

The negative harmony

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Abstract: *Change is inevitable... Change in music is also inevitable, as with all things. However, most of the 20th century's musicians, noticed that this great wave of change touched also the musical world, with all sorts of (big) ideas being brought to life. The experimentation is great, the most of composers are set to creating the „new music”, to configurate their own (new) desires, rather than create music being written for specific performance, or condition. Everyone, musician/composer want to try in the new era of changes, to create the new sound.*

Keywords: *harmony, positive ascending axis, negative descending axis, circle of fifths*

1. Introduction

There were from the beginning two causes of things, father and mother. The father is the light and the mother the darkness. The parts of light are warm, dry, light, swift, and the darkness are cold, moist, heavy, slow. And of this all the universe is composed, of male and female. In the assian philosophy exists Ying and Yang...

2. The basic idea about negative harmony

This theory about the negative harmony was for the first time mentioned by Ernst Levy composer, pianist, teacher, philosopher, who seted down his ideas in the winter of 1950-1941 in a lengthy manuscript in French entitled *Connaissance Harmonique. Essai sur la structure musicale de son*. The war interfered with his publication. About ten years later on the faculty of University of Chicago he translated his manuscript into English using the ocasion to tighteen and revise the text. After his death in 1981 a good friend of him (Sigmund Levarie) will publish in 1985 this book named *The Theory of Harmony*. This idea about negative harmony ist developed since one year by Jacob Collier in the insider jazz forums in the USA.

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Jacob Collier, born in 1994 in London, son of a music teachers family (his parents are teaching the string instruments at Royal Academy of Music) a multi-instrumental player, arranger and composer. Discovered in 2014, by no one else than Quincy Jones, he studied at MIT, in Boston, and creates his breakthrough in 2016, with his first album, named *Album in my room*, recorded at the Label Membran Entertainment Group, achieving in 2017 his first Grammy Award, for the best vocal and instrumental arrangement.

3. Arguments who maintenance this theory

3.1. The overtone series

We start with the option that exists a ascendent positive harmony axis and a descendent negative harmony axis.

- The overtones of C are decreasing amples in well determinated intervals and in a exactly pitch and order ascendent or descendent. They are a lot of but determinating are the first 16 of this. (Pascanu 2003, 11).



Fig. 1. *Overtones on the ascendent positive harmony axis*

- Building the same decreasing amples intervals and pitches in the (other) descendent direction results the follow serial overtones.



Fig. 2. *Overtones on the descendent negative harmony axis*

3.2. Relationship between modes

- The ascendent ionian mode on the positive harmony axis is equal with the frigid mode on the descendent negative harmony axis. By strictly obeying the structure W(hole)T(one)-WT-S(emi)T(one) WT-WT-ST (Persichetti 1961, 31).



Fig. 3. *Mirror modal equivalent modes*

- So on, the ascendent frigid mode build of C, D-flat, E-flat, F, G, A-flat, B-flat, C will be built of ionian C, B, A, G, F, E, D, C in the descendent negative direction.



Fig. 4. *Mirror modal equivalents (in a contrar motion)*

- This two modes (ionian and frigid) are mirror equal equivalents by strictly obeying the structure on a positive ascendent and a negative descendent way.
- Any mode on the ascendent positive axis has an equal mode on the the negative descendent axis.

Exactly it means:

- The lidian mode and the locrian mode are also mirror equal equivalent modes.

Fig. 5. *Mirror modal equivalents*

- The only one mode that remains the same on both directions (ascendent positive and descendent negative) is the dorian mode it has the exact same intervall combination.

Fig. 6. *The dorian mode (a symmetrical structure)*

- By following the same procedure the mixolidian and the eolian mode are also equals.
- The major double harmonical mode is also equal, in mirror, by comparsing the first and the second four notes (tethra-chord) and viceversa of the mode.



Fig. 7. Major double harmonic reflective mode

3.3. Relations between chords on a positive and negative axis

- The C major chord has as equivalent the F minor chord on a descendent construction. The structure of major third and perfect quint must be basically for building the equal chord in the descendent direction (Ernst Levy 1985, 24-25).

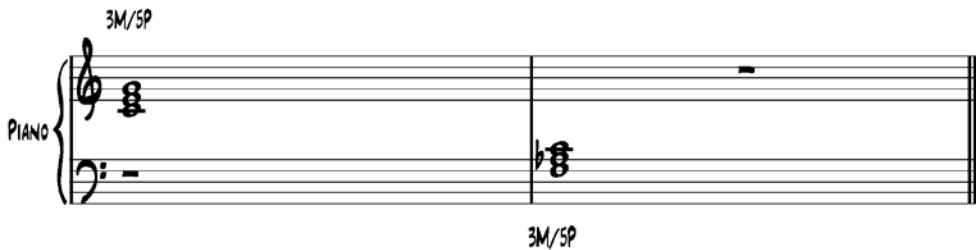


Fig. 8. Mirror equivalent chords

- Building the chords on the steps of ionian mode on a ascendenig axis will result (equals) the frigian chords on a descendent axis

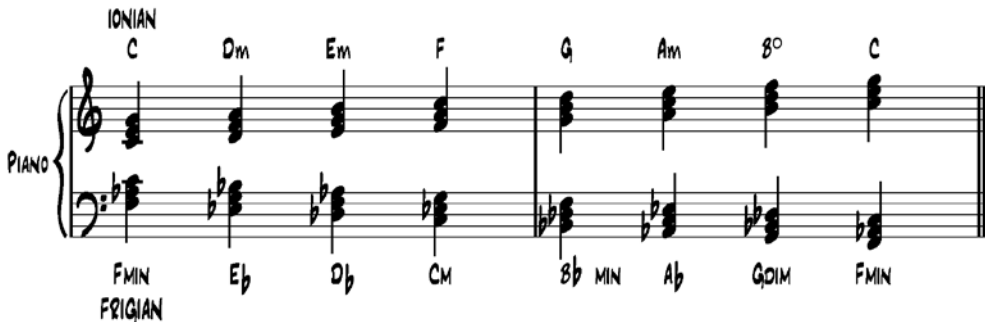


Fig. 9. Mirror equal mode chords

This and more kind of chords combinations on the ascending positive axis and chords on a negative descending axis, or like locrian and lidian mode, or mixolidian and eolian mode, become the harmonical support for works like *Piano Trio* Vitebsk Aaron Copland (1929) or Bela Bartók *Concert for orchestra*.

3.4. Major/major negativ conversion

Building the ionian mode on a positive ascendent axis and the frigid descendent negative axis, starting from the note G (C chord on the first step of the mode has a F chord as equal, that's way the quint/5th interval) it becomes a C minor or a G major negative.



Fig. 10. Modes conversion

By comparing the chords on the positive ascendent axis and the descendent negative axis the major chords reamain major chords, the minor remain minor chords, and the diminished chords remain also diminished, exactly as the old basically theoretical principle of chords inversions.



Fig. 11. Chords conversion

It exactly means:

- The chord on the IInd step, B flat major, will be considered the equal negative chord of D minor chord.
- The chord on the IIIth step, A flat major, will be considered the equal negative chord of E minor chord.

- The chord on the IVth step, G minor, will be considered the equal negative chord of F major chord.
- The chord on the Vth step, F minor, will be considered the equal negative chord of G major chord.
- The chord on the Vith step, E flat major, will be considered the equal negative chord of A minor chord.
- The chord on the VIth step, D diminished, will be considered the equal negative chord of B diminished chord.

3.5. The fifth circle on a negative harmony

By exactly observing, the circle of 5th (without thinking of the major or minor structure of the chords) we find that the chord built on the IInd step on the positive ascending axis (D minor) is on a distance for 2 steps in the sharp direction, the same equal B flat chord is also on a distance for 2 steps on the negative axis in the flat direction (Schönberg 1922, 253-266 and 266-269).

The image shows a piano exercise on a grand staff with two systems of chords. The first system contains positive harmony chords: C major, D minor (+2), E minor (+4), F major (-1), G major (+1), A minor (+3), and B^o diminished. The second system contains their negative counterparts: C minor (C^{MIN}), B flat (-2), A flat (-4), G minor (G^{MIN}, +1), F minor (F^{MIN}, -1), E flat (-3), and C minor (C^{MIN}). The word "PIANO" is written to the left of the first system.

Chord	Interval	Chord	Interval
C		C ^{MIN}	
D ^m	+2	B ^b	-2
E ^m	+4	A ^b	-4
F	-1	G ^{MIN}	+1
G	+1	F ^{MIN}	-1
A ^m	+3	E ^b	-3
B ^o		D ^o DIM	
C		C ^{MIN}	

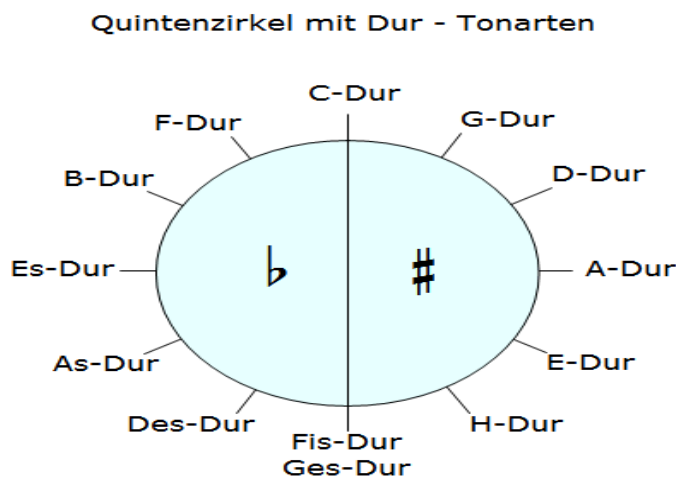


Fig. 12. *Cicle of 5th*

So on:

- The chord built on the IIIrd step on the positive ascending axis, E minor, is on a distance for 4 steps in the sharp direction, the same equal, A flat chord, is also on a distance for 4 steps on the negative axis in the flat direction.
- The chord built on the IVth step on the positive ascending axis, F major, is on a distance for 1 step in the flat direction, the same equal, G minor chord, is also on a distance for 1 step on the negative axis in the sharp direction.
- The chord built on the Vth step on the positive ascending axis, G major, is on a distance for 1 step in the sharp direction, the same equal, F minor chord, is also on a distance for 1 step on the negative axis in the flat direction.
- The chord built on the VIth step on the positive ascending axis, A minor, is on a distance for 3 steps in the sharp direction, the same equal, E flat chord, is also on a distance for 3 steps on the negative axis in the flat direction.

3.6. Transcription/transposing of a song on the descending negative axis

For a better understanding and comparing of the negative harmony I choose the melodic transcription of a very simple song by using the ionian and the frigid modes on the note G .

Fig. 13 a. *Happy Birthday*

Fig. 13 b. *G major negative*

By using the 2 equal modes and strictly the pitches/intervals, will result the following new song:

Fig. 14. *Happy Birthday negative harmony*

Finally, the negative harmonisation of a scale will look like this:

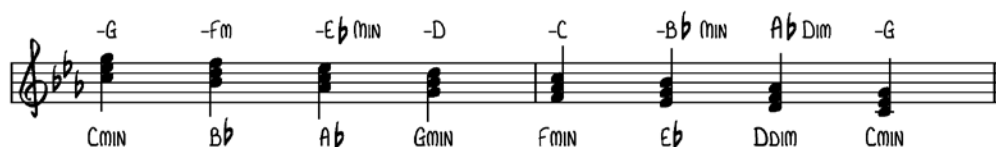


Fig. 15. *Negative harmonisation of G major*

4. Conclusions

The music of the 20th century becomes to be more interesting about sound, based on the contemporan musical thought, and knowledge. New visions, ideas, based (still) on classical harmony and counterpoint, will give a new constellation of lines, melody, harmony, with extended notes and other builded chords constructions, elements who creates the tensions – a very important opportunity for the modern music. The new methods of creating the contemporan music must be known, recognised and successfully appllied. The musical progress is that what we expect, is that what bring the (musical) world ahead, in a new era of development.

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