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Article

Towards a Typology of the Use of Coloured Ink in Old Georgian Manuscripts

Jost Gippert | Frankfurt am Main

A common trait of most parchment manuscripts connected to Christian traditions is that in contrast to the black or dark brown ink that is dominant in them, some elements are written in a second colour, usually red. This is also true for the bulk of Old Georgian manuscripts, which are spread in various repositories in Georgia and abroad.¹ As the conditions and purposes of the use of ‘rubrics’ in Georgian manuscripts have not as yet been studied in detail, it seems sensible to establish a basic typology in order to facilitate future research.²

1. Decoration and Demarcation

A typical use of red ink in Old Georgian manuscripts is decorative, as in the braid-like bands of two colours we often meet

at the beginning or end of a given manuscript; such bands can be found, for example, in the Sinai mss. no. N 2 (Fig. 1) and 32-57-33 (Fig. 2), the latter representing the oldest dated Georgian manuscript known so far.³

The same type of coloured bands can also be found demarcating different elements of texts, such as in fol. 84r of the Sinai mss. no. 15 (Fig. 3), where it serves to separate the final verses of the Gospel of Matthew from the scribe’s colophon (in smaller letters). This contrasts with fol. 224v of the same manuscript (Fig. 4), where although a similar band is placed after the colophon (of the Gospel of Luke), the end of the main text is only indicated by a few neume-like scratches in red ink.



Fig. 1: Sin.geo. N 2, fol. 1r (detail)

¹ Within Georgia, most Old Georgian manuscripts are stored in the K. Kekelidze Institute of Manuscripts (now the National Centre of Manuscripts, <http://www.manuscript.ge/index.php?m=7&ln=eng>), Tbilisi, and the Kutaisi State Historical Museum (<http://www.histmuseum.ge/engmain.htm>). Outside of Georgia, larger collections are found in St. Catherine’s Monastery on Mt. Sinai (more than 200 items) and the Greek Patriarchate of Jerusalem (ca. 160 items). Minor collections are kept in European libraries and archives (Vienna, Graz, Paris, Leipzig, Göttingen, Rome, St. Petersburg, etc.). The Old Georgian period extends roughly from the 5th to the 12th century.

² The present study is mostly based on a survey of the Georgian manuscripts kept in St. Catherine’s Monastery that was undertaken during a sojourn

by M. Shanidze, S. Sarjveladze, D. Tvaltvdze, B. Outtier, and the present author on Mt. Sinai in May 2009, in connection with the international project ‘Critical Edition of the Old Georgian Versions of Matthew’s and Mark’s Gospels-Catalogue of the Manuscripts Containing the Old Georgian Translation of the Gospels’ (project kindly supported by INTAS, Brussels, under ref.no. 05-1000008-8026). The project members are extremely grateful to the monastery librarian, Father Justin, for the kind support he provided.

³ The Georgian manuscripts of Mt. Sinai are described in Garitte 1956; a catalogue of the so-called ‘New Finds’ (of 1975, numbers with a prefixed ‘N’) was provided by Aleksidze et al. 2005.—Ms. no. 32-57-33 is the so-called ‘Sinai polycephalion’ (*Sinuri Mravaltavi*) of 864 AD.

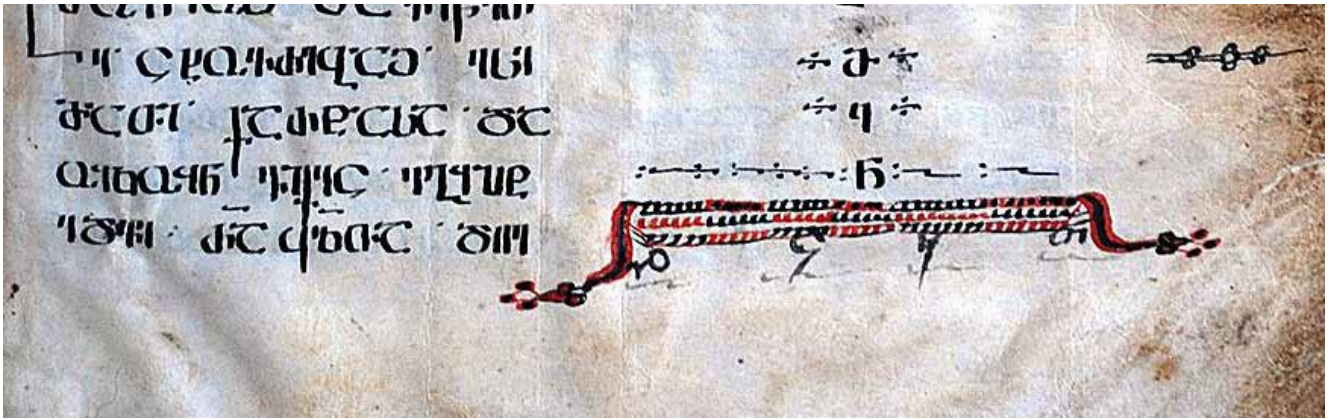


Fig. 2: Ms. Sin. geo. 32-57-33, fol. 273r (detail)

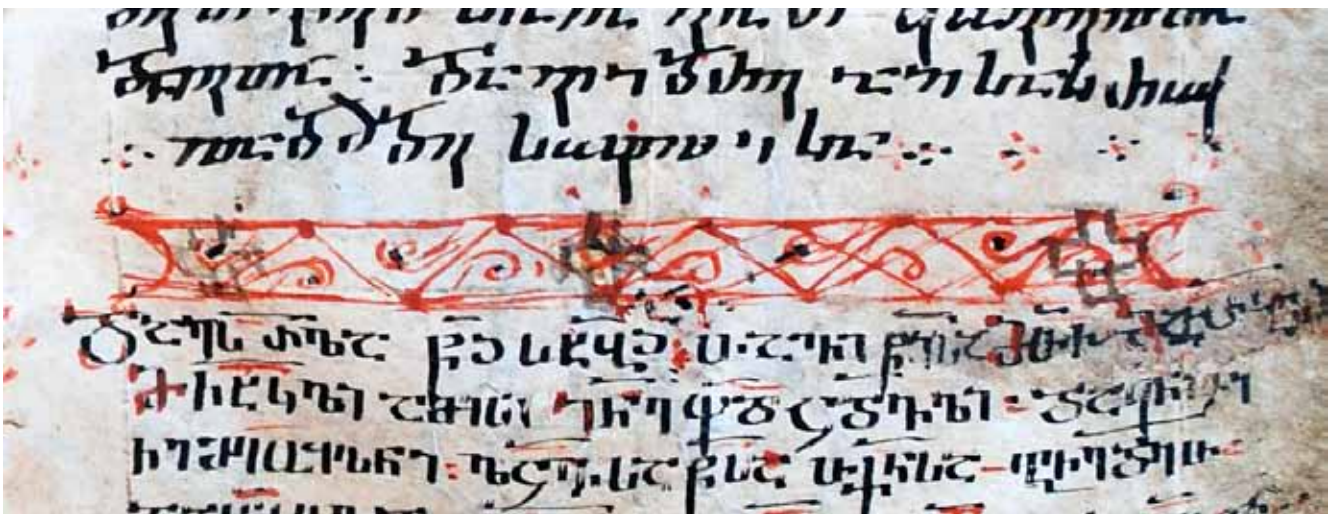


Fig. 3: Sin. geo. 15, fol. 84r (detail)



Fig. 4: Sin. geo. 15, fol. 224v (detail)



Fig. 5: Ms. Kut. 176, fol. 92r (detail)



Fig. 6: Sin. geo. 19, fol. 199v (detail)

By no means is this type of ornamental band restricted to the Mt. Sinai manuscripts. It is also found, for example, in ms. no. 176 of the Kutaisi State Historical Museum (Fig. 5),⁴ where such bands separate the different parts of the so-called Euthalian materials introducing the Pauline Epistles.

A special form of two-coloured ornament of this type consists in rows of crosses added at the end of Gospel texts and the like, as is found in the Sinai ms. no. 19 (Fig. 6).

2. Headings and Titles

A related demarcation purpose can be seen in the many cases of headings and titles being written in red ink, either completely or partly. This feature is widespread, both in Gospel codices such as the Sinai ms. no. 16 (Fig. 7, where we read *s(a)x(a)r(e)b(a)y m(a)t(ē)s t(a)vi* as the heading of the

‘Gospel of Matthew’ in the top margin) and in other manuscripts, as for example the Sinai ms. no. 6, where the heading introduces the legend of St. Christina with the date of the saint’s commemoration (*t(tues)a ivnissa k̄d: camebay ç(mi) disa kristīnaysi mamisa twsisa orbanosisg(an) dionisg(an) da ivliaysg(a)n*, ‘in the month of June, 24: Martyrdom of St. Christina by her father Urbanus, Dios, and Julian’, Fig. 8).

A similar type of marking is extensively used in liturgical codices, such as the Sinai lectionary ms. no. 37 (Fig. 9), where red ink indicates the date of a particular reading (in the given case, *didsa otxšabatsa*, ‘Big Wednesday’, i.e. the Wednesday before Easter, in the 5th line from the bottom), or the type of prayer or hymn to be sung in the service (e.g., *psalmuni riž*, i.e. ‘Psalm 116’, 2nd line from the bottom), etc.

⁴ My thanks are due to the staff of the Kutaisi State Historical Museum, who made ms. 176 and several other manuscripts of the collection available to

the members of the above-named INTAS project during a sojourn in Kutaisi in April 2007.

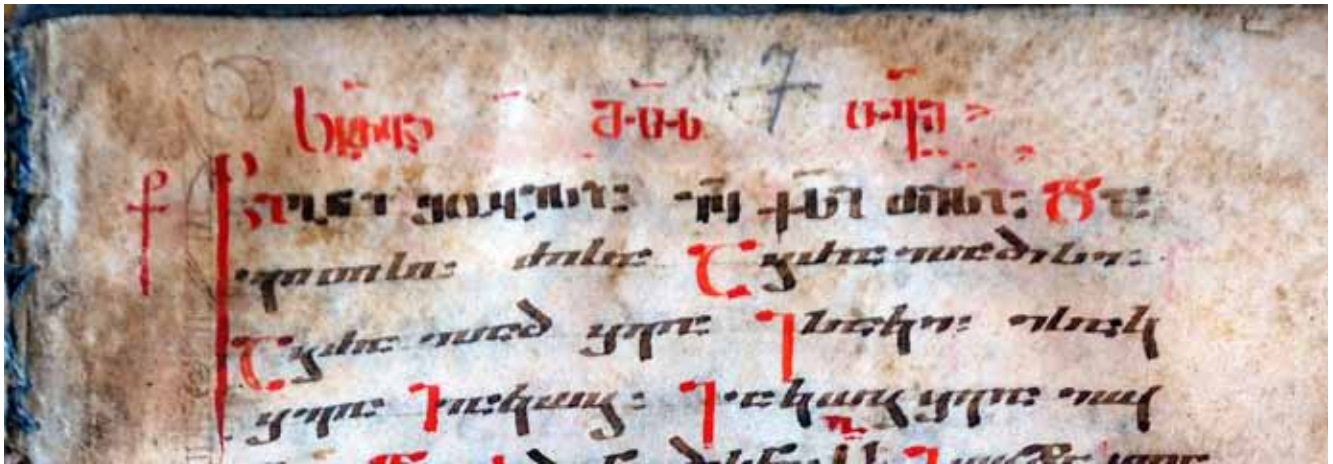


Fig. 7: Sin. geo. 16, fol. 7r (detail)



Fig. 8: Sin. geo. 6, fol. 201r (detail)



Fig. 9: Sin. geo. 37, fol. 105r (detail)



Fig. 10: Sin. geo. N 73, fol. 2v (detail)

Likewise, titles written in red ink are often found in hymnaries, where they indicate the type of hymn (*heirmos*) as well as its primary mode, as in line 1 of the Sinai ms. no. N 73 (*samš(a) b(a)t(o)nive: owg(a)l(o)bd(i)tsa: qmay b̃*, ‘on Saturdays as well: the *ugalobdit* (*heirmos*), mode no. 2’;⁵ Fig. 10). In special cases, the elements in red ink represent the transcription into Georgian (majuscule) script of the Greek titles of hymns,⁶ as in the Sinai ms. no. N 5 (Fig. 11: *tonen morpi anže(low)* ~ τὸν ἐν μορφῇ ἀγγέλου), and *lowtroṭaṭow* ~ λυτρωτὰ τοῦ (παντός)).

3. Initials and Capitals

Serving a similar function to many of the examples above, single characters outdented into the left margin as initials are often written in red ink, either completely or outlined on a black background, as found in the beginning of the scribe’s colophon of the Sinai Gospel ms. no. 15 (on fol. 292r:⁷ *Ṣaxelita ġ(mrti)s(a)yta* ‘In the name of God’; Fig. 12). In the same way, red ink is also applied to initial letters within lines, usually indicating the beginning of a sentence or phrase, as in the text of the same colophon (*meoxebita ḥ(mid)isa ġ(mr) tismš(o)b(e)lisayta da ḥ(mida)ta maxar(e)belta : m(a)te mark(oz) l(ow)ka da i(ova)nesita : da...* ‘With the help of the holy Mother of God and the holy Evangelists, Matthew, Mark, Luke and John, and ...’), or in the colophon at the bottom of fol. 224v of the same manuscript (Fig. 4: *daesr(u)la ḥ(mida)y s(a)x(ar)e)b(a)y : tavi ḥ(mid)isa l(ow)ka m(a)x(a)*

reb(e)lis(a)y . mčx(re)k(a)li amisi i(oa)ne c(o)d(vil)i locvasa ḥ(mida)sa tk(ow)ensa gvedia, ‘Completed is the holy Gospel, the chapter of St. Luke the Evangelist. The writer of this, sinful Ioane, be remembered in your holy prayer.’).

In these examples, marking the initial letters of the names of the four Evangelists with coloured ink is similar to the use of capital letters in denoting proper names in modern Latin-based orthographies. An even more striking example of this is the list of the ancestors of Jesus Christ at the beginning of the Gospel of Matthew in the Sinai Gospel ms. no. 16 (fol. 7r, Fig. 7), where most of the names have red initials, with the additional enlargement of the initial letters (*Cigni šobisay i(eso)w k(risṭē)si zisa Davitisi: zisa Abrahamisi: Abraham šva Isaki: isaḥ šva Iiakob [sic!]: Iakob šva iuda...* ‘Book of the birth of Jesus Christ, the son of David son of Abraham. Abraham begat Isaac, Isaac begat Jacob, Jacob begat Juda...’).

4. Referencing and Marginalia

Another typical use of rubrics in Old Georgian manuscripts is related to referencing. A characteristic example can be seen in fol. 314v of the Sinai Gospel ms. no. 16 (Fig. 13), where initials in red ink (in one case, the dots over a black letter) are combined with references that comply with the system of Ammonian (or Eusebian) section numbers (in the given case: *sk̃d* = 224 = Jo. 21,12a–b, *ĩ* = 10th canon; *sk̃e* = 225 = Jo. 21,13, *ĩ* = 9th canon; *sk̃v* = 226 = Jo. 21,14–15a, *ĩ* = 9th canon). A similar use is found on the Georgian flyleaves of ms. no. 303 of the Yerevan Matenadaran (Fig. 14),⁸ here, only initials and canon numbers are written in red, while the section numbers have the same colour as the main text

⁵ The nine odes (*heirmoi*) that constituted the canon of the Georgian (Orthodox) church in the Middle Ages were named after their initial words (in the case in question, *ugalobdit* ‘praise (the Lord)’, Ex. 15,1); cf. Gippert et al. 2007, vi n. 17.

⁶ Cf. Meṭreveli 1971, 31 ff. with regard to this kind of transcript.

⁷ In the following transcripts and translations, the letters in red ink in the originals are marked by underlining.

⁸ Cf. Gippert, and Outtier 2010; my thanks are due to the staff of the Matenadaran, who made ms. 303 and several other manuscripts of its collection available to the members of the above-named INTAS project during a sojourn in Yerevan in September 2007.



Fig. 11: Sin. geo. N 5, fol. 4r (detail)



Fig. 12: Sin. geo. 15, fol. 292r (detail)

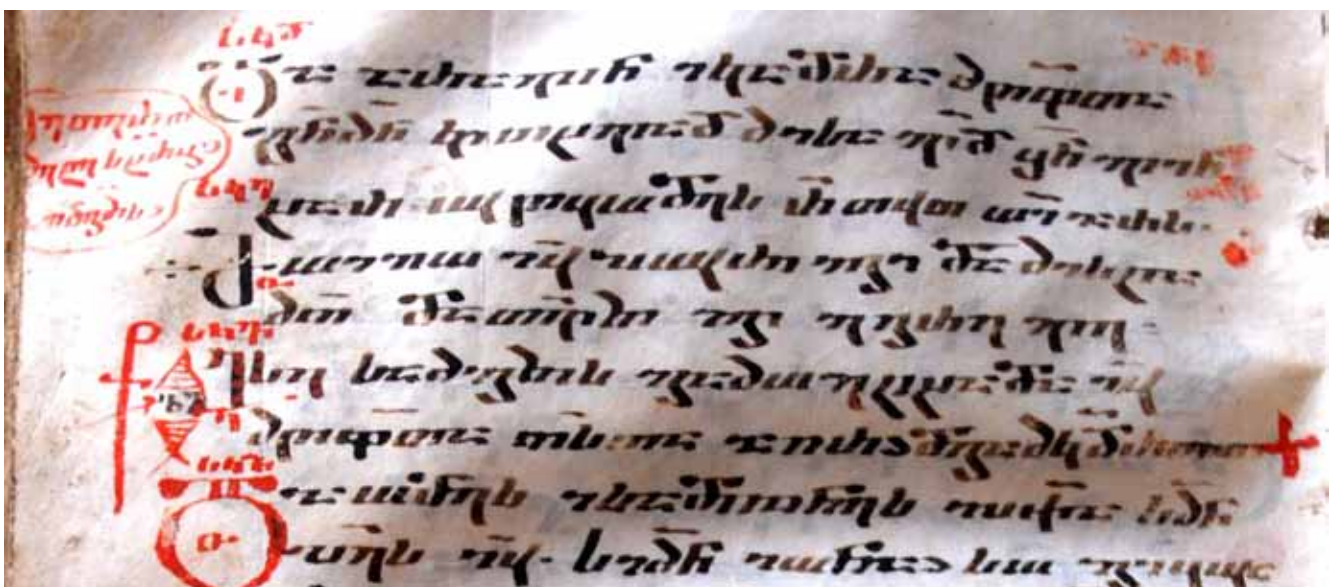


Fig. 13: Sin. geo. 16, fol. 314v (detail)



Fig. 14: Back flyleaf of ms. 303 of the Matenadaran (detail)

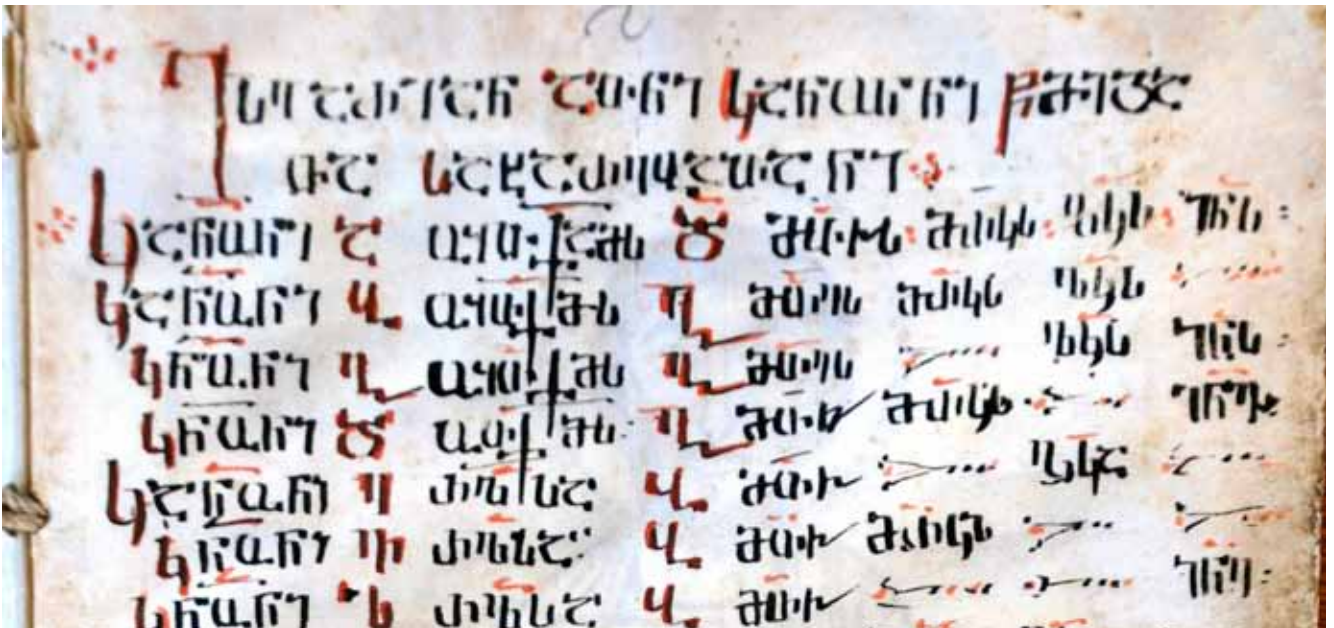


Fig. 15: Sin. geo. 30, fol. 2r (detail)

($sm\tilde{b} = 242 = \text{Lk. } 20,19$, $\tilde{a} = 1^{\text{st}} \text{ canon}$; $s\tilde{y} = 260 = \text{Lk. } 22,1$, $\tilde{a} = 1^{\text{st}} \text{ canon}$; $sy\tilde{a} = 261 = \text{Lk. } 22,2$, $\tilde{a} = 1^{\text{st}} \text{ canon}$).

In the margins of both these manuscripts, we find additional information written in red, either entirely or partially. In the Yerevan flyleaf, this is another element of referencing, viz. the number $\tilde{p}\tilde{z} = 87$ that is attached to the final verse (38) of Lk. 21, decorated with a dotted circle in red. On fol. 314v of Sin. geo. 16 (and elsewhere in the manuscript), one finds a complete gloss written in red that has been added in the margin, in this case with a liturgical background

(*metertmete s(a)x(a)r(e)b(a)y aġdg(o)mis(a)y*, i.e. ‘eleventh Gospel (reading) of Resurrection (Day)’).

The rubrication of letters that represent numeric units is not restricted to marginal references of the type discussed above. It is also found in the tables listing the Eusebian canons in the front matter of the Sinai Gospel ms. no. 30 (Fig. 15), where all numerical data (as well as some letters) are in red (on a black background): *Ese arian atni kanonni emidata saxarebatani* ∴ *Kanoni a owtk(ow)ams d m(a)tēs ∴ m(a)rk(oz)is ∴ l(ow)k(ay)s ∴ i(ova)n(ē)s ∴ Kanoni b owtk(ow)ams g m(a)tes* [sic!] *m(a)rk(oz)is l(ow)k(ay)s*: ... ‘These are

Table 2

Foreword

I have read through all the epistles of Paul and excerpted from them all the words of quotations and listed them one after another in one place, in turn prefixing the name of the book where they derive from.

Then (follows) a single number, which is in red, initiating the arrangement, and (this number) indicates the running number of the quotation according to each epistle and re-starts again epistle by epistle.

However, (a number) which is in brown and which is (placed) below, is the total number of all (the quotations from) the (given) book, and (it) increases with the lectures up to the end and shows us the number of the quotations from each book.

And to each of these (quotations) I have added the respective number so that you might know how many times the Apostle took a quotation from the book which is mentioned at the same place and (whose name) is placed aside.

And you will find the number in red, arranged once again inside the lectures of the very words of the scriptures of the Apostle.

ΠΡΟΓΡΑΜΜΑ.

Τὰς πάσας ἐπιστολάς ἀναγνοὺς Παύλου τοῦ ἀποστόλου, ἀνειλόμην ἐκεῖθεν τῶν πασῶν μαρτυριῶν τὰ ῥητὰ, καὶ καθεξῆς ἀνεκεφαλαιωσάμην, ἀκολουθῶς προτάσσων τὴν προσηγορίαν τῶν ὄθεν εἰσὶ βιβλίων.

Ἔστιν οὖν ὁ διὰ τοῦ κινναβάρεως ἐκ μονάδος ἀρχό-μενος ἀριθμὸς τὴν τάξιν, καὶ τὴν ποσότητα δηλῶν τῶν καθ' ἑκάστην ἐπιστολὴν μαρτυριῶν, καὶ συναπολήγων πάλιν τῇ ἐπιστολῇ.

Ὁ δὲ διὰ τοῦ μέλανος καὶ ὑποκείμενος τούτῳ, καθολικός ἐστιν ἀριθμὸς πάσης τῆς βίβλου, καὶ συναυξόμενος τῇ ἀναγνώσει μέχρι τέλους, γνωρίζων ἡμῖν τὴν ποσότητα τῶν ἀφ' ἑκάστης βίβλου μαρτυριῶν.

Παρέθηκα γὰρ ἑκάστη τούτων τὸν ἴδιον ἀριθμὸν, ἵν' εἰδέναι ἔχῃς ποσάκις τὴν ταύτην εἴληφε μαρτυρίαν ἐκ τῆς μνημονευθείσης ἅμα, καὶ παρακειμένης βίβλου ὁ Ἀπόστολος.

Εὐρήσεις δὲ τὴν διὰ τοῦ κινναβάρεως ἀπαριθμησιν κανονιζομένην τῇ πάλιν ἔνδον παρακειμένη αὐτοῖς τοῖς ῥητοῖς τοῦ ἀποστολικοῦ τεύχους.

where it would fall into the large lacuna between the present fols. 93v and 94r. However, another *programma* of this type has been preserved in this codex, namely, at the bottom of fol. 92r (Fig. 16).¹² Under the title *Zemo ceril ars*: ('Above is written:') it reads: *R(ome)l-igi melnita ars ricxw raodeni ars tavebi mas x(olo) aowçq̄ebs: da r(ome)l-igi çitelita ars : aowçq̄ebs titoeowlisa çignisa çamebata gançesebasa erbamad ...* 'A number that is in black ink denotes only how many chapters there are (quoted). And (a number) that is in red ink denotes the sum of quotations of each book altogether...'¹³

There is no indication why the scribe of the Kutaisi manuscript did not adhere to the principle outlined by Euthalius; elsewhere in the Caucasian tradition it was applied, as seen in the Armenian underwriting of the Georgian palimpsest ms. no. N 55 of Mt. Sinai (Fig. 17). Here, as can clearly be seen even in the monochrome (UV) photograph of the fold

between fols. 28v and 29r,¹⁴ the numbers pertaining to the epistle names are much less distinct than the numbers concerning the book of Leviticus, which strongly suggests that in the erased original they were written in red ink.¹⁵

5. Neumes and other non-linguistic signs

A less common usage of rubrics in Old Georgian manuscripts is the denotation of melodic features with neume-like signs. A good example of this can be found in the Sinai hymnary ms. no. N 73 (Fig. 10).¹⁶ It remains unclear whether the awkward-looking scratches in red ink in the Gospel codex no. 15, fols. 84r and 224v (Figs. 3 and 4), which seem to serve as demarcations or perhaps simply as ornaments, have any relation to the neumes of the hymnaries.

¹² The present passage corresponds to Zacagnius 1698, 542 and col. 720 bc in Migne 1860; cf. p. 107 in the edition of the Georgian version of the Euthaliana by Danelia 1977.

¹³ There are several other passages that deal with the use of colours in Euthalius' materials: in the Greek text, p. 573 / 749C ('ecthesis' to the list of chapters of Romans); 591 / 753 C (the same, I Corinthians); 613 / 757C (II Corinthians); 625 / 759D (Galatians); 635 / 763A (Ephesians); 643 / 765B (Philippians); 650 / 768B (Colossians); 658 / 769D (I Thessalonians); 664 / 773A (II Thessalonians); 671 / 777A (Hebrews); 688 / 781B (I Timothy); 696 / 785A (II Timothy); 704 / 788B (Titus); 707 / 789A (Philemon; the last 13 attestations have no counterparts in the Georgian version).

¹⁴ Cf. the edition of the Armenian layer of the 'Albanian' palimpsests Sin. geo. N 13 and N 55 in Gippert 2010.

¹⁵ For an edition of the Armenian version of the Euthaliana cf. Vardanian 1930. —A preliminary version of the same edition was printed in the journal *Handēs Amsōreay* in subsequent fascicles of the years 1924–1927 under the title *Evt'ali Matenagrowt' iwnk'* (for matters concerning the Pauline Epistles: 1925, cols. 423–434; 515–530; 1926, cols. 1–16; 97–120; 193–208; 289–304; 417–436; 513–524; 1927, cols. 1–12; 97–108; 225–236; 353–366; 481–492; 545–558). —Parts of the Euthalian apparatus were also printed in the so-called Zohrab Bible (Zōhrapan 1805 / 1984).

¹⁶ Cf. Kiknaze 1982 for another Old Georgian manuscript exhibiting neumes.



Fig. 16: Ms. Kut. 176, fol. 92r (detail)

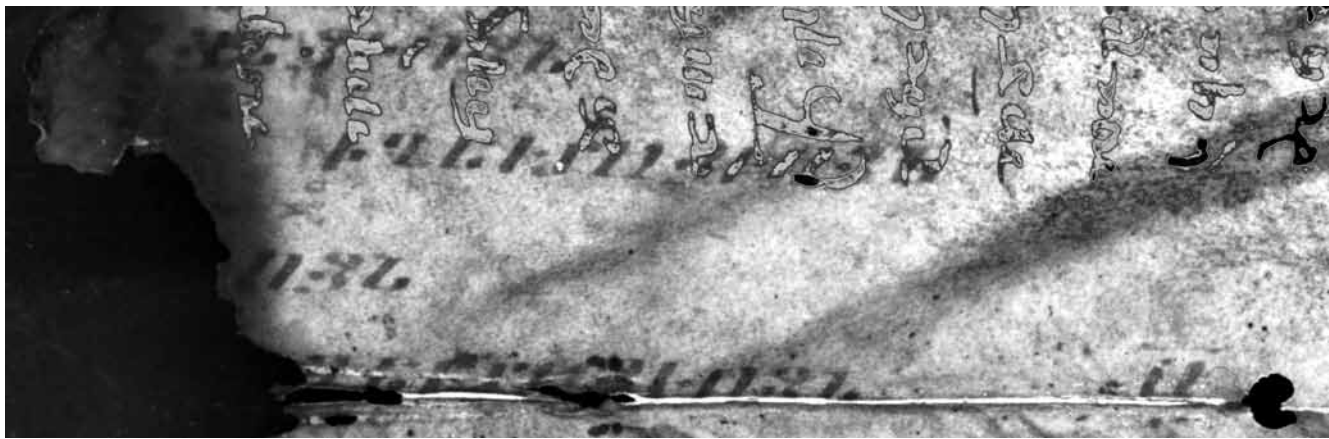


Fig. 17: Sin. geo. N 55, 28v-29r (detail)

<i hrov̄m>ayec'woc'n

i levtac'woc'n

<i galatac'w>oc'n

<i> lewtac'woc'n

x̄a

ā

ž̄

ā

<From the [letter to the]> Romans
 from [the book of] Leviticus
 <from the [letter to the]> Galatians
 <from> [the book of] Leviticus

the 41st (quotation):
 the 1st (quotation);
 the 10th (quotation):
 the 1st (quotation).

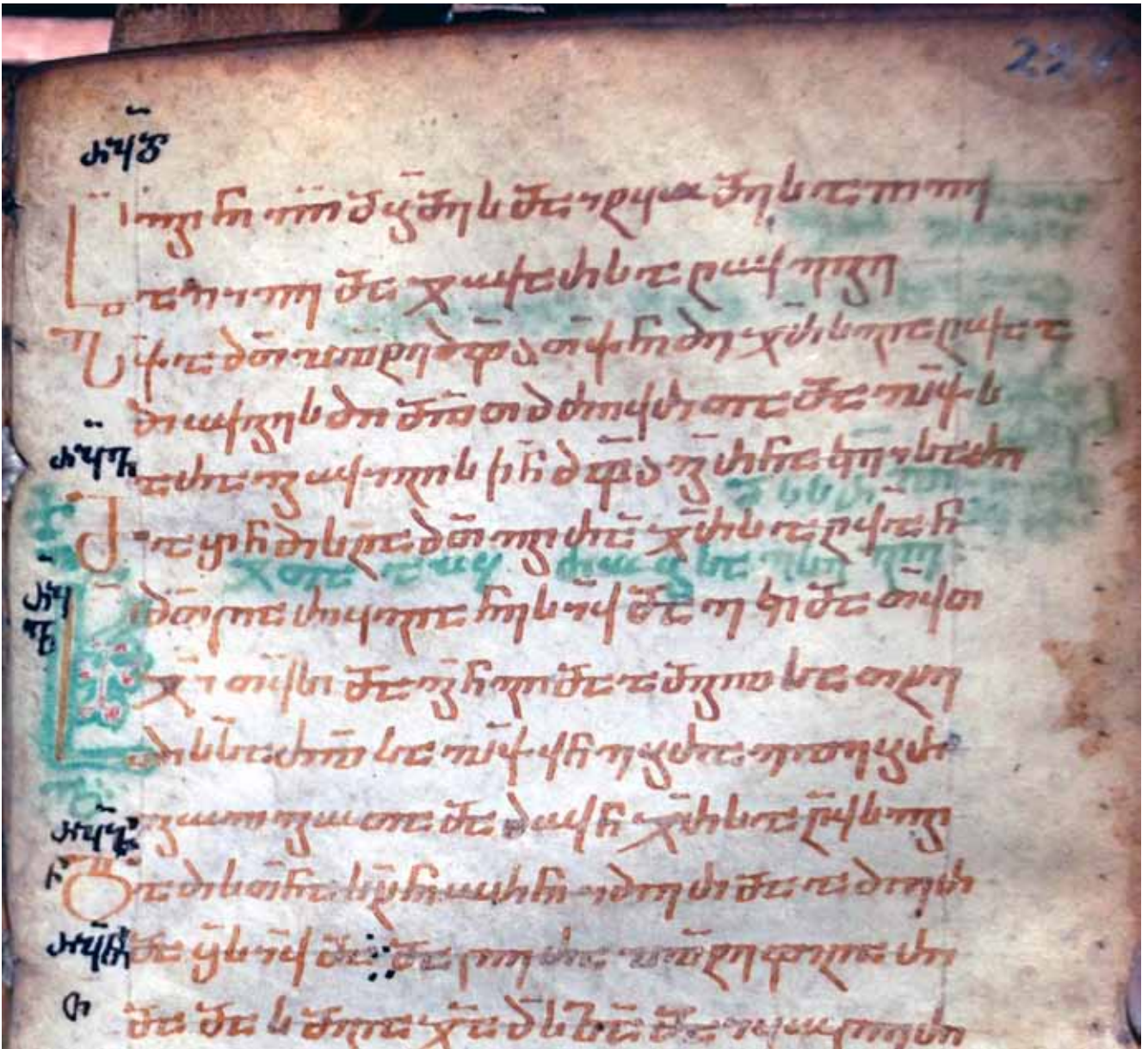


Fig. 18: Cod.Vind.georg. 1, fol. 224r (detail)

6. Multicoloured manuscripts

If we exclude illuminated codices, there are very few Old Georgian manuscripts that exhibit the use of more than two colours. One such case is the Gospel manuscript of the Austrian National Library (Cod. Vind. georg. 1),¹⁷ where we find green, red, and black elements accompanying the main text in brown ink. In the given example (fol. 224r, Fig. 18), the items in black are clearly numerical data, referring again here to the Ammonian sections ($r\check{z}\sim d = 194 = \text{Jo. } 19,15a$; $r\check{z}\sim v = 196 = \text{Jo. } 19,16$; $r\check{z}\sim z = 197 = \text{Jo. } 19,17-18a$; $r\check{z}\sim \bar{e} =$

$198 = \text{Jo. } 19,18b$; $r\check{z}\sim t = 199 = \text{Jo. } 19,19$),¹⁸ these references were probably added by a later hand. The elements in green are mostly liturgical prescriptions, as between lines 6 and 7, where we read $\check{z}(owar)ta\ apqrob(a)sa\ eseve$ ‘as well on the (day of the) Exaltation of the Cross’; the entry between the lines above reads $d(a)s(a)sr(u)li$, which simply means ‘end’. It is clear that these elements are indications of lectures to be read, thus preparing the Gospel manuscript for its use during holy services. In contrast to the references in black ink, it is likely that they were added *prima manu*, given that the same ink is also used for the large initial of Jo. 19,17 = 197

¹⁷ My thanks are due to the staff of the Austrian National Library, who made the Cod.Vind.georg. 1 and several other manuscripts of its collection available to the members of the above-named INTAS project during a sojourn in Vienna in June 2008.

¹⁸ The two single letters can hardly refer to the Eusebian canons ($\bar{e}\sim = 8$ and $t\sim = 9$), as the sections in question pertain to canon 1.

($X\sim = Xolo$ ‘but’).¹⁹ Lastly, red ink is applied here and there in initials, as seen in the latter initial, which again may be taken as being a purely ornamental feature.

It is clear that this list of features is only a first step in establishing a typology of the use of coloured ink in Old Georgian manuscripts, this to some degree due to the fact that until now very few codices have been easily accessible to Western scholars. To proceed, a methodical investigation of a larger number of specimens needs to be done, including sources

from different periods and genres. We cannot but hope that the major repositories of Georgian manuscripts will soon join the ever increasing number of libraries and archives that are ready to digitize their treasures and publish them online, thus sharing them with the interested public. And of course the Georgian data needs to be compared to that of other manuscript traditions, as this will enable a more general typology of the use of coloured ink.

REFERENCES

- Aleksidze, Zaza et al. (2005), *Catalogue of Georgian Manuscripts discovered in 1975 at St. Catherine's Monastery on Mount Sinai* (Athens).
- Danelia, Korneli (1977), ‘Evtales Stikometriis zveli kartuli redakciebi’, in *Zveli kartuli enis katedris šromebi / Trudy kafedry drevnegruzinskogo jazyka* 20 (Tbilisi), 53–149.
- Garitte, Gérard (1956), *Catalogue des manuscrits géorgiens littéraires du Mont Sinai* (Louvain; Corpus Scriptorum Christianorum Orientalium, 165 / Subsidia, 9).
- Gippert, Jost, Sarjveladze, Zurab, and Kajaia, Lamara (2007), *The Old Georgian Palimpsest Codex Vindobonensis georgicus 2* (Turnhout; Monumenta Palaeographica Medii Aevi / Series Ibero-Caucasica, 1).
- Gippert, Jost (2010), *The Caucasian Albanian Palimpsests of Mt. Sinai, vol. III: The Armenian Layer* (Turnhout; Monumenta Palaeographica Medii Aevi / Series Ibero-Caucasica, 2/3).
- Gippert, Jost, and Outtier, Bernard (2010), ‘Fragments de l’Evangile de Luc dans le Maténadaran’, to appear in a Festschrift (Tbilisi).
- Ḳiḳnaḻe, G[ulnaz] (1982), *Nevmirebuli zlispirni (xelnačeri A-603) / Nevmirovannyj irmologij (rukopis' A-603)* (Tbilisi).
- Metreveli, Elene (1971), *Zlispirni da gmartismšoblisani. Ori zveli redakcia / Dve drevnie redakcii gruzinskogo irmologii* (Tbilisi).
- Migne, Jacques-Paul (1860), *Patrologiae cursus completus* (Paris; Patrologia Graeca, Vol. 85).
- Vardanian, Aristaces (1930), *Euthalius Werke. Untersuchungen und Texte. Anhang: Brief des Eusebios von Caesareia an Karpianos* (Vienna).
- Willard, Louis Charles (2009), *A Critical Study of the Euthalian Apparatus* (Berlin, New York; Arbeiten zur Neutestamentlichen Textforschung, 41).
- Zacagnius, Laurentius Alexander (1698), *Collectanea Monumentorum Veterum Ecclesiae Graecae, ac Latinae. Tomus I* (Rome).
- Zōhrapean, Yovhannēs (1805 / 1984), *Astowacašownč' matean hin ew nor ktakaranac'* (Venētik / Repr. Delmar, N.Y.).

¹⁹ In beginning with *xolo* ‘but’ (instead of *da* ‘and’), the text of Cod. Vind. georg. 1 reveals itself as pertaining to the third redaction of the Georgian Gospels (the so-called Athonite vulgate).

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Fig. 1a, 1b, 1–18: Jost Gippert.