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LINE-FINAL WORD DIVISION IN RUSSIAN BIRCHBARK DOCUMENTS*

INTRODUCTION

With the publication of the ninth volume of the Academy Edition of *Новгородские грамоты на бересте* (henceforth: NGB) by Janin and Zaliznjak (1993), the total amount of birchbark documents now available in print has reached approximately 800 items. The *gramoty* and related texts that have come to light in Novgorod and other Russian towns, including Staraja Russa, Smolensk and Pskov, cover between 410 and 470 years, starting in the 1030s.¹ The considerable period of time over which this large number of texts is more or less evenly spread allows for detailed and statistically grounded investigations into the development of the language reflected in the documents. A recent example is Zaliznjak's comprehensive description of the gradual process of the loss of the jers ("Падение редуцированных по данным берестяных грамот", NGB 9, 241-270).

Following a similar approach, the present contribution is devoted to the gradual change of rules governing the orthographic device of line-final word division (in anachronistic terms referred to as "hyphenation") in the birchbark documents. Unfortunately, there seem to be no general studies that present an overall picture of the system of word division used in Russian and other medieval Slavic texts.² Nevertheless, it is well known that, in the early Russian tradition, line-final word division was by and large permitted only after vowel letters. This principle will be abbreviated here as "Vl". In the earliest period, the end of a line thus seemed to be associated with the open-syllable structure of the language. This poses the question of whether after the jer shift the system of word division was capable of changing into a less rigid one, in which not only vowel letters, but also consonant letters were permitted line-finally ("Cl"). It will be seen that this is exactly what happened in the birchbark documents.

Before discussing the data, it should be mentioned that the subject of word division in the birchbark *gramoty* was briefly touched upon by Žukovskaja some forty years ago. After examining 24 relevant documents, Žukovskaja states: "Для многих из рассмотренных берестяных грамот характерно отсутствие регламентации переноса слов со строки на строку" (1955, 75).³ In the time that has passed, the number of uncarted texts has been multiplied by ten and we are now in the position of correcting and specifying Žukovskaja's general observation.

SOURCES

The list of the birchbark documents and related texts that have been consulted (including bibliographical references and abbreviations) is the following:

- Novgorod (N) 1-710, cited according to the Academy Edition, vols. 1-9: N1-10 in NGB 1 (= Arcixovskij and Tixomirov 1953); N11-83 in NGB 2 (= Arcixovskij 1954); N84-136 in NGB 3 (= Arcixovskij and Borkovskij 1958a); N137-194 in NGB 4 (= idem 1958b); N195-318 in NGB 5 (= idem 1963); N319-405 in NGB 6 (= Arcixovskij 1963); N406-539 in NGB 7 (= Arcixovskij and Janin 1978); N540-614 in NGB 8 (= Janin and Zaliznjak 1986); N615-710 in NGB 9 (= idem 1993). See also the “Поправки и замечания...” by Zaliznjak (NGB 8, 181-215; 9, 123-178) and Janin (NGB 8, 220-251).
- Nadpis’ (Nadp.) 1-42. Edition: Nadp. 1-9 in NGB 1, 44-49; Nadp. 10 (= “Азбука”) in NGB 3, 79-81; Nadp. 11-18 (= “Надписи на деревянных ‘счетных’ бирках”, formerly numbered 1-8) in NGB 8, 81-86 (cf. also Zaliznjak, NGB 9, 179); Nadp. 19-42 in NGB 9, 112-122.
- Svincovaja gramota (Svinc.). Edition: NGB 5, 154-155 (cf. also Janin, NGB 8, 246).
- Staraja Russa (St.R.) 1-23. Edition: St.R. 1-13 in NGB 7, 143-153 (cf. also Zaliznjak, NGB 8, 215-216; 9, 178); St.R. 14 in NGB 8, 77 (cf. also Zaliznjak, NGB 9, 178); St.R. 15-23 in NGB 9, 104-111 (cf. also Mironova 1990).
- Smolensk (Smol.) 1-11. Edition: Avdusin and Mel’nikova (1985; cf. also Zaliznjak, NGB 8, 216-217).
- Pskov (Psk.) 2-7. Edition: Psk. 2 by Beleckij (1968, 6); Psk. 3-4 by Labutina and Kostjučuk (1981; cf. also Zaliznjak, NGB 9, 178-179); Psk. 5 by Sedov, Beleckij, Voločkova et al. (1987); Psk. 6-7 by Zaliznjak, Kolosova and Labutina (1993).
- Tver’ (Tv.) 1. Edition: Žilina (1987).
- Vitebsk (Vit.) 1. Edition: Dročenina and Rybakov (1960; cf. also Zaliznjak, NGB 8, 217).
- Mstislavl’ (Mst.) 1. Edition: Alekseev (1983).

Unfortunately, I have not been able to consult Smol. 12-15, Psk. 1, 8, Tv. 2, Moskva 1 and Zvenigorod Galickij 1-2. The words occurring in these texts are included in the glossaries of NGB 8 and 9, where line-final word division is sometimes indicated by a vertical stroke, but mostly not. Without being able to consult the primary sources, it remains unclear what the absence of vertical strokes in the relevant words actually means.

Upon closer scrutiny, not all documents that are listed above are relevant for

the present purposes. Only those which offer a more or less coherent Slavic text running from left to right can be considered useful. This means that the following types of documents will be excluded:

- Nadp. 1-42. Except for Nadp. 10 and 12, we are dealing with very short inscriptions, mostly consisting of a single line or even a single word.
- Some documents that have erroneously been included in the corpus of NGB. On the basis of their contents, they can hardly be labeled *gramoty* in the sense of coherent texts. Most of them have already been identified as such by Janin, who states:

“Включение в корпус ряда находок, имеющих лишь подражательный письму характер, является несомненным результатом в общем объяснимой эйфории (см. “грамоты” № 85, 89, 234, 255, 327, 371, 396, 399, 401, 505, 669, 680). Вряд ли правильным было относить к числу берестяных грамот владельческие надписи на крышках туесов и лукошек, а также на берестяных рыболовных поплавках (№ 86, 116, 127, 360, 431, 432, 447, 484, 498, 499, 599)”. (NGB 9, 4)

In addition to Janin’s list, I would also exclude the “labels” N319, N323, N397, N458 and N555.

- Texts that only list single letters (alphabets), syllables or numbers, e.g., N74, N199 (outer side), N200, N201, N204, N205, N206, N287, N330 (inner side), N342, N444, N460, N576, N591, N623.
- Texts that do not run from left to right, e.g., N46 (reading letters from the first and second line alternatively), N522 (from top to bottom), N553 (partly from top to bottom), N674 (mirror writing).
- Texts that are written in non-Slavic languages: N292 (Finnic), N488 (Latin), N552 (Greek) and Smol. 11 (Scandinavian).

In the relevant birchbark documents there are a few types of line-final word division which will be discarded for various reasons:

- Line-final abbreviations of the type *ннѣ = н(ѣ)нѣ* N167 (conjecture by Zaliznjak, NGB 8, 194) and *сѣво|нѣ = сѣ(о)во(д)нѣ* N421.
- Corrupt places at the beginning or the end of a line which lack convincing conjectures, e.g., *грамо|(тѣ) ог грамо(тѣ)?* N578, *кот|...* (ог кот...?) N635, *сѣ|...?* N675, *...твор|...* (ог ...твор...?) Psk. 3; *(ре)|каъ?* N4 (cf. the glossary of NGB 8, 295), *(соу)|кыно?* N7 (thus according to NGB 1, 37, but not included in the glossary of NGB 8), *(де)|латѣ?* N197 (thus according to NGB 5, 15, but also missing in the same glossary). Furthermore, I will exclude the obvious mistake *«ро|о* N92 as well as the highly implausible conjecture *г[о]|(ѣд)з(н)човъ* N536 (cf. NGB 7, 138), since this would be the only case where *оу* or any other digraph is split up.
- Clitic prepositions and *полъ* at the end of a line as well as the reflexive

particle *ca* in line-initial position will be treated as separate words. There are only a few relevant cases, e.g., *в | нен* N40, *в | (ънф)имовѣ* N300, *ѿ | хого* N463, *ѿ | домацка* N657 (*ѿ | казало* N213 will be treated as VI); *поло | теретѣа* N45, *поло | рѹвѣаа* N278; *прошатѣ | са* N314, *грозить | це* N359.

TRANSCRIPTION

For the present purposes, it is not necessary to render the Cyrillic writing used in the birchbark documents in every detail. The modifications which have been made are the following:

- Mirror-reversed letters are replaced by their plain counterparts (e.g., *ѷ*, *ю*, *а*, *ц*).
- Variants of the *i desjateričnoe* (plain, cross-like or dotted), the digraph *u* (separated or *slitnoe*), the letter *o* (plain, dotted and/or *očnoe*) *ѷ*, the *omega* (plain or dotted) and the digraph *y* (separated or connected) are simply rendered as *i*, *oѷ*, *o*, *ω* and *ъ*, respectively.
- Super- and subscript letters are not distinguished as such, with the exception of *ѿ*.
- Punctuation marks, which sometimes occur in the middle of a word, are omitted.

Furthermore, the following symbols are used: () for conjectures and resolved abbreviations; [] for letters that are only partially visible; <> for redundant letters that are not to be read; and ... for lacunae of unspecified length.

DATING

The documents quoted below are dated according to the information provided by the respective editors. In the Academy Edition, the most convenient place to find such information is the “Указатель принадлежности берестяных грамот к топографическим и хронологическим комплексам” (Janin, NGB 8, 307-310; 9, 103). It should be pointed out, however, that a number of documents have recently been assigned to a different chronological layer for various reasons (see Gajdukov 1992, 78-82 and Zaliznjak NGB 9, 123-180; on the chronology of birchbark texts cf. Vermeer, this volume, Appendix 1). I would like to draw attention to the fact that in NGB 9 Zaliznjak mostly indicates a new dating by “уточненная датировка/дата”, but not always. Sometimes the dating has become quite puzzling, for instance in the case of N1: 1396-1409 according to the “Указатель...” (Janin, NGB 8, 307); 1409-1422 according to Janin’s “Поправки и замечания...” (NGB 8, 220); and XIV/XV (= end of

the fourteenth — beginning of the fifteenth century) according to Zaliznjak's "Поправки и замечания..." (NGB 9, 124). In cases like this, I have simply adhered to the latest information, as provided by the Academy Edition.

As is well known, the most important chronological grouping is the one that sets apart the birchbark documents of the "раннедревнерусский период" (rendered in the glossaries of NGB 8 and 9 by numbers in italics), i.e., before the jer shift, from those of the "позднедревнерусский период", i.e., after the jer shift, beginning in the 1220s (cf. Zaliznjak, NGB 8, 91; for more details see also idem, NGB 9, 269-270). I would like to start off by discussing the few cases in the "early" period where we find line-final word division after consonant letters.

CASES OF CI IN THE "EARLY" PERIOD (UNTIL *ca.* 1220)

Twelfth century

St.R. 17: **въз|ма** (XII₁)

This appears to be the earliest case of a line-final consonant letter. In the edition (NGB 9, 105-106) the word is transcribed as **въз|ма**. The drawing, however, clearly shows a **ь** instead of a **ъ**, as also read by Mironova (1990, 219). The unexpected writing **въз-** can perhaps be explained as an anticipation of a following, unwritten **ь**: **въз(ь)|ма**. Since there seems to be a knot in the birchbark at the end of the fourth line, it is even conceivable that the letter **ь** was in fact written, although it is no longer (completely) visible: **въз[ь]|ма** (?). At any rate, the right edge of the fragment as shown on the drawing gives the strong impression that we are dealing with a case of unintentional word division, caused by a knot in the material. At the end of the fourth line, the writer Mirslav realised too late that the knot would prevent him from finishing the word the way he wanted.

Smol. 10: **кост|на** (XII, unspecified)

Smol. 5 (block Smol. 5/7): **ник|лы** (XII, end)

It should be pointed out that both Smol. 5 (together with Smol. 7) and Smol. 10 consist of mere lists of personal names.

End of the twelfth — beginning of the thirteenth century

N439: **вез|лене**

N531: **кост|тиню, наз|вало**

It is worthy of note that this text is written in a rather sloppy manner. Thus we find, e.g., **съ(с)троу** (twice), **се(с)тра**, **се(с)троу**, **вое(с)лавомо**; **покло(но)**, **ко(у)ровою** (?), **емо(у)**, **пр(и)еѡала**, **с(ер)ьбра**, **ѡедо(ро)**, **слово(во)звало**; **тако<ко>** (cf. Zaliznjak, NGB 8, 213; 9, 176; Vermeer 1992, 430-431).

N542: м[іа]лѡна

According to the edition, the proposed reading м[іа]лѡна may be unsatisfactory: “не исключено, но маловероятно” (NGB 8, 15). In the first publication of N542 by Kolčín, Xorošev and Janin (1981, 50) the end of the third line was interpreted as ѡмні ‘amen’; however, the drawing certainly speaks in favor of a final л rather than а н.

Beginning of the thirteenth century

N222: запираютьсѡ

Zaliznjak (NGB 8, 195) points out that the reading in the edition (cf. also the new drawing in NGB 8, 238) is improbable: “В *запираютьсѡ* либо конечное ѡ утрачено при обрезке грамоты, либо *-тьсѡ* — это сокращенная запись (вместо *-тьсѡ*); предложенное в издании чтение *запираютьсѡ* неправдоподобно” (cf. also the glossary of NGB 8, 277: “*малозер. запираютьсѡ*”).

N436 (block 436/437; cf. below): кѡлѡнѡюсѡ

N507: ненавиѡт(ѡ)

In the edition, this document is assigned to the chronological layer 1196-1213 (= XII/XIII). Zaliznjak (NGB 9, 175) corrects this dating to the first half of the thirteenth century (= XIII₁). In view of the fact that the number of the text is still rendered in italics in the glossary of NGB 9 (cf. the entry *навѣтъ*), the document is apparently still considered to belong to the “early” period, while the corrected dating would imply a shift to the “late” period. Furthermore, the correct rendering of the fragment on the drawing (NGB 7, 102) is suspect. Zaliznjak (NGB 9, 175) points out that the last word should not be read as *навѣтъ* or *навѣтъѡ*, but as *навѣт...* This is strikingly at variance with what we see on the drawing. As it looks now, also *ненавиѡт(ѡ)* may not have been correctly identified. Moreover, the shape of the right edge of the fragment leaves room for the conjecture that the second written line did not end with the letter с (*ненавиѡт...?*).

In sum, we find a maximum of ten instances of Cl in nine different documents belonging to the “early” period. Three cases (appearing in N222, N507 and N542), perhaps even four (including the one in St.R. 17), turned out to be at least doubtful, if not unlikely altogether. In the table below, the numbers of the three documents under discussion will be listed in parentheses. If the reading of St.R. 17 is indeed correct, I think we are still dealing with a peculiar case of line-final word division that was not intended by the writer. A special status should also be attributed to the two instances of Cl in N531 because of the unique way in which Ana’s letter to Klimjata was written. Both the numbers St.R. 17 and N531 have been put between square brackets in the table below.

All in all this leaves us with only four unambiguous cases of Cl in the “early”

period; two from Novgorod (каланюса in N436 and везмене in N439) and two from Smolensk (никюлы in Smol. 5 and костлана in Smol. 10). Both documents from Novgorod belong to the last chronological division of the “early” period (1195-1220) and both were found in the *Lubjanickij raskop* (N436 in layer 10, N439 in layer 11). N436 has been considered to belong together with N437 to one of the earliest “blocks”, i.e. groups of birchbark documents written by the same person (for a list cf. Zaliznjak, NGB 8, 90; Vermeer 1992, 431; idem, this volume, Appendix 2). Arguing against the opinion of the editors of NGB 7, Zaliznjak states: “Из предосторожности мы предпочитаем не присоединять к этому блоку грамоту 439 [...], поскольку не совпадает начертание букв ы, ц, х” (NGB 8, 90, fn. 3). In view of the fact that out of the total corpus of “early” documents from Novgorod only N436 and N439 show unambiguous cases of Cl, I submit that Zaliznjak’s notion should be reconsidered.

Let us now turn to the cases where we find line-final word division after consonant letters in documents of the “late” period. Henceforth, the abbreviations *b.*, *m.* and *e.* will be used to indicate beginning, middle and end of the century under discussion.

CASES OF Cl IN THE “LATE” PERIOD (AFTER *ca.* 1220)

Thirteenth century

- N73: трли (XIII₁)
 N203 (block Onfm): свлокмү (XIII₁)
 Psk. 6: твлюа (XIII, probably *m.*)
 N404: кловрино (XIII, unspecified after *ca.* 1220)
 N68 (block N61/68): местиловь (XIII₂)
 N483: [цет|вє]ре[т]и, clo (cf. Zaliznjak, NGB 8, 210; 9, 171; XIII₂)
 N482: овса (*e.* XIII)

End of the thirteenth — beginning of the fourteenth century

- N357: ксломо
 N419 (fol. 5v): воскръсеннѣме

Fourteenth century

- N65: двидовү, медведна (*b.* XIV)

On the dating of N65, see Janin (NGB 8, 225). Judging from the drawing, it looks as if the third line of the inner side also ends with a consonant letter (кл...), although this is uncertain.

- N193: нл[н] (*b.* XIV)
 N196: [кє]мо (cf. Zaliznjak, NGB 9, 138; *b.* XIV)
 N146: д'авыда (XIV₁)
 N289: чго (XIV₁)
 N31: сиротѣ (cf. Zaliznjak, NGB 8, 184; *m.* XIV)
 N92: фларе (*m.* XIV)
 N102: клоровѣ, іх'ъ (*m.* XIV)
 N177 (block Maskim): поплѣ, т'ы (*ъ.m.* XIV)
 N580: кълъм(єн)[ѣ]цкѣ (Gajdukov 1992, 80; *m.* XIV)
 N594: онсифорѣ, микѣлѣ (*m.* XIV)
 N136: кѣници (on нн cf. glossary, NGB 8, 281; XIV, unspecified)
 N564: (ж)лгга (XIV, unspecified)
 N132: д'ви (cf. Zaliznjak, NGB 8, 192; XIV₂)
 N133 (block Grigorija): (ъв)ланомо (cf. Zaliznjak, NGB 8, 192; XIV₂)
 N252: мьнѣ (XIV₂)
 N253 (block Maskim): десасцнлмо, д'еже (XIV₂)
 N278 (block Grigorija): филиппа (XIV₂)
 N497: злати, кло, плонхали, м'оен (XIV₂)
 N532: дрловъ (XIV₂)
 N538: пош'ло (XIV₂)
 N690: ворланѣ, воз'ми, плотниццкомо (sic), ворисоганеомо (XIV₂)
 N2: кѣница, возем'ѣга, намѣст'а, осл'ровѣ, в'ѣльюта (*e.* XIV)
 N42: (дѣх)а (cf. Zaliznjak, NGB 8, 185; *e.* XIV)
 N178: ш'ироки (*e.* XIV)
 N179: анлає(а)рѣ (cf. Janin, NGB 8, 234; *e.* XIV)
 N281 (block Grigorija): новгородцамо (*e.* XIV)
 N528: доб'(рѣ), братом'ъ (*e.* XIV)

By the way, братом'ъ is a unique case of line-final word division: братом is written on one side of the document, 'ъ on the other (cf. also Zaliznjak, NGB 9, 176).

N257 воз'ми (*e.* XIV) will be excluded from the material: judging from the drawing, after the з the lower part of the letter є (= ѵ) may be visible (воз[є]ми?).

End of the fourteenth — beginning of the fifteenth century

- N1: в(є)л(ъи) (cf. Janin, NGB 8, 221), сєла
 N25: позн'алъ
 N43: п'риде, приш'ли
 N126: лашенєстинково
 N129 (block Esif): ксиѣла, д'а, в'лодлаа, юб'лѣ

- N265 (block Grigorija): леж|**[и]** (cf. Zaliznjak, NGB 8, 199)
 N311: хът|**и**мо
 N363 (block Smen): сол|**о**дъ
 N364 (block Smen): поц|**н**ешъ, грам|**л**ота (sic)
 N413: нв|**а**нѹ, горн|**о**сталь
 N519 (block Mosii): нлн|**н**скимъ
 N622: (в)|**л**юдите

Fifteenth century

- N17: н|**ѣ** (b. XV)
 N21: пр|**н**слать (b. XV)
 N40: пр|**н**детъ (b. XV)
 N463: свон|**н**ъ (b. XV)
 N11: в|**л**оць (cf. Zaliznjak, NGB 8, 182-183; XV₁)
 N14: ксн|**ф**лѹ, сав|**л**а (XV₁)
 N19 (block Esif): от|**л**ыцѹ, ѿп|**р**азновавъ, з|**д**ѣсе (XV₁)
 N162: н|**а**, пелем|**ч**ахъ, меш|**л**(къ) (cf. Zaliznjak, NGB 9, 136; XV₁)
 N297: ц|**ѣ**тверетьнън (XV₁)
 N298: нгн|**а**тлѹ (XV₁)
 N464: м|**л**атфѣквица (XV₁)
 N466: как|**ъ** (XV₁)

Table 1. Cases of C1 in birchbark documents

<i>“Early” period</i>		<i>number of cases</i>	
XI			—
XII			—
XII ₁	{St.R. 17}	[1]	—
e. XII	Smol. 5; Smol. 10 (XII, unspecified)		2
XII/XIII	N439, [N531 2x], (N542)	(1)	[2] 1
b. XIII	N436, (N222), (N507)	(2)	1
<i>“Late” period</i>			
XIII (excluding b. XIII)			8
XIII ₁	N73, N203		2
m. XIII	Psk. 6; N404 (XIII, unspecified after ca. 1220)		2
XIII ₂	N68, N483 (2x)		3
e. XIII	N482		1
XIII/XIV	N357, N419		2
XIV (through XIV ₁)			6
b. XIV	N65 (2x), N193, N196		4
XIV ₁	N146, N289		2

XIV (from <i>m.</i> XIV)		38
<i>m.</i> XIV	N31, N92, N102 (2x), N177 (2x), N580, N594 (2x); N136, N564 (XIV, unspecified)	11
XIV ₂	N132, N133, N252, N253 (2x), N278, N497 (4x), N532, N538, N690 (4x)	16
<i>e.</i> XIV	N2 (5x), N42, N178, N179, N281, N528 (2x)	11
XIV/XV	N1 (2x), N25, N43 (2x), N126, N129 (4x), N265, N311, N363, N364 (2x), N413 (2x), N519, N622	19
XV		17
<i>b.</i> XV	N17, N21, N40, N463	4
XV ₁	N11, N14 (2x), N19 (3x), N162 (3x), N297, N298, N464, N466	13

COUNTEREXAMPLES TO VI

In the appendix below, I have listed all clear-cut cases of VI, the total number of which is 488. As for the “early” period (see appendix I), I find 123 cases in which line-final word division occurs after a vowel letter. If only the four unambiguous cases of Cl are taken into account, the proportional relation between Cl and VI in the “early” period turns out to be 3.1% against 96.9%. Again, I would like to point out that at least three of the four instances of Cl occur in relatively late documents; moreover, the two from Novgorod may have been written by the same person. The percentage of cases of Cl still remains extremely low if one wishes to include N531 and St.R. 17: 5.4%.

The absolute numbers of cases of Cl and VI in the “late” period are 90 against 365. However, as Table 1 may evidently show, a sharp increase of line-final consonant letters can be observed during the middle of the fourteenth century. Over the period *ca.* 1220-1340 we surely find unmistakable cases of Cl, but the total number of 16 nevertheless comes down to a mere 11.7% of all cases of line-final word division during that time (see appendix IIa, where 121 cases of VI are listed). It is only from *ca.* 1340 on that line-final consonant letters really become relatively frequent. By then, they can be found in almost every fourth instance of word division, or to be precise: 74 cases of Cl (= 23.3%) against 244 cases of VI (see appendix IIb).

If we take a closer look at the cases of Cl in the middle of the fourteenth century, we see that the majority belong to the chronological division 1340-1369, i.e. layer 9 of the *Nerevskij raskop*: N31, N92, N102 (2x), N177 (2x); formerly also N133 (now assigned by Zaliznjak, NGB 9, 135, to XIV₂). N177 together with N253 (two cases of Cl) belong to the Maskim (Maksim Onciforovič) block and N133 together with N265, N278 and N281 (each one case of Cl) to the Grigorija block (cf. Vermeer 1991, 340-349). It seems likely that the relatively frequent use of line-final consonant letters started off during the generation of Maskim and Grigorija. In this respect, it may not be due to chance that Maskim’s

father, Oncifor Lukinič, ended his lines only after vowel letters (see appendix IIb: N354 and N358).

Table 2. Cases of Cl and Vl in numbers and percentages

	<i>cases of Cl</i>	<i>cases of Vl</i>
<i>“Early” period</i>	4 = 3.1% [or 7 = 5.4%]	123 = 96.9% 123 = 94.6%
<i>“Late” period</i>	90	365
From <i>ca.</i> 1220 through XIV ₁	16 = 11.7%	121 = 88.3%
From <i>m.</i> XIV through XV	74 = 23.3%	244 = 76.7%

CONCLUSIONS

The results of this investigation can be summarized as follows:

— In the “early” period there are practically no cases of Cl. Apparently, a written line was perceived in the same way as a syllable. In accordance with the open-syllable structure of the language at that time, line-final word division only occurred after vowel letters.

— After the conclusion of the final stage of the jer shift, i.e. after *ca.* 1220, there was no particular reason to allow only word division of the type Vl. Consequently, during more than a century after the end of the jer shift we find a stable but still infrequent number of cases of Cl. It is only in the middle of the fourteenth century that a clear break with the traditional way of dividing words at the end of a line can be observed. From that time on, word division of the type Cl becomes an accepted and regular device.

— In future investigations, it is clear that line-final word division, especially of the type Cl, may be taken into account when dating accidental finds of birchbark documents. Also, unambiguous cases of Cl in documents before *ca.* 1220 have to be regarded as early innovations. Finally, conjectures in “early” documents that presuppose line-final word division of the type Cl should be looked upon with suspicion.

In conclusion, I would like to draw attention to the fact that the rather sudden change of rules governing line-final word division was not the only innovation in birchbark documents that took place in the vicinity of the 1350s. There seem to be quite a few other changes on various linguistic levels following a similar chronological pattern; some of them may already be attested sporadically from the beginning of the “late” period on, but it is only around the middle of the fourteenth century that they penetrated into writing on a large scale. Some striking examples of this chronological type of change are:

- merger of *ě with *i in /i/ (cf. Zaliznjak, NGB 8, 106-109);
- loss of word-final *-i in the infinitive, the 2sg of the present tense and the imperative (cf. idem, NGB 8, 144-145);
- replacement of *vχ-* with *vš-* in the pronominal stem **vχ-* (cf. idem, NGB 8, 116; 9, 197-198);
- replacement of *sl'-* with *šl'-* in the stem of the verb *сълати* (cf. Vermeer 1992, 394-395);
- end of incipits of the type “*ѿ X къ Y*” and beginning of new types containing the words *приказъ* and *человиткъ* (cf. Worth 1984).

Future research into the chronology of birchbark documents may throw further light on the possibility that an important chronological break within the “late” period can be observed around the middle of the fourteenth century.

APPENDIX

I: Cases of V1 in the “early” period (until ca. 1220)

N8 [ε]сть (XII/XIII); N9 *даалъ, вола, ничыто, иноую* (e. XII); N78 *воже* (XII₂); N79 *михалеви* (e. XII); N105 *въверичь, лазь(в)къмъ* (XII₂); N109 *дрожина, послан, коупивъ, съводъ* (XI/XII); N112 *господъни* (b. XIII)⁴; N118 (block Prokša) *ei(млн)* (XII₂); N119 *гривьнѣ* (XII₁); N155 *домаслава, присан* (XII₂); N219 (block N219/223/230) *възнимитъ* (b. XIII); N222 *татымо* (b. XIII); N227 *согре(шити), мь(сте), тиро(вати)* (XII₂); N231 *нынь* (XII₂); N235 *лвѣтника* (XII₂)⁵; N238 *горо(дъ)* (XI/XII); N240 *дражъницъ, кол[ло].../кол[м]...* (XII₂); N241 [п]жѣтши (XII₁); N332 (outer side) *хроушькин[иц] (ы/а)* (XII/XIII); N335 *золотыхъ, вѣ(вериць), шел(мъ)* (XII₂); N336 *емалти, ныне* (XII₁)⁶; N338 *(соро)слоса* (XII₁); N422 *коина, поклаина, солнѣта* (m. XII); N424 *продавѣше, кълевоу* (b. XII); N436 (block N436/437?; cf. above) *присоли* (b. XIII); N439 *коупленъ* (XII/XIII); N487 *возывахо* (XII₁); N502 *кодь* (XII₂); N503 *(по)ла[тъ], [въ]лостн* (XII₁); N508 (inner side) *пелалга* (XII₂); N509 *мъне, десалъ, налмѣноую* (XII₂); N510 *поуоуцьнъ, вачыслава* (XIII₁)⁷; N526 *добролмыслѣ, хъмоуѣ* (m. XI); N531 *ъзветоло* (XII/XIII); N549 (block Mīna?)⁸ *шестокрїленал* (XII/XIII); N550 *молвилъ, совъсалавоу, гривно* (XII₂); N558 (block Mīna?)⁸ *деин* (XII₂); N571 *радого[сть]* (XII); N581 *продаь* (XIII₁)⁹; N590 *въстала* (XI); N600 *негалине, талжа* (XII/XIII); N601 *трѣтеее, коу(н)е* (b. XIII); N603 *талжа* (XII₂); N605 *поустиле, пришъла* (XII₁); N606 *пы(ш)[е]ницѣ, жнѣта* (XII₂); N609 *полъ* (b. XIII); N624 *посоли* (XII₂); N630 *поутоковъ* (XII₁); N632 *влез[о]ке* (XII₁); N633 *[верь](ко)[вьскъ]* (XII₁); N640 *романи[ца]* (XII₂); N644 *виновалга, исправитъ* (b. XII); N651 *возалти* (b. XIII); N652 *нз[в]ав[ит] (елю), хоцелши*

(*b.* XIII); N657 с(ва)теѣ, сторова (XII₂); N663 коростокни (XII/XIII); N664 (block N664/710) прокъшѣ, гривынѣ, възлати (XII/XIII); N671 чырьмына, съвьслава (*b.* XIII); N676 отопоу(с)ти, старость (XII₂); N681 чьрнѣское (XII₂); N682 въдалѣ (XII₂); N683 (block Domapĕg) съ[р]ъ[ц]ьѣ (XII₂); N685 (block Domapĕg) лиха (XII₂); N688 голсти[л] (а) (XII₂); N705 попровѣди, посолю, заходиле (*b.* XIII); N710 (block N664/710) серебра, [р](ѣ)ланъ, пожарѣ (XII₂); Smol. 7 (block Smol. 5/7) олексы (XII₂); Smol. 10 максима (XII); St.R. 5 городнаа (XII₁); St.R. 7 мълавы (XII₁); St.R. 8 [г]въздѣкъѣ, е[с]и (XII₁); St.R. 10 твоєи (XII); St.R. 15 отро(к)ъ (XII₁); St.R. 16 (block St.R. 16/18) дані(лѣ) (XII₁); St.R. 17 створѣа (XII₁); St.R. 22 талишнее, воришековее (XII₁); Svīnc. мѣстатѣ, ходоутиничъ, долѣѣ, налѣѣ (XII₁); Tv. 1 домажироувицоу, твоемоу (XII/XIII).

III: Cases of Vl in the "late" period (from ca. 1220 through XIV₁)

N45 цтеверты (XIV₁); N53 wзерни (XIV₁); N55 гра(мо)[тѣ] (*b.* XIV); N65 прода (*b.* XIV)¹⁰; N67 валсильеви, тимолою, дворани (*b.* XIV); N68 (block N61/68) дыциси (XIII₂); N69 пришьлѣти, григоремъ (*e.* XIII)¹¹; N73 вра(то)мъ (XIII₁); N138 коузмиць, рѣвла, семьдесато, вѣмажнко, шапка, сеелекоуквица (*b.* XIV); N139 поклаианне (XIII₂); N140 цело(мо), платилѣ (XIV₁); N141 положиле, коужоуе, колстина, костини, гришкни, прислаивѣши (XIII₂); N142 тобѣѣ, ѣвѣдан, чѣтѣѣ, голуѣгын, клѣде, людни (*b.* XIV); N144 снголь (XIV₁); N147 ѣнаниу (XIII₁); N196 повелело (*b.* XIV); N198 задницю (*e.* XIII); N202 (block Onfim) долмитрѣ, възлати, доложниѣ/и, доложникѣ (XIII₁); N207 (block Onfim) рава (XIII₁); N211 погостѣ (XIII₂); N213 ѡказало, желевен (XIII₂); N215 (block N215/218B) половника (XIII₂); N220 ма(с)ла, деже, цетвертина (XIII₂); N318 великого, михалу, серебро (XIV₁); N344 сомолове (*b.* XIV); N346 ра(т)емнрѣ (*e.* XIII); N348 ѡрыша, цетверте, цетверти (XIII₂); N350 продаво (*m.* XIII); N351 сто(р)овѣ (XIII₂); N389 коуналѣ (XIV₁); N390 (inner side) жыревѣл, голниое, ньѣгъѣ (*e.* XIII); N 391 олеѣе (*b.* XIV); N395 ма(т)ери (*e.* XIII); N410 (block N409/410) (р)[ри]въ[н]ѣ, по(н)[ь]шь, съ(м)ьрѣда, колокы(н)[а] (*e.* XIII); N417 хо(ди)лѣ, ма(т)ѣѣнке, м(.)шкниѣ (XIV₁); N419 (fol. 3r:) в(ог)о(л)мѣ, на(ш)а, (fol. 3v:) оставыноик, ѡко, ѡвлани, воскръснниѣ, (fol. 4r:) лоу(д)не, обонимѣѣ, дади(т)ѣ, немѣѣ, воскръсош(мо)у, мьрт(ы)н(о), е(с)ть, (fol. 4v:) на(ш)ъ, изва(ви)н, възаконни, лѣ(д)не, (fol. 5r:) ѡго, воскръсене, ѡко, изва(ва)а, везаконн, (fol. 5v:) свобод(х)о(м)о(с)а, (fol. 6r:) нстелениѣ, извъ(х)ъмо (XIII/XIV)¹²; N420 за(х)ары (*m.* XIII); N481 талко (XIII₂); N482 патънаца(т)ѣ (*e.* XIII); N483 е(с)и (XIII₂); N500 не(м)ечкаѣ, м(ы)хъ (XIV₁); N501 ме(н)е, колонею(с)а (XIV₁); N582 по(н)мавоши (XIII/XIV); N583 ми(л)а(т)ѣ (XIII/XIV); N615 исправилѣ (XIII₂); N636 (block N636/704) великоу (XIII/XIV); N707 пе(р)цю (XIII₂); Psk. 4 дво(н)и (XIV₁); Psk. 6 боу(д)и, чело(в)еко (*m.* XIII); Psk. 7 положено, сво(н)им(ы), на(н)и(м)а (XIII₂); Smol. 2/3

гривнама, молвъ, столпыа, осташыка (т. XIII); Vit. 1 продало, продало, оукоупи (XIII/XIV).

Ib: Cases of V1 in the "late" period (from т. XIV through XV)

N1 дару, се(ла), ка(ци) (XIV/XV); N2 сохъдалъ (е. XIV); N3 прислалъ (XIV/XV); N5 есиѡа, молви, петрову, грамотѣ (т. XIV); N17 слова (b. XV); N19 (block Esif) кот[о]рѡму, филиастъ (XV₁); N21 пришли, извѣли (b. XV); N23 wspoдинь, гафанкомо, швина, видьаь (XIV/XV); N24 пришли (XV₁); N25 положи (XIV/XV); N27 вѣшли (е. XIV); N30 вѣдаю (XIV₂); N31 прихода (т. XIV); N40 полткаѣтѣ (b. XV); N41 кааинакма (т. XIV); N42 рѹкописаниѣ, коьна[ъ]ке, [бра]л(т)ни (е. XIV); N43 залъае (XIV/XV); N50 семаа, ѹлоки, олексаидре (XIV₂); N91 максиму (XIV₂); N92 лососи (т. XIV); N94 онцифоровицу (XIV/XV); N97 шръмъка (b. XV); N99 цолоѣтка (т. XIV); N102 творѣце, староста, господине, положиае (т. XIV); N124 наама (XIV/XV); N125 долеру, привышѣ, привези (XIV/XV); N128 извабляющес, долговъ (е. XIV); N129 (block Esif) ѡомаѣ, прислалъ, солшыкма (XIV/XV); N130 (block Grigoriја) локти (XIV/XV); N131 самозерци, ралду (е. XIV); N133 (block Grigoriја) (мо)кмо, (оди)н(о)го, (го)[с]подине (XIV₂); N135 игнаѣтъу, отаѣѣли, казнили, дѣтъмаѣ (XIV/XV); N136 коробыа, ѣѣлки (XIV); N154 оманта, филпе, виделе, филипомъ, ѹѣѣдактса, посадинкомъ, сединѣ (XV₁); N157 перест(а)ванвати (b. XV); N161 филимонь, офромѣкць, долманта, третѣ (b. XV); N162 оьса, малшкѣ, гривни (XV₁); N167 нлз, онцифорову (е. XIV); N169 овдолкиму, цѹка (XIV/VX); N177 (block Maskim) шнеѡимова (т. XIV); N178 сведоамо, максима, замолѡвсови (е. XIV); N183 шлоѣфери (XIV₂); N186 деѣсать, деѣаѣтѣ, ѣѣшкова, флареѡу, кааинаю (XIV₂); N242 осподине (XV₁); N243 жалѹкшъ, тол<р>ѣѣ (XV₁); N244 дѣлаа (b. XV); N249 (block N248/249) водаѹхъ (XIV/XV); N252 гравъжъмъ, городъ (XIV₂); N256 паѣре (XIV₂); N258 (block Maskim) просоли (XIV₂); N260 григорни, воѣзми, сѹлиаь, миѹалии, иванка (XIV₂); N265 (block Grigoriја) слѹшатѣ (XIV/XV); N266/275 (block Sidor) веѣрешъ, погнѹа(ти) (XIV₂); N272 ѹдарнаа, полметалъ (XIV₂); N273 мралвници (XIV₂); N279 сотьс[кы]маѣ (XIV₂); N280 (block Maskim) ѡколи (XIV₂); N282 соль (XIV₂); N283 сиротаѹхъ, долвро (XIV₂); N286 (block Grigoriја) переѣцина, ал(ц)и (т. XIV); N297 юрьѹвицу (XV₁); N298 кѹпра (XV₁); N300 миѹанл(лѹ), тероѹа, тероѹхъ (XV₁); N301 поѹжалѹкши (XV₁); N302 веѣсѹднаа (XV₁); N304 валшемо (XV₁); N305 [о](спо)динь, алъ (XIV/XV); N307 миѹаналоцю, ложивъли, перепѣсысысывають (XV₁); N309 иваномъ (b. XV); N310 валѹаѹт, жиан (b. XV); N311 юрекви(ч)ѹ, деревеѣнеку (XIV/XV); N317 проанваѹстѣа, поканѣтса (т. XIV); N345 приѣѹто (т. XIV); N354 (block Oncifor Lukiniѣ) рѹѣаь, воѣзма, полатини, ключника, полпрошалъ (т. XIV); N355 лисидницникѣ (XIV); N358 (block Oncifor Lukiniѣ) доѹрѹмаѣ, ш(весь)

(*m.* XIV); N359 осподинѣ, двѣрѣ, томо (*b.* XV); N361 кѣсти, соволю, валми, погниблн (XIV/XV); N363 (block Smen) невѣстѣлкѣ, поминала (XIV/XV); N364 (block Smen) полтинѣ (XIV/XV); N366 гюрыгьмо, харѣтоно, пышнѣцѣ (XIV₂); N383 пателѣю, оидрѣкѣ, далі (XIV₂); N403 (block Grigoriĭa) вѣлака (XIV); N406 ведалеше (XIV); N413 вню, кѣцѣ (XIV/XV); N415 пастынке (*m.* XIV); N446 подавалѣ, въдавалѣ, оуиналѣ, осподинѣ (XIV₂); N463 маѣню, недово-рехѣ, животиною (*b.* XV); N466 оубилѣ (XV₁); N471 пшеницѣ, вилѣ (*b.* XV); N477 вѣкощинѣ, осполоко (XIV₂); N478 вѣдѣ (*m.* XIV); N492 за[лѣ]шн(ѣ)не (XIV₂); N495 деинга (XV₂); N496 ивал(нка), макѣн(мком), еларѣв(ѣ) (XV₁); N497 ветабили, ветабилмо (XIV₂); N519 (block Mosii) дѣловон, вѣшкѣвѣ, пожарнскѣю, приказываю, о(с)подѣ, николѣ (XIV/XV); N520 (block Mosii) глѣшнѣ, виноватѣ, дѣшѣвѣ (XIV/XV); N521 розгорн, телло, моѣно, мнѣнке, рѣвлѣ, цѣтверотки, цѣ(вѣ)ротки, цѣ(тверо)т(к)и (XIV/XV); N532 цѣна (XIV₂); N536 омоѣн, сапж(ѣ)нѣхѣ (XIV₂); N538 полпѣ, проноситѣ (XIV₂); N540 твон, поѣховѣ (XV); N578 вричю (XIV₂); N579 феѣдорѣ (XIV₂); N580 синѣ(мѣ) (*m.* XIV); N589 вндрѣю, рѣвлѣ (*m.* XIV); N622 при(с)лати, мо(к) [м]о, на-волн[т]исѣ (XIV/XV); N689 трѣтнѣ, д(ѣ)шѣвномѣ, кѣлѣм, мнѣт(к)и, ксоноѣн, вѣлѣ, корѣвн (XIV₂); N690 полтинѣ, вѣлѣнна, полдо (XIV₂); N693 полѣлѣ, бѣю (XIV/XV); N694 сирѣтѣ (XIV/XV); N697 виноватѣ, зазвал(ѣ), хѣлѣвѣ, при(с)н, завалѣ (XIV₂); N698/N699 (block Evan) роздалѣ, полсаѣнѣтѣ, полгра-билѣ, печѣлѣшѣ (XIV₂); St.R. 2 нѣл[кѣ], трѣнѣ(тѣ) (XV₁).

NOTES

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¹ According to the information provided by Gajdukov, N591 now seems to be the oldest extant birchbark document: “предположительно датирован 30-ми годами XI в.” (1992, 81). The youngest document, N495, is assigned to the second half of the fifteenth century.

² Here and there one may find some random notes on line-final word division in Russian texts. See, for instance, Shevelov’s discussion of the place of origin of the Cyrillic part of the Reims Gospel: “No other Eastern Slavic text consistently has such peculiar carrying over to the next line as *eteria, krlvi, prišobšii, vlyso*” (1975, 188); or Lunt’s discussion of word division of the type CIV as found in the Codex Assemanianus and other South Slavic manuscripts: “This system is totally absent from the Russian (East Slavic) tradition” (1981-82, 408, fn. 11). For further literature on the subject, see Schaecken (1994).

³ As for earlier publications on word division in Russian texts, Žukovskaja only mentions Karinskij’s observation (1916, 205) that, in a number of manuscripts originating in Pskov, frequent use is made of the type CI.

Except for Žukovskaja’s brief treatment of word division in birchbark documents, I could find only a few hints on the subject in the latest volume of the Academy Edition. See, for instance, the comment on *овоинить* in N419: “и здесь повторено, как это нередко бывает при переходе со строки на строку” (NGB 9, 164); or on the conservative spelling of *ѣ* in *невѣстѣлкѣ* in N363

(XIV/XV): “если это не эффект конца строки” (NGB 9, 265; cf. also the hypercorrect spelling *дыщени* in N68 according to Zaliznjak, NGB 9, 129).

⁴ N112 was formerly assigned to the chronological layer 1238-1268 (cf. the “Указатель...” in NGB 8, 307) and thus considered to belong to the “late” period. Zaliznjak, however, gives N112 an earlier date: “уточненная дата: XII/XIII — 30-е годы XIII” (NGB 9, 132). This, of course, would make it an “early” document. Nevertheless, the number is not rendered in italics in the glossary of NGB 9 (cf. the entry *племя*).

⁵ Date according to Gajdukov, as reported by Zaliznjak (NGB 9, 184).

⁶ Date according to Gaidukov, as reported by Zaliznjak (NGB 9, 181).

⁷ According to the “Указатель...” of NGB 8, 309, N510 belongs to the “Слой конца XII — первой половины XIII в.” (cf. also Zaliznjak, NGB 9, 175: “XIII₁”). In the glossaries of NGB 8 and 9 (с.в. *откупити*), the number is given in italics.

⁸ The identification of the Mina block N549/558 (cf. NGB 8, 30, 90) is now questioned by Zaliznjak: “Почерк грамоты [N558--JS], вопреки делавшимся ранее предположениям, по-видимому, не тождествен почерку грамоты N549” (NGB 9, 177).

⁹ N581 is assigned to the chronological layer 1196-1247 but is still considered to be “early” (cf. the glossary of NGB 8 where we read the number “581”).

¹⁰ Note that the date 1281-1299 as given by the “Указатель...” of NGB 8, 307, is incorrect: “Найдена не в 12-м, как указано в публикации, а в 11-м ярусе усадьбы Б (1299-1313 гг.)” (Janin, NGB 8, 225).

¹¹ The date of N69 is controversial. In the “Указатель...” of NGB 8, 308, the document is assigned to the twelfth century (cf. also Janin, NGB 8, 226). Accordingly, the number 69 is rendered in italics in the glossary of the same volume. Zaliznjak, however, now states: “уточненная датировка: кон. XII-XIII/XIV” (NGB 9, 130; cf. also 8, 188). Judging from the entry *пакы* in the glossary of NGB 9, where we read the number “69”, the document has apparently been shifted to the “late” period. As Vermeer (1992, 390-400) has pointed out in detail, there is good reason to believe that N69 belongs to the chronological layer 1281-1299 in which it was found.

¹² It should be noted that the many cases of VI in this “booklet” have quite an influence on the statistics. If one wishes to exclude N419 because of its special character, the percentage of cases of Cl for the period under discussion goes up by almost two points (96x VI and 15x Cl = 13.5%).

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POSTSCRIPT

After the present paper had been submitted, an article by V.L. Janin and A.A. Zaliznjak appeared, which provides further cases of line-final word division in Novgorod birchbark documents; cf. 'Берестяные грамоты из новгородских раскопок 1990-1993 гг.', *Вопросы языкознания* 1994/3, 3-22. The authors have published 19 new documents from Novgorod of which 13 contain a total number of 31 additional cases of line-final word division.

If we exclude the instance (нр)л[н]с[лн] in N736 (outer side), which consists mainly of conjectures, we find one new case of Cl and 21 new cases of Vl in documents that belong to the "early" period: N736 (inner side) нрл[н]с[лн] versus N717 нр[л]г[н]е, ч[о]л[о]у, N722 м[д]в[ѣ]д[ы]н[о], N723 н[л]с[т]ь, ж[ѣ]д[л]т[и], N724 з[с]т[а]в[л]и[н]и, н[с]п[р]а[в]и[т]и, з[а]х[л]р[ѣ]а, о[д]н[о]и[с]е, п[р]и[л]а[н]и, д[а]ч[е], N731 д[ѣ]л[а]т[и]ц[ѣ], е[с]м[о], N735 д[ѣ]м[и]т[р]о[у], п[о]п[р]а[в]и[т]и, N736 (inner side) в[и]л[л]а[л]ь, N745 к[ы]л[и]н[и]а, п[а]в[ы]л[о]ви, N748 з[ѣ]м[л]ь..., N752 т[о]л[к]ѣ, с[о]у[д]и[т]ь. Note that the inner and outer side of N736 are written by different persons. If N736 is correctly dated in the first third of the twelfth century, нрл[н]с[лн] would be by far the earliest unambiguous instance of Cl (cf. Table 1 above). Nevertheless, the proportional relation between Cl and Vl in the "early" period almost remains the same if we include the 22 new cases: 3.4% against 96.6% (cf. Table 2 above: 3.1% against 96.9%).

As for the new cases of line-final word division in documents of the "late" period, we find one instance of Cl and 7 instances of Vl: N718 в[ѣ]жн[ц]ы[к]а[л] versus N718 л[о]в[и]ц[ѣ], г[р]и[в]ь[н]е, (г[р]и)л[ѣ]н[ѣ], [г]л[ъ]р[н]ь[и]ц[ѣ], N727 (с[в]а)л[ъ]ч[ѣ], N750 ж[ѣ]л[ѣ]з[ѣ]х[о], п[о]л[о]л[ѣ]. All three documents belong to the period from ca. 1220 through XIV₁. If the new instances are taken into account, the percentages of Cl and Vl as given in Table 2 stay exactly the same: 11.7% against 88.3%.

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