonic structure.

This moving energy of a melody is the result of coordination of melodic intervals, metric accents and rhythmic values.

We shall play a short melody and analyze the coordination of its intervals, metric accents and rhythmic values.

Music 8

This melody is not periodic and has the drive typical of 18th century contrapuntal music. It begins with a strong melodic interval, an upward skip of an octave.

Music 9

This is the first measure of the illustration. The jump of an octave generates a powerful melodic impulse for the following two measures:

Music 10

The melody in the second, third and fourth measures is a chain of small intervals. With the exception of one skip of a third, only intervals of a second are used.

Rhythmically, the two quarter notes in the first measure briskly outline the tonal space of an octave. In the following three measures this tonal space of an octave is filled in by smaller rhythmical values (eighths and sixteenths).

Music 11

The skeleton of the initial four measures of our melody actually consists of an interval of an octave up and an octave down. The flute in the next example plays the elaborated melody, the harpsichord the skeleton of an octave up and down.

Music 12

These four measures finish on the tonic (B flat), but the end is not satisfactory. The final tone is reached by a weak dropping into the tonic without a strong harmonic feeling of concluding necessity. This can be adjusted by inserting, in the fourth measure, an upward leap to G, which has a latent sub-dominant harmonic function; this is followed by two notes (F and Eb) with a dominant function. Thus we establish the perfect cadential formula: sub-dominant, dominant, tonic:

Music 13

The importance of the inserted G, which falls on the weak second half of the first beat, is stressed by accenting it.

Music 14

The rhythmical values are distributed in such a manner as to give the melody a strong impetus toward the concluding cadence. Let us play the melody, but omit all sixteenth notes, with the exception of the final cadence:

Music 15

This outline reveals the actual metric construction of the melody. The eighth notes, A and F, are on unaccented second beats of the 2/4 measures; but since they are accented through their longer values, the result is syncopation in quarter notes.

Music 16

The two tied eighth notes of G in measure four begin on the second part of the first beat, with an irregular accent; the resulting syncopation is therefore one in eighth note values.

Music 17

In measures two and three the accents were shifted in quarter note values, in measure four in eighth notes. Thus measure four is a diminution of measures two and three. Here are measures two and three:

Music 18

And here is measure four:

Music 19

The syncopation in quarter notes, followed by syncopation in eighth notes, causes the strong pull of the melody toward the final tonic:

Music 20

To this melody we now add two other melodic lines, which by their non-syncopated outline will stress the metric and rhythmic particularities of the first melody:

Music 21

Band 2: MELODIC OUTLINE

We have analyzed a short melody and pointed out how the coordination of melodic intervals, metric accents and rhythmic values generate the drive of a contrapuntal melody.

Now we shall concentrate on the technique of how to create a melody. The beginning of a contrapuntal melody is of utmost importance. A small group of intervals must be arranged, rhythmically or melodically, in such a way as to create a characteristic phrase, which is able to attract the attention of the ear. Here are several such melodic beginnings. First the theme from Fugue #5, in D major of the Well Tempered Clavier, Part I, by Bach. Its characteristic element is an accumulation of small rhythmic values at the start:

Music 22

Also from the Well Tempered Clavier, Part I, this theme of the Fugue #2 in c minor, with its characteristic nucleus of two sixteenth notes followed by three eighth notes:

Music 23

The theme from Fugue #4 in c# minor, Part I, is not interesting in rhythm, but impresses itself on our ear because of the intervals between its initial four slow notes:

Music 24

THE MOTIVE

The motive is the nucleus of the melody. Here is a motive:

Music 25

The simplest way to develop a motive into a melody is to repeat it on various pitch levels. In the next example, the motive is played three times, each time one fourth higher:

Music 26

THE SEQUENCE

Such a repetition of a motive (or any melodic, harmonic or rhythmic pattern) on various pitch levels is called a sequence. There should be no more than three consecutive statements of the motive in a well-balanced outline of a melody. For this reason, if we want to use the sequence of example #26 as the beginning of a melody, we must find a different device to further develop the melodic line. Here is one possibility:

Music 27

Measures four and five do not repeat the original motive, but use the rhythmic pattern of the fourth, fifth and sixth tones of the original motive as the basis of a new motive and a new sequence:

Music 28

The second motive is only two quarter beats long, the length of the original motive is three quarters. This introduces into the flow of the melody a strong driving metric element. The new motive is then repeated three times, the last time slightly varied:

Music 29

The irregular last quarter beat, consisting of four sixteenth notes, is repeated once at the beginning of measure six.

Music 30

The end of the melody is free, using the syncopated pattern of the beginning of the first motive:

Music 31

The following scheme in the text shows the sequential layout of the melody and the technique of feeding the thrust of the melody by shortening the length of each succeeding motive in the sequence -- from 3/4 to 2/4 and finally to 1/4 -- and by diminishing the number of repeats of the motive in the third sequence to two:

All that remains to be done now is to check the latent harmony of this melody. First the melody, with two added melodic lines, is played by three woodwinds, with three-part support in the harpsichord:

Music 32

Now we shall hear the chord progressions alone, played by the harpsichord:

Music 33

Finally the chordal progression by the harpsichord, together with the three melodic lines played by the woodwinds:

Music 34

Another way to develop a melody from a motive is by making a rhythmic sequence. To do this we repeat the rhythmic pattern of the motive, but change the melodic intervals. In the next example we repeat such a rhythmic pattern three times, followed by a free ending of two measures:

Music 35

A contrasting procedure is to maintain the melodic intervals exactly while changing the rhythm. Now we shall hear three thythmically varied repetitions of the motive, followed by a free cadence:

Music 36

A frequent practice is repetition in inversion (that is, the direction of the intervals is the exact opposite -- a third up becomes a third down and so on: the motive remains unchanged rhythmically, while all melodic intervals are inverted:

Music 37

A motive contraction is a repetition of a motive, not in its entirety, but with some tones omitted. In our next illustration the motive is repeated three times; in the last two statements, the second and third tones are omitted:

Music 38

Motive extension is the opposite procedure; in the restatements of the motive, we repeat certain segments of it. The next example is a sequence with three statements of a motive on different pitch levels. The second and third statements are extended:

Music 39

In the following example, we shall demonstrate the diminution of a motive. In a sequence of three statements, the second and third repetitions are identical as to melodic intervals, the number of notes is the same, but the rhythmic values of some of the tones are halved:

Music 40

The reverse procedure is augmentation; in the repetition of a motive, the time value of certain tones is doubled:

Music 41

INTERRUPTED SEQUENCE

Free melodic sections can be interpolated between the restatements of a motive. The two interpolations we are now going to hear are identical, but on different pitch levels:

Music 42

In the preceding example, the flute played the motive and its two repetitions on different pitch levels, while the interpolations and the free ending were played by the oboe.

The next example also demonstrates an interrupted sequence. The repeated motive is marked "A", "A1" and "A2" in the text, the interpolations "B", "C", and "D". The three interpolations are not melodically identical, but free melodic fragments.

Music 43

Especially in long contrapuntal melodies, the motivic elaboration ceases toward the end and a flow of small rhythmical values leads the melody to its conclusion:

Music 44

There is one additional technique still to be mentioned; this is a melodic line (played by one instrument) which actually consists of two melodies, each on a different pitch level, combined in complementary rhythm, so that they are playable on the instrument:

Music 45

(End of Side One - Record I)

(Side 2, Record 1)

TWO-PART COUNTERPOINT

INTERVALS

The two melodic lines in two-part counterpoint create an interval which can be consonant or dissonant.

The consonant intervals are:

Perfect consonances: Unison; perfect fifth; and octave:

Imperfect consonances: Minor or major third; minor or major sixth:

The dissonant intervals are: Minor and major second; perfect fourth; augmented fourth (which is identical with a diminished fifth); and minor and major seventh:

CONSONANCES

Can be used on any beat without restriction.

DISSONANCES

The use of dissonances, however, is quite restricted, depending on whether the dissonance falls on an accented or an unaccented beat.

A dissonance on an unaccented beat can be used:

a) as a passing tone, moving stepwise up or down from one consonance to another. Here is an illustration:

Music 46

And here is an example of an irregular treatment of passing tones. The consonance (C#), which is supposed to follow the passing tone (B) stepwise, is preceded by another consonant or dissonant tone; in our example, a dissonant tone (D):

Music 47

b) as an alternating tone, which moves one step up or down and returns.

Music 48

The next example illustrates an irregular treatment of an alternating tone, which does not return to the initial tone:

Music 49

Dissonances on accented beats are allowed as:

a) suspensions: the dissonant tone is held over from the preceding unaccented beat, where it was a consonance. The dissonant tone is resolved by moving stepwise down on the following unaccented beat:

Music 50

b) retarded suspension: The resolution if the dissonance on an accented beat can be retarded, in our example by half a beat:

Music 51

c) appogiatura: If a dissonant tone enters on the accented beat unprepared, that is, not held over from the preceding unaccented beat, such a dissonance is called an appogiatura and is resolved by moving stepwise down on the following unaccented beat into a consonant interval:

Music 52

d) retarded appogiatura: the resolution of the dissonance can be delayed by insertion of one or more tones. Here are two resolutions retarded by half a beat each, and a third by one and a half beats:

Music 53

Band 1: SIMULTANEOUS MOTION

Parallel motion in fifths and octaves is not permitted.

Similar motion into the fifth or octave is not permitted. The only time similar motion into an octave is allowed is when one (preferably the upper) part is the leading tone and the other part is the fifth, both moving into a unison or an octave:

Music 54

CROSS-RELATIONS

This is the appearance of the unaltered and altered forms of the same tone in different voices in close succession, and is to be avoided. In the following example the B natural in the upper part is followed immediately by a Bb in the lower:

Music 55

The danger of cross-relations is obvious when a composition is in a melodic minor key, where the sixth and seventh steps of the scale have different accidentals when ascending or descending. This leads to difficulties when two voices move in contrary motion. In our example the C natural in the lower part is separated by a full two beats from the C# in the upper part. The Bb in the lower part is separated by one and a half beats from the B natural in the upper part.

Music 56

Band 2: MELODY IN TWO-PART COUNTERPOINT

The basic principle of counterpoint is the independence of the melodic lines involved in the contrapuntal structure. By what means do we achieve such independence?

First, melodically:

a) by avoiding parallel motion. Here is a duet, perfectly permissible in homophonic music, but impossible in counterpoint:

Music 57

b) by frequent use of contrary motion:

Music 58

The independence of the individual melodic lines can be stressed by rhythmic means. We must avoid the rhythmic identity or close similarity of both parts. Here is an example of two parts led melodically in strict contrary motion, but identical rhythmically. Again, such two-part writing is not permissible in contrapuntal music:

Music 59

The best way to achieve the independence of the individual parts is to use complementary rhythm: while one part has long rhythmical values, the other part moves in complementary values:

Music 60

A frequently used technique is to write one part in syncopation and the other without syncopation.

Band 3: HARMONY

All triads and seventh chords may be used in the latent harmonic chordal progressions resulting from the convergence of two parts.

TRIADS

To identify a triad by two tones, it is important to choose the most characteristic tones at the beginning of the harmonic function.

A contrapuntal composition in the style of the 18th century is strictly tonal. Thus it usually starts with the tonic triad. If this tonic triad is represented by the unison or octave, we must establish the major or minor key by introducing the third as soon as possible. The next example starts with an octave, followed, on the second part of the beat, by the minor third:

Music 61

In the following illustration, one part opens with a single tonic, followed in the other part by the whole broken triad: fifth, third, prime:

Music 62

And finally, the two parts create the interval of a third. This is the best way to identify the key:

Music 63

In the last three examples we called attention only to the first beat of a composition to the point where the key is established. In general, the best way to identify a triad (major or minor) is by using the root and the third:

Music 64

If we use the root and the fifth, the third must appear immediately thereafter:

Music 65

In the dominant function of a closing cadence, we may use the root and the fifth without the third, which is apparent to the ear:

Music 66

SEVENTH CHORDS

The most certain way of identifying the seventh chord is by use of the root and seventh of the chord. In the following illustration, the second beat (tones G and F)

Music 67

means the full seventh chord, G-B-D-F

Music 68

Another solution is to start with any two tones of the seventh chord and on the next beat introduce the third important tone. In the next example we shall start with the root and seventh, followed by the third:

Music 69

Here we start with the interval of the third, followed by the seventh:

Music 70

In the next illustration, both parts move, thus stating the complete seventh chord in two beats:

Music 71

In the following example, only one (the upper) part moves and plays all three remaining tones of the seventh chord:

Music 72

The seventh and the third of the seventh chord are another way of identifying the seventh chord from two parts:

Music 73

Here is the same situation with inverted parts:

Music 74

Especially in fast-moving music, where a beat is subdivided into smaller rhythmical parts (for example, a quarter note into four sixteenths), we may have a third at the beginning of the beat, and in the course of the rhythmical subdivision introduce the seventh or even the ninth, thus identifying the harmonic function of the whole beat as a seventh or a ninth chord:

Music 75

Many interesting ways of formulating seventh chords in two parts can be studied in any of Bach's two-part compositions. We recommend particularly an analysis of the Prelude in A minor, #20, in the second book of the Well-Tempered Clavier.

Band 3: IMITATION

A frequently used technique in contrapuntal music is imitation, which means that one part borrows from the other part its melodic intervals or rhythmic patterns, thus imitating the other part. If both the melodic intervals and their rhythmic patterns are borrowed, both parts are identical. This is the complete, perfect imitation, called canon. Canon is a contrapuntal form in which one part is repeated exactly in another part a certain time later. The exact repetition can be done in unison, an octave lower or higher, at the fifth or any other interval.

CANON AT THE UNISON

Here is a short musical passage:

Music 76

Now the oboe will play this melody and the harpsichord will repeat it exactly, entering two beats later. This is a canon at the unison:

Music 77

TONAL COUNTERPOINT Part II

CANON AT THE OCTAVE

If the second part is identical, but is played one octave lower (or higher), we have a canon at the octave.

Music 78

That was a canon at the lower octave. The next example is a canon at the higher octave:

Music 79

At the close of each canon a free ending has to be added to the first part, which started before the second part, in order to make both voices end at the same time.

The next illustration is a canon at the minor sixth:

Music 80

And here is another canon, more elaborate. The clarinet imitates exactly the initial eight measures of the flute a perfect fifth lower. Beginning with measure nine and ending with twenty-four, the clarinet imitates the flute at the interval of a perfect fourth:

Music 81

CANON IN INVERSION

The second part imitates the first part, but all the intervals of the imitating part are going in the opposite direction. This is a canon in inversion:

Music 82

CANON IN DIMINUTION

The imitating part (the clarinet in our next illustration) repeats the part of the bassoon one octave higher. The particularity of this example is that the note values of the bassoon melody are halved when played by the clarinet. This is a canon in diminution:

Music 83

CANON IN AUGMENTATION

In our next example, both parts start together. The lower part imitates the upper part exactly, one octave lower, but all rhythmical values are doubled. This is a canon in augmentation:

Music 84

CANON IN INVERSION AND AUGMENTATION

In the next example the lower part imitates the upper part in augmentation (the rhythmical values are doubled) as well as in inversion (all the intervals are turned around):

Music 85

CANON IN RETROGRADE MOTION (CRAB CANON)

In such a canon both parts are identical and proceed simultaneously, but one of the parts plays the music forward while the other part plays the same music backwards.

Here is the melody, played forward by the oboe:

Music 86

And here the clarinet plays the same music backwards:

Music 87

Now both instruments together in a crab canon:

Music 88

IMITATION

In the canons played thus far, the second part imitated the preceding part exactly. If the second voice does not repeat the first one exactly, but only uses certain fragments of it "freely," we call it Imitation. In the following example only the initial five beats of the upper part are repeated identically in the lower part. The rest is free imitation:

Music 89

Here is an example of rhythmic imitation. The rhythmic patterns of the first part are imitated but not the melodic intervals:

Music 90

(End of Record 1)

(Side 1 - Record 2)

MULTIPLE (INTERCHANGEABLE) COUNTERPOINT IN TWO PARTS

DOUBLE COUNTERPOINT AT THE OCTAVE

Double counterpoint in two parts is the method of writing both parts in such a way that they may interchange their positions as upper and lower voices without causing any breach of the rules governing dissonances. In our next example the oboe plays the upper, the clarinet the lower part:

Music 91

We shall now transpose the upper oboe part one octave lower; it becomes too low for the oboe and therefore the bassoon will play this part. The clarinet, which was the lower part, becomes the upper one. When the parts are switched by transposing one of them an octave lower or higher, it is called "double counter-

point at the octave". And here is the resulting example:

Music 92

Not every two-part setting is suitable for double counterpoint at the octave. As we can see from the following chart in the text, the intervals change when transposed: 8 becomes 1; 7 -- 2; 6 -- 3; 5 -- 4; 4 -- 5; 3 -- 6; 2 -- 7; and 1 -- 8.

The only critical interval is the consonant perfect fifth, which when transposed becomes a fourth, considered dissonant in counterpoint. This means that we must avoid, in the original (the not transposed) setting, the interval of a fifth on an accented beat, because when transposed it becomes a fourth, which as a dissonance cannot be used on an accented beat without proper preparation in accordance with the rules stated previously (such as suspension, appogiatura, and so on).

Music 93

Band 1: DOUBLE COUNTERPOINT AT THE TENTH

If a lower part in a two-part counterpoint can be transposed a tenth higher or the upper part a tenth lower and the treatment of the intervals between the two parts remains correct, such two parts are composed in double counterpoint at the tenth.

Here is a chart showing the change of intervals by transposition of a tenth up or down: 1 becomes 10; 2 -- 9; 3 -- 8; 4 -- 7; 5 -- 6; 6 -- 5; 7 -- 4; 8 -- 3; 9 -- 2; 10 -- 1.

The critical intervals are: the tenth, third and sixth. We must avoid parallel motion in tenths because in the transposition a tenth becomes a prime (unison). The same is true with thirds, which become octaves, and with sixths, which become fifths.

In the following example, we hear a duet for oboe and clarinet, written in double counterpoint at the tenth which could be reversed:

Music 94

Band 2: DOUBLE COUNTERPOINT AT THE TWELFTH

If a lower part in a two-part composition can be transposed a twelfth higher or an upper part a twelfth lower and the treatment of the intervals between the two upper parts remains correct, such two parts are composed in double counterpoint at the twelfth.

The following chart shows the change of intervals by transposition: 1 becomes 12; 2 -- 11; 3 -- 10; 4 -- 9; 5 -- 8; 6 -- 7; 7 -- 6; 8 -- 5; 9 -- 4; 10 -- 3; 11 -- 2; 12 -- 1.

The critical interval is the consonant sixth, which when transposed one twelfth becomes a dissonant seventh. For this reason we must treat the consonant sixth as a dissonance when writing in double counterpoint at the twelfth.

If we take any melody and transpose it one fifth higher (the twelfth is actually a fifth plus an octave) the transposed melody will be in a different key: if the original is in a key with flats, the transposition will be in a key with one flat less: for example, the original is in g minor, therefore the transposed melody is in d minor.

If the original is in a key with sharps, the transposition will be in a key with one more sharp; for example, the original is in A minor, therefore the transposed melody is in e minor. This will create certain problems at the end of a piece written in double counterpoint at the twelfth. We shall demonstrate this in the two following illustrations:

First, we shall play a duet for oboe and flute composed in double counterpoint at the twelfth:

Music 95

In the next example the bassoon plays the original flute part transposed one twelfth lower. The last note in the flute part was G, and therefore, transposed one twelfth lower, should be C. But as we shall see, the bassoon plays a G. This is a necessary adjustment to obtain an unequivocal cadence. The adjustment is always made in the transposed part.

Music 96

Band 3: DOUBLE COUNTERPOINT AT THE OCTAVE AND THE TENTH

We have seen what constitutes double counterpoint at the octave and at the tenth. A more difficult technique is to write two contrapuntal parts in such a way that the parts can switch their "lower-upper" positions by transposing one part an octave or a tenth. This means that all the rules about the treatment of intervals in double counterpoint at the octave as well as at the tenth must be obeyed. Here is such an example, a duet played by the oboe and the bassoon:

Music 97

Now we shall play a duet for oboe and clarinet, the clarinet playing the bassoon part from the preceding illustration, transposed one octave higher; this means that the lower bassoon part is composed in double counterpoint at the octave:

Music 98

Now the unchanged oboe part will be joined by the flute, which will play the original bassoon part transposed one tenth higher. Thus we see that the bassoon part is composed not only in double counterpoint at the octave, but at the tenth as well:

Music 99

In the following musical example we shall combine those last two illustrations: the oboe will play the not transposed part, the clarinet the transposition of the original bassoon part at the upper octave, and the flute, the transposition of the same bassoon part one tenth higher. The result is a melodic line (in the oboe) joined by the second part doubled in thirds:

Music 100

Band 4: DOUBLE COUNTERPOINT AT THE OCTAVE, TENTH AND TWELFTH

This means that a part can be transposed one octave, one tenth or one twelfth higher or lower. In the following musical illustrations in the script you will find some of the possible combinations:

The original two voices are: #4 and #5.

The voice #3 is the transposition of #5 one octave higher.

The voice #2 is the transposition of #5 one tenth higher.

And the voice #1 is the transposition of #5 one twelfth higher.

Band 5: CONTRAPUNTAL COMPOSITION

In a contrapuntal composition in two parts, we are vertically quite limited by the lack of a third part, which could fill out the two parts into a complete triad. The existing literature of two part contrapuntal compositions, however, shows that the skillful use of the techniques briefly described herein can produce highly artistic results.

The contrapuntal compositions of the 18th century are mostly written in a form called Invention.

INVENTION

An invention consists of two sections:

The First Section is most often shorter and never longer than the second section. Its conclusion is clearly marked by a half-cadence.

In an invention written in a minor key the half-cadence leads into the tonic of the relative major key: for instance, the invention is in A minor, therefore the first section ends on the chord C-E-G. The half-cadence in an invention in a major key leads into its dominant: for instance, in C major, into the chord G-B-D.

The Second Section develops the motivic material stated in the first section. The sequential technique is very frequently used here. The invention always ends in the tonic, on the same chord which opened it. In the next musical example we shall demonstrate, in miniature, the harmonic layout of an invention in a major key. The first section has four measures. This condensed invention being in C major, the first section ends on the dominant (G-B-D):

Music 101

That was the first section. The second one starts on the dominant and ends on the tonic. It is five measures long:

Music 102

Now follows the plan of an invention in a minor key. Both sections are equally long:

Music 103

This was the first section, ending on the tonic of C major, the relative major of a A minor, in which this illustration is written.

The second section starts in C major and ends on the A minor tonic:

Music 104

Bach's two-part inventions are the best material for further study and analysis of this form.

Band 6: THREE-PART COUNTERPOINT

All rules concerning melodic design and treatment of consonances and dissonances established for two-part counterpoint are valid for counterpoint in three parts.

In two-part counterpoint there was no limitation as to the distance between the two voices. In three-part counterpoint the interval between the two upper parts should not be greater than an octave. The third (lowest) part can be placed at any reasonable distance from the middle part.

HARMONY

Similar motion between the middle and either the high or the low part is permissible, but then the third voice must move in contrary motion. However, parallel motion between the two outer parts is not permitted:

Music 105

The opening or closing chord may be the tripled root of the chord:

Music 106

or the triad with the fifth omitted and the root doubled:

Music 107

or the full triad:

Music 108

The chord progressions in three-part counterpoint consist of triads and seventh chords. Triads can be used complete, or with the fifth omitted and the root doubled (see examples 106, 107, 108).

The seventh chords are used as follows:

With the fifth omitted:

Music 109

With the third omitted:

Music 110

Or even with both third and fifth omitted and the root doubled:

Music 111

RHYTHM

The balanced distribution of the rhythmic values in all three parts is of utmost importance. The same rhythmic values in all three parts cannot be used in counterpoint:

Music 112

However, two parts are frequently led in parallel motion and with the same rhythmic values. When this is done, the two parallel parts create one unit which must rhythmically be carefully balanced against the remaining third part. Actually, this is two-part counterpoint with one of the parts doubled in constant parallel thirds. Here is an illustration of two-part counterpoint played by the oboe and the bassoon:

Music 113

We now add a third part, played by the clarinet, in parallel tenths (thirds) with the bassoon:

Music 114

This time we shall have parallel thirds not with the bass, but with the top part:

Music 115

Here is the preceding example without the doubling thirds:

Music 116

In our next illustration, the part in parallel thirds switches from the alto to the bass:

Music 117

The real aim of three-part counterpoint, however, is a symbiosis of three independent, freely flowing melodic lines. By independent we mean that the flow of each individual part is not tied rhythmically to either of the other parts.

Independence of the individual lines does not mean that there is no melodic or rhythmic relation between them. On the contrary, at least two of the three parts should be related to each other melodically, rhythmically, or both. A typical example of such a relation between two parts is imitation of one part by a second. The third part should then have a contrasting melodic and rhythmic design. In the following example, the top part is a free imitation of the middle part:

Music 118

Now the two parts are joined by the free third part, played by the bassoon:

Music 119

The closest relation between two parts is achieved by canonic treatment.

A special rhythmic feature is the following: each of the three parts consistently moves in its individual rhythm -- the top voice in quarter notes, the middle part in eighths and the bass in half notes:

Music 120

Any type of steadily held regularity, as in the preceding example, results in a repetitious sequential character. When using sequences, we cannot repeat the pattern more than three times; then we must switch to a different melodic and rhythmic design. The top and middle parts in the next illustration are in triple sequence, followed by a free melodic evolution:

Music 121

(Side 2 - Record 2)

COMPLEMENTARY RHYTHM

Complementary rhythm is a very frequent device of rhythmically balancing the whole structure. In the following example, the two upper parts are written in complementary rhythm; the bass has its own independent rhythmical development:

Music 122

The next illustration demonstrates complementary rhythmic interplay between one part and the remaining two parts, which rhythmically form one unit (see also Music 113 and 117):

Music 123

Band 1: CANON IN THREE PARTS

Canon in three parts offers a great variety of features. Here is an example of a canon in which the second part forms a canon in unison and the third part one at the octave:

Music 124

In the next illustration the second part forms a canon at the lower fifth and the third part imitates the second, again at the lower fifth. This means that the canon between the first and third parts is at the lower ninth:

Music 125

The next example is more complex: the upper two parts are a canon in unison, the third part is a canon at the lower octave in augmentation (doubled rhythmic values):

Music 126

We conclude this demonstration of the canon with an example in which the two upper parts are a canon at the upper fifth (oboe and flute) and the third part (bassoon) has a free contrapuntal melodic line:

Music 127

Band 2: TRIPLE COUNTERPOINT AT THE OCTAVE

The rules governing the treatment of intervals when transposing a part are the same as in two-part counterpoint.

We shall play a passage in three parts, composed in triple counterpoint at the octave:

Music 128

In the next example, the former top part is transposed one octave lower and becomes the bass, and the former bass part is transposed two octaves higher and becomes the top part. The middle voice, played by the clarinet, remains unchanged:

Music 129

The third possibility of interchanging the parts is demonstrated in the next example: the former lowest part (in the first illustration) is transposed two octaves higher and becomes the top part; the former middle part, transposed one octave lower, becomes the bass; and the former top part, not transposed, becomes the middle part:

Music 130

The following examples are two other versions of the music played in example 121 composed in the counterpoint at the octave.

Music 131 & 132

Band 3: FOUR-PART COUNTERPOINT

There are no new rules for the treatment of intervals, melody or rhythm. Each part must have a clear function within the four-part contrapuntal structure.

We shall start with a frequently used, but not the most typical, pattern: one leading melody is supported by three free contrapuntal melodic lines; this is Bach's Chorale DAS ALTE JAHR VERGANGEN IST:

Music 133

In the next illustration we shall hear a four-part setting in which the two upper parts are kept in parallel motion, while the third and fourth parts are free lines. This is an illustration of three actual melodic lines, analogous to the three-part setting which actually consisted of two free melodic lines.

Music 134

The next example illustrates an actual two-part counterpoint, in which the first part is paralleled by the third, and the second by the fourth. We shall first play only the highest and lowest parts together:

Music 135

Now all four parts:

Music 136

Next, the first and second parts (from the top) are written in complementary rhythm, the third and fourth parts are free. We shall first play only the rhythmically complementary parts:

Music 137

Now all four parts:

Music 138

This is the first example of real four-part counterpoint.

The first and second parts in the next illustration are written in canon at the fifth. The third part doubles different voices at different times, following them in parallel motion. The fourth part is free:

Music 139

Our next example demonstrates complementary rhythm between the three upper parts. The fourth part progresses in steady eighth notes:

Music 140

The complementary setting of three (or more, or fewer) parts can be written in such a way that the various parts involved sound as one

melodic line, distributed among various instruments. This is achieved by putting rests in the place of the long notes which the instruments held in the foregoing illustration:

Music 141

Here is another example of one melodic line resulting from the complementary setting of three parts:

Music 142

Now we shall convert the preceding illustration back to a true four-part setting:

Music 143

The technique of using rests can also be employed by having voices alternately play and pause in pairs:

Music 144

Band 4: INTERCHANGEABLE COUNTERPOINT -- QUADRUPLE AT THE OCTAVE

Here are the four parts composed in quadruple counterpoint at the octave:

Music 145

In the next version, the top and bass parts were switched by transposing the top part two octaves lower and the bass two octaves higher:

Music 146

In the third version the original third and fourth parts are transposed one octave higher. The original highest voice is not transposed, but the original second part is transposed one octave lower:

Music 147

Band 5: CANON

The first example demonstrates a four-part canon in which the top part starts and is imitated one measure later at the same pitch (canon in unison); the third part imitates the second one octave lower, and the fourth part imitates the third another octave lower. The last two measures are a free ending:

Music 148

In the next example, each new part imitates the preceding part a measure later and a fourth lower:

Music 149

Our last example demonstrates a highly complex form of canon in four parts. There are two special features: this four-part canon actually consists of two two-part canons:

1. The fourth part is imitated one measure later by the third part at the higher fifth, while the second part is imitated by the first part, also one measure later and a fifth higher.

2. The canon begins and ends in F major. In the course of this canon, the melodic lines modulate through the whole circle of fifths: F - C - G - D - A - E - B - F# - C# (-Db) - Ab - Eb - Bb - F.

Music 150

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