12

Thematic Metamorphosis

REPETITION is basic to the language of music. Meaningful music without repetition is almost inconceivable, and it is usually detectable even in the music of those few composers who strive to avoid it. For most composers it is not a question of eliminating repetition but of sustaining interest, which lags when literal repetition is excessive. Several procedures for modifying repetition which preserve its unifying values without placing interest in jeopardy are at the disposal of composers. The application of these procedures to thematic material produces the metamorphoses so characteristic of the compositional process.

Though exact reiteration has its place in music, modified repetition is more prevalent and useful. Nuances and instrumentation may vary in repetitions which otherwise are literal, but more significant changes involve pitch and rhythm. Such modifications applied to motives and themes sustain interest for extended periods with a minimum of source material. The exhaustive use of a few germ motives is highly conducive to essential unity. These facts have long been common knowledge, and the imaginative and skillful manipulation of thematic material is a continuing art, not an innovation. The processes of thematic transformation originated in the distant past, but their recent manifestations deserve attention.

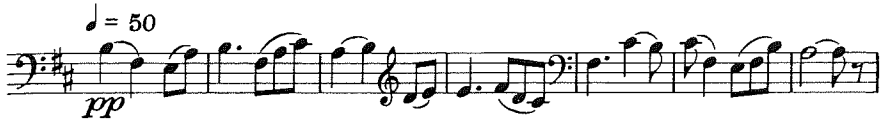
Transposition and Sequence

The modification closest to exact repetition but still capable of providing variety is that of octave transposition. Though rhythm, line, and tonality remain the same, the theme is brought into the register of other instruments or shifted to a different register of the same instrument by

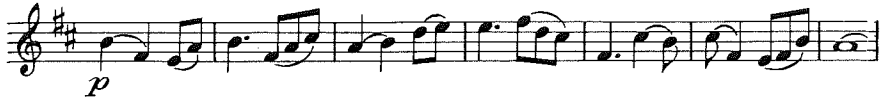
octave transposition. This type of repetition has the advantage of being immediately apparent to the most casual listener without being utterly lacking in variety. Example 236 shows a melody with interesting contour and internal organization and its octave transposition. A study of these two excerpts in context substantiates the value of octave transposition in modified repetition.

Ex. 236 RAVEL: *Daphnis and Chloe, Suite No. 2* (1911)

a. p10

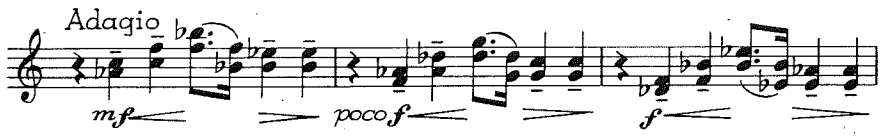


b. p19



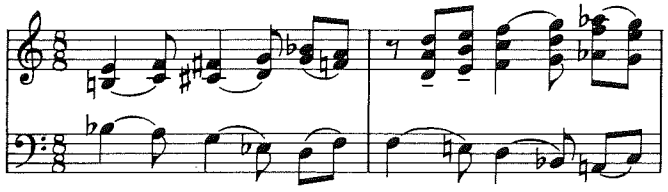
Transposition by intervals other than the octave provides additional variety by implying either a different tonal center or a change of harmony, and intervallic relationships may be altered. Example 237 consists of a one-measure motive repeated sequentially, each time a third lower. The first and third measures have identical patterns, but the second has a minor third in place of a major third, an augmented fourth in place of one of the perfect fourths, and a diminished fifth in place of a perfect fifth.

Ex. 237 SIBELIUS: *Symphony No. 7 in C* (1924) p5



Interest is added to the sequential treatment of the motive in Example 238 by the slight rhythmic shift in the repetition and the change in relationship between the parts. The two upper voices are repeated sequentially a minor seventh higher with the top part doubled an octave below. The bass is also repeated sequentially, but a perfect fourth lower providing a fresh relationship. Even those who generally regard sequences as excessively repetitious would find little fault with this imaginative use of the device.

Ex. 238 PISTON: *Divertimento* (1946) p10

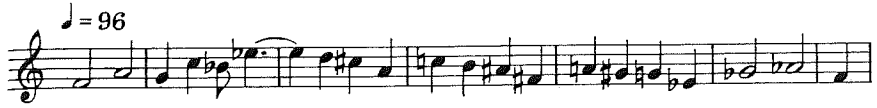


Systematic Modifications of Contour

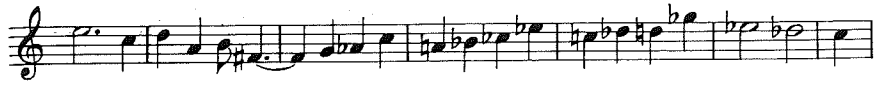
Every musical line inherently has four basic forms: *original, inversion, retrograde,* and *retrograde inversion.* The inverted form presents the theme upside-down or as if seen in a mirror, going down where the original goes up and up where the original goes down. The retrograde form is like the original played backwards from the end to the beginning. Retrograde inversion is the retrograde form of the inversion or the original upside-down and backwards. All three of these modifications pose certain problems of perception to the listener, but they have persisted in the musical vocabulary for an extended period down to the present time. With but slight alteration all four forms of the theme —original, inversion, retrograde, and retrograde inversion—appear in the contemporary fugue from which Example 239 is taken.

Ex. 239 HINDEMITH: *Ludus Tonalis—Fuga Tertia in F* (1943)

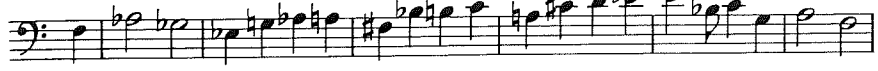
Original



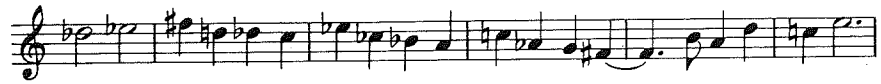
Inversion



Retrograde



Retrograde Inversion



The two retrograde forms are more difficult to perceive aurally than the inverted form in which the original rhythm is unaltered, and they are therefore less serviceable for purposes of unity. Most easily recognized and therefore most capable of contributing to unity is the inverted form which has a different version of the contour but the same rhythm as the original. The inversion can mirror the intervals of the original exactly or with some liberty, as in Example 240. The two forms of the theme appear consecutively starting in the measures indicated.

Ex. 240 BARTOK: *Mikrokosmos, No. 146—Ostinato* (1926–37)

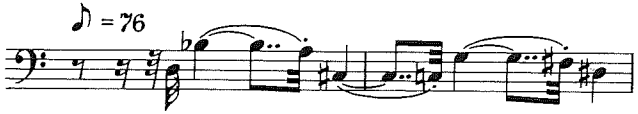
a. m61

b. m68

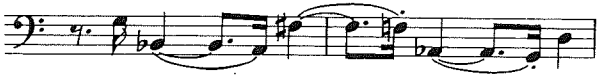
The operation of the inversion principle is conspicuous in the two forms of the thematic fragment shown in Example 241, though the second version does not actually mirror the contour or duplicate the rhythm of the first.

Ex. 241 SHOSTAKOVICH: *Symphony No. 5* (1937)

a. p3



b. p45



Retrogrades are encountered less frequently than inversions in non-serial music, but they do occur. In Schoenberg's *Pierrot Lunaire, No. 18* the second half is an exact retrograde of the first half in the four upper parts. The *Postludium* in Hindemith's *Ludus Tonalis* is a literal retrograde inversion of the *Praeludium*. The parts are reversed from top to bottom so that even the location of the notes on, above, and below the staff is mirrored. Quoting these extended works is not feasible, but they are well worth studying.

Systematic Modifications of Rhythm

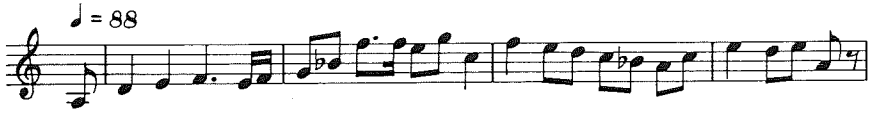
Inversion, retrograde, and retrograde inversion are systematic ways of modifying lines. *Augmentation* and *diminution* are systematic ways

of modifying rhythms. Rhythmic values in augmentation are increased by a constant ratio, usually 1:2. Rhythmic values in diminution are reduced by a constant ratio, usually 2:1. For other ratios see Example 92. In reverse order, the original is the diminution of the augmentation and vice versa. The terms augmentation and diminution customarily refer to notation and not to tempo, which affects durations but not relative values.

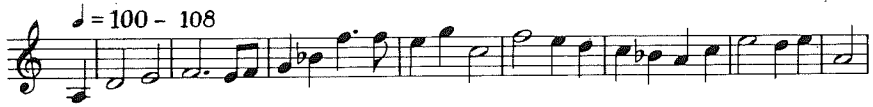
Example 242 shows a theme in its original and augmented forms. The effect of the augmentation is somewhat counteracted by the faster tempo.

Ex. 242 SHOSTAKOVICH: *Symphony No. 5* (1937)

a. p109



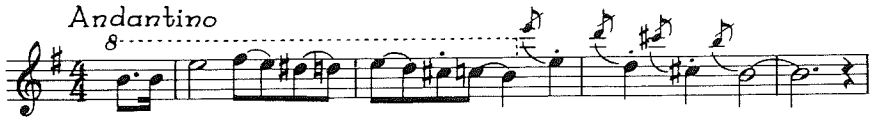
b. p146



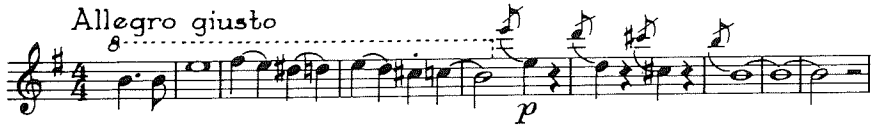
Example 243 also shows a theme in its original and augmented forms. In this case the purpose of the augmentation is to bring the theme back in the faster tempo sounding the same as it did originally.

Ex. 243 PROKOFIEV: *Piano Concerto No. 3* (1921)

a. p71



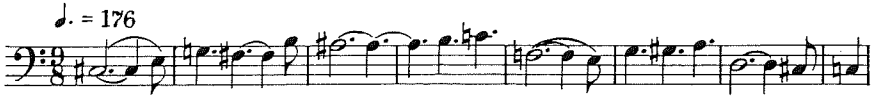
b. p108



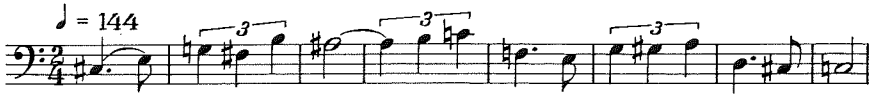
A somewhat different type of rhythmic change is illustrated in Example 244. The material in each measure of the two versions corresponds, but the number of beats in a measure is reduced from three to two. At the same time, the metronome mark is reduced, but not sufficiently to make the two forms move at the same rate. Adjustments are made in the other values, but the three equal notes in a measure are preserved as a triplet.

Ex. 244 HINDEMITH: *Mathis der Maler* (1934)

a. p42

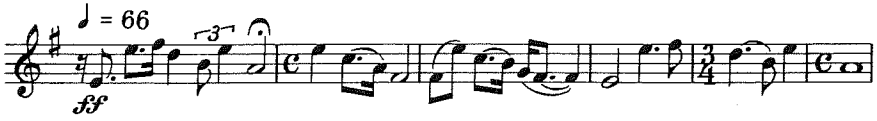


b. p77



Augmentation can be used within a theme, as it is in Example 245. The motive in the first measure returns with increased rhythmic values in the last three measures. The two forms of this motive enclose a contrasting motive and its varied repetition in a cogent theme.

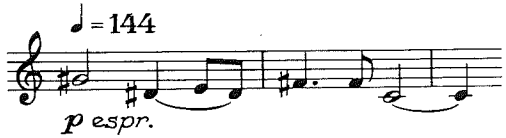
Ex. 245 BARBER: *Symphony No. 1* (1936) p1



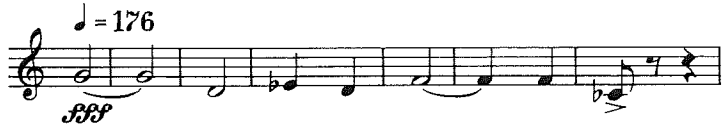
Within the space of seven score pages Shostakovich uses the same thematic motive in augmentation, in diminution, and in various transpositions.

Ex. 246 SHOSTAKOVICH: *Symphony No. 1* (1925)

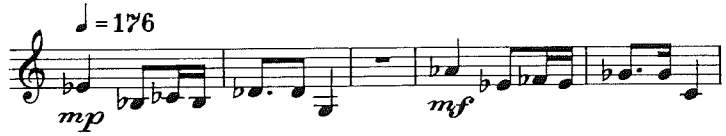
a. p74



b. p78



c. p80



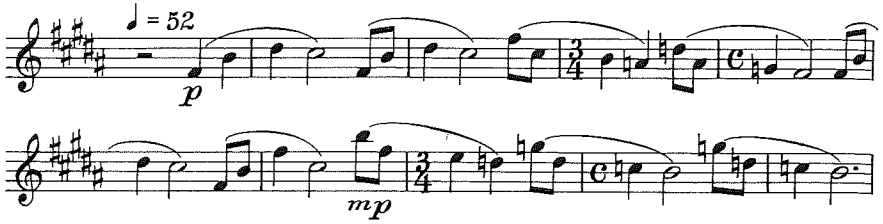
The preceding examples demonstrate that notating thematic elements in augmented and diminished values is used not only to double and halve durations but also to change the pace varying degrees and to preserve the original character in a different tempo.

Other Modifications

There are less systematic ways of transforming themes and motives which are not easily classified, and the systematic methods can be applied freely and in combinations. The passage quoted from *Appalachian Spring* illustrates some of the possibilities. It consists of nine consecutive versions of a single four-note motive. In the second version the value of the first two notes is reduced. The next version is a partial inversion. The fourth is a sequential repetition of the third a third lower and with the last note extended. The fifth appearance of the motive is an exact repetition of the second version. In the sixth and seventh versions the contour and rhythm of the third and fourth are repeated a perfect fourth higher.

The final version is a repetition of the preceding one with the last note extended one beat.

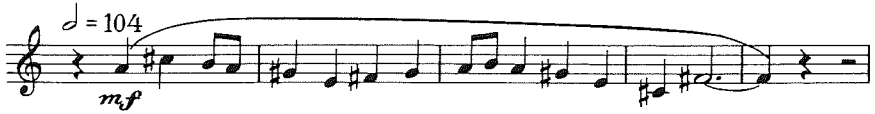
Ex. 247 COPLAND: *Appalachian Spring* (1944) p24



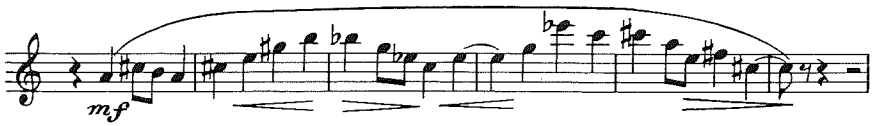
Roy Harris uses a different approach in the following thematic lines from his *Third Symphony*. Organic unity is sensed within each theme and between all three, but there is little actual repetition or obvious manipulation. This type of thematic transformation is conceived and perceived essentially by instinct, and no significant use is made of preconceived formulas. Though the unifying features do not yield readily to systematic analysis, they are apparent and effective.

Ex. 248 HARRIS: *Symphony No. 3* (1938)

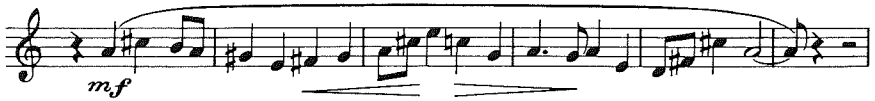
a. p24



b. p25



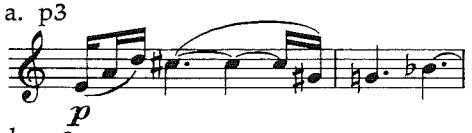
c. p28



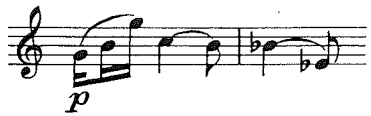
The opening motive of the Bartok *Second String Quartet* is altered continually as the movement progresses. The following are just a few of its many guises. Only the rhythm and the direction of the first three notes are constant. Other rhythmic values are lengthened and shortened; intervals are expanded and contracted; and linear motion is reversed; but the identity of the motive is never in doubt.

Ex. 249 BARTOK: *String Quartet No. 2* (1917)

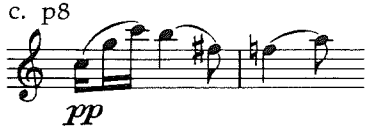
a. p3



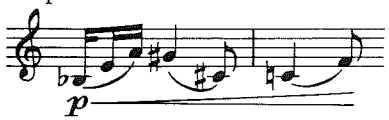
b. p3



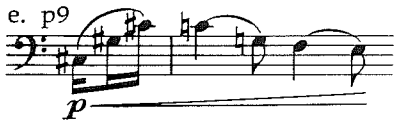
c. p8



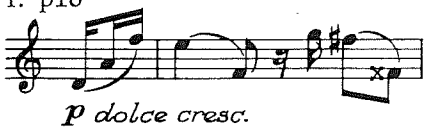
d. p8



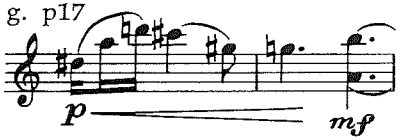
e. p9



f. p16



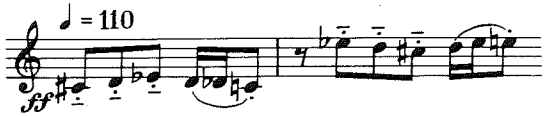
g. p17



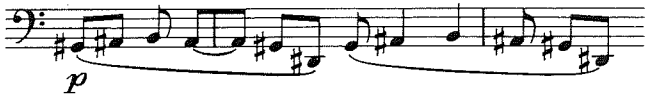
More elaborate thematic metamorphosis occurs in Bartok's *Fourth Quartet*. Example 250 shows several versions of the motive which dominates both the first and last movements. Near the beginning it appears in its original form and immediately inverted (a). Some of the intervals and durations are expanded in the next version (b). A form of the motive with additional contour and rhythm modifications is stated in the low register and is answered immediately by its inversion in a higher octave (c). The remaining forms are from the last movement. In the first of these and its inversion the preceding pattern is shifted rhythmically and extended. The intervals and compass are expanded further, and the sixteenth notes are shifted back a half beat in the next version (f). Its essential features are preserved in a free inversion (g). The final melody (h), the last half of which is a free retrograde of the first half, is derived from the motive, but this inference is possible only by tracing it through the intervening transformations. Toward the end of the last movement the circle is completed, and the motive is heard again in its original form as it was at the beginning of the quartet.

Ex. 250 BARTOK: *String Quartet No. 4* (1928)

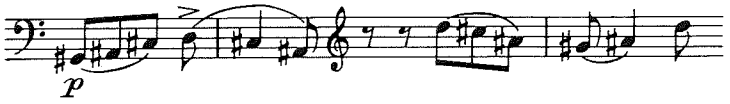
a. p4



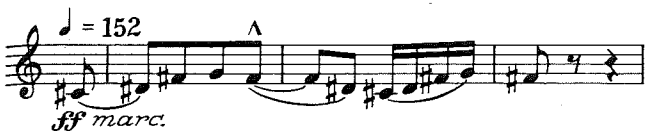
b. p4



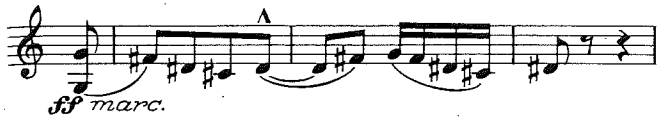
c. p8



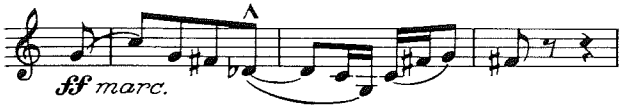
d. p45



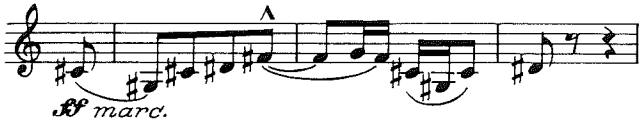
e. p46



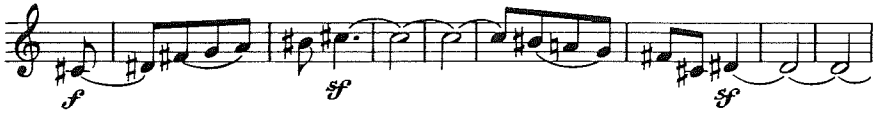
f. p46



g. p47



h. p47



Peruse complete works at random for additional examples of the many and varied methods of thematic transformation. All of them will not be found in any one composition, but some of them will be. Thematic metamorphosis is basic in the construction of extended musical forms, and the ability to recognize thematic elements in all of their mutations is prerequisite to intelligent performing and listening.

Suggested Assignments

1. Locate examples of augmentation and diminution in twentieth-century music. Determine whether the changes in note values were made to alter the flow of the melodies or to preserve the original movement in a different tempo.
2. Catalog the transformation of the motives in Barber's *First Symphony* (see Example 245).
3. Find examples of thematic metamorphosis in the first and last movements of Bartok's *String Quartet No. 5.*
4. Write a motive and extend it by varied sequential repetition.
5. Compose a theme which is equally effective as nearly as possible in its original, inverted, retrograde, and inverted retrograde forms.
6. Write a theme in which a motive is used in augmentation and/or free inversion.
7. Construct an extended theme from a single concise motive by applying some of the procedures outlined in this chapter.
8. Write three different but similar melodies related in the manner of those in Example 248.
9. Create a motive and then write several modifications of it which could be used in a development section.
10. Compose a short piece based on a single motive and its transformations.
11. In *The Thematic Process in Music* by Rudolph Reti (Lawrence Verry, 1961) read the sections on Bartok's *Fourth String Quartet* and Debussy's *La Cathédrale Engloutie.*

13

Imitative Procedures

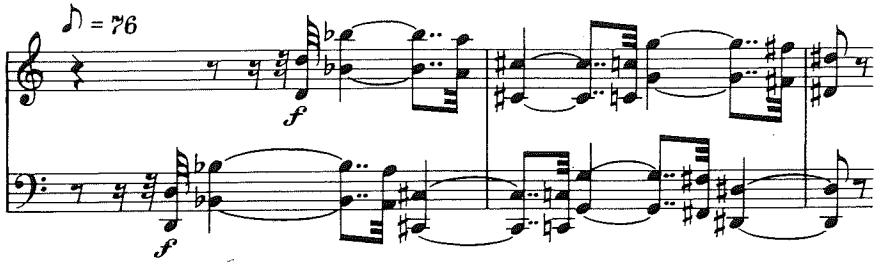
THE practice of imitation dates back almost as far as the art of combining tones, but for centuries strictly observed conventions were formidable barriers to contrapuntal fluency. The ability to write imitation conforming to baroque and classic precepts was a notable achievement constituting somewhat of an end in itself, but this is not the case in modern styles. The permissiveness previously observed in connection with melodic invention and the treatment of dissonance applies equally to melodies in contrapuntal associations. Contrapuntal intricacy is no longer the evidence of technical mastery and the assurance of quality that it was before the obstacles which formerly thwarted novices were removed. The poet Robert Frost is quoted as saying that writing free verse is like playing tennis with the net down. The analogy might well be applied to writing dissonant counterpoint. This is not to say that the artistic and esthetic values of imitation have diminished but only that unrestrained accessibility increases the proclivity for unimaginative and mechanical usage. Contrapuntal manipulations not motivated by a genuine creative impluse quickly degenerate into a mere display of pedantry, but inspired contrapuntal writing remains today, as always, one of the composer's most versatile and esteemed modes of expression.

Though counterpoint and imitation are used almost synonymously, much effective contrapuntal music does not involve imitation. Contrapuntal associations of independent lines are difficult to classify and analyze, and it is for this reason that the following examples are drawn exclusively from imitative passages. They illustrate adaptations peculiar to the twentieth century of previously accepted practices, all of which persist to the present time. The one approach to counterpoint which is entirely a product of this century, the twelve-tone method, is the subject of the next chapter.

Direct Imitation

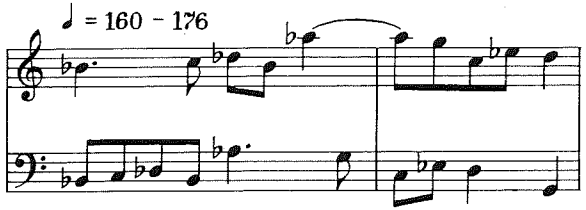
The first example, with its direct imitation at the octave after one beat, could have come from an earlier period except that it violates the principle, formerly observed, of resolving contrapuntal dissonances stepwise. Its twentieth-century origin is betrayed by the casual way the major seventh, augmented octave, and minor ninth are left by leap, but their dissonant effect is minimized by their being unaccented and of short duration.

Ex. 251 SHOSTAKOVICH: *Symphony No. 5* (1937) p3



Example 252 also has octave imitation at the distance of one beat and dissonances left by leap. Beginning the two parts together and making the upper one the follower by extending its first note is a novel touch.

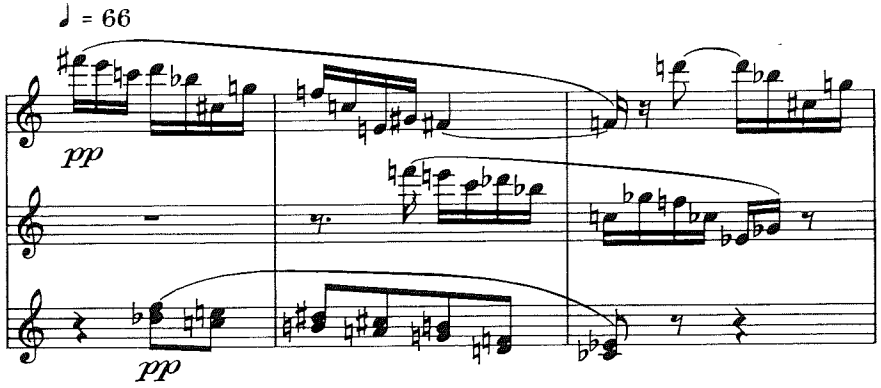
Ex. 252 WALTON: *Belshazzar's Feast* (1931) p27



Imitative and nonimitative parts are often combined, as they are in Example 253. A descending line in thirds accompanies a curious bit of imitation replete with dissonances. The follower starts a half beat later

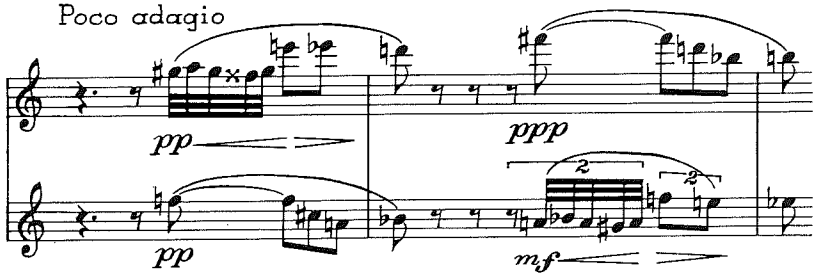
in the measure than the leader, causing a shift in the metric stresses. All of the notes have the same letter name in the leader and follower, but seven of the eleven have different chromatic inflections.

Ex. 253 SCHOENBERG: *Pierrot Lunaire, No. 1—Mondestrunken* (1912)



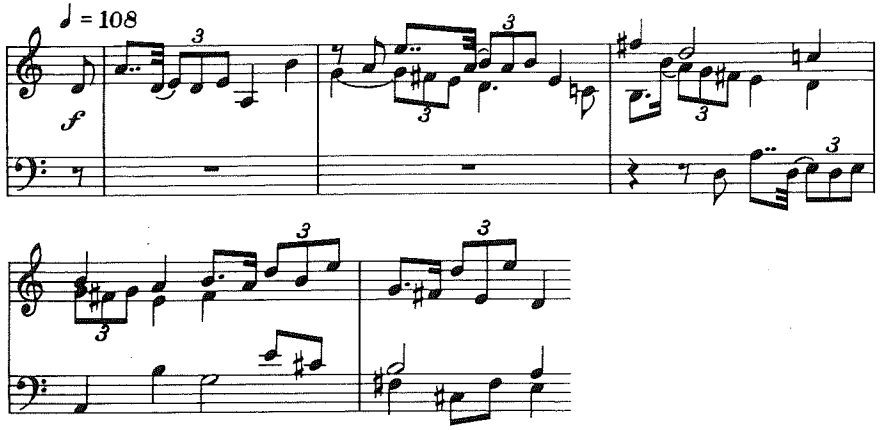
The reasons which account for the preponderance of imitation at the fourth, fifth, and octave in earlier music no longer exist, so other intervals of imitation are used with equal freedom. In the exchange of thematic fragments between the two voices in Example 254 the imitation, allowing for enharmonic spellings, is at the minor ninth above and the major seventh below. In these transpositions the harmonic intervals are inverted, again allowing for enharmonic spellings, as they are in classic double (invertible) counterpoint at the octave.

Ex. 254 SCHOENBERG: *Verklaerte Nacht* (1899) p14



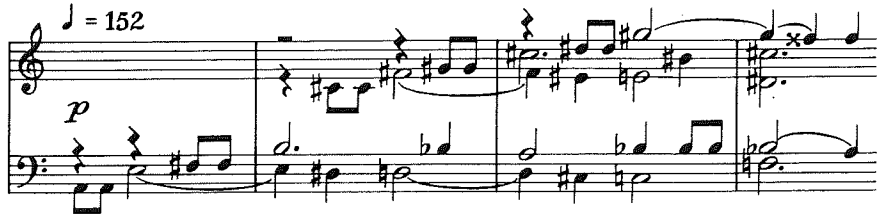
The fugal imitation shown in Example 255 is more recent but more conventional. The entrances at the fifth above and the octave below and the suspension-like resolutions of some of the dissonances could have come right out of Bach, but the lines and harmonies are less academic.

Ex. 255 HINDEMITH: *Ludus Tonalis—Fuga Octava in D* (1943)



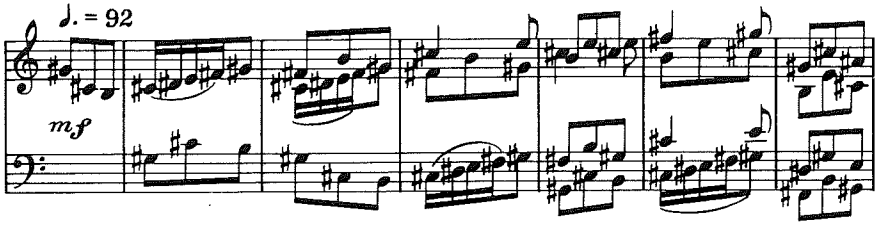
Close fragmentary imitation producing pyramid effects is a common contemporary device illustrated in Example 256. The rising fifth in the first voice is imitated by fourths in the ensuing voices. In conventional music this would be tonal imitation, but in this case it is not used to preserve the tonality as it was during the common practice period. Successive entrances a major sixth, a major third, a major seventh, and an augmented fourth above the initial pitch lead to interesting vertical structures.

Ex. 256 KODALY: *Te Deum* (1936) p44



In the four-part imitation of Example 257 the first note of alternate entrances is transposed down an octave to avoid overlapping in the imitation, which otherwise is at the same pitch as the preceding voice. The third and fourth voices enter an octave lower than the first pair, and the distance between them is increased to two measures for added variety. The imitative counterpoint is followed with no break in the continuity by a thematic fragment in parallel seventh chords.

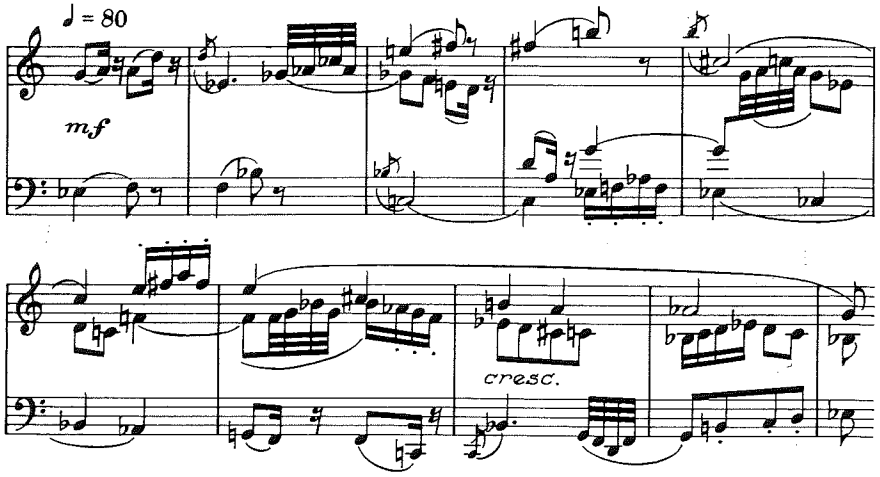
Ex. 257 BARTOK: *Piano Concerto No. 3* (1945) p59



Modified Imitation

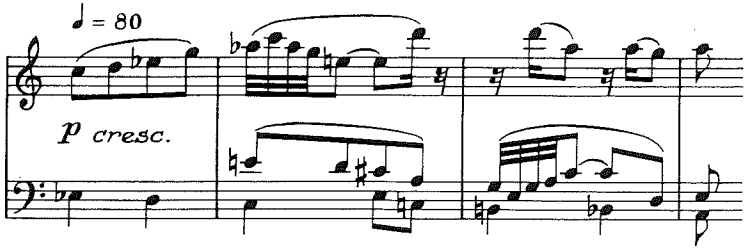
The methods of thematic modification discussed in Chapter 12 are used imitatively, and Hindemith's *Ludus Tonalis* is virtually a catalog of these procedures. Example 258 begins with a fugue subject in its original form and in augmentation. Two measures later the augmented form enters in the soprano. In the seventh measure, while the augmented form is continuing in the soprano, the inverted form enters in the bass. The middle voice presents fragments from both the original and inverted forms of the subject.

Ex. 258 HINDEMITH: *Ludus Tonalis—Fuga Nona in B-flat* (1943)



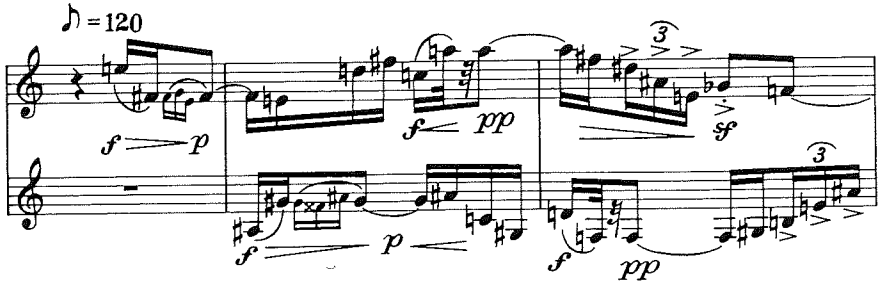
The retrograde form of the fugue subject in Example 258 is partially imitated by the retrograde inversion at the distance of one measure in Example 259.

Ex. 259 HINDEMITH: *Ludus Tonalis—Fuga Nona in B-flat* (1943)



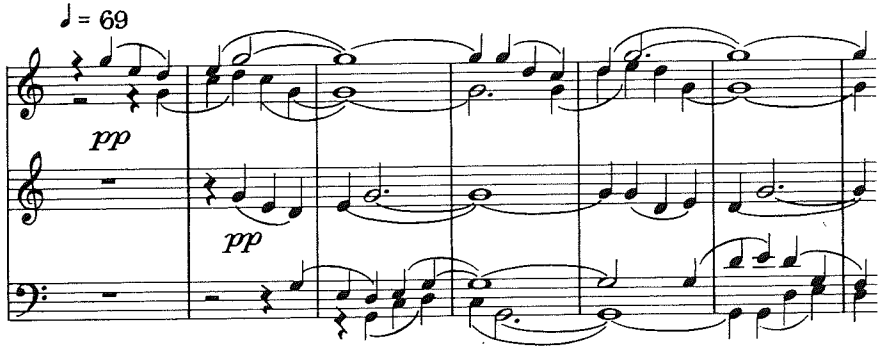
Slight deviations in imitating lines like those in the Hindemith examples just cited do not detract from the contrapuntal effect, but exact imitation is usual when harmonic considerations are minimal as they are in Example 260. Every interval in the second voice is a precise mirror inversion of the corresponding interval in the first voice, though some are spelled enharmonically.

Ex. 260 SCHOENBERG: *Pierrot Lunaire, No. 17—Parodie* (1912)



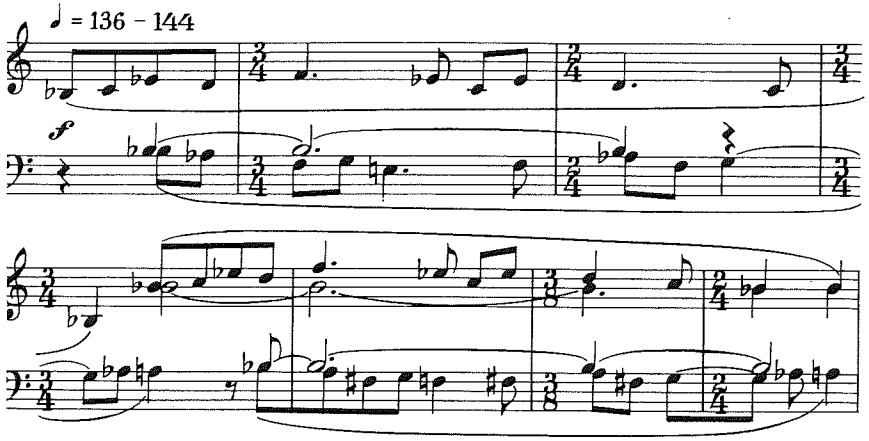
Less strict direct and mirror imitation are illustrated in Example 261. The third and fourth voices are in direct imitation at the octave. The second and fifth voices two octaves apart mirror the contour but not the intervals of the others. Bartok is one of the composers who is inclined to make compromises in imitation for the sake of sonority.

Ex. 261 BARTOK: *Piano Concerto No. 3* (1945) p32



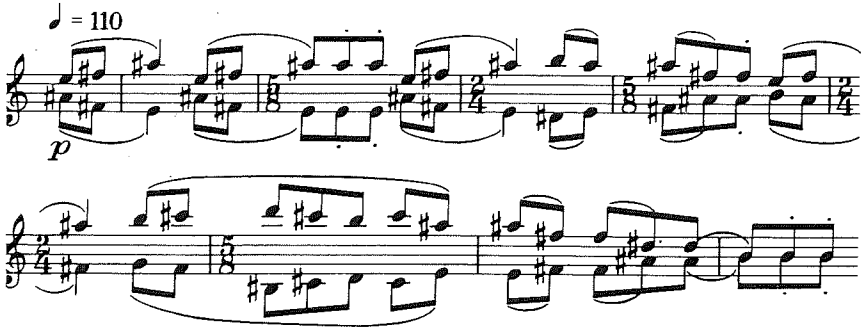
The mirror imitation in Example 262 is subtly changed both rhythmically and melodically when the phrase is repeated with the top voice an octave higher. The imitating voice starts an eighth later than in the first phrase, but the fifth note is shortened an eighth to reestablish the original relationship between the parts. The 3/8 measure in the second phrase is a compressed version of the corresponding 2/4 measure. Concomitant with these rhythmic shifts, several notes in the second phrase imitation are a semitone higher than in the first phrase.

Ex. 262 BARTOK: *Mikrokosmos, No. 141—Subject and Reflection* (1926–37)



Simultaneous mirroring lacks the rhythmic interplay of imitation with delayed entrance and of nonimitative counterpoint, but it is contrapuntally more interesting than melodic doubling to which it is related. The two parts in Example 263 create the impression of simultaneous mirroring, even though the intervals have been substantially adjusted to achieve the desired harmonic effect.

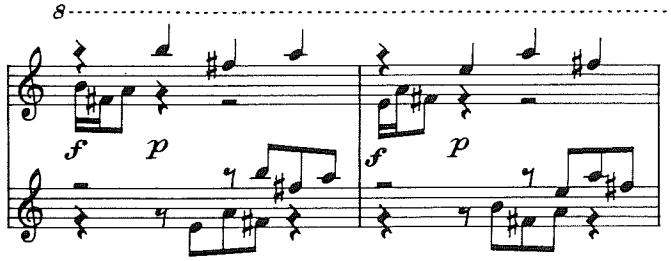
Ex. 263 BARTOK: *Concerto for Orchestra* (1943) p68



Example 264 is an intrinsically simple piece of writing which on closer examination reveals some intricate contrapuntal processes. In order of entrance, the second voice is an augmentation of the first; the third is an

inversion of both, an augmentation of the first and a diminution of the second; and the fourth is an inversion of the third and a diminution of the second. In the second measure the procedure is repeated with the shapes of the motives reversed. The description of this passage sounds much more complicated than the music, which is convincing evidence of the contrapuntal mastery of the composer.

Ex. 264 BARTOK: *Piano Concerto No. 3* (1945) p36



The contrapuntal accomplishments of composers past and present can be fully appreciated only by those who have studied their works and attempted to duplicate their feats. The preceding examples and the following assignments show how some of the contrapuntal techniques have been and can be used in contemporary idioms. The sphere of composers is learning to use them; that of performers and listeners is learning to perceive and appreciate them.

Suggested Assignments

1. Locate and describe examples of imitation in twentieth-century compositions.
2. Using Example 251 as a model, write an exercise in two-part imitative counterpoint in which dissonances are treated freely.
   The following procedures facilitate writing imitative counterpoint:
   a. Start with an incisive motive and continue it for the distance of the imitation.
   b. Copy this line where it is to be in the imitation with the desired transposition and modifications, if any.
   c. Write a suitable counterpoint in the first voice which is also a logical continuation of the start.