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### Remarks on the Patron's Inscription of the Boyana Church

### Reproductions and Unicode-based Wikipedia Representation

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#### Introduction

While it is obvious that most visitors to the famous Boyana Church on the outskirts of Sofia will visit this UNESCO world heritage site because of its famous paintings and wonderfully restored frescoes, there is also some epigraphical material there that merits the attention of philologists (see Gălăbov 1962; Gălăbov 1963)<sup>1</sup>. The patron's inscription (Stifterinschrift, Ktitor's inscription, Боянският надпис, Боянски ктиторски надпис) of tsar Kaloyan tells the story of the renewal of the paintings at the end of the 13<sup>th</sup> century, and it is this inscription that will be the subject of the present paper.

It will be immediately visible to even a casual reader of books about the Boyana church, that nearly all photographs available are not up to today's standards, that they document the status quo of the paintings and inscriptions *before* the restauration, and that new publications representing the current state are very much needed. This is also true for the inscriptions – with the exception of the material published by Popkonstantinov (Popkonstantinov 2009)<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> A recent addition to the epigraphical material was the discovery of several graffiti, the portrait of a man, and a line of text to the left and to the right of the door leading to the XIIIth century part of the church. The reading of the text was first thought to be "Аз Влкан / Влчан писа", but the "official reading is now "Азъ Василие писахъ" (see Popkonstantinov 2009). The reading 'Vlkan' would correspond nicely to the picture of a wolf right above it. The author of the present paper is not yet convinced that it is more adequate to decipher the hardly readable name as 'Vasilij'.

<sup>&</sup>lt;sup>2</sup> Because taking pictures is strictly forbidden inside the church, even on the web there are hardly any photographs available showing the interior. One notable exception seem to be some unofficial pictures taken by Valentina Petrova (see http://e-vestnik.bg/4824). The patron's inscription can be seen at the center of the first picture, to the left of the patrons themselves.

The aim of the present paper is to review some current publications of the patron's inscription in print and on the web, to point out mistakes and omissions, and then to illustrate the progress that later versions of the Unicode standard ( $\geq$  Unicode 5.1) have brought to the representational level of Early Cyrillic.

In preparation for this paper, the author visited the Boyana church several times during the last few years to visually check details of individual letters of the inscription as they can be seen now.

#### 1. Grabar's reproduction (1924, 1978)

The best version of the patron's inscription of the Boyana church as far readability of the text is concerned could long be considered to be the one in Andrej Grabar's classic book about the church (Grabar 1924: 3; Grabar 1978: 22). However, this "facsimile" has been rightly criticized by Gălăbov (1963). We won't therefore show the drawing in its original form. Rather, we will indicate questionable letters and positions, and comment upon some of them (see below).

+ Β7 LA 6 Η Χ 6 CA <sup>CO</sup> 7 CHA H G 5 2 A CA ΠΡ ΤΥ Η 3 Τ ΓΓΡΑ ΜΔ· Č ŤΑΓ Ο Η ΟΑΡ ΧΆ ΧΒΑ· ΝΗΚΟΛ Η Η ΟΤΆΓΟΗ ΒΕΛΗ Η Ο GAA B NAΓ O ΜΧΎ C NΗΚΑ ΧΈΑ· ΠΑΝΤ ΕΛΕΗΜΟΝΑΤΕΥΕ NHE ΜΔ· Η ΤΡΟ У ДΟΜЬ Η ΑЮ БΟΒ Η ΔΑΜΝΟΓΟ Δ Χ΄ ΚΑΛΟ ΈΝ 5 G 6 B A C T Ο ΚΡΑΤ ΟΡΑ ΕΡΑ ΟΥ ΆΔΑ ΨΡΒΑ· ΒΝΟΚ 5 ČA CT 5 Φ A NA· Κ ΡΑΛΤ G P 5 L CKAΓΟ· ΝΑΠΗ C A ЖΕ CATHAP Оствоелгарское. ПРНЕЛАГОВЪРМЕЛЬ НЕГОУЬ стнвать нхстолюбнвать чен костано ΔΗΝΈ ΑCENH···· CAHKTO· 3 02 0 40303··· EN.ET.O

Let us make the main point clear once again: this is not a touched-up photograph or a copy of the inscription. Rather, it is an artist's reproduction of the actual inscription. That this fact is not mentioned in the book is very astonishing indeed. At first, the reproduction looks faithful; however, it soon becomes clear that all strokes are much lighter and that the serifed parts of the letters which are clearly visible in the original are nearly missing in the drawing. To illustrate the point, let us compare a single word ("Stefana", first word, line 6) from both sources<sup>3</sup>:

<sup>&</sup>lt;sup>3</sup> The photographs used as references for this paper are the one in Gălăbov's book (Gălăbov 1963: 77) and in Popkonstantinov's recent publication (Popkonstantinov 2009: 10).

Grabar:

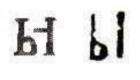
стефана Стефана

Photograph:

For the missing serifs, see especially the letter "N", and also letter "M" in the word XPAMb which looks especially strange (second line, first letter). For a textual representation this does not make any difference, but for paleographic purposes and a visual representation, it surely does! On the presentation level, one would say that the text in Grabar's reproduction would seem to use "a different font", one that does not preserve the "look and feel" of an older OCS script completely. All this would not be very important if there weren't some actual incorrectnesses in the reproduction!

Mistakes or incorrect representations in the drawing concern the following details:

a) first line, next-to-last word, last letter of the word "TPTSYNCTLI"



The treatment of the yers is a characteristic feature of the text - only the front yer is used. In this instance, the drawing (right half of the illustration) omits to faithfully reproduce the single instance of the back yer to be found in the text, and it also does not show the horizontal stroke

which extends from the "I" to the yer (without producing a real connection of the two letters).

b) center of line five, words "БРАТЪЧАДА" and "ВНЪКЬ"



The inscription clearly uses a different variant of the ligature OV than the artist's drawing: While the drawing (right half of the illustration) uses the (more common) narrow, but high ligated variant, the original uses the "stacked" type which has two unconnected parts, one above the

other. The same differences can be seen again in the word "BN&Kb" (same line) but here the reproduction is closer (but not true) to the original.

Both are included in the electronic version of this paper on the author's Kodeks server (http://kodeks.uni-bamberg.de). All pictures of individual letters used here are touched-up parts of that scan.

c) end of line six, words "ПРИ ЦР"

# กหินุคิ กหนุค

It is immediately visible that the drawing differs from the photograph in two instances: with regard to the position and to the orientation of the superscripted "P", and in the variant of the "Ц" being used: the horizontal line of the latter sits on the base line in the original, whereas the drawing uses the shape that can be easily mistaken for the modern form of the "Ч" (in other instances, the original does indeed use this shape). Again, the differences between the original and the reproduction are relevant distinctions paleographically.

Because of the incorrectnesses demonstrated here (there are more), (Gălăbov 1963: 24) calls the illustration a "несполучливо факсимиле". Why, then, the newer edition (1978) continues to use the same illustration as the first edition, is really not understandable. Although it is a large-format book, it does not, by the way, include a photograph of the complete inscription.

#### 2. Gălăbov's edition (1963)

Взьдви же са wт зема и създа са пръчисты хра мь с/ва/таго иерарха х/ристо/ва Николы и с/ва/таго и великиславнаги мяченика х/ристо/ва Пантелеимина течениемь и троудомь и любовная многоаж Калиънъ, севастократора, брат&чада ц/а/р/е/ва, вн&кь с/ва/таго Стефана, кралъ србъскаго. Написа же са при ц/а/рьство блгарское, при благовърнъм и б/о/гочьстивъмь и х/ри/столюбивъмь, ц/а/ри Костаньдинъ Асъни. Едикто 3, в лъто 5 ý ž з.

Let us now turn to the treatment of the text to be found in (Gălăbov 1963: 24 ff.). First, this author gives a concise overview of the older literature that in some way or other describes the Patron's inscription of the Boyana church (Gălăbov 1963: 24). He clearly points out progress that has been made, errors that have been introduced etc., followed by a transcription of the complete text (p. 24 f.)<sup>4</sup>. Gălăbov goes

<sup>&</sup>lt;sup>4</sup> The *Bukyvede* font is used here which reproduces the typesetting used in Gălăbovs book quite nicely. See http://kodeks.uni-bamberg.de/AKSL/Schrift/BukyVede.htm for

on to name two ligatures the typographical representation does reproduce (Gălăbov 1963: 25): in line 5, the word  $C(BA)TA\Gamma0$  features a horizontally ligated combination of  $A\Gamma$ , with  $\circ$  added as a superscript – the only occurrence in the inscription. The second ligature is to be found in line 6, in the preposition  $\Pi PU$ . Here, the letters PU form a vertical ligature, with the P quite possibly added later to correct an obvious mistake, as Gălăbov points out. He then reviews all differences in reading the text as offered by his predecessors.

Even in the light of this careful review of the text and its readings, some remarks are in order on the transcription given here. First, Gălăbov's text shows quite a few *subscripted dots* (16, to be precise), nearly all of which are not visible to us on the photograph. Consequently, we have not tried to reproduce them here. At the same time, he omits the middle dots found between words in the text (17 in all) and adds his own punctuation marks. He omits the dots to the right and left of letters indicating numbers, he ignores the special mark at the beginning of the text (a cross with four dots) and replaces all four-dot marks at the end of the text with a single dot.

Astonishingly, Gălăbovs representation of the text does not use one peculiar letter which is a well-known part of the OCS alphabet and should not have presented any problem at all for typesetting: the preposition 'ot' /  $\overline{\omega}$  in line 1, fourth word. This letter should always be represented as such, and not by two single letters.

Further, there is clearly a third ligature in the text, the last two letters in line 8:  $H_{i}$  instead of Nb. Clearly, this is a Serbian influence on the writing which is not accidentally, of course.

A

N

Next, if one carefully looks at the last letter in the word ANDENNAM (line 4), I cannot help but think that this letter really is the mixture between the two nasal letters. For the "T" it is very characteristic for the inscription to use the 'long'

For the "Z", it is very characteristic for the inscription to use the 'long' shape; Gălăbov's rendition does not reflect this, although typographically it should not have presented a problem to do so.



As Gălăbov himself critizes Grabar's "facsimile" for not reflecting the horizontal part in this letter we will also mention this here as not being part of Gălăbov's own representation.

information about the font. – For a textual comparison of the Boyana inscription to other similar patrons' inscriptions cf. (Smjadovski 1993: 70 f.).

БЗЬДВИЖЄ СА от БЗЬДВИ ЖЄ СА? A grammatical question concerns the segmentation into words right at the beginning of the text. Both variants are to be found in the literature: Gălăbov<sup>5</sup> has БЗЬДБИ ЖЄ СА while Smjadovski<sup>6</sup> has БЗЬДВИЖЄ СА. Who is correct here? Smjadovski. The aorist ends in -e, and before this vowel, the alternations  $\Gamma/\kappa \sim \pi/\gamma$  take place. Thus,  $\pi$  is the result of such an alternation, not the beginning of a particle. БЗЬДБИ by itself is not a correct form.

Let us now apply all corrections mentioned above (with the exception of the ligatures) to the text for a new version which is closer to the original. Besides the changes commented upon in detail we will give up the distinction between upper case and lower case letters which is not present in the original, and will add certain details such as the non-connecting horizontal line in the shape of the bl. A corrected diplomatic version of the Boyana inscription could look like this:

# ВЗЬДВИЖЕ СА Ѿ ЗЕМА · И СЬЗДА СА · ПРЪЧИСТЫ ХРА МЬ · СТАГО ИЕРАРХА ХБА НИКОЛЫ · И СТАГО И ВЕЛИКШ СЛАВНАГШ МЖЧЕНИКА ХБА · ПАНТЕЛЕИМШНА · ТЕЧЕ НИЕМЬ · И ТРОУДОМЬ · И ЛЮБОВНАЖ МНОГОАЖ · КАЛШ БИЪ СЕВАСТОКРАТОРА БРАТЪЧАДА ЦРВА · ВНЪКЬ · СТАГ<sup>0</sup>. СТЕФАНА · КРАЛЪ СРБЬСКАГО · НАПИСА ЖЕ СА ПРИ ЦР ЬСТВО БЛГАРСКОЕ · ПРИ БЛАГОВЪРИЪМЬ И БГОЧЬ СТИВЪМЬ · И ХСТОЛЮБИВЪМЬ ЦРИ · КОСТАНЬ ДИНЪ АСЪНИ · ЕДИКТО ·  $\vec{Z}$  [·] В ЛЪТО ·  $\vec{S}$  ·  $\vec{Y}$  ·  $\vec{\tilde{Z}}$  ·

#### 3. The Wikipedia version, and progress in Unicode

The Boyana inscription is a good example to show the progress that the Unicode character encoding standard has lately made, especially when moving to version 5.1 in April 2008 (the current version is 5.2, released October 2009). At the same time, this will demonstrate once more that the latest additions of Cyrillic characters were really needed.

Currently (July 2010), Wikipedia contains an article about the Boyana church in 22 languages. As is to be expected, they differ vastly in length and depth. The text of the patron's inscription can be found in only three of these articles, English, Russian, and, astonishingly, Portuguese. The text is the same in all three articles.

<sup>&</sup>lt;sup>5</sup> Gălăbov 1963: 24

<sup>&</sup>lt;sup>6</sup> Smjadovski 1993: 70

Because this is of some importance to our arguments, we will include the text in its original form below, displayed using the author's *Kliment Std* font.<sup>7</sup>

There is no Wikipedia article about the inscription itself, but there is one in the Bulgarian Wikipedia version portal.<sup>8</sup> The original Wikipedia version has been copied to several other web sites, as a simple Google search shows.<sup>9</sup>

We will divide our discussion of the text into two parts: corrections of mistakes and other remarks on the one hand, and progress in rendering the text as made possible by Unicode 5.1 (and later). This is the current Wikipedia version<sup>10</sup> which we might call the '2010 version':

> + взъдвиже са w зема и създа са прѣчисты хра мъ стаго иерарха х́ва николы стаго и великw славнагw мжченика хва пантелеимwна тече ниемъ и троудомъ и любовиаа многоаж калw ѣнѣ севастократора братоучади цр́ва вноукъ ста стефана кралѣ србъскаго написа же са при цр́ вство блгарское при благовѣрнем и бѓочь стивѣмъ и хр́столюбивѣмъ цр́и костан динѣ асѣна едикто з́ в лѣто .sī.ψ.ž́ з́

A closer examination of the text reveals the following:

1) The text does not reproduce any punctuation marks, although the original has quite a few middle dots.

<sup>&</sup>lt;sup>7</sup> See http://kodeks.uni-bamberg.de/AKSL/Schrift/KlimentStd.htm. This font is especially well suited to display the inscription because of certain letter variants it uses.

<sup>&</sup>lt;sup>8</sup> http://bg.wikisource.org/wiki/Боянска\_църква

<sup>&</sup>lt;sup>9</sup> Interestingly, these copies still contain a mistake already corrected by the author some time ago: in its original version, the preposition "ot" (first line, third word) wasn't written  $\varpi$  but as  $\varpi$  – similar, but not the same thing. Especially at small point sizes, both characters may indeed look similar – but only because common fonts still use an older, now obsolete rendering of the second character. Corrected, they would look like this:  $\varpi$  vs.  $\varpi$ , and would not be as easily mistaken one for the other. For more information, see Everson 2007: 1.

<sup>&</sup>lt;sup>10</sup> As of July 2010. We intentionally display the text using the standard *Times New Ro-man* font. This font features an uneven display in the design of certain Early Cyrillic letters – see the omega and the OV, for example. It also shows that the titlo has not been implemented correctly – it should sit directly above characters, not to the right.

2) Of the non-punctuation marks, the text does reproduce only the cross at the very beginning of the text, but without its dots. The dot clusters at the end of the text are omitted. The cross at the beginning of the text is not correctly encoded – the character being used is simply the 'plus' sign, not the correct Unicode glyph.

3) The text omits the titlo over one of the numbers, and omits some of the dots indicating numbers<sup>11</sup>. Where the text reproduces such dots, it uses the wrong Unicode glyph – the dots are standard punctuation marks, not the correct dots sitting at middle height above the base line.

4) It is a well-known characteristic of the text to use only one yer, in this case the front yer ( $_{\text{b}}$ ). The Wikipedia version, however, uses the back yer ( $_{\text{b}}$ ) in nearly all cases. It seems as if the original contributor has tried to "correct" the use of the yers by reinstating the expected ones. However, it is a standard practice not to alter any yers in such cases.

5) The text contains an astonishing number of mistakes with regard to letters, endings and even words: After HUKOJIBI the ' $\mu$ ' is missing (line 2), so that Nikola and Pantelejmon are unconnected syntactically; instead of  $\Lambda IOBOB\underline{MA}\underline{A}$  and  $MNOTO\underline{A}\underline{A}$ , the text has  $\Lambda IOBOB\underline{H}\underline{A}\underline{A}$  and  $MNOTO\underline{A}\underline{A}$  (line 4). Instead of  $BPATOY\underline{V}\underline{A}\underline{A}\underline{A}$ , the text has  $FPATOY\underline{V}\underline{A}\underline{A}\underline{H}$  (line 5). Instead of CTATO, the text has only CTA (end of line 5). In the word  $\mu \overline{p} \mid \underline{B}CTBO$ , the text erroneously has a <u>B</u> instead of the correct <u>b</u>. In the word KOCTA<u>M</u> |  $\underline{A}HN\underline{B}$ , the text does not use the clearly visible soft Serbian letter  $\underline{H}$  at the end of the line. In the word  $\underline{A}\underline{C}\underline{B}\underline{N}\underline{A}$ , again a wrong inflectional ending is being used – the original says  $\underline{A}\underline{C}\underline{B}\underline{N}\underline{H}$ .

Now let us move on to the second part, to the demonstration of progress in Unicode, and why recent additions to this encoding standard were so important. Readers who wish to learn more about the Cyrillic letters added to Unicode with version 5.1 are referred to (Everson 2007; Kempgen 2008). The additions were grouped to form a new block of related characters, the so-called "Cyrillic Extended-B" block, documented in Unicode code chart UA640.

6) The first pair of letters that can be distinguished within UC 5.1 are the letters for the [z] sound, 3 and Z. The second one is new, its Unicode name is "Cyrillic (capital/small) letter zemlya", code points are A640 and A641. This is actually the earlier shape of the character. It is obvious that the Boyana inscription uses zemlya throughout.

7) For the un-iotified front nasal vowel, the inscription has two variants, standard A, and A. This latter variant was introduced to Unicode 5.1 under the name "Cyrillic (capital/small) letter closed little yus", at code points A658 and A659. The inscription uses the "closed" variant twice (line 4), and the standard variant elsewhere.

<sup>&</sup>lt;sup>11</sup> Citing the inscription, Smjadovski (Smjadovski 1993: 72) similarly puts only one titlo above the date as a whole, omitting all dots.

8) The encoding of the graphical representations of the [u] sound has undergone some changes. Besides the horizontal digraph OV (which is not recommended to be used any more as a single character; rather it should be decomposed into its two parts), Unicode 5.1 has introduced "Cyrillic (capital/small) letter monograph Uk", 8, at code points A64A and A64B. The inscription uses the horizontal digraph once (line 4) and the vertical ligature twice (line 5). Consequently, these shapes can now be distinguished by using fonts that fully that portion of Unicode 5.1.

9) Unicode 5.1 introduced quite a lot of superscripted Cyrillic letters, among them the vowel [o]. Thus, the superscript at the end of line 5 can now be properly encoded.

10) Unicode 5.1 introduced the "blended yus"  $\mathbb{X}$  (code points A65A and A65B). If the text really uses that letter in line 4 – as we think it does –, it can now be encoded properly.

There are also certain glyph variations that Unicode does not distinguish as individual letters; rather, these variations must be accounted for in a different way (for example, through the OpenType glyph variant selecting mechanism, see Kempgen 2008). In our text, this would concern primarly the following details: 11) The letter bI (lines 1 and 2) is realised here in a 'half-connected' form. 12) The vertical monograph Uk, already mentioned above, has several forms associated with it. The shape used in the inscription is normally not the basic shape fonts will use.

Let us now apply all the changes mentioned above to the text restricting ourselves to straightforward Unicode encoding, i.e. without resorting to OpenType features or using the PUA (private use area). In other words: the version given below could be used on the web. We will display it here using our own *Kliment Std* font:

# ВZЬДВНЖЕ СА Ü ZЕМА · Н СЬZДА СА · ПРѢҰНСТЫ ХРА МЬ · СТ́аго нерарха Хб́а Nhkoлы · н ст́аго н велнк@ Славнаг@ мж чеnнка Хб́а · Паптеленм@na · тече Nhi@mb · н троудомь · н любовнаж многоаж · кал@ Ѣпѣ севастократора брат8чада цр́ва · вn8кь · ст́аѓ · Стефана · кралѣ србьскаго · напнса же са П<sup>р</sup>н ц́р ьство блгарское · прн благовѣрнѣмь н бѓочь стнвѣмь · н Хс́толюбнвѣмь ц́рн · костањ дниѣ асѣnн · еднкто · ζ́[·] в лѣто · Š ·· Ψ́··Ѯ ·· Ź ··

#### Conclusion

In our age, where information either seems to be available electronically or does not exist any longer in a growing number of users' perception, and where Wikipedia is all too often used as a trusted source of information not only by students, one should be aware that it does contain errors, that early Slavic texts available in Wikipedia articles should be and have to be carefully reviewed and updated after the introduction of Unicode 5.1 and associated fonts.

As far as the patron's inscription of the Boyana church is concerned, it has been shown here that currently available online versions of the text do contain an astonishing number of mistakes and omissions, and that the encoding of the text is indeed in need of an update. The same is also true, mutatis mutandis, for the version of the text found in (Gălăbov 1963). For both sources, the present paper contains new versions. The author will, of course, update the Wikipedia article to reflect all the changes detailed above, resulting in a '2011 version' of the inscription.

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