

COMPOSING AND CHANTING IN THE ORTHODOX CHURCH
PROCEEDINGS
OF THE SECOND INTERNATIONAL CONFERENCE ON
ORTHODOX CHURCH MUSIC
UNIVERSITY OF JOENSUU, FINLAND
4 -10 JUNE 2007

THE INTERNATIONAL SOCIETY FOR
ORTHODOX CHURCH MUSIC
&
UNIVERSITY OF JOENSUU
2009

JOPI HARRI

PRINCIPLES OF TRADITIONAL HARMONIZATION IN EASTERN SLAVIC CHANT

INTRODUCTION

The present paper deals with music theory; more specifically, how traditional harmonic analysis can be applied to facilitate the understanding of the harmonic framework of Eastern Slavic (Russian) chant harmonizations. A prerequisite for understanding the analyses is a working basic knowledge of common practice tonal harmony.

However, the customary way in which harmony is taught in classes and textbooks tends to result in a limited view of the subject. After this kind of theoretical study, the analyst may encounter various problematic passages in western tonal music, as the harmony is reluctant to behave in the way one has been told it should. Such passages we are often willing to label as “modal” or even “atonal” to do away with the problem. But this is superfluous for many cases.

To circumvent the difficulties caused by different theoretical backgrounds, I provide here a recapitulation of some of the rudiments of harmony, followed by an introduction to the Russian Church Gamut and general remarks on the book forms of chant melodies.

A) ON THE CONCEPT OF KEY

- There is no direct connection between a melodic scale and a harmonic key. That is to say, if we have a melody which seems to contain notes of the C major scale, this in no way implies that the melody must be harmonized by chords whose notes belong to C major, or by harmonic progressions that are idiomatic in C major.
- The sense of a key or tonality in a given passage of music is based on our musical perception. We get the sense of a key if we hear chords and chord progressions that are familiar to us as characteristics of that key.
- To get a sense of a key it is not mandatory to hear the tonic chord of the key in question, inasmuch as there are other chords that can also determine the key.

B) ON THE GENERAL DISCIPLINE OF HARMONIC ANALYSIS IN WESTERN TONAL MUSIC

- The preferred course of action for harmonic analysis is to locate musical passages in which the harmony consists of chords (and progressions) typical of some key, of either the major or the harmonic minor (harmonic, since we are dealing with the harmony). We do not refer to any other types of “keys” than the two mentioned.
- The chords are analysed with degree numbers (uppercase Roman numerals) and other standard accessory markings. (Other systems, such as the *Riemannian functional analysis*, tend to be too illogical to be useful.)
- The use of chromatic alteration signs in the analysis should be kept to a minimum. (The abundance of such signs often indicates that the music is being analysed in the wrong key.)
- From the preceding, it follows that we must be sure that the chords really belong to the key in which we are analysing them. For instance, it is erroneous to claim that a $B\flat$ minor triad is the VII degree of C minor, as there is no such chord in harmonic C minor.¹

C) ON CHORD PROGRESSIONS

Chord progressions within a key can be rudimentarily classified according to their typicality in tonal music.²

Typical progressions	I–V, I–IV, I–VI, I–II II–V IV–V, IV–I, IV–II	V–I, V–VI VI–IV, VI–II, VI–V VII–I, VII–VI
Less frequent progressions	I–III, I–VII II–I, II–VII III–I, III–II, III–IV, III–V, III–VI, III–VII	IV–VII V–III, V–VII VI–III, VI–VII VII–III, VII–V
Atypical (“incorrect”) progressions	II–III, II–IV, II–VI IV–III, IV–VI V–II, V–IV	VI–I VII–II, VII–IV

Table 1. A rudimentary classification of chord progressions in tonal music.

The tendency to articulate the tonality is clearest in the first group of progressions. The progressions of the second and third groups generally have the opposite tendency. Passages consisting of such progressions tend to have a

1 This is contrary to analytical practices derived from Schenkerian approaches presupposing the universal existence of a Schenkerian *Urlinie* in all tonal music, which tends to result in a temptation to adjust the harmonic analysis accordingly.

2 The classification is based on the subjective judgements of this writer, and thus, not to be taken as absolute, but, rather, as a suggestion.

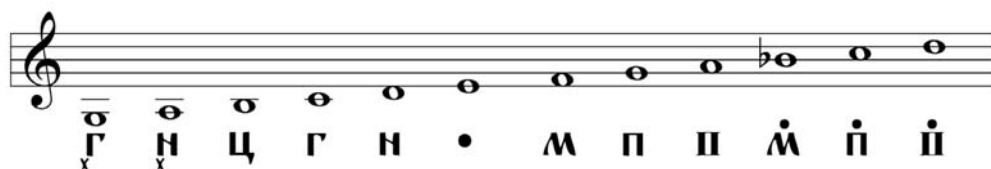
perceived flavour of indetermination, which is sometimes referred to as “modality” (although it does not have a great deal to do with modal music in the historical sense).³

ANNOTATIONS

- There may be seventh chords principally on degrees V, II, and VII (and a ninth chord on degree V). On other degrees, these are infrequent.
- There may be secondary dominants directed to degrees (other than I) on which the triads are either major or minor.
- When the melody admits, chords on II, IV and VI degrees may be substituted by a group of chromatically altered chords, such as the Neapolitan chord on the flattened II degree, and the Italian, German, and French chords on the (flattened) VI degree.

THE CHURCH GAMUT

The traditional tonal system of Eastern Slavic chant is based on a scale formation of 12 pitches, referred to as the Church Gamut.



Example 1. The Church Gamut.

Although the pitch system of Russian monophonic church singing is somewhat more complex according to available information,⁴ the Church Gamut is, nevertheless, the tonal foundation of monophonic chant.

The gamut consists of four identical major (Ionian) trichords, separated by a minor second. Thus, it is a cyclic trichordal formation, fundamentally different from the western church modes, as well as major and minor scales.

If expanded according to the cyclical structure, the gamut would take the following shape:

3 Cf. Piston 1982, 460: “The deliberate use in the common-practice period of modal scales ... seems to have reflected composers’ desires ... to provide a certain feeling of archaic style, especially in religious music.”

4 Cf. Grigor’ev 2001; Vladyševskaja 1982; 2006, 240–297.



Example 2. A hypothetical expansion of the Church Gamut.

As illustrated, the expanded gamut becomes redundant only in the span of five octaves. This pitch collection is able to produce only three different melodic modes. A melody can be transposed by a diatonic second, which results in a melody of different intervallic content (or mode). This new melody can be in turn transposed by another diatonic second to the same direction, which results in a third version, but when the transposition is repeated once more, the mode of that melody is found to be identical to the original one. Consequently, any melody in this pitch collection can be transposed by a perfect fourth in any direction without distorting its intervallic structure.

Another feature of this pitch collection is that it seems well suited to a simple harmonization in parallel thirds, as the issue of the tritone produced by two consecutive parallel major thirds a major second apart (i.e., in C major: F-A → G-B \sharp) is not present. This suggests that some kind of harmonic performance practice may have influenced on the structure of the Church Gamut.

According to music sources and living performance practices of monophonic chant, the tonal variation of the gamut can be divided into two different types of pitch mutations. One of these consists of occasional transposition of a passage a whole step lower in relation to the standard gamut. Traces of this practice can be found in some square-note manuscripts and early printings of Synodal chant books,⁵ but as Grigor'ev puts it, "This phenomenon, known as *spusk*, has virtually disappeared from contemporary [Old Rite] practice, or [nowadays] the lowering is only applied to a single note."⁶

A more common type of pitch mutations is the occasional application of extra-gamut leading-notes. Such an alteration may take place on the lowest pitch of a Ionian trichord when the melody tangents it from above in stepwise movement, most often in cadences.⁷ Although this alteration is not unexcep-

5 For instance, in *Prazdniki* 1772, fol. 3 ff.

6 Grigor'ev 2001, 85, footnote 1.

7 The possible progressions are: A-G \sharp -A, D-C \sharp -D, G-F \sharp -G, C-B \sharp -C. In addition, the raising of the high B \flat into B \sharp can take place in some special cases when the melody tangents on it from below (cf. Grigor'ev 2001, 178). I am very grateful to Mr. Nikita Simmons for sharing his invaluable insight on these questions.

tional, and its prominence varies in different Old Rite communities, it implies that such views that *musica ficta* is uncharacteristic and foreign to an “uncorrupted” chant tradition are erratic and baseless.⁸ As this phenomenon is common in monophonic chant, it is unreasonable to infer that it would not have been intrinsic to the polyphonic singing from the outset — despite the fact that it was not explicitly indicated in the music.⁹

A GENERAL REMARK ON THE BOOK FORMS OF CHURCH MELODIES

It is a common conception that the chant melodies in certain “canonical” chant books represent the “official” forms of the music, and that it is mandatory to sing everything meticulously as it has been written, whereas a failure to do so will be taken into account in the Last Judgement. However, contemporary church practice — be it Greek or Slavic — demonstrates that this is not observed in reality. In addition, there is no proof that it was observed at an earlier time either; rather the contrary. It seems that the concept of the identity of a melody has usually been much less rigid than most scholars have thought.

HARMONY IN EASTERN SLAVIC CHURCH MUSIC

BACKGROUND

According to documents, singing church music in some kind of harmony was already known in the Eastern Slavic liturgical practice in the 16th century. An early literary reference can be found in the *Čin arhiepisropa Novagoroda i Pskova*,¹⁰ which is a description on the divine services of the St. Sophia Cathedral of Novgorod in the 1540s. It contains remarks of the following kind:

И діаки поють съ верхом ...¹¹

И таж начинают часы, и поют тропари по крылосом с верхом ...¹²

... всенощное по обычаю поют. Стихиры по уставу по знаменью, славникъ с верхом.¹³

8 Symptomatically, after Old Believers had been granted freedom of religion in 1905, which in turn had allowed them to promote their church music in public concerts, press critics such as V. Pashalov” (1917) could accuse them of having corrupted the tradition: “Equally inadmissible is the raised leading tone in final cadences, which is totally foreign to the diatonic nature [of the chants].” (Cited in Morosan 1994, 257.)

9 The “diatonic nature” of the chants as they appear in monophonic sources has been a chief argument for the advocates of archaistic polyphony in condemning the established tradition of polyphonic chant. Hence, much of the controversy appears to have been based on a fundamental misapprehension of the rudiments of music.

10 Golubcov” 1899, 239–262.

11 “And clerics sing *with the upper* ...” (Ibid. 257.)

12 “And then begin the hours, and both kryloses sing the troparia *with the upper* ...” (Ibid. 259.)

13 “... the all-night vigil is sung as usual. Stichera according to the Typikon from

The expression that suggests some sort of polyphonic singing is “с верхом”, which means: something is sung with something “upper”. The real meaning of this “upper” remains enigmatic. It could be a polyphonic counter-voice, but apparently, no written sources for such counter-voices from that time have survived. Perhaps it is a question of doubling. One possibility could be doubling the melody in the upper octave. But since it is improbable that an octave doubling was perceived as being different from the melody, would this have been worth mentioning?

A more plausible explanation is that “с верхом” may refer to doubling the chant melody in another interval than the octave, such as the upper third.

Later on, when singing in harmony became standard practice in the Russian Church, it seems probable that harmonization was carried out in a semi-improvisational manner: by doubling the melody in parallel thirds and attaching a well-sounding bass part. Following this procedure there was no need for polyphonic music materials: it was possible to sing in harmony from monophonic chant books. Thus, when we encounter a monophonic chant book, written in square-notes or normal staff notation, we should not take it for granted that the music was actually sung in unison.

But there survive, in addition to monophonic chant books, also *harmonized* chant sources from the late 17th and early 18th centuries. These sources were written in a style customarily referred to as the *partesny* style. Typically, these settings, often made according to Znamenny Chant or Greek Chant, contain four to eight parts, and the music is generally very florid. It is probably too florid to have been used by amateur choirs or casual church singers. I think that this music stands outside the mainstream.

Some time in the latter part of the 18th century, the copying of these *partesny* chant settings seems to have ceased. The reasons for this are not known. When the monophonic Synodal chant books were being prepared in the 1760s, the project leader, Byškovskij, declared that technically it was possible to print even polyphonic chant books.¹⁴ But for some reason, such books were not printed at that time. Perhaps it was considered unnecessary, as the *partesny* style was going out of vogue, and polyphonic singing was customarily carried out from monophonic materials.

CHANT POLYPHONY IN PRINT

The first polyphonic chant books in Russia were printed by the St. Petersburg Imperial Court Chapel in 1815 and 1830. The earlier publication contains non-changing parts of the Liturgy according to the Court Chant,¹⁵ while the 1830 publication, *Krug prostago cerkovnago penija*,¹⁶ is a more or less complete *Court Chant Obihod*. Peculiarly, these chant books are not full four-part settings but

musical notation, the doxasticon *with the upper*.” (Ibid. 262.)

14 Bezsonov” 1864, 42.

15 *Prostoe pēnīe* 1815.

16 *Krug*” 1830.

provide only melodic and harmonic outlines for the music. It seems plausible that when the music was performed, other parts were added by ear. (Cf. Examples 3–4.)

Example 3. Videhom svet istinnyj — We have seen the True Light.
(Prostoe pēnte 1815, 18.)

Example 4. The third Heirmos of Theophany. (Krug" 1830, 72.)

Only in 1848 was a *Court Chant Obihod*¹⁷ in full four-part harmony published, compiled by Aleksej L'vov. It has been argued that the music was arranged by L'vov somehow synthetically according to his personal taste, but it is more plausible that it represents the orally-transmitted polyphonic singing practices of the Court Chapel. Concurrently, L'vov was involved in making polyphonic arrangements of entire monophonic chant books, including the *Synodal Heirmologion*¹⁸ and *Oktoih*,¹⁹ as well as some manuscripts.²⁰ These were printed during subsequent years, but are now virtually forgotten, except for the Greek Chant heirmoi. These books demonstrate clearly that rendering chant melodies in four-part harmony indeed did not require L'vov to make melodic modifications or simplifications of any substance.

Meanwhile, the monopoly of the Court Chapel prevented the publication of polyphonic settings from sources not affiliated to the Chapel. This situation changed only in the 1880s. From that time on, we have printed polyphonic sources of Kiev-Pechersk Lavra Chant as well as some other local traditions. Had the war and the Revolution not taken place, we might have similar polyphonic chant anthologies of other monasteries as well, such as Valaam.

For Valaam Chant, in addition to the printed *Sbornik* (1902) and the *Cherubic Hymn* (*Heruvoimskaja* 1903),²¹ there exist a considerable number of polyphonic manuscript sources from the beginning of the 20th century, surviving in the archives of the monastery in Finland. These sources, which have been used on the kliroses of the Valaam main church, demonstrate that what is in the monophonic *Valaam Obihod*²² does not represent a monophonic singing tradition but is rather a monophonic reduction of a polyphonic singing practice. And further, in the monastery, the melodies were not sung meticulously in the form in which they were printed in the *Obihod*. I believe that this holds for other monastic singing traditions as well.

When the polyphonic sources of monastic chant are analysed, it turns out that the style is very consistent. The harmonization strategy follows a few general outlines:

- The chant melody is constantly or almost constantly doubled in some part in the upper third, or in some cases, in the lower sixth.
- There are extra-gamut leading notes (sharps) in the “original” melody part. These take place on the lowest pitch of a Ionian trichord principally when the melody tangents it from above in stepwise movement. (Similar leading notes are known in Old Rite performance practice of monophonic chant.)

17 *Obihod*” 1848.

18 *Sokraščennyj irmologij* s.a.

19 *Oktoih*” 1849.

20 Including the Greek Chant heirmoi (*Irmosy* s.a., originally in three volumes; one of the sources is a manuscript heirmologion, catalogued as No. 1177 in *Opisanje* 1904) and a Vigil setting (*Utrenja* 1893, according to some source which seems to have consisted of Greek Chant as well as other chants).

21 The *Cherubic Hymn* and most of the *Sbornik*” were set for a mixed choir.

22 *Obihod*” 1909.

- The bass sings mostly roots of the chords suggested by the parallel voice complex.
- The fourth part acts as a harmonic filler, providing acoustically correct notes for the chords determined by the other parts.
- The parallel voice complex may form temporary dissonances against the bass.
- There are occasional parallel fifths in the part-writing.
- In chords containing a minor seventh (or a diminished fifth), the dissonance may progress upwards or be left by a leap.
- The harmonic progressions can be analysed as if the music were in partial compliance with western tonality.

ANALYSING THE HARMONY

To find out what kind of a harmonic framework results from this procedure, and how can we analyse the chord progressions in it, let us take the Church Gamut as the point of departure. There are 12 pitches in the Gamut on which we can form triads by using the unaltered gamut notes. It is assumed that the gamut would continue upwards according to the same trichordal structure.

The image shows two staves of music. The top staff, labeled 'Gamut', contains 12 notes on a five-line staff, each with a Cyrillic letter above it: Г, И, Ц, Г, И, •, М, П, П, М, И, И. The bottom staff, labeled 'Triads', shows 12 triads corresponding to the notes above. Each triad is a three-note chord. Below the triads, the labels 'Ma', 'mi', and 'dim' are repeated in a sequence: Ma mi dim Ma mi dim Ma mi dim Ma mi dim.

Example 5. Triads deriving from the pitches of the Church Gamut.

As the Church Gamut is a cyclic construction, not identical with a western key of major or harmonic minor, it is not useful to analyse its chords as degrees of a single key. To solve this problem we need a further layer of proportionality.

In traditional polyphonic renditions of chant that is based on the Church Gamut, every consonant²³ triad that consists of unaltered gamut notes can appear as a tonic of a *harmonic region*.²⁴ These harmonic regions are similar to major and harmonic minor keys with the mentioned chords as their tonics. Consequently, the harmonic progressions in this kind of chant polyphony can be parsed as segments of similar progressions in the tonal keys in question.

For practical reasons I have chosen to refer to the harmonic regions by names *derived* from western church modes. While some other nomenclature

²³ The diminished triad, being dissonant, cannot act as a tonic.

²⁴ The concept of harmonic regions in western tonal music is introduced in Schoenberg 1975. Its adaptation to chant polyphony is an original idea of mine.

could be equally possible, the advantage of the present solution is that it is readily comprehensible to music theorists.

Gamut note	Г	Н	Ц	Г	Н	•
Tonic	G	a	(b ^o)	C	d	(e ^o)
Region (abbr.)	Mix	aeol	=	Ion	dor	=
Region (full name)	Mixolydian major	Aeolian minor	=	Ionian major	Dorian minor	=
Gamut note	М	п	п	М	п	п
Tonic	F	g	(a ^o)	B \flat	c	(d ^o)
Region (abbr.)	Lyd	mix	=	\flat Loc	ion	=
Region (full name)	Lydian major	Mixolydian minor	=	Flat Locrian major	Ionian minor	=

Table 2. The eight harmonic regions of the Church Gamut.

Table 2 enumerates the eight harmonic regions of the Church Gamut. The regions form four adjacent and identical major–minor pairs which are separated from each other by a minor third. Likewise, the four lower regions are in identical relation to one another as the four upper regions, as well as is the case for the four middle regions. However, it is unlikely that all these regions would appear within a single polyphonic setting. This is the case because a chant melody seldom covers the whole Church Gamut.

Sometimes the written pitch space may represent a transposition of the gamut. Usually this is indicated with a key signature, as illustrated in Table 3. However, in practice the key signature may appear to have a difference of at least one accidental in relation to the actual transposition.

Gamut note Region		Г Mix	Н aeol	Г Ion	Н dor	М Lyd	п mix	М \flat Loc	п ion
Sig.	Transposition	Tonic triad							
h	–	G	a	C	d	F	g	B \flat	c
b	$\uparrow 4 / \downarrow 5$	C	d	F	g	B \flat	c	E \flat	f
bb	$\downarrow M2$	F	g	B \flat	c	E \flat	f	A \flat	b \flat
bbb	$\uparrow m3$	B \flat	c	E \flat	f	A \flat	b \flat	D \flat	e \flat
#	$\uparrow 5 / \downarrow 4$	D	e	G	a	C	d	F \sharp	g
##	$\uparrow M2$	A	b	D	e	G	a	C \sharp	d
###	$\downarrow m3$	E	f \sharp	A	b	D	e	G \sharp	a

Table 3. The effect of key signature transpositions of the Church Gamut.

Consequently, the function of key signatures in harmonized chant is not the same as in western tonal music, as they do not signify a major or minor key.

Each of the tonal regions of the Church Gamut may contain the same chords as the corresponding major and harmonic minor keys. In analysis, these chords are referenced to with the customary key labels, degree numbers and other standard symbols.

It must be emphasized that the analytical system does not imply the presence of some particular chords in music. Neither is it aimed at suggesting that the music is in a Western key, nor that it would comply with Western tonality. Rather, its objective is to allow referencing the harmonic constituents of the music by standard and comprehensible means.

Before the analysis is applied, some disciplinary refinements are necessary:

- All changes in harmony are considered as individual sonorities.
- Non-chordal dissonances are indicated only with the + sign.
- The missing notes of incomplete chords are not indicated.
- It is implied that the root of the chord is always present in the music. Thus, a chord cannot be analysed as having its root omitted.
- Seventh chords on the V degree are analysed as dominant seventh chords when the third is not present.
- Should there occur an unlikely dominant chord that does not belong to any region, it can be analysed as a secondary dominant.
- A region change is triggered primarily by the appearance of a chord (or possibly a set of non-harmonic notes) that does not belong to the earlier region.
- A region change can also be analysed as occurring on phrase boundaries before the actual appearance of harmonies characteristic of the new region.
- If there is an abundance of progressions involving the triads on I and IV degrees of some region, there has probably taken place a shift to the region fourth above, in which these triads are on degrees V and I.
- Region changes are not considered *modulations* in the western sense. Only if there were a shift from one transposition of the Church Gamut to another during a piece would the question be of modulation.

DNES' SPASENIE

I have analysed the harmony of six polyphonic versions of the troparion *Dnes' spasenie* — *Today is salvation come*, sung at the end of resurrectional matins. The melody, of which there exist multiple variants, is referred to as belonging to Znamenny Chant, or to Greek Chant in some sources. It seems that the melodic variation is caused by oral transmission.

Dnes' spasenie

Bahmetev Obihod 1869
(in narrow rendition by J. H.)

Dnes' spa - se - ni - e mi - ru byst', po - em vo - skres - še - mu
Ion Lyd

C: VI V I₄⁶ V⁷ I V₃⁶ I + I V V⁷ I F: V + V I₄⁶ V⁷ I V₃⁶ I V V⁷

iz gro - ba, i na - čal' - ni - ku žiz - ni na - še - ja:
Ion Lyd Ion

I V C: V V⁷ I V I F: I V I V₃⁶ I V + V C: V V⁷ I

raz - ru - šiv bo smer - ti - ju smert', po - be - du da - de nam,
Lyd

VI V I V₃⁶ I V I IV F: I + I V₃⁶ I V I V₃⁶ I V

i ve - li - ju mi - lost'.
Ion

VI V I V C: V₃⁶ I V⁷ I

Example 6. *Dnes' spasenie* (Today salvation has come), resurrectional troparion, in tones 1, 3, 5, 7. (Obihod" 1869.)

Dnes' spasenie

N. Potulov: *Vsenoščnoe bdenie raznyh rospenov*. M. 1882

Dnes' spa-se - ni - e mi - ru byst' po - em vo - skre - sše - mu iz gro - ba,
 Ion Lyd Ion

i na - čal' - ni - ku žiz - ni na - še - ja raz - ru - šiv bo
 Lyd Ion

smer - ti - ju smert' po - be - du da - de nam i ve - li - ju mi - lost'.
 Lyd Ion

C: VI + VI II I⁶ II VI II I V VI F: V + V I⁶ V I V⁶ I V I V C: V I

F: VI V I V I⁶ V I C: I + I V I VI III I⁶ II VI

F: VI V I I V I V⁶ I V I⁶ V I V VI V I V C: V⁶ I V I

Example 7. Dnes' spasenie. (Potulov" 1882.)

Dnes' spasenie

Penie pri vsenoščnom bdenii drevnih napevov (Rimskij-Korsakov). P. 1887

Dnes' spa-se - ni - e mi - ru byst', po - em vo - skres - še - mu iz gro - ba,
 Ion Lyd

i na - čal' - ni - ku žiz - ni na - še - ja: raz - ru - šiv bo smer - ti - ju smert',
 Ion

C: VI V I⁶ II VI V VI V I V I V + V I⁶ II V I II II⁷ V I⁶ III VI VI⁶ III

VI V I V I V⁶ I V + V VI VI⁶ III C: VI V I⁶ II VI V I IV

Example 8. *Dnes' spasenie*. (Pěňe 1887.)

The melodies are practically identical in the *Bahmetev Obihod*,²⁵ in *Penie pri vsenošnom bdenii drevnih napevov* (*Vigil after Ancient Chants*)²⁶ by Rimskij-Korsakov and others, and in Potulov's *Vigil*,²⁷ which all comply with the melody of the *Synodal Obihod*.²⁸ Of these three settings, the one that probably documents an actual oral tradition is Bahmetev's. The other two have been specifically arranged by their respective authors. (Examples 6–8.)

One indicator of traditionality is the constant parallelism in sixths between the soprano and tenor parts, which is present in Bahmetev, to some degree in Rimskij, and virtually missing in Potulov. It is remarkable how the intentional avoidance of the dominant seventh distorts the parallelism in the *Vigil after Ancient Chants*. This is based on a questionable supposition that such a chordal dissonance was a western innovation and improper in chant polyphony. But oddly enough, other academic principles of western harmony and part-writing are observed meticulously.

In the music examples, the harmony has been analysed according to the proposed guidelines. The results have also been compiled as statistics which show the region synopses and the distributions of chord degrees (and dissonant harmonies, indicated with +) for each chant setting.²⁹ (Tables 4–6.)

Bahmetev: Dnes' spasenie	Synopsis of regions: Ion-Lyd-Ion-Lyd-Ion-Lyd-Ion					
	I	IV	V	V ⁷	VI	+
Ion	13	1	7	8	2	
Lyd	13		11	6	1	
Total	26	1	18	14	3	4
%	39.4	1.5	27.3	21.2	4.5	6.1

Table 4. Region synopsis and chord distribution of Example 6.

25 *Obihod*" 1869.

26 *Pěňe* 1887.

27 *Potulov*" 1882.

28 *Obihod*" 1772 (ff.); 1892 (ff.).

29 Immediate chord repetitions have been ignored.

Rimskij & al.: Dnes' spasenie	Synopsis of regions: Ion–Lyd–Ion–Lyd–Ion							
	I	II	II ⁷	III	IV	V	VI	+
Ion	7	4		1	1	9	6	
Lyd	8	3	1	3		10	8	
Total	15	7	1	4	1	19	14	5
%	22.7	10.6	1.5	6.1	1.5	28.8	21.2	7.6

Table 5. Region synopsis and chord distribution of Example 7.

Potulov: Dnes' spasenie	Synopsis of regions: Ion–Lyd–Ion–Lyd–Ion–Lyd–Ion					
	I	II	III	V	VI	+
Ion	9	4	1	5	6	
Lyd	14			17	3	
Total	23	4	1	22	9	3
%	37.1	6.5	1.6	35.5	14.5	4.8

Table 6. Region synopsis and chord distribution of Example 8.

While the choice of chords is different in these three versions, the regions of Ionian and Lydian major are articulated in all of them. The region synopses are identical in Bahmetev and Potulov, while Rimskij has fewer region changes. The latter has eliminated them by making more use of the modal degrees of the current region, and even cadencing on the third degree. This results in an awkward character in the harmony that is generally not present in orally transmitted chant polyphony. While Potulov has intentionally given up the parallelism in sixths, this has provided him with some freedom for the harmony, so that he has actually managed to harmonize the piece without notable clumsiness.

It is notable that in Bahmetev the majority of chords consist of degrees I and V, and no chords of II and III degrees are used. In Potulov, there are rather more chords of degrees II, III and VI, and considerably more in Rimskij. In all settings the number of IV degree chords is limited, and there are generally no cadences of the I–IV–V–I archetype. No chords of the VII degree are found in this music – but can generally exist in chant settings.

The three monastic versions of the same troparion in the following examples (9–11) show more melodic variation and seem independent of the melody in *Synodal Obihod*. The former two represent the Kiev-Pechersk Lavra singing. The earlier one is from a publication by Leonid Malaškin,³⁰ in which he declares that he has reproduced an old manuscript source from the Lavra, without having modified the melodies or the traditional harmony.³¹ One pecu-

30 *Vsenoščnoe bděnie* 1887.

31 *Ibid.*, foreword. A quotation from the foreword among some general discussion on the stylistic authenticity of Malaškin's publication can be found in Bolgar-

liarity of the publication is that the bass tends to double the chant melody in the lower octave. It is improbable that a trained musician like Malaškin would have fabricated this kind of non-academic part-writing.

The second Lavra version is from the *Lavra Obihod*.³² By the time of its compilation, the melodies appear to have changed somewhat, and the bass has become independent, but the other harmonic peculiarities of Lavra singing remain. In both of these settings, the chant melody is consistently doubled at the upper third.

Dnes' spasenie *Vsenoščnoe bdenie po napevu K.-P. Lavry,*
perel. L. D. Malaškina, op. 42. M. 1887

The musical score is written in staff notation with a treble and bass clef. The lyrics are in Russian. The figured bass is written below the staff. The score is divided into four systems, each with a treble and bass staff. The lyrics are: Dnes' spa - se - ni - e mi - ru byst', po - em vo - skres - še - mu; iz gro - ba, i na - čal' - ni - ku žiz - ni na - - - - še - ja; raz - ru - šiv bo smer - ti - ju smert', po - be - du da - de nam, i ve - li - ju mi - lost'.

Figured bass: C: II I V₃ III V₃ I V₃ III I⁶ IV I F: V⁶ + V⁶ I V⁶ I V⁶ + V + V⁶; I V d: VI V VI V I F: V I V⁶ I V₃ I V⁶ + V⁶ I VI d: VI V; V⁶ + V⁶ I V⁶ + V VI V F: IV V I I V₃ I V VI V⁶ I V VI V⁶; I V d: VI V I₄⁶ II⁶ I₄⁶ V⁷ I

Example 9. *Dnes' spasenie* (*Vsenoščnoe bdēnie* 1887.)

sky 2007, 309–310.

32 *Obihod'* 1910.

Dnes' spasenie KPL Obihod 1910

Dnes' spa - se - ni - e mi - ru byst', po - - - em Vos - kres - še - - - mu
dor lon dor Lyd

iz gro - ba, i Na - čal' - ni - ku žiz - ni na - - - - še - ja:
dor Lyd dor

raz - ru - šiv bo smer - ti - ju smert', po - be - du
lon aeol dor Lyd

da - de nam, i ve - li - ju mi - lost'.
dor

d: I V I V C: V⁷ I V d: V F: V + V I₄⁶ V⁷ I V⁷ I₄⁶ V I₄⁶ V⁷
d: I₄⁶ V⁷ I₄⁶ V VI IV⁷ V I F: V I V I₄⁶ V₅⁶ I I₄⁶ V + V I₄⁶ d: VI IV⁷ V
C: VI V I₄⁶ a: IV I₄⁶ V⁷ I IV d: V I F: V I I V₅⁶ I V VI V
I I₄⁶ V VI V I V VI d: V I₄⁶ V⁷ I V I

Example 10. *Dnes' spasenie*. (Obihod' 1910.)

Dnes' spasenie Valaam ms. № 421

Dnes' spa - se - ni - e mi - ru byst' po - - em vos - kres - še - mu
dor Lyd

d: I V I₄⁶ V₃⁴ I V₅⁶ I V F: V + V I₄⁶ V⁷ V₅⁶ I V₅⁶ I V

iz gro - ba i na - čal' - ni - ku žiz - ni na - še -
Ion **Lyd** **Ion**

ja, raz - ru - šiv bo smer - ti - ju smert' po - be - du da -
dor **Lyd**

de nam i ve - li - ju mi - - - - lost'.
dor

Chord notation: C: IV + V⁷ I₄⁶ V⁷ I F: VI V I V I₄⁶ V₅⁶ I V + V⁶ C: V⁷
I + I V VI + d: V I I₆⁶ V I F: V I + I V₅⁶ I V
I V₅⁶ I V VI V I V VI d: V + V⁷ I₄⁶ V I

Example 11. *Dnes' spasenie*. (Valaam ms. № 421.)

The third monastic version is from a set of manuscript part-books of Valaam Monastery which were once used at the main church. Unlike the Lavra versions and unlike Valaam Chant in general, this setting makes use of lower sixth parallelism so that the chant melody is in the top voice.

KPL Malaškin: Dnes' spasenie	Synopsis of regions: Ion-Lyd-dor-Lyd-dor-Lyd-dor							
	I	II	III	IV	V	V ⁷	VI	+
Ion	4	1	2	1		3		
dor	5	1			9	1	4	
Lyd	12			1	17	2	3	
Total	21	2	2	2	26	6	7	6
%	29.2	2.8	2.8	2.8	36.1	8.3	9.7	8.3

Table 7. Region synopsis and chord distribution of Example 9.

KPL 1910:	Synopsis of regions: dor-Ion-dor-Lyd-dor-Lyd-dor-Ion-aeol-dor-Lyd-dor						
Dnes' spasenie	I	IV	IV⁷	V	V⁷	VI	+
aeol	2	2			1		
Ion	2			4	1	1	
dor	9		2	9	2	2	
Lyd	15			13	5	3	
Total	28	2	2	26	9	6	2
%	37.3	2.7	2.7	34.7	12.0	8.0	2.7

Table 8. Region synopsis and chord distribution of Example 10.

Valaam ms.:	Synopsis of regions: dor-Lyd-Ion-Lyd-Ion-dor-Lyd-dor					
Dnes' spasenie	I	IV	V	V⁷	VI	+
Ion	4	1	1	3	1	
dor	9		5	3		
Lyd	12		12	6	3	
Total	25	1	18	12	4	7
%	37.3	1.5	26.9	17.9	6.0	10.4

Table 9. Region synopsis and chord distribution of Example 11.

Tables 7–9 show that whereas the monastic versions have more versatile region synopses than the previous group of settings, the distribution of chord degrees is closer to Bahmetev than to Rimskij or Potulov.

OTHER EXAMPLES

For further comparison, I have analysed another excerpt from the Valaam manuscripts: the *aposticha theotokion* of Tone 6 (Example 12). The region synopsis and chord distribution of the theotokion are listed in Table 10. The chord distribution parallels that of the Valaam *Dnes' spasenie*.

Богородицень
Гласъ 6

Валаамскаго напѣва
Ms. № 472

C: V⁷ I + I V⁷ I VI V I

и из - ба - - ви - тель мой Пре - чи - ста - я
Lyd dor Lyd

I + I + I + I V VI V I + I V I₄⁶ F: VI V I d: V₃⁶ I V I₄⁶ V⁷ I F: V I₄⁶

Хри-стось Гос - подь изъ Тво - ихъ ло - жеснь про - шедъ
Ion dor Lyd dor Ion

V⁷ I V C: V⁷ I d: I V I F: V I V VI V I d: I V₃⁶ I C: I⁶ V⁷ I

въ мя о - бол-кій - ся пер - вы - я клят - - - вы А - да - ма
dor Lyd dor Ion

IV d: V⁷ I V I V I F: V I d: V⁷ I₄⁶ V I₄⁶ V⁷ I C: I V I₄⁶ V⁷

сво - бо-ди. Тѣм-же Ти Все-чи - ста - я я - ко Бо-жі - ей Ма-те-ре же
dor Lyd Ion dor Lyd

I + d: V⁷ I F: V I V⁷ V I V C: V⁷ I d: I I₄⁶ V V₃⁶ I + I F: V I V

и Дѣ - - - вѣ во - ис - тин - ну во - пі -
dor Lyd dor Lyd

d: V⁷ I F: V + V I₄⁶ V⁷ I + I + I V VI V I V d: I V I F: V

емъ не - молч - но: Ра - - - дуй-ся ан - гель - ски
dor Ion Lyd dor Ion

I d: I V₃⁶ I C: I⁶ V⁷ I F: V I₄⁶ V⁷ I₄⁶ V d: I V I₄⁶ V⁷ I C: I + I IV₄⁶ I

ра-дуй-ся Вла-ды - чи - це пред-ста - тель-ство и пок - ро - ве,
Lyd Ion Lyd dor

F: V⁷ V I V C: V⁷ I F: VI V I₄⁶ V₃⁶ I + I V VI d: V₃⁶ I

и спа - се - ні - е душъ на - шихъ.
Lyd dor

V I + I V I F: V I V I₄⁶ d: I V⁷ I

Example 12. *I nyne... Tvorec i izbavitel'*. Tone 6, resurrectional theotokion aposticha. (Valaam ms. № 472.)

Valaam ms.: Tvorec i izbavitel'	Synopsis of regions:					
	Ion-Lyd-dor-Lyd-Ion-dor-Lyd-dor-Ion-dor-Lyd-dor-Ion-dor-Lyd-Ion-dor-Lyd-dor-Lyd-dor-Ion-Lyd-dor-Ion-Lyd-Ion-Lyd-dor-Lyd-dor					
	I	IV	V	V ⁷	VI	+
Ion	24	2	5	8	2	
dor	32		10	13		
Lyd	23		26	6	5	
Total	79	2	41	27	7	13
%	46.7	1.2	24.2	16.0	4.1	7.7

Table 10. Region synopsis and chord distribution of Example 12.

The last example (13) is a possible reconstruction of the stylistically correct harmony for the tone 8 prosomoion *O preslavnago čudese*, for which no polyphonic sources apparently survive.

ПѢ, гл҃асъ ѿ: ѿ пресл҃авнаго ч҃дєсѣ!

Нм҃ѣтѣхъ ѿ колѣнъ нъ събѣ ѿсѣбѣхъ запѣхъ.

Валаамскаго напѣва,

Обр. Jopi Harri

Запѣхъ.

ѿ с҃тра-жи оу҃-трен-нї-а до но-щи, ѿ с҃тра-жи оу҃-трен-нї-а да

C: I

оу҃-по-ба-етѣхъ ѿз-ра-нѣхъ на го-спо-да.

d: V

I

C: V₅

I

ѿ пресл҃авна-го ч҃дєсѣ! мї-ра жї-те-ли с҃ер-гїи нъ с҃ер-манѣхъ,

[C:] I +

I

+ d: V₅

I a: I₄

V⁷ I

C: I

d: V I

V I

ко Хрї-стѣ лю-бо-вї-ю рас-па-лѣхъ - ше-сѣ:

I

C: V⁷

III⁶ I +

I

d: V⁷ I

C: V⁷

мїрѣхъ нъ мї-ро-дѣрж-ца кѣп-нѣхъ до-блѣ-мѣд-рен-нѣхъ по-бе-ждѣ-нѣхъ,

I

+ I

V⁷

I

Example 13 shows four systems of musical notation for Eastern Slavic chant. Each system consists of a vocal line (treble clef) and a piano accompaniment (bass clef). The vocal line contains Cyrillic text, and the piano line contains chords. The chords are indicated by Roman numerals and mode names (dor, Ion, Lyd, aeol). The systems are separated by vertical lines.

System 1:
 Vocal: ѿ до-бро-дѣ-лѣхъ - вѣ-це - ю
 Piano: [C:] I d: V⁷ I C: III⁶ V⁷ I + I F: V I⁶ V⁷ VI
 Mode: dor, Ion, Lyd

System 2:
 Vocal: ѿ-ваг-гѣль-ска-гво-хъ - да-дѣхъ.
 Piano: + d: I V⁶ I V I C: I V⁶ I
 Mode: dor, Ion

System 3:
 Vocal: вѣ - лѣ-а, пѣ-сѣ-хъ ѿ-хри-стѣ-хъ вѣ-а-ро-ва
 Piano: V⁶ I V⁷ I d: V⁷ V I + C: V⁹ V⁶ I
 Mode: dor, Ion

System 4:
 Vocal: вѣ-гѣ-томъ дѣ-лахъ ѿ-хри-стѣ-хъ ѿ-хри-стѣ-хъ ѿ-хри-стѣ-хъ
 Piano: + d: V⁶ I C: V⁶ I V⁶ I a: V⁷ I
 Mode: dor, Ion, aeol

Example 13. *Ot straži... O preslavnago čudese! Refrain and prosomoion, tone 8: kekragarion for Ss. Sergei and Herman of Valaam (O most glorious wonder!). Arr. from Obihod" 1909 by Jopi Harri.*

I have placed the melody in the second part from the top, doubled it in the upper third, made the idiomatic leading note adjustments and completed the harmonization. The final cadence has been modelled according to some instances in other Valaam polyphonic manuscripts. As Table 11 reveals, the distribution of chords is not very different from the previous excerpts of “authentic” Valaam polyphony.³³

33 The prevalence of dominant seventh chords over dominant triads is not artificial but caused by the consistent third doubling.

Valaam Obihod: O preslavnago čudese (harmonized by J. H.)	Synopsis of regions: Ion-dor-Ion-dor-aeol-Ion-dor-Ion-dor-Ion-dor-Ion-Lyd-dor-Ion-dor-Ion- dor-Ion-aeol						
	I	III	V	V⁷	V⁹	VI	+
aeol	3			2			
Ion	19	2		11	1		
dor	11		5	6			
Lyd	1		1	1		1	
Total	34	2	6	20	1	1	8
%	47.2	2.8	8.3	27.8	1.4	1.4	11.1

Table 11. Region synopsis and chord distribution of Example 13.

CONCLUSION

It can be inferred that the harmonic framework of the traditional chant polyphony of the mainstream is coherent but in some of its features distinct from the western common practice tonality:

- There are constant tonal shifts to specific regions that originate from the Church Gamut.
- When the harmony is analysed according to the regions, the degrees I and V prevail, degree VI is relatively common, whereas the other degrees appear infrequently.
- Dominant seventh chords are idiomatic in the harmonic vocabulary. The sevenths may progress also upwards (indicated in the music examples) or be left by a leap.
- The number of non-chordal dissonances is modest but not infinitesimal.
- The harmonic progressions tend to belong to the typical progression group (cf. Table 1).
- There are generally no cadences of the I-IV-V-I archetype.
- In orally-transmitted repertoires that have not been “corrected” there are occasional parallel fifths and other parallelisms that are considered improper or poor in Western part-writing.

Insofar as I believe that the foregoing answers the question of how harmony functions in this music, it should now be possible to create stylistically valid reconstructions and even settings of new music, working not by chance but following clear guidelines.

REFERENCES

A. CHANT SOURCES REPRODUCED

Krug 1830. *Krug* prostago cerkovnago penĭja izdavna upotrebljaemago pri vysočajšem dvorě. *Dlja hora bez* soprovožd. Sankt'-Peterburg": Petr" Rezelius".

Obihod 1869. *Obihod* notnago cerkovnago penĭja pri vysočajšem dvorě upotrebljaemyj. Izdanĭe pridvornoj pĕvčeskoj kapelly s" vysočajšago soizvolenĭja vnov" peresmotrennoe, ispravlennoe i dopolnennoe pod" rukovodstvom" direktora pridvornoj pĕvčeskoj kapelly N. Bahmeteĕva. Čast' I. Partitura. S. Peterburg": Pridvornaja Pĕvčeskaja Kapella.

Obihod 1909. *Obihod* odnogolosnyj cerkovno-bogoslužebnago penĭja po napĕvu Valaamskago monastyrja. 2nd p. Spb.: P. I. Volkov".

Obihod 1910. *Notnyj obihod* Kĭevo-Pečerskĭja Uspenskĭja Lavry. Čast' I. Vsenoščnoe bdĕnĭe. Partitura. Kĭev": Typografĭja Kĭevo-Pečerskĭja Uspenskĭja Lavry.

Pĕnte 1887. *Pĕnte pri vsenoščnom* bdĕnĭi drevnih" napĕvov" položennoe dlja četyrehgolosnago smĕščannago hora. Sobstvennost' Pridvornoj Pĕvčeskoj Kapelly. S.-Peterburg".

Prostoe pĕnte 1815. *Prostoe pĕnte* božestvennoj liturgĭi Zlatoustago, izdrevle po edinomu predanĭju upotrebljaemoe pri vysočajšem dvorě. S.-Peterburg".

Potulov", N. 1882. *Sbornik* cerkovnyh" pĕsnopĕnĭj. Sostavlen" i na golosa položen" po notnym" cerkovnym" knigam", izdannym" po blagosloventĭju Svjatĕjščago Sinoda pervym" tisenĭem" v" Moskĕ, v" 1772 godu, i nynĕ pravlennym" protivu drevnih" bezlinejnyh" (krjukovyh") rukopisej do XVIII stolĕtĭja vključitel'no N. Potulovym". Vsenoščnoe bdĕnĭe raznyh" rospĕvov". Moskva: P. Jurgenson".

Valaam ms. № 421. Vsenoščnaja Valaamskago napĕva. [Four manuscript part-books: A, T1, T2, B. Copied by K. Čeremuhin", January 1914.]

Valaam ms. № 472. Dogmatiki i bogorodičny Valaamskago napĕva. [Four manuscript part-books: A, T1, T2, B. Copied by Monk Venerĭj & M. Troickin", September–October 1913.]

Vsenoščnoe bdĕnĭe 1887. *Vsenoščnoe bdĕnĭe* po napĕvu Kĭevo-Pečerskoj Lavry dlja mužskago ili smĕščannago hora. Pereloženĭe L. D. Malaškina. Op. 42. Izdanĭe žurnala *Rukovodstvo dlja Sel'skih*" Pastyrej. Partitura. Moskva: V. Grosse.

B. OTHER CHANT SOURCES REFERRED TO

Heruvimskaja 1903. *Heruvimskaja pĕsn'* po napĕvu Valaamskago Monastyrja. Partitura dlja smĕščannago hora. Izdanĭe Valaamskoj Obiteli.

Irmosy s.a. [1850s] Irmosy voskresnye grečeskago napěva ... – Irmosy gospodskim", bogorodichnym" i inym" naročitym" prazdnikam" grečeskago napěva po vysočajšemu povelěnjju gosudarja imperatora Nikolaja Pavloviča položeny na četyre golosa pod" rukovodstvom" Direktora Pridvornoj Pěvčeskoj Kapelly A. L'vova. S.I.

Obihod" 1772 (ff.). Obihod" c[e]rkovnyj notnago pěnija raznyh" rospěvov". Moskva.

Obihod" 1848. Obihod" notnago cerkovnago pěnija pri vysočajšem" dvorě upotrebljaemyj, po vysočajšemu povelěnjju Gosudarja Imperatora Nikolaja 1-go položen" na četyre golosa pod" rukovodstvom" direktora pridvornoj pěvčeskoj kapelly A. L'vova. Čast' pervaja & vtoraja. St. Peterburg": Pridvornaja pěvčeskaja Kapella.

Obihod" 1892 (ff.). Obihod" notnago pěnija upotrebitel'nyh" cerkovnyh" rospěvov". Moskva: Synodal'naja tipografija.

Oktoih" 1849. Oktoih" notnago pěnija znamennago napěva s" 12-go izdanija napečatannago po blagosloveniju Svjatějšago Synoda, po vysočajšemu povelěnjju gosudarja imperatora Nikolaja Pavloviča položen" na četyre golosa pod" rukovodstvom" Direktora Pridvornoj Pěvčeskoj Kapelly A. L'vova. S. Peterburg": Litografija Pazovskago.

Prazdniki 1772. Prazdniki, s'test' izbrannyja, na G[ospo]d'sk'tja i B[o]gorodičnyja dni, stihiry znamennago rospěva. Moskva.

Sbornik" 1902. Sbornik" cerkovno-bogoslužebnyh" pěsnopěnjij po napěvu Valaamskago Monastyryja. Dlja směšannago hora. Partitury. Izdanie Valaamskoj Obiteli.

Sokraščennyj irmologij s.a. Sokraščennyj irmologij znamennago napěva s" izdanija, napečatannago po blagosloveniju svjatějšago synoda v" 1833-m" godu, po vysočajšemu povelěnjju gosudarja imperatora Nikolaja Pavloviča položen" na četyre golosa pod" rukovodstvom" sostojaščago v" dolžnosti direktora pridvornoj pěvčeskoj kapelly A. L'vova. S.Peterburg": Vedekind".

Utrenja 1893 [ca. 1850]. Utrenja grečeskago napěva, po vysočajšemu povelěnjju gosudarja imperatora Nikolaja Pavloviča položennaja na četyre golosa pod" rukovodstvom" Direktora Pridvornoj Pěvčeskoj Kapelly Aleksėja L'vova. S.-Peterburg".

C. SELECT BIBLIOGRAPHY

Bezsonov", P. 1864. Sud'ba notnyh" pěvčeskih" knig". *Pravoslavnoe Obozrěnte*, Maj: 27–53 & Ījun': 92–130.

Bolgarsky, Dmitry 2007. Kievo-Pechersk Chant. In *The Traditions of Orthodox Music. Proceedings of the First International Conference on Orthodox Church Music. University of Joensuu, Finland, 13–19 June 2005*. Publications of Orthodox Theology at the University of Joensuu № 38 / Publications of the International Society for Orthodox Church Music № 1. Finland: University of Joensuu & The International Society for Orthodox Church Music. P. 297–319.

Golubcov", Aleksandr" 1899. *Činovnik" novgorodskago sofijskago sobora*. Moskva: Universitetskaja tipografija.

Grigor'ev, E. 2001. *Posobie po izučeniju cerkovnago pēnija i čtenija*. Izdanie 2-e, dopolnennoe i pererabotannoe. Riga: Rizskaja Grebenščikovskaja staroobriadčeskaja obščina.

Morosan, Vladimir 1994. *Choral Performance in Pre-Revolutionary Russia*. Reprint ed. Madison, CT: Musica Russica.

Opisanie 1904. *Opisanie rukopisej, hranjaščihsja v" arhive Svjatějščago Pravitel' stoujuščago Sinoda*. Tom" 1. Rukopisi bogoslužebnija. S.-Peterburg": Synodal'naja Tipografija.

Pashalov", V. 1917. *Staroobriadčeskij koncert"*. *Hronika muzykal'nago sovremennika* 19 (1917): 13.

Piston, Walter 1982. *Harmony*. Revised and expanded by Mark DeVoto. London: Victor Gollancz Ltd.

Plotnikova, N. 2003. *Penie pri vsenoščnom bdenii drevnih napevov*. In *Obihod notnogo penija. Vsenoščnoe bdenie. Drevnie rospevy v pereloženii dlja četyrehgolosnogo smešannogo hora*. Moskva: Izdatel'skij Sovet Russkoj Pravoslavnoj Cerkvi. P. 152–158. [An introduction of *Pēnie* 1887, a reproduction of which constitutes most of the 2003 publication.]

Schoenberg, Arnold 1975. *Structural Functions of Harmony*. Revised edition with corrections. Ed. by Leonard Stein. 2nd impr. New York: W. W. Norton & Company Inc. / London: Ernst Benn Limited.

Vladyševskaja, Tat'jana 1982. Arhaičeskie pevčeskie tradicii kak istočnik dlja rekonstrukcii drevnerusskoj muzykal'noj kul'tury. *Musica Antiqua* VI. Acta scientifica. Bydgoszcz. P. 893–905.

Vladyševskaja, Tat'jana 2006. *Muzykal'naja kul'tura Drevnej Rusi*. M