

## Music 231

### Motive Development Techniques, part 2

New Material	
Fourteen motive development techniques:	
<b>Part 1</b> * repetition * sequence * interval change * rhythm change * fragmentation * extension * expansion	<b>Part 2 (this document)</b> * compression * inversion * interverson * diminution * augmentation * ornamentation * thinning

#### Compression

Compression (also known as elision) is a less common development technique in which the motive is shortened by removing material from its middle. Do not confuse this with diminution (see below). Compressed motives are shorter than the original motive (because material is removed), but their note values are the same. [motive length: shorter than original]

Brahms: Violin Concerto, Op. 77 (1878)

The image shows a musical staff in bass clef with a key signature of one sharp (F#) and a 3/4 time signature. The tempo is marked 'Allegro non troppo' and the dynamic is 'ff'. A blue bracket labeled 'motive' spans the first four measures. A red bracket labeled 'compression' spans the last two measures of the first phrase. Two green brackets labeled 'diminution of compr.' are placed over the final two measures of the piece, indicating further shortening of the compressed material.

#### Inversion

The motive (or part of it) repeated in the opposite direction, i.e. intervals that went up now go down, and vice versa. Inversion may be strict (usually in twentieth-century music) or tonal (in most common-practice music). [motive length: same as original]

In a tonal inversion, the qualities of intervals are often changed as their direction is reversed. For example, an ascending **major** third might become a descending **minor** third.

Small divergences from completely strict inversions are accepted as normal. In the Bartok example below, notice the irregularity in the inversion of the second measure.

Haydn: Symphony No. 101 (1794)

The image shows a musical staff in treble clef with a key signature of one sharp (F#) and a 3/8 time signature. The tempo is marked 'Presto' and the dynamic is 'f'. A blue bracket labeled 'motive' spans the first two measures. A red bracket labeled 'inversion' spans the next two measures, showing the original motive played upside down.

Bartok: Concerto for Orchestra (1943)

Allegro vivace, ♩ = 88

The image shows a musical staff in 3/8 time with a key signature of one flat. A blue bracket labeled 'motive' spans the first four measures, starting with a forte (*f*) dynamic. A red bracket labeled 'inversion' spans the next four measures, which are a pitch inversion of the first four measures.

### Interversion

Interversion is the restatement of a motive with its germs reordered. [motive length: same as original]

In the second example below, notice the introduction of a new germ in conjunction with the intervension. This results in an unusual five-measure phrase.

Sondheim: Sweeney Todd (1979)

The image shows two staves of music in 4/4 time with a key signature of one sharp. The tempo is marked ♩ = 132. The first staff contains the lyrics: 'Twas Pi-rel-li's Mir-a-cle E-lix-ir, That's wot did the trick, sir, True, sir, true. Below the notes, blue brackets identify 'germ a' (the first two notes) and 'germ b' (the next two notes). A red bracket labeled 'intervension' spans the last four measures, which are a pitch inversion of the first four measures. The second staff contains the lyrics: 'Was it quick, sir? Did it in a tick, sir, Just like an e-lix-ir ought to do. The same 'germ a' and 'germ b' are present in the first two measures, followed by a new 'germ c' (a single note) in the third measure, and then 'germ b' and 'germ a' in the final two measures.

Haydn: Symphony No. 101 (1794)

The image shows two staves of music in 3/8 time with a key signature of one sharp. The tempo is marked 'Presto'. The first staff starts with a piano (*p*) dynamic. A blue bracket labeled 'motive' spans the first four measures. A red bracket labeled 'intervension' spans the next four measures, which are a pitch inversion of the first four measures. A green bracket labeled 'germ a' spans the first two notes, 'germ b' spans the next two notes, and 'germ c' (a single note) is in the fifth measure. A blue bracket labeled 'ext.' (extension) spans the last two measures, and a blue bracket labeled 'phrase repeated' spans the final two measures. The second staff starts with a forte (*f*) dynamic, followed by a sforzando (*sf*) dynamic. A blue bracket labeled 'motive' spans the first four measures, and a green bracket labeled 'intervension' spans the last four measures, which are a pitch inversion of the first four measures.

### Diminution and Augmentation

In a motivic restatement, note values may be shortened (diminution) [motive length: shorter than original] or lengthened (augmentation) [motive length: longer than original] .

In early contrapuntal forms (fugues, canons, etc.), these processes were applied strictly to every note of a motive: every note value would either be doubled, quadrupled, halved, or quartered. In the eighteenth and nineteenth centuries, liberties were sometimes taken so that some notes would be shortened (or lengthened) while others would not, or they might be shortened or lengthened by different amounts.

#### Berlioz: Symphonie Fantastique (1830)

4 bassoons  
2 tubas

**Allegro** (♩ = 104)

motive, part 1

10

21

trombones and horns

pizz. strings woodwinds

part 1, diminution 2

part 2, diminution 2

31

Mahler: Symphony No. 5 (1903), IV: Adagietto

Sehr langsam

[violins 1]

*pp* [violas, cellos] *pp* < *pp* seelenvoll

motive

molto rit. a tempo (molto Adagio)

6

augmentation

Nicht schleppen

[cellos]

*pp* < *pp*

12

(interval changes, other variations)

**Ornamentation and Thinning**

Ornamentation is a common technique in which notes are added to the motive while keeping the melodic and rhythmic outline of the motive intact. (Note that these notes are specifically written into the music by the composer, unlike the implied ornamentation in Baroque music or in improvisational music.) Thinning is the opposite process, removing some notes but retaining the essential outline. [motive length: same as original]

Beethoven: Piano Sonata, Op. 53, "Waldstein" (1804), Third Movement

Prestissimo

*p dolce*

motive

ornamentation

Ellington: Satin Doll (1953)

Moderately, with a beat

germ

thinned

Cig - a-rette hold - der which wigs me o - ver her shold - er,

she digs me Out cat-tin' that Sat - tin Doll.

### Additional examples

The body of music literature contains countless examples of development techniques that are too subtle or too individual to catalogue. Further, the techniques listed in these pages are often combined in unique ways. Examine the examples below, paying special attention to combinations of development techniques. You may need to describe variations as based on multiple techniques (for example a sequence with a rhythmic change) or you may wish to describe consecutive techniques (for example the first germ might be inverted, the second germ might be sequenced).

### Bach: The Art of Fugue, Canon I

Bach: The Art of Fugue (1750), Canon I

The image displays the first three systems of the musical score for Canon I from J.S. Bach's The Art of Fugue. The score is written for two staves, treble and bass clef, in C major and common time. The first system shows the initial entry of the subject in the treble clef, with a blue bracket labeled 'motive' spanning the first five measures. The second system continues the subject's development, and the third system shows further variations and counterpoint. The bass clef part provides a harmonic and rhythmic foundation for the treble part.

## Dvorak: Symphony No. 9, Fourth Movement

Dvorak: Symphony No. 9 ("New World") (1893), two passages from the fourth movement

The image shows two staves of musical notation in 4/4 time, marked 'Allegro con fuoco' with a tempo of quarter note = 152. The first staff begins with a 'motive' (ff) and a 'repet.' (repetition). The second staff starts at measure 5 and includes an 'aug.' (augmentation) section. Various techniques are annotated with brackets and labels: 'dim1', 'dim2', 'int ch', and 'aug.'.

### Summary

Technique	Method	Length of original
repetition	restatement	same
sequence	restatement transposed	same
interval change	same rhythm, interval or intervals altered	same
rhythm change	same intervals, rhythm varied	same
fragmentation	part of original (usually a germ) repeated	shorter
extension	material added at end of motive	longer
expansion	material added in the middle of the motive	longer
compression	material removed from the middle of the motive	shorter
inversion	interval direction reversed	same
interversion	germs presented in a different order	same
diminution	note values reduced	shorter
augmentation	note values lengthened	longer
ornamentation	non-harmonic tones added	same
thinning	non-harmonic and/or ornamenting tones removed	same

Please note: the information on this page has been supplied by Dr. Ronald Caltabiano