

The Key to the Neumes

Komitas makes the following observations:

“I began my serious experiments in decoding the neumes with the Բձ (B-dz, second) mode, for there, the primary tones remained uncorrupted in both the old and new singing styles.

“1. I observed that the tenor [reciting tone] is the most important note in a mode, and neumes assume direction only according to their relation to the tenor in each mode.

“2. Each scale degree keeps its position unaltered, and takes its charge from the tenor, making its distinctive moves in accordance with the tenor, the intonation inflects up if it is rising, and down if it is descending.

“3. The *bout* (`) is a cadential note in the Բձ (B-dz, second) mode; it is sometimes c and sometimes a, calculating from the tenor – e).

For instance, in the Բձ mode:

The tenor is c or a

The terminal note is a

The *shesht* is g

The *benkorch* is a gesture that moves from f-sharp to g

The *parouyk* is d – c

The *volorak* is d – e

The *poush* is e – d

The *khounch* is c – h or g – f-sharp

The *vernakhagh* is a – c – b-flat – c

The *bout* is c, a, or d (f-sharp) d, if the tetrachord is d – e – f-sharp – g

The *tour* is a – d or e – a

and so on.”

The following shapes are used for the above *khazes*:

<i>Shesht</i>	/
<i>Benkorch</i>	ㄣ
<i>Parouyk</i>	ㄣ
<i>Volorak</i>	ㄣ
<i>Poush</i>	✓
<i>Khounch</i>	ㄣ
<i>Vernakhagh</i>	ㄣ
<i>Bout</i>	ㄣ
<i>Tour</i>	ㄣ

An effective rendering of *khaz* notation must consider the following:

a. The scale of the piece's mode (and, further, knowledge of the entire system of modes).

b. The meaning of each *khaz* employed, its scalar function, its pitch, and other related characteristics.

c. The rule which determines the affiliation of the *khazes* to one another, i.e. the principle that makes them read and sung in a prescribed manner.

Khazes and *khaz*-notated songs are identified as having either simple, medium, or complex configuration. Therefore, to have the “key to the *khazes*” (a common expression) does not yet mean that one can take any *khaz*-notated hymn and begin to sing it; it is still important to know the significance of each *khaz* together with a variety of other elements.

In studying Komitas's research, it seems likely that first he clarified the meaning of the signs for each of the simple *khazes*, and then determined their affiliation to one another. From there he began his experiments in deciphering simple psalms.

In Komitas's archives we found a *khaz*-notated sharakan that Komitas had decoded and rendered with staff notation (No. 631a). It is titled “*Paravon Handerdz Karoqn*” – hymn from the set of *Avag Orhnoutiunner* (Major Canticles) – together with one other hymn authored by Stepanos Siunetsi I (5th century).

The image shows a musical score for the hymn "Paravon Handerdz Karoqn". It consists of three staves of music in G major (one sharp, F#). The notation includes various Khaz symbols (accents, slurs, and other markings) placed above the notes. Below each staff, the lyrics are written in Armenian. The first staff has a key signature of one sharp (F#) and a common time signature (C). The lyrics for the first staff are: Փա - րա - տն հաճ - դերձ կա - ոտքն ըն - կող - մե - ցաւ. The second staff has the lyrics: ի հո-սանս ջուրց. և որ - դիքն Իս - րա - յե - լի. The third staff has the lyrics: գնա - ցին ընդ ցա - տաքն ի մեջ ծո - վուն:

The hymn “*Paravon Handerdz Karoqn*”

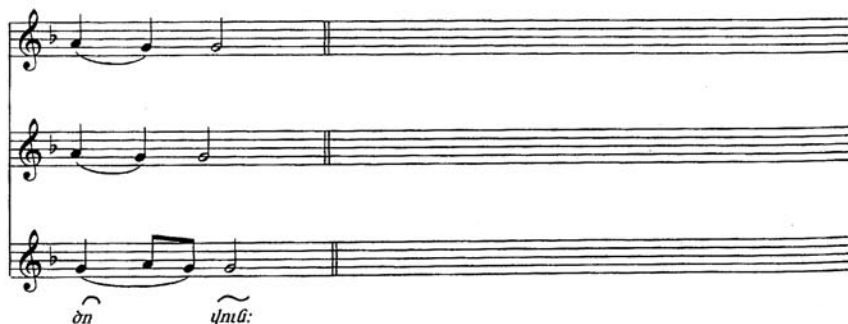
Here the importance of Komitas's principles for decoding *khaz* notations becomes apparent. One must therefore know the following:

1. For decoding a song, the tenor [reciting tone] is the main key (the other scale degrees are determined by the tenor).
2. The employment of the tetrachord principle is another key (the proper choice of tetrachord yields a more harmonious progression of the melody).
3. Identification of the inflection pattern of each and every single *khaz* used.
4. The option of possible embellishment (improvisation).

Below is the *sharakan* (hymn) translated into standard notation by Komitas, along with the embellishments he offers and, in two instances, an option to select an alternate tetrachord.

♩ = ♭

Փա - րա - տն հաւ - դերժ կա - ոտքն ըն - կըղ - մե - ցաւ
 ի հո - տան ջուրց. և որ - դիրքն Իս - րա - յէ - լի
 գնա - ցիմ ընդ ցա - մաքն ի մէջ
 ցա - մաքն



We notice that when two *parouyks* are used in a row, the figure that immediately follows descends a step.

The next examples come from various stanzas of the same hymn (again, from the set of *Avag Orhnoutiunner* - "Major Canticles"). The first example (staff 1) comes from Nikoghayos Tashjian's transcription (transcribed in the 19th century, from the oral tradition), followed by Komitas's decipherments - staves 2, 3 & 4:

Tashjian:



Komitas:



Mode: Բձ (second mode)

tenor (reciting note) cadential notes (resting and ending notes)
 դիմող հանգչող

shesht benkorch parouyk volorak poush khounch
 շէշտ / բենկորժ պարույկ յօրակ փուշ ✓ խունժ ~

vernakhagh bout
 վերնախաղ ~ բութ \

tour or
 բութ / կամ /

bjot քառուակն է
 (or c, if it is a tetrachord)

In the next figure we have combined the transcribed neumes with their *khaz*-notated syllables for further comparison (here, syllables which are not *khaz*-notated are sung in the tonic).

հիմնածայն tonic (main tone)

benkorch poush tour bout shesht

Ե ապաւն... իմ լեր... քոյով յարութեամբ

Յոյս փուշ պաշ լ Հաս քիմ յով

բութ լ քութ քիմ յով

մայր Տեր սուրբ. տուի

շէշտ յա մեր

Syllables without *khazes* are affected by the tone preceding them as well. For instance, the note on the word «մեր» ("mer," second syllable) is higher than a normal note for shesht (the note f¹). Since the previous figure ends on shesht (i.e. f¹), the syllable with shesht that follows will necessarily rise.

The same refers to *khounch*, which signifies a downward gesture when followed by *tour*, or to *yerkar* which is inflected upwards, and rises in reference to the preceding tone.



In order to decipher a hymn one must, needless to say, secure a copy of that *khaz*-notated hymn. This is not as easy a task as one might initially assume. It is important to examine the source document one intends to decipher, and to check and compare it with other copies, for *khaz*-notations of the same hymn in diverse manuscripts will reveal various differences.

The variation in *khaz* notation of the same hymn might be described as below:

1. Identical: the various *khazes* on the syllables are identical, however, one may find a certain *khaz* above a syllable in one copy and not in another.
2. Identical with some departure: the *khaz* notation is similar, yet a few signs may differ. For example, in one copy a given syllable may carry a *sheshterkar*, while in another it carries a *tour* or some other *khaz*.
3. Around half of the successive *khazes* used in one copy will correspond, though the remaining *khazes* will not.
4. The *khazes* used are different enough as to contradict one another.

Likely reasons for these inconsistencies include defective inscription, mistaking the identity of symbols that closely resemble one another, and, indeed, the changes in paleographic trends. One of the most urgent issues in Armenian neumology is the critical publication of *khaz*-notated hymnbooks.



[Measure 4: դիմող = tenor; measure 6: հանգչող = cadential note; measure 8: վերջ = end note]

Through the use of only the simplest *khazes* (and we must say that many hymns have been notated only with simple *khazes*) one achieves the basic scale of the *Բձ* mode (this is demonstrated by Komitas).



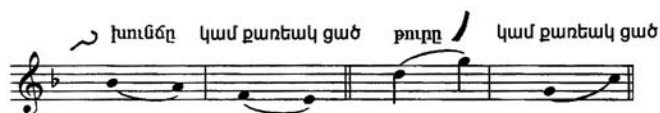
[Measure 2: դիմող = tenor]

With all this information, it is still not possible to read the melody of a hymn. We must also understand the second most important factor – yet another exceptional discovery by Komitas.

THE RULE OF THE TETRACHORD

If the information about the key to the neumes (which we presented in the first half of this study) was all that had survived, it would still be sufficient for us to form an idea about the tetrachord rule. Yet, Komitas has given us supplementary information on this matter: "[t]he meaning of *khazes*, their calibration by tetrachords, and their scale degrees preserve the semitone system."

Ostensibly, this rule made the medieval singer's work much easier, for, in effect, the *khazes* deal with the four tones within the primary tetrachord, and in an extended scale they take their intonation according to the rule of chained tetrachords (including the modulating tetrachord). This is to say that the singer should know from the flow of the melody what tetrachord he is in at a given instance, and what the intonational values are on the basic tones of that tetrachord. This means that a *khaz* has its unique intonation in an upper or a lower tetrachord. Komitas had also mentioned this rule in his writings on key signatures concerning independent *khazes*, as follows:



[Measure 1-2: the *khounch* – a fourth below; measure 4-5: the *tour* – a fourth below]

In the deciphered scores (whether it be a hymn or an individual *khaz*, which we have shown throughout our book), Komitas has also given the application of this same rule with other *khazes*:



[1. Komitas Archives, 672]

Simply stated: some *khazes* are used typically in a specific tetrachord of a given mode.

In the table below, we have provided a comprehensive classification of the *khazes* according to the tetrachord rule and their intonational values in the *Քձ* (second) mode. We have shown the *khazes* according to the primary tetrachord (f-g-a-b-flat), as well as the upper and modulating tetrachords (together with *khazes* used for the latter).

Staff 1: Modulating tetrachord
 Staff 2: 2nd (upper) tetrachord
 Staff 3: 1st tetrachord
 Staff 4: Intonation figures

Words in bars between the 2nd and 3rd staves:

- Bar 1: ① *Hangchog* (resting tone); ② *Bout*; ③ *Parouyk*
 Bar 2: ① *Verj* (ending tone); ② *Hangchogh* (resting tone);
 ③ *Bout*; ④ *Parouyk*; ⑤ *Poush*
 Bar 3: ① *Dimogh* (tenor); ② *Volorak*; ③ *Khounch*
 Bar 4: ① *Shesht*; ② *Benkorch*; ③ *Vernakhagh*
 Bar 1: ① *Tour*

In the second (upper) tetrachord, for instance, the poush will be intoned as d^1-c^1 , i.e. a fourth above its normal position.

The table above also shows which *khaz* is particular to which tetrachord. The ones with circled numbers are particular to the 2nd tetrachord, those in squares to the 3rd (modulating) tetrachord, those with only a point next to them to the 1st; the *tour* is the tone above the tetrachord (it is c^1 for the $f - g - a - b$ - flat tetrachord, and g^1 for the $c^1 - d^1 - e^1 - f^1$). On the lower staves appear intonational figures particular to the *khazes*: *bout* (I), or resting tone, is particular to the second tetrachord (the lower note); *bout* (II), or resting tone, is particular to the first tetrachord. Komitas has mentioned specifically that *bout* can also be c^1 if it occurs in the modulating tetrachord ($c^1 - d^1 - e^1 - f^1$), in other words, the lower note of that tetrachord. Komitas, in his writing on the key to neumes, has actually provided the scale degrees of the *khazes* in accordance with the rule of tetrachords.

This unique method is clearly demonstrated in the example below, where the particular tetrachord of each *khaz*, its tone, its scale degree, etc. are shown. We present the *khazes* with their basic notes, for we have already given their intonational figures (i.e. the movement they take towards the basic note), even though arrows directed to the notes also reveal the movement of their figures.



So then, the tetrachord chain (the heptad) of *Pa* (second mode), its modulating tetrachord, and the final tetrachord of *tour* are as follows:



[*Shegh* = modulating tetrachord; *Verin* = upper tetrachord]



By comparison, our transcription of the hymn “Vor Tagavord Es Tagavorats” is more intricate. Here the *khosrovayin khaz* is also included. After perusing our book, the decipherment of this hymn should be obvious to any expert of Armenian liturgical music, however, for the benefit of the general musician, let us furnish a few notes here.

The three consecutive *yerkars* used in the first line, signify a gradual rise ($d^1 - e\text{-flat}^1 - f^1$) towards *tour* (of which the normal tone is *g*). The *Բձ* mode does not support the progressions $d^1 - e\text{-flat}^1 - f^1 - g^1$ or $d^1 - e\text{-flat}^1 - f^1 - d^1$ (not as ornament, but assigned at least one beat to every note), and in motifs common to the *Բձ* mode, the $e\text{-flat}^1 - f^1 - d^1$ turn is done with e^1 (natural - as in the example below). This would mean that the voicing of the ordinary tone is realized in accordance with progressions proper to a given mode. Let us demonstrate this with notation for clearness.



In other words, if a tone with a half note is made to “move,” then it must move as follows: the former note is repeated and then slurred to the normal tone in retardation (Komitas had analyzed these progressions). And if it were merely an e-flat¹ – f¹ – g¹ progression (without d¹ – g¹), then it would take the following figure: e-flat¹ – f¹ – e¹ – g¹. In the cited example (No. 6), if the melody needed to have the progression d¹ – e¹, then it would be marked not with an *yerkar* but with a *khouch*, because *khouch*’s intonation is f¹ – e¹. Also, the *zark* which follows *tour* is a fourth higher than its original tone (c¹), pursuant to the rule of both melodic progression and disjunct movement, because this neume has the same intonational function as its normal tone, a fourth up or down (as specified in Komitas’s discovery). The ensuing *poushes* are also up a fourth, in keeping with the style and, in this instance, it is more beautiful like that than a fourth down. The e-flat¹ in the intonation of the *yerkar* on word *pn* (qo, in example 6, staff 3, the last neume of the staff), and the low *ṛ* vowel (of *uz*, next syllable), followed by the *bout*, revert the melody back to the b – c¹ – d¹ – e – flat¹ tetrachord, and that is why *poush* is used in that tetrachord. Similarly, the intonation for *tour*, in the case of the low *ṛ* (in *ṛṛṛ*, ex. 6, staff 5, fourth syllable), starts a step lower. The rest is simple (except that one should be mindful in choosing high or low transpositions, and use them in such a way that they would not disrupt the flow of the melody). As to the pentatonic progression g¹ – f¹ – d¹ mentioned above: this should not be considered unusual for authentic ancient Armenian music. That progression is also extant in our epic songs:

