

VARIATION TECHNIQUES FOR COMPOSERS AND IMPROVISORS

In this short paper some basic methods of making variations on a melodic model, which is called 'melos', will be shown. Our melos is:

Melos



With only a small number of examples the following techniques or methods will be demonstrated:

- Method 1: rhythmic change
- Method 2: diminution
- Method 3: omission and contraction
- Method 4: external and internal expansion
- Method 5: permutation and retrograde
- Method 6: inversion and retrograde inversion

1. Rhythmic change

Rhythmic change is the easiest way of varying melos and seems to be common practice in the Renaissance and the Baroque. Michel de Saint-Lambert wrote in his *Principes du Clavecin* (1702) that inequality, i.e. making certain equally notated notes unequal, gives the notes more grace. Of course, if done with good taste. Although 'notes inégales' is limited to mainly stepwise melodies, we can use this idea.

In the following basic examples, in contrast to the advanced examples, the metrical position of the original notes remains more or less unchanged (which is according to the practice of 'notes inégales').

Method 1a: basic rhythmic change



Method 1b: advanced rhythmic change

From a certain point of view, composing twelve-tone music could be defined as a rhythmically varied repetition of a tone row or set (i.e. an ordered arrangement of the twelve notes of the chromatic scale) as in the example from Webern op. 17/3. Formation of intervals and chords on the set is the only exception where this definition is not valid. When the technique is applied most rigorously, an entire piece must be built up from statements of any transposition of this tone row in strict order or transformations of the initial tone row (retrograde, inversion or retrograde inversion). In practice, the "rules" of twelve-tone technique have been bent and broken many times, not least by the developer Schoenberg himself. For instance, in some pieces two or more tone rows may be heard progressing at once, or there may be parts of a composition which are written freely, without recourse to the twelve-tone technique at all. This being said, one could think about a combination of the twelve-tone technique and the free techniques in this paper.

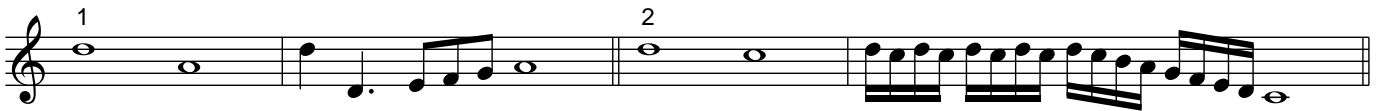
Webern, op. 17/3 Twelve tone row

Webern, op. 17/3 Twelve tone row, four times rhythmically changed

2. Diminution

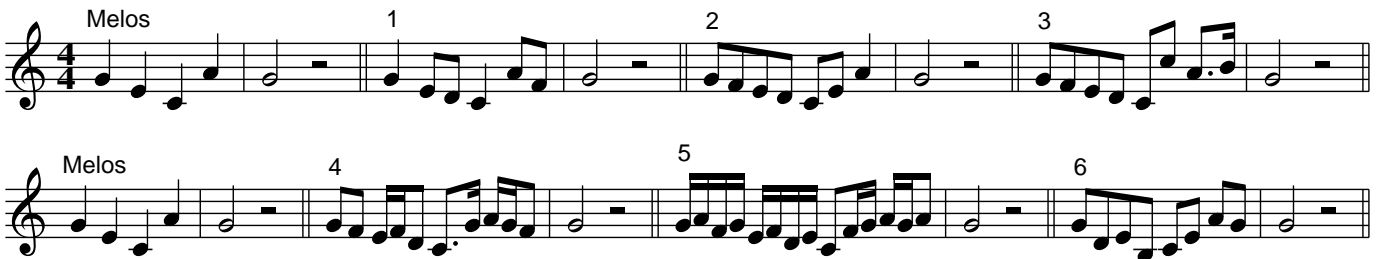
Diminution refers to a common practice of improvisation, where the melos is broken into notes of smaller value. Many examples can be found in important 16th, 17th and 18th century treatises such as Ganassi (*Opera intitulata Fontegara*, 1535), Ortiz (*Trattado de Glosas*, 1553), Diruta (*Il Transilvano*, 1593), Bassano (*Ricercate, Passaggi et Cadentie*, 1598) and to mention a younger author Quantz (*Versuch einer Anweisung die Flöte traversiere zu spielen*, 1752). They demonstrate several techniques of diminution in relation to intervals, progressions of intervals and to existing compositions (as Bassano does in motets of Palestrina). Studying their examples we can find several diminution techniques such as the application of anticipation, passing and neighbour notes (in the annex of this paper we give eight basic forms of diminution). Most interesting are the examples where the octave of the original note is changed (register transfer). Two examples from Ortiz will suffice.

Ortiz (1553): two examples of diminution of an interval

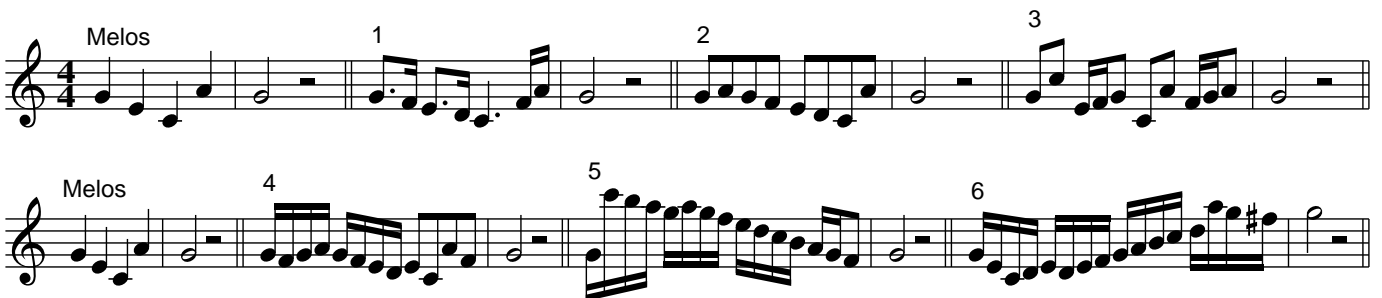


Now we will make some diminutions on our melos. In the basic examples the metrical position/octave of the original notes remains unchanged, in contrast to the advanced examples.

Method 2a: basic diminution



Method 2b: advanced diminution



3. Omission and contraction

Omission – 'abruptio' according to the old authors – is modifying the melos by replacing of one or more notes through rests. The metrical position of the original notes remains unchanged.

Method 3a: omission



Contraction is shortening the melos by skipping of one or more notes which can create more melodic tension and more drive.

Method 3b: contraction



4. External and internal expansion

External expansion is lengthening the melos by adding one or more notes at the end (new or derived material). The music theoretician Heinrich Christoph Koch refers to this expansion technique as appendix (*Versuch einer Anleitung zur Composition*, 1782). Of course, we can add also a prefix or combine these techniques.

Method 4a: external expansion



Internal expansion is lengthening the melos by inserting one or more notes. The inserted notes can be new or derived material (e.g. repetition, varied repetition). It is Heinrich Christoph Koch again who describes internal expansion extensively.

Method 4b: internal expansion

Melos 1 2 3

5. Permutation and retrograde

Permutation is the act of permuting, that is rearranging, the order of the notes. The number of permutations of the 5 notes of our melos is in math computing the factorial 5! This means $5 \times 4 \times 3 \times 2 \times 1 = 120$ permutations. Below three permutations. The last one is the famous retrograde (backward-read version of the melos) .

Method 5: permutation and retrograde

Melos 1 2 3

6. Inversion and retrograde inversion

In case of inversion the melos is turned upside-down. For instance, our melos starts with the falling minor third. When inverted, the melos should start with a rising minor third. A retrograde inversion turns the melos upside-down and reads then the new melos backwards.

Method 6: inversion and retrograde inversion

Melos 1 2

7. Examples from the music literature

The composer or improvisor can select some or all of the above mentioned six methods to make a variation on a model. To conclude this paper, carefully study the following basic examples from the music literature.

Example 1: Josquin Des Prez, Pange lingua Internal expansion

Original Gregorian chant

Diminution of Josquin

Original Gregorian chant

Diminution of Josquin

Example 2: Josquin Des Prez, Pange lingua The sequence as expansion technique

Original Gregorian chant

Diminution of Josquin

Example 3: J.S. Bach, Kunst der Fuge
A soggetto rhythmical changed and diminished

1. Original

2. Diminution: passing notes

3. Omission

4. Several techniques

The image shows four staves of music. The first staff is the original subject. The second staff shows the subject with passing notes. The third staff shows the subject with some notes omitted. The fourth staff shows the subject with several techniques combined, including triplets and a diminished interval.

Example 4: Hindemith, Marienleben
An ostinato rhythmical changed and diminished

Original ostinato

Variation

The image shows two staves of music. The first staff is the original ostinato in 3/4 time. The second staff is a variation in 4/4 time.

Example 5: Schubert, Symphony 9
A triad, expanded and diminished

The image shows two staves of music. The first staff shows a triad. The second staff shows the triad expanded and then diminished. The label 'appendix, augmentation' is placed above the second staff.

Example 6: Mahler, Symphony 9
Permutation and expanding a four-notes model

The image shows two staves of music. The first staff shows a four-note model. The second staff shows the model permuted and expanded. A triplet is indicated above the second staff.

Example 7: Entrée from Daan Manneke

A six song phrases as a result of an expanded and diminished fourth

Model

The image shows six staves of music. The first staff is labeled 'Model' and contains two whole notes: G4 and D5. The following six staves are labeled '1' and '2' at the beginning and '(phrase 1)' through '(phrase 6)' at the end. Each staff shows a variation of the model interval. Phrases 1, 2, and 3 show the interval expanded to a fifth (G4 to E5). Phrases 4, 5, and 6 show the interval diminished to a third (G4 to B4). The notes are written in treble clef.

Example 8: J.S. Bach, Gavotte (Cello Suite in C minor)

A stepwise descending line diminished

Model

The image shows three staves of music in bass clef with a key signature of two flats (B-flat and E-flat). The first staff is labeled 'Model' and shows a stepwise descending line of eight notes: G2, F2, E2, D2, C2, B1, A1, G1. The second staff is labeled 'Diminished version (hypothetical)' and shows a similar descending line but with a diminished interval between the first two notes (G2 to F2) and a diminished interval between the last two notes (A1 to G1). The third staff is labeled 'Bach's version' and shows a more complex descending line with a triplet of eighth notes at the beginning. The time signature is 2/2.

Example 9: Olivier Messiaen, Corps Glorieux

A variable-ostinato = an ostinato, however rhythmically changed and internally expanded

Example 10: Debussy, Violin sonata

Diminishing and expanding the third G – Bb to the diminished fifth G– Db; register transfer

Example 11: Old Korean Folk Tune

Varied repetition

Annex: eight basic forms of diminution from 16th–18th century treatises

The image displays eight musical examples of diminution techniques on a single treble clef staff. Each example is separated by a double bar line and includes a label above it:

- Multiplicatio, tone repetition:** A sequence of notes where a single tone is repeated multiple times.
- Anticipatio:** A note that occurs before the expected time of the next note.
- Transitus:** A note that occurs after the expected time of the next note.
- Tirata, passaggio:** A note that is stretched or held longer than its original value.
- Circulus:** A series of notes forming a circle or loop.
- Halbcircl:** A series of notes forming a half-circle or loop.
- Groppo:** A series of notes forming a group or cluster.
- Superjectio, neighbour notes:** A note that is placed above or below the expected time of the next note.
- Nexus, neighbour notes:** A note that is placed between the expected times of two notes.
- Sumsumtio:** A note that is placed between the expected times of two notes, often with a sharp sign.

In loving memory of Barbe Vivien

This paper is written by Reinier Maliepaard, based on notes of Barbe Vivien.
I added the example of Manneke's Entrée to Barbe's examples from the music literature.

This paper has been typeset with MC Musiceditor 5.0.1 (www.mcmusiceditor.com – www.bestmusicteacher.com)