Dimitrie Cuclin Analyzing the Modes in the Romanian Folk Music

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Abstract: The original and prolific composer Dimitrie Cuclin conceived a particular musical system, with metaphysical correspondences, implemented by him in his own creation. The theoretical model of his functional system could be a starting point of a new and coherent interpretation of the modalism in the Romanian folk song.

Being nonconformist and provocative, Cuclin reconsidered the old tonal system, starting from neo-Pythagorean principles, and reorganized the musical functions and their relations following a personal logic, manifesting in his theories and compositions the obstinacy of a philosopher in scholasticism. The Tonic, the Dominant, the Subdominant and the Leading tone get roles which are sometimes in contradiction with the traditional musical logic, but their roles are redefined from the perspective of a movement between two parallel universes described in his metaphysical works.

His musical thinking included the ideas of his contemporaries (Vincent d'Indy, Hugo Riemann) and is similar to those of Ernst Kurth, Wilhelm Worringer, but his meta-musical conception based on psychology and metaphysics led to a more subtle analysis of the Romanian folk modes and left a specific stylistic mark on his compositions inspired from the modal system, which are peculiar in the Romanian music.

His music turns into an image of a superior world, and the understanding of its elements (the musical tonal functions) and their relations leads finally to the knowledge of the physical and metaphysical universe.

Keywords: Cuclin, mode, function, structure, folk

1. Introduction

Three types of musical systems form the basis of the intonation in the Romanian folk melodies: the pre-pentatonic scales, named "oligochords" by the Romanian ethnomusicologists, the pentatonic scales and the modes. The difficulty to establish precisely some ordering principles stems from: the mobility of certain scale degrees, the passage of the melody from a tetrachord to another one with a different structure and different sounds, the change of the characteristics of the mode in the final cadence with respect to the main mode, the pentatonic basis of many modes, apparently heptatonic ones.

Part of the investigation is focused on the definition of the modal melodic formulae which have a generative and a modeling character. These formulae

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were considered from the point of view of the pentatonic basis of the modes (Brăiloiu, 1967, 283-303), and from the point of view of their role in generating the form of the song (Comișel, 1967, p. 112). Their role in the cadence and their function was another investigated aspect (Mîrza, 1966, pp. 83-105). Modal scales having mobile scale degrees were considered polychords (Duțică, 2009, p. 64), having a complex chromatic-diatonic or chromatic-polymodal structure. The chromaticism was defined as a ”distantial – chromaticism” (Rîpă, 2001, p. 370), or according to the old Greek theory, a part of a diatonic tetrachord, as the ”diatonic chromaticism” (Firca, 1966, p. 19). Various points of view were presented in connection to the chromatic modes. Some researchers (Ciobanu, 1974, p. 71) incline to define the structure of the chromatic modes according to the augmented second and they also imply that these modes belong to the archaic stratus (Ciobanu, 1974, pp. 79-81). Other researchers (Comișel, 1967, p. 103) consider that the chromatic modes are formed by the disjoint superposition of trichords and/or tetrachords.

The theoretical approach of the musicologist and composer Dimitrie Cuclin consists in deriving a comprehensive model able to offer a coherent interpretation of the modes in the Romanian folk music.

2. Short introduction in the functional system of Dimitrie Cuclin

Based on the ascending and descending spiral of the perfect fifths, Cuclin’s system is a dualistic symmetrical one. The modal system is one of the four specific systems forming the general scientific musical system: the diatonic system, the tonal system and the harmonic system are the other three. The diatonic system displays the elements (the functions) successively, the modal system displays them in “distorted” succession, the tonal system simply translates them on the frequency scale, and the harmonic system displays the elements simultaneously. The elements of this musical system are not the sounds determined by a specific frequency, but the functions defined by the relationship between two sounds and the part this relationship plays in a melodic structure: “the same sonorous element is capable of representing at least two musical functions, so that what actually counts in music is not the element itself, but its musical function (or its functional values)” (Cuclin, 1991, p. 72). Choosing the perfect fifth as a functional unit for this system, Cuclin is referring both to the theory of the natural resonance as to the attraction between the sounds. The perfect fifth is the third harmonic, in contrast with the second harmonic, therefore it has a centrifugal tendency, yet it is strongly attracted by the first harmonic. The third harmonic is connected the strongest to the fundamental sound. Therefore, it is endowed with characteristics of centrifugal sensitivity. Now, if the third harmonic is strongly attached to the first harmonic, it follows that the most attached characteristic to the third harmonic is its third harmonic and so on.

Let us consider C the tonic of the whole system, the element of absolute stability. The symmetrical ascending and descending successions of the fifths generate the direct and the reverse orderings of the functions. Consequently, the functions are defined with respect to the tonic, that is, by the distance from the tonic, measured in fifths. This distance accounts for the two forces acting within the system: the centripetal force of attraction to the tonic and the centrifugal force which increases with the departure from the tonic. Unlike the traditional musical scales, organized in ascending or descending order with respect to the criterion of the pitch, the elements of Cuclin's system are organized with respect to the succession of the fifths.

The diatonic scale in major mode (the "direct mode") is equivalent to the ionic mode, i.e. the classical major and it is generated by the ascending (direct) order of the fifths:

F – **C** – G – D – A – E – B

The diatonic scale in minor mode (the "reverse mode") is equivalent to the Phrygian mode and it is generated by the reverse ordering of the fifths:

B – **E** – A – D – D – G – C – F

The first seven functions are considered primary elements, that is to say: the tonic (T), the dominant (D), the subdominant (SD), the first and the second "Melodic" functions (M_1, M_2) and the Leading tone (L.). The tonic is the first scale degree. The dominant and the subdominant are considered symmetrical with respect to the tonic. Both the dominant and the subdominant play the part of the second scale degree. The first "melodic" function (the traditional supertonic in the major scale) is to be found at the second fifth superior to the tonic. The second "melodic" function (the Submediant) is at the third fifth superior to the tonic. The two leading tones: the leading tone of the subdominant (the Mediant) and the leading tone of the tonic complete the main functions described above. The leading tones are considered to be expansive or depressive according to the direct or reverse order of the mode.

The centripetal force is definitory for the "group of fundamentals" which include the tonic, the dominant, and the subdominant. The centrifugal force is specific for the "group of leading tones". Between these two groups, there is to be found the group of the functions called "melodics", because of their transitory place. These "melodic" elements play an important role in the modal system.

The scheme of the functions in the direct mode is:

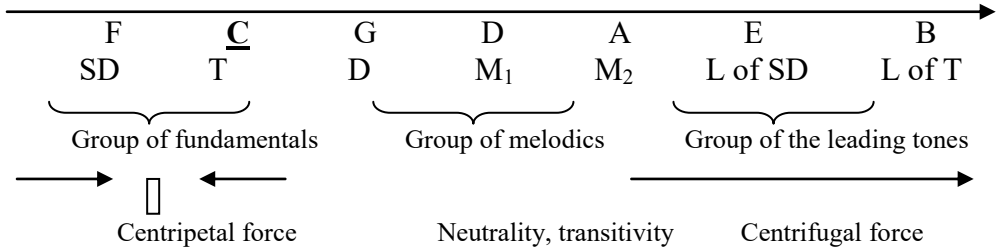

Fig. 1 The scheme of the functions and the forces in the diatonic major scale

In the reverse mode, called the minor aspect, the subdominant is an expansive function, meanwhile the dominant, the "melodics" and the leading tones are depressive:

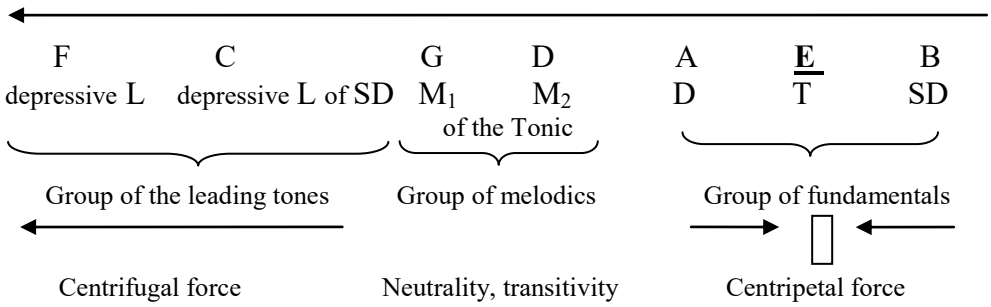

Fig. 2 The scheme of the functions and the forces in the Cuclinian diatonic minor scale

Cuclin considers that, in the reverse mode, the relationship between the depressive leading tone of the tonic and the tonic (F – E) bestows upon the tonic the functional value of a direct dominant for A. This fact changes the functional relationship:

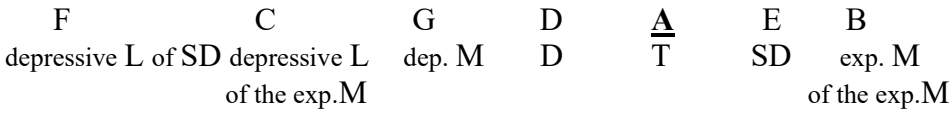

Fig. 3 The scheme of the functions in the minor scale

The chromatic scale is formed by the secondary functions: the leading tones of the leading tones of the main functions. These leading tones also follow the ascending and descending order of the fifths:

F	C	G	D	A	E		B		f#		c#		g#		d#		a#	
SD	T	D	M_1	M_2	L.of SD		L.of T		L.of D		L.of M_1		L.of M_2		L.of L.of SD		L.of	L.ofT

Fig. 4 The scheme of the functions in the chromatic scale

Consequently, every main function in the direct or reverse mode may be determined by expansive or depressive leading tones. The ascending and descending directions have psychic connotations of "expansiveness" and "depressiveness" because, in Cuclin's conception, there is a correspondence between the musical and the psychic functions.

3. A functional analysis of the Romanian folk modes

The terminology: tonic, dominant, subdominant, leading tone, etc. should not be understood in the accepted meaning. When analyzing the modes, the tonic will represent nothing but a reference and by no means the centre which polarizes every attraction. The tonic becomes the most important and stable reference point in the constellation of sounds of the mode. The notion of dominant maintains its usual meaning only as far as the direct mode of the diatonic scale is concerned. In the reverse mode, the dominant and subdominant interchange places, because of the descending succession of the fifths. Consequently, the reverse dominant (the first descending fifth from the tonic) replaces the direct subdominant (see Fig. 2).

The most complex interpretation is associated with the function of the leading note. In some cases, this is interpreted – like in the classical theory – as an element of movement. Such cases concern the leading note of the tonic and the leading note of the subdominant. In other cases, when interpreted as a melodic ornament, the leading note becomes an element of sound slip. Here, the attraction to the ornamented sound does not imply a functional relationship. Frequently, the leading tone is a filling note, "Füllton", similar to the "pien", mostly when it is a mobile scale degree. More often than not, the leading notes are interpreted as modal characteristics. In such cases, their functions tend to receive a greater importance in the mode with respect to the main functions. The leading tone is no more a reusing element determining the occurrence of the next sound. The ascending or descending departure of the leading note from the tonic (measured in fifths) determines the degree of expansiveness or depressiveness of the leading notes. The relationship between expansiveness and depressiveness defines the ethos of the mode.

According to this theoretical model, proposed by Cuclin, the following analysis of the Romanian folk modes will conventionally use the terms "melodic" elements and "leading notes".

The Romanian diatonic modes preserve the names they were given in the Middle Ages: Lydian, Ionian, Mixolydian, Dorian, Aeolian, Phrygian. There are also three scales called "acoustic modes" because of the occurrence on the

same scale of the harmonics 7 (14), 11 and 13. Other musicologists consider them "metadiatonic modes" (Ghircoiașu) or "naturally chromatic modes" (Firca), stemming from the superposition of allogeneous tetrachords. The chromatic modes were studied according to the place of the augmented second which is considered essential to the mode.

In the Lydian mode, the function of the subdominant is replaced by the expansive leading note of the tonic. This creates an excess of expansiveness, as there is no depressive element in this mode. The function of the first melodic tends to become a second dominant. This fact is underlined by the Mixolydian cadence, typical for the Romanian melodies in Lydian. In the cadential formula, F plays the role of a subtone and thus it displaces the attraction centre towards the dominant C, which tends to substitute the tonic of the Lydian.

		Mixolydian cadence				
F	C	G	D	A	E	B
T	D	M_1 = D_2	M_2 M_1	M_3 M_2	L.of T	L. of D

Fig. 5 The scheme of the functions in the Lydian mode

In the Dorian mode, the expansive function of the "melodic" is stressed by the final cadence on this function. The degree of expansiveness is also enhanced by the expansive leading note of the "depressive melodic".

					Phrygian cadence	
F	C	G	D	A	E	B
depressive L. of E.M.	dep. M (=D.M.)	D	T	SD	expansive M (=E.M.)	exp.L.of. depM

Fig. 6 The scheme of the functions in the Dorian mode

The relationship between the direct and reversed modes is a special case of functionality (see Fig. 1 and Fig. 2). The balance between major and minor characteristics is peculiar to a great part of Romanian folk melodies. The tonic function in a mode could substitute the function of the "second melodic" in the other mode. Therefore, the second melodic becomes a modal dominant, a role/part which is stressed upon by the final cadence, mostly Phrygian. The symmetry of the functions in the direct and reverse orders creates a special balance in the major/minor relationship.

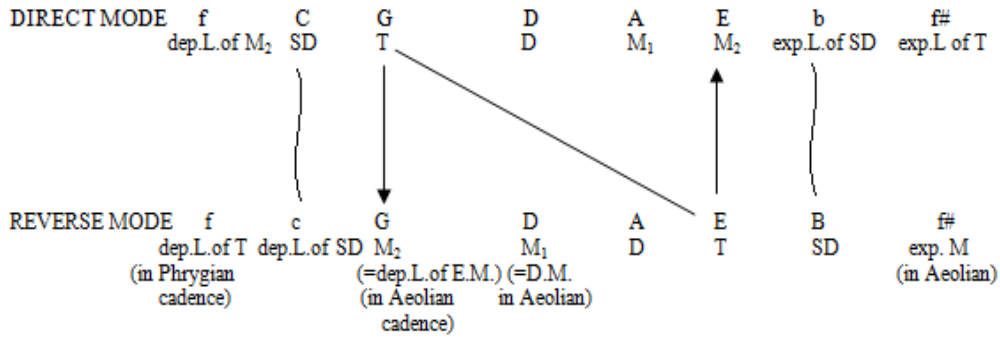

Fig. 7 The relation between the functions in the direct – reverse modes with regards to different cadences

The unbalance between expansiveness and depressiveness manifested itself in the chromatic modes and in the acoustic ones. The second acoustic is an example to this rule. Here, the second expansive melodic function is replaced by a depressive melodic. Consequently, the symmetry of the functions is quite perfect.

b flat	f	C	G	D	A	E	(B)	f#
dep.L.of D	dep.L of M_1 (=dep.L.of E.M.) (in the Phrygian and Locrian cadence)	Dep.M.	SD	T	D	M_1 (=E.M.)	(absent) (replaced by D.M.)	exp. L of SD (in the Istrian cadence)

Fig. 8 The scheme of the functions in the second acoustic, in relation with the modal cadences

The functional relations in the third acoustic mode (the "Istrian mode") show a greater degree of depression. The only expansive function of the mode (the expansive melodic) is eliminated in the final cadence, usually a Locrian one:

b flat	f	c	g	D	A	E	B	F#
dep.L.of D	[dep.L.of T] (in Locrian cadence)	dep.L.of SD	dep.L.of E.M.	Dep.M.	D (cadence)	T	SD (absent)	Exp.M

Fig. 9 The scheme of the functions in the third acoustic, in relation with the modal cadences

The first chromatic mode is a minor scale, with the fourth scale degree raised a semitone, and the sixth and seventh degrees are mobile, according to the variants (Ciobanu, 1974, p. 75) of this mode. The raising of the fourth scale degree eliminates the function of the reverse dominant. The expansive functions prevail in this minor mode. These functions are the subdominant, the expansive melodic (there are two expansive melodics in some variants), the

expansive leading note of the subdominant and, sometimes, even the expansive leading note of the tonic.

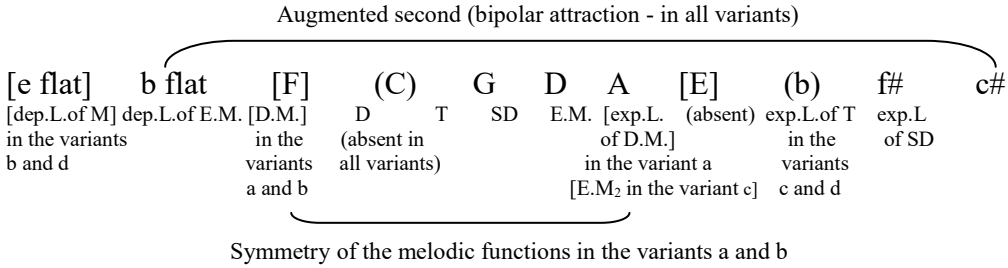

Fig. 10 Scheme of the functions in the first chromatic mode (all the variants)

The second chromatic mode is a major scale with the augmented second between the second and the third scale degrees. The depressive functions prevail: depressive melodic, depressive leading note of the tonic, depressive leading tone of the dominant. The depression is accentuated by the absence of both expansive melodics.

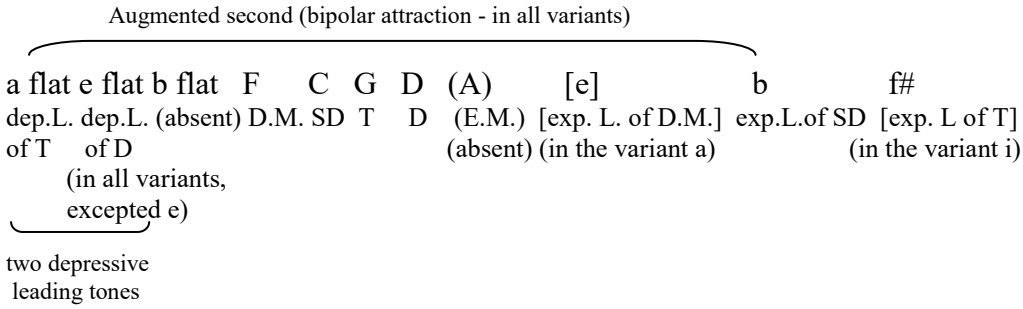

Fig. 11 Scheme of the functions in the second chromatic mode (all the variants)

The third chromatic is a major mode, similar to a Lydian mode, with the second scale degree raised. This mode has an excess of expansiveness. The first melodic is absent, he second melodic is followed by another expansive melodic and its expansive leading note replaces the first melodic.

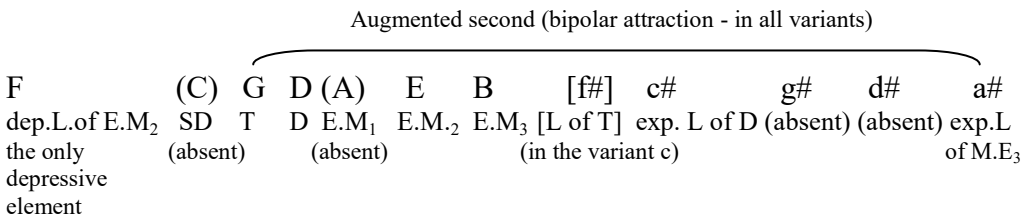

Fig. 12 Scheme of the functions in the third chromatic mode (all the variants)

The depressiveness is progressively accentuated in the fourth, fifth and sixth chromatic modes, which are minor scales. In the fourth chromatic mode, the balance of the functional relations, which are quite symmetrical, is disturbed only by one depressive element: the depressive leading note of the dominant (the sixth descending perfect fifth):

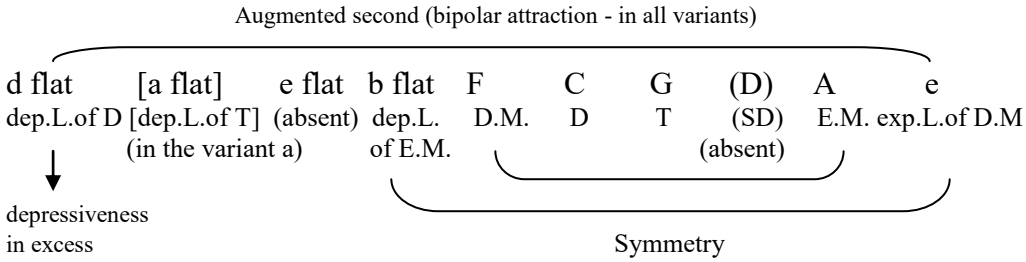

Fig. 13 Scheme of the functions in the fourth chromatic mode (all the variants)

In the fifth chromatic mode (a minor scale with the fourth degree lowered), the depressiveness is underlined by a secondary function: the depressive leading note of the depressive note of the expansive melodic (the eighth descending fifth):

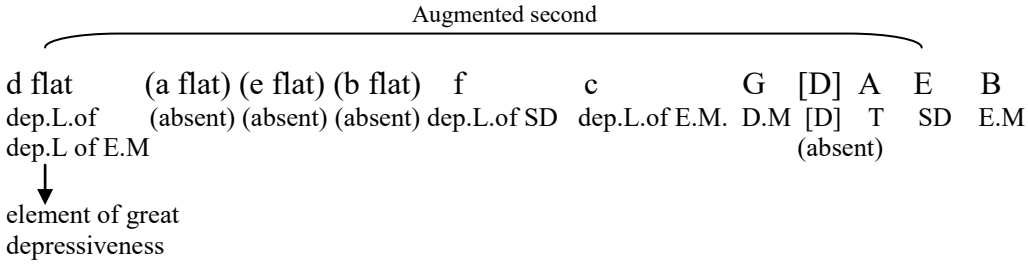

Fig. 14 Scheme of the functions in the fifth chromatic mode (all the variants)

The sixth chromatic mode reaches the climax of depressiveness. The functions of the dominant and of the first melodic are absent. On the other hand there is a depressive leading note of the depressive melodic (the eighth descending perfect fifth).

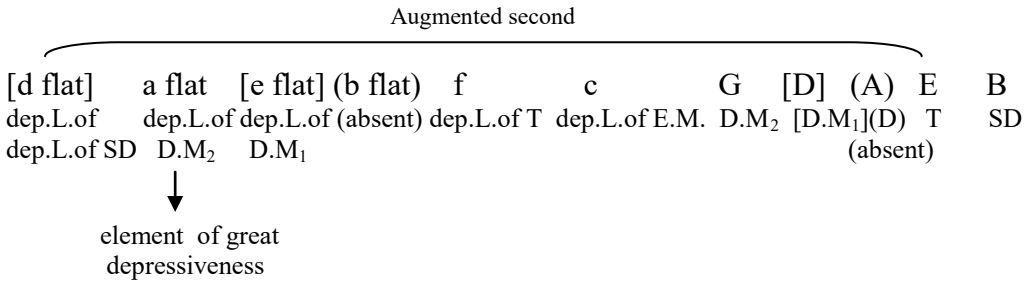

Fig. 15 Scheme of the functions in the sixth chromatic mode

Generally speaking, there is a tendency of an increased depressiveness in the final cadences, especially in the diatonic modes. Even in the modes with an excess of expansiveness (like the Lydian) the final mixolydic cadence turns the functions in the depressive direction. The downwards tendency from major characteristics to minor characteristics is associated with other aspect like: the descendent direction of the melody or the accent of the first syllabus of the basic metrical foot.

3. Conclusions

The theoretical model presented above brings forth the following principles of studying the Romanian folk songs:

1. The decreasing of the role played by the subdominant. In some modes, like the Lydian or first acoustic ones, the subdominant is totally absent.
2. The important share of the so-called "melodic functions", which tend to become the modal dominants. The specific pattern of some modes, resulting from the combination of expansive and depressive elements, determines the occurrence of the "depressive melodic" in major modes and on the "expansive melodic" in minor modes.
3. The degree of expansiveness/depressiveness of each mode is controlled by leading notes (mostly in the chromatic modes)
4. The functional relations are specific to each mode and they are determined by the expansiveness/depressiveness relation. This latter one is greatly influenced by the final cadence. Usually, these final cadences alter the characteristics of the prevailing mode.

Only too often, the descriptive tendencies in ethnomusicology tried to turn this discipline into an empirical science. We tried to show that the study of a complex musical material is more fruitful when based on the study of a complex musical material is more fruitful when based on a theoretical model, debatable as models generally are.

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