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**THE PRINCIPLES AND PROBLEMATICS OF TRANSCRIBING NEUMATIC TEXTS OF
MIDDLE BYZANTINE AND NEW BYZANTINE NOTATIONS
INTO STAFF NOTATION**

Abstract: This study deals with the problematic and the elucidation of the method of transcribing musical texts recorded in Byzantine neumatic notation (mid-Byzantine and new Byzantine) into staff notation. The subject is treated from two key aspects: the elucidation of the purpose, forms and scope of transcription and transnotation, and analysis of the logic of Byzantine notations.

Key words: sign, phrase, interpretation, transcription, transnotation, *privlekanija*.

From its very beginnings, the Church has been using music in religious service. It is an attempt to express the inexpressible – the secret of the coexistence and relationship of God and man. Because this music had a specific and noble cause, during its evolution it underwent different phases and the ever strict criteria of the Church since it was required to meet, in every sense of the word, the demands of religious service. Therefore, such music is rightfully called church music (from Greek *Εκκλησιαστική μουσική*) or shorter, chanting (Gr. *Ψαλτική*). This was, then, the music of the Church – of the whole church, of all parochial churches, of all people. Recently it was named Byzantine as it flourished during the Roman Empire.

Religious service has a long and unbroken history. It has been developing since the age of the apostles to date. Church music developed in parallel with the evolution of liturgy, so when we speak of the development of liturgy, we cannot but speak of the development of church chanting as well, and vice versa. The needs of the Church in different periods, as well as the needs of specific communities (e.g. monastic), have been essential to this evolution.

Church music has its own system of recording melodies, its notation. The development of this notation was a long process (over 1000 years). It is very important to understand that, despite certain amplifications and elaborations of the notation, however big, complex, at times even radical these changes were, the notation remained one and the same, in other words, it underwent an evolving rather than transforming into another, different notation.¹ Byzantine musicology nowadays generally accepts the division of the notation into three basic categories: Old Byzantine (Gr. *παλαιοβυζαντινή*), Middle Byzantine (Gr. *μεσοβυζαντινή*), and New Byzantine (Gr. *Νέα μέθοδος* or *νέα γραφή*) notations. Each of these periods consists of several stages.²

¹ This must be stressed as otherwise one may wrongly infer that the replacement of the old by the new notation meant a change in the chant, too, i.e. that the melodies recorded in the new method are not the ancient ones recorded in the old notation.

² Cf. Κωνσταντίνος Φλώρος, *Ηellenική παράδοση στις μουσικές γραφές του μεσαίωνα*, Ζήτη, Θεσσαλονίκη 1998; Κ. Α. Ψάχου, *Η παρασημαντική της Βυζαντινής Μουσικής*, Διόνυσος, Αθήναι 1978.

Byzantine notation is *relational* (it is based on relations) and *descriptive*. It does not show us every detail, every embellishment the voice can or should perform, but rather the main melodic line. Of course, this does not mean that it is imprecise, incomplete, that it demands some sort of arbitrariness of the performer. It is very precise and concise. However, it seems that this precision and conciseness should be identified by observing the notation from another angle, which perhaps is different to our accustomed view thereof. It offers the performer some license, albeit not to perform whatever he or she might wish or think of, but rather something that is permitted by such a rich music tradition. This “limitation” by the confines of tradition is not restriction; it provides authenticity. For, in church art “observance” (i.e. accurate adoption, preservation and transmission of tradition) is the beacon, guardian and guaranty of authenticity and, at the same time, the space in which authenticity appears, albeit not as some forcible need to be “authentic” at all costs, but as a natural outcome of the participation of all of man in that music.

The old notation is commonly regarded as synoptic, while the new one is analytical. However, should we delve into the principles and logic of the old and new notations, we would find them both to be, each in their own way, at once synoptic and analytical.

The problematic of transcribing music texts recorded in the old notation into staff notation has been the focus of interest in musicology for many years. The need for relevant methods arising from the comparative analysis of sources was pointed out first and foremost by western-European scholars. Over time, researchers created different methods, each according to the needs of specific researches.³ This paper presents the method of transcribing Middle Byzantine and New Byzantine music texts, which we were taught in our postgraduate course, in semiography classes, by Professor Maria Alexandrou, Ph.D., from the Aristotle University in Thessaloniki, to whom I fondly dedicate this modest work.

There are three basic forms of transcribing music texts from one notation to another. They are *interpretation* or *exegesis*, *transcription* and *transnotation*.

Interpretation or exegesis (Gr. *εξήγηση*) is, in brief, a complete and accurate interpretation of the old (Old Byzantine or Middle Byzantine) notation. The term is used for both the “translation” from an older form of the old notation into a recent form and the translation from the old into the new notation.

Transcription (Gr. *μεταγραφή*) is the recording by notation of a music work from oral tradition or the translation of a work from one notation into another, bearing in mind oral tradition.⁴ This paper is concerned with transcription as a translation of a music work from one notation into another, more specifically, the translation from Byzantine neumatic notation into western-European notation – staff notation – bearing in mind the oral tradition.

The transcription of Byzantine melodies into graphic systems of other civilizations began already in the middle ages, for example:

³ A detailed historical survey of these methods can be found in: M. Alexandrou, *Εξηγήσεις και Μεταγραφές της Βυζαντινής μουσικής, Σύνομη Εισαγωγή στον προβληματισμό τους*, Θεσσαλονίκη, 2007, 12–14 (manuscript).

- into Western neumes, in the 11th century;
- into Kiev staff notation, in the 17th and 18th century;
- into contemporary western-European notation, in the 18th century.⁵

Transnotation (Gr. *μεταγραμματισμός*) is the translation of a music work from one graphic system (recording system) to another, based on paleographic and philological methods, taking no account of the oral tradition of Byzantine music. The following forms of transnotation can be identified:

- with the pitch and duration of a performance, including other relevant data, into staff notation;
- only with pitch:
 - a) in the alphabetic system,
 - b) in the staff system⁶.

It should be stressed that transcriptions and transnotations can be used only in research, but not as scores. They are not adequate substitutes for Byzantine notation. Transcriptions and transnotations do not convey the whole melody hidden in the recording by Byzantine notation, only some of its segments. As for transcription, it is possible to record every individual possibility of the analysis of a sign (Gr. *σημάδι*) or a phrase (Gr. *θέση*) by European notation (using the method that is now being explained), but it is not possible to convey all the possibilities of signs and phrases by a single recording. Byzantine notation, therefore, is rich in that it incorporates in a single recording all the possible analyses of a sign or phrase.

First we will explain the principles of translating the new notation or, as we more commonly refer to it, the new method into European notation. The new method or the new notation has officially been in use since 1814, when it was approved by the Holy Synod Committee of the Ecumenical Patriarchate. It was created by the “three masters” – Chrysant of Madit, Gregory Protopsalt, and Hurmuzije Hartofilaks. As a notational system, it is a novelty, albeit created on the basis of Middle Byzantine notation that had been in use hitherto.⁷ The novel thing about it is a different logic, although not entirely dissimilar. The characters that are used are mostly those from the old notation, with their meaning slightly modified in certain cases. One of the main reasons for introducing such a system was that it took too long a time to gain mastery of the chant. What previously took choristers 20-30 years to accomplish learning according to the old notation, they could now accomplish in only a few years, claimed the three masters. And indeed, practice has shown that the new notation did in fact fulfill its role. Moreover, we believe that the process of the development of notation was natural. Greek musicologist Gregory Stathis (Γρηγόριος Θ. Στάθης) states that, prior to the reform of the three masters, there had already been over 50 interpreters of Middle Byzantine notation.⁸ However, a radical change, but also the adoption of the new method, did

⁴ Cf. *Ibid.*, 12-14.

⁵ *Ibid.*, 13.

⁶ Cf. *Ibid.*, 14.

⁷ Cf. Evstatije Makris, “Značaj tonskih visina u ‘Novom metodu’ grčke crkvene muzike”, *Novi zvuk 16*, Beograd, 2000.

⁸ Cf. Θ. Στάθης, *Οί αναγραμματισμοί και τά μαθήματα τής βυζαντινής μελοποιίας*, Ίδρυμα Βυζαντινής Μουσικολογίας, Μελέται 3, Αθήναι, 1992, 53–54.

take place in 1814. In a sense, the logic of this notation has remained the same. The notation has remained *relational*. We will try to outline the workings of the new notation.⁹

All the signs of the new Byzantine notation can be divided into three categories – martyriae, characters, and phthorae.

Martyriae (Gr. *μαρτυρίες*) of tones are signs used to mark tones. Each tone, therefore, depending on the genus¹⁰, has a special mark, a martyrion, which consists of the name of a tone and the stenographic representation of the voice that is based on that tone¹¹. They are neither sung nor have duration; rather, they serve as starting points (i.e. indicating which tone a chant starts from) and as “guides” in the flow of a melody, indicating whether or not the flow is correct.

Characters are signs representing the movement of voice, duration of tones and the manner in which they are performed. There are three types:

- a) quantity characters (Gr. *χαρακτήρες ποσότητας*)
- b) time characters (Gr. *αργίες*)
- c) characters of expression (Gr. *χαρακτήρες έκφρασης*), quality (Gr. *ποιότητας*), or cheironomy (Gr. *χειρονομίες*).

In the course of a melody, the voice can have three movements: it can remain the same (flat), ascend, or descend. Accordingly, there are three types of quantity characters: characters of flatness, ascending, and descending characters. These are further divided into bodies (Gr. *σώματα*) and spirits (Gr. *πνεύματα*). Characters do not represent any specific notes; rather, every character represents the movement of voice in relation to the previous one. This is one of the basic principles of notation, which is why we refer to Byzantine notation as *relational* in the first place.

Time characters indicate the duration of quality characters. Every character in itself has a duration of one beat.¹² Time characters extend or shorten the duration of quality characters. Together with characters of expression, they are called *voiceless signs* (Gr. *άφωνα σημάδια*) as they do not have a phonetic effect.

Characters of expression are voiceless signs; this is sometimes also true of quality characters,¹³ which indicate how a tone should be performed. Most of these characters have multiple effect (energy), depending on the tone, voice etc.

All the melodies of church music are written in one of the modes. There are eight modes, four leading and four plagal.¹⁴ Each mode has a characteristic sound, realized by various rules and laws that

⁹ We will briefly explain the workings of the new notation in order to provide some insight into the logic of Byzantine notation. Given the limited scope of this text, we will have to settle for this brief analysis of the new notation and the brief, most basic outlines of the old notation because a more detailed explanation of the workings of notation would at best require an entire tome.

¹⁰ There are three genera of intervals and, by extension, three genera of scales: *diatonic*, *chromatic*, and *enharmonic*. The latter is no longer in use in church music.

¹¹ Each tone is the basis (root) of a mode.

¹² The exception is *iporoi* (Gr. *υπορροή*), which has a duration of two beats.

¹³ This means that some characters (for example, *oxia*, *petasti*, etc.), apart from functioning as indicators of the movement of voice, contain “instructions” on how to perform a given tone.

apply for each mode. These rules and laws as well as possibilities of each mode are explained in the theory of music by mode characteristics. They are: basis of a mode, intervals, leading tones, melodic endings, *privlekanija*, martyrion of a mode, and *apihima*, *enihima* and *glašenije* of a mode.¹⁵ These characteristics also determine the sound of each mode.

It should be emphasized that Byzantine music makes use of a much larger number of intervals than European. The size of intervals is expressed by the number of *moria* (Gr. *μόριον*). Hence, a whole tone is an interval of 12 *moria*, while a half-tone is an interval of 6 *moria*. However, there are also intervals of 8, 10, 16, or 18 *moria*.

What is particularly significant for our subject is the question of *privlekanija*. Each mode has a basis and leading tones, namely the tones around which melody is concentrated for the most part and which bear melodic endings. Leading tones are “strong” and in order to achieve this domination, they attract the surrounding tones during certain movements of melody. They raise the tones that are lower than they are and flatten the ones that are higher. These changes of intervals between tones are marked by *privlekanija* (sharps and flats). However, our subject here is not the change of scale but a phenomenon that contributes to the characteristic sound of the mode. *Privlekanija*, therefore, are not indicators of a permanent and stable change of the intervals determined by the scale of a mode, but rather of the way in which leading tones should be stressed. They often mean a movement of voice (something like *glissando*), a laryngeal embellishment. The use of *privlekanija* depends on the mode, tone and flow of melody. The following chart gives a parallel overview of *privlekanija* and their values in Byzantine notation and in the special system of representation in European notation.¹⁶

¹⁴ 1st, 2nd, 3rd and 4th modes are leading voices (Gr. *κίριοι*) and have their plagals: the plagal of the 1st, the plagal of the 2nd, the plagal of the 3rd (or *vareia*), and the plagal of the 4th. Slavonic churches use the terms fifth, sixth, seventh and eighth mode for plagal modes instead of these terms.

¹⁵ All the terms from the theory of church music used here appear for the first time publicly in this paper! We found some of these terms in old church manuscripts, while others (*odstojanije*, *vladajući tonovi*, *melodijski završeci*, *privlekanija*, *glašenije*...) we coined ourselves.

¹⁶ M. Alexandrou, op. cit., παράδειγμα 7. Cf. M. Δ. Μαυροειδής, *Οι τρόποι στην ανατολική Μεσόγειο*, Fagotto, Αθήνα, 1999. 45. Alexandrou suggests a substitution of the two sharps. Cf. M. Alexandrou, op. cit., comment on the example 7.

Византијска нотација	Byzantine notation	Морије	Европска нотација	European notation
Снизилице Flats	Повисилице Sharps	Morion	Снизилице Flats	Повисилице Sharps
♭	♯	2	♭	♯
♭♭	♯♯	4	♭♭	♯♯
♭♭♭	♯♯♯	6	♭♭♭	♯♯♯
♭♭♭♭	♯♯♯♯	8	♭♭♭♭	♯♯♯♯

Picture 1. The marking of *privlekanija* (sharps and flats) in Byzantine and European notation.

In this instance we can give a more specific explanation of the principle of transcription. At the beginning of every music piece recorded in Byzantine notation, it is necessary to write the martyrion of the mode, which contains all the basic information about the mode, and the specific type of mode,¹⁷ so that we know how to chant. The martyrriae are not indicated at the beginning of transcription; however, right after the treble clef we write sharps and flats from which we can infer the mode in question or, at least, the scale used by the mode. Given that the modal system of Byzantine music is different than the scale system of European music, it should be pointed out that *privlekanija* which are placed at the beginning of the text apply only for the octave in which they are written, not for other octaves.¹⁸

It has already been said that each character of Byzantine notation has the duration of a beat. In transcription, this one beat is marked by a crotchet. Quality characters and time characters, as well as rests, are transcribed into corresponding signs of European notation using the regular notation, without any additional symbols. Martyrriae of the tones are not recorded. The characters of expression *vareia* (Gr. *βαρεία*), *psifiston* (Gr. *ψηφιστόν*), *omalon* (Gr. *ομαλόν*), *antikenoma* (Gr. *αντικένωμα*), *eteron* (Gr. *έτερον*) or *syndesmos* (Gr. *σύνδεσμος*) are not transcribed by any special symbols. The exact energy of a character is impossible to convey precisely by a single symbol. Each possibility of interpreting a character can be notated using a group of symbols of European notation, but all the possible effects of a character cannot be notated by a single symbol, as each character of expression contains several possible energies at once. If we also bear in mind different local traditions, that is, the modes of interpretation of certain characters that are typical of or common to specific milieus (e.g. Mount Athos, Constantinople, Thessaloniki, Athens, Asia Minor et al), we realize that Byzantine notation is more advanced than European, but also that we should consider the question of accuracy of transcription. Seeing that transcription should likewise take account of oral tradition, we can simultaneously use two staves; in the lower we would transcribe as previously explained, i.e. the exact quality and time values of characters, while in the upper

¹⁷ Here we refer to the subtypes of modes, since each mode has a number of subtypes, for example, First mode of tone K, First mode of tone Pa etc.

¹⁸ Cf. M. Alexandrou, op. cit., comment on example 7.

staff we could also notate the effects of various characters of expression, laryngeal embellishments, etc. The notes in the upper staff could be smaller in order to indicate the analyses of characters of expression. Of course, if the need arises, other parallel staves could be added to notate, for example, different variants of the same phrase. If we do not wish to use another staff, we can use the same staff for both the typical notes and the smaller ones (for analysis). In that case, we could write only one of the possibilities of character analysis.

The principle of transcribing Middle Byzantine notation into the staff also entails a special notational system. One should first and foremost bear in mind that the old notation is, tentatively, synoptic, i.e., that most characters can have the meaning of not only one, but two and more notes, while in combination with other signs (large hypostases,¹⁹ albeit as part of music phrases) they can represent entire music phrases. Therefore, characters have quantity value, duration (which is not always strictly and clearly determined in the old notation as it is in the new notation), and quality. The number of characters and their combinations is considerably larger than in the new method. Because of that, it is, understandably, much more difficult to render a notation in the staff. However, as we have already mentioned, transnotation does not take account of oral tradition. What does that mean? It means that transnotation does not convey the whole melody, not even in the sense and to the degree in which transcription does, but only some of its elements, i.e. the values of quality and time characters, in a narrow sense. In the short, syllabic melody, the situation is somewhat less complicated. In the melismatic melody, transnotation is merely a brief “reminder”, a sketch of the melody’s flow. Transnotation is rendered as follows:

The only thing that is transnotated is the pitch of the note, that is, only the head, which is black (like the head of a crotchet), without the stem or tail. The symbols with *dipli* (Gr. *διπλή*), two *apostrophi* (Gr. *δύο απόστροφαι*), and *kratima* (Gr. *κράτημα*) are transnotated only as note heads (as a whole note). The symbols with *klasma* (Gr. *κλάσμα*) are transnotated only as the note head of a crotchet, without the stem, but with a horizontal mark over them. *Isaki* (Gr. *ισάκι*) is transnotated as a note that has the same pitch as the preceding note, and is written like a quaver, with the stem and flag crossed out. It is slightly smaller than the other notes so as to clearly indicate that it is an *isaki*. The martyriae of modes, as well as those in the text (which differ from the martyriae of tones in the new method, but have the same purpose), are not transnotated, same as large hypostases.

All this makes it clear that transnotation is not an interpretation of the old notation, but an indispensable tool. It can by no means show us a melody, it only generally points us towards the flow of the melody. The example provided at the end of the text will clarify this.

¹⁹ Large hypostases are signs that were used in addition to quality and time characters to indicate, in characteristic melodic patterns, entire music phrases. For a better understanding, we provide an example of one of the large hypostases – *uranisma* (Gr. *ουράνισμα*). In diatonic modes the phrase of an *uranisma* is composed, in the old notation, of five quality characters that also feature certain time characters, with the *uranisma* being below the whole phrase. In the new notation it translates as 36 quality characters, along with a series of characters of expression and time characters.

We have said that characters of expression have different effects. Groups of signs form music phrases. All church music is composed of phrases. Each character, depending on the tone, mode and specific phrase, is given possible energies, interpretations and analyses, which makes the procedure even more complicated. If the same symbol appears on two different notes, it can have completely different effects. Also, in each mode, in accordance with specific phrases, the symbols are given characteristic possibilities for producing a certain effect. Hence the implication that a chanter must have a good knowledge of the tradition. A notation without knowledge of oral tradition is a “dead letter”.

European notation does not have the means to convey all the richness of the melody recorded in Byzantine notation. Byzantine notation allows great license in performing, in the interpretation of both signs and entire music phrases. It is, therefore, possible to interpret the same notation in a variety of ways. This applies to the interpretation of both the old and new notations.

At the end of this paper we provide examples of interpretation, transcription and transnotation, employing a comparative method. The composition we have used as an example is the automelon *Oikos tou Epratha*, in Greek, as notated by Petros Lampadarios of the Great Church of Christ (†1777). We will compare the following four sources:

1. the original Lampadarios’ Middle Byzantine notation;²⁰
2. a transnotation into European notation, using the method presented in this paper; for the basis of the Second mode we have taken Di, rather than the natural basis, Zo’, to follow the course of melody more easily;
3. the same automelon in the new method, interpreted by one of the three reformers of notation, Harmuzije Hartofilaks;²¹ we have supplemented the text with self-implied *privlekanija*;
4. a transcription of Harmuzije’s interpretation into European notation, using the method herein presented.

The order of the sources may vary, depending on the needs of the individual researcher. Usually the order is such as to begin from the most recent sources towards the older ones. Here we have opted for the reverse procedure, from the older to the most recent sources, because we believe it to be the more practical and systematic way of presenting the problematic and principles of interpretation, transcription, and transnotation.

We have divided the automelon into five smaller segments. It is the so-called *stichometry of poetic text* (Gr. *στιχομετρία του ποιητικού κειμένου*), which is used for an easier identification of smaller music segments – phrases – within a composition. Each page contains two stichometrical segments (two lines) – the first being at the top of the page, the second below a double broken horizontal line in the

²⁰ We have used a facsimile of the manuscript of Peter Peloponnesian’s *irmologion* from the library of the Holy Synod of the Greek Orthodox Church in Athens (we did not manage to find out its number in the library’s catalogue).

²¹ Πέτρου τού Πελοποννησίου, *Είρμολόγιον τών Καταβασιών*, Κουλτούρα, Αθήνα 1982 (photoprint of the first printed edition of this *irmologion*, Constantinople, 1825), 221.

middle of the page. At the top of each stichometrical segment is the poetic text²² of the given segment, broken down into syllables. A hyphen at the end or beginning of a syllable indicates that this syllable contains or is the resumption of a word, i.e. it forms part of the same word with a preceding or anteceding syllable. The syllables are separated by parallel vertical lines that run across the music text to make for a clearer comparison of the parts of each phrase in different notations. In the transcription section there are two parallel staves: the lower shows simple transcription, while the upper contains the addendum to transcription relative to the energies of various characters of expression.

Translated by Dušan Zabrdac

Summary

This paper brings to light a short study on transcription and transnotation of Byzantine neumatic notations into pentagram. The logic of notations, of the Byzantines and European, differs. This begins from the different understanding of the basic elements of music and notation, that is the *sign (semadi)*, *the musical phrase (thesis)* and the need as a whole to note down. For the Byzantines the principle “one note-one sign” is not valid but a sign can suggest more notes. Consequently, this phenomenon and logic extend and are more intensely observed in musical phrases which are the basic element of creation of melody. The Byzantines record melody so that the semiography reminds them of the melody which, of course, is known to the chanter through the oral tradition. The transcription and transnotation carry some elements of melody and not the melody itself. The purpose of this process is not equalisation of the notations or a suggestion of substitution, but an explanation of the method which may be a valuable tool- (asset), aiding in comparative studies.

In the end there is also an example of the comparison between of the automelon “Oikos tou Ephratha” in melody by Petros Lampadarios, in the Old and New Byzantine notations, escorted by transcription and transnotation on the pentagram.

²² There are two types of text: *poetic* and *music*. The poetic text are the “words”, while the music text are the “notes” of a composition.

Example No. 1

Самоподобен "Доме Ефратов", Петра Лампадарија, глас други.
 Automelon "Oikos tou Ephratha", by Petros Lampadarios, Mode II.

	Οι-	-κος	του	Ε-	-φρα-	-θα
Средњевизантијска нотација Middle Byzantine notation						
Транснотација Transnotation						
Нова нотација New Method						
Транскрипција Transcription						

	η	Πό-	-λις	η	Α-	-γι-	-α
Средњевизантијска нотација Middle Byzantine notation							
Транснотација Transnotation							
Нова нотација New Method							
Транскрипција Transcription							

Example No. 2

	των	Προ-	-φη-	-των	ή	δό-	-ξα
Средњевизантијска нотација Middle Byzantine notation							
Транснотација Transnotation							
Нова нотација New Method							
Транскрипција Transcription							

	ευ-	-τρέ-	πι-	-σον	τον	οι-	-κον
Средњевизантијска нотација Middle Byzantine notation							
Транснотација Transnotation							
Нова нотација New Method							
Транскрипција Transcription							

Example No. 3

	έν	ώ	το	Θει-	-ον	τι-	-κτε-	ται
Средњевизантијска нотација Middle Byzantine notation								
Транснотација Transnotation								
Нова нотација New Method								
Транскрипција Transcription								