

Modern Arranging and Composing

MODERN TWELVE-TONE TECHNIQUE

*"An examination of serial writing for the
contemporary composer and arranger."*

by Gordon Delamont

U.S. \$8.00

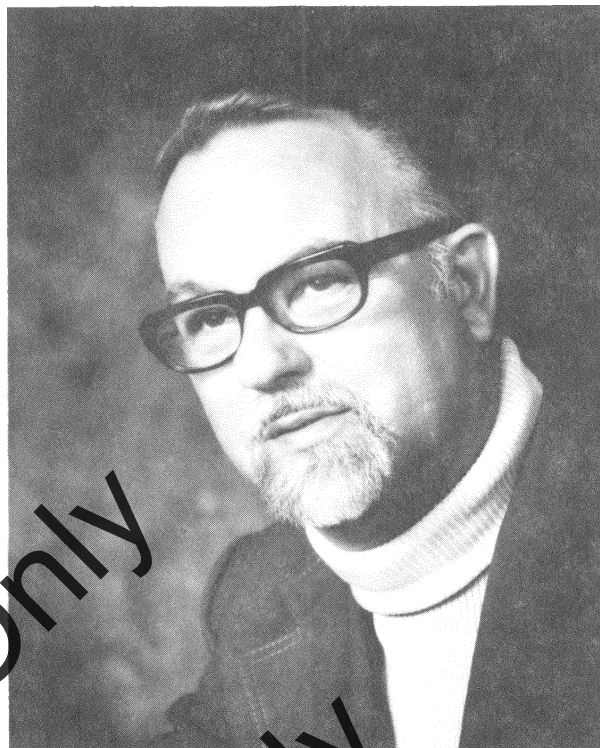
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BIOGRAPHICAL SKETCH

GORDON DELAMONT was born in Moose Jaw, Saskatchewan, Canada, and received his first musical training in Vancouver, British Columbia. While in his early teens he was trumpet soloist with the world famous Vancouver Kitsilano Boys Band. This band, conducted by Mr. Delamont's father, has won major contests the world over, starting with the 1933 Chicago World's Fair and culminating in four consecutive first place ratings at the World Music Festival in Kerkrade, Holland, in 1958, 1962, 1966 and 1970 respectively.



Mr. Delamont's career as a professional trumpet player began in 1939 in Toronto, and in the following twenty years he played with virtually all of Canada's leading dance and studio orchestras. During this time he also formed and directed his own band which enjoyed great success in Canada until he started his present career as a teacher of harmony, arranging and related subjects. He opened his own studio in 1950, and since then has spent full time in teaching and writing, his two primary interests. His students have come from the United States and Europe, as well as Canada, and may now be found in successful musical positions the world over.

Along with teaching, Mr. Delamont has pursued his own writing in the field of jazz composition and arranging. He has had works commissioned and performed on CBC, CTV, and on many concerts and concert series. He has also written a number of articles for such magazines as Canadian Music Journal, Music Across Canada, Crescendo, and Jazz Monthly.

His rich musical heritage and experience, combined with his scholarly approach in teaching and writing, make Mr. Delamont an eminently qualified author of this text on modern harmony, composing, and arranging. It is our opinion that his works will stand for many years as the most comprehensive and definitive approach to serious study of these subjects.

The Publisher

FOLLOWING IS THE COMPLETE LIST OF BOOKS ON MODERN ARRANGING & COMPOSING BY GORDON DELAMONT:

- MODERN HARMONIC TECHNIQUE (Volume I)** *The Elements of Harmony*
- MODERN HARMONIC TECHNIQUE (Volume II)** *The Advanced Materials of Harmony*
- MODERN ARRANGING TECHNIQUE** *A comprehensive approach to arranging and orchestration for the contemporary stage band, dance band, and studio orchestra*
- MODERN CONTRAPUNTAL TECHNIQUE** *An examination of non-chordal counterpoint for the contemporary composer and arranger, including pan-diatonicism, quartal harmony and poly-tonal technique*
- MODERN TWELVE-TONE TECHNIQUE** *An examination of serial writing for the contemporary composer and arranger*
- MODERN MELODIC TECHNIQUE** *An examination of melody for the contemporary composer and arranger, including a survey of psychological, technical, and structural considerations, and the song form*

FOREWORD

This book is intended to give the student of modern music a basic understanding of twelve-tone techniques. Twelve-tone writing is the most important compositional development of the 20th century. This alone is sufficient reason for gaining an understanding of it.

Furthermore, it is a valuable method of music writing for those interested in motion picture, TV, radio, and other areas of dramatic background writing, as well as modern composition generally. It has not filtered down to popular song writing, (at least, not yet) but atonal jazz is with us, and the average listener is much more prepared to accept music which is less "key-oriented" than he was.

This book examines the fundamental processes of atonal music writing. It does not purport to survey all of the possibilities. Nevertheless the student who achieves a knowledge of the processes outlined in this book will, with a little imagination, be able to see further implications and techniques.

The student who has some familiarity with traditional harmony and voice-leading, and with counterpoint, will have a distinct advantage with the materials presented herein. There have been, of course, cases where students began their studies with an examination of serial procedures but, in general, this approach does not yield the best results. Twelve-tone writing requires a great deal of musical judgement, and this judgement is still developed best, in the author's opinion, through working with traditional materials first.

It is hoped that the techniques in the following pages will enlarge the musical vocabulary of the student, and also present him with more compositional procedures and more methods of musical expression.

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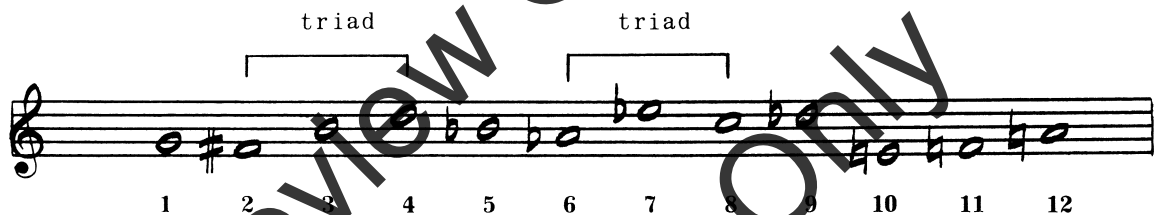
Chapter 1

THE ROW (or "SERIES")

An ordered grouping of the twelve notes, called a "row", is chosen as the first step in serial composition. The row can be of any desired character, but it is important to take whatever time is necessary to fashion a row which is suited to the intended character of the composition. Further, it should be a row which the composer finds logical and comfortable - a row he can live with.

Although the structure of the row is largely a matter of personal choice, there are some points worth noting:

1. Serial music is, by its nature, *atonal* rather than *tonal*. That is to say it is not related to standard major or minor scales, and has no central *tonic*. As a general rule, then, it is wise, when constructing the row, to avoid situations which tend to be traditionally *tonal* in implication. Therefore:
 - a. Avoid arpeggiated major or minor triads, or at least avoid over-using them. The following, for instance, is not satisfactory:

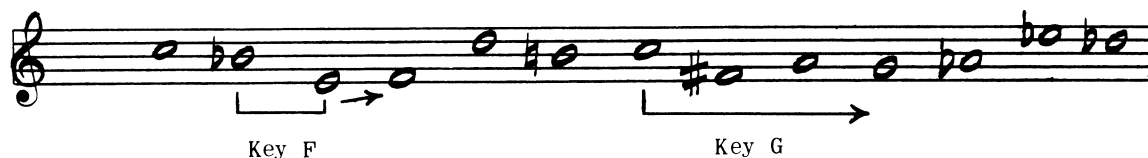


Although if the "key suggestion" of a triad movement is contradicted by the note or notes immediately preceding and immediately following the triad, the key suggestion will be less obvious, as:

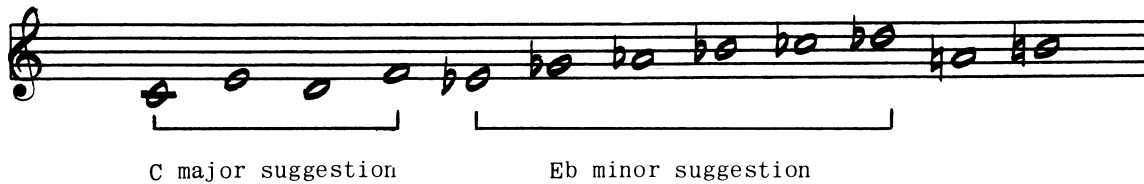


In the above, the C major suggestion of the first triad is negated by the preceding C# and the following F, Eb, F#, and the enharmonic B major triad is negated by its approach and release.

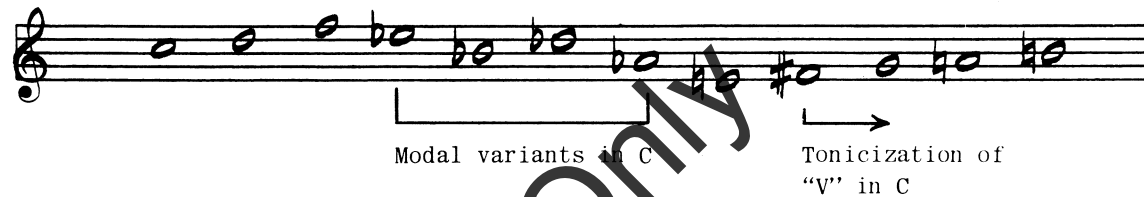
- b. Avoid classically resolved tritones, or other movements that have tonal cadential implications, as:



- c. Avoid the tonal suggestion that could arise from too obvious a use of diatonic scale or intervallic patterns, as:

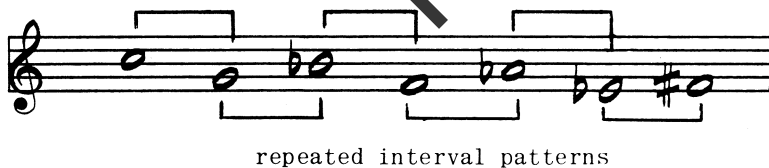
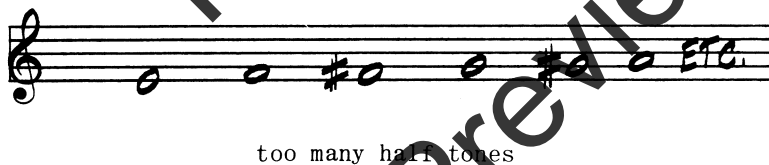
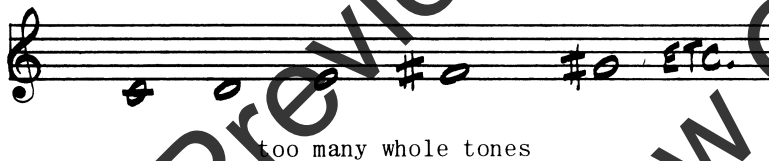


The above points, which are aimed at avoiding a *tonal* sense in the row, are generally valid. It should be pointed out, however, that a row which has a mild sense of tonality is not necessarily wrong. Such a row could be suitable to a composer under circumstances where he needed or desired a subtle suggestion of *key*. To illustrate:

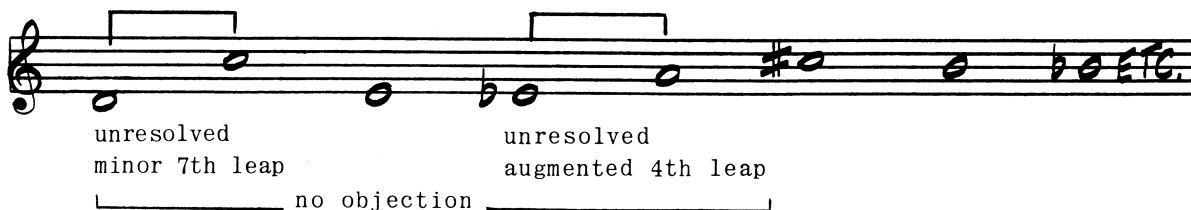


The above row is clearly "C" oriented but could be suitable for an atonal context.

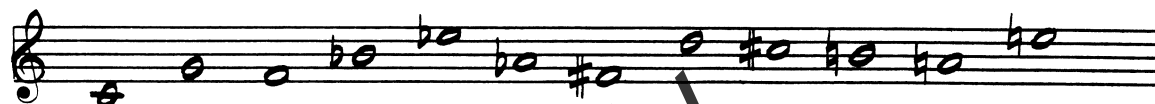
2. In order to avoid monotony, do not use too many repeated interval patterns or too many successive equal intervals. To illustrate:



- Resolution of "melodically dissonant" intervals, an important consideration in tonal melody, is of no consequence in atonal melody. Therefore, there is no objection if the row contains unresolved 7th leaps, unresolved diminished or augmented leaps, etc. To illustrate:



- The row can be composed with a particular psychological association in mind, depending on the nature of the proposed composition. To illustrate:



The above row has an *open* and strong quality, due to the use of a number of strong interval leaps, such as 5ths and 4ths.

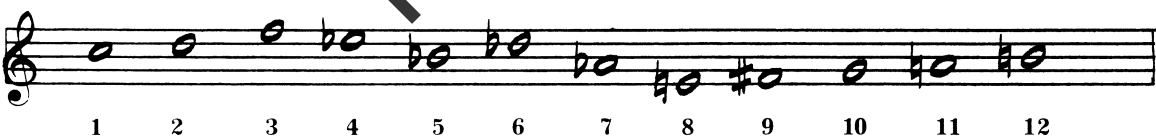


The above row is subdued and introspective, due to the use of interval leaps such as minor 6ths, minor 3rds, and some stepwise motion.

- Notation. Since serial music is not related to keys, notation is of little consequence. Simply choose the notation which is easiest to read.
- In composing melodies based on the row, the notes can appear in any octave. Consequently this row, for instance:



is regarded as equivalent to this one:



ASSIGNMENT 1

Compose a dozen or so twelve-tone rows, keeping in mind the advice outlined in this chapter. Compose one or two from a "psychological" point of view.

Chapter 2

ROW DERIVATIVES

The row as it is initially composed is called the ORIGINAL and is designated "O". From it, three other rows can be devised through INVERSION (designated "I"), through RETROGRADE (designated "R"), and through RETROGRADE INVERSION (designated "RI"). For illustration, here is a row with its three derivatives:

"O"

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

"I"
(inversion of "O")

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

"R"
("O" backwards)

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

"RI"
("I" backwards)

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

NOTE: THE ABOVE ROWS WILL BE USED FOR ALL OF THE COMPOSITIONAL ILLUSTRATIONS IN THE REMAINDER OF THIS TEXT.

In serial composition, as the text will demonstrate, all forms of the row can be used. Furthermore, each form can be transposed to 11 other pitch levels. Therefore, most rows have 48 possible versions - 4 versions of each row, at 12 different pitch levels.

ASSIGNMENT 2

Take some of the rows devised in Assignment 1, or some new rows, and work out the "I", "R", and "RI" for each.

Chapter 3

MELODY WRITING

GENERAL DIRECTIONS

1. The melody may be of a *traditional* vocal character, generally avoiding leaps of more than an octave, and employing traditional rhythms. Here is an example of an atonal melody which has a traditional character. The "O" series is used, with the notes being allowed to appear in any octave:



The above melody, while certainly atonal, is not too abstract. Its rhythms and its leaps are fairly conventional.

2. The melody may be of a *non-traditional* nature, a style which is more favored with atonal melody. In the following example, still using "O", note the less traditional nature of the leaps and the rhythms:

Musical notation for a non-traditional atonal melody. The tempo is marked as ♩ = 86. The melody is written on a single staff in 4/4 time. It begins with a mezzo-forte (*mf*) dynamic, followed by a crescendo to forte (*f*), then a decrescendo to mezzo-forte (*mf*), and finally a crescendo to forte (*f*). The melody features more complex rhythms, including eighth and sixteenth notes, and larger leaps than the first example. The notes are more widely spaced, and the overall feel is more abstract and non-traditional.

Note the form in the above example. The opening is a short, rather calm, thematic statement. This is followed by more intense and agitated movement leading to a climax. The last 4 bars return to a reflection of the mood of the opening statement.

The type of melody the composer chooses to write will depend on the proposed nature and purpose of the music and, of course, on the musical feelings of the composer. Whatever style is chosen, however, the following points are pertinent:

- a. The melody need not end on the final note of the row. Normally it begins on the first note of the row, but even this is not essential.
- b. No note of the row is to be repeated until all of the notes of the row have been heard, with these exceptions:
 - (1) Note repetition is allowed before the next note of the row has been used, provided it is in the same octave, as:



- (2) Tremolos and trills are allowed, as:



3. Avoid repeating the high point or the low point of the melody.
4. Strive for varied rhythms. Do not employ identical rhythm patterns in adjoining bars and, for greatest rhythmic sophistication, avoid repeating rhythms in any bars of the passage. Furthermore, do not hesitate to make a liberal use of suspensions. In other words, atonal melody is generally better if it avoids symmetrical rhythm patterns. Bar lines are used for ease of reading and for organization, but they should not be obvious in performance. A possible exception to this principle would be the deliberate use of a traditional unifying sequential rhythm, as:



5. Do not overdo the shortest note value. Whether the shortest note of the passage is a quarter, eighth, sixteenth, or thirty-second note, it should not appear too often in succession.
6. The use of rests (i.e. silence) is an effective means through which the phrases in the melody can be formed. Since atonal music is non-harmonic, it does not have the ebb and flow which is produced with cadences, phrase endings, and the obvious division points of melody related to traditional scales. In atonal music, silence can often perform these duties.
7. Care should be taken with the principle of action and reaction in the line. Even in angular atonal melody the control and disposition of energy should be a paramount concern. Even though the materials are different, a controlled "melodic curve" is just as important as it is in a traditional song.

8. Because of the lack of cadences, phrase endings, etc., atonal melody can easily become formless and wandering. In order to avoid this formlessness, the composer should have:

a. A consistency of emotional quality and a consistency of character in the melody.

b. Some sort of *story line*. This might take the form of a general *ternary* structure in the melody, i.e. an opening statement, followed by developmental material leading to a climax, followed by a return to the original feeling. Certainly any atonal melody (even if it has fairly conventional intervals) is more abstract than a tonal one, but the composer must remember that music, tonal or atonal, is a communicative art and too much abstraction can lead to a loss of communication.

9. The melody may change from "O" to "I", "O" to "R", "O" to "RI" or, in fact, make use of any combination of the four related rows. To illustrate:

$\text{♩} = 76$

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10. Part of the row may double back on itself. A group of notes of the row may be repeated before proceeding to the following notes. Such repetitions should, however, use different rhythm patterns. To illustrate:

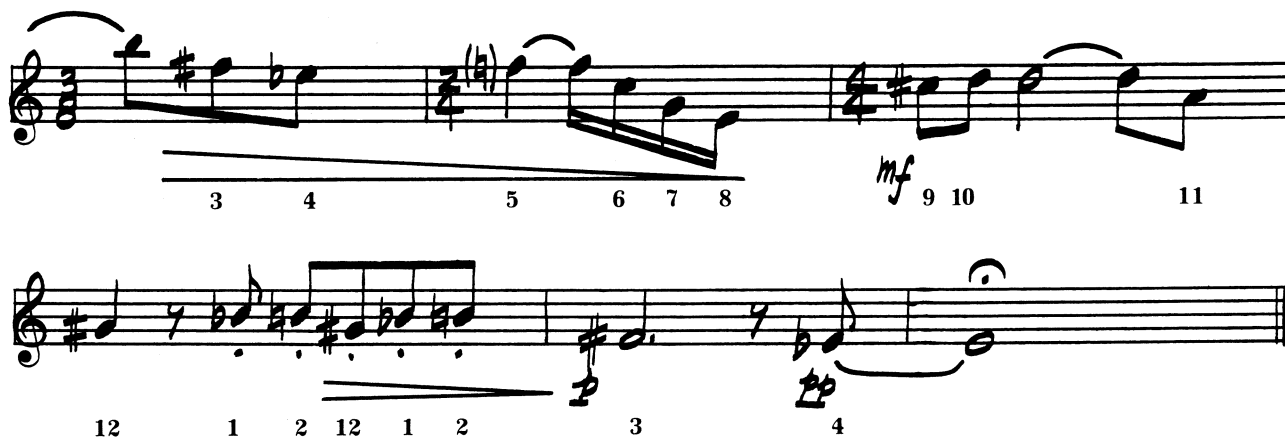
$\text{♩} = 88$

1 2 1 2 3 4 5 6 3 4 5

N.B. *

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

N.B. Note how last note of "O" becomes first note of "R"



11. The student will notice that dynamic markings and accents have been included in the main examples of this text. Accents and dynamic markings are important in all styles of music, of course, but they are especially important in atonal music. The tension and relaxation of tension in atonal melody is particularly dependent on the phrasing, the climax, the release of the climax, and the shadings provided by the accents and dynamic markings.

ASSIGNMENT 3.

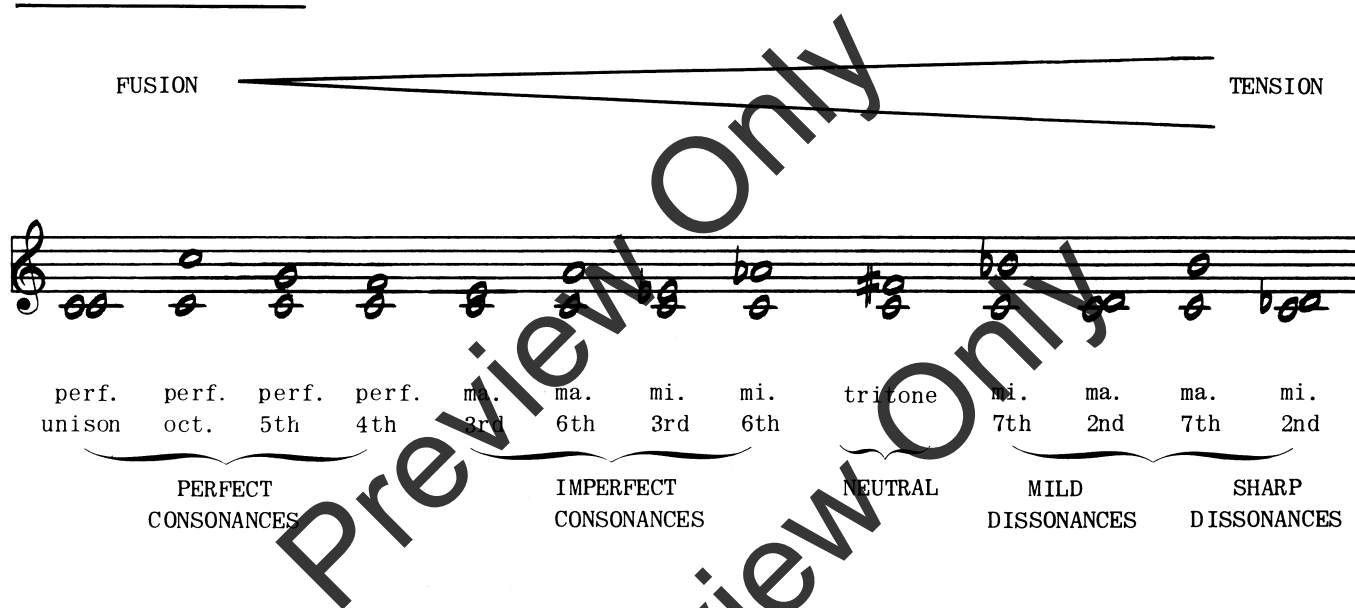
Work out many melodies using the row techniques, exploiting the various points made in this chapter. Use a previously composed row and derivatives, or compose new ones. Work out melodies of a more traditional nature as well as some with the characteristic angularity of atonal melody. The student should attempt to discover the type of atonal melody which affords him the most natural self-expression. The length of the melodies is of no great importance, but for a working framework something between 10 and 20 bars is satisfactory.

Chapter 4

THE CONTRAPUNTAL USE OF THE ROW

The student who is familiar with tonal counterpoint in a linear style (see “Modern Contrapuntal Technique” by this author, published by Kendor Music, Inc.) will remember the “interval spectrum”, but a review of it seems wise here:

The Interval Spectrum



Note that the intervals are grouped into 5 “tension categories”, ranging from a high degree of *fusion* in the perfect consonances, to a high degree of *tension* in the sharp dissonances. Two points should be made:

1. An *enharmonic* version of any of these intervals will not affect its tension category.
2. When a *consonant* interval exceeds an octave (e.g. a 10th instead of a 3rd) its quality remains much the same, but when a *dissonant* interval exceeds an octave, (e.g. a 9th instead of a 2nd) it becomes markedly less “tense”.

Although atonal music is usually distinguished by a higher level of tension than tonal music, it is quite possible to arrange the harmonic (or vertical) aspect of the counterpoint to produce consistent *fusion*, consistent *tension*, a crescendo and decrescendo of tension, or a balance of tension and fusion.

For instance, if the manipulation of the row or rows in counterpoint leads to a degree of tension which is too harsh for the context, the timing of one or both of the parts can be adjusted. To illustrate:



High Tension



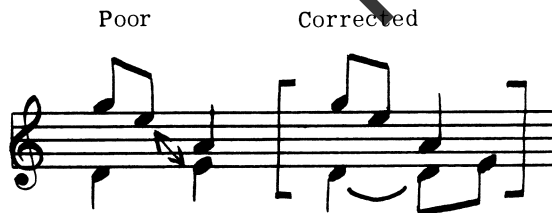
Tension minimized by
rhythmic adjustment

A. TWO PART COUNTERPOINT

Tonal counterpoint is often studied with a "species" approach, working first with one note against one, then two notes against one, etc. Atonal counterpoint does not lend itself well to this method, so this text will immediately examine counterpoint with free rhythms in all parts. (For the student acquainted with traditional counterpoint, this is "combined 5th species".)

GENERAL DIRECTIONS

1. Avoid striking either octaves or unisons simultaneously except, if desired, on the first or last notes. The objection is the loss of harmonic motion, plus the fact that the octave or unison will stand out too prominently.
2. Avoid "cross relation of the octave". This will happen if a note sounded by one part is immediately followed by the striking of the octave of the same note in another part, as:



3. Parallel octaves or parallel unisons are to be avoided.
4. Parallel motion of any sort should be kept to a minimum because of its tendency to submerge the individuality of the voice lines.

5. The high point of each line should not occur simultaneously.
6. There is no rigid restriction on the distance between the parts, but if they are consistently far apart the texture may become too "thin".
7. The parts may occasionally cross.
8. Each part should observe the principles of good atonal melody, as outlined in Chapter 3.
9. Retain good "forward motion". There should be movement in at least one part on every strong beat. While suspensions remain very desirable, avoid tying both parts over the bar line, as:



Poor

10. There should be a general similarity of character between the two lines, and the use of an occasional imitation between the two lines will contribute to structural unity.

Here is an example. The "lead" line is the same as the second melody example in Chapter 3. The second part uses the same twelve-tone row (the "O"). There are no restrictions on how often the row is to appear in either line, and in this example no effort was made to complete each row at the end, although it would be quite all right to do so. This passage uses an occasional imitation between the parts.

A musical notation example for Violin and Cello. The Violin part is in the upper staff and the Cello part is in the lower staff. Both parts are in 4/4 time. The Violin part starts with a half note, followed by a quarter note, and then a half note. The Cello part starts with a half note, followed by a quarter note, and then a half note. The two parts are in a similar character, with the Cello part often imitating the Violin part. Dynamics include *mf* and *f*.

A musical notation example for Violin and Cello. The Violin part is in the upper staff and the Cello part is in the lower staff. Both parts are in 4/4 time. The Violin part starts with a half note, followed by a quarter note, and then a half note. The Cello part starts with a half note, followed by a quarter note, and then a half note. The two parts are in a similar character, with the Cello part often imitating the Violin part. Dynamics include *f*, *mf*, *p*, and *pp*. The Cello part has a *pizz.* (pizzicato) marking.

Piano score for a musical passage. The score is in G major (one sharp) and 4/4 time. It consists of two systems of staves. The first system has a treble staff with a 'pizz.' (pizzicato) marking and a '3' (triple) marking, and a bass staff with an 'ARCO' (arco) marking. Dynamics include pp, mf, and p. The second system continues the melody and accompaniment, ending with a forte (f) dynamic.

Further, any combination of the row and/or its derivatives will work, (e.g. "O" and "I", "O" and "R", "O" and "RI", "R" and "I", etc.) and either or both parts can shift from one form of the row to another. Here is an example using the original ("O") and its inversion ("I"). In this passage the melodic lines are constructed fairly traditionally.

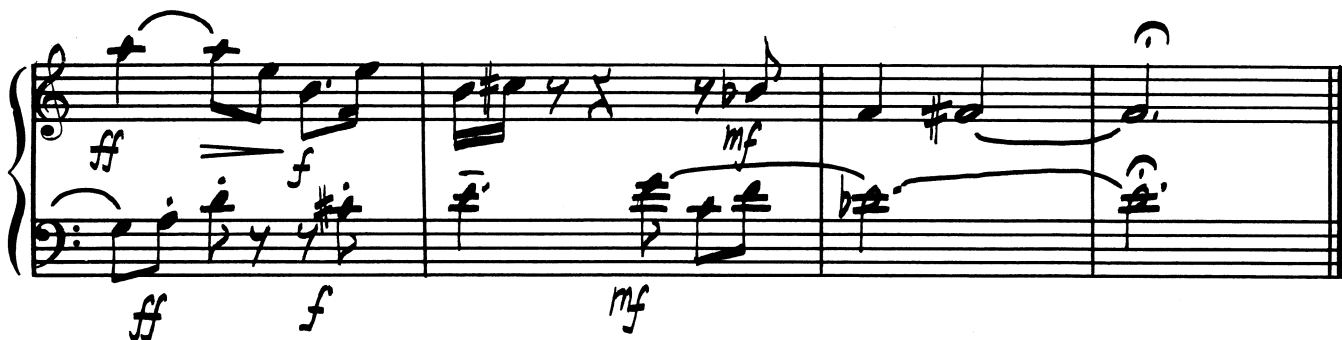
Trumpet ("I")

Trombone ("O")

♩ = 92

Musical score for Trumpet and Trombone. The tempo is marked as quarter note = 92. The Trumpet part is labeled 'Trumpet ("I")' and the Trombone part is labeled 'Trombone ("O")'. The score is in 3/4 time and G major. Dynamics include p and f.

Piano score for a musical passage. The score is in G major (one sharp) and 4/4 time. It consists of two systems of staves. The first system has a treble staff with a 'mf' (mezzo-forte) marking and a '2' (second ending) marking, and a bass staff with a 'f' (forte) marking. The second system continues the melody and accompaniment, ending with a forte (f) dynamic.

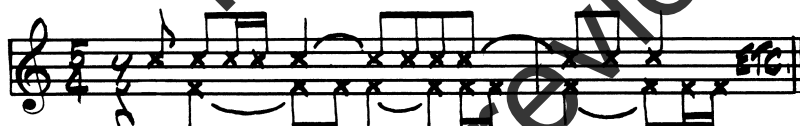


ASSIGNMENT 4.

Work out many two part inventions, each at least ten bars in length and preferably longer. In some, use the same form of the row in both parts, in others use combinations of the row and/or its derivatives. Remember that either or both parts is at liberty to change from one form of the row to another.

Writing a second part to a previously conceived first part may be the easier method, but also try conceiving both parts simultaneously. The principles of atonal melody should be followed in each line, and try examples in which the melodies have a "traditional" quality as well as melodies which have the characteristic angularity of atonal music. Use previously composed rows and derivatives or compose new ones; writing for specific instruments may make the problems less abstract.

Note: Since rhythm is perhaps the primary element in any form of counterpoint, some writers may prefer to calculate the rhythmic patterns of the parts first, after which notes can be found to translate the rhythms into melodies, e.g.:



Rhythm plotted



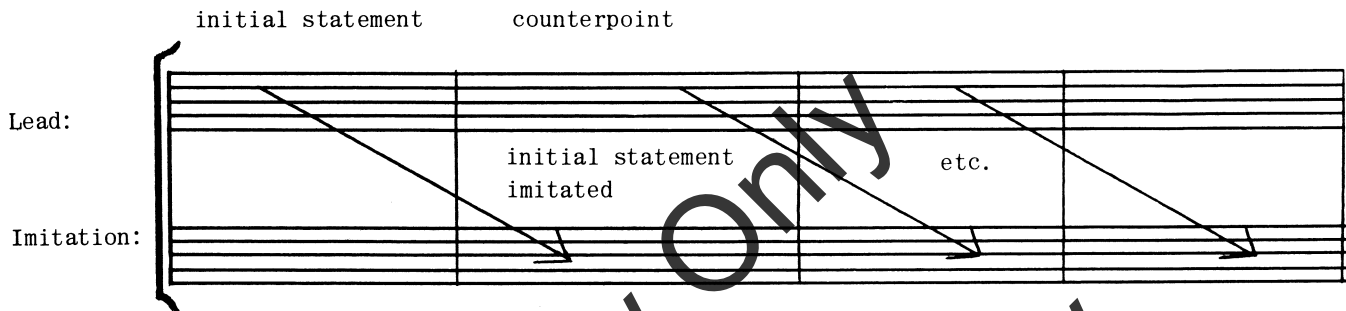
Translated into notes

TWO PART CANON

A canon is a composition in which the second voice line is an exact imitation of the first. Sometimes it may be necessary for the last few notes to be adjusted in order to bring the composition to a close.

The imitation may take place at any interval relationship, but imitation at the octave and sometimes the unison is most usual.

It would be rare indeed to find a situation where a predetermined lead part would lend itself well to canonic treatment. Rather, it is customary to compose the two parts simultaneously, in a process as follows:



(The *lead* part can, of course, be at the bottom or the top.)

In the above illustration, the *imitation* starts a bar after the *lead*, but the time lag between the two parts is entirely a matter of the composer's choice. However, since the effect of a canon depends largely on the listener's memory, it is probably wise to avoid having too much time between the entries.

Here is an example of an atonal two part canon at the octave. It makes use of all forms of the row ("O", "I", "R" and "RI"). It is distinguished by wide interval leaps and has a generally light-hearted character:

The musical score is for a piano piece in 2/4 time, marked 'PLAYFULLY = 94'. It consists of two staves. The first staff has a treble clef and a key signature of one sharp (F#). The second staff has a bass clef and a key signature of one sharp (F#). The music is characterized by wide interval leaps and dynamic markings such as *f*, *mf*, and *p*. The score includes various musical notations like notes, rests, and slurs, and is labeled 'PIANO'.

ASSIGNMENT 5

Write several atonal two part canons, each from 12 to 20 bars in length, of varying mood and character. Use previously composed rows and derivatives, or compose new ones. Each canon can be written with only one form of the row or, like the given example, can use any or all of its derivatives. Also, try a canon by inversion, as:

and, as earlier mentioned, the relationship between the two parts need not be an octave, unison, or double octave, but can occur at any interval.

B. THREE PART COUNTERPOINT

The chief difference between three part and two part counterpoint is the emergence of "chords". In atonal counterpoint the *chords* which occur will seldom be the familiar triads and 7th chords, etc.. Rather, they will be groupings formed by coincidental combinations of notes.

The control of tension and fusion is an important consideration. With respect to this control, the following points can be noted:

1. A chord containing no mild or sharp dissonances will be bland, as:



Such chords are *tonal* in implication and should be used cautiously. When a chord such as one of these is used, it should be surrounded by material which denies the tonal implication, otherwise the atonal character of the music will be threatened.

2. A chord containing one or more mild dissonances (major 2nds, minor 7ths) will be bland in comparison to sharp dissonances but will obviously be less bland than a chord containing only perfect and imperfect consonances. The following representative groupings contain mild dissonances:



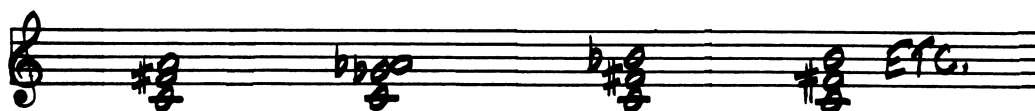
3. A chord containing one sharp dissonance will begin to develop higher tension, as:



4. A chord containing two sharp dissonances will generate high tension, as:



5. Chords containing a tritone (augmented 4th, diminished 5th) will have the instability characteristic of this interval but their *consonance* or *dissonance* will depend mainly on the other note in the chord, as:



Consonance Mild dissonance Mild dissonance Sharp dissonance

6. When the sharp or mild dissonances in a chord are "compound", that is, if they are over the distance of an octave, the tension will be markedly less, as:

tense less tense tense less tense tense less tense etc. etc.

The procedures for three part counterpoint are much the same as those which are applicable to two part.

GENERAL DIRECTIONS

1. Avoid striking octaves or unisons simultaneously except, if desired, on the first or last notes.
2. Avoid cross relation of the octave.
3. Avoid parallel octaves or unisons.
4. Keep parallel motion of any sort to a minimum.
5. The high point of each line should not occur simultaneously.
6. As with two parts, there is no rigid restriction on the distance between the parts, but a constant use of wide spacing will lead to an undesirably *thin* texture.
7. Occasional crossing of the parts is acceptable.
8. Each of the three parts should observe the principles of good atonal melody, as outlined in Chapter 3, and the melodies may be of a generally traditional character or they may display the angularity which is more characteristic of atonal music.
9. Retain good "forward motion". In general, avoid tying all parts into a strong beat.
10. A similarity of character in all parts is desirable. Imitative phrases are not obligatory, but they do contribute to organic unity.
11. The passage may use one or two forms of the row, but the use of three different forms simultaneously is likely to yield the best results. All forms of the row are combinable, of course, and they may appear in any vertical order. Furthermore, just as in one or two part writing, any one line can shift from "O" to "I", "I" to "R", etc., and any version of the row can be transposed to a different level.

Here is an example, using "O", "I", and "R"

FLUTE

CLARINET

BASS CLARINET

Handwritten musical score for Flute, Clarinet, and Bass Clarinet. The score is divided into three systems, each with three staves. The key signature is one sharp (F#) and the time signature is 4/4. The tempo is marked $\text{♩} = 60$.

System 1:

- Flute:** Starts with a circled "O" and a dynamic of p . The melody moves up, then down, ending with a dynamic of pp .
- Clarinet:** Starts with a rest, then enters with a circled "I" and a dynamic of pp . The melody moves up, then down, ending with a dynamic of mf .
- Bass Clarinet:** Starts with a rest, then enters with a circled "R" and a dynamic of p . The melody moves up, then down, ending with a dynamic of mf .

System 2:

- Flute:** Continues the melody, starting with a dynamic of mf . It features a circled "I" and ends with a dynamic of p .
- Clarinet:** Continues the melody, starting with a dynamic of mf . It features a circled "I" and ends with a dynamic of p .
- Bass Clarinet:** Continues the melody, starting with a dynamic of mf . It features a circled "R" and ends with a dynamic of f .

System 3:

- Flute:** Continues the melody, starting with a dynamic of mf . It features a circled "I" and ends with a dynamic of f .
- Clarinet:** Continues the melody, starting with a dynamic of mf . It features a circled "I" and ends with a dynamic of f .
- Bass Clarinet:** Continues the melody, starting with a dynamic of mf . It features a circled "R" and ends with a dynamic of f .

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ASSIGNMENT 6.

Write several examples of three part atonal counterpoint, each passage at least 10 bars in length. Use various forms of either a previously composed row or one composed for this assignment. Use a variety of time signatures, tempos, and instruments.

One part can be composed in its entirety, with the other two added to it, or all three parts may be conceived simultaneously.

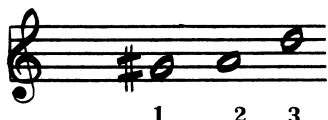
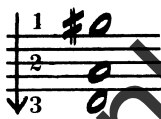

Also, try a three part canon, which can be a true canon of all parts, or can be a two part canon with an added "free" part.

Students may wish to try some four part counterpoint, although the rich and dense texture that may result is not consistent with the clarity of line that atonal counterpoint requires. This danger could, however, be avoided with a liberal use of rests.

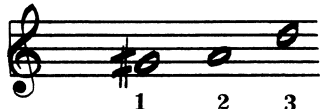
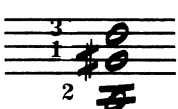
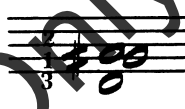
Chapter 5

THE HARMONIC USE OF THE ROW

Melody and counterpoint composed with a row is essentially a "horizontal" process, but the row can also be used in "vertical" groupings to form harmony. For instance, three note chords can be procured by using each successive three notes of the row in a vertical fashion. Each group of notes can be arranged vertically in the order in which they appear in the row, as:

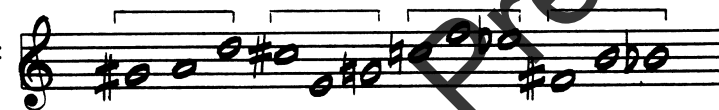
this:  can become:  or: 

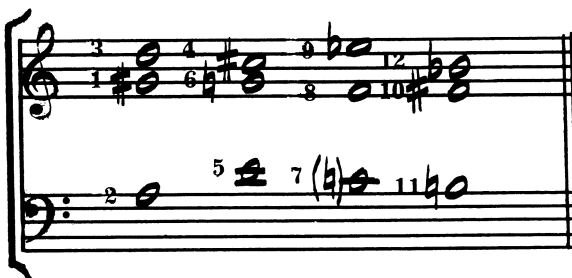
but it is not necessary to arrange them in this strict fashion. Each group of three notes can be placed in any desired order, as:

this:  can become:  or:  etc.

The order in which the notes are placed then, depends on voice leading, the sonority of the chord, and on the composer's choice.

Here is a progression of three note chords derived from the "0" series:

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



and here is a progression of four note chords derived from the same series:

series:

It is worth remarking that the minor 2nd (or augmented unison) develops very high tension; it is often wise to use such an interval in its major 7th or minor 9th form, as:

this: or this: is often preferable to this: or this:

A basic progression of harmonies derived from the row, as illustrated above, is of limited value, but there are many ways in which the row harmonies can produce effective music. Here are a few possibilities.

1. An accompaniment to a melody can be based on row harmonies. In the following example, the melody is derived from "O", with the accompaniment based on the row and its derivatives:

♩ = 72

VOICE

PIANO OR ORCH.

When notes in the solo part are the same as notes in the accompaniment, as in the fourth bar of the above example, they are better at the unison rather than the octave.

2. An undulating line derived from the row or its derivatives may be used as an accompaniment. This is similar to the "broken chord" technique often used in strings, woodwinds, or piano in tonal music. To illustrate:

22

♩=92

Accordion
(Free Bass)

ETC.

4. A mixing of styles and techniques very often produces ineffective results, but it is possible for an atonal melody, derived from a row, to be given a traditional harmonic support, as:

♩=76

TONAL HARMONY

ETC.

or a row melody may be harmonized with parallel chords of any type, as:

♩=126

PARALLEL 4TH CHORDS

ORGAN POINT

ETC.

5. JAZZ

For jazz improvisation, or for an area of improvisation inside a jazz composition, the improviser or improvisors can be instructed to relate ideas to the row and/or its derivatives, as:

Solo (32 bars) Relate to row



An accompanying rhythmic string or electric bass part can be devised from the row and its derivatives, as:



or, optionally, the bass player can also be instructed to improvise his line from the row and/or its derivatives.

In formal jazz composition, using serial techniques, it is desirable that the characteristic rhythms of jazz be retained. Also, repetition of melodic elements is likely to occur more frequently in jazz composition. In fact, a generally simpler and more traditional melodic style is likely to produce better results in this idiom. Recent years have seen a move toward atonality in some avant-garde areas of jazz improvisation, and there is no reason why a composer cannot apply serial methods to his music provided he is familiar with the jazz idiom, and can retain its characteristic rhythmic qualities.

Pianos, and to some degree organs, have played a prominent part in jazz. In twelve-tone music they present somewhat of a problem. In traditional jazz practice these instruments are given the basic chord progression, on which the players base their rhythmic accompaniment. In serial music no such *chord progression* exists, of course. One way in which the problem of these instruments can be overcome is by eliminating them. Another is by the use of a contrapuntal technique, employing them in essentially a single line role. The guitar can be similarly used as a single line instrument rather than in a harmonic accompaniment role.

Here is a brief example of jazz writing using the row. Notice the inclusion of octave doublings in the brass chords, which is typical of jazz “sectional” orchestration:

25

The bass part in the above example is not a strict presentation of either the original row or its derivatives, but it is loosely derived from them. The creative composer should not be upset by a little modification of the row technique. After all, it is **only** a technique which, like all techniques, should be regarded as a servant of the composer and not his master.

The example uses a large band, but the jazz composer may well find that a smaller group of four or five instruments such as vibes, guitar, bass, drums, etc., may be more adaptable to row writing. It is also likely that the gentler sound of such a group will be more compatible with the abstract quality of serial music.

6. For the writer who may deal with the twelve-tone system only occasionally, the row can still be a valuable stockpile of melodic ideas. For instance, in the author's "Ontario Suite" largely a tonal work, two of the main motifs were drawn from the row used in this text, as follows:

Row ("O")

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

Motif 1:

5 6 7 8

Motif 2:

3 4 5 6

ASSIGNMENT 7

1. Write a solo passage (approximately 20 bars) for either flute or clarinet, with piano accompaniment. Use a row and derivatives of your own, in any desired manner.
2. Write a short brass quintet (two trumpets, French horn, trombone, and either tuba or bass trombone) employing an angular and percussive style. Use a row and derivatives of your own, in any desired manner.
3. Write a short piece for piano or for free bass accordion, using a row of your own in any desired manner.
4. Write a movement for large orchestra, in the following general plan:
 - a. a passive and quiet opening passage, leading to:
 - b. more energetic and climactic material, leading to:
 - c. another quiet area leading to:
 - d. more energetic material, with a bigger climax than "b", leading to:
 - e. a quiet and reflective ending.
5. Experiment with a traditional harmonic support and background to an atonal melody.
6. Write a short passage to serve as a basic theme (or "head") for subsequent jazz improvisation. Use drums, bass, guitar, vibes, plus either flute, flugelhorn, tenor or alto saxophone, or trombone. Use a row and derivatives of your own in any desired manner.
7. Write a jazz composition for a standard stage band instrumentation. Use row techniques either wholly or partially. Provide for some improvised solos.

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