Interpretation of musical text of chants is important for understanding of its musical composition structure. This structure was in one way or another reflected in music notation. Besides textual punctuation, in neumatic manuscripts to the 12th century additional signs were applied. These signs directed the singer to melodic ending at the middle or ending of phrases. Even when the mode, rhythm and temp were transmitted orally, musical structure was fixed in written form.¹ We consider the relationship between signs and musical structure, using semiology three notations: Byzantine, Slavic neumatic (12th–16th century) and Kievan five-line notations (16th century).

The history of Byzantine chant music generally has three periods of evolution of writing: paleo- (10th–12th century), middle- (late 12th century) and neo-Byzantine notations (16th–19th centuries).² The Slavic neumatic notation appeared at 11th–12th century and retained the graphic forms of paleo-Byzantine system.³ From the second part of the 16th century in Ukrainian and Belarusian manuscripts began to be used a new type of notation – five-line notation, namely Kievan square note.⁴ In consequence of our study based on the treatise⁵ and works of Constantin

Floros, Christian Troelsgaard, Maksim Brazhnikov, Vasilij Metallov, Juryj Jasynovskyy we identifying following signs of musical structure sections.

The first sign appear in ekphonetic notation, which occur in the sacred texts (especially lectionary readings of Biblical texts) at the ending of phrases or sentences. In the Byzantine neumatic (paleo and middle period) and Slavic notations used for:

a) at the beginning of chant colon or phrase: parakletike, kratemokatabasma;

b) at the ending of the phrase or colon/cola used: stauros or teleia (Greek), kryz or chrest (Slavic), klasma (gr., sl. čaška), bareia, statija (sl. hold), apoderma (gr.), anatrichisma (gr. diple+oxeia+dyo kentemata), strela (sl.);

c) in cadence used: kouphisma (gr., ascending 2nd), kylisma, thema haploun (descending 3rd), thes kai apothes (five-note figure), diple and dyo apostrophoi (gr.), (sl. zapiataja) (descending 2nd), xeron klasma.

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10Juriy Jasynovskyy. Vizantiys'ka hymnografiya i cerkovna monodiya v ukrajins'kiy retseptsiyi rann'omodernoho času, L'viv 2011 (in Ukrainian).

11Haas, Palaeographie (see note 3), S.69–70.
– (gr.) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) (two-four-note figure), polkulyzma (sl.) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \), hamila;

d) at the end or middle of phrase zmejica \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) (sl.), surma, seisma (gr.) – at the end or at the begin colon; čaška povna \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) \( \text{\textbackslash n} \) (sl.).

Such signs as diple, dyo apostrophoi, kratema, klasma also belong to rhythmical and meaning, the slowing, extension of sound that occurs at the end of phrases.\(^{12}\) Melodic formulas in Byzantine notation enechema (ἐνεχέμα) and apechemata (ἀπεχεμά)\(^{13}\) designated at the beginning and echemata at the ending of chant.\(^{14}\)

Further the recording was improved and corresponding theoretical explanation was developed. With the accumulation of a large number of hymns there was a challenge to hand down the repertoire of chants from generation to generation. Voice teachers were themselves masters of singing, composers, practitioners and church music theoretician. The first Byzantine music theoretical works with formulation of chants structural features dated to the 14th century. These early treatises content description of separate signs and terms needed to acquire the necessary skills for singing. For example, the treatise of Manuel Chrysaphes the Lampadarios (15th century) establishing a set of rules for singers. Everyone singer should be able to compose, imitate, sing, analyse and notate chants. The author of the treatise draws the attention on thesis – the composition of forming melody signs. Another sign – phtorai related to a melody (mode) change, i.e. the modulation insert in the middle of melody.\(^{15}\) The relation of phtorai to chant composition considered below in text. The treatise Hagiopolites (Ἤγιος ὁ πολιτις) describes signs, intonation and melodic formulas.\(^{16}\) Mode (ichos) characterised by the intonation formula. The mode change recorded using the martyrria sign. This treatise defines phtorai as

\(^{12}\)Troelsgard, Byzantine neumes (see note 7), S. 49–52; Floros, Universale Neumenkunde, Bd. 1 (see note 6), S. 128–164, 195, 203–243.
\(^{13}\)Raasted, The Hagiopolites (see note 5), pp. 53–54.
\(^{15}\)Conomos, The treatise (see note 5), p. 47, 41, 49.
\(^{16}\)Raasted, The Hagiopolites (see note 5), p. 99.
melody change which make provision to cadence in another mode before returning to the main mode of chant melody. The melody changes determined the features of its musical structure. Understanding the chant structure considered on the basis of contrast as one of the main factors for melodies creating. In posterior times the melodic formula designation became a practical basis for theoretical analysis of church hymns melody.

In Slavic neumatic (znamenna or kulyzmiana) notation for phrase marking the following signs was used: paraklit, stauros, statija, čaška, polkulyzma, zmejica. In Kondakarian notation (Slavic manuscripts 11th–13th centuries) occurred the sign of melodic phrase repetition. Constantin Floros noticed that in Uspenskyy Kondakar there is a mark indicating melodic phrase repetition. The same graphic mark at the beginning of chant has the meaning of singing principle podoben (gr. prosomoion).  

17 It is the \( \Pi \) sign. At the end of first phrase it defines the following characteristic form of the genre kontakion: AABA1, AABCCD. In John Chrysostom’s kontakion Je že o nas (Єжо о нас) from Tipografskiy Ustav the \( \Pi \) mark indicates the repetition of the first phrase melody in the second phrase:

![Kontakion of John Chrysostom, Tipografskiy Ustav, fol. 37.](image)

The development of the Slavic church music calls into being the Slavic neumatic notation and contributed to grounding of its theoretical basis. Slavic theoretic Azbuki (‘music alphabets’ from 15th century) contains already a register of neumes names but without an explanation of performance character, and about signs relevance to musical structure. Generally there was a few guidance: “Strely ogromnyye prostiye, na konce stichov, i strok, v pervom glase i pyatom. Ashche li pred streloyu polkulizmy. Po obychayu”

17 Floros, Universale Neumenkunde, Bd. 1 (see note 6), S. 31, 188.
[great simply *Strely* at the end of verse and phrase in first and fifth mode]; or directive that *paraklit* “v načale sticha ili stroki vozglasit” [proclaim at the beginning of the verse or phrase]. Since the theoretical information about ‘structural’ marks in Azbuky is miser the possible way to suppose about signs arrangement is to conclude it from chant liturgical neumatic books.

The Kievan notation of staff-notated Heirmologion enables full melodic material for reading and singing. Such material can be read without transcription and consider the musical form of chants and the basic principles of melodic construction: repetition, variation, contrast.

Ukrainian musicologist Jurij Jasinovs’kyy analysing the Kievan palaeography notes that there are additional signs for the repetition of some melodic phrases or sections. This is the sign:)20

Repetition mark, Heirmologion 17th century.21

In five-line notation the graphically similar sign to modern *fermata* (hold) or Byzantine *apoderma* are founded. Such sign usually used at the end of phrase or music composition:

Hold sign in Heirmologion 17th century22

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19Brazhnikov, *Drevnerusskaya teoriya muzyki* (see note 8), p. 69, 73.
22Ibid., p. 256.
Oleksandra Calaj-Jakymenko founded some graphical semblance of the whole note and statija. But the melodic line (verse) no often ending by whole note, it rather typical at the end of chant. Metrical periodicity (pulses) fixed on notation by the clearly grouping notes into ‘measure’. At the culminations and the cadences the tempo of melody singled out visually in writing – acceleration, compression recording:

Visually metrical ‘measure’, acceleration, compressing in Kievan square notation.

The mutation (mode modulation) in writing fixed by the clef C with b-flat or without it. The modulation happens on tone up or tone down. Let us consider stichera of second mode (of Christmas Feast Matins) Dnes’ Chrys-tos vo Vyfleyemi [Today the Christ in Bethlehem]. The stichera consists of twelve verses in Greek and Slavic texts:

24 See: Lyubachivs’kyy Heirmologion 1674 r., manuscript at L’viv Historical Museum, Ruk. 103, fol. 10.
1. Σήμερον ὁ Χριστός ἐν Βηθ-Θελεμ γεννᾶται ἐκ Παρθένου. 

2. σήμερον ὁ άναρχος ἄρχεται.

3. καὶ ὁ Λόγος σαρκοῦται: Mpl2

4. οἱ δυνάμεις τῶν οὐρανῶν ἀγάλλονται,
5. καὶ ἡ γῆ σὺν τοῖς ἀνθρώποις εὕφρανται: M2
6. οἱ Μάγοι τὰ δώρα προσφέρουσιν: M2
7. οἱ Ποιμένες τὸ Θεόμα κηρύττουσιν:
8. ἡμεῖς δὲ
9. ἀκαταπαύστως βοῶμεν.
10. Δόξα ἐν υἱόστοις Θεῷ,
11. καὶ ἐπὶ γῆς ἐρήμη,
12. ἐν ἀνθρώποις εὐδοκία M*pl

The verse marked in manuscript by middle points:

The verse marked in manuscript by middle points:

25Μ – modulation at 2 mode and pl 2 – plagal 6 mode – marked by martyria.
In melody of chant the modulation is five times: transposed up a tone and return to the beginning mode. The return at the end of chant is recorded according to Byzantine rules of music composition using phtorai. This pattern is typical for the music later time.

The mutation in Kievian notation are highlighted in bold, the words rož-dajet’sia [born], slovo plote byvajete [the Word became flesh], syly nebesnyja [Powers of Heaven], dyvyt’sya [wonder], my že [we are], vopyjuše [deliver], slava vo vyšneycho [Glory to God in highest], myro [peace], vo čelovececho [among people]. The changes of the mode used to place emphasis on key words and culmination of chant (My že) with melisma in melody. The similar mode changing used on sectional boundaries of verses (the end of line and the beginning of next line). Such manner is similar to rhetorical device anadiplosis. In the Greek manuscript text the melisma in melody falls at words тюмвèц ðè [My že, We are] and εφγηνη [myr, peace] similar to Suprasl’s’ky manuscript (Heirmologion).


Melisma in word εἰρήνη (gr.) / myr (sl.).

In Byzantine notation the modulation of this stichera noted by martyrria (second mode) at the end of the first, fifth, sixth verses and plagal second mode at the end of third and final verses. Comparing with Kievan notation (Heirmologion) the melody mutation coincides in first verse, between third and fourth verses (Slovo plote byvaete / καίδ Λόγος σαρκούται) and at the end of chant. In Byzantine notation melody changes to plagal second mode (ichos) whereby in Kievan notation to tone down, in clef C with flat. In Slavic manuscript there are no graphical signs of mutation, but it can been assumed that it was transmitted orally. This question is open for research and shall be considered using additional sources.

The text of stichera consists of three chapters. In the first revealed the theological content of the feast, in the second – the action, in the third – glorification at words Slava vo vyšneycho [Glory to God in highest]. This phrase is used in stichera of mode 6 in Vespers of Christmas. In the text of Suprasl’s’ky Heirmologion (the end 16th century) there are words related to khomonia denes’, pryyemlete, byvaete, dyvyatesya, neprestaneno vopyemo, vyshneykho, myro, vo chelovetsekho.

The chant melody consists of minor fourth stepwise g–c and major (Ionian) third stepwise c–e with mainstay c. This mode combination creates “the play of light and shadow”, the joy of feast and knowledge of God’s wisdom. The mutation at the first chapter occurs at the end of melodic line, at the second – at the edges of chapter, in third – within melodic line. This is an interesting structural principle of melody composition.

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28 In the Slavic texte designated by 1, 2, 3.
29 In 15th–17th centuries in Slavic church singing the texte syllables was elongated. The hard sign began to be pronounced as an open “O”, and the soft sign as “yeh”. This resulted in “vonyemi” instead of “von’mi” (“attend”) and “sogreshikhomo” instead of “sogreshikhom” (“we have sinned”). The ending “khomo” became so noticeable that the singing itself acquired the name of “khomovoye” singing, or “khomonia”. Johann von Gardner, Russian Church Singing, New York 1980.
Stichera Dnes’ Chrystos vo Vyfleyemi, Suprasl’s’ky Heirmologion.\textsuperscript{30}

The music structure of first chapter consists of two melodic lines (verses), which repeat with slight changes in the melody. The second chapter contains four less melodic lines (aaba) with cadence tones $d$, $d$, $g$, $d$. Every melodic line includes two motives – ascending and descending. The melodic formula highlights verbs \textit{raduyut’sya} and \textit{veselytesya} (rejoice), \textit{dyviatesya} (wonder) in cadences. Thus melodic and intonation formula concentrates the thematic material, whose motives developing in ev-

\textsuperscript{30}Suprasl’s’ky Heirmologion, 1598–1601, Kyiv, National Library of Ukraine, I, 5396, fol.490.
ery of melodic line. The third chapter begins with culmination – melisma on words *My že* and consists of three melodic lines. The last two melodic lines generalise intonation of first and second chapters. The structure of this stichera is similar for a three-part strophic form.

The performed analysis shows that each notation (Byzantine and Slavic neumatic, Kievan five-line) in a graphical form of marks transmit the structural organization of a musical composition. Analytical comparisons of stichera *Dnes’ Chrystos vo Vyfleyemi* provides a certain foundation to better understand music chant structure of old sacral monody and its interpretation in modern performer practise.