

THRACO-DACIAN TONAL SYSTEMS

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Abstract. *International musicology has clear notions about the tonal systems of several antique civilizations, mainly about Indian, Chinese and Greek music. We consider that the research of the tonal systems of other peoples leads to a surplus of knowledge which proves very useful to the development of musicology and at the same time beneficial for contemporary creative activity, which receives thus a thesaurus of art from which it can draw inspiration. In this way, the research of Thraco-Dacian tonal systems constitutes an effort of restitution.*

Keywords: *tonal, thrac, oligochordie, hexatonic.*

1. INTRODUCTION

The wide geographic area of the Thracians (from the Baltic Sea to the Aegean Sea, all the way to the mountains of Slovakia and the Pannonian Basin) is indicative of the fact that they have always been a people of these lands, creators of civilization, culture, and art, as archeological documents and ancient writings attest.

The musical art of the Thracians had considerable expressive force, suggested by the legend of Orpheus, who was of Thracian origin, as the Homeric epics and the references of ancient Greek writers indicate.

Based on to these documents, the idea can be formulated that Thracian music was already strongly crystallized by the 2nd millennium BC, based on an evolution involving in the first place the formation and stabilization of certain stages of the tonal systems, as well as the craftsmanship with which they were used, which was more highly evolved (at that time) than in the case of other peoples.

The Thracian spirituality will be adopted by the peoples that later formed in the respective area, and in whose culture and art will be discovered traces of the ancient Thracian culture and art.

2. DISCUSSIONS

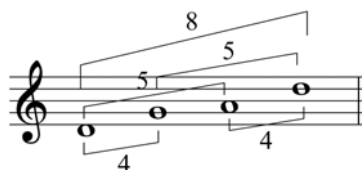
Concrete Thracian music documents have not come into our possession (yet). That is why two indirect sources have been use for the reconstruction of the Thraco-Dacian systems:

- ❖ musical and theoretical documents of certain ancient Southeast European peoples;
- ❖ the old layer of the folklore of Romania and other southern neighboring peoples (Bulgaria, Serbia) from the space of former Thrace.

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All the musical and theoretical documents have been passed down to us from the ancient Greeks. In order to get an idea of the Thracian tonal systems, from the ancient writings one must keep in mind Plutarch's account, who mentions that Olympus and Terpander sang melodies consisting of 3-4 sounds. If in the 8th-7th centuries BC the descendants of Orpheus used oligochordies, it can be appreciated that the tonal systems of the Thracians found themselves at this stage of development in the days of Orpheus, i.e. in the 2nd millennium BC (approximately the 14th century BC).

In his effort to prove this, G. Breazul presents, according to Nichomachus's accounts, the tuning of the lyre of Orpheus, which the latter brought to the Greeks from the Thracian world, and which was the following [1]:



This tuning is based on the "consonance principle" (with three consonant intervals: the octave, the fifth, the fourth), which is a fundamental principle of the world musical thought. The examples of melodies from Romanian folklore provided by G. Breazul, based on the intonation of the intervals of the consonance principle, even though it cannot be sustained that they have been preserved intact from the Thracians, at least attest the expressive possibilities that can be concentrated in so few sounds and intervals:

➤ *Fast The Bride's Hora*

Repede "Hora miresii" (G.Breazul)

Tu mi-rea-să, tu, ne-bu-nă Hâi, hâ- iu, hâi, hâ- iu,
hâi, hâ- iu măi Nu plân-ge du-pă cu-nu-nă.

➤ "Hindireaua" (G. Breazul)

$\text{♩} = 152$ "Hindireaua" (G.Breazul)

But, as G. Breazul points out (quoting from Curt Sachs), it was not these intervals that prevailed in ancient European music, and therefore in Thracian music, but rather the bichords and the third.

Thus, this is an outline of the thesis of the oligochordic systems, which must have formed the first tonal systems of the ancient Thracians. Consequently, the anhemitonic bi-trichordies and bi-tri-tetratonies represent the sound plasma of the Thracian melodic typology.

And since it's a single step from these to pentatony, certainly this pentatonic system was already acquired by the 2nd millennium BC [2].

Some musicologists argue that the evolution from oligochordic systems did not necessarily turn towards pentatony, but rather, in European music, it took the path of the conjunct scales (including only the microtonalities), in which the tetrachord is the first important stage. The phenomenon can also be argued through the characteristics of the languages of the Indo-European dialect (“The Indo-European languages, through their rich inflection, through the complex modulation of words in declension or conjugation and through their multi-syllabic words, seem to favor the recited melody, supported by a text that does not need substantial differences in pitch in order to be understood,”; while the peoples of the Finno-Ugro-Mongolian family followed the path of pentatony (“The agglutinating languages seem to establish, through the juxtaposition of monosyllabic words, the intonation of certain musical intervals, which, in order to be easily understood, have to be larger than the tone, therefore these must be third, fourth, and perhaps even fifth intervals, [2]”). This has not been confirmed yet, because the research of the ethnomusicologists (mentioned earlier) unanimously agrees that the stage of pentatony was reached by all music idioms from around the world. As far as the Thraco-Dacian music is concerned, the pentatonic melodies, as well as the Romanian folklore melodies with a pentatonic substratum, confirm the rich existence of this archaic content.

The ways in which these systems were used, the involvement of chromaticism, the cadential patterns, the interval specificity, etc. are momentarily hard to imagine, inasmuch as not only the Thracian verse, but also the Thracian language, are not known to us. And yet, Gh. Ciobanu makes the assumption that certain melodies that, from the point of view of the cadential pattern, are common to certain Balkan peoples (Romanians, Bulgarians, Serbs), among which are the ones with the cadential pattern on the fifth, may represent Thracian relics. Some examples of such songs may suggest the image of a melodic world of three millennia ago:

Fe - ri - cat, fe - ri - ce, Fe - ri - cat, fe - ri - ce,
 Hoi bo-ieri bă - tră-nu.

Sluj - ba slu - ji sve - ti I - lia - ia Mla-di mi - li
 Boj - ne - le gos - po - di - ne.

Pre dumblă-re, maipre-dumblă,Dai, Dom-nul nos - tru.

Recitativ Oas

Cu-cu-le, pa-să-re blân-dă, Cu-cu-le, pa-să-re blân-dă
Ce tât cânti la noi în tin-dă, Ce tât cânti la noi în tin-dă.

or only partially, as in this magical song:

"Homanul" (Tg. Jiu)

Toa-de-re sãn-toa-de-re.

The anhemitonic trichord will be expanded into a tetrachord by the acquisition of a sound in the high-pitched register:

➤ Lament

Recitativ (♩=84) Bocet (Oas)

(uã) Mândrama-mii, Mã-ri-u cã (uã) Un-de mei
mãn-dra ma-mii da Un-di te duci de-a cã-su-cã.

or by the addition of a low-pitched sound:

➤ Lament (Tg. Secuiesc)

Recitativ (♩=cca 230) Bocet (Tg. Secuiesc)

Brei-co dra gã Brei-co (si) Cum te-ai în-du-rat dra-gã
dã-ailã sat a-tât a-mar de bã-ieti scum-pa noas-trã, Brei-co.

or both of the above:

➤ Carol (Bihor)

♩=92 Colind (Bihor)

O-în-trea - bă, să-n - trea - bă sfinti, me,
Dân ce s-o fă - cu - tui sfânt.

The image shows a musical score for a Carol (Bihor). It consists of two staves of music in G major. The tempo is marked as quarter note = 92. The melody is written on a treble clef staff, and the accompaniment is on a bass clef staff. The lyrics are in Romanian. There is a triplet of eighth notes in the second measure of the second staff.

The tritone involves the same interior enrichment:

➤ Lament (Huedin)

Recitativ, poco rubato Bocet (Huedin)

Îm-bră - cat ca si-un mi-re Îm-bră - cat ca
si-un mi-re Plân - ge lu - mea du - pă ti-ne.

The image shows a musical score for a Lament (Huedin). It consists of two staves of music in G major. The tempo is marked as Recitativ, poco rubato. The melody is written on a treble clef staff, and the accompaniment is on a bass clef staff. The lyrics are in Romanian. There are various ornaments and phrasing slurs throughout the piece.

or interior and exterior enrichment:

➤ Păpărugă (Bihor)

♩=256 Păpărugă (Bihor)

Pă - pă - ru - ga, ru - ga Plo - i - ta cu - ra - ta
Dă, Doamne plo - i - ta Făr' d-on pic dă chia - tră.

The image shows a musical score for Păpărugă (Bihor). It consists of two staves of music in G major. The tempo is marked as quarter note = 256. The melody is written on a treble clef staff, and the accompaniment is on a bass clef staff. The lyrics are in Romanian. The piece features a repeating rhythmic pattern.

The tetratone, a more ample formation, engages both the sounds between the internal pillars:

➤ Carol (Bihor)

♩=132 Colindă (Bihor)

La ce li - nă de fân-tân' Hoi, li, le - - - - - rui
ler mai ler Se - de-un lar de pă - cu - rar.

The image shows a musical score for a Carol (Bihor). It consists of two staves of music in G major. The tempo is marked as quarter note = 132. The melody is written on a treble clef staff, and the accompaniment is on a bass clef staff. The lyrics are in Romanian. Below the main score, there is a separate musical notation showing a tetratone interval: a whole note G, a whole note A, a whole note B, and a whole note C.

as well as those between external satellites:

➤ Carol (Deva)

Allegro (♩=138) Colindă (Deva)

Plea - că ju - ne la vâ - na - tu Li - noi Li - noi

Le - rom Doam - ne Pes - te-un deal în - de - lun - ga - tu'.

(N.B. In the case of this melody one also notes a stratification of two smaller modal formations – the extreme melodic rows, the exposition and the reprise are built on the tritone

, while the middle uses the anhemitonic trichord

The pentatony, used within the limits of its own scale (in which the most frequent structure is D-E-G-A-B) often fills the space of the third with a *pyen*-type note, which may be rather unstable, as in this “Păpărugă.”

➤ (Bihor)

♩=96 (♩=192) (Bihor)

Pă - pă - ru - gă ru - gă Dă, Doam-ne, plo - i - tă

Plo - i - tă cu - ra - tă Făr' o leac' de chia - tră.

or it can be sufficiently fixed, or “heavy” (Brăiloiu), as in the following state:

➤ Carol (Cluj)

Andante (♩=68) Colind (Cluj)

Bra-du-le, din mun-te ma - re Lioi, lioi, lioi, lioi,

Bra-du-le din mun-te ma - re.

In both situations the hexachord is accomplished with sufficient consistency.

Sometimes the modal completion is accomplished by the interference of two oligochordic structures:

➤ The Hora of the Bride” (Bihor)

Poco rubato (♩=112-120) "Hora miresii" (Bihor) etc.

One may note the interpolation of the three-note system D-C-G section with D-B-A, from which a pentachord results: D-C-B-A-G. The phenomenon is possible in pentatony, too:

➤ Carol (Bihor)

♩=64 Colindă (Bihor)

Ră-să ri - t-o ră - să - ri - tu, D-un găl băn dă

lu-cea-fă-ru Hoi, le-rui Doam-ne, Nu-i gal-băn dă lu-cea-fă-ru.

The modal expansion towards the diatonic (heptachordic) total, will be accomplished in two ways:

Through the maximum enrichment of an oligochordic or pentatonic formation;

Through the coupling of two-three micro-modal (oligochordic) formations, or by transposition.

(It is instructive to observe the fact that the modal octave, discovered by the Greek theory, does not play any role here, the Thraco-Dacian modalism remaining non-octaviant, as well as the fact that the new modal structures do not have tetrachordic organizations, according to the Greek theory, but, rather, any other formation, bichord, trichord, three-note system, four-note system, may constitute a modal unit):

Parallel to the process of self-fulfillment and even through this very process, the oligochordic and pentatonic formations evolve towards the diatonic total. In this way, what is called modes in traditional theory is reached. From this point of view, the Thraco-Daco-Getic modal proves to be rather incomplete, defective. Most of the modal scales lack certain steps, especially on the outside (totalizing only one hexachord). An example of an incomplete mode that will remain definitively defective is the pentachord Istrian formation

born from the enriched tritone. (The origin of the Istrian pentachord lies in the acoustic modes from the instrumental music - wind instruments, but, certainly, its absorption into vocal music was done via the genetic modal conscience).

➤ Carol (Bihor)

♩=180 Colindă (Bihor)

Co - lo sus, co - lo mai su - su,

Lu - mi - nioa - ră 'o-chit'neg'.

Detailed description: The image shows two staves of musical notation for a Carol (Bihor). The first staff is in treble clef, key of G major (one sharp), and 4/8 time. It starts with a tempo marking of ♩=180. The melody consists of eighth and quarter notes. The second staff continues the melody with similar rhythmic values. The lyrics are written below the notes.

which, engaging other neighboring sounds as well, can expand into a hexachord, as in this well-known lament:

➤ Lament (Bihor)

Quasi recitativo Bocet (Bihor)

ã Mân-ce- te fo-cu pâmân-tu Că mult te-am gu-no- i- tu,

Că mult te-am gu- no - i - tu.

Detailed description: The image shows two staves of musical notation for a Lament (Bihor). The first staff is in treble clef, key of G major (one sharp), and 4/8 time. It starts with a tempo marking of 'Quasi recitativo'. The melody is characterized by a recitative style with long notes and a final cadence. The second staff continues the melody. The lyrics are written below the notes.

The phenomenon is also valid in the case of the Lydian mode (aspect), which rarely surpasses the hexachord:

➤ Carol (Bihor)

♩=102 (♩=204) Colindă (Bihor)

Doi tre-cu-mi mâr-gu-si Doam-ne Do doi dru-mă - re - i,

Doi co-rin - de Dru-marici-ne-or fi.

Detailed description: The image shows two staves of musical notation for a Carol (Bihor). The first staff is in treble clef, key of G major (one sharp), and 4/8 time. It starts with tempo markings of ♩=102 and (♩=204). The melody features a triplet of eighth notes. The second staff continues the melody with similar rhythmic values. The lyrics are written below the notes.

and, to a high degree, also in the case the Phrygian mode (see the previous example “Pleacă june la vânatu”).

Here is an example of a mode lacking an internal step:

➤ Slow and solemn

Wedding song (Câmpeni)

Rar si solemn (♩=52) Cântec de cunună (Câmpeni)

Foa - ie ver - de de a - lu - nă A - dă

a - pă la cu - nu-nă.

Detailed description: The image shows two staves of musical notation for a Wedding song (Câmpeni). The first staff is in treble clef, key of G major (one sharp), and 5/4 time. It starts with a tempo marking of 'Rar si solemn (♩=52)'. The melody is slow and solemn, consisting of quarter and half notes. The second staff continues the melody. The lyrics are written below the notes.

Complete, heptachordic modes, evolved from oligochordic and pentatonic formations, are encountered only rarely and inconclusively at the level of this given folkloric level. The inconsistency of certain sounds casts a doubt on just how old their presence in the respective melodies is. Thus, in this wedding song

➤ Wedding song (Năsăud)

Adagio maestoso (♩=52) Cântecul cununii (Năsăud)

Di-mi — nea — tă ne-am scu — la — tu

Si pe o — braz ne-am spă — lat.

the completion of the interior tetrachord (D-E-F sharp-G) within the frame of the tetratone (re-sol-la-si), through which a Hypoionian heptatony is obtained

does not seem to have a considerable age.

The same observation can also be made in the case of the following heptatony, derived from pentatony:

➤ Carol (Bihor)

♩=112 Colindă (Bihor)

Du-las ma — re, cât demar? Lu-mi - nioa — ra

do-chit ne — gri A - u - ri — ca-i fa - tăbun?.

Even in the case of the songs connected with some customs, which, by their more lyrical nature (slower tempi), such as the melodies connected with the wedding ceremonial, the *lioara* (translator's note: a Romanian folk custom accompanied by a specific song) the *vergel* (translator's note: a Romanian folk custom accompanied by a specific song) and with funerals, etc., where the possibility of the ornamental engagement of the sounds intermediate to pentatony was at hand, as in this melody:

➤ “Lioara” (Bihor)

"Lioara" (Bihor)

Li-oa - ră, Li - oa. ră Ce flori de mi - oa-ră,
Li - oa-ră, li - oa - ră Li - oa-ră, Li - oa - ră.

by researching the variants and attempting the penetration towards the archetype, the issue of complete heptatony becomes uncertain, the hexachord establishing itself as being rather the ancestral modal reality. (One cannot totally rule out, however, the possibility of the existence of the heptatonic modal achieved in this manner by the Thraco-Dacian music, without having conducted painstaking research work to also include other folkloric genres (pastoral songs, dance songs, perhaps even the song proper).

The second method by which the heptachordic diatonic total may be obtained, by coupling two or more micro-modal (oligochordic) units, or by transposition – without being too frequent – still constitutes a procedure for modal enlargement:

Poco rubato (♩ = 112-120)

Ru-peti mân - dră ru - ji - ta, Le -
Hoi ie-lor da, ie-lor, ie-lor, fi-cu-ta.

But, even from this method, complete modes are only seldom obtained.

3. CONCLUSIONS

From this exposition of the evolution of the Thraco-Dacian tonal systems, one may derive the following ideas:

- ❖ the oligochordies and anhemitonic pentatonies have great stability, and their balance is not substantially affected by the enrichment process, which will result in the respective music preserving its potent diatonic content;
- ❖ the stable foundation of the oligochordic and pentatonic pillars also resides in the fact that they function as internal or final cadences;

- ❖ modal enrichment does not weaken the initial cohesion of the systems nor does it create functional hierarchies among sounds, which is why the formation of a tetrachord or pentachord by filling an oligochordic section inside and out does not lead to the establishment of a “tonic” or “dominant”; this way, the melodic formation does not become stereotypical and the variation capabilities remain unlimited. (“Certainly, with the exception of the fifth-based cadence, the lower tones of a formation are favored via the cadence by the very physiology of singing, which seeks a resting tone in the lower area. But the feeling with which one tends to ascribe a “tonic” today in such cases, is a deformation produced by the tonal-functional education, which is alien to the conscience of the archaic oligochordic and pentatonic modal” [4]).

As far as the heptachordic modal completion is concerned, one notes that, in Thraco-Dacian music, the phenomenon does not have a spectacular evolution (as one may assume in connection with ancient Greek music, according to their theory), in that most of the modes remain incomplete. The hexachord seems to be the most frequent modal reality. Thus, not even the principle of the octave establishes itself in this music, principle that could have led to certain hierarchical regulations in the substance of the mode (basic sound, median sound, etc.). It is again the oligochordic and pentatonic pillars that are sovereign at the heptachordic level, too; they constitute the centers of the melodic nuclei or cadential sounds.

The reality of the oligochordic and pentatonic pillars is also highlighted by the phenomenon of chromaticism in Thraco-Dacian music.

Chromaticism will be inserted as:

- variable intermediary step between pillars:

$\text{♩} = 96$ ($\text{♩} = 192$)

(Bihor)

Pă - pă - ru - gă ru - gă Dă, Doam - ne plo - i - ță

Plo - i - ță cu - ra - tă Făr' o leac de chia - tră.

a phenomenon that will also be extended to the microinterval.

(“As this song also shows, the microinterval is the product of an unstable intonation of a *pyen*. That is why the microinterval cannot be considered as being a conscious reality, as being a means of melodic ornamentation, as it is heard in present-day oriental music (Turkish, Arabian, Indian). Even the ancient Greeks (even though in theory they admitted the enharmonic tetrachord) asserted that the nuances (microintervals) are of oriental influence. To the same extent, as with the Greeks, the microintervals do not represent intonations characteristics of Thraco-Dacian music”) [4].

- step attracted to a pillar:

Andante

Carol (Banat)

Andante (♩=84) Colindă (Banat)

As-ta-iju-pâ - nea - sa Le - rui Le - rui Doamne, As-ta-iju-pâ - nea - sa.

- real step attracted to another real step. The phenomenon establishes itself as a chromatic procedure, which Gh. Firca will reformulate under the name of “the fluctuation of steps in pentatony,” [5] which is a phenomenon of diatonic chromaticism adopted by modern music (as early as Liszt) from the archaic pentatonic practices

Carol

Allegro moderato (♩=132) Colindă (Sf. Gheorghe)

Cel un - chies bă - trâ - nă, Bă - trân
si - n - fo - ca - tî, Ar - cu si - a - n - cor - da - tî.

Thraco-Dacian chromaticism is consequently also circumscribed within the spirit of economy, of balance, without substantially affecting diatonism.

“The Thraco-Dacian tonal systems, to the extent to which they can be glimpsed via the signs of ancient and contemporary musicology and especially via the folklore of Romania and other neighboring peoples (Bulgarians, Serbs), attest the values of a musical culture that expressed at that time the level of an advanced civilization, built out of successive sedimentations, in the process of a continuity spanning millennia” [4].

Contemporary musicology has the duty to permanently scrutinize this ancient musical past that is the cornerstone of Romanian folklore, in order for our projection into the previous dimension to gain genuine amplitude.

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REFERENCES

- [1] Breazul, G., *Idei curente*, Ed. Muzicala, Bucharest, 75, 1981.
- [2] Ghircoiasiu, R., *Contribuții la istoria muzicii românești*, Ed. Muzicala, Bucharest, 54, 1963.
- [3] Ciobanu, Gh., *Studii de etnomuzicologie și bizantinologie*, Ed. Muzicala, Bucharest, 1974, p. 46.
- [4] Rîpă, Constantin, *The Superior Music of Theory*, vol. I *Tonal Sistem*, Ed. MediaMusica, Cluj-Napoca, 2001, p. 84.
- [5] Firca, Gh., *Bazele modale ale cromatismului diatonic*, Ed. Muzicala, Bucharest, 56, 1968.